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      "PA02": {
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        "legacy_id": "P2"
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      "PA03": {
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      "PA04": {
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        "legacy_id": "P4"
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      "PA05": {
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        "legacy_id": "P5"
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      "PA06": {
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        "legacy_id": "P6"
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      "PA07": {
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        "legacy_id": "P7"
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      "PA08": {
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sexuales|feminicidio"
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      "\\d+\\s*por\\s*\\d+",
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      "índice de",
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  "flags": "i",
  "id": "PAT-Q002-008",
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"scoring_modality": "TYPE_B",
"text": "¿El texto dimensiona el problema de la desigualdad de género cuantificando la brecha o déficit? Se debe buscar si se mencionan explícitamente limitaciones en los datos, como 'subregistro', 'información insuficiente' o 'vacíos de información'.",
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      "function": "trace_financial_allocation",
      "method_type": "analysis",
      "priority": 1,
      "description": "FinancialAuditor.trace_financial_allocation"
    },
    {
      "class": "FinancialAuditor",
      "function": "_process_financial_table",
      "method_type": "analysis",
      "priority": 2,
      "description": "FinancialAuditor._process_financial_table"
    },
    {
      "class": "FinancialAuditor",
      "function": "_match_program_to_node",
      "method_type": "analysis",
      "priority": 3,

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    "description": "FinancialAuditor._match_program_to_node"
  },
  {
    "class": "FinancialAuditor",
    "function": "_match_goal_to_budget",
    "method_type": "analysis",
    "priority": 4,
    "description": "FinancialAuditor._match_goal_to_budget"
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  {
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    "function": "_perform_counterfactual_budget_check",
    "method_type": "analysis",
    "priority": 5,
    "description": "FinancialAuditor._perform_counterfactual_budget_check"
  },
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    "function": "_calculate_sufficiency",
    "method_type": "scoring",
    "priority": 6,
    "description": "FinancialAuditor._calculate_sufficiency"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "analyze_financial_feasibility",
    "method_type": "analysis",
    "priority": 7,
    "description": "PDETMunicipalPlanAnalyzer.analyze_financial_feasibility"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_extract_budget_for_pillar",
    "method_type": "extraction",
    "priority": 8,
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  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_identify_funding_source",
    "method_type": "analysis",
    "priority": 9,
    "description": "PDETMunicipalPlanAnalyzer._identify_funding_source"
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    "function": "_classify_tables",
    "method_type": "analysis",
    "priority": 10,
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  },
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    "method_type": "analysis",
    "priority": 11,
    "description": "PDETMunicipalPlanAnalyzer._analyze_funding_sources"
  },
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    "function": "_score_financial_component",
    "method_type": "scoring",
    "priority": 12,
    "description": "PDETMunicipalPlanAnalyzer._score_financial_component"
  },
  {
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    "function": "aggregate_risk_and_prioritize",
    "method_type": "analysis",
    "priority": 13,
    "description": "BayesianCounterfactualAuditor.aggregate_risk_and_prioritize"
  }
}

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  "flags": "i",
  "id": "PAT-Q003-000",
  "match_type": "REGEX",
  "pattern": "Plan Plurianual de Inversiones|PPI|Plan Indicativo"
},
{
  "category": "GENERAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q003-001",
  "match_type": "REGEX",
  "pattern": "BPIN|Banco de Proyectos|código del proyecto de género"
},
{
  "category": "GENERAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q003-002",
  "match_type": "REGEX",
  "pattern": "presupuestos sensibles al género|trazador presupuestal de género"
},
{
  "category": "GENERAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q003-003",
  "match_type": "REGEX",
  "pattern": "recursos para la Casa de la Mujer|fortalecimiento de la Comisaría"
},
{
  "category": "GENERAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q003-004",
  "match_type": "REGEX",
  "pattern": "asignación para la política pública de mujer y género"
},
{
  "category": "GENERAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q003-005",
  "match_type": "REGEX",
  "pattern": "inversión en autonomía económica de las mujeres"
},
{
  "category": "GENERAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q003-006",
  "match_type": "REGEX",
  "pattern": "\\$\\s*\\d+|COP\\s*\\d+|millones de pesos"
},
{
  "category": "GENERAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q003-007",
  "match_type": "REGEX",
  "pattern": "fuentes de financiación|recursos propios|SGP|recursos de cofinanciación"
},
{
  "category": "GENERAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q003-008",
  "match_type": "REGEX",

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    "pattern": "el presupuesto asignado permite cubrir|análisis de suficiencia"
  }
],
"policy_area_id": "PA01",
"question_global": 3,
"question_id": "Q003",
"scoring_definition_ref": "scoring_modalities.TYPE_B",
"scoring_modality": "TYPE_B",
"text": "¿Se identifican en el Plan Plurianual de Inversiones (PPI) o en tablas
presupuestales, recursos monetarios (con cifras en $, COP o millones) explícitamente asignados a
programas para la equidad de género, la Casa de la Mujer o la atención a VBG?",
"validations": {}
},
{
  "base_slot": "D1-Q4",
  "cluster_id": "CL02",
  "dimension_id": "DIM01",
  "expected_elements": [
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    },
    {
      "required": true,
      "type": "datos_sistemas"
    },
    {
      "required": true,
      "type": "gobernanza"
    },
    {
      "required": true,
      "type": "procesos"
    },
    {
      "required": true,
      "type": "talento_humano"
    }
  ],
  "failure_contract": {
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      "incomplete_text"
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    "emit_code": "ABORT-Q004-REQ"
  },
  "method_sets": [
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      "function": "identify_responsible_entities",
      "method_type": "analysis",
      "priority": 1,
      "description": "PDETMunicipalPlanAnalyzer.identify_responsible_entities"
    },
    {
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      "function": "_extract_entities_ner",
      "method_type": "extraction",
      "priority": 2,
      "description": "PDETMunicipalPlanAnalyzer._extract_entities_ner"
    },
    {
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      "function": "_extract_entities_syntax",
      "method_type": "extraction",
      "priority": 3,
      "description": "PDETMunicipalPlanAnalyzer._extract_entities_syntax"
    },
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      "function": "_classify_entity_type",
      "method_type": "analysis",

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    "priority": 4,
    "description": "PDETMunicipalPlanAnalyzer._classify_entity_type"
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  {
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    "function": "_score_entity_specificity",
    "method_type": "scoring",
    "priority": 5,
    "description": "PDETMunicipalPlanAnalyzer._score_entity_specificity"
  },
  {
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    "function": "_consolidate_entities",
    "method_type": "analysis",
    "priority": 6,
    "description": "PDETMunicipalPlanAnalyzer._consolidate_entities"
  },
  {
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    "function": "extract_entity_activity",
    "method_type": "extraction",
    "priority": 7,
    "description": "MechanismPartExtractor.extract_entity_activity"
  },
  {
    "class": "MechanismPartExtractor",
    "function": "_normalize_entity",
    "method_type": "analysis",
    "priority": 8,
    "description": "MechanismPartExtractor._normalize_entity"
  },
  {
    "class": "MechanismPartExtractor",
    "function": "_validate_entity_activity",
    "method_type": "validation",
    "priority": 9,
    "description": "MechanismPartExtractor._validate_entity_activity"
  },
  {
    "class": "MechanismPartExtractor",
    "function": "_calculate_ea_confidence",
    "method_type": "scoring",
    "priority": 10,
    "description": "MechanismPartExtractor._calculate_ea_confidence"
  },
  {
    "class": "OperationalizationAuditor",
    "function": "audit_evidence_traceability",
    "method_type": "validation",
    "priority": 11,
    "description": "OperationalizationAuditor.audit_evidence_traceability"
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],
"patterns": [
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    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q004-000",
    "match_type": "REGEX",
    "pattern": "Secretaría de la Mujer|Oficina de la Mujer|Enlace de Género"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q004-001",
    "match_type": "REGEX",
    "pattern": "Comisaría de Familia|equipo psicosocial|abogado|trabajador social"
  },
  {
    "category": "GENERAL",

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    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q004-002",
    "match_type": "REGEX",
    "pattern": "capacidad instalada|talento humano|personal idóneo"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q004-003",
    "match_type": "REGEX",
    "pattern": "ruta de atención a víctimas de VBG|protocolo de atención"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q004-004",
    "match_type": "REGEX",
    "pattern": "sistema de información de casos de VBG|registro de feminicidios"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q004-005",
    "match_type": "REGEX",
    "pattern": "Observatorio de Asuntos de Género"
  },
  {
    "category": "TERRITORIAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q004-006",
    "match_type": "REGEX",
    "pattern": "Mesa Municipal de Mujeres|Consejo Consultivo de Mujeres|Comité de
seguimiento Ley 1257"
  },
  {
    "category": "FUENTE_OFICIAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q004-007",
    "match_type": "REGEX",
    "pattern": "articulación interinstitucional|coordinación con Fiscalía y Policía"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q004-008",
    "match_type": "REGEX",
    "pattern": "cuello de botella|limitación institucional|barrera de acceso|falta de
capacidad|necesidad de fortalecimiento"
  }
],
"policy_area_id": "PA01",
"question_global": 4,
"question_id": "Q004",
"scoring_definition_ref": "scoring_modalities.TYPE_B",
"scoring_modality": "TYPE_B",
"text": "¿El PDM describe las capacidades para gestionar la política de género, mencionando
entidades (ej. Secretaría de la Mujer, Comisaría) y sus necesidades? Se debe buscar términos como
'equipo psicosocial', 'protocolo de atención' y si se identifican 'limitaciones' o 'barreras'
institucionales.",
"validations": {}
},
{
  "base_slot": "D1-Q5",
  "cluster_id": "CL02",
  "dimension_id": "DIM01",

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"expected_elements": [
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  },
  {
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  },
  {
    "required": true,
    "type": "restricciones_presupuestales"
  },
  {
    "required": true,
    "type": "restricciones_temporales"
  }
],
"failure_contract": {
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    "incomplete_text"
  ],
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    "function": "_check_deadline_constraints",
    "method_type": "analysis",
    "priority": 1,
    "description": "TemporalLogicVerifier._check_deadline_constraints"
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    "function": "verify_temporal_consistency",
    "method_type": "analysis",
    "priority": 2,
    "description": "TemporalLogicVerifier.verify_temporal_consistency"
  },
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    "function": "identify_failure_points",
    "method_type": "analysis",
    "priority": 3,
    "description": "CausalInferenceSetup.identify_failure_points"
  },
  {
    "class": "CausalExtractor",
    "function": "_assess_temporal_coherence",
    "method_type": "analysis",
    "priority": 4,
    "description": "CausalExtractor._assess_temporal_coherence"
  },
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    "function": "_analyze_link_text",
    "method_type": "analysis",
    "priority": 5,
    "description": "TextMiningEngine._analyze_link_text"
  },
  {
    "class": "IndustrialPolicyProcessor",
    "function": "_analyze_causal_dimensions",
    "method_type": "analysis",
    "priority": 6,
    "description": "IndustrialPolicyProcessor._analyze_causal_dimensions"
  },
  {
    "class": "IndustrialPolicyProcessor",
    "function": "_extract_metadata",
    "method_type": "extraction",

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    "priority": 7,
    "description": "IndustrialPolicyProcessor._extract_metadata"
  }
],
"patterns": [
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    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q005-000",
    "match_type": "REGEX",
    "pattern": "en el marco de la Ley 1257 de 2018|Decreto 1630"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q005-001",
    "match_type": "REGEX",
    "pattern": "Política Pública Nacional de Equidad de Género|PPEG"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q005-002",
    "match_type": "REGEX",
    "pattern": "CONPES de equidad de género"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q005-003",
    "match_type": "LITERAL",
    "pattern": "sentencia T-|Corte Constitucional"
  },
  {
    "category": "TERRITORIAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q005-004",
    "match_type": "REGEX",
    "pattern": "Acuerdo Municipal|Decreto Municipal"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q005-005",
    "match_type": "REGEX",
    "pattern": "competencias del municipio en VBG|responsabilidad subsidiaria"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q005-006",
    "match_type": "REGEX",
    "pattern": "límite fiscal|disponibilidad de recursos del SGP"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q005-007",
    "match_type": "LITERAL",
    "pattern": "presupuesto insuficiente para|restricción presupuestal"
  },
  {
    "category": "TEMPORAL",
    "confidence_weight": 0.85,

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    "flags": "i",
    "id": "PAT-Q005-008",
    "match_type": "REGEX",
    "pattern": "durante el cuatrienio|en el periodo 2024-2027|plazo de implementación"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q005-009",
    "match_type": "REGEX",
    "pattern": "coherencia entre metas y recursos|factibilidad financiera"
  }
],
"policy_area_id": "PA01",
"question_global": 5,
"question_id": "Q005",
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"scoring_modality": "TYPE_E",
"text": "¿El plan justifica su alcance en materia de género mencionando el marco legal (ej.
Ley 1257) o reconociendo restricciones explícitas de tipo presupuestal, temporal o de
competencias?",
"validations": {}
},
{
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  "cluster_id": "CL02",
  "dimension_id": "DIM02",
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      "type": "columna_costo"
    },
    {
      "required": true,
      "type": "columna_cronograma"
    },
    {
      "required": true,
      "type": "columna_producto"
    },
    {
      "required": true,
      "type": "columna_responsable"
    },
    {
      "required": true,
      "type": "formato_tabular"
    }
  ],
  "failure_contract": {
    "abort_if": [
      "missing_required_element",
      "incomplete_text"
    ],
    "emit_code": "ABORT-Q006-REQ"
  },
  "method_sets": [
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      "function": "extract_tables",
      "method_type": "extraction",
      "priority": 1,
      "description": "PDFProcessor.extract_tables"
    },
    {
      "class": "FinancialAuditor",
      "function": "_process_financial_table",
      "method_type": "analysis",
      "priority": 2,
      "description": "FinancialAuditor._process_financial_table"
    }
  ],

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{
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  "function": "_deduplicate_tables",
  "method_type": "analysis",
  "priority": 3,
  "description": "PDETMunicipalPlanAnalyzer._deduplicate_tables"
},
{
  "class": "PDETMunicipalPlanAnalyzer",
  "function": "_classify_tables",
  "method_type": "analysis",
  "priority": 4,
  "description": "PDETMunicipalPlanAnalyzer._classify_tables"
},
{
  "class": "PDETMunicipalPlanAnalyzer",
  "function": "_is_likely_header",
  "method_type": "analysis",
  "priority": 5,
  "description": "PDETMunicipalPlanAnalyzer._is_likely_header"
},
{
  "class": "PDETMunicipalPlanAnalyzer",
  "function": "_clean_dataframe",
  "method_type": "analysis",
  "priority": 6,
  "description": "PDETMunicipalPlanAnalyzer._clean_dataframe"
},
{
  "class": "ReportingEngine",
  "function": "generate_accountability_matrix",
  "method_type": "analysis",
  "priority": 7,
  "description": "ReportingEngine.generate_accountability_matrix"
}
],
"patterns": [
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q006-000",
    "match_type": "REGEX",
    "pattern": "tabla de actividades|cuadro de seguimiento|matriz de plan de acción"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q006-001",
    "match_type": "REGEX",
    "pattern": "columna responsable|entidad a cargo|ejecutor"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q006-002",
    "match_type": "REGEX",
    "pattern": "columna producto|entregable|output|meta de producto"
  },
  {
    "category": "TEMPORAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q006-003",
    "match_type": "LITERAL",
    "pattern": "columna cronograma|plazo|vigencia|año 1|trimestre"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,

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    "flags": "i",
    "id": "PAT-Q006-004",
    "match_type": "LITERAL",
    "pattern": "columna costo|presupuesto|valor|recursos|monto"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q006-005",
    "match_type": "REGEX",
    "pattern": "Secretaría de la Mujer|Comisaría|Secretaría de Gobierno"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q006-006",
    "match_type": "REGEX",
    "pattern": "Plan Indicativo|Anexo de metas"
  }
],
"policy_area_id": "PA01",
"question_global": 6,
"question_id": "Q006",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿Las actividades para la equidad de género se presentan en un formato estructurado
(tabla, cuadro) que incluya columnas para 'responsable', 'producto' o 'entregable', 'cronograma' y
'costo' o 'presupuesto'?",
"validations": {}
},
{
  "base_slot": "D2-Q2",
  "cluster_id": "CL02",
  "dimension_id": "DIM02",
  "expected_elements": [
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      "required": true,
      "type": "instrumento_especificado"
    },
    {
      "required": true,
      "type": "logica_causal_explicita"
    },
    {
      "required": true,
      "type": "poblacion_objetivo_definida"
    }
  ],
  "failure_contract": {
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      "missing_required_element",
      "incomplete_text"
    ],
    "emit_code": "ABORT-Q007-REQ"
  },
  "method_sets": [
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      "class": "BayesianMechanismInference",
      "function": "infer_mechanisms",
      "method_type": "analysis",
      "priority": 1,
      "description": "BayesianMechanismInference.infer_mechanisms"
    },
    {
      "class": "BayesianMechanismInference",
      "function": "_infer_single_mechanism",
      "method_type": "analysis",
      "priority": 2,
      "description": "BayesianMechanismInference._infer_single_mechanism"
    }
  ],

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{
  "class": "BayesianMechanismInference",
  "function": "_infer_mechanism_type",
  "method_type": "analysis",
  "priority": 3,
  "description": "BayesianMechanismInference._infer_mechanism_type"
},
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  "priority": 4,
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  "priority": 5,
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  "method_type": "extraction",
  "priority": 6,
  "description": "CausalExtractor.extract_causal_hierarchy"
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{
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  "function": "construir_grafo_causal",
  "method_type": "analysis",
  "priority": 7,
  "description": "TeoriaCambio.construir_grafo_causal"
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{
  "class": "TeoriaCambio",
  "function": "_es_conexion_valida",
  "method_type": "analysis",
  "priority": 8,
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  "function": "construct_causal_dag",
  "method_type": "analysis",
  "priority": 9,
  "description": "PDETMunicipalPlanAnalyzer.construct_causal_dag"
},
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  "function": "classify_test",
  "method_type": "analysis",
  "priority": 10,
  "description": "BeachEvidentialTest.classify_test"
},
{
  "class": "IndustrialPolicyProcessor",
  "function": "_analyze_causal_dimensions",
  "method_type": "analysis",
  "priority": 11,
  "description": "IndustrialPolicyProcessor._analyze_causal_dimensions"
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  "confidence_weight": 0.85,
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  "id": "PAT-Q007-000",
  "match_type": "REGEX",
  "pattern": "mediante|a través de|con la implementación de|por medio de"
}
]

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      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q007-001",
      "match_type": "REGEX",
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      "confidence_weight": 0.85,
      "flags": "i",
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      "match_type": "REGEX",
      "pattern": "capital semilla|incentivos económicos|apoyo a emprendimientos"
    },
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      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q007-003",
      "match_type": "REGEX",
      "pattern": "población objetivo:|dirigido a|beneficiarias serán"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q007-004",
      "match_type": "REGEX",
      "pattern": "mujeres rurales|madres cabeza de familia|mujeres víctimas de VBG"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q007-005",
      "match_type": "REGEX",
      "pattern": "mujeres cuidadoras|mujeres en extrema pobreza|mujeres LBT"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q007-006",
      "match_type": "REGEX",
      "pattern": "con el fin de|para lograr que|lo cual genera|porque permite"
    },
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      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q007-007",
      "match_type": "REGEX",
      "pattern": "para fortalecer la autonomía económica|para reducir la dependencia"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q007-008",
      "match_type": "LITERAL",
      "pattern": "para prevenir la VBG|para promover la participación política"
    }
  ],
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  "question_global": 7,
  "question_id": "Q007",
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  "scoring_modality": "TYPE_A",
  "text": "¿La descripción de las actividades de género detalla el instrumento ('mediante

```

talleres', 'a través de capital semilla')), la población objetivo ('mujeres rurales', 'madres cabeza de familia') y la lógica causal ('para generar autonomía', 'porque reduce la dependencia'))?",

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  "cluster_id": "CL02",
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    {
      "required": true,
      "type": "vinculo_diagnostico_actividad"
    }
  ],
  "failure_contract": {
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      "priority": 1,
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      "function": "_calculate_composite_likelihood",
      "method_type": "scoring",
      "priority": 2,
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      "method_type": "analysis",
      "priority": 3,
      "description": "CausalExtractor._initialize_prior"
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      "function": "_calculate_type_transition_prior",
      "method_type": "scoring",
      "priority": 4,
      "description": "CausalExtractor._calculate_type_transition_prior"
    },
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      "function": "_identify_causal_edges",
      "method_type": "analysis",
      "priority": 5,
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      "function": "_refine_edge_probabilities",
      "method_type": "analysis",
      "priority": 6,
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    },
    {
      "class": "BayesianCounterfactualAuditor",
      "function": "construct_scm",
      "method_type": "analysis",
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    "priority": 7,
    "description": "BayesianCounterfactualAuditor.construct_scm"
  },
  {
    "class": "BayesianCounterfactualAuditor",
    "function": "_create_default_equations",
    "method_type": "analysis",
    "priority": 8,
    "description": "BayesianCounterfactualAuditor._create_default_equations"
  },
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    "function": "extract_semantic_cube",
    "method_type": "extraction",
    "priority": 9,
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    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q008-000",
    "match_type": "REGEX",
    "pattern": "para abordar la causa relacionada con|en respuesta al problema de"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q008-001",
    "match_type": "REGEX",
    "pattern": "la actividad X atiende el determinante Y"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q008-002",
    "match_type": "REGEX",
    "pattern": "causa estructural|factor determinante|nudo crítico"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q008-003",
    "match_type": "REGEX",
    "pattern": "dependencia económica|falta de oportunidades laborales"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q008-004",
    "match_type": "REGEX",
    "pattern": "patrones culturales machistas|estereotipos de género"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q008-005",
    "match_type": "REGEX",
    "pattern": "barreras de acceso a la justicia|desconocimiento de las rutas"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q008-006",

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    "match_type": "REGEX",
    "pattern": "árbol de problemas|diagnóstico causal"
  }
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"question_global": 8,
"question_id": "Q008",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿El PDM vincula explícitamente las actividades propuestas con las 'causas raíz' de la desigualdad de género (ej. dependencia económica, patrones culturales) identificadas en el diagnóstico?",
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    {
      "required": true,
      "type": "riesgos_identificados"
    }
  ],
  "failure_contract": {
    "abort_if": [
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      "incomplete_text"
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    "emit_code": "ABORT-Q009-REQ"
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  "method_sets": [
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      "class": "PDETMunicipalPlanAnalyzer",
      "function": "_bayesian_risk_inference",
      "method_type": "analysis",
      "priority": 1,
      "description": "PDETMunicipalPlanAnalyzer._bayesian_risk_inference"
    },
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      "function": "sensitivity_analysis",
      "method_type": "analysis",
      "priority": 2,
      "description": "PDETMunicipalPlanAnalyzer.sensitivity_analysis"
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    {
      "class": "PDETMunicipalPlanAnalyzer",
      "function": "_interpret_risk",
      "method_type": "analysis",
      "priority": 3,
      "description": "PDETMunicipalPlanAnalyzer._interpret_risk"
    },
    {
      "class": "PDETMunicipalPlanAnalyzer",
      "function": "_compute_robustness_value",
      "method_type": "analysis",
      "priority": 4,
      "description": "PDETMunicipalPlanAnalyzer._compute_robustness_value"
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    {
      "class": "PDETMunicipalPlanAnalyzer",
      "function": "_compute_e_value",
      "method_type": "analysis",
      "priority": 5,
      "description": "PDETMunicipalPlanAnalyzer._compute_e_value"
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  ],
  {

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    "method_type": "analysis",
    "priority": 6,
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  {
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    "function": "_audit_systemic_risk",
    "method_type": "validation",
    "priority": 7,
    "description": "OperationalizationAuditor._audit_systemic_risk"
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  {
    "class": "BayesianCounterfactualAuditor",
    "function": "aggregate_risk_and_prioritize",
    "method_type": "analysis",
    "priority": 8,
    "description": "BayesianCounterfactualAuditor.aggregate_risk_and_prioritize"
  },
  {
    "class": "BayesianCounterfactualAuditor",
    "function": "refutation_and_sanity_checks",
    "method_type": "analysis",
    "priority": 9,
    "description": "BayesianCounterfactualAuditor.refutation_and_sanity_checks"
  },
  {
    "class": "AdaptivePriorCalculator",
    "function": "sensitivity_analysis",
    "method_type": "analysis",
    "priority": 10,
    "description": "AdaptivePriorCalculator.sensitivity_analysis"
  }
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"patterns": [
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    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q009-000",
    "match_type": "REGEX",
    "pattern": "riesgos:|posibles dificultades:|barreras a la implementación"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q009-001",
    "match_type": "REGEX",
    "pattern": "obstáculos|desafíos"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q009-002",
    "match_type": "REGEX",
    "pattern": "baja participación de las mujeres|poca asistencia"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q009-003",
    "match_type": "REGEX",
    "pattern": "revictimización|riesgos de seguridad para las víctimas"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",

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        "flags": "i",
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        "pattern": "sostenibilidad de los emprendimientos"
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        "category": "GENERAL",
        "confidence_weight": 0.85,
        "flags": "i",
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        "category": "GENERAL",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q009-007",
        "match_type": "REGEX",
        "pattern": "medidas de mitigación|plan de contingencia|para mitigar"
    },
    {
        "category": "GENERAL",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q009-008",
        "match_type": "REGEX",
        "pattern": "se realizará seguimiento|estrategia de monitoreo de riesgos"
    }
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"question_global": 9,
"question_id": "Q009",
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"scoring_modality": "TYPE_A",
"text": "¿El plan identifica posibles riesgos, 'obstáculos' o 'barreras' en la
implementación de las actividades de género (ej. revictimización, baja participación) y propone
'medidas de mitigación'?",
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    "dimension_id": "DIM02",
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            "type": "complementariedad_explicita"
        },
        {
            "required": true,
            "type": "secuenciacion_logica"
        }
    ]
},
"failure_contract": {
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"method_sets": [
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    "priority": 1,
    "description": "PolicyContradictionDetector._detect_logical_incompatibilities"
  },
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    "class": "PolicyContradictionDetector",
    "function": "_calculate_coherence_metrics",
    "method_type": "scoring",
    "priority": 2,
    "description": "PolicyContradictionDetector._calculate_coherence_metrics"
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  {
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    "function": "_calculate_objective_alignment",
    "method_type": "scoring",
    "priority": 3,
    "description": "PolicyContradictionDetector._calculate_objective_alignment"
  },
  {
    "class": "PolicyContradictionDetector",
    "function": "_calculate_graph_fragmentation",
    "method_type": "scoring",
    "priority": 4,
    "description": "PolicyContradictionDetector._calculate_graph_fragmentation"
  },
  {
    "class": "OperationalizationAuditor",
    "function": "audit_sequence_logic",
    "method_type": "validation",
    "priority": 5,
    "description": "OperationalizationAuditor.audit_sequence_logic"
  },
  {
    "class": "BayesianMechanismInference",
    "function": "_calculate_coherence_factor",
    "method_type": "scoring",
    "priority": 6,
    "description": "BayesianMechanismInference._calculate_coherence_factor"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_score_causal_coherence",
    "method_type": "scoring",
    "priority": 7,
    "description": "PDETMunicipalPlanAnalyzer._score_causal_coherence"
  },
  {
    "class": "AdaptivePriorCalculator",
    "function": "calculate_likelihood_adaptativo",
    "method_type": "scoring",
    "priority": 8,
    "description": "AdaptivePriorCalculator.calculate_likelihood_adaptativo"
  }
],
"patterns": [
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q010-000",
    "match_type": "REGEX",
    "pattern": "de manera articulada|en complemento a|integralmente"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q010-001",
    "match_type": "LITERAL",
    "pattern": "sinergia entre|se refuerza con"
  },
  {

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        "category": "GENERAL",
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        "flags": "i",
        "id": "PAT-Q010-002",
        "match_type": "REGEX",
        "pattern": "la actividad X es prerequisite para la actividad Y"
    },
    {
        "category": "GENERAL",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q010-003",
        "match_type": "REGEX",
        "pattern": "en una primera fase se realizará... y luego..."
    },
    {
        "category": "GENERAL",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q010-004",
        "match_type": "LITERAL",
        "pattern": "la estrategia combina prevención, atención y acceso a la justicia"
    },
    {
        "category": "GENERAL",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q010-005",
        "match_type": "REGEX",
        "pattern": "el programa de autonomía económica se complementa con el de prevención de
VBG"
    },
    {
        "category": "GENERAL",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q010-006",
        "match_type": "REGEX",
        "pattern": "evitando duplicidad de esfuerzos|no redundancia"
    }
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"question_global": 10,
"question_id": "Q010",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿El conjunto de actividades de género demuestra una estrategia coherente? Se debe
buscar evidencia de 'complementariedad', 'sinergia', o una 'secuencia' lógica entre ellas.",
"validations": {}
},
{
    "base_slot": "D3-Q1",
    "cluster_id": "CL02",
    "dimension_id": "DIM03",
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            "required": true,
            "type": "fuente_verificacion"
        },
        {
            "required": true,
            "type": "linea_base_producto"
        },
        {
            "required": true,
            "type": "meta_cuantitativa"
        }
    ]
},
"failure_contract": {
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        "missing_required_element",
        "incomplete_text"
    ]
}

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"function": "_score_indicators",
"method_type": "scoring",
"priority": 1,
"description": "PDETMunicipalPlanAnalyzer._score_indicators"
},
{
"class": "OperationalizationAuditor",
"function": "audit_evidence_traceability",
"method_type": "validation",
"priority": 2,
"description": "OperationalizationAuditor.audit_evidence_traceability"
},
{
"class": "CausalInferenceSetup",
"function": "assign_probative_value",
"method_type": "analysis",
"priority": 3,
"description": "CausalInferenceSetup.assign_probative_value"
},
{
"class": "BeachEvidentialTest",
"function": "apply_test_logic",
"method_type": "analysis",
"priority": 4,
"description": "BeachEvidentialTest.apply_test_logic"
},
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"function": "diagnose_critical_links",
"method_type": "analysis",
"priority": 5,
"description": "TextMiningEngine.diagnose_critical_links"
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{
"class": "IndustrialPolicyProcessor",
"function": "_extract_metadata",
"method_type": "extraction",
"priority": 6,
"description": "IndustrialPolicyProcessor._extract_metadata"
},
{
"class": "IndustrialPolicyProcessor",
"function": "_calculate_quality_score",
"method_type": "scoring",
"priority": 7,
"description": "IndustrialPolicyProcessor._calculate_quality_score"
},
{
"class": "AdaptivePriorCalculator",
"function": "generate_traceability_record",
"method_type": "analysis",
"priority": 8,
"description": "AdaptivePriorCalculator.generate_traceability_record"
}
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"patterns": [
{
"category": "INDICADOR",
"confidence_weight": 0.85,
"flags": "i",
"id": "PAT-Q011-000",
"match_type": "REGEX",
"pattern": "indicador de producto|meta de producto"
},
{
"category": "GENERAL",

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    "flags": "i",
    "id": "PAT-Q011-001",
    "match_type": "REGEX",
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  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q011-002",
    "match_type": "REGEX",
    "pattern": "emprendimientos apoyados|unidades productivas"
  },
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    "confidence_weight": 0.85,
    "flags": "i",
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    "match_type": "REGEX",
    "pattern": "casos atendidos|mujeres asistidas"
  },
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    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q011-004",
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    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q011-005",
    "match_type": "REGEX",
    "pattern": "Meta Cuatrienio:|Meta:|Valor esperado:"
  },
  {
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    "confidence_weight": 0.85,
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    "pattern": "Fuente de verificación:|Medio de verificación:|Fuente:"
  },
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    "confidence_weight": 0.85,
    "flags": "i",
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    "pattern": "listados de asistencia|actas de entrega|registros administrativos"
  },
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    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q011-008",
    "match_type": "REGEX",
    "pattern": "informes de supervisión|sistema de seguimiento"
  },
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    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q011-009",
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    "pattern": "Ficha de Indicador|Anexo de metas"
  }
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"policy_area_id": "PA01",

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"question_global": 11,
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"scoring_definition_ref": "scoring_modalities.TYPE_A",
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"text": "¿Los indicadores de producto para género (ej. mujeres capacitadas, kits entregados)
incluyen 'línea base', 'meta' cuantitativa, y 'fuente de verificación'?",
"validations": {}
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  "cluster_id": "CL02",
  "dimension_id": "DIM03",
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    {
      "required": true,
      "type": "proporcionalidad_meta_brecha"
    }
  ],
  "failure_contract": {
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      "method_type": "scoring",
      "priority": 1,
      "description": "AdvancedDAGValidator._calculate_bayesian_posterior"
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      "function": "_calculate_confidence_interval",
      "method_type": "scoring",
      "priority": 2,
      "description": "AdvancedDAGValidator._calculate_confidence_interval"
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      "method_type": "analysis",
      "priority": 3,
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      "method_type": "analysis",
      "priority": 4,
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      "method_type": "analysis",
      "priority": 5,
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      "method_type": "analysis",
      "priority": 6,
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  "priority": 8,
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  "priority": 9,
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  "priority": 11,
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  "priority": 12,
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  "method_type": "scoring",
  "priority": 13,
  "description": "AdaptivePriorCalculator.calculate_likelihood_adaptativo"
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  "function": "_calculate_quality_score",
  "method_type": "scoring",
  "priority": 14,
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  "function": "_generar_sugerencias_internas",
  "method_type": "analysis",
  "priority": 15,
  "description": "TeoriaCambio._generar_sugerencias_internas"
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  "priority": 16,
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    "priority": 19,
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    "priority": 20,
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    "function": "_empty_result",
    "method_type": "analysis",
    "priority": 21,
    "description": "IndustrialPolicyProcessor._empty_result"
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    "flags": "i",
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    "pattern": "cobertura del|atenderá al \\d+% de la población objetivo"
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    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q012-001",
    "match_type": "REGEX",
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    "confidence_weight": 0.85,
    "flags": "i",
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    "pattern": "población objetivo de|universo de atención"
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    "flags": "i",
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    "flags": "i",
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    "flags": "i",
    "id": "PAT-Q012-007",
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    "pattern": "dosificación del apoyo económico"
  },
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    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q012-008",
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    "pattern": "análisis de costo-efectividad|recursos disponibles permiten esta cobertura"
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"policy_area_id": "PA01",
"question_global": 12,
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"scoring_definition_ref": "scoring_modalities.TYPE_A",
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"text": "¿Las metas de los productos de género (ej. 'cobertura del 15% de mujeres rurales') son proporcionales a la magnitud de la brecha diagnosticada? Se debe buscar si se define la 'intensidad' o 'frecuencia' de la intervención.",
"validations": {}
},
{
  "base_slot": "D3-Q3",
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      "required": true,
      "type": "trazabilidad_presupuestal"
    }
  ]
},
"failure_contract": {
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    "priority": 5,
    "description": "PDETMunicipalPlanAnalyzer.identify_responsible_entities"
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    "priority": 6,
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    "priority": 7,
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    "priority": 8,
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    "priority": 10,
    "description": "PolicyAnalysisEmbedder._apply_mmr"
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    "method_type": "analysis",
    "priority": 11,
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  "priority": 13,
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  "method_type": "analysis",
  "priority": 14,
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  "method_type": "analysis",
  "priority": 15,
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  "method_type": "analysis",
  "priority": 16,
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  "priority": 17,
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  "function": "_compute_evidence_confidence",
  "method_type": "analysis",
  "priority": 18,
  "description": "IndustrialPolicyProcessor._compute_evidence_confidence"
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  "method_type": "analysis",
  "priority": 19,
  "description": "PDETMunicipalPlanAnalyzer._entity_to_dict"
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  "function": "generate_traceability_record",
  "method_type": "analysis",
  "priority": 20,
  "description": "AdaptivePriorCalculator.generate_traceability_record"
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  "priority": 21,
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    "pattern": "código BPIN|proyecto de inversión asociado"
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    "flags": "i",
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    "flags": "i",
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    "flags": "i",
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    "flags": "i",
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    "match_type": "REGEX",
    "pattern": "articulado con la Comisaría de Familia"
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    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q013-006",
    "match_type": "REGEX",
    "pattern": "corresponsabilidad de|en alianza con"
  }
],
"policy_area_id": "PA01",
"question_global": 13,
"question_id": "Q013",
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"scoring_modality": "TYPE_A",
"text": "¿Los productos de género tienen trazabilidad presupuestal (vinculados a códigos BPIN, PPI) y organizacional (asociados a una 'Secretaría de la Mujer' o dependencia responsable)?",

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      "type": "factibilidad_tecnica"
    },
    {
      "required": true,
      "type": "realismo_plazos"
    }
  ],
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      "priority": 5,
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      "priority": 6,
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    "priority": 8,
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    "priority": 10,
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    "method_type": "analysis",
    "priority": 11,
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    "method_type": "analysis",
    "priority": 12,
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    "priority": 13,
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    "method_type": "analysis",
    "priority": 14,
    "description": "IndustrialGradeValidator.execute_suite"
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    "priority": 15,
    "description": "IndustrialGradeValidator.validate_connection_matrix"
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    "method_type": "analysis",
    "priority": 16,
    "description": "IndustrialGradeValidator.run_performance_benchmarks"
  },
  {
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    "function": "_benchmark_operation",
    "method_type": "analysis",

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    "priority": 17,
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  {
    "class": "IndustrialGradeValidator",
    "function": "_log_metric",
    "method_type": "analysis",
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    "function": "validate_engine_readiness",
    "method_type": "validation",
    "priority": 19,
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    "priority": 20,
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    "priority": 21,
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    "method_type": "scoring",
    "priority": 22,
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    "priority": 23,
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    "priority": 24,
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    "function": "validate_causal_categories",
    "method_type": "validation",
    "priority": 25,
    "description": "IndustrialGradeValidator.validate_causal_categories"
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    "function": "_extraer_categorias",
    "method_type": "analysis",
    "priority": 26,
    "description": "TeoriaCambio._extraer_categorias"
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    "flags": "i",

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      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q014-001",
      "match_type": "REGEX",
      "pattern": "capacidad operativa para|recursos humanos suficientes para"
    },
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      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q014-002",
      "match_type": "REGEX",
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      "match_type": "LITERAL",
      "pattern": "la meta es ambiciosa pero alcanzable"
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      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q014-004",
      "match_type": "REGEX",
      "pattern": "contradictorio|poco probable|desproporcionado"
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    {
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      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q014-005",
      "match_type": "REGEX",
      "pattern": "con los recursos asignados se puede lograr"
    }
  ],
  "policy_area_id": "PA01",
  "question_global": 14,
  "question_id": "Q014",
  "scoring_definition_ref": "scoring_modalities.TYPE_A",
  "scoring_modality": "TYPE_A",
  "text": "¿Existe una relación factible entre la actividad (ej. 'un taller de formación') y la meta del producto asociado (ej. '5.000 mujeres emprendedoras') para el área de Derechos de las mujeres e igualdad de género? Se debe evaluar si los 'plazos' y recursos son realistas.",
  "validations": {}
},
{
  "base_slot": "D3-Q5",
  "cluster_id": "CL02",
  "dimension_id": "DIM03",
  "expected_elements": [
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      "type": "conexion_producto_resultado"
    },
    {
      "required": true,
      "type": "mecanismo_causal_explicito"
    }
  ],
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    "priority": 1,
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    "method_type": "analysis",
    "priority": 2,
    "description": "PDETMunicipalPlanAnalyzer._effect_to_dict"
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    "function": "_scenario_to_dict",
    "method_type": "analysis",
    "priority": 3,
    "description": "PDETMunicipalPlanAnalyzer._scenario_to_dict"
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    "method_type": "analysis",
    "priority": 4,
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    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_generate_recommendations",
    "method_type": "analysis",
    "priority": 5,
    "description": "PDETMunicipalPlanAnalyzer._generate_recommendations"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_identify_causal_nodes",
    "method_type": "analysis",
    "priority": 6,
    "description": "PDETMunicipalPlanAnalyzer._identify_causal_nodes"
  },
  {
    "class": "BayesianCounterfactualAuditor",
    "function": "_evaluate_factual",
    "method_type": "analysis",
    "priority": 7,
    "description": "BayesianCounterfactualAuditor._evaluate_factual"
  },
  {
    "class": "BayesianCounterfactualAuditor",
    "function": "_evaluate_counterfactual",
    "method_type": "analysis",
    "priority": 8,
    "description": "BayesianCounterfactualAuditor._evaluate_counterfactual"
  },
  {
    "class": "CausalExtractor",
    "function": "_assess_financial_consistency",
    "method_type": "analysis",
    "priority": 9,
    "description": "CausalExtractor._assess_financial_consistency"
  },
  {
    "class": "BayesianMechanismInference",
    "function": "_infer_activity_sequence",
    "method_type": "analysis",

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    "priority": 10,
    "description": "BayesianMechanismInference._infer_activity_sequence"
  },
  {
    "class": "BayesianMechanismInference",
    "function": "_generate_necessity_remediation",
    "method_type": "analysis",
    "priority": 11,
    "description": "BayesianMechanismInference._generate_necessity_remediation"
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    "class": "BayesianCounterfactualAuditor",
    "function": "refutation_and_sanity_checks",
    "method_type": "analysis",
    "priority": 12,
    "description": "BayesianCounterfactualAuditor.refutation_and_sanity_checks"
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    "function": "_load_questionnaire",
    "method_type": "analysis",
    "priority": 13,
    "description": "IndustrialPolicyProcessor._load_questionnaire"
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    "function": "analyze_financial_feasibility",
    "method_type": "analysis",
    "priority": 14,
    "description": "PDETMunicipalPlanAnalyzer.analyze_financial_feasibility"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "construct_causal_dag",
    "method_type": "analysis",
    "priority": 15,
    "description": "PDETMunicipalPlanAnalyzer.construct_causal_dag"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "estimate_causal_effects",
    "method_type": "analysis",
    "priority": 16,
    "description": "PDETMunicipalPlanAnalyzer.estimate_causal_effects"
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    "function": "generate_counterfactuals",
    "method_type": "analysis",
    "priority": 17,
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    "class": "CausalExtractor",
    "function": "_build_type_hierarchy",
    "method_type": "analysis",
    "priority": 18,
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  },
  {
    "class": "CausalExtractor",
    "function": "_check_structural_violation",
    "method_type": "analysis",
    "priority": 19,
    "description": "CausalExtractor._check_structural_violation"
  },
  {
    "class": "CausalExtractor",
    "function": "_calculate_type_transition_prior",
    "method_type": "scoring",
    "priority": 20,
    "description": "CausalExtractor._calculate_type_transition_prior"
  }

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},
{
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  "function": "_calculate_textual_proximity",
  "method_type": "scoring",
  "priority": 21,
  "description": "CausalExtractor._calculate_textual_proximity"
},
{
  "class": "TeoriaCambio",
  "function": "_validar_orden_causal",
  "method_type": "analysis",
  "priority": 22,
  "description": "TeoriaCambio._validar_orden_causal"
},
{
  "class": "PDETMunicipalPlanAnalyzer",
  "function": "_refine_edge_probabilities",
  "method_type": "analysis",
  "priority": 23,
  "description": "PDETMunicipalPlanAnalyzer._refine_edge_probabilities"
},
{
  "class": "PolicyAnalysisEmbedder",
  "function": "compare_policy_interventions",
  "method_type": "analysis",
  "priority": 24,
  "description": "PolicyAnalysisEmbedder.compare_policy_interventions"
},
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  "class": "BayesianMechanismInference",
  "function": "infer_mechanisms",
  "method_type": "analysis",
  "priority": 25,
  "description": "BayesianMechanismInference.infer_mechanisms"
}
],
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    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q015-000",
    "match_type": "REGEX",
    "pattern": "esto permitirá que|lo cual contribuirá a|generando así"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q015-001",
    "match_type": "LITERAL",
    "pattern": "el mecanismo es|la lógica es que"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q015-002",
    "match_type": "REGEX",
    "pattern": "a través de las capacitaciones, las mujeres mejorarán sus ingresos"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q015-003",
    "match_type": "REGEX",
    "pattern": "el fortalecimiento de las Comisarías se traducirá en una mejor atención"
  },
  {
    "category": "GENERAL",

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    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q015-004",
    "match_type": "REGEX",
    "pattern": "variable intermedia|mediador|eslabón causal"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q015-005",
    "match_type": "REGEX",
    "pattern": "cadena de valor|ruta de cambio"
  }
],
"policy_area_id": "PA01",
"question_global": 15,
"question_id": "Q015",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿El PDM explica cómo los productos de la política de género (ej. 'mujeres capacitadas') contribuyen a generar resultados (ej. 'aumento de ingresos')? Se debe buscar la descripción de este 'mecanismo' o 'eslabón' causal.",
"validations": {}
},
{
  "base_slot": "D4-Q1",
  "cluster_id": "CL02",
  "dimension_id": "DIM04",
  "expected_elements": [
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      "required": true,
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    },
    {
      "required": true,
      "type": "linea_base_resultado"
    },
    {
      "required": true,
      "type": "meta_resultado"
    },
    {
      "required": true,
      "type": "metrica_outcome"
    }
  ],
"failure_contract": {
  "abort_if": [
    "missing_required_element",
    "incomplete_text"
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  "emit_code": "ABORT-Q016-REQ"
},
"method_sets": [
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    "function": "_extract_entities_syntax",
    "method_type": "extraction",
    "priority": 1,
    "description": "PDETMunicipalPlanAnalyzer._extract_entities_syntax"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_extract_entities_ner",
    "method_type": "extraction",
    "priority": 2,
    "description": "PDETMunicipalPlanAnalyzer._extract_entities_ner"
  },
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    "function": "_calculate_language_specificity",

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    "method_type": "scoring",
    "priority": 3,
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    "method_type": "scoring",
    "priority": 4,
    "description": "CausalExtractor._calculate_composite_likelihood"
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    "function": "_calculate_semantic_distance",
    "method_type": "scoring",
    "priority": 5,
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    "method_type": "analysis",
    "priority": 6,
    "description": "TemporalLogicVerifier._classify_temporal_type"
  },
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    "method_type": "scoring",
    "priority": 7,
    "description": "PDETMunicipalPlanAnalyzer._score_indicators"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_find_outcome_mentions",
    "method_type": "analysis",
    "priority": 8,
    "description": "PDETMunicipalPlanAnalyzer._find_outcome_mentions"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_score_temporal_consistency",
    "method_type": "scoring",
    "priority": 9,
    "description": "PDETMunicipalPlanAnalyzer._score_temporal_consistency"
  },
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    "function": "_extract_goals",
    "method_type": "extraction",
    "priority": 10,
    "description": "CausalExtractor._extract_goals"
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    "function": "_parse_goal_context",
    "method_type": "extraction",
    "priority": 11,
    "description": "CausalExtractor._parse_goal_context"
  },
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    "class": "CausalExtractor",
    "function": "_classify_goal_type",
    "method_type": "analysis",
    "priority": 12,
    "description": "CausalExtractor._classify_goal_type"
  },
  {
    "class": "TemporalLogicVerifier",
    "function": "_parse_temporal_marker",
    "method_type": "extraction",
    "priority": 13,

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    "description": "TemporalLogicVerifier._parse_temporal_marker"
  },
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    "function": "_extract_resources",
    "method_type": "extraction",
    "priority": 14,
    "description": "TemporalLogicVerifier._extract_resources"
  },
  {
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    "function": "analyze_performance",
    "method_type": "analysis",
    "priority": 15,
    "description": "PerformanceAnalyzer.analyze_performance"
  },
  {
    "class": "PerformanceAnalyzer",
    "function": "_generate_recommendations",
    "method_type": "analysis",
    "priority": 16,
    "description": "PerformanceAnalyzer._generate_recommendations"
  }
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    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q016-000",
    "match_type": "REGEX",
    "pattern": "indicador de resultado|indicador de efecto|outcome"
  },
  {
    "category": "INDICADOR",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q016-001",
    "match_type": "REGEX",
    "pattern": "tasa de violencia|tasa de feminicidios|brecha salarial"
  },
  {
    "category": "INDICADOR",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q016-002",
    "match_type": "REGEX",
    "pattern": "porcentaje de participación política|índice de autonomía económica"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q016-003",
    "match_type": "LITERAL",
    "pattern": "Línea Base:|LB:|valor 2023:"
  },
  {
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    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q016-004",
    "match_type": "REGEX",
    "pattern": "Meta Cuatrienio:|Meta 2027:|se espera reducir a"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q016-005",
    "match_type": "REGEX",
    "pattern": "Fuente de verificación:|Medio de verificación:"
  }
]

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    },
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      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q016-006",
      "match_type": "REGEX",
      "pattern": "Ficha de Indicador de Resultado (KPT)"
    },
    {
      "category": "TEMPORAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q016-007",
      "match_type": "REGEX",
      "pattern": "horizonte temporal|ventana de maduración|al final del periodo"
    }
  ],
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  "question_global": 16,
  "question_id": "Q016",
  "scoring_definition_ref": "scoring_modalities.TYPE_A",
  "scoring_modality": "TYPE_A",
  "text": "¿Los indicadores de resultado para género (ej. 'tasa de participación política', 'reducción de la VBG') están definidos con línea base, meta y un horizonte temporal ('cuatrienio', 'para 2027')?",
  "validations": {}
},
{
  "base_slot": "D4-Q2",
  "cluster_id": "CL02",
  "dimension_id": "DIM04",
  "expected_elements": [
    {
      "required": true,
      "type": "cadena_causal_explicita"
    },
    {
      "required": true,
      "type": "condiciones_habilitantes"
    },
    {
      "required": true,
      "type": "supuestos_identificados"
    }
  ],
  "failure_contract": {
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      "incomplete_text"
    ],
    "emit_code": "ABORT-Q017-REQ"
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      "function": "_encontrar_caminos_completos",
      "method_type": "analysis",
      "priority": 1,
      "description": "TeoriaCambio._encontrar_caminos_completos"
    },
    {
      "class": "TeoriaCambio",
      "function": "validacion_completa",
      "method_type": "analysis",
      "priority": 2,
      "description": "TeoriaCambio.validacion_completa"
    },
    {
      "class": "CausalExtractor",
      "function": "extract_causal_hierarchy",
      "method_type": "extraction",

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    "priority": 3,
    "description": "CausalExtractor.extract_causal_hierarchy"
  },
  {
    "class": "HierarchicalGenerativeModel",
    "function": "verify_conditional_independence",
    "method_type": "analysis",
    "priority": 4,
    "description": "HierarchicalGenerativeModel.verify_conditional_independence"
  },
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    "class": "HierarchicalGenerativeModel",
    "function": "_generate_independence_tests",
    "method_type": "analysis",
    "priority": 5,
    "description": "HierarchicalGenerativeModel._generate_independence_tests"
  },
  {
    "class": "BayesianCounterfactualAuditor",
    "function": "construct_scm",
    "method_type": "analysis",
    "priority": 6,
    "description": "BayesianCounterfactualAuditor.construct_scm"
  },
  {
    "class": "AdvancedDAGValidator",
    "function": "_perform_sensitivity_analysis_internal",
    "method_type": "analysis",
    "priority": 7,
    "description": "AdvancedDAGValidator._perform_sensitivity_analysis_internal"
  },
  {
    "class": "BayesFactorTable",
    "function": "get_bayes_factor",
    "method_type": "analysis",
    "priority": 8,
    "description": "BayesFactorTable.get_bayes_factor"
  }
],
"patterns": [
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    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q017-000",
    "match_type": "REGEX",
    "pattern": "cadena causal|lógica de intervención|si... entonces..."
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q017-001",
    "match_type": "REGEX",
    "pattern": "el resultado se logrará siempre y cuando|asumiendo que"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q017-002",
    "match_type": "REGEX",
    "pattern": "supuesto clave|premisa fundamental"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q017-003",
    "match_type": "REGEX",
    "pattern": "condición habilitante|factor crítico|requiere de"
  },
],

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{
  "category": "GENERAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q017-004",
  "match_type": "REGEX",
  "pattern": "depende de la articulaci3n con|necesita de la participaci3n de"
},
{
  "category": "GENERAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q017-005",
  "match_type": "REGEX",
  "pattern": "un supuesto es que las mujeres se apropien de las herramientas"
},
{
  "category": "GENERAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q017-006",
  "match_type": "LITERAL",
  "pattern": "se requiere un cambio cultural para que"
}
],
"policy_area_id": "PA01",
"question_global": 17,
"question_id": "Q017",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿Se explicita la cadena causal que lleva a los resultados de g3nero, mencionando
los 'supuestos' clave (ej. 'si las mujeres denuncian') o las 'condiciones habilitantes' para que
funcione?",
"validations": {}
},
{
  "base_slot": "D4-Q3",
  "cluster_id": "CL02",
  "dimension_id": "DIM04",
  "expected_elements": [
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      "required": true,
      "type": "evidencia_comparada"
    },
    {
      "required": true,
      "type": "justificacion_capacidad"
    },
    {
      "required": true,
      "type": "justificacion_recursos"
    }
  ],
  "failure_contract": {
    "abort_if": [
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      "incomplete_text"
    ],
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  },
  "method_sets": [
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      "class": "PDETMunicipalPlanAnalyzer",
      "function": "_get_prior_effect",
      "method_type": "analysis",
      "priority": 1,
      "description": "PDETMunicipalPlanAnalyzer._get_prior_effect"
    },
    {
      "class": "PDETMunicipalPlanAnalyzer",
      "function": "_estimate_effect_bayesian",
      "method_type": "analysis",

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    "priority": 2,
    "description": "PDETMunicipalPlanAnalyzer._estimate_effect_bayesian"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_compute_robustness_value",
    "method_type": "analysis",
    "priority": 3,
    "description": "PDETMunicipalPlanAnalyzer._compute_robustness_value"
  },
  {
    "class": "AdaptivePriorCalculator",
    "function": "sensitivity_analysis",
    "method_type": "analysis",
    "priority": 4,
    "description": "AdaptivePriorCalculator.sensitivity_analysis"
  },
  {
    "class": "HierarchicalGenerativeModel",
    "function": "_calculate_r_hat",
    "method_type": "scoring",
    "priority": 5,
    "description": "HierarchicalGenerativeModel._calculate_r_hat"
  },
  {
    "class": "HierarchicalGenerativeModel",
    "function": "_calculate_ess",
    "method_type": "scoring",
    "priority": 6,
    "description": "HierarchicalGenerativeModel._calculate_ess"
  },
  {
    "class": "AdvancedDAGValidator",
    "function": "_calculate_statistical_power",
    "method_type": "scoring",
    "priority": 7,
    "description": "AdvancedDAGValidator._calculate_statistical_power"
  },
  {
    "class": "BayesianMechanismInference",
    "function": "_aggregate_bayesian_confidence",
    "method_type": "analysis",
    "priority": 8,
    "description": "BayesianMechanismInference._aggregate_bayesian_confidence"
  }
],
"patterns": [
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    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q018-000",
    "match_type": "REGEX",
    "pattern": "meta ambiciosa pero factible|meta realista dado el presupuesto"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q018-001",
    "match_type": "LITERAL",
    "pattern": "la meta se justifica por|esta meta es coherente con"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q018-002",
    "match_type": "REGEX",
    "pattern": "con la inversión de X se espera lograr una reducción de Y"
  },
  {

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        "category": "GENERAL",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q018-003",
        "match_type": "REGEX",
        "pattern": "la capacidad de la Comisaría permite aspirar a esta meta"
    },
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        "category": "GENERAL",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q018-004",
        "match_type": "REGEX",
        "pattern": "en experiencias similares|en otros municipios se ha logrado"
    },
    {
        "category": "GENERAL",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q018-005",
        "match_type": "LITERAL",
        "pattern": "benchmark|referente nacional|meta ODS"
    },
    {
        "category": "GENERAL",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q018-006",
        "match_type": "REGEX",
        "pattern": "análisis de viabilidad de la meta"
    }
],
"policy_area_id": "PA01",
"question_global": 18,
"question_id": "Q018",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿La ambición de las metas de resultado en materia de género (ej. 'reducir la brecha salarial en 10%') se justifica en función de los recursos asignados, la capacidad institucional o se compara con 'casos' similares?",
"validations": {}
},
{
    "base_slot": "D4-Q4",
    "cluster_id": "CL02",
    "dimension_id": "DIM04",
    "expected_elements": [
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            "required": true,
            "type": "criterios_exito_definidos"
        },
        {
            "required": true,
            "type": "vinculo_resultado_problema"
        }
    ]
},
"failure_contract": {
    "abort_if": [
        "missing_required_element",
        "incomplete_text"
    ],
    "emit_code": "ABORT-Q019-REQ"
},
"method_sets": [
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        "function": "_calculate_objective_alignment",
        "method_type": "scoring",
        "priority": 1,
        "description": "PolicyContradictionDetector._calculate_objective_alignment"
    },
    {

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    "class": "PolicyContradictionDetector",
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    "method_type": "analysis",
    "priority": 2,
    "description": "PolicyContradictionDetector._identify_affected_sections"
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    "class": "PolicyContradictionDetector",
    "function": "_generate_resolution_recommendations",
    "method_type": "analysis",
    "priority": 3,
    "description": "PolicyContradictionDetector._generate_resolution_recommendations"
  },
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    "class": "OperationalizationAuditor",
    "function": "_generate_optimal_remediations",
    "method_type": "analysis",
    "priority": 4,
    "description": "OperationalizationAuditor._generate_optimal_remediations"
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  {
    "class": "OperationalizationAuditor",
    "function": "_get_remediation_text",
    "method_type": "analysis",
    "priority": 5,
    "description": "OperationalizationAuditor._get_remediation_text"
  },
  {
    "class": "BayesianCounterfactualAuditor",
    "function": "aggregate_risk_and_prioritize",
    "method_type": "analysis",
    "priority": 6,
    "description": "BayesianCounterfactualAuditor.aggregate_risk_and_prioritize"
  },
  {
    "class": "FinancialAuditor",
    "function": "_detect_allocation_gaps",
    "method_type": "analysis",
    "priority": 7,
    "description": "FinancialAuditor._detect_allocation_gaps"
  }
],
"patterns": [
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q019-000",
    "match_type": "REGEX",
    "pattern": "este resultado responde al problema de|para solucionar la brecha de"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q019-001",
    "match_type": "REGEX",
    "pattern": "el resultado atiende directamente|aborda la causa de"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q019-002",
    "match_type": "REGEX",
    "pattern": "criterio de éxito|se considerará un logro si"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q019-003",

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    "match_type": "REGEX",
    "pattern": "umbral de cumplimiento|mínimo aceptable"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q019-004",
    "match_type": "REGEX",
    "pattern": "matriz de coherencia|alineación diagnóstico-estrategia"
  }
],
"policy_area_id": "PA01",
"question_global": 19,
"question_id": "Q019",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿Los resultados propuestos para la igualdad de género (ej. 'aumento de la autonomía económica') 'atienden' o 'abordan' directamente los problemas priorizados en el diagnóstico?",
"validations": {}
},
{
  "base_slot": "D4-Q5",
  "cluster_id": "CL02",
  "dimension_id": "DIM04",
  "expected_elements": [
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      "required": true,
      "type": "alineacion_ods"
    },
    {
      "required": true,
      "type": "alineacion_pnd"
    }
  ],
  "failure_contract": {
    "abort_if": [
      "missing_required_element",
      "incomplete_text"
    ],
    "emit_code": "ABORT-Q020-REQ"
  },
  "method_sets": [
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      "class": "PDETMunicipalPlanAnalyzer",
      "function": "_score_pdet_alignment",
      "method_type": "scoring",
      "priority": 1,
      "description": "PDETMunicipalPlanAnalyzer._score_pdet_alignment"
    },
    {
      "class": "PDETMunicipalPlanAnalyzer",
      "function": "_score_causal_coherence",
      "method_type": "scoring",
      "priority": 2,
      "description": "PDETMunicipalPlanAnalyzer._score_causal_coherence"
    },
    {
      "class": "CDAFFramework",
      "function": "_validate_dnp_compliance",
      "method_type": "validation",
      "priority": 3,
      "description": "CDAFFramework._validate_dnp_compliance"
    },
    {
      "class": "CDAFFramework",
      "function": "_generate_dnp_report",
      "method_type": "analysis",
      "priority": 4,
      "description": "CDAFFramework._generate_dnp_report"
    }
  ]
}

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    "class": "IndustrialPolicyProcessor",
    "function": "_analyze_causal_dimensions",
    "method_type": "analysis",
    "priority": 5,
    "description": "IndustrialPolicyProcessor._analyze_causal_dimensions"
  },
  {
    "class": "AdaptivePriorCalculator",
    "function": "validate_quality_criteria",
    "method_type": "validation",
    "priority": 6,
    "description": "AdaptivePriorCalculator.validate_quality_criteria"
  }
],
"patterns": [
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q020-000",
    "match_type": "REGEX",
    "pattern": "alineado con el Plan Nacional de Desarrollo|PND"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q020-001",
    "match_type": "REGEX",
    "pattern": "contribuye al ODS 5|Objetivos de Desarrollo Sostenible"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q020-002",
    "match_type": "REGEX",
    "pattern": "en concordancia con la Política Pública de Equidad de Género|PPEG"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q020-003",
    "match_type": "REGEX",
    "pattern": "articulado con el CONPES de equidad de género"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q020-004",
    "match_type": "REGEX",
    "pattern": "transformación del PND|eje de convergencia social-regional"
  }
],
"policy_area_id": "PA01",
"question_global": 20,
"question_id": "Q020",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿El plan declara la alineación de sus resultados de género con marcos superiores como el PND o los ODS (especialmente el ODS 5)?",
"validations": {}
},
{
  "base_slot": "D5-Q1",
  "cluster_id": "CL02",
  "dimension_id": "DIM05",
  "expected_elements": [
    {
      "required": true,

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    "type": "impacto_definido"
  },
  {
    "required": true,
    "type": "rezago_temporal"
  },
  {
    "required": true,
    "type": "ruta_transmision"
  }
],
"failure_contract": {
  "abort_if": [
    "missing_required_element",
    "incomplete_text"
  ],
  "emit_code": "ABORT-Q021-REQ"
},
"method_sets": [
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    "class": "PDETMunicipalPlanAnalyzer",
    "function": "generate_counterfactuals",
    "method_type": "analysis",
    "priority": 1,
    "description": "PDETMunicipalPlanAnalyzer.generate_counterfactuals"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_simulate_intervention",
    "method_type": "analysis",
    "priority": 2,
    "description": "PDETMunicipalPlanAnalyzer._simulate_intervention"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_generate_scenario_narrative",
    "method_type": "analysis",
    "priority": 3,
    "description": "PDETMunicipalPlanAnalyzer._generate_scenario_narrative"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_find_mediator_mentions",
    "method_type": "analysis",
    "priority": 4,
    "description": "PDETMunicipalPlanAnalyzer._find_mediator_mentions"
  },
  {
    "class": "TeoriaCambio",
    "function": "_validar_orden_causal",
    "method_type": "analysis",
    "priority": 5,
    "description": "TeoriaCambio._validar_orden_causal"
  },
  {
    "class": "CausalExtractor",
    "function": "_assess_temporal_coherence",
    "method_type": "analysis",
    "priority": 6,
    "description": "CausalExtractor._assess_temporal_coherence"
  },
  {
    "class": "TextMiningEngine",
    "function": "_generate_interventions",
    "method_type": "analysis",
    "priority": 7,
    "description": "TextMiningEngine._generate_interventions"
  },
  {
    "class": "BayesianCounterfactualAuditor",
    "function": "construct_scm",
    "method_type": "analysis",

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    "priority": 8,
    "description": "BayesianCounterfactualAuditor.construct_scm"
  }
],
"patterns": [
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q021-000",
    "match_type": "REGEX",
    "pattern": "impacto esperado|visión de largo plazo|transformación cultural"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q021-001",
    "match_type": "REGEX",
    "pattern": "cambio estructural|erradicación de la VBG"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q021-002",
    "match_type": "REGEX",
    "pattern": "sociedad más equitativa|igualdad real y efectiva"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q021-003",
    "match_type": "REGEX",
    "pattern": "la suma de los resultados generará el impacto de"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q021-004",
    "match_type": "REGEX",
    "pattern": "ruta de transmisión|cadena de impacto"
  },
  {
    "category": "TEMPORAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q021-005",
    "match_type": "REGEX",
    "pattern": "tiempo de maduración|se espera observar en 8 años|más allá del cuatrienio"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q021-006",
    "match_type": "REGEX",
    "pattern": "rezago temporal|efectos de segunda generación"
  }
],
"policy_area_id": "PA01",
"question_global": 21,
"question_id": "Q021",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿El PDM define 'impactos' o 'transformaciones estructurales' de largo plazo en equidad de género? Se debe verificar si se menciona la ruta desde los resultados y el 'tiempo de maduración' esperado.",
"validations": {}
},

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{
  "base_slot": "D5-Q2",
  "cluster_id": "CL02",
  "dimension_id": "DIM05",
  "expected_elements": [
    {
      "required": true,
      "type": "justifica_validez"
    },
    {
      "required": true,
      "type": "usa_indices_compuestos"
    },
    {
      "required": true,
      "type": "usa_proxies"
    }
  ],
  "failure_contract": {
    "abort_if": [
      "missing_required_element",
      "incomplete_text"
    ],
    "emit_code": "ABORT-Q022-REQ"
  },
  "method_sets": [
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      "class": "PDETMunicipalPlanAnalyzer",
      "function": "calculate_quality_score",
      "method_type": "scoring",
      "priority": 1,
      "description": "PDETMunicipalPlanAnalyzer.calculate_quality_score"
    },
    {
      "class": "PDETMunicipalPlanAnalyzer",
      "function": "_estimate_score_confidence",
      "method_type": "scoring",
      "priority": 2,
      "description": "PDETMunicipalPlanAnalyzer._estimate_score_confidence"
    },
    {
      "class": "PDETMunicipalPlanAnalyzer",
      "function": "_compute_e_value",
      "method_type": "analysis",
      "priority": 3,
      "description": "PDETMunicipalPlanAnalyzer._compute_e_value"
    },
    {
      "class": "PDETMunicipalPlanAnalyzer",
      "function": "_compute_robustness_value",
      "method_type": "analysis",
      "priority": 4,
      "description": "PDETMunicipalPlanAnalyzer._compute_robustness_value"
    },
    {
      "class": "PDETMunicipalPlanAnalyzer",
      "function": "_interpret_sensitivity",
      "method_type": "analysis",
      "priority": 5,
      "description": "PDETMunicipalPlanAnalyzer._interpret_sensitivity"
    },
    {
      "class": "ReportingEngine",
      "function": "_calculate_quality_score",
      "method_type": "scoring",
      "priority": 6,
      "description": "ReportingEngine._calculate_quality_score"
    },
    {
      "class": "BayesianMechanismInference",
      "function": "_aggregate_bayesian_confidence",
      "method_type": "analysis",

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    "priority": 7,
    "description": "BayesianMechanismInference._aggregate_bayesian_confidence"
  },
  {
    "class": "PolicyAnalysisEmbedder",
    "function": "evaluate_policy_numerical_consistency",
    "method_type": "analysis",
    "priority": 8,
    "description": "PolicyAnalysisEmbedder.evaluate_policy_numerical_consistency"
  },
  {
    "class": "PolicyAnalysisEmbedder",
    "function": "get_diagnostics",
    "method_type": "analysis",
    "priority": 9,
    "description": "PolicyAnalysisEmbedder.get_diagnostics"
  },
  {
    "class": "PolicyAnalysisEmbedder",
    "function": "process_document",
    "method_type": "analysis",
    "priority": 10,
    "description": "PolicyAnalysisEmbedder.process_document"
  },
  {
    "class": "PolicyAnalysisEmbedder",
    "function": "_generate_query_from_pdq",
    "method_type": "analysis",
    "priority": 11,
    "description": "PolicyAnalysisEmbedder._generate_query_from_pdq"
  },
  {
    "class": "PolicyAnalysisEmbedder",
    "function": "_filter_by_pdq",
    "method_type": "analysis",
    "priority": 12,
    "description": "PolicyAnalysisEmbedder._filter_by_pdq"
  },
  {
    "class": "PolicyAnalysisEmbedder",
    "function": "_extract_numerical_values",
    "method_type": "extraction",
    "priority": 13,
    "description": "PolicyAnalysisEmbedder._extract_numerical_values"
  },
  {
    "class": "PolicyAnalysisEmbedder",
    "function": "_embed_texts",
    "method_type": "analysis",
    "priority": 14,
    "description": "PolicyAnalysisEmbedder._embed_texts"
  },
  {
    "class": "PolicyAnalysisEmbedder",
    "function": "_compute_overall_confidence",
    "method_type": "analysis",
    "priority": 15,
    "description": "PolicyAnalysisEmbedder._compute_overall_confidence"
  },
  {
    "class": "FinancialAuditor",
    "function": "_calculate_sufficiency",
    "method_type": "scoring",
    "priority": 16,
    "description": "FinancialAuditor._calculate_sufficiency"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_interpret_overall_quality",
    "method_type": "analysis",
    "priority": 17,
    "description": "PDETMunicipalPlanAnalyzer._interpret_overall_quality"
  }

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},
{
  "class": "BayesianCounterfactualAuditor",
  "function": "aggregate_risk_and_prioritize",
  "method_type": "analysis",
  "priority": 18,
  "description": "BayesianCounterfactualAuditor.aggregate_risk_and_prioritize"
},
{
  "class": "PolicyTextProcessor",
  "function": "normalize_unicode",
  "method_type": "analysis",
  "priority": 19,
  "description": "PolicyTextProcessor.normalize_unicode"
},
{
  "class": "PolicyTextProcessor",
  "function": "segment_into_sentences",
  "method_type": "analysis",
  "priority": 20,
  "description": "PolicyTextProcessor.segment_into_sentences"
},
{
  "class": "IndustrialPolicyProcessor",
  "function": "_compute_evidence_confidence",
  "method_type": "analysis",
  "priority": 21,
  "description": "IndustrialPolicyProcessor._compute_evidence_confidence"
},
{
  "class": "IndustrialPolicyProcessor",
  "function": "_compute_avg_confidence",
  "method_type": "analysis",
  "priority": 22,
  "description": "IndustrialPolicyProcessor._compute_avg_confidence"
},
{
  "class": "PDETMunicipalPlanAnalyzer",
  "function": "_quality_to_dict",
  "method_type": "analysis",
  "priority": 23,
  "description": "PDETMunicipalPlanAnalyzer._quality_to_dict"
},
{
  "class": "IndustrialPolicyProcessor",
  "function": "_construct_evidence_bundle",
  "method_type": "analysis",
  "priority": 24,
  "description": "IndustrialPolicyProcessor._construct_evidence_bundle"
},
{
  "class": "PolicyTextProcessor",
  "function": "compile_pattern",
  "method_type": "analysis",
  "priority": 25,
  "description": "PolicyTextProcessor.compile_pattern"
},
{
  "class": "PolicyTextProcessor",
  "function": "extract_contextual_window",
  "method_type": "extraction",
  "priority": 26,
  "description": "PolicyTextProcessor.extract_contextual_window"
},
{
  "class": "PDETMunicipalPlanAnalyzer",
  "function": "generate_executive_report",
  "method_type": "analysis",
  "priority": 27,
  "description": "PDETMunicipalPlanAnalyzer.generate_executive_report"
},
{

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    "class": "IndustrialPolicyProcessor",
    "function": "export_results",
    "method_type": "analysis",
    "priority": 28,
    "description": "IndustrialPolicyProcessor.export_results"
  }
],
"patterns": [
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q022-000",
    "match_type": "REGEX",
    "pattern": "Índice de Equidad de Género|Índice de Desigualdad de Género"
  },
  {
    "category": "INDICADOR",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q022-001",
    "match_type": "REGEX",
    "pattern": "indicador compuesto|indicador sintético"
  },
  {
    "category": "INDICADOR",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q022-002",
    "match_type": "REGEX",
    "pattern": "se usará como proxy|indicador aproximado"
  },
  {
    "category": "INDICADOR",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q022-003",
    "match_type": "REGEX",
    "pattern": "la tasa de participación laboral femenina se usa como proxy de la autonomía
económica"
  },
  {
    "category": "INDICADOR",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q022-004",
    "match_type": "REGEX",
    "pattern": "este indicador es válido porque refleja|captura la esencia del cambio"
  }
],
"policy_area_id": "PA01",
"question_global": 22,
"question_id": "Q022",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿Se utilizan 'índices' (ej. Índice de Equidad de Género) o 'proxies' para medir los
impactos en la política de género, justificando por qué son válidos para 'capturar el mecanismo' de
cambio?",
"validations": {}
},
{
  "base_slot": "D5-Q3",
  "cluster_id": "CL02",
  "dimension_id": "DIM05",
  "expected_elements": [
    {
      "required": true,
      "type": "documenta_validez"
    },
    {
      "required": true,
      "type": "proxy_para_intangibles"
    }
  ]
}

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    },
    {
      "required": true,
      "type": "reconoce_limitaciones"
    }
  ],
  "failure_contract": {
    "abort_if": [
      "missing_required_element",
      "incomplete_text"
    ],
    "emit_code": "ABORT-Q023-REQ"
  },
  "method_sets": [
    {
      "class": "CausalExtractor",
      "function": "_calculate_semantic_distance",
      "method_type": "scoring",
      "priority": 1,
      "description": "CausalExtractor._calculate_semantic_distance"
    },
    {
      "class": "SemanticAnalyzer",
      "function": "extract_semantic_cube",
      "method_type": "extraction",
      "priority": 2,
      "description": "SemanticAnalyzer.extract_semantic_cube"
    },
    {
      "class": "BayesianMechanismInference",
      "function": "_quantify_uncertainty",
      "method_type": "analysis",
      "priority": 3,
      "description": "BayesianMechanismInference._quantify_uncertainty"
    },
    {
      "class": "PDETMunicipalPlanAnalyzer",
      "function": "_find_mediator_mentions",
      "method_type": "analysis",
      "priority": 4,
      "description": "PDETMunicipalPlanAnalyzer._find_mediator_mentions"
    },
    {
      "class": "PolicyAnalysisEmbedder",
      "function": "get_diagnostics",
      "method_type": "analysis",
      "priority": 5,
      "description": "PolicyAnalysisEmbedder.get_diagnostics"
    },
    {
      "class": "AdaptivePriorCalculator",
      "function": "_perturb_evidence",
      "method_type": "analysis",
      "priority": 6,
      "description": "AdaptivePriorCalculator._perturb_evidence"
    }
  ],
  "patterns": [
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      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q023-000",
      "match_type": "REGEX",
      "pattern": "dado que es difícil medir|para aproximar la medición de"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q023-001",
      "match_type": "REGEX",

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    "pattern": "se utilizará como proxy|medición indirecta"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q023-002",
    "match_type": "REGEX",
    "pattern": "encuestas de percepción sobre roles de género"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q023-003",
    "match_type": "REGEX",
    "pattern": "este proxy es validado por estudios de|evidencia internacional"
  },
  {
    "category": "INDICADOR",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q023-004",
    "match_type": "REGEX",
    "pattern": "una limitación de este indicador es que no captura|es sensible a"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q023-005",
    "match_type": "LITERAL",
    "pattern": "aunque imperfecto, este proxy nos permite"
  }
],
"policy_area_id": "PA01",
"question_global": 23,
"question_id": "Q023",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "Cuando un impacto en género es difícil de medir (ej. 'cambio en patrones culturales'), ¿se recurre a un 'proxy'? Se valora si el texto documenta su 'validez' y reconoce sus 'limitaciones'.",
"validations": {}
},
{
  "base_slot": "D5-Q4",
  "cluster_id": "CL02",
  "dimension_id": "DIM05",
  "expected_elements": [
    {
      "required": true,
      "type": "alineacion_marcos"
    },
    {
      "required": true,
      "type": "riesgos_sistemicos"
    }
  ],
  "failure_contract": {
    "abort_if": [
      "missing_required_element",
      "incomplete_text"
    ],
    "emit_code": "ABORT-Q024-REQ"
  },
  "method_sets": [
    {
      "class": "OperationalizationAuditor",
      "function": "_audit_systemic_risk",
      "method_type": "validation",
      "priority": 1,

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    "description": "OperationalizationAuditor._audit_systemic_risk"
  },
  {
    "class": "BayesianCounterfactualAuditor",
    "function": "refutation_and_sanity_checks",
    "method_type": "analysis",
    "priority": 2,
    "description": "BayesianCounterfactualAuditor.refutation_and_sanity_checks"
  },
  {
    "class": "BayesianCounterfactualAuditor",
    "function": "_test_effect_stability",
    "method_type": "analysis",
    "priority": 3,
    "description": "BayesianCounterfactualAuditor._test_effect_stability"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_interpret_risk",
    "method_type": "analysis",
    "priority": 4,
    "description": "PDETMunicipalPlanAnalyzer._interpret_risk"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_interpret_sensitivity",
    "method_type": "analysis",
    "priority": 5,
    "description": "PDETMunicipalPlanAnalyzer._interpret_sensitivity"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_break_cycles",
    "method_type": "analysis",
    "priority": 6,
    "description": "PDETMunicipalPlanAnalyzer._break_cycles"
  },
  {
    "class": "AdaptivePriorCalculator",
    "function": "sensitivity_analysis",
    "method_type": "analysis",
    "priority": 7,
    "description": "AdaptivePriorCalculator.sensitivity_analysis"
  }
],
"patterns": [
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q024-000",
    "match_type": "REGEX",
    "pattern": "visión 2050|Agenda 2030"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q024-001",
    "match_type": "REGEX",
    "pattern": "riesgo sistémico|choque externo|crisis económica|desastre natural"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q024-002",
    "match_type": "REGEX",
    "pattern": "agudización del conflicto armado|cambio en la política nacional"
  },
  {
    "category": "GENERAL",

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    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q024-003",
    "match_type": "REGEX",
    "pattern": "estos factores podrían revertir los avances"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q024-004",
    "match_type": "LITERAL",
    "pattern": "el mecanismo causal es vulnerable a|sensible a"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q024-005",
    "match_type": "REGEX",
    "pattern": "estrategias de resiliencia|plan de adaptación"
  }
],
"policy_area_id": "PA01",
"question_global": 24,
"question_id": "Q024",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿Los impactos en género se alinean con marcos nacionales/globales y consideran
'riesgos sistémicos' (ej. crisis económica) que podrían romper el mecanismo causal?",
"validations": {}
},
{
  "base_slot": "D5-Q5",
  "cluster_id": "CL02",
  "dimension_id": "DIM05",
  "expected_elements": [
    {
      "required": true,
      "type": "análisis_realismo"
    },
    {
      "required": true,
      "type": "efectos_no_deseados"
    },
    {
      "required": true,
      "type": "hipotesis_limite"
    }
  ],
  "failure_contract": {
    "abort_if": [
      "missing_required_element",
      "incomplete_text"
    ],
    "emit_code": "ABORT-Q025-REQ"
  },
  "method_sets": [
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      "class": "HierarchicalGenerativeModel",
      "function": "posterior_predictive_check",
      "method_type": "analysis",
      "priority": 1,
      "description": "HierarchicalGenerativeModel.posterior_predictive_check"
    },
    {
      "class": "HierarchicalGenerativeModel",
      "function": "_ablation_analysis",
      "method_type": "analysis",
      "priority": 2,
      "description": "HierarchicalGenerativeModel._ablation_analysis"
    }
  ],

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{
  "class": "HierarchicalGenerativeModel",
  "function": "_calculate_waic_difference",
  "method_type": "scoring",
  "priority": 3,
  "description": "HierarchicalGenerativeModel._calculate_waic_difference"
},
{
  "class": "AdaptivePriorCalculator",
  "function": "_add_ood_noise",
  "method_type": "analysis",
  "priority": 4,
  "description": "AdaptivePriorCalculator._add_ood_noise"
},
{
  "class": "AdaptivePriorCalculator",
  "function": "validate_quality_criteria",
  "method_type": "validation",
  "priority": 5,
  "description": "AdaptivePriorCalculator.validate_quality_criteria"
},
{
  "class": "PDETMunicipalPlanAnalyzer",
  "function": "_compute_e_value",
  "method_type": "analysis",
  "priority": 6,
  "description": "PDETMunicipalPlanAnalyzer._compute_e_value"
},
{
  "class": "PDETMunicipalPlanAnalyzer",
  "function": "_compute_robustness_value",
  "method_type": "analysis",
  "priority": 7,
  "description": "PDETMunicipalPlanAnalyzer._compute_robustness_value"
},
{
  "class": "BayesianMechanismInference",
  "function": "_calculate_coherence_factor",
  "method_type": "scoring",
  "priority": 8,
  "description": "BayesianMechanismInference._calculate_coherence_factor"
}
],
"patterns": [
{
  "category": "GENERAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q025-000",
  "match_type": "REGEX",
  "pattern": "la ambición del impacto es realista si se mantienen las condiciones"
},
{
  "category": "GENERAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q025-001",
  "match_type": "REGEX",
  "pattern": "efecto no deseado|consecuencia imprevista|externalidad negativa"
},
{
  "category": "GENERAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q025-002",
  "match_type": "REGEX",
  "pattern": "riesgo de sobrecargar a las mujeres con un doble rol"
},
{
  "category": "GENERAL",
  "confidence_weight": 0.85,
  "flags": "i",

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    "id": "PAT-Q025-003",
    "match_type": "LITERAL",
    "pattern": "posible estigmatización o reacción violenta"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q025-004",
    "match_type": "REGEX",
    "pattern": "trade-off|costo de oportunidad"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q025-005",
    "match_type": "REGEX",
    "pattern": "hipótesis límite|el modelo funciona hasta el punto en que"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q025-006",
    "match_type": "LITERAL",
    "pattern": "supuesto crítico para el impacto"
  }
],
"policy_area_id": "PA01",
"question_global": 25,
"question_id": "Q025",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿La ambición del impacto para la igualdad de género es realista? Se debe buscar si se analizan posibles 'efectos no deseados' (ej. sobrecarga en mujeres) o se declaran 'hipótesis límite'.",
"validations": {}
},
{
  "base_slot": "D6-Q1",
  "cluster_id": "CL02",
  "dimension_id": "DIM06",
  "expected_elements": [
    {
      "required": true,
      "type": "diagrama_causal"
    },
    {
      "required": true,
      "type": "supuestos_verificables"
    },
    {
      "required": true,
      "type": "teoria_cambio_explicita"
    }
  ],
  "failure_contract": {
    "abort_if": [
      "missing_required_element",
      "incomplete_text"
    ],
    "emit_code": "ABORT-Q026-REQ"
  },
  "method_sets": [
    {
      "class": "TeoriaCambio",
      "function": "construir_grafo_causal",
      "method_type": "analysis",
      "priority": 1,
      "description": "TeoriaCambio.construir_grafo_causal"
    },

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{
  "class": "TeoriaCambio",
  "function": "validacion_completa",
  "method_type": "analysis",
  "priority": 2,
  "description": "TeoriaCambio.validacion_completa"
},
{
  "class": "TeoriaCambio",
  "function": "export_nodes",
  "method_type": "analysis",
  "priority": 3,
  "description": "TeoriaCambio.export_nodes"
},
{
  "class": "ReportingEngine",
  "function": "generate_causal_diagram",
  "method_type": "analysis",
  "priority": 4,
  "description": "ReportingEngine.generate_causal_diagram"
},
{
  "class": "ReportingEngine",
  "function": "generate_causal_model_json",
  "method_type": "analysis",
  "priority": 5,
  "description": "ReportingEngine.generate_causal_model_json"
},
{
  "class": "AdvancedDAGValidator",
  "function": "export_nodes",
  "method_type": "analysis",
  "priority": 6,
  "description": "AdvancedDAGValidator.export_nodes"
},
{
  "class": "PDETMunicipalPlanAnalyzer",
  "function": "export_causal_network",
  "method_type": "analysis",
  "priority": 7,
  "description": "PDETMunicipalPlanAnalyzer.export_causal_network"
},
{
  "class": "CausalExtractor",
  "function": "extract_causal_hierarchy",
  "method_type": "extraction",
  "priority": 8,
  "description": "CausalExtractor.extract_causal_hierarchy"
}
],
"patterns": [
{
  "category": "GENERAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q026-000",
  "match_type": "REGEX",
  "pattern": "teoría de cambio|marco lógico|cadena causal|modelo lógico"
},
{
  "category": "GENERAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q026-001",
  "match_type": "REGEX",
  "pattern": "diagrama causal|gráfico de la teoría|esquema de intervención|figura"
},
{
  "category": "GENERAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q026-002",

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    "match_type": "REGEX",
    "pattern": "causa raíz|determinante estructural"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q026-003",
    "match_type": "REGEX",
    "pattern": "mediador|variable intermedia|eslabón|ruta de cambio"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q026-004",
    "match_type": "REGEX",
    "pattern": "moderador|factor contextual"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q026-005",
    "match_type": "LITERAL",
    "pattern": "supuesto verificable|hipótesis a testear|premisa comprobable"
  }
],
"policy_area_id": "PA01",
"question_global": 26,
"question_id": "Q026",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿Existe una 'teoría de cambio' explícita para la política de género,
preferiblemente en un 'diagrama', que identifique causas, mediadores y 'supuestos verificables'?",
"validations": {}
},
{
  "base_slot": "D6-Q2",
  "cluster_id": "CL02",
  "dimension_id": "DIM06",
  "expected_elements": [
    {
      "required": true,
      "type": "evita_saltos_logicos"
    },
    {
      "required": true,
      "type": "proporcionalidad_eslabones"
    }
  ],
  "failure_contract": {
    "abort_if": [
      "missing_required_element",
      "incomplete_text"
    ],
    "emit_code": "ABORT-Q027-REQ"
  },
  "method_sets": [
    {
      "class": "BeachEvidentialTest",
      "function": "apply_test_logic",
      "method_type": "analysis",
      "priority": 1,
      "description": "BeachEvidentialTest.apply_test_logic"
    },
    {
      "class": "BayesianMechanismInference",
      "function": "_test_necessity",
      "method_type": "analysis",
      "priority": 2,
      "description": "BayesianMechanismInference._test_necessity"
    }
  ]
}

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    },
    {
      "class": "BayesianMechanismInference",
      "function": "_test_sufficiency",
      "method_type": "analysis",
      "priority": 3,
      "description": "BayesianMechanismInference._test_sufficiency"
    },
    {
      "class": "BayesianMechanismInference",
      "function": "_calculate_coherence_factor",
      "method_type": "scoring",
      "priority": 4,
      "description": "BayesianMechanismInference._calculate_coherence_factor"
    },
    {
      "class": "BayesianCounterfactualAuditor",
      "function": "_test_effect_stability",
      "method_type": "analysis",
      "priority": 5,
      "description": "BayesianCounterfactualAuditor._test_effect_stability"
    },
    {
      "class": "IndustrialGradeValidator",
      "function": "validate_connection_matrix",
      "method_type": "validation",
      "priority": 6,
      "description": "IndustrialGradeValidator.validate_connection_matrix"
    },
    {
      "class": "PolicyAnalysisEmbedder",
      "function": "_compute_overall_confidence",
      "method_type": "analysis",
      "priority": 7,
      "description": "PolicyAnalysisEmbedder._compute_overall_confidence"
    }
  ],
  "patterns": [
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q027-000",
      "match_type": "REGEX",
      "pattern": "proporcionalidad entre|magnitud del efecto"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q027-001",
      "match_type": "REGEX",
      "pattern": "salto lógico|brecha en la argumentación|milagro de implementación"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q027-002",
      "match_type": "LITERAL",
      "pattern": "es realista esperar que|es factible que"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q027-003",
      "match_type": "REGEX",
      "pattern": "la escala de la intervención es coherente con la ambición del resultado"
    },
    {
      "category": "GENERAL",

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        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q027-004",
        "match_type": "REGEX",
        "pattern": "se requieren pasos intermedios|el resultado es de mayor alcance que el
producto"
    }
],
"policy_area_id": "PA01",
"question_global": 27,
"question_id": "Q027",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿Los saltos en la cadena causal de género son proporcionales y realistas (ej. un
taller de 2 horas no genera 'empoderamiento económico total')?",
"validations": {}
},
{
    "base_slot": "D6-Q3",
    "cluster_id": "CL02",
    "dimension_id": "DIM06",
    "expected_elements": [
        {
            "required": true,
            "type": "propone_pilotos_o_pruebas"
        },
        {
            "required": true,
            "type": "reconoce_inconsistencias"
        }
    ],
    "failure_contract": {
        "abort_if": [
            "missing_required_element",
            "incomplete_text"
        ],
        "emit_code": "ABORT-Q028-REQ"
    },
    "method_sets": [
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            "class": "IndustrialGradeValidator",
            "function": "execute_suite",
            "method_type": "analysis",
            "priority": 1,
            "description": "IndustrialGradeValidator.execute_suite"
        },
        {
            "class": "IndustrialGradeValidator",
            "function": "validate_engine_readiness",
            "method_type": "validation",
            "priority": 2,
            "description": "IndustrialGradeValidator.validate_engine_readiness"
        },
        {
            "class": "IndustrialGradeValidator",
            "function": "_benchmark_operation",
            "method_type": "analysis",
            "priority": 3,
            "description": "IndustrialGradeValidator._benchmark_operation"
        },
        {
            "class": "AdaptivePriorCalculator",
            "function": "validate_quality_criteria",
            "method_type": "validation",
            "priority": 4,
            "description": "AdaptivePriorCalculator.validate_quality_criteria"
        },
        {
            "class": "HierarchicalGenerativeModel",
            "function": "_calculate_r_hat",
            "method_type": "scoring",
            "priority": 5,

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    "description": "HierarchicalGenerativeModel._calculate_r_hat"
  },
  {
    "class": "HierarchicalGenerativeModel",
    "function": "_calculate_ess",
    "method_type": "scoring",
    "priority": 6,
    "description": "HierarchicalGenerativeModel._calculate_ess"
  },
  {
    "class": "AdvancedDAGValidator",
    "function": "calculate_acyclicity_pvalue",
    "method_type": "scoring",
    "priority": 7,
    "description": "AdvancedDAGValidator.calculate_acyclicity_pvalue"
  },
  {
    "class": "PerformanceAnalyzer",
    "function": "analyze_performance",
    "method_type": "analysis",
    "priority": 8,
    "description": "PerformanceAnalyzer.analyze_performance"
  }
],
"patterns": [
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q028-000",
    "match_type": "REGEX",
    "pattern": "inconsistencia|debilidad en la teor\u00eda|supuesto d\u00e9bil"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q028-001",
    "match_type": "REGEX",
    "pattern": "se requiere validar|es necesario probar si"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q028-002",
    "match_type": "REGEX",
    "pattern": "plan piloto|fase experimental|prueba de concepto"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q028-003",
    "match_type": "REGEX",
    "pattern": "testear el supuesto|validar la hip\u00f3tesis"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
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    "match_type": "REGEX",
    "pattern": "evaluaci\u00f3n de mecanismos|monitoreo de la teor\u00eda de cambio"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q028-005",
    "match_type": "REGEX",
    "pattern": "aprendizaje adaptativo|gesti\u00f3n adaptativa"
  }
]

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    }
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  "question_global": 28,
  "question_id": "Q028",
  "scoring_definition_ref": "scoring_modalities.TYPE_A",
  "scoring_modality": "TYPE_A",
  "text": "¿El plan reconoce 'inconsistencias' en su lógica causal para género y propone
'pilotos' o 'pruebas' para 'testear los supuestos' de sus intervenciones?",
  "validations": {}
},
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  "base_slot": "D6-Q4",
  "cluster_id": "CL02",
  "dimension_id": "DIM06",
  "expected_elements": [
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      "type": "ciclos_aprendizaje"
    },
    {
      "required": true,
      "type": "mecanismos_correccion"
    },
    {
      "required": true,
      "type": "sistema_monitoreo"
    }
  ],
  "failure_contract": {
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      "missing_required_element",
      "incomplete_text"
    ],
    "emit_code": "ABORT-Q029-REQ"
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      "function": "update_priors_from_feedback",
      "method_type": "analysis",
      "priority": 1,
      "description": "ConfigLoader.update_priors_from_feedback"
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    {
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      "function": "check_uncertainty_reduction_criterion",
      "method_type": "analysis",
      "priority": 2,
      "description": "ConfigLoader.check_uncertainty_reduction_criterion"
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      "function": "_save_prior_history",
      "method_type": "analysis",
      "priority": 3,
      "description": "ConfigLoader._save_prior_history"
    },
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      "function": "_load_uncertainty_history",
      "method_type": "analysis",
      "priority": 4,
      "description": "ConfigLoader._load_uncertainty_history"
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      "function": "_extract_feedback_from_audit",
      "method_type": "validation",
      "priority": 5,
      "description": "CDAFFramework._extract_feedback_from_audit"
    }
  ],

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  "function": "_calculate_node_importance",
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  "function": "get_bayes_factor",
  "method_type": "analysis",
  "priority": 7,
  "description": "BayesFactorTable.get_bayes_factor"
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    "flags": "i",
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    "pattern": "sistema de seguimiento y evaluación|M&E"
  },
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    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q029-001",
    "match_type": "REGEX",
    "pattern": "monitoreo de indicadores de proceso"
  },
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    "category": "INDICADOR",
    "confidence_weight": 0.85,
    "flags": "i",
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    "match_type": "REGEX",
    "pattern": "alerta temprana|semáforo de indicadores"
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  {
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    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q029-003",
    "match_type": "REGEX",
    "pattern": "mecanismo de ajuste|medida correctiva|plan de mejora"
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    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q029-004",
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    "pattern": "retroalimentación|feedback"
  },
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    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q029-005",
    "match_type": "REGEX",
    "pattern": "ciclos de aprendizaje|reuniones de revisión estratégica"
  },
  {
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    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q029-006",
    "match_type": "REGEX",
    "pattern": "lecciones aprendidas|gestión del conocimiento"
  }
]

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"policy_area_id": "PA01",
"question_global": 29,
"question_id": "Q029",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿Se describe un sistema de monitoreo para la política de género que incluya
'mecanismos de corrección', 'retroalimentación' o 'aprendizaje' para adaptar la estrategia en caso
de desviaciones?",
"validations": {}
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"required": true,
"type": "enfoque_diferencial"
}
],
"failure_contract": {
"abort_if": [
"missing_required_element",
"incomplete_text"
],
"emit_code": "ABORT-Q030-REQ"
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"method_sets": [
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"function": "_calculate_language_specificity",
"method_type": "scoring",
"priority": 1,
"description": "CausalExtractor._calculate_language_specificity"
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{
"class": "CausalExtractor",
"function": "_assess_temporal_coherence",
"method_type": "analysis",
"priority": 2,
"description": "CausalExtractor._assess_temporal_coherence"
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{
"class": "TextMiningEngine",
"function": "diagnose_critical_links",
"method_type": "analysis",
"priority": 3,
"description": "TextMiningEngine.diagnose_critical_links"
},
{
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"function": "identify_failure_points",
"method_type": "analysis",
"priority": 4,
"description": "CausalInferenceSetup.identify_failure_points"
},
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"function": "_get_dynamics_pattern",
"method_type": "analysis",
"priority": 5,
"description": "CausalInferenceSetup._get_dynamics_pattern"
},
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"function": "chunk_text",
"method_type": "analysis",

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    "priority": 6,
    "description": "SemanticProcessor.chunk_text"
  },
  {
    "class": "SemanticProcessor",
    "function": "_detect_pdm_structure",
    "method_type": "analysis",
    "priority": 7,
    "description": "SemanticProcessor._detect_pdm_structure"
  },
  {
    "class": "SemanticProcessor",
    "function": "_detect_table",
    "method_type": "analysis",
    "priority": 8,
    "description": "SemanticProcessor._detect_table"
  },
  {
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    "function": "generate_traceability_record",
    "method_type": "analysis",
    "priority": 9,
    "description": "AdaptivePriorCalculator.generate_traceability_record"
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    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q030-000",
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    "pattern": "enfoque diferencial|enfoque interseccional"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q030-001",
    "match_type": "REGEX",
    "pattern": "mujeres rurales|mujeres indígenas|mujeres afrodescendientes"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q030-002",
    "match_type": "REGEX",
    "pattern": "mujeres con discapacidad|mujeres víctimas|mujeres LBT"
  },
  {
    "category": "TERRITORIAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q030-003",
    "match_type": "REGEX",
    "pattern": "restricciones territoriales|barreras de acceso geográfico"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q030-004",
    "match_type": "REGEX",
    "pattern": "contexto cultural|patrones machistas arraigados"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q030-005",
    "match_type": "LITERAL",

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    "pattern": "restricciones normativas|marco legal limitante"
  },
  {
    "category": "TERRITORIAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q030-006",
    "match_type": "REGEX",
    "pattern": "estrategias territorializadas|acciones adaptadas al contexto"
  }
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"question_global": 30,
"question_id": "Q030",
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"scoring_modality": "TYPE_A",
"text": "¿La lógica causal para la equidad de género considera el contexto, reconociendo 'grupos afectados' (ej. mujeres rurales, víctimas, étnicas) y 'restricciones' territoriales, culturales o normativas?",
"validations": {}
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  "dimension_id": "DIM01",
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      "type": "fuentes_oficiales"
    },
    {
      "minimum": 3,
      "type": "indicadores_cuantitativos"
    },
    {
      "minimum": 2,
      "type": "series_temporales_años"
    }
  ],
  "failure_contract": {
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      "missing_required_element",
      "incomplete_text"
    ],
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  "method_sets": [
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      "method_type": "analysis",
      "priority": 1,
      "description": "TextMiningEngine.diagnose_critical_links"
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      "method_type": "analysis",
      "priority": 2,
      "description": "TextMiningEngine._analyze_link_text"
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      "function": "process",
      "method_type": "analysis",
      "priority": 3,
      "description": "IndustrialPolicyProcessor.process"
    },
    {
      "class": "IndustrialPolicyProcessor",
      "function": "_match_patterns_in_sentences",
      "method_type": "analysis",

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    "priority": 4,
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  },
  {
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    "function": "_extract_point_evidence",
    "method_type": "extraction",
    "priority": 5,
    "description": "IndustrialPolicyProcessor._extract_point_evidence"
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    "function": "_extract_goals",
    "method_type": "extraction",
    "priority": 6,
    "description": "CausalExtractor._extract_goals"
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    "function": "_parse_goal_context",
    "method_type": "extraction",
    "priority": 7,
    "description": "CausalExtractor._parse_goal_context"
  },
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    "class": "FinancialAuditor",
    "function": "_parse_amount",
    "method_type": "extraction",
    "priority": 8,
    "description": "FinancialAuditor._parse_amount"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_extract_financial_amounts",
    "method_type": "extraction",
    "priority": 9,
    "description": "PDETMunicipalPlanAnalyzer._extract_financial_amounts"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_extract_from_budget_table",
    "method_type": "extraction",
    "priority": 10,
    "description": "PDETMunicipalPlanAnalyzer._extract_from_budget_table"
  },
  {
    "class": "PolicyContradictionDetector",
    "function": "_extract_quantitative_claims",
    "method_type": "extraction",
    "priority": 11,
    "description": "PolicyContradictionDetector._extract_quantitative_claims"
  },
  {
    "class": "PolicyContradictionDetector",
    "function": "_parse_number",
    "method_type": "extraction",
    "priority": 12,
    "description": "PolicyContradictionDetector._parse_number"
  },
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    "class": "PolicyContradictionDetector",
    "function": "_statistical_significance_test",
    "method_type": "analysis",
    "priority": 13,
    "description": "PolicyContradictionDetector._statistical_significance_test"
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    "class": "BayesianNumericalAnalyzer",
    "function": "evaluate_policy_metric",
    "method_type": "analysis",
    "priority": 14,
    "description": "BayesianNumericalAnalyzer.evaluate_policy_metric"
  }

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    },
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      "method_type": "analysis",
      "priority": 15,
      "description": "BayesianNumericalAnalyzer.compare_policies"
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      "class": "SemanticProcessor",
      "function": "chunk_text",
      "method_type": "analysis",
      "priority": 16,
      "description": "SemanticProcessor.chunk_text"
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    {
      "class": "SemanticProcessor",
      "function": "embed_single",
      "method_type": "analysis",
      "priority": 17,
      "description": "SemanticProcessor.embed_single"
    }
  ],
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      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q031-000",
      "match_type": "REGEX",
      "pattern": "línea base|diagnóstico migratorio|caracterización de la población migrante"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q031-001",
      "match_type": "REGEX",
      "pattern": "fuente:|según|reportado por|con datos de"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q031-002",
      "match_type": "LITERAL",
      "pattern": "Migración Colombia|R4V|GIFMM|Grupo Interagencial sobre Flujos Migratorios"
    },
    {
      "category": "FUENTE_OFICIAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q031-003",
      "match_type": "REGEX",
      "pattern": "DANE|Encuesta Pulso de la Migración|Censo"
    },
    {
      "category": "TERRITORIAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q031-004",
      "match_type": "REGEX",
      "pattern": "ACNUR|OIM|Personería Municipal|Secretaría de Gobierno/Social"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q031-005",
      "match_type": "REGEX",
      "pattern": "número de migrantes|población con vocación de permanencia"
    }
  ]
}

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    },
    {
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      "confidence_weight": 0.85,
      "flags": "i",
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      "pattern": "población en tránsito|caminantes|flujo pendular"
    },
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      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q031-007",
      "match_type": "REGEX",
      "pattern": "Permiso por Protección Temporal|PPT|Estatuto Temporal de Protección|ETPV"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q031-008",
      "match_type": "REGEX",
      "pattern": "Niños, Niñas y Adolescentes (NNA) migrantes matriculados|NNA no acompañados"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q031-009",
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      "pattern": "migrantes afiliados a salud|migrantes en SISBEN"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q031-010",
      "match_type": "LITERAL",
      "pattern": "asentamientos informales con población migrante"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q031-011",
      "match_type": "REGEX",
      "pattern": "2022|2023|2024|vigencia anterior|serie histórica de flujos"
    },
    {
      "category": "INDICADOR",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q031-012",
      "match_type": "REGEX",
      "pattern": "número de personas|hogares|porcentaje sobre la población total"
    }
  ],
  "policy_area_id": "PA10",
  "question_global": 31,
  "question_id": "Q031",
  "scoring_definition_ref": "scoring_modalities.TYPE_A",
  "scoring_modality": "TYPE_A",
  "text": "¿El diagnóstico presenta datos numéricos (flujo de migrantes, número de PPT expedidos, NNA migrantes en el sistema escolar) sobre el área de Migración transfronteriza que sirvan como línea base? Se debe verificar el año y fuentes (ej. Migración Colombia, DANE, Personería).",
  "validations": {
    "buscar_indicadores_cuantitativos": {
      "minimum_required": 3,
      "patterns": [
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        "\\d+\\s*por\\s*\\d+",
        "tasa de",
        "índice de",
        "cobertura de"
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        "urbano",
        "rural",
        "territorial",
        "poblacional"
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"series_temporales": {
    "minimum_years": 3,
    "patterns": [
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        "año",
        "periodo",
        "histórico",
        "serie"
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        "%",
        "porcentaje",
        "tasa",
        "razón"
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"verificar_fuentes": {
    "minimum_required": 2,
    "patterns": [
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        "según",
        "datos de",
        "DANE",
        "DNP",
        "SISPRO",
        "SIVIGILA",
        "Ministerio"
    ],
    "specificity": "MEDIUM"
}
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},
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    "cluster_id": "CL04",
    "dimension_id": "DIM01",
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            "type": "analisis_causal_problema"
        },
        {
            "required": true,
            "type": "cuantificacion_magnitud"
        }
    ],
    {

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  }
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"failure_contract": {
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"method_sets": [
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    "function": "_audit_direct_evidence",
    "method_type": "validation",
    "priority": 1,
    "description": "OperationalizationAuditor._audit_direct_evidence"
  },
  {
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    "function": "_audit_systemic_risk",
    "method_type": "validation",
    "priority": 2,
    "description": "OperationalizationAuditor._audit_systemic_risk"
  },
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    "class": "FinancialAuditor",
    "function": "_detect_allocation_gaps",
    "method_type": "analysis",
    "priority": 3,
    "description": "FinancialAuditor._detect_allocation_gaps"
  },
  {
    "class": "BayesianMechanismInference",
    "function": "_detect_gaps",
    "method_type": "analysis",
    "priority": 4,
    "description": "BayesianMechanismInference._detect_gaps"
  },
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    "function": "_generate_optimal_remediations",
    "method_type": "analysis",
    "priority": 5,
    "description": "PDETMunicipalPlanAnalyzer._generate_optimal_remediations"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_simulate_intervention",
    "method_type": "analysis",
    "priority": 6,
    "description": "PDETMunicipalPlanAnalyzer._simulate_intervention"
  },
  {
    "class": "BayesianCounterfactualAuditor",
    "function": "counterfactual_query",
    "method_type": "analysis",
    "priority": 7,
    "description": "BayesianCounterfactualAuditor.counterfactual_query"
  },
  {
    "class": "BayesianCounterfactualAuditor",
    "function": "_test_effect_stability",
    "method_type": "analysis",
    "priority": 8,
    "description": "BayesianCounterfactualAuditor._test_effect_stability"
  },
  {
    "class": "PolicyContradictionDetector",
    "function": "_detect_numerical_inconsistencies",
    "method_type": "analysis",

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    "priority": 9,
    "description": "PolicyContradictionDetector._detect_numerical_inconsistencies"
  },
  {
    "class": "PolicyContradictionDetector",
    "function": "_calculate_numerical_divergence",
    "method_type": "scoring",
    "priority": 10,
    "description": "PolicyContradictionDetector._calculate_numerical_divergence"
  },
  {
    "class": "BayesianConfidenceCalculator",
    "function": "calculate_posterior",
    "method_type": "scoring",
    "priority": 11,
    "description": "BayesianConfidenceCalculator.calculate_posterior"
  },
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    "class": "PerformanceAnalyzer",
    "function": "analyze_performance",
    "method_type": "analysis",
    "priority": 12,
    "description": "PerformanceAnalyzer.analyze_performance"
  }
],
"patterns": [
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    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q032-000",
    "match_type": "REGEX",
    "pattern": "presión sobre los servicios de salud/educación|aumento de la demanda"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q032-001",
    "match_type": "REGEX",
    "pattern": "déficit de cupos en albergues|necesidades humanitarias insatisfechas"
  },
  {
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    "match_type": "REGEX",
    "pattern": "magnitud de la población en tránsito por el Darién"
  },
  {
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    "confidence_weight": 0.85,
    "flags": "i",
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    "match_type": "REGEX",
    "pattern": "barreras de acceso a la regularización|dificultades para obtener el PPT"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q032-004",
    "match_type": "REGEX",
    "pattern": "aumento de la xenofobia|tensiones con la comunidad de acogida"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q032-005",
    "match_type": "REGEX",

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    "pattern": "información insuficiente sobre la población irregular|caminantes no
registrados"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q032-006",
    "match_type": "REGEX",
    "pattern": "subregistro de VBG en mujeres migrantes"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q032-007",
    "match_type": "REGEX",
    "pattern": "vacío de información sobre el estado de salud de los migrantes en tránsito"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q032-008",
    "match_type": "REGEX",
    "pattern": "causas de la no afiliación a salud|determinantes de la explotación laboral"
  }
],
"policy_area_id": "PA10",
"question_global": 32,
"question_id": "Q032",
"scoring_definition_ref": "scoring_modalities.TYPE_B",
"scoring_modality": "TYPE_B",
"text": "¿El texto dimensiona la magnitud del fenómeno migratorio, cuantificando la presión
sobre los servicios públicos o la población con necesidades humanitarias? Se debe buscar si se
mencionan 'vacíos de información' (ej. sobre población irregular en tránsito).",
"validations": {}
},
{
  "base_slot": "D1-Q3",
  "cluster_id": "CL04",
  "dimension_id": "DIM01",
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      "type": "asignacion_explicita"
    },
    {
      "required": true,
      "type": "suficiencia_justificada"
    },
    {
      "required": true,
      "type": "trazabilidad_ppi_bpín"
    }
  ]
},
"failure_contract": {
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    "missing_required_element",
    "incomplete_text"
  ],
  "emit_code": "ABORT-Q033-REQ"
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"method_sets": [
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    "function": "trace_financial_allocation",
    "method_type": "analysis",
    "priority": 1,
    "description": "FinancialAuditor.trace_financial_allocation"
  },
  {

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    "method_type": "analysis",
    "priority": 3,
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    "function": "_match_goal_to_budget",
    "method_type": "analysis",
    "priority": 4,
    "description": "FinancialAuditor._match_goal_to_budget"
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    "function": "_perform_counterfactual_budget_check",
    "method_type": "analysis",
    "priority": 5,
    "description": "FinancialAuditor._perform_counterfactual_budget_check"
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    "function": "_calculate_sufficiency",
    "method_type": "scoring",
    "priority": 6,
    "description": "FinancialAuditor._calculate_sufficiency"
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    "class": "PDETMunicipalPlanAnalyzer",
    "function": "analyze_financial_feasibility",
    "method_type": "analysis",
    "priority": 7,
    "description": "PDETMunicipalPlanAnalyzer.analyze_financial_feasibility"
  },
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    "function": "_extract_budget_for_pillar",
    "method_type": "extraction",
    "priority": 8,
    "description": "PDETMunicipalPlanAnalyzer._extract_budget_for_pillar"
  },
  {
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    "function": "_identify_funding_source",
    "method_type": "analysis",
    "priority": 9,
    "description": "PDETMunicipalPlanAnalyzer._identify_funding_source"
  },
  {
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    "function": "_classify_tables",
    "method_type": "analysis",
    "priority": 10,
    "description": "PDETMunicipalPlanAnalyzer._classify_tables"
  },
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    "function": "_analyze_funding_sources",
    "method_type": "analysis",
    "priority": 11,
    "description": "PDETMunicipalPlanAnalyzer._analyze_funding_sources"
  },
  {
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    "function": "_score_financial_component",

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    "method_type": "scoring",
    "priority": 12,
    "description": "PDETMunicipalPlanAnalyzer._score_financial_component"
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    "function": "aggregate_risk_and_prioritize",
    "method_type": "analysis",
    "priority": 13,
    "description": "BayesianCounterfactualAuditor.aggregate_risk_and_prioritize"
  }
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    "flags": "i",
    "id": "PAT-Q033-000",
    "match_type": "REGEX",
    "pattern": "Plan Plurianual de Inversiones|PPI|Plan Indicativo"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q033-001",
    "match_type": "REGEX",
    "pattern": "BPIN|Banco de Proyectos|proyecto de inversión para atención a migrantes"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q033-002",
    "match_type": "REGEX",
    "pattern": "recursos para la atención humanitaria|albergues|ayuda alimentaria"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q033-003",
    "match_type": "REGEX",
    "pattern": "presupuesto para el Punto de Atención y Orientación|PAO"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q033-004",
    "match_type": "REGEX",
    "pattern": "asignación para programas de integración socioeconómica|empleabilidad"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q033-005",
    "match_type": "REGEX",
    "pattern": "inversión en estrategias de convivencia y contra la xenofobia"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q033-006",
    "match_type": "REGEX",
    "pattern": "\\$\\s*\\d+|COP\\s*\\d+|millones de pesos"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,

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        "flags": "i",
        "id": "PAT-Q033-007",
        "match_type": "REGEX",
        "pattern": "fuentes: recursos propios, cofinanciación de cooperación internacional
(ACNUR, OIM)"
    },
    {
        "category": "GENERAL",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q033-008",
        "match_type": "REGEX",
        "pattern": "el presupuesto es complementario a la oferta de la cooperación"
    }
],
"policy_area_id": "PA10",
"question_global": 33,
"question_id": "Q033",
"scoring_definition_ref": "scoring_modalities.TYPE_B",
"scoring_modality": "TYPE_B",
"text": "¿Se identifican en el PPI recursos monetarios (con cifras en $, COP o millones)
explícitamente asignados a programas de atención humanitaria, integración socioeconómica o
fortalecimiento de la respuesta institucional a la migración?",
"validations": {}
},
{
    "base_slot": "D1-Q4",
    "cluster_id": "CL04",
    "dimension_id": "DIM01",
    "expected_elements": [
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            "type": "cuellos_botella"
        },
        {
            "required": true,
            "type": "gobernanza"
        },
        {
            "required": true,
            "type": "infraestructura_fisica"
        },
        {
            "required": true,
            "type": "procesos"
        },
        {
            "required": true,
            "type": "talento_humano"
        }
    ],
    "failure_contract": {
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            "incomplete_text"
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            "function": "identify_responsible_entities",
            "method_type": "analysis",
            "priority": 1,
            "description": "PDETMunicipalPlanAnalyzer.identify_responsible_entities"
        },
        {
            "class": "PDETMunicipalPlanAnalyzer",
            "function": "_extract_entities_ner",
            "method_type": "extraction",
            "priority": 2,
            "description": "PDETMunicipalPlanAnalyzer._extract_entities_ner"
        }
    ]
}

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    },
    {
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      "function": "_extract_entities_syntax",
      "method_type": "extraction",
      "priority": 3,
      "description": "PDETMunicipalPlanAnalyzer._extract_entities_syntax"
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      "function": "_classify_entity_type",
      "method_type": "analysis",
      "priority": 4,
      "description": "PDETMunicipalPlanAnalyzer._classify_entity_type"
    },
    {
      "class": "PDETMunicipalPlanAnalyzer",
      "function": "_score_entity_specificity",
      "method_type": "scoring",
      "priority": 5,
      "description": "PDETMunicipalPlanAnalyzer._score_entity_specificity"
    },
    {
      "class": "PDETMunicipalPlanAnalyzer",
      "function": "_consolidate_entities",
      "method_type": "analysis",
      "priority": 6,
      "description": "PDETMunicipalPlanAnalyzer._consolidate_entities"
    },
    {
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      "function": "extract_entity_activity",
      "method_type": "extraction",
      "priority": 7,
      "description": "MechanismPartExtractor.extract_entity_activity"
    },
    {
      "class": "MechanismPartExtractor",
      "function": "_normalize_entity",
      "method_type": "analysis",
      "priority": 8,
      "description": "MechanismPartExtractor._normalize_entity"
    },
    {
      "class": "MechanismPartExtractor",
      "function": "_validate_entity_activity",
      "method_type": "validation",
      "priority": 9,
      "description": "MechanismPartExtractor._validate_entity_activity"
    },
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      "class": "MechanismPartExtractor",
      "function": "_calculate_ea_confidence",
      "method_type": "scoring",
      "priority": 10,
      "description": "MechanismPartExtractor._calculate_ea_confidence"
    },
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      "function": "audit_evidence_traceability",
      "method_type": "validation",
      "priority": 11,
      "description": "OperationalizationAuditor.audit_evidence_traceability"
    }
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  "patterns": [
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      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q034-000",
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    "pattern": "Secretaría de Gobierno|Desarrollo Social|Enlace de Migración"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q034-001",
    "match_type": "REGEX",
    "pattern": "Punto de Atención y Orientación|PAO"
  },
  {
    "category": "TERRITORIAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q034-002",
    "match_type": "REGEX",
    "pattern": "Mesa Municipal de Migración|espacio de coordinación GIFMM local"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q034-003",
    "match_type": "REGEX",
    "pattern": "capacidad instalada en albergues|capacidad de respuesta humanitaria"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q034-004",
    "match_type": "REGEX",
    "pattern": "ruta de atención al migrante|protocolo para NNA no acompañados"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q034-005",
    "match_type": "REGEX",
    "pattern": "sistema de información para caracterización|Registro Único de Migrantes"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q034-006",
    "match_type": "REGEX",
    "pattern": "articulación con Migración Colombia|coordinación con la cooperación
internacional (OIM, ACNUR)"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q034-007",
    "match_type": "REGEX",
    "pattern": "falta de personal en el PAO|necesidad de fortalecer el Enlace"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q034-008",
    "match_type": "REGEX",
    "pattern": "cuello de botella|limitación en la capacidad de albergue|barrera en la
articulación"
  }
],
"policy_area_id": "PA10",
"question_global": 34,
"question_id": "Q034",

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    "scoring_modality": "TYPE_B",
    "text": "¿El PDM describe las capacidades para la gestión migratoria, mencionando entidades (Secretaría de Gobierno, enlace de migrantes) y sus necesidades? Se debe buscar términos como 'centros de atención al migrante', 'rutas de integración' y si se identifican 'limitaciones' en la articulación.",
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    "cluster_id": "CL04",
    "dimension_id": "DIM01",
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      },
      {
        "required": true,
        "type": "restricciones_competencias"
      },
      {
        "required": true,
        "type": "restricciones_legales"
      },
      {
        "required": true,
        "type": "restricciones_presupuestales"
      }
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        "function": "_check_deadline_constraints",
        "method_type": "analysis",
        "priority": 1,
        "description": "TemporalLogicVerifier._check_deadline_constraints"
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        "function": "verify_temporal_consistency",
        "method_type": "analysis",
        "priority": 2,
        "description": "TemporalLogicVerifier.verify_temporal_consistency"
      },
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        "class": "CausalInferenceSetup",
        "function": "identify_failure_points",
        "method_type": "analysis",
        "priority": 3,
        "description": "CausalInferenceSetup.identify_failure_points"
      },
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        "class": "CausalExtractor",
        "function": "_assess_temporal_coherence",
        "method_type": "analysis",
        "priority": 4,
        "description": "CausalExtractor._assess_temporal_coherence"
      },
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        "class": "TextMiningEngine",
        "function": "_analyze_link_text",
        "method_type": "analysis",
        "priority": 5,
        "description": "TextMiningEngine._analyze_link_text"
      }
    ]
  }
]

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    },
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      "function": "_analyze_causal_dimensions",
      "method_type": "analysis",
      "priority": 6,
      "description": "IndustrialPolicyProcessor._analyze_causal_dimensions"
    },
    {
      "class": "IndustrialPolicyProcessor",
      "function": "_extract_metadata",
      "method_type": "extraction",
      "priority": 7,
      "description": "IndustrialPolicyProcessor._extract_metadata"
    }
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      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q035-000",
      "match_type": "REGEX",
      "pattern": "en el marco del Estatuto Temporal de Protección para Migrantes
Venezolanos|ETPV|PPT"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q035-001",
      "match_type": "REGEX",
      "pattern": "Ley 2136 de 2021|Política Integral Migratoria|CONPES 3950"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q035-002",
      "match_type": "REGEX",
      "pattern": "competencia del municipio en asistencia humanitaria y complementaria"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q035-003",
      "match_type": "REGEX",
      "pattern": "la regularización migratoria es competencia de Migración Colombia"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q035-004",
      "match_type": "REGEX",
      "pattern": "la determinación de la condición de refugiado es de la CONARE/Cancillería"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q035-005",
      "match_type": "REGEX",
      "pattern": "recursos propios insuficientes|alta dependencia de la cooperación
internacional"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q035-006",

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  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q035-007",
    "match_type": "REGEX",
    "pattern": "durante el cuatrienio|plazo de la estrategia de integración"
  },
  {
    "category": "TERRITORIAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q035-008",
    "match_type": "LITERAL",
    "pattern": "coherencia entre metas y la competencia municipal"
  }
],
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"question_global": 35,
"question_id": "Q035",
"scoring_definition_ref": "scoring_modalities.TYPE_E",
"scoring_modality": "TYPE_E",
"text": "¿El plan justifica su alcance en la política migratoria mencionando el marco legal (Estatuto Temporal de Protección) o reconociendo restricciones de competencias (Migración Colombia vs. municipio), presupuestales o de capacidad de respuesta?",
"validations": {}
},
{
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  "cluster_id": "CL04",
  "dimension_id": "DIM02",
  "expected_elements": [
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      "required": true,
      "type": "columna_costo"
    },
    {
      "required": true,
      "type": "columna_cronograma"
    },
    {
      "required": true,
      "type": "columna_producto"
    },
    {
      "required": true,
      "type": "columna_responsable"
    },
    {
      "required": true,
      "type": "formato_tabular"
    }
  ]
},
"failure_contract": {
  "abort_if": [
    "missing_required_element",
    "incomplete_text"
  ],
  "emit_code": "ABORT-Q036-REQ"
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"method_sets": [
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    "function": "extract_tables",
    "method_type": "extraction",
    "priority": 1,
    "description": "PDFProcessor.extract_tables"
  },
  {

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    "priority": 2,
    "description": "FinancialAuditor._process_financial_table"
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    "function": "_deduplicate_tables",
    "method_type": "analysis",
    "priority": 3,
    "description": "PDETMunicipalPlanAnalyzer._deduplicate_tables"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_classify_tables",
    "method_type": "analysis",
    "priority": 4,
    "description": "PDETMunicipalPlanAnalyzer._classify_tables"
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  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_is_likely_header",
    "method_type": "analysis",
    "priority": 5,
    "description": "PDETMunicipalPlanAnalyzer._is_likely_header"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_clean_dataframe",
    "method_type": "analysis",
    "priority": 6,
    "description": "PDETMunicipalPlanAnalyzer._clean_dataframe"
  },
  {
    "class": "ReportingEngine",
    "function": "generate_accountability_matrix",
    "method_type": "analysis",
    "priority": 7,
    "description": "ReportingEngine.generate_accountability_matrix"
  }
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    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q036-000",
    "match_type": "REGEX",
    "pattern": "tabla de actividades|cuadro de seguimiento|matriz de plan de acción"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q036-001",
    "match_type": "REGEX",
    "pattern": "columna responsable|entidad a cargo|ejecutor|Cooperante"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q036-002",
    "match_type": "REGEX",
    "pattern": "columna producto|entregable|output|meta de producto"
  },
  {
    "category": "TEMPORAL",
    "confidence_weight": 0.85,
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    "id": "PAT-Q036-003",

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    "pattern": "columna cronograma|plazo|vigencia|año 1|trimestre"
  },
  {
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    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q036-004",
    "match_type": "LITERAL",
    "pattern": "columna costo|presupuesto|valor|recursos|monto"
  },
  {
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    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q036-005",
    "match_type": "REGEX",
    "pattern": "Secretaría de Gobierno|Desarrollo Social|Salud|Educación"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q036-006",
    "match_type": "REGEX",
    "pattern": "Plan Indicativo|Anexo de metas"
  }
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"policy_area_id": "PA10",
"question_global": 36,
"question_id": "Q036",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿Las actividades para la población migrante se presentan en un formato estructurado (tabla, cuadro) que incluya columnas para 'responsable', 'producto', 'cronograma' y 'presupuesto'?",
"validations": {}
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  "cluster_id": "CL04",
  "dimension_id": "DIM02",
  "expected_elements": [
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    {
      "required": true,
      "type": "logica_causal_explicita"
    },
    {
      "required": true,
      "type": "poblacion_objetivo_definida"
    }
  ]
},
"failure_contract": {
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    "missing_required_element",
    "incomplete_text"
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  "emit_code": "ABORT-Q037-REQ"
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    "method_type": "analysis",
    "priority": 1,
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  },
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    "method_type": "analysis",
    "priority": 2,
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    "function": "_infer_mechanism_type",
    "method_type": "analysis",
    "priority": 3,
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    "method_type": "analysis",
    "priority": 4,
    "description": "BayesianMechanismInference._test_sufficiency"
  },
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    "function": "_test_necessity",
    "method_type": "analysis",
    "priority": 5,
    "description": "BayesianMechanismInference._test_necessity"
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    "function": "extract_causal_hierarchy",
    "method_type": "extraction",
    "priority": 6,
    "description": "CausalExtractor.extract_causal_hierarchy"
  },
  {
    "class": "TeoriaCambio",
    "function": "construir_grafo_causal",
    "method_type": "analysis",
    "priority": 7,
    "description": "TeoriaCambio.construir_grafo_causal"
  },
  {
    "class": "TeoriaCambio",
    "function": "_es_conexion_valida",
    "method_type": "analysis",
    "priority": 8,
    "description": "TeoriaCambio._es_conexion_valida"
  },
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    "function": "construct_causal_dag",
    "method_type": "analysis",
    "priority": 9,
    "description": "PDETMunicipalPlanAnalyzer.construct_causal_dag"
  },
  {
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    "function": "classify_test",
    "method_type": "analysis",
    "priority": 10,
    "description": "BeachEvidentialTest.classify_test"
  },
  {
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    "function": "_analyze_causal_dimensions",
    "method_type": "analysis",
    "priority": 11,
    "description": "IndustrialPolicyProcessor._analyze_causal_dimensions"
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  {

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  {
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    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q037-001",
    "match_type": "REGEX",
    "pattern": "jornadas de orientación y regularización|ferias de servicios"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q037-002",
    "match_type": "REGEX",
    "pattern": "entrega de asistencia humanitaria|kits de alimentación/higiene"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q037-003",
    "match_type": "REGEX",
    "pattern": "fortalecimiento de albergues|espacios de tránsito digno"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q037-004",
    "match_type": "REGEX",
    "pattern": "población objetivo:|dirigido a|beneficiarios serán"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q037-005",
    "match_type": "REGEX",
    "pattern": "población migrante en tránsito|caminantes|pendulares"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q037-006",
    "match_type": "REGEX",
    "pattern": "población con vocación de permanencia|retornados|comunidad de acogida"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q037-007",
    "match_type": "REGEX",
    "pattern": "NNA no acompañados|mujeres gestantes migrantes"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q037-008",
    "match_type": "REGEX",
    "pattern": "con el fin de estabilizar|para facilitar la integración"
  },
  {

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    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q037-009",
    "match_type": "REGEX",
    "pattern": "lo cual reduce la vulnerabilidad|porque previene la explotación"
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"question_global": 37,
"question_id": "Q037",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿La descripción de las actividades para migrantes detalla el instrumento ('mediante jornadas de regularización', 'a través de asistencia humanitaria'), la población objetivo ('migrantes pendulares', 'población de acogida', 'retornados') y la lógica causal?",
"validations": {}
},
{
  "base_slot": "D2-Q3",
  "cluster_id": "CL04",
  "dimension_id": "DIM02",
  "expected_elements": [
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      "required": true,
      "type": "aborda_causa_raiz"
    },
    {
      "required": true,
      "type": "vinculo_diagnostico_actividad"
    }
  ]
},
"failure_contract": {
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    "function": "_extract_causal_links",
    "method_type": "extraction",
    "priority": 1,
    "description": "CausalExtractor._extract_causal_links"
  },
  {
    "class": "CausalExtractor",
    "function": "_calculate_composite_likelihood",
    "method_type": "scoring",
    "priority": 2,
    "description": "CausalExtractor._calculate_composite_likelihood"
  },
  {
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    "function": "_initialize_prior",
    "method_type": "analysis",
    "priority": 3,
    "description": "CausalExtractor._initialize_prior"
  },
  {
    "class": "CausalExtractor",
    "function": "_calculate_type_transition_prior",
    "method_type": "scoring",
    "priority": 4,
    "description": "CausalExtractor._calculate_type_transition_prior"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_identify_causal_edges",
    "method_type": "analysis",

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    "priority": 5,
    "description": "PDETMunicipalPlanAnalyzer._identify_causal_edges"
  },
  {
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    "function": "_refine_edge_probabilities",
    "method_type": "analysis",
    "priority": 6,
    "description": "PDETMunicipalPlanAnalyzer._refine_edge_probabilities"
  },
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    "function": "construct_scm",
    "method_type": "analysis",
    "priority": 7,
    "description": "BayesianCounterfactualAuditor.construct_scm"
  },
  {
    "class": "BayesianCounterfactualAuditor",
    "function": "_create_default_equations",
    "method_type": "analysis",
    "priority": 8,
    "description": "BayesianCounterfactualAuditor._create_default_equations"
  },
  {
    "class": "SemanticAnalyzer",
    "function": "extract_semantic_cube",
    "method_type": "extraction",
    "priority": 9,
    "description": "SemanticAnalyzer.extract_semantic_cube"
  }
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"patterns": [
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    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q038-000",
    "match_type": "REGEX",
    "pattern": "para abordar las barreras de acceso|en respuesta a la xenofobia"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q038-001",
    "match_type": "REGEX",
    "pattern": "la actividad de regularización ataca la causa de la informalidad"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q038-002",
    "match_type": "REGEX",
    "pattern": "causa estructural|factor determinante|nudo crítico"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q038-003",
    "match_type": "REGEX",
    "pattern": "estatus migratorio irregular|falta del PPT"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q038-004",
    "match_type": "REGEX",
    "pattern": "barreras de acceso a servicios básicos (salud, educación)"
  }
]

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      "confidence_weight": 0.85,
      "flags": "i",
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      "match_type": "REGEX",
      "pattern": "discriminación y xenofobia"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q038-006",
      "match_type": "REGEX",
      "pattern": "desconocimiento de sus derechos y rutas de atención"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q038-007",
      "match_type": "REGEX",
      "pattern": "árbol de problemas|diagnóstico causal de la crisis migratoria"
    }
  ],
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  "question_global": 38,
  "question_id": "Q038",
  "scoring_definition_ref": "scoring_modalities.TYPE_A",
  "scoring_modality": "TYPE_A",
  "text": "¿El PDM vincula explícitamente las actividades (ej. ferias de empleo) con las
'causas raíz' de los problemas de la población migrante (ej. barreras de acceso al mercado laboral)
identificadas en el diagnóstico?",
  "validations": {}
},
{
  "base_slot": "D2-Q4",
  "cluster_id": "CL04",
  "dimension_id": "DIM02",
  "expected_elements": [
    {
      "required": true,
      "type": "mitigacion_propuesta"
    },
    {
      "required": true,
      "type": "riesgos_identificados"
    }
  ]
},
"failure_contract": {
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    "missing_required_element",
    "incomplete_text"
  ],
  "emit_code": "ABORT-Q039-REQ"
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"method_sets": [
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    "function": "_bayesian_risk_inference",
    "method_type": "analysis",
    "priority": 1,
    "description": "PDETMunicipalPlanAnalyzer._bayesian_risk_inference"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "sensitivity_analysis",
    "method_type": "analysis",
    "priority": 2,
    "description": "PDETMunicipalPlanAnalyzer.sensitivity_analysis"
  }
],

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  "function": "_interpret_risk",
  "method_type": "analysis",
  "priority": 3,
  "description": "PDETMunicipalPlanAnalyzer._interpret_risk"
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  "class": "PDETMunicipalPlanAnalyzer",
  "function": "_compute_robustness_value",
  "method_type": "analysis",
  "priority": 4,
  "description": "PDETMunicipalPlanAnalyzer._compute_robustness_value"
},
{
  "class": "PDETMunicipalPlanAnalyzer",
  "function": "_compute_e_value",
  "method_type": "analysis",
  "priority": 5,
  "description": "PDETMunicipalPlanAnalyzer._compute_e_value"
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  "class": "PDETMunicipalPlanAnalyzer",
  "function": "_interpret_sensitivity",
  "method_type": "analysis",
  "priority": 6,
  "description": "PDETMunicipalPlanAnalyzer._interpret_sensitivity"
},
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  "class": "OperationalizationAuditor",
  "function": "_audit_systemic_risk",
  "method_type": "validation",
  "priority": 7,
  "description": "OperationalizationAuditor._audit_systemic_risk"
},
{
  "class": "BayesianCounterfactualAuditor",
  "function": "aggregate_risk_and_prioritize",
  "method_type": "analysis",
  "priority": 8,
  "description": "BayesianCounterfactualAuditor.aggregate_risk_and_prioritize"
},
{
  "class": "BayesianCounterfactualAuditor",
  "function": "refutation_and_sanity_checks",
  "method_type": "analysis",
  "priority": 9,
  "description": "BayesianCounterfactualAuditor.refutation_and_sanity_checks"
},
{
  "class": "AdaptivePriorCalculator",
  "function": "sensitivity_analysis",
  "method_type": "analysis",
  "priority": 10,
  "description": "AdaptivePriorCalculator.sensitivity_analysis"
}
],
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    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q039-000",
    "match_type": "REGEX",
    "pattern": "riesgos:|posibles dificultades:|barreras a la implementación"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q039-001",
    "match_type": "REGEX",

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    "pattern": "aumento de la xenofobia|tensiones con la comunidad de acogida"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q039-002",
    "match_type": "REGEX",
    "pattern": "saturación de los servicios de salud y educación"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q039-003",
    "match_type": "REGEX",
    "pattern": "sostenibilidad de la ayuda humanitaria|dependencia de la cooperación"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q039-004",
    "match_type": "REGEX",
    "pattern": "riesgos de trata de personas y explotación en la población migrante"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q039-005",
    "match_type": "REGEX",
    "pattern": "cambios en la política migratoria nacional o del país vecino"
  },
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    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q039-006",
    "match_type": "REGEX",
    "pattern": "medidas de mitigación|plan de contingencia|para mitigar"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q039-007",
    "match_type": "REGEX",
    "pattern": "campañas de convivencia|estrategias de integración|fortalecimiento de
servicios"
  }
],
"policy_area_id": "PA10",
"question_global": 39,
"question_id": "Q039",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿El plan identifica posibles riesgos en la implementación de la respuesta
migratoria (ej. brotes de xenofobia, saturación de servicios sociales) y propone 'medidas de
mitigación'?",
"validations": {}
},
{
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  "cluster_id": "CL04",
  "dimension_id": "DIM02",
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      "required": true,
      "type": "complementariedad_explicita"
    }
  ],
  {

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        "required": true,
        "type": "secuenciacion_logica"
    }
],
"failure_contract": {
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        "method_type": "analysis",
        "priority": 1,
        "description": "PolicyContradictionDetector._detect_logical_incompatibilities"
    },
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        "function": "_calculate_coherence_metrics",
        "method_type": "scoring",
        "priority": 2,
        "description": "PolicyContradictionDetector._calculate_coherence_metrics"
    },
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        "function": "_calculate_objective_alignment",
        "method_type": "scoring",
        "priority": 3,
        "description": "PolicyContradictionDetector._calculate_objective_alignment"
    },
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        "function": "_calculate_graph_fragmentation",
        "method_type": "scoring",
        "priority": 4,
        "description": "PolicyContradictionDetector._calculate_graph_fragmentation"
    },
    {
        "class": "OperationalizationAuditor",
        "function": "audit_sequence_logic",
        "method_type": "validation",
        "priority": 5,
        "description": "OperationalizationAuditor.audit_sequence_logic"
    },
    {
        "class": "BayesianMechanismInference",
        "function": "_calculate_coherence_factor",
        "method_type": "scoring",
        "priority": 6,
        "description": "BayesianMechanismInference._calculate_coherence_factor"
    },
    {
        "class": "PDETMunicipalPlanAnalyzer",
        "function": "_score_causal_coherence",
        "method_type": "scoring",
        "priority": 7,
        "description": "PDETMunicipalPlanAnalyzer._score_causal_coherence"
    },
    {
        "class": "AdaptivePriorCalculator",
        "function": "calculate_likelihood_adaptativo",
        "method_type": "scoring",
        "priority": 8,
        "description": "AdaptivePriorCalculator.calculate_likelihood_adaptativo"
    }
],
"patterns": [
    {
        "category": "GENERAL",

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    "flags": "i",
    "id": "PAT-Q040-000",
    "match_type": "REGEX",
    "pattern": "estrategia integral de atención e integración|de manera articulada"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q040-001",
    "match_type": "LITERAL",
    "pattern": "la regularización se complementa con la inclusión laboral y el acceso a
servicios"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q040-002",
    "match_type": "REGEX",
    "pattern": "sinergia entre la atención humanitaria y las soluciones duraderas"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q040-003",
    "match_type": "REGEX",
    "pattern": "la atención de emergencia es el primer paso, seguido por la estabilización"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q040-004",
    "match_type": "REGEX",
    "pattern": "en una primera fase se dará respuesta humanitaria, luego se promoverá la
integración"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q040-005",
    "match_type": "LITERAL",
    "pattern": "la estrategia combina asistencia, protección e integración"
  }
],
"policy_area_id": "PA10",
"question_global": 40,
"question_id": "Q040",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿El conjunto de actividades para la migración demuestra una estrategia coherente?
Se debe buscar evidencia de 'complementariedad' (ej. regularización + acceso a servicios) o una
'secuencia' lógica.",
"validations": {}
},
{
  "base_slot": "D3-Q1",
  "cluster_id": "CL04",
  "dimension_id": "DIM03",
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      "type": "fuente_verificacion"
    },
    {
      "required": true,
      "type": "linea_base_producto"
    }
  ],

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    {
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      "type": "meta_cuantitativa"
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  ],
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      "incomplete_text"
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      "function": "_score_indicators",
      "method_type": "scoring",
      "priority": 1,
      "description": "PDETMunicipalPlanAnalyzer._score_indicators"
    },
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      "method_type": "validation",
      "priority": 2,
      "description": "OperationalizationAuditor.audit_evidence_traceability"
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      "method_type": "analysis",
      "priority": 3,
      "description": "CausalInferenceSetup.assign_probative_value"
    },
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      "function": "apply_test_logic",
      "method_type": "analysis",
      "priority": 4,
      "description": "BeachEvidentialTest.apply_test_logic"
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      "method_type": "analysis",
      "priority": 5,
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      "method_type": "extraction",
      "priority": 6,
      "description": "IndustrialPolicyProcessor._extract_metadata"
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      "method_type": "scoring",
      "priority": 7,
      "description": "IndustrialPolicyProcessor._calculate_quality_score"
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      "function": "generate_traceability_record",
      "method_type": "analysis",
      "priority": 8,
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    }
  ],
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    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q041-001",
    "match_type": "REGEX",
    "pattern": "migrantes orientados en el PAO|personas atendidas"
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    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q041-002",
    "match_type": "REGEX",
    "pattern": "kits de ayuda humanitaria (alimento, higiene) entregados"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q041-003",
    "match_type": "REGEX",
    "pattern": "personas alojadas en albergues temporales"
  },
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    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q041-004",
    "match_type": "REGEX",
    "pattern": "migrantes acompañados en la obtención del PPT"
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    "confidence_weight": 0.85,
    "flags": "i",
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    "match_type": "REGEX",
    "pattern": "NNA migrantes matriculados en el sistema escolar"
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    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q041-006",
    "match_type": "LITERAL",
    "pattern": "Línea Base:|LB:|Valor inicial:"
  },
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    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q041-007",
    "match_type": "REGEX",
    "pattern": "Meta Cuatrienio:|Meta:|Valor esperado:"
  },
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    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q041-008",
    "match_type": "REGEX",
    "pattern": "Fuente de verificación:|Medio de verificación:|Fuente:"
  },
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        "flags": "i",
        "id": "PAT-Q041-009",
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ACNUR)"
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    "question_global": 41,
    "question_id": "Q041",
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    "scoring_modality": "TYPE_A",
    "text": "¿Los indicadores de producto para migración (ej. migrantes regularizados, kits de
ayuda entregados) incluyen 'línea base', 'meta' cuantitativa y 'fuente de verificación'?",
    "validations": {}
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    "cluster_id": "CL04",
    "dimension_id": "DIM03",
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        {
            "required": true,
            "type": "proporcionalidad_meta_problema"
        }
    ],
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            "incomplete_text"
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        "emit_code": "ABORT-Q042-REQ"
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    "method_sets": [
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            "class": "AdvancedDAGValidator",
            "function": "_calculate_bayesian_posterior",
            "method_type": "scoring",
            "priority": 1,
            "description": "AdvancedDAGValidator._calculate_bayesian_posterior"
        },
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            "function": "_calculate_confidence_interval",
            "method_type": "scoring",
            "priority": 2,
            "description": "AdvancedDAGValidator._calculate_confidence_interval"
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            "method_type": "analysis",
            "priority": 3,
            "description": "AdaptivePriorCalculator._adjust_domain_weights"
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            "method_type": "analysis",
            "priority": 4,
            "description": "PDETMunicipalPlanAnalyzer._get_spanish_stopwords"
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            "function": "_log_refactored_components",
            "method_type": "analysis",

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    "priority": 5,
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    "method_type": "analysis",
    "priority": 6,
    "description": "PDETMunicipalPlanAnalyzer.analyze_financial_feasibility"
  },
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    "function": "_score_indicators",
    "method_type": "scoring",
    "priority": 7,
    "description": "PDETMunicipalPlanAnalyzer._score_indicators"
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    "function": "_interpret_risk",
    "method_type": "analysis",
    "priority": 8,
    "description": "PDETMunicipalPlanAnalyzer._interpret_risk"
  },
  {
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    "function": "_calculate_sufficiency",
    "method_type": "scoring",
    "priority": 9,
    "description": "FinancialAuditor._calculate_sufficiency"
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  {
    "class": "BayesianMechanismInference",
    "function": "_test_sufficiency",
    "method_type": "analysis",
    "priority": 10,
    "description": "BayesianMechanismInference._test_sufficiency"
  },
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    "class": "BayesianMechanismInference",
    "function": "_test_necessity",
    "method_type": "analysis",
    "priority": 11,
    "description": "BayesianMechanismInference._test_necessity"
  },
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    "function": "_assess_financial_sustainability",
    "method_type": "analysis",
    "priority": 12,
    "description": "PDETMunicipalPlanAnalyzer._assess_financial_sustainability"
  },
  {
    "class": "AdaptivePriorCalculator",
    "function": "calculate_likelihood_adaptativo",
    "method_type": "scoring",
    "priority": 13,
    "description": "AdaptivePriorCalculator.calculate_likelihood_adaptativo"
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    "method_type": "scoring",
    "priority": 14,
    "description": "IndustrialPolicyProcessor._calculate_quality_score"
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    "function": "_generar_sugerencias_internas",
    "method_type": "analysis",
    "priority": 15,
    "description": "TeoriaCambio._generar_sugerencias_internas"
  }

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      "priority": 16,
      "description": "PDETMunicipalPlanAnalyzer._deduplicate_tables"
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      "function": "_indicator_to_dict",
      "method_type": "analysis",
      "priority": 17,
      "description": "PDETMunicipalPlanAnalyzer._indicator_to_dict"
    },
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      "function": "_generate_recommendations",
      "method_type": "analysis",
      "priority": 18,
      "description": "PDETMunicipalPlanAnalyzer._generate_recommendations"
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    {
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      "function": "_compile_pattern_registry",
      "method_type": "analysis",
      "priority": 19,
      "description": "IndustrialPolicyProcessor._compile_pattern_registry"
    },
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      "class": "IndustrialPolicyProcessor",
      "function": "_build_point_patterns",
      "method_type": "analysis",
      "priority": 20,
      "description": "IndustrialPolicyProcessor._build_point_patterns"
    },
    {
      "class": "IndustrialPolicyProcessor",
      "function": "_empty_result",
      "method_type": "analysis",
      "priority": 21,
      "description": "IndustrialPolicyProcessor._empty_result"
    }
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      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q042-000",
      "match_type": "REGEX",
      "pattern": "la cobertura de atención humanitaria cubre un X% del flujo en tránsito
estimado"
    },
    {
      "category": "INDICADOR",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q042-001",
      "match_type": "REGEX",
      "pattern": "se espera regularizar al \\d+% de la población con vocación de permanencia"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q042-002",
      "match_type": "REGEX",
      "pattern": "universo de atención|flujo migratorio estimado"
    },
    {
      "category": "GENERAL",

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        "flags": "i",
        "id": "PAT-Q042-003",
        "match_type": "REGEX",
        "pattern": "la meta se establece en función de la capacidad de los albergues y los
recursos de cooperación"
    },
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        "category": "GENERAL",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q042-004",
        "match_type": "REGEX",
        "pattern": "se priorizará la atención a NNA no acompañados y mujeres gestantes"
    },
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        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q042-005",
        "match_type": "REGEX",
        "pattern": "la dosificación de la ayuda humanitaria sigue los estándares Esfera"
    }
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"question_global": 42,
"question_id": "Q042",
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"scoring_modality": "TYPE_A",
"text": "¿Las metas de los productos (ej. 'atender a 5.000 migrantes en albergues') son
proporcionales a la magnitud del flujo migratorio diagnosticado?",
"validations": {}
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    "cluster_id": "CL04",
    "dimension_id": "DIM03",
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            "type": "trazabilidad_organizacional"
        },
        {
            "required": true,
            "type": "trazabilidad_presupuestal"
        }
    ],
    "failure_contract": {
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        "emit_code": "ABORT-Q043-REQ"
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    "method_sets": [
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            "function": "_match_program_to_node",
            "method_type": "analysis",
            "priority": 1,
            "description": "FinancialAuditor._match_program_to_node"
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            "class": "FinancialAuditor",
            "function": "_match_goal_to_budget",
            "method_type": "analysis",
            "priority": 2,
            "description": "FinancialAuditor._match_goal_to_budget"
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            "function": "_extract_from_responsibility_tables",

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    "method_type": "extraction",
    "priority": 3,
    "description": "PDETMunicipalPlanAnalyzer._extract_from_responsibility_tables"
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    "function": "_consolidate_entities",
    "method_type": "analysis",
    "priority": 4,
    "description": "PDETMunicipalPlanAnalyzer._consolidate_entities"
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    "method_type": "analysis",
    "priority": 5,
    "description": "PDETMunicipalPlanAnalyzer.identify_responsible_entities"
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    "method_type": "scoring",
    "priority": 6,
    "description": "PDETMunicipalPlanAnalyzer._score_responsibility_clarity"
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    "function": "process_document",
    "method_type": "analysis",
    "priority": 7,
    "description": "PolicyAnalysisEmbedder.process_document"
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    "function": "_generate_query_from_pdq",
    "method_type": "analysis",
    "priority": 8,
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    "function": "semantic_search",
    "method_type": "analysis",
    "priority": 9,
    "description": "PolicyAnalysisEmbedder.semantic_search"
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    "function": "_apply_mmr",
    "method_type": "analysis",
    "priority": 10,
    "description": "PolicyAnalysisEmbedder._apply_mmr"
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    "function": "_empty_semantic_cube",
    "method_type": "analysis",
    "priority": 11,
    "description": "SemanticAnalyzer._empty_semantic_cube"
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    "function": "_classify_policy_domain",
    "method_type": "analysis",
    "priority": 12,
    "description": "SemanticAnalyzer._classify_policy_domain"
  },
  {
    "class": "SemanticAnalyzer",
    "function": "_classify_cross_cutting_themes",
    "method_type": "analysis",
    "priority": 13,

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    "description": "SemanticAnalyzer._classify_cross_cutting_themes"
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  {
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    "function": "_classify_value_chain_link",
    "method_type": "analysis",
    "priority": 14,
    "description": "SemanticAnalyzer._classify_value_chain_link"
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    "function": "_vectorize_segments",
    "method_type": "analysis",
    "priority": 15,
    "description": "SemanticAnalyzer._vectorize_segments"
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    "function": "_process_segment",
    "method_type": "analysis",
    "priority": 16,
    "description": "SemanticAnalyzer._process_segment"
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    "function": "_calculate_semantic_complexity",
    "method_type": "scoring",
    "priority": 17,
    "description": "SemanticAnalyzer._calculate_semantic_complexity"
  },
  {
    "class": "IndustrialPolicyProcessor",
    "function": "_compute_evidence_confidence",
    "method_type": "analysis",
    "priority": 18,
    "description": "IndustrialPolicyProcessor._compute_evidence_confidence"
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  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_entity_to_dict",
    "method_type": "analysis",
    "priority": 19,
    "description": "PDETMunicipalPlanAnalyzer._entity_to_dict"
  },
  {
    "class": "AdaptivePriorCalculator",
    "function": "generate_traceability_record",
    "method_type": "analysis",
    "priority": 20,
    "description": "AdaptivePriorCalculator.generate_traceability_record"
  },
  {
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    "function": "generate_pdq_report",
    "method_type": "analysis",
    "priority": 21,
    "description": "PolicyAnalysisEmbedder.generate_pdq_report"
  },
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    "class": "ReportingEngine",
    "function": "generate_accountability_matrix",
    "method_type": "analysis",
    "priority": 22,
    "description": "ReportingEngine.generate_accountability_matrix"
  }
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"patterns": [
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    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q043-000",

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    "match_type": "REGEX",
    "pattern": "código BPIN|proyecto de inversión para atención a población migrante"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q043-001",
    "match_type": "REGEX",
    "pattern": "programa del PPI|línea de inversión en integración"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q043-002",
    "match_type": "REGEX",
    "pattern": "recursos del proyecto|presupuesto para el PAO"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q043-003",
    "match_type": "REGEX",
    "pattern": "responsable:|dependencia a cargo:|entidad ejecutora"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q043-004",
    "match_type": "REGEX",
    "pattern": "Secretaría de Gobierno|Desarrollo Social|Enlace de Migración"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q043-005",
    "match_type": "REGEX",
    "pattern": "articulado con la Personería|operado por un socio de la cooperación (ONG)"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q043-006",
    "match_type": "REGEX",
    "pattern": "convenio con|contrato de suministro"
  }
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"policy_area_id": "PA10",
"question_global": 43,
"question_id": "Q043",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿Los productos para migración tienen trazabilidad presupuestal (vinculados a códigos BPIN, PPI) y organizacional (asociados a una 'Secretaría de Gobierno' o entidad responsable)?",
"validations": {}
},
{
  "base_slot": "D3-Q4",
  "cluster_id": "CL04",
  "dimension_id": "DIM03",
  "expected_elements": [
    {
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      "type": "coherencia_recursos"
    }
  ],
  {

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        "required": true,
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    },
    {
        "required": true,
        "type": "realismo_plazos"
    }
],
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        "incomplete_text"
    ],
    "emit_code": "ABORT-Q044-REQ"
},
"method_sets": [
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        "function": "calculate_acyclicity_pvalue",
        "method_type": "scoring",
        "priority": 1,
        "description": "AdvancedDAGValidator.calculate_acyclicity_pvalue"
    },
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        "function": "_is_acyclic",
        "method_type": "analysis",
        "priority": 2,
        "description": "AdvancedDAGValidator._is_acyclic"
    },
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        "class": "AdvancedDAGValidator",
        "function": "get_graph_stats",
        "method_type": "analysis",
        "priority": 3,
        "description": "AdvancedDAGValidator.get_graph_stats"
    },
    {
        "class": "AdvancedDAGValidator",
        "function": "_calculate_node_importance",
        "method_type": "scoring",
        "priority": 4,
        "description": "AdvancedDAGValidator._calculate_node_importance"
    },
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        "function": "_generate_subgraph",
        "method_type": "analysis",
        "priority": 5,
        "description": "AdvancedDAGValidator._generate_subgraph"
    },
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        "function": "add_node",
        "method_type": "analysis",
        "priority": 6,
        "description": "AdvancedDAGValidator.add_node"
    },
    {
        "class": "AdvancedDAGValidator",
        "function": "add_edge",
        "method_type": "analysis",
        "priority": 7,
        "description": "AdvancedDAGValidator.add_edge"
    },
    {
        "class": "AdvancedDAGValidator",
        "function": "export_nodes",
        "method_type": "analysis",
        "priority": 8,
        "description": "AdvancedDAGValidator.export_nodes"
    },

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  "function": "_initialize_rng",
  "method_type": "analysis",
  "priority": 9,
  "description": "AdvancedDAGValidator._initialize_rng"
},
{
  "class": "AdvancedDAGValidator",
  "function": "_calculate_statistical_power",
  "method_type": "scoring",
  "priority": 10,
  "description": "AdvancedDAGValidator._calculate_statistical_power"
},
{
  "class": "AdvancedDAGValidator",
  "function": "_get_node_validator",
  "method_type": "analysis",
  "priority": 11,
  "description": "AdvancedDAGValidator._get_node_validator"
},
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  "class": "AdvancedDAGValidator",
  "function": "_create_empty_result",
  "method_type": "analysis",
  "priority": 12,
  "description": "AdvancedDAGValidator._create_empty_result"
},
{
  "class": "BayesianMechanismInference",
  "function": "_test_necessity",
  "method_type": "analysis",
  "priority": 13,
  "description": "BayesianMechanismInference._test_necessity"
},
{
  "class": "IndustrialGradeValidator",
  "function": "execute_suite",
  "method_type": "analysis",
  "priority": 14,
  "description": "IndustrialGradeValidator.execute_suite"
},
{
  "class": "IndustrialGradeValidator",
  "function": "validate_connection_matrix",
  "method_type": "validation",
  "priority": 15,
  "description": "IndustrialGradeValidator.validate_connection_matrix"
},
{
  "class": "IndustrialGradeValidator",
  "function": "run_performance_benchmarks",
  "method_type": "analysis",
  "priority": 16,
  "description": "IndustrialGradeValidator.run_performance_benchmarks"
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{
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  "function": "_benchmark_operation",
  "method_type": "analysis",
  "priority": 17,
  "description": "IndustrialGradeValidator._benchmark_operation"
},
{
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  "function": "_log_metric",
  "method_type": "analysis",
  "priority": 18,
  "description": "IndustrialGradeValidator._log_metric"
},
{
  "class": "IndustrialGradeValidator",

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    "function": "validate_engine_readiness",
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    "priority": 19,
    "description": "IndustrialGradeValidator.validate_engine_readiness"
  },
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    "priority": 20,
    "description": "PerformanceAnalyzer.analyze_performance"
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    "function": "_calculate_loss_functions",
    "method_type": "scoring",
    "priority": 21,
    "description": "PerformanceAnalyzer._calculate_loss_functions"
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    "method_type": "scoring",
    "priority": 22,
    "description": "HierarchicalGenerativeModel._calculate_likelihood"
  },
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    "function": "_calculate_ess",
    "method_type": "scoring",
    "priority": 23,
    "description": "HierarchicalGenerativeModel._calculate_ess"
  },
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    "function": "_calculate_r_hat",
    "method_type": "scoring",
    "priority": 24,
    "description": "HierarchicalGenerativeModel._calculate_r_hat"
  },
  {
    "class": "IndustrialGradeValidator",
    "function": "validate_causal_categories",
    "method_type": "validation",
    "priority": 25,
    "description": "IndustrialGradeValidator.validate_causal_categories"
  },
  {
    "class": "TeoriaCambio",
    "function": "_extraer_categorias",
    "method_type": "analysis",
    "priority": 26,
    "description": "TeoriaCambio._extraer_categorias"
  }
],
"patterns": [
  {
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    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q044-000",
    "match_type": "REGEX",
    "pattern": "factibilidad|viabilidad|es realista esperar que"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q044-001",
    "match_type": "REGEX",
    "pattern": "capacidad operativa para realizar jornadas masivas de regularización"
  },

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{
  "category": "GENERAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q044-002",
  "match_type": "REGEX",
  "pattern": "el plazo para lograr la afiliación depende de la asignación de cupos en el
régimen subsidiado"
},
{
  "category": "GENERAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q044-003",
  "match_type": "REGEX",
  "pattern": "la meta de atención humanitaria depende de la continuidad de la cooperación"
},
{
  "category": "GENERAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q044-004",
  "match_type": "REGEX",
  "pattern": "contradictorio|poco probable|desproporcionado"
},
{
  "category": "GENERAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q044-005",
  "match_type": "REGEX",
  "pattern": "con el personal del PAO se puede lograr la orientación"
}
],
"policy_area_id": "PA10",
"question_global": 44,
"question_id": "Q044",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿Existe una relación factible entre la actividad (ej. 'una jornada de atención') y
la meta del producto asociado (ej. '10.000 migrantes con acceso a salud') para la política
migratoria? Se debe evaluar si los 'plazos' son realistas.",
"validations": {}
},
{
  "base_slot": "D3-Q5",
  "cluster_id": "CL04",
  "dimension_id": "DIM03",
  "expected_elements": [
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      "required": true,
      "type": "conexion_producto_resultado"
    },
    {
      "required": true,
      "type": "mecanismo_causal_explicito"
    }
  ],
  "failure_contract": {
    "abort_if": [
      "missing_required_element",
      "incomplete_text"
    ],
    "emit_code": "ABORT-Q045-REQ"
  },
  "method_sets": [
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      "function": "_identify_confounders",
      "method_type": "analysis",
      "priority": 1,
      "description": "PDETMunicipalPlanAnalyzer._identify_confounders"
    }
  ]
}

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},
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  "method_type": "analysis",
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  "description": "PDETMunicipalPlanAnalyzer._effect_to_dict"
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  "class": "PDETMunicipalPlanAnalyzer",
  "function": "_scenario_to_dict",
  "method_type": "analysis",
  "priority": 3,
  "description": "PDETMunicipalPlanAnalyzer._scenario_to_dict"
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  "class": "PDETMunicipalPlanAnalyzer",
  "function": "_simulate_intervention",
  "method_type": "analysis",
  "priority": 4,
  "description": "PDETMunicipalPlanAnalyzer._simulate_intervention"
},
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  "class": "PDETMunicipalPlanAnalyzer",
  "function": "_generate_recommendations",
  "method_type": "analysis",
  "priority": 5,
  "description": "PDETMunicipalPlanAnalyzer._generate_recommendations"
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  "class": "PDETMunicipalPlanAnalyzer",
  "function": "_identify_causal_nodes",
  "method_type": "analysis",
  "priority": 6,
  "description": "PDETMunicipalPlanAnalyzer._identify_causal_nodes"
},
{
  "class": "BayesianCounterfactualAuditor",
  "function": "_evaluate_factual",
  "method_type": "analysis",
  "priority": 7,
  "description": "BayesianCounterfactualAuditor._evaluate_factual"
},
{
  "class": "BayesianCounterfactualAuditor",
  "function": "_evaluate_counterfactual",
  "method_type": "analysis",
  "priority": 8,
  "description": "BayesianCounterfactualAuditor._evaluate_counterfactual"
},
{
  "class": "CausalExtractor",
  "function": "_assess_financial_consistency",
  "method_type": "analysis",
  "priority": 9,
  "description": "CausalExtractor._assess_financial_consistency"
},
{
  "class": "BayesianMechanismInference",
  "function": "_infer_activity_sequence",
  "method_type": "analysis",
  "priority": 10,
  "description": "BayesianMechanismInference._infer_activity_sequence"
},
{
  "class": "BayesianMechanismInference",
  "function": "_generate_necessity_remediation",
  "method_type": "analysis",
  "priority": 11,
  "description": "BayesianMechanismInference._generate_necessity_remediation"
},
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    "method_type": "analysis",
    "priority": 12,
    "description": "BayesianCounterfactualAuditor.refutation_and_sanity_checks"
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    "function": "_load_questionnaire",
    "method_type": "analysis",
    "priority": 13,
    "description": "IndustrialPolicyProcessor._load_questionnaire"
  },
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    "class": "PDETMunicipalPlanAnalyzer",
    "function": "analyze_financial_feasibility",
    "method_type": "analysis",
    "priority": 14,
    "description": "PDETMunicipalPlanAnalyzer.analyze_financial_feasibility"
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    "function": "construct_causal_dag",
    "method_type": "analysis",
    "priority": 15,
    "description": "PDETMunicipalPlanAnalyzer.construct_causal_dag"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "estimate_causal_effects",
    "method_type": "analysis",
    "priority": 16,
    "description": "PDETMunicipalPlanAnalyzer.estimate_causal_effects"
  },
  {
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    "function": "generate_counterfactuals",
    "method_type": "analysis",
    "priority": 17,
    "description": "PDETMunicipalPlanAnalyzer.generate_counterfactuals"
  },
  {
    "class": "CausalExtractor",
    "function": "_build_type_hierarchy",
    "method_type": "analysis",
    "priority": 18,
    "description": "CausalExtractor._build_type_hierarchy"
  },
  {
    "class": "CausalExtractor",
    "function": "_check_structural_violation",
    "method_type": "analysis",
    "priority": 19,
    "description": "CausalExtractor._check_structural_violation"
  },
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    "function": "_calculate_type_transition_prior",
    "method_type": "scoring",
    "priority": 20,
    "description": "CausalExtractor._calculate_type_transition_prior"
  },
  {
    "class": "CausalExtractor",
    "function": "_calculate_textual_proximity",
    "method_type": "scoring",
    "priority": 21,
    "description": "CausalExtractor._calculate_textual_proximity"
  },
  {
    "class": "TeoriaCambio",
    "function": "_validar_orden_causal",

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    "method_type": "analysis",
    "priority": 22,
    "description": "TeoriaCambio._validar_orden_causal"
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  {
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    "method_type": "analysis",
    "priority": 23,
    "description": "PDETMunicipalPlanAnalyzer._refine_edge_probabilities"
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    "function": "compare_policy_interventions",
    "method_type": "analysis",
    "priority": 24,
    "description": "PolicyAnalysisEmbedder.compare_policy_interventions"
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  {
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    "function": "infer_mechanisms",
    "method_type": "analysis",
    "priority": 25,
    "description": "BayesianMechanismInference.infer_mechanisms"
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    "flags": "i",
    "id": "PAT-Q045-000",
    "match_type": "REGEX",
    "pattern": "esto permitirá que|lo cual contribuirá a|facilitando la"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q045-001",
    "match_type": "REGEX",
    "pattern": "el mecanismo es que la regularización (PPT) es la puerta de entrada al
mercado laboral formal y a los servicios"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q045-002",
    "match_type": "REGEX",
    "pattern": "al recibir atención humanitaria, se reduce la vulnerabilidad inmediata de
los caminantes"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q045-003",
    "match_type": "REGEX",
    "pattern": "la matrícula escolar de NNA migrantes promueve su integración y protege sus
derechos"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q045-004",
    "match_type": "REGEX",
    "pattern": "variable intermedia|mediador|eslabón causal|regularización|acceso a
servicios"
  },
  {

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        "category": "GENERAL",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q045-005",
        "match_type": "REGEX",
        "pattern": "cadena de valor|ruta de cambio de la integración"
    }
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"policy_area_id": "PA10",
"question_global": 45,
"question_id": "Q045",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿El PDM explica cómo los productos (ej. 'migrantes con estatus regularizado')
contribuyen a generar resultados (ej. 'aumento de la integración socioeconómica')? Se debe buscar
este 'mecanismo'.",
"validations": {}
},
{
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    "cluster_id": "CL04",
    "dimension_id": "DIM04",
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            "type": "horizonte_temporal"
        },
        {
            "required": true,
            "type": "linea_base_resultado"
        },
        {
            "required": true,
            "type": "meta_resultado"
        },
        {
            "required": true,
            "type": "metrica_outcome"
        }
    ],
    "failure_contract": {
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            "incomplete_text"
        ],
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            "function": "_extract_entities_syntax",
            "method_type": "extraction",
            "priority": 1,
            "description": "PDETMunicipalPlanAnalyzer._extract_entities_syntax"
        },
        {
            "class": "PDETMunicipalPlanAnalyzer",
            "function": "_extract_entities_ner",
            "method_type": "extraction",
            "priority": 2,
            "description": "PDETMunicipalPlanAnalyzer._extract_entities_ner"
        },
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            "function": "_calculate_language_specificity",
            "method_type": "scoring",
            "priority": 3,
            "description": "CausalExtractor._calculate_language_specificity"
        },
        {
            "class": "CausalExtractor",
            "function": "_calculate_composite_likelihood",

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    "method_type": "scoring",
    "priority": 4,
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  },
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    "function": "_calculate_semantic_distance",
    "method_type": "scoring",
    "priority": 5,
    "description": "CausalExtractor._calculate_semantic_distance"
  },
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    "function": "_classify_temporal_type",
    "method_type": "analysis",
    "priority": 6,
    "description": "TemporalLogicVerifier._classify_temporal_type"
  },
  {
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    "function": "_score_indicators",
    "method_type": "scoring",
    "priority": 7,
    "description": "PDETMunicipalPlanAnalyzer._score_indicators"
  },
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    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_find_outcome_mentions",
    "method_type": "analysis",
    "priority": 8,
    "description": "PDETMunicipalPlanAnalyzer._find_outcome_mentions"
  },
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    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_score_temporal_consistency",
    "method_type": "scoring",
    "priority": 9,
    "description": "PDETMunicipalPlanAnalyzer._score_temporal_consistency"
  },
  {
    "class": "CausalExtractor",
    "function": "_extract_goals",
    "method_type": "extraction",
    "priority": 10,
    "description": "CausalExtractor._extract_goals"
  },
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    "class": "CausalExtractor",
    "function": "_parse_goal_context",
    "method_type": "extraction",
    "priority": 11,
    "description": "CausalExtractor._parse_goal_context"
  },
  {
    "class": "CausalExtractor",
    "function": "_classify_goal_type",
    "method_type": "analysis",
    "priority": 12,
    "description": "CausalExtractor._classify_goal_type"
  },
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    "function": "_parse_temporal_marker",
    "method_type": "extraction",
    "priority": 13,
    "description": "TemporalLogicVerifier._parse_temporal_marker"
  },
  {
    "class": "TemporalLogicVerifier",
    "function": "_extract_resources",
    "method_type": "extraction",
    "priority": 14,

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    "description": "TemporalLogicVerifier._extract_resources"
  },
  {
    "class": "PerformanceAnalyzer",
    "function": "analyze_performance",
    "method_type": "analysis",
    "priority": 15,
    "description": "PerformanceAnalyzer.analyze_performance"
  },
  {
    "class": "PerformanceAnalyzer",
    "function": "_generate_recommendations",
    "method_type": "analysis",
    "priority": 16,
    "description": "PerformanceAnalyzer._generate_recommendations"
  }
],
"patterns": [
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    "category": "INDICADOR",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q046-000",
    "match_type": "REGEX",
    "pattern": "indicador de resultado|indicador de efecto|outcome"
  },
  {
    "category": "INDICADOR",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q046-001",
    "match_type": "REGEX",
    "pattern": "porcentaje de la población migrante con estatus regular"
  },
  {
    "category": "INDICADOR",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q046-002",
    "match_type": "REGEX",
    "pattern": "tasa de ocupación de la población migrante"
  },
  {
    "category": "INDICADOR",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q046-003",
    "match_type": "REGEX",
    "pattern": "porcentaje de NNA migrantes que permanecen en el sistema educativo"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q046-004",
    "match_type": "REGEX",
    "pattern": "Índice de percepción de xenofobia"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q046-005",
    "match_type": "LITERAL",
    "pattern": "Línea Base:|LB:|valor 2023:"
  },
  {
    "category": "INDICADOR",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q046-006",
    "match_type": "LITERAL",

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    "pattern": "Meta Cuatrienio:|Meta 2027:|se espera aumentar a un X%"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q046-007",
    "match_type": "REGEX",
    "pattern": "Fuente de verificación:|Medio de verificación:"
  },
  {
    "category": "INDICADOR",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q046-008",
    "match_type": "REGEX",
    "pattern": "Ficha de Indicador de Resultado (KPT del DNP)"
  },
  {
    "category": "TEMPORAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q046-009",
    "match_type": "REGEX",
    "pattern": "horizonte temporal|ventana de maduración|al final del periodo"
  }
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"policy_area_id": "PA10",
"question_global": 46,
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"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿Los indicadores de resultado para migración (ej. 'porcentaje de migrantes afiliados a salud', 'tasa de ocupación de la población migrante') están definidos con línea base, meta y un horizonte temporal?",
"validations": {}
},
{
  "base_slot": "D4-Q2",
  "cluster_id": "CL04",
  "dimension_id": "DIM04",
  "expected_elements": [
    {
      "required": true,
      "type": "cadena_causal_explicita"
    },
    {
      "required": true,
      "type": "condiciones_habilitantes"
    },
    {
      "required": true,
      "type": "supuestos_identificados"
    }
  ]
},
"failure_contract": {
  "abort_if": [
    "missing_required_element",
    "incomplete_text"
  ],
  "emit_code": "ABORT-Q047-REQ"
},
"method_sets": [
  {
    "class": "TeoriaCambio",
    "function": "_encontrar_caminos_completos",
    "method_type": "analysis",
    "priority": 1,
    "description": "TeoriaCambio._encontrar_caminos_completos"
  },
  {
    "class": "TeoriaCambio",

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    "function": "validacion_completa",
    "method_type": "analysis",
    "priority": 2,
    "description": "TeoriaCambio.validacion_completa"
  },
  {
    "class": "CausalExtractor",
    "function": "extract_causal_hierarchy",
    "method_type": "extraction",
    "priority": 3,
    "description": "CausalExtractor.extract_causal_hierarchy"
  },
  {
    "class": "HierarchicalGenerativeModel",
    "function": "verify_conditional_independence",
    "method_type": "analysis",
    "priority": 4,
    "description": "HierarchicalGenerativeModel.verify_conditional_independence"
  },
  {
    "class": "HierarchicalGenerativeModel",
    "function": "_generate_independence_tests",
    "method_type": "analysis",
    "priority": 5,
    "description": "HierarchicalGenerativeModel._generate_independence_tests"
  },
  {
    "class": "BayesianCounterfactualAuditor",
    "function": "construct_scm",
    "method_type": "analysis",
    "priority": 6,
    "description": "BayesianCounterfactualAuditor.construct_scm"
  },
  {
    "class": "AdvancedDAGValidator",
    "function": "_perform_sensitivity_analysis_internal",
    "method_type": "analysis",
    "priority": 7,
    "description": "AdvancedDAGValidator._perform_sensitivity_analysis_internal"
  },
  {
    "class": "BayesFactorTable",
    "function": "get_bayes_factor",
    "method_type": "analysis",
    "priority": 8,
    "description": "BayesFactorTable.get_bayes_factor"
  }
],
"patterns": [
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q047-000",
    "match_type": "REGEX",
    "pattern": "cadena causal|lógica de intervención|si... entonces..."
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q047-001",
    "match_type": "REGEX",
    "pattern": "el resultado se logrará siempre y cuando|asumiendo que"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q047-002",
    "match_type": "REGEX",
    "pattern": "supuesto clave|premisa fundamental"
  }
]

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    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q047-003",
      "match_type": "REGEX",
      "pattern": "condición habilitante|factor crítico|requiere de"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q047-004",
      "match_type": "REGEX",
      "pattern": "depende de la voluntad del sector productivo para contratar migrantes"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q047-005",
      "match_type": "REGEX",
      "pattern": "un supuesto es que la población de acogida esté dispuesta a la convivencia"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q047-006",
      "match_type": "LITERAL",
      "pattern": "se requiere que la política migratoria nacional se mantenga estable"
    }
  ],
  "policy_area_id": "PA10",
  "question_global": 47,
  "question_id": "Q047",
  "scoring_definition_ref": "scoring_modalities.TYPE_A",
  "scoring_modality": "TYPE_A",
  "text": "¿Se explicita la cadena causal que lleva a la integración de la población migrante, mencionando 'supuestos' clave (ej. 'si el sector privado contrata a migrantes regularizados') o 'condiciones habilitantes'?",
  "validations": {}
},
{
  "base_slot": "D4-Q3",
  "cluster_id": "CL04",
  "dimension_id": "DIM04",
  "expected_elements": [
    {
      "required": true,
      "type": "evidencia_comparada"
    },
    {
      "required": true,
      "type": "justificacion_capacidad"
    },
    {
      "required": true,
      "type": "justificacion_recursos"
    }
  ],
  "failure_contract": {
    "abort_if": [
      "missing_required_element",
      "incomplete_text"
    ],
    "emit_code": "ABORT-Q048-REQ"
  },
  "method_sets": [
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      "class": "PDETMunicipalPlanAnalyzer",

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    "function": "_get_prior_effect",
    "method_type": "analysis",
    "priority": 1,
    "description": "PDETMunicipalPlanAnalyzer._get_prior_effect"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_estimate_effect_bayesian",
    "method_type": "analysis",
    "priority": 2,
    "description": "PDETMunicipalPlanAnalyzer._estimate_effect_bayesian"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_compute_robustness_value",
    "method_type": "analysis",
    "priority": 3,
    "description": "PDETMunicipalPlanAnalyzer._compute_robustness_value"
  },
  {
    "class": "AdaptivePriorCalculator",
    "function": "sensitivity_analysis",
    "method_type": "analysis",
    "priority": 4,
    "description": "AdaptivePriorCalculator.sensitivity_analysis"
  },
  {
    "class": "HierarchicalGenerativeModel",
    "function": "_calculate_r_hat",
    "method_type": "scoring",
    "priority": 5,
    "description": "HierarchicalGenerativeModel._calculate_r_hat"
  },
  {
    "class": "HierarchicalGenerativeModel",
    "function": "_calculate_ess",
    "method_type": "scoring",
    "priority": 6,
    "description": "HierarchicalGenerativeModel._calculate_ess"
  },
  {
    "class": "AdvancedDAGValidator",
    "function": "_calculate_statistical_power",
    "method_type": "scoring",
    "priority": 7,
    "description": "AdvancedDAGValidator._calculate_statistical_power"
  },
  {
    "class": "BayesianMechanismInference",
    "function": "_aggregate_bayesian_confidence",
    "method_type": "analysis",
    "priority": 8,
    "description": "BayesianMechanismInference._aggregate_bayesian_confidence"
  }
],
"patterns": [
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q048-000",
    "match_type": "REGEX",
    "pattern": "meta ambiciosa pero factible|meta realista dado el flujo migratorio"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q048-001",
    "match_type": "REGEX",
    "pattern": "la meta se justifica por los recursos de cooperaci3n gestionados"
  },

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    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q048-002",
      "match_type": "REGEX",
      "pattern": "con la inversión de X se espera lograr la afiliación de Y personas"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q048-003",
      "match_type": "REGEX",
      "pattern": "la capacidad del sistema de salud local permite absorber esta nueva
población"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q048-004",
      "match_type": "REGEX",
      "pattern": "en experiencias similares de Cúcuta|Maicao|otras ciudades fronterizas"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q048-005",
      "match_type": "REGEX",
      "pattern": "benchmark|referente de ACNUR/OIM|meta del PND para migración"
    }
  ],
  "policy_area_id": "PA10",
  "question_global": 48,
  "question_id": "Q048",
  "scoring_definition_ref": "scoring_modalities.TYPE_A",
  "scoring_modality": "TYPE_A",
  "text": "¿La ambición de las metas de resultado (ej. 'lograr la afiliación a salud del 80%
de los migrantes') se justifica en función de los recursos, la capacidad del sistema o se compara
con 'casos' de otras ciudades fronterizas?",
  "validations": {}
},
{
  "base_slot": "D4-Q4",
  "cluster_id": "CL04",
  "dimension_id": "DIM04",
  "expected_elements": [
    {
      "required": true,
      "type": "criterios_exito_definidos"
    },
    {
      "required": true,
      "type": "vinculo_resultado_problema"
    }
  ],
  "failure_contract": {
    "abort_if": [
      "missing_required_element",
      "incomplete_text"
    ],
    "emit_code": "ABORT-Q049-REQ"
  },
  "method_sets": [
    {
      "class": "PolicyContradictionDetector",
      "function": "_calculate_objective_alignment",
      "method_type": "scoring",
      "priority": 1,
      "description": "PolicyContradictionDetector._calculate_objective_alignment"
    }
  ]
}

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    },
    {
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      "function": "_identify_affected_sections",
      "method_type": "analysis",
      "priority": 2,
      "description": "PolicyContradictionDetector._identify_affected_sections"
    },
    {
      "class": "PolicyContradictionDetector",
      "function": "_generate_resolution_recommendations",
      "method_type": "analysis",
      "priority": 3,
      "description": "PolicyContradictionDetector._generate_resolution_recommendations"
    },
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      "class": "OperationalizationAuditor",
      "function": "_generate_optimal_remediations",
      "method_type": "analysis",
      "priority": 4,
      "description": "OperationalizationAuditor._generate_optimal_remediations"
    },
    {
      "class": "OperationalizationAuditor",
      "function": "_get_remediation_text",
      "method_type": "analysis",
      "priority": 5,
      "description": "OperationalizationAuditor._get_remediation_text"
    },
    {
      "class": "BayesianCounterfactualAuditor",
      "function": "aggregate_risk_and_prioritize",
      "method_type": "analysis",
      "priority": 6,
      "description": "BayesianCounterfactualAuditor.aggregate_risk_and_prioritize"
    },
    {
      "class": "FinancialAuditor",
      "function": "_detect_allocation_gaps",
      "method_type": "analysis",
      "priority": 7,
      "description": "FinancialAuditor._detect_allocation_gaps"
    }
  ],
  "patterns": [
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      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q049-000",
      "match_type": "REGEX",
      "pattern": "este resultado responde al problema de la xenofobia"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q049-001",
      "match_type": "REGEX",
      "pattern": "para solucionar las barreras de acceso al empleo"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q049-002",
      "match_type": "REGEX",
      "pattern": "el resultado atiende directamente la necesidad de regularización"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,

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        "flags": "i",
        "id": "PAT-Q049-003",
        "match_type": "REGEX",
        "pattern": "criterio de éxito|se considerará un logro si disminuyen las denuncias por
discriminación"
    },
    {
        "category": "GENERAL",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q049-004",
        "match_type": "REGEX",
        "pattern": "umbral de cumplimiento|mínimo aceptable"
    },
    {
        "category": "GENERAL",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q049-005",
        "match_type": "REGEX",
        "pattern": "matriz de coherencia|alineación diagnóstico-estrategia"
    }
],
"policy_area_id": "PA10",
"question_global": 49,
"question_id": "Q049",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿Los resultados propuestos (ej. 'mejora de la convivencia entre migrantes y
comunidad de acogida') 'atienden' o 'abordan' directamente los problemas de integración y xenofobia
priorizados en el diagnóstico?",
"validations": {}
},
{
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    "cluster_id": "CL04",
    "dimension_id": "DIM04",
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            "required": true,
            "type": "alineacion_ods"
        },
        {
            "required": true,
            "type": "alineacion_otros_marcos"
        },
        {
            "required": true,
            "type": "alineacion_pnd"
        }
    ],
    "failure_contract": {
        "abort_if": [
            "missing_required_element",
            "incomplete_text"
        ],
        "emit_code": "ABORT-Q050-REQ"
    },
    "method_sets": [
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            "function": "_score_pdet_alignment",
            "method_type": "scoring",
            "priority": 1,
            "description": "PDETMunicipalPlanAnalyzer._score_pdet_alignment"
        },
        {
            "class": "PDETMunicipalPlanAnalyzer",
            "function": "_score_causal_coherence",
            "method_type": "scoring",
            "priority": 2,
            "description": "PDETMunicipalPlanAnalyzer._score_causal_coherence"
        }
    ]
}

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    },
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      "function": "_validate_dnp_compliance",
      "method_type": "validation",
      "priority": 3,
      "description": "CDAFFramework._validate_dnp_compliance"
    },
    {
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      "function": "_generate_dnp_report",
      "method_type": "analysis",
      "priority": 4,
      "description": "CDAFFramework._generate_dnp_report"
    },
    {
      "class": "IndustrialPolicyProcessor",
      "function": "_analyze_causal_dimensions",
      "method_type": "analysis",
      "priority": 5,
      "description": "IndustrialPolicyProcessor._analyze_causal_dimensions"
    },
    {
      "class": "AdaptivePriorCalculator",
      "function": "validate_quality_criteria",
      "method_type": "validation",
      "priority": 6,
      "description": "AdaptivePriorCalculator.validate_quality_criteria"
    }
  ],
  "patterns": [
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      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q050-000",
      "match_type": "REGEX",
      "pattern": "alineado con el Plan Nacional de Desarrollo|PND|transformación"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q050-001",
      "match_type": "REGEX",
      "pattern": "contribuye a los ODS 10, 11, 16|Objetivos de Desarrollo Sostenible"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q050-002",
      "match_type": "REGEX",
      "pattern": "en concordancia con la Política Integral Migratoria|PIM|Ley 2136"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q050-003",
      "match_type": "REGEX",
      "pattern": "articulado con el CONPES 3950"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q050-004",
      "match_type": "REGEX",
      "pattern": "Pacto Mundial para una Migración Segura, Ordenada y Regular"
    }
  ]
},

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    "question_id": "Q050",
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    "scoring_modality": "TYPE_A",
    "text": "¿El plan declara la alineación de sus resultados de migración con marcos superiores
como el PND, los ODS (10, 11) o los pactos globales sobre migración?",
    "validations": {}
  },
  {
    "base_slot": "D5-Q1",
    "cluster_id": "CL04",
    "dimension_id": "DIM05",
    "expected_elements": [
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        "required": true,
        "type": "impacto_definido"
      },
      {
        "required": true,
        "type": "rezago_temporal"
      },
      {
        "required": true,
        "type": "ruta_transmision"
      }
    ],
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        "incomplete_text"
      ],
      "emit_code": "ABORT-Q051-REQ"
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        "function": "generate_counterfactuals",
        "method_type": "analysis",
        "priority": 1,
        "description": "PDETMunicipalPlanAnalyzer.generate_counterfactuals"
      },
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        "class": "PDETMunicipalPlanAnalyzer",
        "function": "_simulate_intervention",
        "method_type": "analysis",
        "priority": 2,
        "description": "PDETMunicipalPlanAnalyzer._simulate_intervention"
      },
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        "class": "PDETMunicipalPlanAnalyzer",
        "function": "_generate_scenario_narrative",
        "method_type": "analysis",
        "priority": 3,
        "description": "PDETMunicipalPlanAnalyzer._generate_scenario_narrative"
      },
      {
        "class": "PDETMunicipalPlanAnalyzer",
        "function": "_find_mediator_mentions",
        "method_type": "analysis",
        "priority": 4,
        "description": "PDETMunicipalPlanAnalyzer._find_mediator_mentions"
      },
      {
        "class": "TeoriaCambio",
        "function": "_validar_orden_causal",
        "method_type": "analysis",
        "priority": 5,
        "description": "TeoriaCambio._validar_orden_causal"
      },
      {
        "class": "CausalExtractor",

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    "function": "_assess_temporal_coherence",
    "method_type": "analysis",
    "priority": 6,
    "description": "CausalExtractor._assess_temporal_coherence"
  },
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    "function": "_generate_interventions",
    "method_type": "analysis",
    "priority": 7,
    "description": "TextMiningEngine._generate_interventions"
  },
  {
    "class": "BayesianCounterfactualAuditor",
    "function": "construct_scm",
    "method_type": "analysis",
    "priority": 8,
    "description": "BayesianCounterfactualAuditor.construct_scm"
  }
],
"patterns": [
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    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q051-000",
    "match_type": "REGEX",
    "pattern": "impacto esperado|visión de largo plazo|transformación social"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q051-001",
    "match_type": "LITERAL",
    "pattern": "integración socioeconómica sostenible|cohesión social"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q051-002",
    "match_type": "REGEX",
    "pattern": "una sociedad intercultural y sin xenofobia"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q051-003",
    "match_type": "REGEX",
    "pattern": "la suma de los resultados de regularización e inclusión generará el impacto
de"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q051-004",
    "match_type": "REGEX",
    "pattern": "ruta de transmisión|cadena de impacto"
  },
  {
    "category": "TEMPORAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q051-005",
    "match_type": "REGEX",
    "pattern": "tiempo de maduración|se espera observar en una generación|8-10 años"
  }
],
"policy_area_id": "PA10",

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"question_global": 51,
"question_id": "Q051",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿El PDM define 'impactos' de largo plazo (ej. 'integración social y económica
sostenible de la población migrante', 'cohesión social')? Se debe verificar si se menciona la ruta
desde los resultados y el 'tiempo de maduración' esperado.",
"validations": {}
},
{
"base_slot": "D5-Q2",
"cluster_id": "CL04",
"dimension_id": "DIM05",
"expected_elements": [
{
"required": true,
"type": "justifica_validez"
},
{
"required": true,
"type": "usa_indices_compuestos"
},
{
"required": true,
"type": "usa_proxies"
}
],
"failure_contract": {
"abort_if": [
"missing_required_element",
"incomplete_text"
],
"emit_code": "ABORT-Q052-REQ"
},
"method_sets": [
{
"class": "PDETMunicipalPlanAnalyzer",
"function": "calculate_quality_score",
"method_type": "scoring",
"priority": 1,
"description": "PDETMunicipalPlanAnalyzer.calculate_quality_score"
},
{
"class": "PDETMunicipalPlanAnalyzer",
"function": "_estimate_score_confidence",
"method_type": "scoring",
"priority": 2,
"description": "PDETMunicipalPlanAnalyzer._estimate_score_confidence"
},
{
"class": "PDETMunicipalPlanAnalyzer",
"function": "_compute_e_value",
"method_type": "analysis",
"priority": 3,
"description": "PDETMunicipalPlanAnalyzer._compute_e_value"
},
{
"class": "PDETMunicipalPlanAnalyzer",
"function": "_compute_robustness_value",
"method_type": "analysis",
"priority": 4,
"description": "PDETMunicipalPlanAnalyzer._compute_robustness_value"
},
{
"class": "PDETMunicipalPlanAnalyzer",
"function": "_interpret_sensitivity",
"method_type": "analysis",
"priority": 5,
"description": "PDETMunicipalPlanAnalyzer._interpret_sensitivity"
},
{
"class": "ReportingEngine",

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    "function": "_calculate_quality_score",
    "method_type": "scoring",
    "priority": 6,
    "description": "ReportingEngine._calculate_quality_score"
  },
  {
    "class": "BayesianMechanismInference",
    "function": "_aggregate_bayesian_confidence",
    "method_type": "analysis",
    "priority": 7,
    "description": "BayesianMechanismInference._aggregate_bayesian_confidence"
  },
  {
    "class": "PolicyAnalysisEmbedder",
    "function": "evaluate_policy_numerical_consistency",
    "method_type": "analysis",
    "priority": 8,
    "description": "PolicyAnalysisEmbedder.evaluate_policy_numerical_consistency"
  },
  {
    "class": "PolicyAnalysisEmbedder",
    "function": "get_diagnostics",
    "method_type": "analysis",
    "priority": 9,
    "description": "PolicyAnalysisEmbedder.get_diagnostics"
  },
  {
    "class": "PolicyAnalysisEmbedder",
    "function": "process_document",
    "method_type": "analysis",
    "priority": 10,
    "description": "PolicyAnalysisEmbedder.process_document"
  },
  {
    "class": "PolicyAnalysisEmbedder",
    "function": "_generate_query_from_pdq",
    "method_type": "analysis",
    "priority": 11,
    "description": "PolicyAnalysisEmbedder._generate_query_from_pdq"
  },
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    "class": "PolicyAnalysisEmbedder",
    "function": "_filter_by_pdq",
    "method_type": "analysis",
    "priority": 12,
    "description": "PolicyAnalysisEmbedder._filter_by_pdq"
  },
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    "class": "PolicyAnalysisEmbedder",
    "function": "_extract_numerical_values",
    "method_type": "extraction",
    "priority": 13,
    "description": "PolicyAnalysisEmbedder._extract_numerical_values"
  },
  {
    "class": "PolicyAnalysisEmbedder",
    "function": "_embed_texts",
    "method_type": "analysis",
    "priority": 14,
    "description": "PolicyAnalysisEmbedder._embed_texts"
  },
  {
    "class": "PolicyAnalysisEmbedder",
    "function": "_compute_overall_confidence",
    "method_type": "analysis",
    "priority": 15,
    "description": "PolicyAnalysisEmbedder._compute_overall_confidence"
  },
  {
    "class": "FinancialAuditor",
    "function": "_calculate_sufficiency",
    "method_type": "scoring",

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    "priority": 16,
    "description": "FinancialAuditor._calculate_sufficiency"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_interpret_overall_quality",
    "method_type": "analysis",
    "priority": 17,
    "description": "PDETMunicipalPlanAnalyzer._interpret_overall_quality"
  },
  {
    "class": "BayesianCounterfactualAuditor",
    "function": "aggregate_risk_and_prioritize",
    "method_type": "analysis",
    "priority": 18,
    "description": "BayesianCounterfactualAuditor.aggregate_risk_and_prioritize"
  },
  {
    "class": "PolicyTextProcessor",
    "function": "normalize_unicode",
    "method_type": "analysis",
    "priority": 19,
    "description": "PolicyTextProcessor.normalize_unicode"
  },
  {
    "class": "PolicyTextProcessor",
    "function": "segment_into_sentences",
    "method_type": "analysis",
    "priority": 20,
    "description": "PolicyTextProcessor.segment_into_sentences"
  },
  {
    "class": "IndustrialPolicyProcessor",
    "function": "_compute_evidence_confidence",
    "method_type": "analysis",
    "priority": 21,
    "description": "IndustrialPolicyProcessor._compute_evidence_confidence"
  },
  {
    "class": "IndustrialPolicyProcessor",
    "function": "_compute_avg_confidence",
    "method_type": "analysis",
    "priority": 22,
    "description": "IndustrialPolicyProcessor._compute_avg_confidence"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_quality_to_dict",
    "method_type": "analysis",
    "priority": 23,
    "description": "PDETMunicipalPlanAnalyzer._quality_to_dict"
  },
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    "class": "IndustrialPolicyProcessor",
    "function": "_construct_evidence_bundle",
    "method_type": "analysis",
    "priority": 24,
    "description": "IndustrialPolicyProcessor._construct_evidence_bundle"
  },
  {
    "class": "PolicyTextProcessor",
    "function": "compile_pattern",
    "method_type": "analysis",
    "priority": 25,
    "description": "PolicyTextProcessor.compile_pattern"
  },
  {
    "class": "PolicyTextProcessor",
    "function": "extract_contextual_window",
    "method_type": "extraction",
    "priority": 26,
    "description": "PolicyTextProcessor.extract_contextual_window"
  }

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    },
    {
      "class": "PDETMunicipalPlanAnalyzer",
      "function": "generate_executive_report",
      "method_type": "analysis",
      "priority": 27,
      "description": "PDETMunicipalPlanAnalyzer.generate_executive_report"
    },
    {
      "class": "IndustrialPolicyProcessor",
      "function": "export_results",
      "method_type": "analysis",
      "priority": 28,
      "description": "IndustrialPolicyProcessor.export_results"
    }
  ],
  "patterns": [
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q052-000",
      "match_type": "REGEX",
      "pattern": "Índice de Integración Migrante|Índice de Cohesión Social"
    },
    {
      "category": "INDICADOR",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q052-001",
      "match_type": "REGEX",
      "pattern": "indicador compuesto|indicador sintético"
    },
    {
      "category": "INDICADOR",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q052-002",
      "match_type": "REGEX",
      "pattern": "se usará como proxy|indicador aproximado"
    },
    {
      "category": "INDICADOR",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q052-003",
      "match_type": "REGEX",
      "pattern": "las tasas de matrimonios mixtos como proxy de integración cultural"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q052-004",
      "match_type": "REGEX",
      "pattern": "la percepción de la comunidad de acogida sobre la migración"
    },
    {
      "category": "INDICADOR",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q052-005",
      "match_type": "REGEX",
      "pattern": "este indicador es válido porque refleja|captura las dinámicas de
convivencia"
    }
  ],
  "policy_area_id": "PA10",
  "question_global": 52,
  "question_id": "Q052",
  "scoring_definition_ref": "scoring_modalities.TYPE_A",
  "scoring_modality": "TYPE_A",

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"text": "¿Se utilizan 'índices' o 'proxies' (ej. encuestas de percepción sobre la migración) para medir los impactos en la integración, justificando su validez?",

"validations": {}

},

{

"base\_slot": "D5-Q3",

"cluster\_id": "CL04",

"dimension\_id": "DIM05",

"expected\_elements": [

{

"required": true,

"type": "documenta\_validez"

},

{

"required": true,

"type": "proxy\_para\_intangibles"

},

{

"required": true,

"type": "reconoce\_limitaciones"

}

],

"failure\_contract": {

"abort\_if": [

"missing\_required\_element",

"incomplete\_text"

],

"emit\_code": "ABORT-Q053-REQ"

},

"method\_sets": [

{

"class": "CausalExtractor",

"function": "\_calculate\_semantic\_distance",

"method\_type": "scoring",

"priority": 1,

"description": "CausalExtractor.\_calculate\_semantic\_distance"

},

{

"class": "SemanticAnalyzer",

"function": "extract\_semantic\_cube",

"method\_type": "extraction",

"priority": 2,

"description": "SemanticAnalyzer.extract\_semantic\_cube"

},

{

"class": "BayesianMechanismInference",

"function": "\_quantify\_uncertainty",

"method\_type": "analysis",

"priority": 3,

"description": "BayesianMechanismInference.\_quantify\_uncertainty"

},

{

"class": "PDETMunicipalPlanAnalyzer",

"function": "\_find\_mediator\_mentions",

"method\_type": "analysis",

"priority": 4,

"description": "PDETMunicipalPlanAnalyzer.\_find\_mediator\_mentions"

},

{

"class": "PolicyAnalysisEmbedder",

"function": "get\_diagnostics",

"method\_type": "analysis",

"priority": 5,

"description": "PolicyAnalysisEmbedder.get\_diagnostics"

},

{

"class": "AdaptivePriorCalculator",

"function": "\_perturb\_evidence",

"method\_type": "analysis",

"priority": 6,

"description": "AdaptivePriorCalculator.\_perturb\_evidence"

}

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],
"patterns": [
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q053-000",
    "match_type": "REGEX",
    "pattern": "dado que es difícil medir la integración cultural|para aproximar"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q053-001",
    "match_type": "REGEX",
    "pattern": "se utilizará como proxy|medición indirecta"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q053-002",
    "match_type": "REGEX",
    "pattern": "el número de emprendimientos mixtos (colombo-venezolanos)"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q053-003",
    "match_type": "REGEX",
    "pattern": "este proxy es validado por estudios de migración de la OIM"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q053-004",
    "match_type": "REGEX",
    "pattern": "una limitación es que solo captura la dimensión económica de la integración"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q053-005",
    "match_type": "REGEX",
    "pattern": "aunque imperfecto, este proxy nos da una señal de interacción positiva"
  }
],
"policy_area_id": "PA10",
"question_global": 53,
"question_id": "Q053",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "Cuando un impacto migratorio es difícil de medir (ej. 'integración cultural'), ¿se recurre a un 'proxy'? Se valora si el texto documenta su 'validez' y reconoce sus 'limitaciones'.",
"validations": {}
},
{
  "base_slot": "D5-Q4",
  "cluster_id": "CL04",
  "dimension_id": "DIM05",
  "expected_elements": [
    {
      "required": true,
      "type": "alineacion_marcos"
    },
    {
      "required": true,
      "type": "riesgos_sistemicos"
    }
  ]
}

```

```

    }
  ],
  "failure_contract": {
    "abort_if": [
      "missing_required_element",
      "incomplete_text"
    ],
    "emit_code": "ABORT-Q054-REQ"
  },
  "method_sets": [
    {
      "class": "OperationalizationAuditor",
      "function": "_audit_systemic_risk",
      "method_type": "validation",
      "priority": 1,
      "description": "OperationalizationAuditor._audit_systemic_risk"
    },
    {
      "class": "BayesianCounterfactualAuditor",
      "function": "refutation_and_sanity_checks",
      "method_type": "analysis",
      "priority": 2,
      "description": "BayesianCounterfactualAuditor.refutation_and_sanity_checks"
    },
    {
      "class": "BayesianCounterfactualAuditor",
      "function": "_test_effect_stability",
      "method_type": "analysis",
      "priority": 3,
      "description": "BayesianCounterfactualAuditor._test_effect_stability"
    },
    {
      "class": "PDETMunicipalPlanAnalyzer",
      "function": "_interpret_risk",
      "method_type": "analysis",
      "priority": 4,
      "description": "PDETMunicipalPlanAnalyzer._interpret_risk"
    },
    {
      "class": "PDETMunicipalPlanAnalyzer",
      "function": "_interpret_sensitivity",
      "method_type": "analysis",
      "priority": 5,
      "description": "PDETMunicipalPlanAnalyzer._interpret_sensitivity"
    },
    {
      "class": "PDETMunicipalPlanAnalyzer",
      "function": "_break_cycles",
      "method_type": "analysis",
      "priority": 6,
      "description": "PDETMunicipalPlanAnalyzer._break_cycles"
    },
    {
      "class": "AdaptivePriorCalculator",
      "function": "sensitivity_analysis",
      "method_type": "analysis",
      "priority": 7,
      "description": "AdaptivePriorCalculator.sensitivity_analysis"
    }
  ],
  "patterns": [
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q054-000",
      "match_type": "REGEX",
      "pattern": "visión de largo plazo del Pacto Mundial sobre Migración"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,

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    "flags": "i",
    "id": "PAT-Q054-001",
    "match_type": "LITERAL",
    "pattern": "riesgo sistémico|choque externo"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q054-002",
    "match_type": "REGEX",
    "pattern": "cambios abruptos en la política migratoria del país de origen o de Colombia"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q054-003",
    "match_type": "LITERAL",
    "pattern": "crisis económica regional que intensifique los flujos"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q054-004",
    "match_type": "REGEX",
    "pattern": "estos factores podrían revertir los avances en integración"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q054-005",
    "match_type": "REGEX",
    "pattern": "el mecanismo causal es vulnerable a|sensible a las decisiones de política
exterior"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q054-006",
    "match_type": "REGEX",
    "pattern": "estrategias de resiliencia|flexibilidad en la respuesta humanitaria"
  }
],
"policy_area_id": "PA10",
"question_global": 54,
"question_id": "Q054",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿Los impactos en la integración se alinean con marcos nacionales/globales y
consideran 'riesgos sistémicos' (ej. cambios en la política migratoria del país vecino) que podrían
romper el mecanismo causal?",
"validations": {}
},
{
  "base_slot": "D5-Q5",
  "cluster_id": "CL04",
  "dimension_id": "DIM05",
  "expected_elements": [
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      "required": true,
      "type": "análisis_realismo"
    },
    {
      "required": true,
      "type": "efectos_no_deseados"
    }
  ],
  {
    "required": true,

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    "type": "hipotesis_limite"
  }
],
"failure_contract": {
  "abort_if": [
    "missing_required_element",
    "incomplete_text"
  ],
  "emit_code": "ABORT-Q055-REQ"
},
"method_sets": [
  {
    "class": "HierarchicalGenerativeModel",
    "function": "posterior_predictive_check",
    "method_type": "analysis",
    "priority": 1,
    "description": "HierarchicalGenerativeModel.posterior_predictive_check"
  },
  {
    "class": "HierarchicalGenerativeModel",
    "function": "_ablation_analysis",
    "method_type": "analysis",
    "priority": 2,
    "description": "HierarchicalGenerativeModel._ablation_analysis"
  },
  {
    "class": "HierarchicalGenerativeModel",
    "function": "_calculate_waic_difference",
    "method_type": "scoring",
    "priority": 3,
    "description": "HierarchicalGenerativeModel._calculate_waic_difference"
  },
  {
    "class": "AdaptivePriorCalculator",
    "function": "_add_ood_noise",
    "method_type": "analysis",
    "priority": 4,
    "description": "AdaptivePriorCalculator._add_ood_noise"
  },
  {
    "class": "AdaptivePriorCalculator",
    "function": "validate_quality_criteria",
    "method_type": "validation",
    "priority": 5,
    "description": "AdaptivePriorCalculator.validate_quality_criteria"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_compute_e_value",
    "method_type": "analysis",
    "priority": 6,
    "description": "PDETMunicipalPlanAnalyzer._compute_e_value"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_compute_robustness_value",
    "method_type": "analysis",
    "priority": 7,
    "description": "PDETMunicipalPlanAnalyzer._compute_robustness_value"
  },
  {
    "class": "BayesianMechanismInference",
    "function": "_calculate_coherence_factor",
    "method_type": "scoring",
    "priority": 8,
    "description": "BayesianMechanismInference._calculate_coherence_factor"
  }
],
"patterns": [
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,

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      "flags": "i",
      "id": "PAT-Q055-000",
      "match_type": "REGEX",
      "pattern": "la ambición del impacto es realista si se mantiene el apoyo de la
cooperación"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q055-001",
      "match_type": "REGEX",
      "pattern": "efecto no deseado|consecuencia imprevista|externalidad negativa"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q055-002",
      "match_type": "REGEX",
      "pattern": "riesgo de generar una percepción de competencia desleal por empleos"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q055-003",
      "match_type": "REGEX",
      "pattern": "posible formación de enclaves o guetos"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q055-004",
      "match_type": "REGEX",
      "pattern": "trade-off entre la rapidez de la ayuda humanitaria y la sostenibilidad de la
integración"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q055-005",
      "match_type": "REGEX",
      "pattern": "hipótesis límite|el modelo de integración funciona si la economía local
crece"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q055-006",
      "match_type": "LITERAL",
      "pattern": "supuesto crítico para el impacto a largo plazo"
    }
  ],
  "policy_area_id": "PA10",
  "question_global": 55,
  "question_id": "Q055",
  "scoring_definition_ref": "scoring_modalities.TYPE_A",
  "scoring_modality": "TYPE_A",
  "text": "¿La ambición del impacto (ej. 'plena integración de toda la población migrante') es
realista? Se debe buscar si se analizan 'efectos no deseados' o se declaran 'hipótesis límite'.",
  "validations": {}
},
{
  "base_slot": "D6-Q1",
  "cluster_id": "CL04",
  "dimension_id": "DIM06",
  "expected_elements": [
    {

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    "required": true,
    "type": "diagrama_causal"
  },
  {
    "required": true,
    "type": "supuestos_verificables"
  },
  {
    "required": true,
    "type": "teoria_cambio_explicita"
  }
],
"failure_contract": {
  "abort_if": [
    "missing_required_element",
    "incomplete_text"
  ],
  "emit_code": "ABORT-Q056-REQ"
},
"method_sets": [
  {
    "class": "TeoriaCambio",
    "function": "construir_grafo_causal",
    "method_type": "analysis",
    "priority": 1,
    "description": "TeoriaCambio.construir_grafo_causal"
  },
  {
    "class": "TeoriaCambio",
    "function": "validacion_completa",
    "method_type": "analysis",
    "priority": 2,
    "description": "TeoriaCambio.validacion_completa"
  },
  {
    "class": "TeoriaCambio",
    "function": "export_nodes",
    "method_type": "analysis",
    "priority": 3,
    "description": "TeoriaCambio.export_nodes"
  },
  {
    "class": "ReportingEngine",
    "function": "generate_causal_diagram",
    "method_type": "analysis",
    "priority": 4,
    "description": "ReportingEngine.generate_causal_diagram"
  },
  {
    "class": "ReportingEngine",
    "function": "generate_causal_model_json",
    "method_type": "analysis",
    "priority": 5,
    "description": "ReportingEngine.generate_causal_model_json"
  },
  {
    "class": "AdvancedDAGValidator",
    "function": "export_nodes",
    "method_type": "analysis",
    "priority": 6,
    "description": "AdvancedDAGValidator.export_nodes"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "export_causal_network",
    "method_type": "analysis",
    "priority": 7,
    "description": "PDETMunicipalPlanAnalyzer.export_causal_network"
  },
  {
    "class": "CausalExtractor",
    "function": "extract_causal_hierarchy",

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    "method_type": "extraction",
    "priority": 8,
    "description": "CausalExtractor.extract_causal_hierarchy"
  }
],
"patterns": [
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q056-000",
    "match_type": "REGEX",
    "pattern": "teoría de cambio|marco lógico|cadena causal|modelo lógico de integración"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q056-001",
    "match_type": "REGEX",
    "pattern": "diagrama causal|gráfico de la teoría|esquema de intervención|figura"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q056-002",
    "match_type": "REGEX",
    "pattern": "causa raíz de la vulnerabilidad|determinante de la no integración"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q056-003",
    "match_type": "REGEX",
    "pattern": "mediador|variable intermedia|eslabón|regularización migratoria|acceso a
servicios"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q056-004",
    "match_type": "REGEX",
    "pattern": "moderador|factor contextual|nivel de xenofobia|dinamismo económico"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q056-005",
    "match_type": "LITERAL",
    "pattern": "supuesto verificable|hipótesis a testear|premisa comprobable"
  }
],
"policy_area_id": "PA10",
"question_global": 56,
"question_id": "Q056",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿Existe una 'teoría de cambio' explícita para la política migratoria,
preferiblemente en un 'diagrama', que identifique causas, mediadores (ej. regularización) y
'supuestos verificables'?",
"validations": {}
},
{
  "base_slot": "D6-Q2",
  "cluster_id": "CL04",
  "dimension_id": "DIM06",
  "expected_elements": [
    {

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        "required": true,
        "type": "evita_saltos_logicos"
    },
    {
        "required": true,
        "type": "proporcionalidad_eslabones"
    }
],
"failure_contract": {
    "abort_if": [
        "missing_required_element",
        "incomplete_text"
    ],
    "emit_code": "ABORT-Q057-REQ"
},
"method_sets": [
    {
        "class": "BeachEvidentialTest",
        "function": "apply_test_logic",
        "method_type": "analysis",
        "priority": 1,
        "description": "BeachEvidentialTest.apply_test_logic"
    },
    {
        "class": "BayesianMechanismInference",
        "function": "_test_necessity",
        "method_type": "analysis",
        "priority": 2,
        "description": "BayesianMechanismInference._test_necessity"
    },
    {
        "class": "BayesianMechanismInference",
        "function": "_test_sufficiency",
        "method_type": "analysis",
        "priority": 3,
        "description": "BayesianMechanismInference._test_sufficiency"
    },
    {
        "class": "BayesianMechanismInference",
        "function": "_calculate_coherence_factor",
        "method_type": "scoring",
        "priority": 4,
        "description": "BayesianMechanismInference._calculate_coherence_factor"
    },
    {
        "class": "BayesianCounterfactualAuditor",
        "function": "_test_effect_stability",
        "method_type": "analysis",
        "priority": 5,
        "description": "BayesianCounterfactualAuditor._test_effect_stability"
    },
    {
        "class": "IndustrialGradeValidator",
        "function": "validate_connection_matrix",
        "method_type": "validation",
        "priority": 6,
        "description": "IndustrialGradeValidator.validate_connection_matrix"
    },
    {
        "class": "PolicyAnalysisEmbedder",
        "function": "_compute_overall_confidence",
        "method_type": "analysis",
        "priority": 7,
        "description": "PolicyAnalysisEmbedder._compute_overall_confidence"
    }
],
"patterns": [
    {
        "category": "GENERAL",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q057-000",

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    "match_type": "REGEX",
    "pattern": "proporcionalidad entre|magnitud del efecto esperado"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q057-001",
    "match_type": "REGEX",
    "pattern": "salto lógico|brecha en la argumentación|milagro de implementación"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q057-002",
    "match_type": "LITERAL",
    "pattern": "es realista esperar que|es factible que"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q057-003",
    "match_type": "REGEX",
    "pattern": "la escala de la intervención es coherente con la ambición del resultado"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q057-004",
    "match_type": "REGEX",
    "pattern": "se requieren pasos intermedios entre la regularización y la empleabilidad
formal"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q057-005",
    "match_type": "REGEX",
    "pattern": "el resultado es de mayor alcance que el producto"
  }
],
"policy_area_id": "PA10",
"question_global": 57,
"question_id": "Q057",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿Los saltos en la cadena causal de la migración son proporcionales (ej. una jornada
de orientación no genera por sí sola 'integración socioeconómica total')?",
"validations": {}
},
{
  "base_slot": "D6-Q3",
  "cluster_id": "CL04",
  "dimension_id": "DIM06",
  "expected_elements": [
    {
      "required": true,
      "type": "propone_pilotos_o_pruebas"
    },
    {
      "required": true,
      "type": "reconoce_inconsistencias"
    }
  ]
},
"failure_contract": {
  "abort_if": [
    "missing_required_element",
    "incomplete_text"
  ]
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"method_sets": [
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"class": "IndustrialGradeValidator",
"function": "execute_suite",
"method_type": "analysis",
"priority": 1,
"description": "IndustrialGradeValidator.execute_suite"
},
{
"class": "IndustrialGradeValidator",
"function": "validate_engine_readiness",
"method_type": "validation",
"priority": 2,
"description": "IndustrialGradeValidator.validate_engine_readiness"
},
{
"class": "IndustrialGradeValidator",
"function": "_benchmark_operation",
"method_type": "analysis",
"priority": 3,
"description": "IndustrialGradeValidator._benchmark_operation"
},
{
"class": "AdaptivePriorCalculator",
"function": "validate_quality_criteria",
"method_type": "validation",
"priority": 4,
"description": "AdaptivePriorCalculator.validate_quality_criteria"
},
{
"class": "HierarchicalGenerativeModel",
"function": "_calculate_r_hat",
"method_type": "scoring",
"priority": 5,
"description": "HierarchicalGenerativeModel._calculate_r_hat"
},
{
"class": "HierarchicalGenerativeModel",
"function": "_calculate_ess",
"method_type": "scoring",
"priority": 6,
"description": "HierarchicalGenerativeModel._calculate_ess"
},
{
"class": "AdvancedDAGValidator",
"function": "calculate_acyclicity_pvalue",
"method_type": "scoring",
"priority": 7,
"description": "AdvancedDAGValidator.calculate_acyclicity_pvalue"
},
{
"class": "PerformanceAnalyzer",
"function": "analyze_performance",
"method_type": "analysis",
"priority": 8,
"description": "PerformanceAnalyzer.analyze_performance"
}
],
"patterns": [
{
"category": "GENERAL",
"confidence_weight": 0.85,
"flags": "i",
"id": "PAT-Q058-000",
"match_type": "REGEX",
"pattern": "inconsistencia|debilidad en la teoría|supuesto débil"
},
{
"category": "GENERAL",

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    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q058-001",
    "match_type": "REGEX",
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  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q058-002",
    "match_type": "REGEX",
    "pattern": "plan piloto de emprendimiento mixto|fase experimental"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q058-003",
    "match_type": "REGEX",
    "pattern": "testear el supuesto de que la regularización reduce la explotación laboral"
  },
  {
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    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q058-004",
    "match_type": "REGEX",
    "pattern": "validar la hipótesis sobre la efectividad de las campañas anti-xenofobia"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q058-005",
    "match_type": "REGEX",
    "pattern": "evaluación de mecanismos|monitoreo de la teoría de cambio"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q058-006",
    "match_type": "REGEX",
    "pattern": "aprendizaje adaptativo|gestión adaptativa de la migración"
  }
],
"policy_area_id": "PA10",
"question_global": 58,
"question_id": "Q058",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿El plan reconoce 'inconsistencias' en su lógica de integración y propone 'pilotos'
o 'pruebas' para 'testear los supuestos' de sus intervenciones?",
"validations": {}
},
{
  "base_slot": "D6-Q4",
  "cluster_id": "CL04",
  "dimension_id": "DIM06",
  "expected_elements": [
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      "type": "ciclos_aprendizaje"
    },
    {
      "required": true,
      "type": "mecanismos_correccion"
    },
    {
      "required": true,
      "type": "sistema_monitoreo"
    }
  ]
}

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    }
  ],
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      "incomplete_text"
    ],
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      "function": "update_priors_from_feedback",
      "method_type": "analysis",
      "priority": 1,
      "description": "ConfigLoader.update_priors_from_feedback"
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    {
      "class": "ConfigLoader",
      "function": "check_uncertainty_reduction_criterion",
      "method_type": "analysis",
      "priority": 2,
      "description": "ConfigLoader.check_uncertainty_reduction_criterion"
    },
    {
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      "function": "_save_prior_history",
      "method_type": "analysis",
      "priority": 3,
      "description": "ConfigLoader._save_prior_history"
    },
    {
      "class": "ConfigLoader",
      "function": "_load_uncertainty_history",
      "method_type": "analysis",
      "priority": 4,
      "description": "ConfigLoader._load_uncertainty_history"
    },
    {
      "class": "CDAFFramework",
      "function": "_extract_feedback_from_audit",
      "method_type": "validation",
      "priority": 5,
      "description": "CDAFFramework._extract_feedback_from_audit"
    },
    {
      "class": "AdvancedDAGValidator",
      "function": "_calculate_node_importance",
      "method_type": "scoring",
      "priority": 6,
      "description": "AdvancedDAGValidator._calculate_node_importance"
    },
    {
      "class": "BayesFactorTable",
      "function": "get_bayes_factor",
      "method_type": "analysis",
      "priority": 7,
      "description": "BayesFactorTable.get_bayes_factor"
    }
  ],
  "patterns": [
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      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q059-000",
      "match_type": "REGEX",
      "pattern": "sistema de seguimiento y evaluación|M&E de la respuesta migratoria"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,

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    "flags": "i",
    "id": "PAT-Q059-001",
    "match_type": "REGEX",
    "pattern": "monitoreo de flujos en tiempo real|monitoreo en frontera"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q059-002",
    "match_type": "REGEX",
    "pattern": "alerta temprana sobre aumento de flujos o brotes de xenofobia"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q059-003",
    "match_type": "REGEX",
    "pattern": "mecanismo de ajuste de la respuesta humanitaria|escalamiento de la ayuda"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q059-004",
    "match_type": "REGEX",
    "pattern": "retroalimentación desde la población migrante y la comunidad de acogida"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q059-005",
    "match_type": "REGEX",
    "pattern": "ciclos de aprendizaje|reuniones de la Mesa de Migración para revisar
estrategia"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q059-006",
    "match_type": "REGEX",
    "pattern": "lecciones aprendidas en la gestión de crisis migratorias"
  }
],
"policy_area_id": "PA10",
"question_global": 59,
"question_id": "Q059",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿Se describe un sistema de monitoreo para la política migratoria que incluya
'mecanismos de corrección', 'retroalimentación' o 'aprendizaje' para adaptar la estrategia ante
cambios en los flujos?",
"validations": {}
},
{
  "base_slot": "D6-Q5",
  "cluster_id": "CL04",
  "dimension_id": "DIM06",
  "expected_elements": [
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      "type": "analisis_contextual"
    },
    {
      "required": true,
      "type": "enfoque_diferencial"
    }
  ]
},
"failure_contract": {

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  "incomplete_text"
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"emit_code": "ABORT-Q060-REQ"
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"method_sets": [
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    "function": "_calculate_language_specificity",
    "method_type": "scoring",
    "priority": 1,
    "description": "CausalExtractor._calculate_language_specificity"
  },
  {
    "class": "CausalExtractor",
    "function": "_assess_temporal_coherence",
    "method_type": "analysis",
    "priority": 2,
    "description": "CausalExtractor._assess_temporal_coherence"
  },
  {
    "class": "TextMiningEngine",
    "function": "diagnose_critical_links",
    "method_type": "analysis",
    "priority": 3,
    "description": "TextMiningEngine.diagnose_critical_links"
  },
  {
    "class": "CausalInferenceSetup",
    "function": "identify_failure_points",
    "method_type": "analysis",
    "priority": 4,
    "description": "CausalInferenceSetup.identify_failure_points"
  },
  {
    "class": "CausalInferenceSetup",
    "function": "_get_dynamics_pattern",
    "method_type": "analysis",
    "priority": 5,
    "description": "CausalInferenceSetup._get_dynamics_pattern"
  },
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    "function": "chunk_text",
    "method_type": "analysis",
    "priority": 6,
    "description": "SemanticProcessor.chunk_text"
  },
  {
    "class": "SemanticProcessor",
    "function": "_detect_pdm_structure",
    "method_type": "analysis",
    "priority": 7,
    "description": "SemanticProcessor._detect_pdm_structure"
  },
  {
    "class": "SemanticProcessor",
    "function": "_detect_table",
    "method_type": "analysis",
    "priority": 8,
    "description": "SemanticProcessor._detect_table"
  },
  {
    "class": "AdaptivePriorCalculator",
    "function": "generate_traceability_record",
    "method_type": "analysis",
    "priority": 9,
    "description": "AdaptivePriorCalculator.generate_traceability_record"
  }
],
"patterns": [

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  "flags": "i",
  "id": "PAT-Q060-000",
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  "pattern": "enfoco diferencial|enfoco de género|enfoco etario"
},
{
  "category": "GENERAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q060-001",
  "match_type": "REGEX",
  "pattern": "Niños, Niñas y Adolescentes (NNA) no acompañados o separados"
},
{
  "category": "GENERAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q060-002",
  "match_type": "REGEX",
  "pattern": "mujeres gestantes o lactantes|víctimas de VBG en la ruta migratoria"
},
{
  "category": "GENERAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q060-003",
  "match_type": "REGEX",
  "pattern": "caminantes|población en tránsito con alta vulnerabilidad"
},
{
  "category": "GENERAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q060-004",
  "match_type": "REGEX",
  "pattern": "restricciones de seguridad en la ruta (ej. Darién)|presencia de grupos
criminales"
},
{
  "category": "GENERAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q060-005",
  "match_type": "REGEX",
  "pattern": "contexto de frontera|dinámicas de economía informal"
},
{
  "category": "TERRITORIAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q060-006",
  "match_type": "REGEX",
  "pattern": "estrategias territorializadas|acciones adaptadas al tipo de flujo (tránsito
vs. permanencia)"
}
],
"policy_area_id": "PA10",
"question_global": 60,
"question_id": "Q060",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿La lógica causal para la migración considera el contexto, reconociendo 'grupos
afectados' (NNA no acompañados, mujeres migrantes, caminantes) y 'restricciones' territoriales o de
seguridad?",
"validations": {}
},
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  "base_slot": "D1-Q1",
  "cluster_id": "CL01",

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"dimension_id": "DIM01",
"expected_elements": [
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    "required": true,
    "type": "cobertura_territorial_especificada"
  },
  {
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    "type": "fuentes_oficiales"
  },
  {
    "minimum": 3,
    "type": "indicadores_cuantitativos"
  },
  {
    "minimum": 3,
    "type": "series_temporales_años"
  }
],
"failure_contract": {
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    "missing_required_element",
    "incomplete_text"
  ],
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    "function": "diagnose_critical_links",
    "method_type": "analysis",
    "priority": 1,
    "description": "TextMiningEngine.diagnose_critical_links"
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    "function": "_analyze_link_text",
    "method_type": "analysis",
    "priority": 2,
    "description": "TextMiningEngine._analyze_link_text"
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    "class": "IndustrialPolicyProcessor",
    "function": "process",
    "method_type": "analysis",
    "priority": 3,
    "description": "IndustrialPolicyProcessor.process"
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  {
    "class": "IndustrialPolicyProcessor",
    "function": "_match_patterns_in_sentences",
    "method_type": "analysis",
    "priority": 4,
    "description": "IndustrialPolicyProcessor._match_patterns_in_sentences"
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    "function": "_extract_point_evidence",
    "method_type": "extraction",
    "priority": 5,
    "description": "IndustrialPolicyProcessor._extract_point_evidence"
  },
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    "function": "_extract_goals",
    "method_type": "extraction",
    "priority": 6,
    "description": "CausalExtractor._extract_goals"
  },
  {
    "class": "CausalExtractor",
    "function": "_parse_goal_context",

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    "method_type": "extraction",
    "priority": 7,
    "description": "CausalExtractor._parse_goal_context"
  },
  {
    "class": "FinancialAuditor",
    "function": "_parse_amount",
    "method_type": "extraction",
    "priority": 8,
    "description": "FinancialAuditor._parse_amount"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_extract_financial_amounts",
    "method_type": "extraction",
    "priority": 9,
    "description": "PDETMunicipalPlanAnalyzer._extract_financial_amounts"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_extract_from_budget_table",
    "method_type": "extraction",
    "priority": 10,
    "description": "PDETMunicipalPlanAnalyzer._extract_from_budget_table"
  },
  {
    "class": "PolicyContradictionDetector",
    "function": "_extract_quantitative_claims",
    "method_type": "extraction",
    "priority": 11,
    "description": "PolicyContradictionDetector._extract_quantitative_claims"
  },
  {
    "class": "PolicyContradictionDetector",
    "function": "_parse_number",
    "method_type": "extraction",
    "priority": 12,
    "description": "PolicyContradictionDetector._parse_number"
  },
  {
    "class": "PolicyContradictionDetector",
    "function": "_statistical_significance_test",
    "method_type": "analysis",
    "priority": 13,
    "description": "PolicyContradictionDetector._statistical_significance_test"
  },
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    "class": "BayesianNumericalAnalyzer",
    "function": "evaluate_policy_metric",
    "method_type": "analysis",
    "priority": 14,
    "description": "BayesianNumericalAnalyzer.evaluate_policy_metric"
  },
  {
    "class": "BayesianNumericalAnalyzer",
    "function": "compare_policies",
    "method_type": "analysis",
    "priority": 15,
    "description": "BayesianNumericalAnalyzer.compare_policies"
  },
  {
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    "function": "chunk_text",
    "method_type": "analysis",
    "priority": 16,
    "description": "SemanticProcessor.chunk_text"
  },
  {
    "class": "SemanticProcessor",
    "function": "embed_single",
    "method_type": "analysis",
    "priority": 17,

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    "description": "SemanticProcessor.embed_single"
  }
],
"patterns": [
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q061-000",
    "match_type": "REGEX",
    "pattern": "línea base|diagnóstico de seguridad|situación inicial del conflicto"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q061-001",
    "match_type": "REGEX",
    "pattern": "fuente:|según|reportado por|con datos de"
  },
  {
    "category": "FUENTE_OFICIAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q061-002",
    "match_type": "REGEX",
    "pattern": "UARIV|RUV|Registro Único de Víctimas|Policía Nacional|SIEDCO|Medicina Legal"
  },
  {
    "category": "TERRITORIAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q061-003",
    "match_type": "REGEX",
    "pattern": "Defensoría del Pueblo|Sistema de Alertas Tempranas|SAT|Personería Municipal"
  },
  {
    "category": "FUENTE_OFICIAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q061-004",
    "match_type": "REGEX",
    "pattern": "Fiscalía|SPOA|Observatorio de DDHH|Somos Defensores|INDEPAZ"
  },
  {
    "category": "INDICADOR",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q061-005",
    "match_type": "REGEX",
    "pattern": "homicidio|tasa de homicidios|muertes violentas"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q061-006",
    "match_type": "REGEX",
    "pattern": "desplazamiento forzado|población desplazada|eventos masivos"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q061-007",
    "match_type": "REGEX",
    "pattern": "confinamiento|restricción a la movilidad"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",

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      "id": "PAT-Q061-008",
      "match_type": "LITERAL",
      "pattern": "amenaza|extorsión|secuestro"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q061-009",
      "match_type": "REGEX",
      "pattern": "reclutamiento forzado|uso y utilización de NNA"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q061-010",
      "match_type": "LITERAL",
      "pattern": "minas antipersonal|MAP|MUSE|artefactos explosivos"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q061-011",
      "match_type": "REGEX",
      "pattern": "violencia sexual en el marco del conflicto"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q061-012",
      "match_type": "LITERAL",
      "pattern": "2021|2022|2023|vigencia anterior|serie histórica"
    },
    {
      "category": "UNIDAD_MEDIDA",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q061-013",
      "match_type": "REGEX",
      "pattern": "por cada 100\\.000 habitantes|número de casos|número de víctimas|familias"
    }
  ],
  "policy_area_id": "PA02",
  "question_global": 61,
  "question_id": "Q061",
  "scoring_definition_ref": "scoring_modalities.TYPE_A",
  "scoring_modality": "TYPE_A",
  "text": "¿El diagnóstico presenta datos numéricos (tasas de homicidio, cifras de desplazamiento, casos de reclutamiento) para el área de Prevención de la violencia y protección frente al conflicto que sirvan como línea base? Se debe verificar el año de referencia y fuentes (ej. Policía Nacional, UARIV, Defensoría del Pueblo).",
  "validations": {
    "buscar_indicadores_cuantitativos": {
      "minimum_required": 3,
      "patterns": [
        "\\d+%",
        "\\d+\\s*por\\s*\\d+",
        "tasa de",
        "índice de",
        "cobertura de"
      ],
      "specificity": "HIGH"
    },
    "cobertura": {
      "minimum_required": 1,
      "patterns": [
        "departamental",
        "municipal",
        "urbano",

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        "rural",
        "territorial",
        "poblacional"
    ],
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        "serie"
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    "patterns": [
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        "porcentaje",
        "tasa",
        "razón"
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"verificar_fuentes": {
    "minimum_required": 2,
    "patterns": [
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        "datos de",
        "DANE",
        "DNP",
        "SISPRO",
        "SIVIGILA",
        "Ministerio"
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        {
            "required": true,
            "type": "vacios_explicitos"
        }
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    "method_type": "analysis",
    "priority": 5,
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    "priority": 6,
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    "method_type": "analysis",
    "priority": 7,
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    "priority": 9,
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    "priority": 10,
    "description": "PolicyContradictionDetector._calculate_numerical_divergence"
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    "function": "calculate_posterior",

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    "priority": 11,
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    "method_type": "analysis",
    "priority": 12,
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    "flags": "i",
    "id": "PAT-Q062-000",
    "match_type": "REGEX",
    "pattern": "aumento de los homicidios|incremento del desplazamiento"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q062-001",
    "match_type": "REGEX",
    "pattern": "magnitud del problema|dimensión del conflicto"
  },
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    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q062-002",
    "match_type": "REGEX",
    "pattern": "brecha de atención a víctimas|población sin reparar"
  },
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    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q062-003",
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    "pattern": "subregistro de la violencia sexual|cifra negra de la extorsión"
  },
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    "confidence_weight": 0.85,
    "flags": "i",
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    "pattern": "dificultad para documentar|miedo a denunciar"
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    "confidence_weight": 0.85,
    "flags": "i",
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    "match_type": "REGEX",
    "pattern": "información fragmentada|datos insuficientes sobre confinamiento"
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    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q062-006",
    "match_type": "REGEX",
    "pattern": "falta de caracterización de los grupos armados"
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  {
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    "confidence_weight": 0.85,

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        "match_type": "REGEX",
        "pattern": "se desconoce el número real de|se estima que la cifra podría ser mayor"
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"question_global": 62,
"question_id": "Q062",
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"scoring_modality": "TYPE_B",
"text": "¿El texto dimensiona el problema de la violencia y el conflicto cuantificando la brecha o el aumento de casos? Se debe buscar si se mencionan explícitamente limitaciones en los datos, como 'subregistro', 'cifra negra' o 'vacíos de información'.",
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            "type": "suficiencia_justificada"
        },
        {
            "required": true,
            "type": "trazabilidad_ppi_bpín"
        }
    ],
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            "method_type": "analysis",
            "priority": 1,
            "description": "FinancialAuditor.trace_financial_allocation"
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            "method_type": "analysis",
            "priority": 2,
            "description": "FinancialAuditor._process_financial_table"
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            "priority": 3,
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    "priority": 6,
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    "method_type": "analysis",
    "priority": 7,
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    "method_type": "extraction",
    "priority": 8,
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    "priority": 9,
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    "method_type": "analysis",
    "priority": 10,
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    "method_type": "analysis",
    "priority": 11,
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    "function": "_score_financial_component",
    "method_type": "scoring",
    "priority": 12,
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    "function": "aggregate_risk_and_prioritize",
    "method_type": "analysis",
    "priority": 13,
    "description": "BayesianCounterfactualAuditor.aggregate_risk_and_prioritize"
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    "flags": "i",
    "id": "PAT-Q063-000",
    "match_type": "REGEX",
    "pattern": "Plan Plurianual de Inversiones|PPI|Plan Indicativo"
  },
  {

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    "category": "GENERAL",
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    "id": "PAT-Q063-001",
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    "pattern": "BPIN|Banco de Proyectos|proyecto de inversión para víctimas/paz"
  },
  {
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    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q063-002",
    "match_type": "REGEX",
    "pattern": "recursos para el Plan de Acción Territorial|PAT"
  },
  {
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    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q063-003",
    "match_type": "REGEX",
    "pattern": "presupuesto para el Comité de Justicia Transicional|CJT"
  },
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    "confidence_weight": 0.85,
    "flags": "i",
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    "pattern": "asignación para ayuda humanitaria|atención a emergencias"
  },
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    "confidence_weight": 0.85,
    "flags": "i",
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    "match_type": "REGEX",
    "pattern": "inversión en prevención del reclutamiento"
  },
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    "confidence_weight": 0.85,
    "flags": "i",
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    "pattern": "fondos para la implementación del Acuerdo de Paz"
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    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q063-007",
    "match_type": "REGEX",
    "pattern": "\\$\\s*\\d+|COP\\s*\\d+|millones de pesos"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q063-008",
    "match_type": "LITERAL",
    "pattern": "fuentes: SGP, recursos propios, cofinanciación UARIV"
  }
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"question_global": 63,
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"scoring_definition_ref": "scoring_modalities.TYPE_B",
"scoring_modality": "TYPE_B",
"text": "¿Se identifican en el PPI recursos monetarios (con cifras en $, COP o millones) explícitamente asignados a programas de prevención, protección, atención a víctimas o funcionamiento del Sistema de Alertas Tempranas (SAT)?",

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    {
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      "type": "gobernanza"
    },
    {
      "required": true,
      "type": "procesos"
    },
    {
      "required": true,
      "type": "talento_humano"
    }
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      "method_type": "analysis",
      "priority": 4,
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      "method_type": "scoring",
      "priority": 5,
      "description": "PDETMunicipalPlanAnalyzer._score_entity_specificity"
    },
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    "priority": 6,
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    "function": "extract_entity_activity",
    "method_type": "extraction",
    "priority": 7,
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    "class": "MechanismPartExtractor",
    "function": "_normalize_entity",
    "method_type": "analysis",
    "priority": 8,
    "description": "MechanismPartExtractor._normalize_entity"
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    "function": "_validate_entity_activity",
    "method_type": "validation",
    "priority": 9,
    "description": "MechanismPartExtractor._validate_entity_activity"
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    "function": "_calculate_ea_confidence",
    "method_type": "scoring",
    "priority": 10,
    "description": "MechanismPartExtractor._calculate_ea_confidence"
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    "method_type": "validation",
    "priority": 11,
    "description": "OperationalizationAuditor.audit_evidence_traceability"
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    "flags": "i",
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    "match_type": "REGEX",
    "pattern": "Enlace Municipal de Víctimas|equipo del punto de atención (PAV)"
  },
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    "category": "TERRITORIAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q064-001",
    "match_type": "REGEX",
    "pattern": "Comité Territorial de Justicia Transicional|CTJT"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q064-002",
    "match_type": "REGEX",
    "pattern": "Mesa de Participación Efectiva de las Víctimas|MPEV"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q064-003",

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    "flags": "i",
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    "flags": "i",
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    "pattern": "ruta de protección|protocolo de atención a VBG en el conflicto"
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    "flags": "i",
    "id": "PAT-Q064-006",
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  },
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    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q064-007",
    "match_type": "REGEX",
    "pattern": "articulación con la UARIV|coordinación con la UNP|Fuerza Pública"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q064-008",
    "match_type": "REGEX",
    "pattern": "falta de personal|limitada capacidad técnica|necesidad de fortalecer"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q064-009",
    "match_type": "REGEX",
    "pattern": "cuello de botella|barrera de acceso|obstáculo institucional"
  }
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"question_id": "Q064",
"scoring_definition_ref": "scoring_modalities.TYPE_B",
"scoring_modality": "TYPE_B",
"text": "¿El PDM describe las capacidades para gestionar la protección y atención a víctimas, mencionando entidades (Comité de Justicia Transicional, Enlace de Víctimas) y sus necesidades? Se debe buscar términos como 'rutas de protección', 'sistemas de información' y si se identifican 'limitaciones' o 'barreras'.",
"validations": {}
},
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    }
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{
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},
{
  "required": true,
  "type": "restricciones_temporales"
}
],
"failure_contract": {
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    "missing_required_element",
    "incomplete_text"
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"method_sets": [
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    "method_type": "analysis",
    "priority": 1,
    "description": "TemporalLogicVerifier._check_deadline_constraints"
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    "function": "verify_temporal_consistency",
    "method_type": "analysis",
    "priority": 2,
    "description": "TemporalLogicVerifier.verify_temporal_consistency"
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    "function": "identify_failure_points",
    "method_type": "analysis",
    "priority": 3,
    "description": "CausalInferenceSetup.identify_failure_points"
  },
  {
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    "function": "_assess_temporal_coherence",
    "method_type": "analysis",
    "priority": 4,
    "description": "CausalExtractor._assess_temporal_coherence"
  },
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    "function": "_analyze_link_text",
    "method_type": "analysis",
    "priority": 5,
    "description": "TextMiningEngine._analyze_link_text"
  },
  {
    "class": "IndustrialPolicyProcessor",
    "function": "_analyze_causal_dimensions",
    "method_type": "analysis",
    "priority": 6,
    "description": "IndustrialPolicyProcessor._analyze_causal_dimensions"
  },
  {
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    "function": "_extract_metadata",
    "method_type": "extraction",
    "priority": 7,
    "description": "IndustrialPolicyProcessor._extract_metadata"
  }
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"patterns": [

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},
{
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  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q065-001",
  "match_type": "LITERAL",
  "pattern": "Decretos Ley Étnicos 4633, 4634, 4635"
},
{
  "category": "GENERAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q065-002",
  "match_type": "REGEX",
  "pattern": "Acuerdo de Paz|Punto 5 Víctimas|PDET|PATR"
},
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  "category": "GENERAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q065-003",
  "match_type": "REGEX",
  "pattern": "competencia del municipio|principio de subsidiariedad, concurrencia y
complementariedad"
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  "confidence_weight": 0.85,
  "flags": "i",
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  "match_type": "REGEX",
  "pattern": "dependencia de la UARIV para la indemnización"
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  "confidence_weight": 0.85,
  "flags": "i",
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  "match_type": "REGEX",
  "pattern": "limitados recursos para la prevención|presupuesto insuficiente"
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  "category": "GENERAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q065-006",
  "match_type": "REGEX",
  "pattern": "desafíos en la coordinación interinstitucional|articulación con el nivel
nacional"
},
{
  "category": "GENERAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q065-007",
  "match_type": "REGEX",
  "pattern": "plazo de implementación del PAT"
},
{
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  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q065-008",
  "match_type": "REGEX",

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    "pattern": "factibilidad financiera de las medidas de reparación"
  }
],
"policy_area_id": "PA02",
"question_global": 65,
"question_id": "Q065",
"scoring_definition_ref": "scoring_modalities.TYPE_E",
"scoring_modality": "TYPE_E",
"text": "¿El plan justifica su alcance en prevención de violencia mencionando el marco legal
(ej. Ley 1448) o reconociendo restricciones explícitas de tipo presupuestal o de coordinación
interinstitucional?",
"validations": {}
},
{
  "base_slot": "D2-Q1",
  "cluster_id": "CL01",
  "dimension_id": "DIM02",
  "expected_elements": [
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      "required": true,
      "type": "columna_costo"
    },
    {
      "required": true,
      "type": "columna_cronograma"
    },
    {
      "required": true,
      "type": "columna_producto"
    },
    {
      "required": true,
      "type": "columna_responsable"
    },
    {
      "required": true,
      "type": "formato_tabular"
    }
  ],
  "failure_contract": {
    "abort_if": [
      "missing_required_element",
      "incomplete_text"
    ],
    "emit_code": "ABORT-Q066-REQ"
  },
  "method_sets": [
    {
      "class": "PDFProcessor",
      "function": "extract_tables",
      "method_type": "extraction",
      "priority": 1,
      "description": "PDFProcessor.extract_tables"
    },
    {
      "class": "FinancialAuditor",
      "function": "_process_financial_table",
      "method_type": "analysis",
      "priority": 2,
      "description": "FinancialAuditor._process_financial_table"
    },
    {
      "class": "PDETMunicipalPlanAnalyzer",
      "function": "_deduplicate_tables",
      "method_type": "analysis",
      "priority": 3,
      "description": "PDETMunicipalPlanAnalyzer._deduplicate_tables"
    },
    {
      "class": "PDETMunicipalPlanAnalyzer",
      "function": "_classify_tables",
      "method_type": "analysis",

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    "priority": 4,
    "description": "PDETMunicipalPlanAnalyzer._classify_tables"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_is_likely_header",
    "method_type": "analysis",
    "priority": 5,
    "description": "PDETMunicipalPlanAnalyzer._is_likely_header"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_clean_dataframe",
    "method_type": "analysis",
    "priority": 6,
    "description": "PDETMunicipalPlanAnalyzer._clean_dataframe"
  },
  {
    "class": "ReportingEngine",
    "function": "generate_accountability_matrix",
    "method_type": "analysis",
    "priority": 7,
    "description": "ReportingEngine.generate_accountability_matrix"
  }
],
"patterns": [
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q066-000",
    "match_type": "REGEX",
    "pattern": "tabla de actividades|cuadro de seguimiento|matriz de plan de acción"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q066-001",
    "match_type": "REGEX",
    "pattern": "columna responsable|entidad a cargo|ejecutor"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q066-002",
    "match_type": "REGEX",
    "pattern": "columna producto|entregable|output|meta de producto"
  },
  {
    "category": "TEMPORAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q066-003",
    "match_type": "LITERAL",
    "pattern": "columna cronograma|plazo|vigencia|año 1|trimestre"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q066-004",
    "match_type": "LITERAL",
    "pattern": "columna costo|presupuesto|valor|recursos|monto"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q066-005",
    "match_type": "REGEX",

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    "pattern": "Secretaría de Gobierno|Enlace de Víctimas|Personería"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q066-006",
    "match_type": "REGEX",
    "pattern": "Plan Indicativo|Anexo de metas"
  }
],
"policy_area_id": "PA02",
"question_global": 66,
"question_id": "Q066",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿Las actividades de prevención y protección se presentan en un formato estructurado (tabla, cuadro) que incluya columnas para 'responsable', 'producto', 'cronograma' y 'presupuesto'?",
"validations": {}
},
{
  "base_slot": "D2-Q2",
  "cluster_id": "CL01",
  "dimension_id": "DIM02",
  "expected_elements": [
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      "required": true,
      "type": "instrumento_especificado"
    },
    {
      "required": true,
      "type": "logica_causal_explicita"
    },
    {
      "required": true,
      "type": "poblacion_objetivo_definida"
    }
  ],
  "failure_contract": {
    "abort_if": [
      "missing_required_element",
      "incomplete_text"
    ],
    "emit_code": "ABORT-Q067-REQ"
  },
  "method_sets": [
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      "class": "BayesianMechanismInference",
      "function": "infer_mechanisms",
      "method_type": "analysis",
      "priority": 1,
      "description": "BayesianMechanismInference.infer_mechanisms"
    },
    {
      "class": "BayesianMechanismInference",
      "function": "_infer_single_mechanism",
      "method_type": "analysis",
      "priority": 2,
      "description": "BayesianMechanismInference._infer_single_mechanism"
    },
    {
      "class": "BayesianMechanismInference",
      "function": "_infer_mechanism_type",
      "method_type": "analysis",
      "priority": 3,
      "description": "BayesianMechanismInference._infer_mechanism_type"
    },
    {
      "class": "BayesianMechanismInference",
      "function": "_test_sufficiency",
      "method_type": "analysis",

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    "priority": 4,
    "description": "BayesianMechanismInference._test_sufficiency"
  },
  {
    "class": "BayesianMechanismInference",
    "function": "_test_necessity",
    "method_type": "analysis",
    "priority": 5,
    "description": "BayesianMechanismInference._test_necessity"
  },
  {
    "class": "CausalExtractor",
    "function": "extract_causal_hierarchy",
    "method_type": "extraction",
    "priority": 6,
    "description": "CausalExtractor.extract_causal_hierarchy"
  },
  {
    "class": "TeoriaCambio",
    "function": "construir_grafo_causal",
    "method_type": "analysis",
    "priority": 7,
    "description": "TeoriaCambio.construir_grafo_causal"
  },
  {
    "class": "TeoriaCambio",
    "function": "_es_conexion_valida",
    "method_type": "analysis",
    "priority": 8,
    "description": "TeoriaCambio._es_conexion_valida"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "construct_causal_dag",
    "method_type": "analysis",
    "priority": 9,
    "description": "PDETMunicipalPlanAnalyzer.construct_causal_dag"
  },
  {
    "class": "BeachEvidentialTest",
    "function": "classify_test",
    "method_type": "analysis",
    "priority": 10,
    "description": "BeachEvidentialTest.classify_test"
  },
  {
    "class": "IndustrialPolicyProcessor",
    "function": "_analyze_causal_dimensions",
    "method_type": "analysis",
    "priority": 11,
    "description": "IndustrialPolicyProcessor._analyze_causal_dimensions"
  }
],
"patterns": [
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q067-000",
    "match_type": "REGEX",
    "pattern": "mediante la activación de|a través de|con la implementación de"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q067-001",
    "match_type": "REGEX",
    "pattern": "rutas de protección|esquemas de seguridad|medidas de autoprotección"
  },
  {
    "category": "GENERAL",

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    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q067-002",
    "match_type": "REGEX",
    "pattern": "albergues temporales|ayuda humanitaria"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q067-003",
    "match_type": "REGEX",
    "pattern": "población objetivo|dirigido a|beneficiarios serán"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q067-004",
    "match_type": "REGEX",
    "pattern": "víctimas de desplazamiento|NNA en riesgo de reclutamiento"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q067-005",
    "match_type": "REGEX",
    "pattern": "comunidades en confinamiento|líderes amenazados"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q067-006",
    "match_type": "REGEX",
    "pattern": "con el fin de mitigar el riesgo|para salvaguardar la vida"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q067-007",
    "match_type": "REGEX",
    "pattern": "lo cual genera un entorno protector|porque reduce la vulnerabilidad"
  }
],
"policy_area_id": "PA02",
"question_global": 67,
"question_id": "Q067",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿La descripción de las actividades de protección detalla el instrumento ('mediante la activación de rutas', 'a través de albergues temporales'), la población objetivo ('víctimas de desplazamiento', 'NNA en riesgo') y la lógica causal ('para mitigar el riesgo')?",
"validations": {}
},
{
  "base_slot": "D2-Q3",
  "cluster_id": "CL01",
  "dimension_id": "DIM02",
  "expected_elements": [
    {
      "required": true,
      "type": "aborda_causa_raiz"
    },
    {
      "required": true,
      "type": "vinculo_diagnostico_actividad"
    }
  ]
},
"failure_contract": {

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  "incomplete_text"
],
"emit_code": "ABORT-Q068-REQ"
},
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    "function": "_extract_causal_links",
    "method_type": "extraction",
    "priority": 1,
    "description": "CausalExtractor._extract_causal_links"
  },
  {
    "class": "CausalExtractor",
    "function": "_calculate_composite_likelihood",
    "method_type": "scoring",
    "priority": 2,
    "description": "CausalExtractor._calculate_composite_likelihood"
  },
  {
    "class": "CausalExtractor",
    "function": "_initialize_prior",
    "method_type": "analysis",
    "priority": 3,
    "description": "CausalExtractor._initialize_prior"
  },
  {
    "class": "CausalExtractor",
    "function": "_calculate_type_transition_prior",
    "method_type": "scoring",
    "priority": 4,
    "description": "CausalExtractor._calculate_type_transition_prior"
  },
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    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_identify_causal_edges",
    "method_type": "analysis",
    "priority": 5,
    "description": "PDETMunicipalPlanAnalyzer._identify_causal_edges"
  },
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    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_refine_edge_probabilities",
    "method_type": "analysis",
    "priority": 6,
    "description": "PDETMunicipalPlanAnalyzer._refine_edge_probabilities"
  },
  {
    "class": "BayesianCounterfactualAuditor",
    "function": "construct_scm",
    "method_type": "analysis",
    "priority": 7,
    "description": "BayesianCounterfactualAuditor.construct_scm"
  },
  {
    "class": "BayesianCounterfactualAuditor",
    "function": "_create_default_equations",
    "method_type": "analysis",
    "priority": 8,
    "description": "BayesianCounterfactualAuditor._create_default_equations"
  },
  {
    "class": "SemanticAnalyzer",
    "function": "extract_semantic_cube",
    "method_type": "extraction",
    "priority": 9,
    "description": "SemanticAnalyzer.extract_semantic_cube"
  }
],
"patterns": [

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{
  "category": "GENERAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q068-000",
  "match_type": "REGEX",
  "pattern": "para abordar la causa relacionada con|en respuesta al problema de"
},
{
  "category": "GENERAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q068-001",
  "match_type": "REGEX",
  "pattern": "esta actividad ataca el factor de riesgo de"
},
{
  "category": "GENERAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q068-002",
  "match_type": "REGEX",
  "pattern": "causa estructural|factor determinante del conflicto"
},
{
  "category": "GENERAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q068-003",
  "match_type": "LITERAL",
  "pattern": "economías ilegales|narcotráfico|minería ilegal"
},
{
  "category": "TERRITORIAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q068-004",
  "match_type": "REGEX",
  "pattern": "disputas territoriales entre GAO|presencia de grupos armados"
},
{
  "category": "GENERAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q068-005",
  "match_type": "REGEX",
  "pattern": "debilidad institucional|ausencia del Estado"
},
{
  "category": "GENERAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q068-006",
  "match_type": "REGEX",
  "pattern": "árbol de problemas|diagnóstico de seguridad"
}
],
"policy_area_id": "PA02",
"question_global": 68,
"question_id": "Q068",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿El PDM vincula explícitamente las actividades (ej. patrullajes) con las 'causas raíz' de la violencia (ej. economías ilegales, disputas territoriales) identificadas en el diagnóstico?",
"validations": {}
},
{
  "base_slot": "D2-Q4",
  "cluster_id": "CL01",
  "dimension_id": "DIM02",
  "expected_elements": [

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    {
      "required": true,
      "type": "mitigacion_propuesta"
    },
    {
      "required": true,
      "type": "riesgos_identificados"
    }
  ],
  "failure_contract": {
    "abort_if": [
      "missing_required_element",
      "incomplete_text"
    ],
    "emit_code": "ABORT-Q069-REQ"
  },
  "method_sets": [
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      "class": "PDETMunicipalPlanAnalyzer",
      "function": "_bayesian_risk_inference",
      "method_type": "analysis",
      "priority": 1,
      "description": "PDETMunicipalPlanAnalyzer._bayesian_risk_inference"
    },
    {
      "class": "PDETMunicipalPlanAnalyzer",
      "function": "sensitivity_analysis",
      "method_type": "analysis",
      "priority": 2,
      "description": "PDETMunicipalPlanAnalyzer.sensitivity_analysis"
    },
    {
      "class": "PDETMunicipalPlanAnalyzer",
      "function": "_interpret_risk",
      "method_type": "analysis",
      "priority": 3,
      "description": "PDETMunicipalPlanAnalyzer._interpret_risk"
    },
    {
      "class": "PDETMunicipalPlanAnalyzer",
      "function": "_compute_robustness_value",
      "method_type": "analysis",
      "priority": 4,
      "description": "PDETMunicipalPlanAnalyzer._compute_robustness_value"
    },
    {
      "class": "PDETMunicipalPlanAnalyzer",
      "function": "_compute_e_value",
      "method_type": "analysis",
      "priority": 5,
      "description": "PDETMunicipalPlanAnalyzer._compute_e_value"
    },
    {
      "class": "PDETMunicipalPlanAnalyzer",
      "function": "_interpret_sensitivity",
      "method_type": "analysis",
      "priority": 6,
      "description": "PDETMunicipalPlanAnalyzer._interpret_sensitivity"
    },
    {
      "class": "OperationalizationAuditor",
      "function": "_audit_systemic_risk",
      "method_type": "validation",
      "priority": 7,
      "description": "OperationalizationAuditor._audit_systemic_risk"
    },
    {
      "class": "BayesianCounterfactualAuditor",
      "function": "aggregate_risk_and_prioritize",
      "method_type": "analysis",
      "priority": 8,
      "description": "BayesianCounterfactualAuditor.aggregate_risk_and_prioritize"
    }
  ]
}

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    },
    {
      "class": "BayesianCounterfactualAuditor",
      "function": "refutation_and_sanity_checks",
      "method_type": "analysis",
      "priority": 9,
      "description": "BayesianCounterfactualAuditor.refutation_and_sanity_checks"
    },
    {
      "class": "AdaptivePriorCalculator",
      "function": "sensitivity_analysis",
      "method_type": "analysis",
      "priority": 10,
      "description": "AdaptivePriorCalculator.sensitivity_analysis"
    }
  ],
  "patterns": [
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      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q069-000",
      "match_type": "REGEX",
      "pattern": "riesgos:|posibles dificultades:|amenazas a la implementación"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q069-001",
      "match_type": "REGEX",
      "pattern": "agudización del conflicto|represalias de grupos armados"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q069-002",
      "match_type": "REGEX",
      "pattern": "estigmatización de las comunidades|señalamientos"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q069-003",
      "match_type": "REGEX",
      "pattern": "sostenibilidad de los retornos"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q069-004",
      "match_type": "REGEX",
      "pattern": "instrumentalización de la ayuda humanitaria"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q069-005",
      "match_type": "REGEX",
      "pattern": "falta de articulación con la Fuerza Pública"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q069-006",
      "match_type": "REGEX",
      "pattern": "medidas de mitigación|plan de contingencia|para mitigar"
    }
  ]
}

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```

    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q069-007",
      "match_type": "REGEX",
      "pattern": "protocolos de seguridad|análisis de riesgo permanente"
    }
  ],
  "policy_area_id": "PA02",
  "question_global": 69,
  "question_id": "Q069",
  "scoring_definition_ref": "scoring_modalities.TYPE_A",
  "scoring_modality": "TYPE_A",
  "text": "¿El plan identifica posibles riesgos en la implementación de las medidas de
protección (ej. agudización del conflicto, estigmatización de comunidades) y propone 'medidas de
mitigación'?",
  "validations": {}
},
{
  "base_slot": "D2-Q5",
  "cluster_id": "CL01",
  "dimension_id": "DIM02",
  "expected_elements": [
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      "required": true,
      "type": "complementariedad_explicita"
    },
    {
      "required": true,
      "type": "secuenciacion_logica"
    }
  ],
  "failure_contract": {
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      "incomplete_text"
    ],
    "emit_code": "ABORT-Q070-REQ"
  },
  "method_sets": [
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      "class": "PolicyContradictionDetector",
      "function": "_detect_logical_incompatibilities",
      "method_type": "analysis",
      "priority": 1,
      "description": "PolicyContradictionDetector._detect_logical_incompatibilities"
    },
    {
      "class": "PolicyContradictionDetector",
      "function": "_calculate_coherence_metrics",
      "method_type": "scoring",
      "priority": 2,
      "description": "PolicyContradictionDetector._calculate_coherence_metrics"
    },
    {
      "class": "PolicyContradictionDetector",
      "function": "_calculate_objective_alignment",
      "method_type": "scoring",
      "priority": 3,
      "description": "PolicyContradictionDetector._calculate_objective_alignment"
    },
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      "class": "PolicyContradictionDetector",
      "function": "_calculate_graph_fragmentation",
      "method_type": "scoring",
      "priority": 4,
      "description": "PolicyContradictionDetector._calculate_graph_fragmentation"
    },
    {
      "class": "OperationalizationAuditor",

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    "function": "audit_sequence_logic",
    "method_type": "validation",
    "priority": 5,
    "description": "OperationalizationAuditor.audit_sequence_logic"
  },
  {
    "class": "BayesianMechanismInference",
    "function": "_calculate_coherence_factor",
    "method_type": "scoring",
    "priority": 6,
    "description": "BayesianMechanismInference._calculate_coherence_factor"
  },
  {
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    "function": "_score_causal_coherence",
    "method_type": "scoring",
    "priority": 7,
    "description": "PDETMunicipalPlanAnalyzer._score_causal_coherence"
  },
  {
    "class": "AdaptivePriorCalculator",
    "function": "calculate_likelihood_adaptativo",
    "method_type": "scoring",
    "priority": 8,
    "description": "AdaptivePriorCalculator.calculate_likelihood_adaptativo"
  }
],
"patterns": [
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q070-000",
    "match_type": "REGEX",
    "pattern": "estrategia integral de seguridad y protección|de manera articulada"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q070-001",
    "match_type": "LITERAL",
    "pattern": "la prevención se complementa con|sinergia entre"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q070-002",
    "match_type": "REGEX",
    "pattern": "la respuesta a las alertas tempranas activa las rutas de protección"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q070-003",
    "match_type": "LITERAL",
    "pattern": "la asistencia humanitaria es el primer paso para la estabilización"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q070-004",
    "match_type": "REGEX",
    "pattern": "en una primera fase... y luego..."
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",

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        "id": "PAT-Q070-005",
        "match_type": "REGEX",
        "pattern": "la estrategia combina prevención, protección y garantías de no repetición"
    }
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"question_global": 70,
"question_id": "Q070",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿El conjunto de actividades de prevención y protección demuestra una estrategia coherente? Se debe buscar evidencia de 'complementariedad' (ej. alertas tempranas + respuesta institucional) o 'secuencia' lógica.",
"validations": {}
},
{
    "base_slot": "D3-Q1",
    "cluster_id": "CL01",
    "dimension_id": "DIM03",
    "expected_elements": [
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            "required": true,
            "type": "fuente_verificacion"
        },
        {
            "required": true,
            "type": "linea_base_producto"
        },
        {
            "required": true,
            "type": "meta_cuantitativa"
        }
    ],
    "failure_contract": {
        "abort_if": [
            "missing_required_element",
            "incomplete_text"
        ],
        "emit_code": "ABORT-Q071-REQ"
    },
    "method_sets": [
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            "function": "_score_indicators",
            "method_type": "scoring",
            "priority": 1,
            "description": "PDETMunicipalPlanAnalyzer._score_indicators"
        },
        {
            "class": "OperationalizationAuditor",
            "function": "audit_evidence_traceability",
            "method_type": "validation",
            "priority": 2,
            "description": "OperationalizationAuditor.audit_evidence_traceability"
        },
        {
            "class": "CausalInferenceSetup",
            "function": "assign_probative_value",
            "method_type": "analysis",
            "priority": 3,
            "description": "CausalInferenceSetup.assign_probative_value"
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            "function": "apply_test_logic",
            "method_type": "analysis",
            "priority": 4,
            "description": "BeachEvidentialTest.apply_test_logic"
        },
        {
            "class": "TextMiningEngine",
            "function": "diagnose_critical_links",

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    "method_type": "analysis",
    "priority": 5,
    "description": "TextMiningEngine.diagnose_critical_links"
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  {
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    "function": "_extract_metadata",
    "method_type": "extraction",
    "priority": 6,
    "description": "IndustrialPolicyProcessor._extract_metadata"
  },
  {
    "class": "IndustrialPolicyProcessor",
    "function": "_calculate_quality_score",
    "method_type": "scoring",
    "priority": 7,
    "description": "IndustrialPolicyProcessor._calculate_quality_score"
  },
  {
    "class": "AdaptivePriorCalculator",
    "function": "generate_traceability_record",
    "method_type": "analysis",
    "priority": 8,
    "description": "AdaptivePriorCalculator.generate_traceability_record"
  }
],
"patterns": [
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    "category": "INDICADOR",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q071-000",
    "match_type": "REGEX",
    "pattern": "indicador de producto|meta de producto"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q071-001",
    "match_type": "REGEX",
    "pattern": "número de alertas tempranas gestionadas"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q071-002",
    "match_type": "REGEX",
    "pattern": "personas incluidas en rutas de protección"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q071-003",
    "match_type": "REGEX",
    "pattern": "familias que recibieron ayuda humanitaria"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q071-004",
    "match_type": "REGEX",
    "pattern": "comunidades acompañadas en autoprotección"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q071-005",

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    "match_type": "LITERAL",
    "pattern": "Línea Base:|LB:|Valor inicial:"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q071-006",
    "match_type": "REGEX",
    "pattern": "Meta Cuatrienio:|Meta:|Valor esperado:"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q071-007",
    "match_type": "REGEX",
    "pattern": "Fuente de verificación:|Medio de verificación:|Fuente:"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q071-008",
    "match_type": "REGEX",
    "pattern": "informes del CTJT|actas del Consejo de Seguridad|registros de la Personería"
  }
],
"policy_area_id": "PA02",
"question_global": 71,
"question_id": "Q071",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿Los indicadores de producto para prevención (ej. alertas gestionadas, personas en
rutas de protección) incluyen 'línea base', 'meta' cuantitativa y 'fuente de verificación'?",
"validations": {}
},
{
  "base_slot": "D3-Q2",
  "cluster_id": "CL01",
  "dimension_id": "DIM03",
  "expected_elements": [
    {
      "required": true,
      "type": "dosificacion_definida"
    },
    {
      "required": true,
      "type": "proporcionalidad_meta_brecha"
    }
  ],
  "failure_contract": {
    "abort_if": [
      "missing_required_element",
      "incomplete_text"
    ],
    "emit_code": "ABORT-Q072-REQ"
  },
  "method_sets": [
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      "function": "_calculate_bayesian_posterior",
      "method_type": "scoring",
      "priority": 1,
      "description": "AdvancedDAGValidator._calculate_bayesian_posterior"
    },
    {
      "class": "AdvancedDAGValidator",
      "function": "_calculate_confidence_interval",
      "method_type": "scoring",
      "priority": 2,
      "description": "AdvancedDAGValidator._calculate_confidence_interval"
    }
  ]
}

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},
{
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  "function": "_adjust_domain_weights",
  "method_type": "analysis",
  "priority": 3,
  "description": "AdaptivePriorCalculator._adjust_domain_weights"
},
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  "class": "PDETMunicipalPlanAnalyzer",
  "function": "_get_spanish_stopwords",
  "method_type": "analysis",
  "priority": 4,
  "description": "PDETMunicipalPlanAnalyzer._get_spanish_stopwords"
},
{
  "class": "BayesianMechanismInference",
  "function": "_log_refactored_components",
  "method_type": "analysis",
  "priority": 5,
  "description": "BayesianMechanismInference._log_refactored_components"
},
{
  "class": "PDETMunicipalPlanAnalyzer",
  "function": "analyze_financial_feasibility",
  "method_type": "analysis",
  "priority": 6,
  "description": "PDETMunicipalPlanAnalyzer.analyze_financial_feasibility"
},
{
  "class": "PDETMunicipalPlanAnalyzer",
  "function": "_score_indicators",
  "method_type": "scoring",
  "priority": 7,
  "description": "PDETMunicipalPlanAnalyzer._score_indicators"
},
{
  "class": "PDETMunicipalPlanAnalyzer",
  "function": "_interpret_risk",
  "method_type": "analysis",
  "priority": 8,
  "description": "PDETMunicipalPlanAnalyzer._interpret_risk"
},
{
  "class": "FinancialAuditor",
  "function": "_calculate_sufficiency",
  "method_type": "scoring",
  "priority": 9,
  "description": "FinancialAuditor._calculate_sufficiency"
},
{
  "class": "BayesianMechanismInference",
  "function": "_test_sufficiency",
  "method_type": "analysis",
  "priority": 10,
  "description": "BayesianMechanismInference._test_sufficiency"
},
{
  "class": "BayesianMechanismInference",
  "function": "_test_necessity",
  "method_type": "analysis",
  "priority": 11,
  "description": "BayesianMechanismInference._test_necessity"
},
{
  "class": "PDETMunicipalPlanAnalyzer",
  "function": "_assess_financial_sustainability",
  "method_type": "analysis",
  "priority": 12,
  "description": "PDETMunicipalPlanAnalyzer._assess_financial_sustainability"
},
{

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    "class": "AdaptivePriorCalculator",
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    "method_type": "scoring",
    "priority": 13,
    "description": "AdaptivePriorCalculator.calculate_likelihood_adaptativo"
  },
  {
    "class": "IndustrialPolicyProcessor",
    "function": "_calculate_quality_score",
    "method_type": "scoring",
    "priority": 14,
    "description": "IndustrialPolicyProcessor._calculate_quality_score"
  },
  {
    "class": "TeoriaCambio",
    "function": "_generar_sugerencias_internas",
    "method_type": "analysis",
    "priority": 15,
    "description": "TeoriaCambio._generar_sugerencias_internas"
  },
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    "function": "_deduplicate_tables",
    "method_type": "analysis",
    "priority": 16,
    "description": "PDETMunicipalPlanAnalyzer._deduplicate_tables"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_indicator_to_dict",
    "method_type": "analysis",
    "priority": 17,
    "description": "PDETMunicipalPlanAnalyzer._indicator_to_dict"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_generate_recommendations",
    "method_type": "analysis",
    "priority": 18,
    "description": "PDETMunicipalPlanAnalyzer._generate_recommendations"
  },
  {
    "class": "IndustrialPolicyProcessor",
    "function": "_compile_pattern_registry",
    "method_type": "analysis",
    "priority": 19,
    "description": "IndustrialPolicyProcessor._compile_pattern_registry"
  },
  {
    "class": "IndustrialPolicyProcessor",
    "function": "_build_point_patterns",
    "method_type": "analysis",
    "priority": 20,
    "description": "IndustrialPolicyProcessor._build_point_patterns"
  },
  {
    "class": "IndustrialPolicyProcessor",
    "function": "_empty_result",
    "method_type": "analysis",
    "priority": 21,
    "description": "IndustrialPolicyProcessor._empty_result"
  }
],
"patterns": [
  {
    "category": "INDICADOR",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q072-000",
    "match_type": "REGEX",
    "pattern": "cobertura del|atenderá al \\d+% de las alertas emitidas"
  }
],

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{
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  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q072-001",
  "match_type": "REGEX",
  "pattern": "la meta es atender a todas las familias desplazadas"
},
{
  "category": "GENERAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q072-002",
  "match_type": "REGEX",
  "pattern": "universo de atención|población en riesgo"
},
{
  "category": "GENERAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q072-003",
  "match_type": "REGEX",
  "pattern": "la meta se define en función de la capacidad de respuesta"
},
{
  "category": "GENERAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q072-004",
  "match_type": "REGEX",
  "pattern": "frecuencia de la atención|periodicidad del seguimiento"
},
{
  "category": "GENERAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q072-005",
  "match_type": "REGEX",
  "pattern": "tiempo de respuesta a emergencias"
},
{
  "category": "GENERAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q072-006",
  "match_type": "REGEX",
  "pattern": "la dosificación de la ayuda humanitaria sigue los estándares"
}
],
"policy_area_id": "PA02",
"question_global": 72,
"question_id": "Q072",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿Las metas de los productos (ej. 'cobertura del 80% de las alertas tempranas') son proporcionales a la magnitud del riesgo diagnosticado? Se debe buscar si se define la 'frecuencia' de la respuesta.",
"validations": {}
},
{
  "base_slot": "D3-Q3",
  "cluster_id": "CL01",
  "dimension_id": "DIM03",
  "expected_elements": [
    {
      "required": true,
      "type": "trazabilidad_organizacional"
    },
    {
      "required": true,
      "type": "trazabilidad_presupuestal"
    }
  ]
}

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],
"failure_contract": {
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    "missing_required_element",
    "incomplete_text"
  ],
  "emit_code": "ABORT-Q073-REQ"
},
"method_sets": [
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    "class": "FinancialAuditor",
    "function": "_match_program_to_node",
    "method_type": "analysis",
    "priority": 1,
    "description": "FinancialAuditor._match_program_to_node"
  },
  {
    "class": "FinancialAuditor",
    "function": "_match_goal_to_budget",
    "method_type": "analysis",
    "priority": 2,
    "description": "FinancialAuditor._match_goal_to_budget"
  },
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    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_extract_from_responsibility_tables",
    "method_type": "extraction",
    "priority": 3,
    "description": "PDETMunicipalPlanAnalyzer._extract_from_responsibility_tables"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_consolidate_entities",
    "method_type": "analysis",
    "priority": 4,
    "description": "PDETMunicipalPlanAnalyzer._consolidate_entities"
  },
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    "class": "PDETMunicipalPlanAnalyzer",
    "function": "identify_responsible_entities",
    "method_type": "analysis",
    "priority": 5,
    "description": "PDETMunicipalPlanAnalyzer.identify_responsible_entities"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_score_responsibility_clarity",
    "method_type": "scoring",
    "priority": 6,
    "description": "PDETMunicipalPlanAnalyzer._score_responsibility_clarity"
  },
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    "function": "process_document",
    "method_type": "analysis",
    "priority": 7,
    "description": "PolicyAnalysisEmbedder.process_document"
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  {
    "class": "PolicyAnalysisEmbedder",
    "function": "_generate_query_from_pdq",
    "method_type": "analysis",
    "priority": 8,
    "description": "PolicyAnalysisEmbedder._generate_query_from_pdq"
  },
  {
    "class": "PolicyAnalysisEmbedder",
    "function": "semantic_search",
    "method_type": "analysis",
    "priority": 9,
    "description": "PolicyAnalysisEmbedder.semantic_search"
  },
]

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{
  "class": "PolicyAnalysisEmbedder",
  "function": "_apply_mmr",
  "method_type": "analysis",
  "priority": 10,
  "description": "PolicyAnalysisEmbedder._apply_mmr"
},
{
  "class": "SemanticAnalyzer",
  "function": "_empty_semantic_cube",
  "method_type": "analysis",
  "priority": 11,
  "description": "SemanticAnalyzer._empty_semantic_cube"
},
{
  "class": "SemanticAnalyzer",
  "function": "_classify_policy_domain",
  "method_type": "analysis",
  "priority": 12,
  "description": "SemanticAnalyzer._classify_policy_domain"
},
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  "class": "SemanticAnalyzer",
  "function": "_classify_cross_cutting_themes",
  "method_type": "analysis",
  "priority": 13,
  "description": "SemanticAnalyzer._classify_cross_cutting_themes"
},
{
  "class": "SemanticAnalyzer",
  "function": "_classify_value_chain_link",
  "method_type": "analysis",
  "priority": 14,
  "description": "SemanticAnalyzer._classify_value_chain_link"
},
{
  "class": "SemanticAnalyzer",
  "function": "_vectorize_segments",
  "method_type": "analysis",
  "priority": 15,
  "description": "SemanticAnalyzer._vectorize_segments"
},
{
  "class": "SemanticAnalyzer",
  "function": "_process_segment",
  "method_type": "analysis",
  "priority": 16,
  "description": "SemanticAnalyzer._process_segment"
},
{
  "class": "SemanticAnalyzer",
  "function": "_calculate_semantic_complexity",
  "method_type": "scoring",
  "priority": 17,
  "description": "SemanticAnalyzer._calculate_semantic_complexity"
},
{
  "class": "IndustrialPolicyProcessor",
  "function": "_compute_evidence_confidence",
  "method_type": "analysis",
  "priority": 18,
  "description": "IndustrialPolicyProcessor._compute_evidence_confidence"
},
{
  "class": "PDETMunicipalPlanAnalyzer",
  "function": "_entity_to_dict",
  "method_type": "analysis",
  "priority": 19,
  "description": "PDETMunicipalPlanAnalyzer._entity_to_dict"
},
{
  "class": "AdaptivePriorCalculator",

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    "function": "generate_traceability_record",
    "method_type": "analysis",
    "priority": 20,
    "description": "AdaptivePriorCalculator.generate_traceability_record"
  },
  {
    "class": "PolicyAnalysisEmbedder",
    "function": "generate_pdq_report",
    "method_type": "analysis",
    "priority": 21,
    "description": "PolicyAnalysisEmbedder.generate_pdq_report"
  },
  {
    "class": "ReportingEngine",
    "function": "generate_accountability_matrix",
    "method_type": "analysis",
    "priority": 22,
    "description": "ReportingEngine.generate_accountability_matrix"
  }
],
"patterns": [
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q073-000",
    "match_type": "REGEX",
    "pattern": "código BPIN|proyecto de inversión para la paz"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q073-001",
    "match_type": "REGEX",
    "pattern": "programa del PPI|línea de inversión en víctimas"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q073-002",
    "match_type": "REGEX",
    "pattern": "recursos del proyecto|presupuesto para prevención"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q073-003",
    "match_type": "REGEX",
    "pattern": "responsable:|dependencia a cargo:|entidad ejecutora"
  },
  {
    "category": "TERRITORIAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q073-004",
    "match_type": "REGEX",
    "pattern": "Secretaría de Gobierno|Enlace de Víctimas|Personería Municipal"
  },
  {
    "category": "FUENTE_OFICIAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q073-005",
    "match_type": "REGEX",
    "pattern": "articulado con la Defensoría del Pueblo|Policía Nacional"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,

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        "flags": "i",
        "id": "PAT-Q073-006",
        "match_type": "REGEX",
        "pattern": "corresponsabilidad de|en alianza con"
    }
],
"policy_area_id": "PA02",
"question_global": 73,
"question_id": "Q073",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿Los productos de protección tienen trazabilidad presupuestal (vinculados a códigos BPIN, PPI) y organizacional (asociados a una 'Secretaría de Gobierno' o entidad responsable)?",
"validations": {}
},
{
    "base_slot": "D3-Q4",
    "cluster_id": "CL01",
    "dimension_id": "DIM03",
    "expected_elements": [
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            "required": true,
            "type": "coherencia_recursos"
        },
        {
            "required": true,
            "type": "factibilidad_tecnica"
        },
        {
            "required": true,
            "type": "realismo_plazos"
        }
    ],
    "failure_contract": {
        "abort_if": [
            "missing_required_element",
            "incomplete_text"
        ],
        "emit_code": "ABORT-Q074-REQ"
    },
    "method_sets": [
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            "function": "calculate_acyclicity_pvalue",
            "method_type": "scoring",
            "priority": 1,
            "description": "AdvancedDAGValidator.calculate_acyclicity_pvalue"
        },
        {
            "class": "AdvancedDAGValidator",
            "function": "_is_acyclic",
            "method_type": "analysis",
            "priority": 2,
            "description": "AdvancedDAGValidator._is_acyclic"
        },
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            "method_type": "analysis",
            "priority": 3,
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            "function": "_calculate_node_importance",
            "method_type": "scoring",
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    "method_type": "analysis",
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    "method_type": "analysis",
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    "method_type": "analysis",
    "priority": 8,
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    "priority": 9,
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    "function": "_create_empty_result",
    "method_type": "analysis",
    "priority": 12,
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    "method_type": "analysis",
    "priority": 13,
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    "priority": 14,
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    "priority": 15,

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    "description": "IndustrialGradeValidator.validate_connection_matrix"
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  {
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    "method_type": "analysis",
    "priority": 16,
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    "function": "_benchmark_operation",
    "method_type": "analysis",
    "priority": 17,
    "description": "IndustrialGradeValidator._benchmark_operation"
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    "function": "_log_metric",
    "method_type": "analysis",
    "priority": 18,
    "description": "IndustrialGradeValidator._log_metric"
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    "function": "validate_engine_readiness",
    "method_type": "validation",
    "priority": 19,
    "description": "IndustrialGradeValidator.validate_engine_readiness"
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    "function": "analyze_performance",
    "method_type": "analysis",
    "priority": 20,
    "description": "PerformanceAnalyzer.analyze_performance"
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    "function": "_calculate_loss_functions",
    "method_type": "scoring",
    "priority": 21,
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    "method_type": "scoring",
    "priority": 22,
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    "method_type": "scoring",
    "priority": 23,
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    "function": "_calculate_r_hat",
    "method_type": "scoring",
    "priority": 24,
    "description": "HierarchicalGenerativeModel._calculate_r_hat"
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  {
    "class": "IndustrialGradeValidator",
    "function": "validate_causal_categories",
    "method_type": "validation",
    "priority": 25,
    "description": "IndustrialGradeValidator.validate_causal_categories"
  },

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    {
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      "function": "_extraer_categorias",
      "method_type": "analysis",
      "priority": 26,
      "description": "TeoriaCambio._extraer_categorias"
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  ],
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      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q074-000",
      "match_type": "REGEX",
      "pattern": "factibilidad|viabilidad|es realista esperar que"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q074-001",
      "match_type": "REGEX",
      "pattern": "capacidad de respuesta institucional|recursos humanos para atender"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q074-002",
      "match_type": "REGEX",
      "pattern": "plazo de ejecución|tiempo de respuesta"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q074-003",
      "match_type": "LITERAL",
      "pattern": "la meta es ambiciosa pero necesaria"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q074-004",
      "match_type": "REGEX",
      "pattern": "contradictorio|poco probable|desproporcionado"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q074-005",
      "match_type": "REGEX",
      "pattern": "con los recursos asignados se puede lograr"
    }
  ],
  "policy_area_id": "PA02",
  "question_global": 74,
  "question_id": "Q074",
  "scoring_definition_ref": "scoring_modalities.TYPE_A",
  "scoring_modality": "TYPE_A",
  "text": "¿Existe una relación factible entre la actividad (ej. 'conformar un comité') y la meta del producto asociado (ej. '100% de alertas respondidas') para el área de Prevención de la violencia? Se debe evaluar si los 'plazos' y recursos son realistas.",
  "validations": {}
},
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  "base_slot": "D3-Q5",
  "cluster_id": "CL01",
  "dimension_id": "DIM03",

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"expected_elements": [
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    "type": "conexion_producto_resultado"
  },
  {
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    "type": "mecanismo_causal_explicito"
  }
],
"failure_contract": {
  "abort_if": [
    "missing_required_element",
    "incomplete_text"
  ],
  "emit_code": "ABORT-Q075-REQ"
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  {
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    "method_type": "analysis",
    "priority": 1,
    "description": "PDETMunicipalPlanAnalyzer._identify_confounders"
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    "priority": 2,
    "description": "PDETMunicipalPlanAnalyzer._effect_to_dict"
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    "function": "_scenario_to_dict",
    "method_type": "analysis",
    "priority": 3,
    "description": "PDETMunicipalPlanAnalyzer._scenario_to_dict"
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    "function": "_simulate_intervention",
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    "priority": 4,
    "description": "PDETMunicipalPlanAnalyzer._simulate_intervention"
  },
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    "function": "_generate_recommendations",
    "method_type": "analysis",
    "priority": 5,
    "description": "PDETMunicipalPlanAnalyzer._generate_recommendations"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_identify_causal_nodes",
    "method_type": "analysis",
    "priority": 6,
    "description": "PDETMunicipalPlanAnalyzer._identify_causal_nodes"
  },
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    "class": "BayesianCounterfactualAuditor",
    "function": "_evaluate_factual",
    "method_type": "analysis",
    "priority": 7,
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  },
  {
    "class": "BayesianCounterfactualAuditor",
    "function": "_evaluate_counterfactual",
    "method_type": "analysis",
    "priority": 8,

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    "description": "BayesianCounterfactualAuditor._evaluate_counterfactual"
  },
  {
    "class": "CausalExtractor",
    "function": "_assess_financial_consistency",
    "method_type": "analysis",
    "priority": 9,
    "description": "CausalExtractor._assess_financial_consistency"
  },
  {
    "class": "BayesianMechanismInference",
    "function": "_infer_activity_sequence",
    "method_type": "analysis",
    "priority": 10,
    "description": "BayesianMechanismInference._infer_activity_sequence"
  },
  {
    "class": "BayesianMechanismInference",
    "function": "_generate_necessity_remediation",
    "method_type": "analysis",
    "priority": 11,
    "description": "BayesianMechanismInference._generate_necessity_remediation"
  },
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    "class": "BayesianCounterfactualAuditor",
    "function": "refutation_and_sanity_checks",
    "method_type": "analysis",
    "priority": 12,
    "description": "BayesianCounterfactualAuditor.refutation_and_sanity_checks"
  },
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    "class": "IndustrialPolicyProcessor",
    "function": "_load_questionnaire",
    "method_type": "analysis",
    "priority": 13,
    "description": "IndustrialPolicyProcessor._load_questionnaire"
  },
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    "class": "PDETMunicipalPlanAnalyzer",
    "function": "analyze_financial_feasibility",
    "method_type": "analysis",
    "priority": 14,
    "description": "PDETMunicipalPlanAnalyzer.analyze_financial_feasibility"
  },
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    "function": "construct_causal_dag",
    "method_type": "analysis",
    "priority": 15,
    "description": "PDETMunicipalPlanAnalyzer.construct_causal_dag"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "estimate_causal_effects",
    "method_type": "analysis",
    "priority": 16,
    "description": "PDETMunicipalPlanAnalyzer.estimate_causal_effects"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "generate_counterfactuals",
    "method_type": "analysis",
    "priority": 17,
    "description": "PDETMunicipalPlanAnalyzer.generate_counterfactuals"
  },
  {
    "class": "CausalExtractor",
    "function": "_build_type_hierarchy",
    "method_type": "analysis",
    "priority": 18,
    "description": "CausalExtractor._build_type_hierarchy"
  },

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  "method_type": "analysis",
  "priority": 19,
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},
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  "function": "_calculate_type_transition_prior",
  "method_type": "scoring",
  "priority": 20,
  "description": "CausalExtractor._calculate_type_transition_prior"
},
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  "class": "CausalExtractor",
  "function": "_calculate_textual_proximity",
  "method_type": "scoring",
  "priority": 21,
  "description": "CausalExtractor._calculate_textual_proximity"
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  "function": "_validar_orden_causal",
  "method_type": "analysis",
  "priority": 22,
  "description": "TeoriaCambio._validar_orden_causal"
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  "function": "_refine_edge_probabilities",
  "method_type": "analysis",
  "priority": 23,
  "description": "PDETMunicipalPlanAnalyzer._refine_edge_probabilities"
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  "function": "compare_policy_interventions",
  "method_type": "analysis",
  "priority": 24,
  "description": "PolicyAnalysisEmbedder.compare_policy_interventions"
},
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  "function": "infer_mechanisms",
  "method_type": "analysis",
  "priority": 25,
  "description": "BayesianMechanismInference.infer_mechanisms"
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  "category": "GENERAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q075-000",
  "match_type": "REGEX",
  "pattern": "la atención humanitaria permite que|lo cual contribuirá a reducir"
},
{
  "category": "GENERAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q075-001",
  "match_type": "LITERAL",
  "pattern": "el mecanismo es|la lógica es que"
},
{
  "category": "GENERAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q075-002",

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        "match_type": "REGEX",
        "pattern": "al activar las rutas de protección, se reduce la probabilidad de un hecho
victimizante"
    },
    {
        "category": "GENERAL",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q075-003",
        "match_type": "REGEX",
        "pattern": "el acompañamiento a comunidades genera capacidades de autoprotección, lo que
resulta en..."
    },
    {
        "category": "GENERAL",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q075-004",
        "match_type": "REGEX",
        "pattern": "variable intermedia|mediador|eslabón causal"
    },
    {
        "category": "GENERAL",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q075-005",
        "match_type": "REGEX",
        "pattern": "cadena de valor de la protección|ruta de cambio"
    }
],
"policy_area_id": "PA02",
"question_global": 75,
"question_id": "Q075",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿El PDM explica cómo los productos de protección (ej. 'personas atendidas en
albergues') contribuyen a generar resultados (ej. 'reducción de la vulnerabilidad')? Se debe buscar
la descripción de este 'mecanismo' causal.",
"validations": {}
},
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    "dimension_id": "DIM04",
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        {
            "required": true,
            "type": "linea_base_resultado"
        },
        {
            "required": true,
            "type": "meta_resultado"
        },
        {
            "required": true,
            "type": "metrica_outcome"
        }
    ],
    "failure_contract": {
        "abort_if": [
            "missing_required_element",
            "incomplete_text"
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        "emit_code": "ABORT-Q076-REQ"
    },
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    "function": "_extract_entities_syntax",
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    "priority": 1,
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    "function": "_extract_entities_ner",
    "method_type": "extraction",
    "priority": 2,
    "description": "PDETMunicipalPlanAnalyzer._extract_entities_ner"
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    "class": "CausalExtractor",
    "function": "_calculate_language_specificity",
    "method_type": "scoring",
    "priority": 3,
    "description": "CausalExtractor._calculate_language_specificity"
  },
  {
    "class": "CausalExtractor",
    "function": "_calculate_composite_likelihood",
    "method_type": "scoring",
    "priority": 4,
    "description": "CausalExtractor._calculate_composite_likelihood"
  },
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    "function": "_calculate_semantic_distance",
    "method_type": "scoring",
    "priority": 5,
    "description": "CausalExtractor._calculate_semantic_distance"
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    "class": "TemporalLogicVerifier",
    "function": "_classify_temporal_type",
    "method_type": "analysis",
    "priority": 6,
    "description": "TemporalLogicVerifier._classify_temporal_type"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_score_indicators",
    "method_type": "scoring",
    "priority": 7,
    "description": "PDETMunicipalPlanAnalyzer._score_indicators"
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    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_find_outcome_mentions",
    "method_type": "analysis",
    "priority": 8,
    "description": "PDETMunicipalPlanAnalyzer._find_outcome_mentions"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_score_temporal_consistency",
    "method_type": "scoring",
    "priority": 9,
    "description": "PDETMunicipalPlanAnalyzer._score_temporal_consistency"
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    "class": "CausalExtractor",
    "function": "_extract_goals",
    "method_type": "extraction",
    "priority": 10,
    "description": "CausalExtractor._extract_goals"
  },
  {
    "class": "CausalExtractor",
    "function": "_parse_goal_context",
    "method_type": "extraction",

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    "priority": 11,
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  {
    "class": "CausalExtractor",
    "function": "_classify_goal_type",
    "method_type": "analysis",
    "priority": 12,
    "description": "CausalExtractor._classify_goal_type"
  },
  {
    "class": "TemporalLogicVerifier",
    "function": "_parse_temporal_marker",
    "method_type": "extraction",
    "priority": 13,
    "description": "TemporalLogicVerifier._parse_temporal_marker"
  },
  {
    "class": "TemporalLogicVerifier",
    "function": "_extract_resources",
    "method_type": "extraction",
    "priority": 14,
    "description": "TemporalLogicVerifier._extract_resources"
  },
  {
    "class": "PerformanceAnalyzer",
    "function": "analyze_performance",
    "method_type": "analysis",
    "priority": 15,
    "description": "PerformanceAnalyzer.analyze_performance"
  },
  {
    "class": "PerformanceAnalyzer",
    "function": "_generate_recommendations",
    "method_type": "analysis",
    "priority": 16,
    "description": "PerformanceAnalyzer._generate_recommendations"
  }
],
"patterns": [
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    "category": "INDICADOR",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q076-000",
    "match_type": "REGEX",
    "pattern": "indicador de resultado|indicador de efecto|outcome"
  },
  {
    "category": "INDICADOR",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q076-001",
    "match_type": "REGEX",
    "pattern": "tasa de homicidios|tasa de desplazamiento|tasa de confinamiento"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q076-002",
    "match_type": "REGEX",
    "pattern": "reducción del número de víctimas|disminución de eventos"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q076-003",
    "match_type": "LITERAL",
    "pattern": "Línea Base:|LB:|valor 2023:"
  },
],

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{
  "category": "INDICADOR",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q076-004",
  "match_type": "REGEX",
  "pattern": "Meta Cuatrienio:|Meta 2027:|se espera reducir en un X%"
},
{
  "category": "GENERAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q076-005",
  "match_type": "REGEX",
  "pattern": "Fuente de verificación:|Medio de verificación:"
},
{
  "category": "INDICADOR",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q076-006",
  "match_type": "REGEX",
  "pattern": "Ficha de Indicador de Resultado (KPT)"
},
{
  "category": "TEMPORAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q076-007",
  "match_type": "REGEX",
  "pattern": "horizonte temporal|ventana de maduración|al final del periodo"
}
],
"policy_area_id": "PA02",
"question_global": 76,
"question_id": "Q076",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿Los indicadores de resultado para la prevención de la violencia (ej. 'tasa de homicidios', 'reducción de eventos de desplazamiento') están definidos con línea base, meta y un horizonte temporal ('cuatrienio')?",
"validations": {}
},
{
  "base_slot": "D4-Q2",
  "cluster_id": "CL01",
  "dimension_id": "DIM04",
  "expected_elements": [
    {
      "required": true,
      "type": "cadena_causal_explicita"
    },
    {
      "required": true,
      "type": "condiciones_habilitantes"
    },
    {
      "required": true,
      "type": "supuestos_identificados"
    }
  ],
  "failure_contract": {
    "abort_if": [
      "missing_required_element",
      "incomplete_text"
    ],
    "emit_code": "ABORT-Q077-REQ"
  },
  "method_sets": [
    {
      "class": "TeoriaCambio",
      "function": "_encontrar_caminos_completos",

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    "method_type": "analysis",
    "priority": 1,
    "description": "TeoriaCambio._encontrar_caminos_completos"
  },
  {
    "class": "TeoriaCambio",
    "function": "validacion_completa",
    "method_type": "analysis",
    "priority": 2,
    "description": "TeoriaCambio.validacion_completa"
  },
  {
    "class": "CausalExtractor",
    "function": "extract_causal_hierarchy",
    "method_type": "extraction",
    "priority": 3,
    "description": "CausalExtractor.extract_causal_hierarchy"
  },
  {
    "class": "HierarchicalGenerativeModel",
    "function": "verify_conditional_independence",
    "method_type": "analysis",
    "priority": 4,
    "description": "HierarchicalGenerativeModel.verify_conditional_independence"
  },
  {
    "class": "HierarchicalGenerativeModel",
    "function": "_generate_independence_tests",
    "method_type": "analysis",
    "priority": 5,
    "description": "HierarchicalGenerativeModel._generate_independence_tests"
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  {
    "class": "BayesianCounterfactualAuditor",
    "function": "construct_scm",
    "method_type": "analysis",
    "priority": 6,
    "description": "BayesianCounterfactualAuditor.construct_scm"
  },
  {
    "class": "AdvancedDAGValidator",
    "function": "_perform_sensitivity_analysis_internal",
    "method_type": "analysis",
    "priority": 7,
    "description": "AdvancedDAGValidator._perform_sensitivity_analysis_internal"
  },
  {
    "class": "BayesFactorTable",
    "function": "get_bayes_factor",
    "method_type": "analysis",
    "priority": 8,
    "description": "BayesFactorTable.get_bayes_factor"
  }
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"patterns": [
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    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q077-000",
    "match_type": "REGEX",
    "pattern": "cadena causal|lógica de intervención|si... entonces..."
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q077-001",
    "match_type": "REGEX",
    "pattern": "el resultado se logrará siempre y cuando|asumiendo que"
  },
  {

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        "category": "GENERAL",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q077-002",
        "match_type": "REGEX",
        "pattern": "supuesto clave|premisa fundamental"
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        "category": "GENERAL",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q077-003",
        "match_type": "REGEX",
        "pattern": "condición habilitante|factor crítico|requiere de"
    },
    {
        "category": "GENERAL",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q077-004",
        "match_type": "REGEX",
        "pattern": "depende de la respuesta de los grupos armados"
    },
    {
        "category": "GENERAL",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q077-005",
        "match_type": "REGEX",
        "pattern": "un supuesto es que la comunidad confíe y colabore con la Fuerza Pública"
    },
    {
        "category": "GENERAL",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q077-006",
        "match_type": "REGEX",
        "pattern": "se requiere una efectiva administración de justicia para que"
    }
],
"policy_area_id": "PA02",
"question_global": 77,
"question_id": "Q077",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿Se explicita la cadena causal que lleva a la reducción de la violencia, mencionando los 'supuestos' clave (ej. 'si la comunidad confía en las instituciones') o las 'condiciones habilitantes'?",
"validations": {}
},
{
    "base_slot": "D4-Q3",
    "cluster_id": "CL01",
    "dimension_id": "DIM04",
    "expected_elements": [
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            "required": true,
            "type": "evidencia_comparada"
        },
        {
            "required": true,
            "type": "justificacion_capacidad"
        },
        {
            "required": true,
            "type": "justificacion_recursos"
        }
    ]
},
"failure_contract": {
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        "missing_required_element",
        "incomplete_text"
    ]
}

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"function": "_get_prior_effect",
"method_type": "analysis",
"priority": 1,
"description": "PDETMunicipalPlanAnalyzer._get_prior_effect"
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{
"class": "PDETMunicipalPlanAnalyzer",
"function": "_estimate_effect_bayesian",
"method_type": "analysis",
"priority": 2,
"description": "PDETMunicipalPlanAnalyzer._estimate_effect_bayesian"
},
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"class": "PDETMunicipalPlanAnalyzer",
"function": "_compute_robustness_value",
"method_type": "analysis",
"priority": 3,
"description": "PDETMunicipalPlanAnalyzer._compute_robustness_value"
},
{
"class": "AdaptivePriorCalculator",
"function": "sensitivity_analysis",
"method_type": "analysis",
"priority": 4,
"description": "AdaptivePriorCalculator.sensitivity_analysis"
},
{
"class": "HierarchicalGenerativeModel",
"function": "_calculate_r_hat",
"method_type": "scoring",
"priority": 5,
"description": "HierarchicalGenerativeModel._calculate_r_hat"
},
{
"class": "HierarchicalGenerativeModel",
"function": "_calculate_ess",
"method_type": "scoring",
"priority": 6,
"description": "HierarchicalGenerativeModel._calculate_ess"
},
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"class": "AdvancedDAGValidator",
"function": "_calculate_statistical_power",
"method_type": "scoring",
"priority": 7,
"description": "AdvancedDAGValidator._calculate_statistical_power"
},
{
"class": "BayesianMechanismInference",
"function": "_aggregate_bayesian_confidence",
"method_type": "analysis",
"priority": 8,
"description": "BayesianMechanismInference._aggregate_bayesian_confidence"
}
],
"patterns": [
{
"category": "GENERAL",
"confidence_weight": 0.85,
"flags": "i",
"id": "PAT-Q078-000",
"match_type": "REGEX",
"pattern": "meta ambiciosa pero factible|meta realista dado el contexto de seguridad"
},
{
"category": "GENERAL",

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        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q078-001",
        "match_type": "REGEX",
        "pattern": "la meta se justifica por el aumento del pie de fuerza"
    },
    {
        "category": "GENERAL",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q078-002",
        "match_type": "REGEX",
        "pattern": "con la inversión en X se espera lograr una reducción de Y"
    },
    {
        "category": "GENERAL",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q078-003",
        "match_type": "REGEX",
        "pattern": "la capacidad de articulación del Consejo de Seguridad permite"
    },
    {
        "category": "GENERAL",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q078-004",
        "match_type": "REGEX",
        "pattern": "en experiencias similares de otros municipios en posconflicto"
    },
    {
        "category": "GENERAL",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q078-005",
        "match_type": "REGEX",
        "pattern": "benchmark|referente nacional|meta del PND en seguridad"
    },
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        "category": "GENERAL",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q078-006",
        "match_type": "REGEX",
        "pattern": "análisis de viabilidad de la meta"
    }
],
"policy_area_id": "PA02",
"question_global": 78,
"question_id": "Q078",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿La ambición de las metas de resultado (ej. 'reducir la tasa de homicidios en 15%') se justifica en función de los recursos, la capacidad policial o se compara con 'casos' similares?",
"validations": {}
},
{
    "base_slot": "D4-Q4",
    "cluster_id": "CL01",
    "dimension_id": "DIM04",
    "expected_elements": [
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            "required": true,
            "type": "criterios_exito_definidos"
        },
        {
            "required": true,
            "type": "vinculo_resultado_problema"
        }
    ]
},
"failure_contract": {

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  "incomplete_text"
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    "method_type": "scoring",
    "priority": 1,
    "description": "PolicyContradictionDetector._calculate_objective_alignment"
  },
  {
    "class": "PolicyContradictionDetector",
    "function": "_identify_affected_sections",
    "method_type": "analysis",
    "priority": 2,
    "description": "PolicyContradictionDetector._identify_affected_sections"
  },
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    "class": "PolicyContradictionDetector",
    "function": "_generate_resolution_recommendations",
    "method_type": "analysis",
    "priority": 3,
    "description": "PolicyContradictionDetector._generate_resolution_recommendations"
  },
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    "function": "_generate_optimal_remediations",
    "method_type": "analysis",
    "priority": 4,
    "description": "OperationalizationAuditor._generate_optimal_remediations"
  },
  {
    "class": "OperationalizationAuditor",
    "function": "_get_remediation_text",
    "method_type": "analysis",
    "priority": 5,
    "description": "OperationalizationAuditor._get_remediation_text"
  },
  {
    "class": "BayesianCounterfactualAuditor",
    "function": "aggregate_risk_and_prioritize",
    "method_type": "analysis",
    "priority": 6,
    "description": "BayesianCounterfactualAuditor.aggregate_risk_and_prioritize"
  },
  {
    "class": "FinancialAuditor",
    "function": "_detect_allocation_gaps",
    "method_type": "analysis",
    "priority": 7,
    "description": "FinancialAuditor._detect_allocation_gaps"
  }
],
"patterns": [
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    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q079-000",
    "match_type": "REGEX",
    "pattern": "este resultado responde al problema del homicidio|para solucionar el
desplazamiento"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q079-001",

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    "match_type": "REGEX",
    "pattern": "el resultado atiende directamente el factor de riesgo"
  },
  {
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    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q079-002",
    "match_type": "REGEX",
    "pattern": "criterio de éxito|se considerará un logro si se reduce la tasa"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q079-003",
    "match_type": "REGEX",
    "pattern": "umbral de cumplimiento|mínimo aceptable"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q079-004",
    "match_type": "REGEX",
    "pattern": "matriz de coherencia|alineación diagnóstico-estrategia"
  }
],
"policy_area_id": "PA02",
"question_global": 79,
"question_id": "Q079",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿Los resultados propuestos (ej. 'mejora de la percepción de seguridad') 'atienden' o 'abordan' directamente los problemas de violencia (homicidio, confinamiento) priorizados en el diagnóstico?",
"validations": {}
},
{
  "base_slot": "D4-Q5",
  "cluster_id": "CL01",
  "dimension_id": "DIM04",
  "expected_elements": [
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      "type": "alineacion_ods"
    },
    {
      "required": true,
      "type": "alineacion_pnd"
    }
  ],
  "failure_contract": {
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      "incomplete_text"
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      "function": "_score_pdet_alignment",
      "method_type": "scoring",
      "priority": 1,
      "description": "PDETMunicipalPlanAnalyzer._score_pdet_alignment"
    },
    {
      "class": "PDETMunicipalPlanAnalyzer",
      "function": "_score_causal_coherence",
      "method_type": "scoring",
      "priority": 2,

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    "description": "PDETMunicipalPlanAnalyzer._score_causal_coherence"
  },
  {
    "class": "CDAFFramework",
    "function": "_validate_dnp_compliance",
    "method_type": "validation",
    "priority": 3,
    "description": "CDAFFramework._validate_dnp_compliance"
  },
  {
    "class": "CDAFFramework",
    "function": "_generate_dnp_report",
    "method_type": "analysis",
    "priority": 4,
    "description": "CDAFFramework._generate_dnp_report"
  },
  {
    "class": "IndustrialPolicyProcessor",
    "function": "_analyze_causal_dimensions",
    "method_type": "analysis",
    "priority": 5,
    "description": "IndustrialPolicyProcessor._analyze_causal_dimensions"
  },
  {
    "class": "AdaptivePriorCalculator",
    "function": "validate_quality_criteria",
    "method_type": "validation",
    "priority": 6,
    "description": "AdaptivePriorCalculator.validate_quality_criteria"
  }
],

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"patterns": [

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    "flags": "i",
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    "match_type": "REGEX",
    "pattern": "alineado con el Plan Nacional de Desarrollo|PND|Colombia Potencia Mundial de
la Vida"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q080-001",
    "match_type": "REGEX",
    "pattern": "contribuye al ODS 16|Paz, Justicia e Instituciones Sólidas"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q080-002",
    "match_type": "REGEX",
    "pattern": "en concordancia con la Política de Seguridad y Defensa Nacional"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q080-003",
    "match_type": "REGEX",
    "pattern": "articulado con el Acuerdo de Paz|Punto 5 sobre Víctimas"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q080-004",
    "match_type": "REGEX",
    "pattern": "eje de Seguridad Humana y Justicia Social"
  }
]

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    }
  ],
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  "question_global": 80,
  "question_id": "Q080",
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  "scoring_modality": "TYPE_A",
  "text": "¿El plan declara la alineación de sus resultados de prevención y protección con
marcos superiores como el PND o los ODS (especialmente el ODS 16)?",
  "validations": {}
},
{
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  "cluster_id": "CL01",
  "dimension_id": "DIM05",
  "expected_elements": [
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      "required": true,
      "type": "impacto_definido"
    },
    {
      "required": true,
      "type": "rezago_temporal"
    },
    {
      "required": true,
      "type": "ruta_transmision"
    }
  ],
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      "incomplete_text"
    ],
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  "method_sets": [
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      "function": "generate_counterfactuals",
      "method_type": "analysis",
      "priority": 1,
      "description": "PDETMunicipalPlanAnalyzer.generate_counterfactuals"
    },
    {
      "class": "PDETMunicipalPlanAnalyzer",
      "function": "_simulate_intervention",
      "method_type": "analysis",
      "priority": 2,
      "description": "PDETMunicipalPlanAnalyzer._simulate_intervention"
    },
    {
      "class": "PDETMunicipalPlanAnalyzer",
      "function": "_generate_scenario_narrative",
      "method_type": "analysis",
      "priority": 3,
      "description": "PDETMunicipalPlanAnalyzer._generate_scenario_narrative"
    },
    {
      "class": "PDETMunicipalPlanAnalyzer",
      "function": "_find_mediator_mentions",
      "method_type": "analysis",
      "priority": 4,
      "description": "PDETMunicipalPlanAnalyzer._find_mediator_mentions"
    },
    {
      "class": "TeoriaCambio",
      "function": "_validar_orden_causal",
      "method_type": "analysis",
      "priority": 5,
      "description": "TeoriaCambio._validar_orden_causal"
    }
  ],

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{
  "class": "CausalExtractor",
  "function": "_assess_temporal_coherence",
  "method_type": "analysis",
  "priority": 6,
  "description": "CausalExtractor._assess_temporal_coherence"
},
{
  "class": "TextMiningEngine",
  "function": "_generate_interventions",
  "method_type": "analysis",
  "priority": 7,
  "description": "TextMiningEngine._generate_interventions"
},
{
  "class": "BayesianCounterfactualAuditor",
  "function": "construct_scm",
  "method_type": "analysis",
  "priority": 8,
  "description": "BayesianCounterfactualAuditor.construct_scm"
}
],
"patterns": [
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    "category": "TERRITORIAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q081-000",
    "match_type": "REGEX",
    "pattern": "impacto esperado|visión de largo plazo|transformación territorial"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q081-001",
    "match_type": "REGEX",
    "pattern": "consolidación de la paz|paz estable y duradera|seguridad humana"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q081-002",
    "match_type": "REGEX",
    "pattern": "restablecimiento del tejido social|reconciliación"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q081-003",
    "match_type": "REGEX",
    "pattern": "la suma de los resultados de seguridad y sociales generará"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q081-004",
    "match_type": "REGEX",
    "pattern": "ruta de transmisión|cadena de impacto"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q081-005",
    "match_type": "REGEX",
    "pattern": "tiempo de maduración|se espera observar en una década|más allá del
cuatrienio"
  },
  {

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    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q081-006",
      "match_type": "REGEX",
      "pattern": "rezago temporal|efectos de largo aliento"
    }
  ],
  "policy_area_id": "PA02",
  "question_global": 81,
  "question_id": "Q081",
  "scoring_definition_ref": "scoring_modalities.TYPE_A",
  "scoring_modality": "TYPE_A",
  "text": "¿El PDM define 'impactos' o 'transformaciones estructurales' de largo plazo (ej. 'consolidación de la paz territorial')? Se debe verificar si se menciona la ruta desde los resultados y el 'tiempo de maduración' esperado.",
  "validations": {}
},
{
  "base_slot": "D5-Q2",
  "cluster_id": "CL01",
  "dimension_id": "DIM05",
  "expected_elements": [
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      "required": true,
      "type": "justifica_validez"
    },
    {
      "required": true,
      "type": "usa_indices_compuestos"
    },
    {
      "required": true,
      "type": "usa_proxies"
    }
  ],
  "failure_contract": {
    "abort_if": [
      "missing_required_element",
      "incomplete_text"
    ],
    "emit_code": "ABORT-Q082-REQ"
  },
  "method_sets": [
    {
      "class": "PDETMunicipalPlanAnalyzer",
      "function": "calculate_quality_score",
      "method_type": "scoring",
      "priority": 1,
      "description": "PDETMunicipalPlanAnalyzer.calculate_quality_score"
    },
    {
      "class": "PDETMunicipalPlanAnalyzer",
      "function": "_estimate_score_confidence",
      "method_type": "scoring",
      "priority": 2,
      "description": "PDETMunicipalPlanAnalyzer._estimate_score_confidence"
    },
    {
      "class": "PDETMunicipalPlanAnalyzer",
      "function": "_compute_e_value",
      "method_type": "analysis",
      "priority": 3,
      "description": "PDETMunicipalPlanAnalyzer._compute_e_value"
    },
    {
      "class": "PDETMunicipalPlanAnalyzer",
      "function": "_compute_robustness_value",
      "method_type": "analysis",
      "priority": 4,
      "description": "PDETMunicipalPlanAnalyzer._compute_robustness_value"
    }
  ]
}

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```

},
{
  "class": "PDETMunicipalPlanAnalyzer",
  "function": "_interpret_sensitivity",
  "method_type": "analysis",
  "priority": 5,
  "description": "PDETMunicipalPlanAnalyzer._interpret_sensitivity"
},
{
  "class": "ReportingEngine",
  "function": "_calculate_quality_score",
  "method_type": "scoring",
  "priority": 6,
  "description": "ReportingEngine._calculate_quality_score"
},
{
  "class": "BayesianMechanismInference",
  "function": "_aggregate_bayesian_confidence",
  "method_type": "analysis",
  "priority": 7,
  "description": "BayesianMechanismInference._aggregate_bayesian_confidence"
},
{
  "class": "PolicyAnalysisEmbedder",
  "function": "evaluate_policy_numerical_consistency",
  "method_type": "analysis",
  "priority": 8,
  "description": "PolicyAnalysisEmbedder.evaluate_policy_numerical_consistency"
},
{
  "class": "PolicyAnalysisEmbedder",
  "function": "get_diagnostics",
  "method_type": "analysis",
  "priority": 9,
  "description": "PolicyAnalysisEmbedder.get_diagnostics"
},
{
  "class": "PolicyAnalysisEmbedder",
  "function": "process_document",
  "method_type": "analysis",
  "priority": 10,
  "description": "PolicyAnalysisEmbedder.process_document"
},
{
  "class": "PolicyAnalysisEmbedder",
  "function": "_generate_query_from_pdq",
  "method_type": "analysis",
  "priority": 11,
  "description": "PolicyAnalysisEmbedder._generate_query_from_pdq"
},
{
  "class": "PolicyAnalysisEmbedder",
  "function": "_filter_by_pdq",
  "method_type": "analysis",
  "priority": 12,
  "description": "PolicyAnalysisEmbedder._filter_by_pdq"
},
{
  "class": "PolicyAnalysisEmbedder",
  "function": "_extract_numerical_values",
  "method_type": "extraction",
  "priority": 13,
  "description": "PolicyAnalysisEmbedder._extract_numerical_values"
},
{
  "class": "PolicyAnalysisEmbedder",
  "function": "_embed_texts",
  "method_type": "analysis",
  "priority": 14,
  "description": "PolicyAnalysisEmbedder._embed_texts"
},
{

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    "class": "PolicyAnalysisEmbedder",
    "function": "_compute_overall_confidence",
    "method_type": "analysis",
    "priority": 15,
    "description": "PolicyAnalysisEmbedder._compute_overall_confidence"
  },
  {
    "class": "FinancialAuditor",
    "function": "_calculate_sufficiency",
    "method_type": "scoring",
    "priority": 16,
    "description": "FinancialAuditor._calculate_sufficiency"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_interpret_overall_quality",
    "method_type": "analysis",
    "priority": 17,
    "description": "PDETMunicipalPlanAnalyzer._interpret_overall_quality"
  },
  {
    "class": "BayesianCounterfactualAuditor",
    "function": "aggregate_risk_and_prioritize",
    "method_type": "analysis",
    "priority": 18,
    "description": "BayesianCounterfactualAuditor.aggregate_risk_and_prioritize"
  },
  {
    "class": "PolicyTextProcessor",
    "function": "normalize_unicode",
    "method_type": "analysis",
    "priority": 19,
    "description": "PolicyTextProcessor.normalize_unicode"
  },
  {
    "class": "PolicyTextProcessor",
    "function": "segment_into_sentences",
    "method_type": "analysis",
    "priority": 20,
    "description": "PolicyTextProcessor.segment_into_sentences"
  },
  {
    "class": "IndustrialPolicyProcessor",
    "function": "_compute_evidence_confidence",
    "method_type": "analysis",
    "priority": 21,
    "description": "IndustrialPolicyProcessor._compute_evidence_confidence"
  },
  {
    "class": "IndustrialPolicyProcessor",
    "function": "_compute_avg_confidence",
    "method_type": "analysis",
    "priority": 22,
    "description": "IndustrialPolicyProcessor._compute_avg_confidence"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_quality_to_dict",
    "method_type": "analysis",
    "priority": 23,
    "description": "PDETMunicipalPlanAnalyzer._quality_to_dict"
  },
  {
    "class": "IndustrialPolicyProcessor",
    "function": "_construct_evidence_bundle",
    "method_type": "analysis",
    "priority": 24,
    "description": "IndustrialPolicyProcessor._construct_evidence_bundle"
  },
  {
    "class": "PolicyTextProcessor",
    "function": "compile_pattern",

```

```

    "method_type": "analysis",
    "priority": 25,
    "description": "PolicyTextProcessor.compile_pattern"
  },
  {
    "class": "PolicyTextProcessor",
    "function": "extract_contextual_window",
    "method_type": "extraction",
    "priority": 26,
    "description": "PolicyTextProcessor.extract_contextual_window"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "generate_executive_report",
    "method_type": "analysis",
    "priority": 27,
    "description": "PDETMunicipalPlanAnalyzer.generate_executive_report"
  },
  {
    "class": "IndustrialPolicyProcessor",
    "function": "export_results",
    "method_type": "analysis",
    "priority": 28,
    "description": "IndustrialPolicyProcessor.export_results"
  }
],
"patterns": [
  {
    "category": "TERRITORIAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q082-000",
    "match_type": "REGEX",
    "pattern": "Índice de Paz Territorial|Índice de Seguridad Humana|Índice de Gobernanza"
  },
  {
    "category": "INDICADOR",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q082-001",
    "match_type": "REGEX",
    "pattern": "indicador compuesto|indicador sintético"
  },
  {
    "category": "INDICADOR",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q082-002",
    "match_type": "REGEX",
    "pattern": "se usará como proxy|indicador aproximado"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q082-003",
    "match_type": "REGEX",
    "pattern": "el retorno de la inversión privada se usará como proxy de la confianza"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q082-004",
    "match_type": "REGEX",
    "pattern": "el número de organizaciones sociales activas como proxy del tejido social"
  },
  {
    "category": "INDICADOR",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q082-005",

```

```

        "match_type": "REGEX",
        "pattern": "este indicador es válido porque refleja|captura la percepción de
estabilidad"
    },
    ],
    "policy_area_id": "PA02",
    "question_global": 82,
    "question_id": "Q082",
    "scoring_definition_ref": "scoring_modalities.TYPE_A",
    "scoring_modality": "TYPE_A",
    "text": "¿Se utilizan 'índices' (ej. Índice de Seguridad Humana) o 'proxies' (ej. inversión
privada en la zona) para medir los impactos en la estabilización, justificando su validez?",
    "validations": {}
},
{
    "base_slot": "D5-Q3",
    "cluster_id": "CL01",
    "dimension_id": "DIM05",
    "expected_elements": [
        {
            "required": true,
            "type": "documenta_validez"
        },
        {
            "required": true,
            "type": "proxy_para_intangibles"
        },
        {
            "required": true,
            "type": "reconoce_limitaciones"
        }
    ],
    "failure_contract": {
        "abort_if": [
            "missing_required_element",
            "incomplete_text"
        ],
        "emit_code": "ABORT-Q083-REQ"
    },
    "method_sets": [
        {
            "class": "CausalExtractor",
            "function": "_calculate_semantic_distance",
            "method_type": "scoring",
            "priority": 1,
            "description": "CausalExtractor._calculate_semantic_distance"
        },
        {
            "class": "SemanticAnalyzer",
            "function": "extract_semantic_cube",
            "method_type": "extraction",
            "priority": 2,
            "description": "SemanticAnalyzer.extract_semantic_cube"
        },
        {
            "class": "BayesianMechanismInference",
            "function": "_quantify_uncertainty",
            "method_type": "analysis",
            "priority": 3,
            "description": "BayesianMechanismInference._quantify_uncertainty"
        },
        {
            "class": "PDETMunicipalPlanAnalyzer",
            "function": "_find_mediator_mentions",
            "method_type": "analysis",
            "priority": 4,
            "description": "PDETMunicipalPlanAnalyzer._find_mediator_mentions"
        },
        {
            "class": "PolicyAnalysisEmbedder",
            "function": "get_diagnostics",
            "method_type": "analysis",

```

```

    "priority": 5,
    "description": "PolicyAnalysisEmbedder.get_diagnostics"
  },
  {
    "class": "AdaptivePriorCalculator",
    "function": "_perturb_evidence",
    "method_type": "analysis",
    "priority": 6,
    "description": "AdaptivePriorCalculator._perturb_evidence"
  }
],
"patterns": [
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q083-000",
    "match_type": "REGEX",
    "pattern": "dado que es difícil medir la reconciliación|para aproximar la medición de"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q083-001",
    "match_type": "REGEX",
    "pattern": "se utilizará como proxy|medición indirecta"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q083-002",
    "match_type": "REGEX",
    "pattern": "encuestas de confianza interpersonal|participación en eventos comunitarios"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q083-003",
    "match_type": "REGEX",
    "pattern": "este proxy es validado por estudios de paz|evidencia internacional"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q083-004",
    "match_type": "LITERAL",
    "pattern": "una limitación es que no captura las tensiones latentes"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q083-005",
    "match_type": "REGEX",
    "pattern": "aunque imperfecto, este proxy nos da una señal de"
  }
],
"policy_area_id": "PA02",
"question_global": 83,
"question_id": "Q083",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "Cuando un impacto en la paz es difícil de medir (ej. 'restablecimiento del tejido social'), ¿se recurre a un 'proxy'? Se valora si el texto documenta su 'validez' y reconoce sus 'limitaciones'.",
"validations": {}
},
{

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```

"base_slot": "D5-Q4",
"cluster_id": "CL01",
"dimension_id": "DIM05",
"expected_elements": [
  {
    "required": true,
    "type": "alineacion_marcos"
  },
  {
    "required": true,
    "type": "riesgos_sistemicos"
  }
],
"failure_contract": {
  "abort_if": [
    "missing_required_element",
    "incomplete_text"
  ],
  "emit_code": "ABORT-Q084-REQ"
},
"method_sets": [
  {
    "class": "OperationalizationAuditor",
    "function": "_audit_systemic_risk",
    "method_type": "validation",
    "priority": 1,
    "description": "OperationalizationAuditor._audit_systemic_risk"
  },
  {
    "class": "BayesianCounterfactualAuditor",
    "function": "refutation_and_sanity_checks",
    "method_type": "analysis",
    "priority": 2,
    "description": "BayesianCounterfactualAuditor.refutation_and_sanity_checks"
  },
  {
    "class": "BayesianCounterfactualAuditor",
    "function": "_test_effect_stability",
    "method_type": "analysis",
    "priority": 3,
    "description": "BayesianCounterfactualAuditor._test_effect_stability"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_interpret_risk",
    "method_type": "analysis",
    "priority": 4,
    "description": "PDETMunicipalPlanAnalyzer._interpret_risk"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_interpret_sensitivity",
    "method_type": "analysis",
    "priority": 5,
    "description": "PDETMunicipalPlanAnalyzer._interpret_sensitivity"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_break_cycles",
    "method_type": "analysis",
    "priority": 6,
    "description": "PDETMunicipalPlanAnalyzer._break_cycles"
  },
  {
    "class": "AdaptivePriorCalculator",
    "function": "sensitivity_analysis",
    "method_type": "analysis",
    "priority": 7,
    "description": "AdaptivePriorCalculator.sensitivity_analysis"
  }
],
"patterns": [

```



```

{
  "category": "GENERAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q084-000",
  "match_type": "REGEX",
  "pattern": "visión de Paz Total|Acuerdo de Paz a largo plazo"
},
{
  "category": "GENERAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q084-001",
  "match_type": "LITERAL",
  "pattern": "riesgo sistémico|choque externo"
},
{
  "category": "GENERAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q084-002",
  "match_type": "REGEX",
  "pattern": "resurgimiento de actores armados|reconfiguración del conflicto"
},
{
  "category": "GENERAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q084-003",
  "match_type": "LITERAL",
  "pattern": "crisis económica que incentive economías ilegales"
},
{
  "category": "GENERAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q084-004",
  "match_type": "REGEX",
  "pattern": "estos factores podrían revertir los avances en seguridad"
},
{
  "category": "GENERAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q084-005",
  "match_type": "LITERAL",
  "pattern": "el mecanismo causal es vulnerable a|sensible a cambios en el contexto
nacional"
},
{
  "category": "GENERAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q084-006",
  "match_type": "REGEX",
  "pattern": "estrategias de resiliencia comunitaria|plan de adaptación"
}
],
"policy_area_id": "PA02",
"question_global": 84,
"question_id": "Q084",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿Los impactos en la paz se alinean con marcos nacionales/globales y consideran
'riesgos sistémicos' (ej. resurgimiento de actores armados) que podrían romper el mecanismo
causal?",
"validations": {}
},
{
  "base_slot": "D5-Q5",
  "cluster_id": "CL01",
  "dimension_id": "DIM05",

```

```

"expected_elements": [
  {
    "required": true,
    "type": "analisis_realismo"
  },
  {
    "required": true,
    "type": "efectos_no_deseados"
  },
  {
    "required": true,
    "type": "hipotesis_limite"
  }
],
"failure_contract": {
  "abort_if": [
    "missing_required_element",
    "incomplete_text"
  ],
  "emit_code": "ABORT-Q085-REQ"
},
"method_sets": [
  {
    "class": "HierarchicalGenerativeModel",
    "function": "posterior_predictive_check",
    "method_type": "analysis",
    "priority": 1,
    "description": "HierarchicalGenerativeModel.posterior_predictive_check"
  },
  {
    "class": "HierarchicalGenerativeModel",
    "function": "_ablation_analysis",
    "method_type": "analysis",
    "priority": 2,
    "description": "HierarchicalGenerativeModel._ablation_analysis"
  },
  {
    "class": "HierarchicalGenerativeModel",
    "function": "_calculate_waic_difference",
    "method_type": "scoring",
    "priority": 3,
    "description": "HierarchicalGenerativeModel._calculate_waic_difference"
  },
  {
    "class": "AdaptivePriorCalculator",
    "function": "_add_ood_noise",
    "method_type": "analysis",
    "priority": 4,
    "description": "AdaptivePriorCalculator._add_ood_noise"
  },
  {
    "class": "AdaptivePriorCalculator",
    "function": "validate_quality_criteria",
    "method_type": "validation",
    "priority": 5,
    "description": "AdaptivePriorCalculator.validate_quality_criteria"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_compute_e_value",
    "method_type": "analysis",
    "priority": 6,
    "description": "PDETMunicipalPlanAnalyzer._compute_e_value"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_compute_robustness_value",
    "method_type": "analysis",
    "priority": 7,
    "description": "PDETMunicipalPlanAnalyzer._compute_robustness_value"
  },
  {

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        "class": "BayesianMechanismInference",
        "function": "_calculate_coherence_factor",
        "method_type": "scoring",
        "priority": 8,
        "description": "BayesianMechanismInference._calculate_coherence_factor"
    }
],
"patterns": [
    {
        "category": "GENERAL",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q085-000",
        "match_type": "REGEX",
        "pattern": "la ambición del impacto es realista si se mantiene el compromiso del nivel
nacional"
    },
    {
        "category": "GENERAL",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q085-001",
        "match_type": "REGEX",
        "pattern": "efecto no deseado|consecuencia imprevista|externalidad negativa"
    },
    {
        "category": "GENERAL",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q085-002",
        "match_type": "REGEX",
        "pattern": "riesgo de estigmatizar a ciertas comunidades|efecto globo"
    },
    {
        "category": "GENERAL",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q085-003",
        "match_type": "REGEX",
        "pattern": "posible reacomodo de actores armados en zonas intervenidas"
    },
    {
        "category": "GENERAL",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q085-004",
        "match_type": "REGEX",
        "pattern": "trade-off entre seguridad y derechos humanos"
    },
    {
        "category": "GENERAL",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q085-005",
        "match_type": "REGEX",
        "pattern": "hipótesis límite|el modelo funciona mientras no haya una ruptura de diálogos
de paz"
    },
    {
        "category": "GENERAL",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q085-006",
        "match_type": "LITERAL",
        "pattern": "supuesto crítico para el impacto"
    }
],
"policy_area_id": "PA02",
"question_global": 85,
"question_id": "Q085",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",

```

"text": "¿La ambición del impacto (ej. 'erradicación total de la violencia') es realista? Se debe buscar si se analizan 'efectos no deseados' (ej. estigmatización) o se declaran 'hipótesis límite'.",

"validations": {}

},

{

"base\_slot": "D6-Q1",

"cluster\_id": "CL01",

"dimension\_id": "DIM06",

"expected\_elements": [

{

"required": true,

"type": "diagrama\_causal"

},

{

"required": true,

"type": "supuestos\_verificables"

},

{

"required": true,

"type": "teoria\_cambio\_explicita"

}

],

"failure\_contract": {

"abort\_if": [

"missing\_required\_element",

"incomplete\_text"

],

"emit\_code": "ABORT-Q086-REQ"

},

"method\_sets": [

{

"class": "TeoriaCambio",

"function": "construir\_grafo\_causal",

"method\_type": "analysis",

"priority": 1,

"description": "TeoriaCambio.construir\_grafo\_causal"

},

{

"class": "TeoriaCambio",

"function": "validacion\_completa",

"method\_type": "analysis",

"priority": 2,

"description": "TeoriaCambio.validacion\_completa"

},

{

"class": "TeoriaCambio",

"function": "export\_nodes",

"method\_type": "analysis",

"priority": 3,

"description": "TeoriaCambio.export\_nodes"

},

{

"class": "ReportingEngine",

"function": "generate\_causal\_diagram",

"method\_type": "analysis",

"priority": 4,

"description": "ReportingEngine.generate\_causal\_diagram"

},

{

"class": "ReportingEngine",

"function": "generate\_causal\_model\_json",

"method\_type": "analysis",

"priority": 5,

"description": "ReportingEngine.generate\_causal\_model\_json"

},

{

"class": "AdvancedDAGValidator",

"function": "export\_nodes",

"method\_type": "analysis",

"priority": 6,

"description": "AdvancedDAGValidator.export\_nodes"

```

    },
    {
      "class": "PDETMunicipalPlanAnalyzer",
      "function": "export_causal_network",
      "method_type": "analysis",
      "priority": 7,
      "description": "PDETMunicipalPlanAnalyzer.export_causal_network"
    },
    {
      "class": "CausalExtractor",
      "function": "extract_causal_hierarchy",
      "method_type": "extraction",
      "priority": 8,
      "description": "CausalExtractor.extract_causal_hierarchy"
    }
  ],
  "patterns": [
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q086-000",
      "match_type": "REGEX",
      "pattern": "teoría de cambio|marco lógico|cadena causal|modelo lógico de seguridad"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q086-001",
      "match_type": "REGEX",
      "pattern": "diagrama causal|gráfico de la teoría|esquema de intervención|figura"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q086-002",
      "match_type": "REGEX",
      "pattern": "causa raíz del conflicto|determinante estructural de la violencia"
    },
    {
      "category": "TERRITORIAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q086-003",
      "match_type": "REGEX",
      "pattern": "mediador|variable intermedia|eslabón|control territorial|confianza
institucional"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q086-004",
      "match_type": "REGEX",
      "pattern": "moderador|factor contextual"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q086-005",
      "match_type": "LITERAL",
      "pattern": "supuesto verificable|hipótesis a testear|premisa comprobable"
    }
  ],
  "policy_area_id": "PA02",
  "question_global": 86,
  "question_id": "Q086",
  "scoring_definition_ref": "scoring_modalities.TYPE_A",
  "scoring_modality": "TYPE_A",

```

"text": "¿Existe una 'teoría de cambio' explícita para la prevención de la violencia, preferiblemente en un 'diagrama', que identifique causas, mediadores (ej. control territorial) y 'supuestos verificables'?",

```
"validations": {}
},
{
  "base_slot": "D6-Q2",
  "cluster_id": "CL01",
  "dimension_id": "DIM06",
  "expected_elements": [
    {
      "required": true,
      "type": "evita_saltos_logicos"
    },
    {
      "required": true,
      "type": "proporcionalidad_eslabones"
    }
  ],
  "failure_contract": {
    "abort_if": [
      "missing_required_element",
      "incomplete_text"
    ],
    "emit_code": "ABORT-Q087-REQ"
  },
  "method_sets": [
    {
      "class": "BeachEvidentialTest",
      "function": "apply_test_logic",
      "method_type": "analysis",
      "priority": 1,
      "description": "BeachEvidentialTest.apply_test_logic"
    },
    {
      "class": "BayesianMechanismInference",
      "function": "_test_necessity",
      "method_type": "analysis",
      "priority": 2,
      "description": "BayesianMechanismInference._test_necessity"
    },
    {
      "class": "BayesianMechanismInference",
      "function": "_test_sufficiency",
      "method_type": "analysis",
      "priority": 3,
      "description": "BayesianMechanismInference._test_sufficiency"
    },
    {
      "class": "BayesianMechanismInference",
      "function": "_calculate_coherence_factor",
      "method_type": "scoring",
      "priority": 4,
      "description": "BayesianMechanismInference._calculate_coherence_factor"
    },
    {
      "class": "BayesianCounterfactualAuditor",
      "function": "_test_effect_stability",
      "method_type": "analysis",
      "priority": 5,
      "description": "BayesianCounterfactualAuditor._test_effect_stability"
    },
    {
      "class": "IndustrialGradeValidator",
      "function": "validate_connection_matrix",
      "method_type": "validation",
      "priority": 6,
      "description": "IndustrialGradeValidator.validate_connection_matrix"
    },
    {
      "class": "PolicyAnalysisEmbedder",
      "function": "_compute_overall_confidence",
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```

    "method_type": "analysis",
    "priority": 7,
    "description": "PolicyAnalysisEmbedder._compute_overall_confidence"
  }
],
"patterns": [
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q087-000",
    "match_type": "REGEX",
    "pattern": "proporcionalidad entre|magnitud del efecto esperado"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q087-001",
    "match_type": "REGEX",
    "pattern": "salto lógico|brecha en la argumentación|milagro de implementación"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q087-002",
    "match_type": "LITERAL",
    "pattern": "es realista esperar que|es factible que"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q087-003",
    "match_type": "REGEX",
    "pattern": "la escala de la intervención es coherente con la ambición del resultado"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q087-004",
    "match_type": "REGEX",
    "pattern": "se requieren pasos intermedios|el resultado es de mayor alcance que el
producto"
  }
],
"policy_area_id": "PA02",
"question_global": 87,
"question_id": "Q087",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿Los saltos en la cadena causal de la seguridad son proporcionales (ej. la
instalación de 10 cámaras no garantiza una reducción del 50% en homicidios)?",
"validations": {}
},
{
  "base_slot": "D6-Q3",
  "cluster_id": "CL01",
  "dimension_id": "DIM06",
  "expected_elements": [
    {
      "required": true,
      "type": "propone_pilotos_o_pruebas"
    },
    {
      "required": true,
      "type": "reconoce_inconsistencias"
    }
  ]
},
"failure_contract": {

```

```

"abort_if": [
  "missing_required_element",
  "incomplete_text"
],
"emit_code": "ABORT-Q088-REQ"
},
"method_sets": [
  {
    "class": "IndustrialGradeValidator",
    "function": "execute_suite",
    "method_type": "analysis",
    "priority": 1,
    "description": "IndustrialGradeValidator.execute_suite"
  },
  {
    "class": "IndustrialGradeValidator",
    "function": "validate_engine_readiness",
    "method_type": "validation",
    "priority": 2,
    "description": "IndustrialGradeValidator.validate_engine_readiness"
  },
  {
    "class": "IndustrialGradeValidator",
    "function": "_benchmark_operation",
    "method_type": "analysis",
    "priority": 3,
    "description": "IndustrialGradeValidator._benchmark_operation"
  },
  {
    "class": "AdaptivePriorCalculator",
    "function": "validate_quality_criteria",
    "method_type": "validation",
    "priority": 4,
    "description": "AdaptivePriorCalculator.validate_quality_criteria"
  },
  {
    "class": "HierarchicalGenerativeModel",
    "function": "_calculate_r_hat",
    "method_type": "scoring",
    "priority": 5,
    "description": "HierarchicalGenerativeModel._calculate_r_hat"
  },
  {
    "class": "HierarchicalGenerativeModel",
    "function": "_calculate_ess",
    "method_type": "scoring",
    "priority": 6,
    "description": "HierarchicalGenerativeModel._calculate_ess"
  },
  {
    "class": "AdvancedDAGValidator",
    "function": "calculate_acyclicity_pvalue",
    "method_type": "scoring",
    "priority": 7,
    "description": "AdvancedDAGValidator.calculate_acyclicity_pvalue"
  },
  {
    "class": "PerformanceAnalyzer",
    "function": "analyze_performance",
    "method_type": "analysis",
    "priority": 8,
    "description": "PerformanceAnalyzer.analyze_performance"
  }
],
"patterns": [
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q088-000",
    "match_type": "REGEX",
    "pattern": "inconsistencia|debilidad en la teoría|supuesto débil"
  }
]

```



```

    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q088-001",
      "match_type": "REGEX",
      "pattern": "se requiere validar|es necesario probar si la estrategia funciona"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q088-002",
      "match_type": "REGEX",
      "pattern": "plan piloto en una vereda|fase experimental|prueba de concepto"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q088-003",
      "match_type": "REGEX",
      "pattern": "testear el supuesto de la colaboración ciudadana"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q088-004",
      "match_type": "REGEX",
      "pattern": "validar la hipótesis de disuasión"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q088-005",
      "match_type": "REGEX",
      "pattern": "evaluación de mecanismos|monitoreo de la teoría de cambio"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q088-006",
      "match_type": "REGEX",
      "pattern": "aprendizaje adaptativo|gestión adaptativa de la seguridad"
    }
  ],
  "policy_area_id": "PA02",
  "question_global": 88,
  "question_id": "Q088",
  "scoring_definition_ref": "scoring_modalities.TYPE_A",
  "scoring_modality": "TYPE_A",
  "text": "¿El plan reconoce 'inconsistencias' en su lógica de seguridad y propone 'pilotos' o 'pruebas' para 'testear los supuestos' de sus intervenciones?",
  "validations": {}
},
{
  "base_slot": "D6-Q4",
  "cluster_id": "CL01",
  "dimension_id": "DIM06",
  "expected_elements": [
    {
      "required": true,
      "type": "ciclos_aprendizaje"
    },
    {
      "required": true,
      "type": "mecanismos_correccion"
    }
  ],

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    {
      "required": true,
      "type": "sistema_monitoreo"
    }
  ],
  "failure_contract": {
    "abort_if": [
      "missing_required_element",
      "incomplete_text"
    ],
    "emit_code": "ABORT-Q089-REQ"
  },
  "method_sets": [
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      "class": "ConfigLoader",
      "function": "update_priors_from_feedback",
      "method_type": "analysis",
      "priority": 1,
      "description": "ConfigLoader.update_priors_from_feedback"
    },
    {
      "class": "ConfigLoader",
      "function": "check_uncertainty_reduction_criterion",
      "method_type": "analysis",
      "priority": 2,
      "description": "ConfigLoader.check_uncertainty_reduction_criterion"
    },
    {
      "class": "ConfigLoader",
      "function": "_save_prior_history",
      "method_type": "analysis",
      "priority": 3,
      "description": "ConfigLoader._save_prior_history"
    },
    {
      "class": "ConfigLoader",
      "function": "_load_uncertainty_history",
      "method_type": "analysis",
      "priority": 4,
      "description": "ConfigLoader._load_uncertainty_history"
    },
    {
      "class": "CDAFFramework",
      "function": "_extract_feedback_from_audit",
      "method_type": "validation",
      "priority": 5,
      "description": "CDAFFramework._extract_feedback_from_audit"
    },
    {
      "class": "AdvancedDAGValidator",
      "function": "_calculate_node_importance",
      "method_type": "scoring",
      "priority": 6,
      "description": "AdvancedDAGValidator._calculate_node_importance"
    },
    {
      "class": "BayesFactorTable",
      "function": "get_bayes_factor",
      "method_type": "analysis",
      "priority": 7,
      "description": "BayesFactorTable.get_bayes_factor"
    }
  ],
  "patterns": [
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q089-000",
      "match_type": "REGEX",
      "pattern": "sistema de seguimiento y evaluación|M&E de seguridad"
    },
  ],

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{
  "category": "GENERAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q089-001",
  "match_type": "REGEX",
  "pattern": "monitoreo en tiempo real|sala de crisis|PMU"
},
{
  "category": "INDICADOR",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q089-002",
  "match_type": "REGEX",
  "pattern": "alerta temprana|indicadores de alerta|semáforo de seguridad"
},
{
  "category": "GENERAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q089-003",
  "match_type": "REGEX",
  "pattern": "mecanismo de ajuste|medida correctiva|reorientación de la estrategia"
},
{
  "category": "GENERAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q089-004",
  "match_type": "REGEX",
  "pattern": "retroalimentación desde la comunidad|Consejos de Seguridad periódicos"
},
{
  "category": "GENERAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q089-005",
  "match_type": "REGEX",
  "pattern": "ciclos de aprendizaje|reuniones de revisión estratégica"
},
{
  "category": "GENERAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q089-006",
  "match_type": "REGEX",
  "pattern": "lecciones aprendidas|gestión del conocimiento en seguridad"
}
],
"policy_area_id": "PA02",
"question_global": 89,
"question_id": "Q089",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿Se describe un sistema de monitoreo para la seguridad que incluya 'mecanismos de corrección' o 'aprendizaje' para adaptar la estrategia policial o de prevención?",
"validations": {}
},
{
  "base_slot": "D6-Q5",
  "cluster_id": "CL01",
  "dimension_id": "DIM06",
  "expected_elements": [
    {
      "required": true,
      "type": "analisis_contextual"
    },
    {
      "required": true,
      "type": "enfoque_diferencial"
    }
  ]
},
],

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"failure_contract": {
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    "missing_required_element",
    "incomplete_text"
  ],
  "emit_code": "ABORT-Q090-REQ"
},
"method_sets": [
  {
    "class": "CausalExtractor",
    "function": "_calculate_language_specificity",
    "method_type": "scoring",
    "priority": 1,
    "description": "CausalExtractor._calculate_language_specificity"
  },
  {
    "class": "CausalExtractor",
    "function": "_assess_temporal_coherence",
    "method_type": "analysis",
    "priority": 2,
    "description": "CausalExtractor._assess_temporal_coherence"
  },
  {
    "class": "TextMiningEngine",
    "function": "diagnose_critical_links",
    "method_type": "analysis",
    "priority": 3,
    "description": "TextMiningEngine.diagnose_critical_links"
  },
  {
    "class": "CausalInferenceSetup",
    "function": "identify_failure_points",
    "method_type": "analysis",
    "priority": 4,
    "description": "CausalInferenceSetup.identify_failure_points"
  },
  {
    "class": "CausalInferenceSetup",
    "function": "_get_dynamics_pattern",
    "method_type": "analysis",
    "priority": 5,
    "description": "CausalInferenceSetup._get_dynamics_pattern"
  },
  {
    "class": "SemanticProcessor",
    "function": "chunk_text",
    "method_type": "analysis",
    "priority": 6,
    "description": "SemanticProcessor.chunk_text"
  },
  {
    "class": "SemanticProcessor",
    "function": "_detect_pdm_structure",
    "method_type": "analysis",
    "priority": 7,
    "description": "SemanticProcessor._detect_pdm_structure"
  },
  {
    "class": "SemanticProcessor",
    "function": "_detect_table",
    "method_type": "analysis",
    "priority": 8,
    "description": "SemanticProcessor._detect_table"
  },
  {
    "class": "AdaptivePriorCalculator",
    "function": "generate_traceability_record",
    "method_type": "analysis",
    "priority": 9,
    "description": "AdaptivePriorCalculator.generate_traceability_record"
  }
],

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"patterns": [
  {
    "category": "TERRITORIAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q090-000",
    "match_type": "REGEX",
    "pattern": "enfoco diferencial|enfoco territorial"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q090-001",
    "match_type": "REGEX",
    "pattern": "jóvenes en riesgo de reclutamiento|NNA"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q090-002",
    "match_type": "REGEX",
    "pattern": "líderes sociales|firmantes del acuerdo de paz|población en reincorporación"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q090-003",
    "match_type": "REGEX",
    "pattern": "comunidades étnicas|guardia indígena"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q090-004",
    "match_type": "REGEX",
    "pattern": "restricciones de acceso geográfico|zonas de difícil acceso"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q090-005",
    "match_type": "REGEX",
    "pattern": "corredores estratégicos para grupos armados"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q090-006",
    "match_type": "REGEX",
    "pattern": "contexto de frontera|cultura de la ilegalidad"
  },
  {
    "category": "TERRITORIAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q090-007",
    "match_type": "REGEX",
    "pattern": "estrategias territorializadas|acciones adaptadas a la vereda"
  }
],
"policy_area_id": "PA02",
"question_global": 90,
"question_id": "Q090",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿La lógica causal para la prevención de la violencia considera el contexto,

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reconociendo 'grupos afectados' (ej. jóvenes, firmantes de paz) y 'restricciones' territoriales o de acceso?",

```
"validations": {}
},
{
  "base_slot": "D1-Q1",
  "cluster_id": "CL01",
  "dimension_id": "DIM01",
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      "minimum": 2,
      "type": "fuentes_oficiales"
    },
    {
      "minimum": 3,
      "type": "indicadores_cuantitativos"
    },
    {
      "minimum": 3,
      "type": "series_temporales_años"
    }
  ],
  "failure_contract": {
    "abort_if": [
      "missing_required_element",
      "incomplete_text"
    ],
    "emit_code": "ABORT-Q091-REQ"
  },
  "method_sets": [
    {
      "class": "TextMiningEngine",
      "function": "diagnose_critical_links",
      "method_type": "analysis",
      "priority": 1,
      "description": "TextMiningEngine.diagnose_critical_links"
    },
    {
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      "function": "_analyze_link_text",
      "method_type": "analysis",
      "priority": 2,
      "description": "TextMiningEngine._analyze_link_text"
    },
    {
      "class": "IndustrialPolicyProcessor",
      "function": "process",
      "method_type": "analysis",
      "priority": 3,
      "description": "IndustrialPolicyProcessor.process"
    },
    {
      "class": "IndustrialPolicyProcessor",
      "function": "_match_patterns_in_sentences",
      "method_type": "analysis",
      "priority": 4,
      "description": "IndustrialPolicyProcessor._match_patterns_in_sentences"
    },
    {
      "class": "IndustrialPolicyProcessor",
      "function": "_extract_point_evidence",
      "method_type": "extraction",
      "priority": 5,
      "description": "IndustrialPolicyProcessor._extract_point_evidence"
    },
    {
      "class": "CausalExtractor",
      "function": "_extract_goals",
      "method_type": "extraction",
      "priority": 6,
      "description": "CausalExtractor._extract_goals"
    }
  ],
}
```

```

{
  "class": "CausalExtractor",
  "function": "_parse_goal_context",
  "method_type": "extraction",
  "priority": 7,
  "description": "CausalExtractor._parse_goal_context"
},
{
  "class": "FinancialAuditor",
  "function": "_parse_amount",
  "method_type": "extraction",
  "priority": 8,
  "description": "FinancialAuditor._parse_amount"
},
{
  "class": "PDETMunicipalPlanAnalyzer",
  "function": "_extract_financial_amounts",
  "method_type": "extraction",
  "priority": 9,
  "description": "PDETMunicipalPlanAnalyzer._extract_financial_amounts"
},
{
  "class": "PDETMunicipalPlanAnalyzer",
  "function": "_extract_from_budget_table",
  "method_type": "extraction",
  "priority": 10,
  "description": "PDETMunicipalPlanAnalyzer._extract_from_budget_table"
},
{
  "class": "PolicyContradictionDetector",
  "function": "_extract_quantitative_claims",
  "method_type": "extraction",
  "priority": 11,
  "description": "PolicyContradictionDetector._extract_quantitative_claims"
},
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  "class": "PolicyContradictionDetector",
  "function": "_parse_number",
  "method_type": "extraction",
  "priority": 12,
  "description": "PolicyContradictionDetector._parse_number"
},
{
  "class": "PolicyContradictionDetector",
  "function": "_statistical_significance_test",
  "method_type": "analysis",
  "priority": 13,
  "description": "PolicyContradictionDetector._statistical_significance_test"
},
{
  "class": "BayesianNumericalAnalyzer",
  "function": "evaluate_policy_metric",
  "method_type": "analysis",
  "priority": 14,
  "description": "BayesianNumericalAnalyzer.evaluate_policy_metric"
},
{
  "class": "BayesianNumericalAnalyzer",
  "function": "compare_policies",
  "method_type": "analysis",
  "priority": 15,
  "description": "BayesianNumericalAnalyzer.compare_policies"
},
{
  "class": "SemanticProcessor",
  "function": "chunk_text",
  "method_type": "analysis",
  "priority": 16,
  "description": "SemanticProcessor.chunk_text"
},
{
  "class": "SemanticProcessor",

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    "function": "embed_single",
    "method_type": "analysis",
    "priority": 17,
    "description": "SemanticProcessor.embed_single"
  }
],
"patterns": [
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q091-000",
    "match_type": "REGEX",
    "pattern": "línea base ambiental|diagnóstico de riesgo|situación inicial"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q091-001",
    "match_type": "REGEX",
    "pattern": "fuente:|según|reporte de|con datos de"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q091-002",
    "match_type": "LITERAL",
    "pattern": "IDEAM|CAR|MinAmbiente|SINA|Parques Nacionales Naturales|PNN"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q091-003",
    "match_type": "LITERAL",
    "pattern": "UNGRD|Servicio Geológico Colombiano|SGC|CMGRD"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q091-004",
    "match_type": "REGEX",
    "pattern": "SUI|SSPD|SIVICAP|Secretaría de Salud"
  },
  {
    "category": "INDICADOR",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q091-005",
    "match_type": "REGEX",
    "pattern": "tasa de deforestación|hectáreas deforestadas|Ha/año"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q091-006",
    "match_type": "REGEX",
    "pattern": "Índice de Riesgo de Calidad del Agua|IRCA"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q091-007",
    "match_type": "REGEX",
    "pattern": "Índice de Calidad del Aire|ICA|PM2.5"
  },
  {

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    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q091-008",
    "match_type": "REGEX",
    "pattern": "toneladas de residuos sólidos generadas|aprovechamiento de residuos"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q091-009",
    "match_type": "REGEX",
    "pattern": "familias en zona de amenaza alta|población expuesta a riesgo"
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  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q091-010",
    "match_type": "REGEX",
    "pattern": "caudal|oferta hídrica|Índice de Uso del Agua|IUA"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q091-011",
    "match_type": "LITERAL",
    "pattern": "2021|2022|2023|vigencia anterior|serie histórica"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q091-012",
    "match_type": "REGEX",
    "pattern": "mapa de riesgo|zonificación de amenazas"
  }
],
"policy_area_id": "PA03",
"question_global": 91,
"question_id": "Q091",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿El diagnóstico presenta datos numéricos (hectáreas deforestadas, nivel de IRCA, familias en riesgo) para el área de Ambiente sano, cambio climático y gestión de desastres que sirvan como línea base? Se debe verificar el año y fuentes (ej. IDEAM, CAR, CMGRD).",
"validations": {
  "buscar_indicadores_cuantitativos": {
    "minimum_required": 3,
    "patterns": [
      "\\d+%",
      "\\d+\\s*por\\s*\\d+",
      "tasa de",
      "índice de",
      "cobertura de"
    ],
    "specificity": "HIGH"
  },
  "cobertura": {
    "minimum_required": 1,
    "patterns": [
      "departamental",
      "municipal",
      "urbano",
      "rural",
      "territorial",
      "poblacional"
    ],
    "specificity": "HIGH"
  }
},

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"series_temporales": {
  "minimum_years": 3,
  "patterns": [
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    "año",
    "periodo",
    "histórico",
    "serie"
  ],
  "specificity": "MEDIUM"
},
"unidades_medicion": {
  "minimum_required": 2,
  "patterns": [
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    "por 1.000",
    "%",
    "porcentaje",
    "tasa",
    "razón"
  ],
  "specificity": "MEDIUM"
},
"verificar_fuentes": {
  "minimum_required": 2,
  "patterns": [
    "fuente:",
    "según",
    "datos de",
    "DANE",
    "DNP",
    "SISPRO",
    "SIVIGILA",
    "Ministerio"
  ],
  "specificity": "MEDIUM"
}
},
{
  "base_slot": "D1-Q2",
  "cluster_id": "CL01",
  "dimension_id": "DIM01",
  "expected_elements": [
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      "required": true,
      "type": "analisis_vulnerabilidad"
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      "type": "cuantificacion_magnitud"
    },
    {
      "required": true,
      "type": "vacios_explicitos"
    }
  ],
  "failure_contract": {
    "abort_if": [
      "missing_required_element",
      "incomplete_text"
    ],
    "emit_code": "ABORT-Q092-REQ"
  },
  "method_sets": [
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      "function": "_audit_direct_evidence",
      "method_type": "validation",
      "priority": 1,
      "description": "OperationalizationAuditor._audit_direct_evidence"
    },

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{
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  "method_type": "validation",
  "priority": 2,
  "description": "OperationalizationAuditor._audit_systemic_risk"
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  "function": "_detect_allocation_gaps",
  "method_type": "analysis",
  "priority": 3,
  "description": "FinancialAuditor._detect_allocation_gaps"
},
{
  "class": "BayesianMechanismInference",
  "function": "_detect_gaps",
  "method_type": "analysis",
  "priority": 4,
  "description": "BayesianMechanismInference._detect_gaps"
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{
  "class": "PDETMunicipalPlanAnalyzer",
  "function": "_generate_optimal_remediations",
  "method_type": "analysis",
  "priority": 5,
  "description": "PDETMunicipalPlanAnalyzer._generate_optimal_remediations"
},
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  "class": "PDETMunicipalPlanAnalyzer",
  "function": "_simulate_intervention",
  "method_type": "analysis",
  "priority": 6,
  "description": "PDETMunicipalPlanAnalyzer._simulate_intervention"
},
{
  "class": "BayesianCounterfactualAuditor",
  "function": "counterfactual_query",
  "method_type": "analysis",
  "priority": 7,
  "description": "BayesianCounterfactualAuditor.counterfactual_query"
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  "class": "BayesianCounterfactualAuditor",
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  "method_type": "analysis",
  "priority": 8,
  "description": "BayesianCounterfactualAuditor._test_effect_stability"
},
{
  "class": "PolicyContradictionDetector",
  "function": "_detect_numerical_inconsistencies",
  "method_type": "analysis",
  "priority": 9,
  "description": "PolicyContradictionDetector._detect_numerical_inconsistencies"
},
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  "function": "_calculate_numerical_divergence",
  "method_type": "scoring",
  "priority": 10,
  "description": "PolicyContradictionDetector._calculate_numerical_divergence"
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  "function": "calculate_posterior",
  "method_type": "scoring",
  "priority": 11,
  "description": "BayesianConfidenceCalculator.calculate_posterior"
},
{
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    "function": "analyze_performance",
    "method_type": "analysis",
    "priority": 12,
    "description": "PerformanceAnalyzer.analyze_performance"
  }
],
"patterns": [
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    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q092-000",
    "match_type": "REGEX",
    "pattern": "déficit de conservación|presión sobre el ecosistema"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q092-001",
    "match_type": "LITERAL",
    "pattern": "población expuesta a amenaza|familias en alto riesgo no mitigable"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q092-002",
    "match_type": "REGEX",
    "pattern": "el municipio presenta una vulnerabilidad alta ante|escenario de riesgo"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q092-003",
    "match_type": "REGEX",
    "pattern": "aumento de la temperatura|variabilidad climática"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q092-004",
    "match_type": "REGEX",
    "pattern": "contaminación del recurso hídrico|calidad del aire crítica"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q092-005",
    "match_type": "REGEX",
    "pattern": "información desactualizada|falta de estudios de microzonificación sísmica"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q092-006",
    "match_type": "REGEX",
    "pattern": "no se cuenta con un inventario de emisiones GEI"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q092-007",
    "match_type": "REGEX",
    "pattern": "vacío de información sobre biodiversidad|se requiere caracterizar"
  },
  {

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```

    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q092-008",
    "match_type": "REGEX",
    "pattern": "limitaciones en el monitoreo de|falta de estaciones"
  }
],
"policy_area_id": "PA03",
"question_global": 92,
"question_id": "Q092",
"scoring_definition_ref": "scoring_modalities.TYPE_B",
"scoring_modality": "TYPE_B",
"text": "¿El texto dimensiona la magnitud de los problemas ambientales o la vulnerabilidad ante desastres, cuantificando el déficit de conservación o el alcance del riesgo? Se debe buscar si se mencionan 'vacíos de información' (ej. falta de estudios de riesgo detallados).",
"validations": {}
},
{
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  "cluster_id": "CL01",
  "dimension_id": "DIM01",
  "expected_elements": [
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      "type": "asignacion_explicita"
    },
    {
      "required": true,
      "type": "suficiencia_justificada"
    },
    {
      "required": true,
      "type": "trazabilidad_ppi_bpin"
    }
  ],
  "failure_contract": {
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      "function": "trace_financial_allocation",
      "method_type": "analysis",
      "priority": 1,
      "description": "FinancialAuditor.trace_financial_allocation"
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      "class": "FinancialAuditor",
      "function": "_process_financial_table",
      "method_type": "analysis",
      "priority": 2,
      "description": "FinancialAuditor._process_financial_table"
    },
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      "function": "_match_program_to_node",
      "method_type": "analysis",
      "priority": 3,
      "description": "FinancialAuditor._match_program_to_node"
    },
    {
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      "function": "_match_goal_to_budget",
      "method_type": "analysis",
      "priority": 4,
      "description": "FinancialAuditor._match_goal_to_budget"
    }
  ],

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```

{
  "class": "FinancialAuditor",
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  "method_type": "analysis",
  "priority": 5,
  "description": "FinancialAuditor._perform_counterfactual_budget_check"
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  "function": "_calculate_sufficiency",
  "method_type": "scoring",
  "priority": 6,
  "description": "FinancialAuditor._calculate_sufficiency"
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  "function": "analyze_financial_feasibility",
  "method_type": "analysis",
  "priority": 7,
  "description": "PDETMunicipalPlanAnalyzer.analyze_financial_feasibility"
},
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  "class": "PDETMunicipalPlanAnalyzer",
  "function": "_extract_budget_for_pillar",
  "method_type": "extraction",
  "priority": 8,
  "description": "PDETMunicipalPlanAnalyzer._extract_budget_for_pillar"
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  "function": "_identify_funding_source",
  "method_type": "analysis",
  "priority": 9,
  "description": "PDETMunicipalPlanAnalyzer._identify_funding_source"
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  "class": "PDETMunicipalPlanAnalyzer",
  "function": "_classify_tables",
  "method_type": "analysis",
  "priority": 10,
  "description": "PDETMunicipalPlanAnalyzer._classify_tables"
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  "function": "_analyze_funding_sources",
  "method_type": "analysis",
  "priority": 11,
  "description": "PDETMunicipalPlanAnalyzer._analyze_funding_sources"
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  "function": "_score_financial_component",
  "method_type": "scoring",
  "priority": 12,
  "description": "PDETMunicipalPlanAnalyzer._score_financial_component"
},
{
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  "function": "aggregate_risk_and_prioritize",
  "method_type": "analysis",
  "priority": 13,
  "description": "BayesianCounterfactualAuditor.aggregate_risk_and_prioritize"
}
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"patterns": [
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  "category": "GENERAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q093-000",
  "match_type": "REGEX",
  "pattern": "Plan Plurianual de Inversiones|PPI|Plan Indicativo"
}
]

```

```

    },
    {
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      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q093-001",
      "match_type": "REGEX",
      "pattern": "BPIN|Banco de Proyectos|proyecto de inversión ambiental"
    },
    {
      "category": "TERRITORIAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q093-002",
      "match_type": "REGEX",
      "pattern": "recursos para el Plan Municipal de Gestión del Riesgo|PMGRD"
    },
    {
      "category": "TERRITORIAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q093-003",
      "match_type": "REGEX",
      "pattern": "presupuesto para el Consejo Municipal de Gestión del Riesgo|CMGRD"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q093-004",
      "match_type": "REGEX",
      "pattern": "asignación para obras de mitigación|compra de predios"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q093-005",
      "match_type": "REGEX",
      "pattern": "inversión en saneamiento básico|construcción de PTAR|acueducto rural"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q093-006",
      "match_type": "REGEX",
      "pattern": "\\$\\s*\\d+|COP\\s*\\d+|millones de pesos"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q093-007",
      "match_type": "LITERAL",
      "pattern": "fuentes: SGP-APSB, recursos propios, cofinanciación CAR, regalías"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q093-008",
      "match_type": "REGEX",
      "pattern": "transferencias del sector eléctrico|Ley 99"
    }
  ],
  "policy_area_id": "PA03",
  "question_global": 93,
  "question_id": "Q093",
  "scoring_definition_ref": "scoring_modalities.TYPE_B",
  "scoring_modality": "TYPE_B",
  "text": "¿Se identifican en el PPI recursos monetarios (con cifras en $, COP o millones)

```

explícitamente asignados a programas de reforestación, saneamiento básico (PTAR), gestión del riesgo o adaptación al cambio climático?",

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"validations": {}
},
{
  "base_slot": "D1-Q4",
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    {
      "required": true,
      "type": "datos_sistemas"
    },
    {
      "required": true,
      "type": "gobernanza"
    },
    {
      "required": true,
      "type": "procesos"
    },
    {
      "required": true,
      "type": "talento_humano"
    }
  ],
  "failure_contract": {
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      "method_type": "analysis",
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      "method_type": "extraction",
      "priority": 2,
      "description": "PDETMunicipalPlanAnalyzer._extract_entities_ner"
    },
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      "function": "_extract_entities_syntax",
      "method_type": "extraction",
      "priority": 3,
      "description": "PDETMunicipalPlanAnalyzer._extract_entities_syntax"
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      "function": "_classify_entity_type",
      "method_type": "analysis",
      "priority": 4,
      "description": "PDETMunicipalPlanAnalyzer._classify_entity_type"
    },
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      "class": "PDETMunicipalPlanAnalyzer",
      "function": "_score_entity_specificity",
      "method_type": "scoring",
      "priority": 5,
      "description": "PDETMunicipalPlanAnalyzer._score_entity_specificity"
    }
  ]
}
```



```

    },
    {
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      "function": "_consolidate_entities",
      "method_type": "analysis",
      "priority": 6,
      "description": "PDETMunicipalPlanAnalyzer._consolidate_entities"
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      "function": "extract_entity_activity",
      "method_type": "extraction",
      "priority": 7,
      "description": "MechanismPartExtractor.extract_entity_activity"
    },
    {
      "class": "MechanismPartExtractor",
      "function": "_normalize_entity",
      "method_type": "analysis",
      "priority": 8,
      "description": "MechanismPartExtractor._normalize_entity"
    },
    {
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      "function": "_validate_entity_activity",
      "method_type": "validation",
      "priority": 9,
      "description": "MechanismPartExtractor._validate_entity_activity"
    },
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      "function": "_calculate_ea_confidence",
      "method_type": "scoring",
      "priority": 10,
      "description": "MechanismPartExtractor._calculate_ea_confidence"
    },
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      "function": "audit_evidence_traceability",
      "method_type": "validation",
      "priority": 11,
      "description": "OperationalizationAuditor.audit_evidence_traceability"
    }
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      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q094-000",
      "match_type": "REGEX",
      "pattern": "Consejo Municipal de Gestión del Riesgo de Desastres|CMGRD"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q094-001",
      "match_type": "REGEX",
      "pattern": "Secretaría de Ambiente|Oficina de Gestión del Riesgo|UMATA"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q094-002",
      "match_type": "REGEX",
      "pattern": "Cuerpo de Bomberos|Defensa Civil|Cruz Roja"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,

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```

    "flags": "i",
    "id": "PAT-Q094-003",
    "match_type": "REGEX",
    "pattern": "capacidad técnica|personal idóneo para la gestión ambiental"
  },
  {
    "category": "TERRITORIAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q094-004",
    "match_type": "REGEX",
    "pattern": "Plan de Ordenamiento Territorial|POT|EOT|PBOT"
  },
  {
    "category": "TERRITORIAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q094-005",
    "match_type": "REGEX",
    "pattern": "Plan Municipal de Gestión del Riesgo|PMGRD|Planes de Contingencia"
  },
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    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q094-006",
    "match_type": "REGEX",
    "pattern": "sistema de monitoreo de calidad del aire/agua|red hidrometeorológica"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q094-007",
    "match_type": "REGEX",
    "pattern": "articulación con la CAR|coordinación con la UNGRD"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q094-008",
    "match_type": "REGEX",
    "pattern": "falta de equipos para atención de emergencias|necesidad de fortalecer"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q094-009",
    "match_type": "REGEX",
    "pattern": "cuello de botella|limitación en la capacidad de respuesta|barrera"
  }
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"question_global": 94,
"question_id": "Q094",
"scoring_definition_ref": "scoring_modalities.TYPE_B",
"scoring_modality": "TYPE_B",
"text": "¿El PDM describe las capacidades para la gestión ambiental y del riesgo, mencionando entidades (CMGRD, Secretaría de Ambiente) y sus necesidades? Se debe buscar términos como 'sistemas de monitoreo ambiental' e 'instrumentos de ordenamiento'.",
"validations": {}
},
{
  "base_slot": "D1-Q5",
  "cluster_id": "CL01",
  "dimension_id": "DIM01",
  "expected_elements": [
    {
      "required": true,
      "type": "coherencia_demostrada"
    }
  ]
}

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```

    },
    {
      "required": true,
      "type": "restricciones_legales"
    },
    {
      "required": true,
      "type": "restricciones_presupuestales"
    },
    {
      "required": true,
      "type": "restricciones_tecnicas"
    }
  ],
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      "missing_required_element",
      "incomplete_text"
    ],
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  },
  "method_sets": [
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      "class": "TemporalLogicVerifier",
      "function": "_check_deadline_constraints",
      "method_type": "analysis",
      "priority": 1,
      "description": "TemporalLogicVerifier._check_deadline_constraints"
    },
    {
      "class": "TemporalLogicVerifier",
      "function": "verify_temporal_consistency",
      "method_type": "analysis",
      "priority": 2,
      "description": "TemporalLogicVerifier.verify_temporal_consistency"
    },
    {
      "class": "CausalInferenceSetup",
      "function": "identify_failure_points",
      "method_type": "analysis",
      "priority": 3,
      "description": "CausalInferenceSetup.identify_failure_points"
    },
    {
      "class": "CausalExtractor",
      "function": "_assess_temporal_coherence",
      "method_type": "analysis",
      "priority": 4,
      "description": "CausalExtractor._assess_temporal_coherence"
    },
    {
      "class": "TextMiningEngine",
      "function": "_analyze_link_text",
      "method_type": "analysis",
      "priority": 5,
      "description": "TextMiningEngine._analyze_link_text"
    },
    {
      "class": "IndustrialPolicyProcessor",
      "function": "_analyze_causal_dimensions",
      "method_type": "analysis",
      "priority": 6,
      "description": "IndustrialPolicyProcessor._analyze_causal_dimensions"
    },
    {
      "class": "IndustrialPolicyProcessor",
      "function": "_extract_metadata",
      "method_type": "extraction",
      "priority": 7,
      "description": "IndustrialPolicyProcessor._extract_metadata"
    }
  ],

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"patterns": [
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    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q095-000",
    "match_type": "REGEX",
    "pattern": "en el marco de la Ley 99 de 1993|Ley 1523 de 2012|Ley 388 de 1997"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q095-001",
    "match_type": "REGEX",
    "pattern": "Decreto 1076 de 2015|Decreto 1077 de 2015"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q095-002",
    "match_type": "REGEX",
    "pattern": "Política Nacional de Gestión del Riesgo de Desastres"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q095-003",
    "match_type": "REGEX",
    "pattern": "competencia de la CAR en|responsabilidad del municipio en"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q095-004",
    "match_type": "REGEX",
    "pattern": "conflictos por uso del suelo|determinantes ambientales"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q095-005",
    "match_type": "REGEX",
    "pattern": "límite fiscal|disponibilidad de recursos para grandes obras"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q095-006",
    "match_type": "REGEX",
    "pattern": "restricción presupuestal para la compra de predios"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q095-007",
    "match_type": "REGEX",
    "pattern": "complejidad técnica de los estudios de riesgo"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q095-008",
    "match_type": "REGEX",
    "pattern": "durante el cuatrienio|plazo de ejecución del POT"
  }
]

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    }
  ],
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  "question_global": 95,
  "question_id": "Q095",
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  "scoring_modality": "TYPE_E",
  "text": "¿El plan justifica su alcance en materia ambiental mencionando el marco legal (ej.
Ley 1523) o reconociendo restricciones explícitas de tipo presupuestal, técnico o de competencias
(ej. con la CAR)?",
  "validations": {}
},
{
  "base_slot": "D2-Q1",
  "cluster_id": "CL01",
  "dimension_id": "DIM02",
  "expected_elements": [
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      "type": "columna_costo"
    },
    {
      "required": true,
      "type": "columna_cronograma"
    },
    {
      "required": true,
      "type": "columna_producto"
    },
    {
      "required": true,
      "type": "columna_responsable"
    },
    {
      "required": true,
      "type": "formato_tabular"
    }
  ],
  "failure_contract": {
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      "missing_required_element",
      "incomplete_text"
    ],
    "emit_code": "ABORT-Q096-REQ"
  },
  "method_sets": [
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      "function": "extract_tables",
      "method_type": "extraction",
      "priority": 1,
      "description": "PDFProcessor.extract_tables"
    },
    {
      "class": "FinancialAuditor",
      "function": "_process_financial_table",
      "method_type": "analysis",
      "priority": 2,
      "description": "FinancialAuditor._process_financial_table"
    },
    {
      "class": "PDETMunicipalPlanAnalyzer",
      "function": "_deduplicate_tables",
      "method_type": "analysis",
      "priority": 3,
      "description": "PDETMunicipalPlanAnalyzer._deduplicate_tables"
    },
    {
      "class": "PDETMunicipalPlanAnalyzer",
      "function": "_classify_tables",
      "method_type": "analysis",
      "priority": 4,

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    "description": "PDETMunicipalPlanAnalyzer._classify_tables"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_is_likely_header",
    "method_type": "analysis",
    "priority": 5,
    "description": "PDETMunicipalPlanAnalyzer._is_likely_header"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_clean_dataframe",
    "method_type": "analysis",
    "priority": 6,
    "description": "PDETMunicipalPlanAnalyzer._clean_dataframe"
  },
  {
    "class": "ReportingEngine",
    "function": "generate_accountability_matrix",
    "method_type": "analysis",
    "priority": 7,
    "description": "ReportingEngine.generate_accountability_matrix"
  }
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"patterns": [
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q096-000",
    "match_type": "REGEX",
    "pattern": "tabla de actividades|cuadro de seguimiento|matriz de plan de acción"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q096-001",
    "match_type": "REGEX",
    "pattern": "columna responsable|entidad a cargo|ejecutor"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q096-002",
    "match_type": "REGEX",
    "pattern": "columna producto|entregable|output|meta de producto"
  },
  {
    "category": "TEMPORAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q096-003",
    "match_type": "LITERAL",
    "pattern": "columna cronograma|plazo|vigencia|año 1|trimestre"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q096-004",
    "match_type": "LITERAL",
    "pattern": "columna costo|presupuesto|valor|recursos|monto"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q096-005",
    "match_type": "REGEX",
    "pattern": "Secretaría de Ambiente|Planeación|Infraestructura|CMGRD"
  }
]

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    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q096-006",
      "match_type": "REGEX",
      "pattern": "Plan Indicativo|Anexo de metas"
    }
  ],
  "policy_area_id": "PA03",
  "question_global": 96,
  "question_id": "Q096",
  "scoring_definition_ref": "scoring_modalities.TYPE_A",
  "scoring_modality": "TYPE_A",
  "text": "¿Las actividades ambientales y de gestión del riesgo se presentan en un formato
estructurado (tabla, cuadro) que incluya columnas para 'responsable', 'producto', 'cronograma' y
'presupuesto'?",
  "validations": {}
},
{
  "base_slot": "D2-Q2",
  "cluster_id": "CL01",
  "dimension_id": "DIM02",
  "expected_elements": [
    {
      "required": true,
      "type": "instrumento_especificado"
    },
    {
      "required": true,
      "type": "logica_causal_explicita"
    },
    {
      "required": true,
      "type": "poblacion_objetivo_definida"
    }
  ],
  "failure_contract": {
    "abort_if": [
      "missing_required_element",
      "incomplete_text"
    ],
    "emit_code": "ABORT-Q097-REQ"
  },
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    {
      "class": "BayesianMechanismInference",
      "function": "infer_mechanisms",
      "method_type": "analysis",
      "priority": 1,
      "description": "BayesianMechanismInference.infer_mechanisms"
    },
    {
      "class": "BayesianMechanismInference",
      "function": "_infer_single_mechanism",
      "method_type": "analysis",
      "priority": 2,
      "description": "BayesianMechanismInference._infer_single_mechanism"
    },
    {
      "class": "BayesianMechanismInference",
      "function": "_infer_mechanism_type",
      "method_type": "analysis",
      "priority": 3,
      "description": "BayesianMechanismInference._infer_mechanism_type"
    },
    {
      "class": "BayesianMechanismInference",
      "function": "_test_sufficiency",
      "method_type": "analysis",
      "priority": 4,

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    "description": "BayesianMechanismInference._test_sufficiency"
  },
  {
    "class": "BayesianMechanismInference",
    "function": "_test_necessity",
    "method_type": "analysis",
    "priority": 5,
    "description": "BayesianMechanismInference._test_necessity"
  },
  {
    "class": "CausalExtractor",
    "function": "extract_causal_hierarchy",
    "method_type": "extraction",
    "priority": 6,
    "description": "CausalExtractor.extract_causal_hierarchy"
  },
  {
    "class": "TeoriaCambio",
    "function": "construir_grafo_causal",
    "method_type": "analysis",
    "priority": 7,
    "description": "TeoriaCambio.construir_grafo_causal"
  },
  {
    "class": "TeoriaCambio",
    "function": "_es_conexion_valida",
    "method_type": "analysis",
    "priority": 8,
    "description": "TeoriaCambio._es_conexion_valida"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "construct_causal_dag",
    "method_type": "analysis",
    "priority": 9,
    "description": "PDETMunicipalPlanAnalyzer.construct_causal_dag"
  },
  {
    "class": "BeachEvidentialTest",
    "function": "classify_test",
    "method_type": "analysis",
    "priority": 10,
    "description": "BeachEvidentialTest.classify_test"
  },
  {
    "class": "IndustrialPolicyProcessor",
    "function": "_analyze_causal_dimensions",
    "method_type": "analysis",
    "priority": 11,
    "description": "IndustrialPolicyProcessor._analyze_causal_dimensions"
  }
],
"patterns": [
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q097-000",
    "match_type": "REGEX",
    "pattern": "mediante|a través de|con la implementación de"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q097-001",
    "match_type": "REGEX",
    "pattern": "construcción de obras de mitigación|jarillón|muro de contención"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,

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      "flags": "i",
      "id": "PAT-Q097-002",
      "match_type": "LITERAL",
      "pattern": "incentivos a la conservación|Pagos por Servicios Ambientales|PSA"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q097-003",
      "match_type": "REGEX",
      "pattern": "programas de educación ambiental|comparendos ambientales"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q097-004",
      "match_type": "REGEX",
      "pattern": "población objetivo:|dirigido a|beneficiarios serán"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q097-005",
      "match_type": "REGEX",
      "pattern": "familias en zonas de riesgo|comunidades ribereñas"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q097-006",
      "match_type": "REGEX",
      "pattern": "propietarios de predios en cuencas|sector productivo"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q097-007",
      "match_type": "REGEX",
      "pattern": "con el fin de reducir la vulnerabilidad|para proteger las fuentes hídricas"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q097-008",
      "match_type": "REGEX",
      "pattern": "lo cual genera resiliencia|porque reduce la contaminación"
    }
  ],
  "policy_area_id": "PA03",
  "question_global": 97,
  "question_id": "Q097",
  "scoring_definition_ref": "scoring_modalities.TYPE_A",
  "scoring_modality": "TYPE_A",
  "text": "¿La descripción de las actividades ambientales detalla el instrumento ('mediante la construcción de un jarillón', 'a través de incentivos a la conservación'), la población objetivo ('familias en zonas de riesgo', 'propietarios de predios en cuencas') y la lógica causal?",
  "validations": {}
},
{
  "base_slot": "D2-Q3",
  "cluster_id": "CL01",
  "dimension_id": "DIM02",
  "expected_elements": [
    {
      "required": true,
      "type": "aborda_causa_raiz"
    }
  ]
}

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    },
    {
      "required": true,
      "type": "vinculo_diagnostico_actividad"
    }
  ],
  "failure_contract": {
    "abort_if": [
      "missing_required_element",
      "incomplete_text"
    ],
    "emit_code": "ABORT-Q098-REQ"
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      "function": "_extract_causal_links",
      "method_type": "extraction",
      "priority": 1,
      "description": "CausalExtractor._extract_causal_links"
    },
    {
      "class": "CausalExtractor",
      "function": "_calculate_composite_likelihood",
      "method_type": "scoring",
      "priority": 2,
      "description": "CausalExtractor._calculate_composite_likelihood"
    },
    {
      "class": "CausalExtractor",
      "function": "_initialize_prior",
      "method_type": "analysis",
      "priority": 3,
      "description": "CausalExtractor._initialize_prior"
    },
    {
      "class": "CausalExtractor",
      "function": "_calculate_type_transition_prior",
      "method_type": "scoring",
      "priority": 4,
      "description": "CausalExtractor._calculate_type_transition_prior"
    },
    {
      "class": "PDETMunicipalPlanAnalyzer",
      "function": "_identify_causal_edges",
      "method_type": "analysis",
      "priority": 5,
      "description": "PDETMunicipalPlanAnalyzer._identify_causal_edges"
    },
    {
      "class": "PDETMunicipalPlanAnalyzer",
      "function": "_refine_edge_probabilities",
      "method_type": "analysis",
      "priority": 6,
      "description": "PDETMunicipalPlanAnalyzer._refine_edge_probabilities"
    },
    {
      "class": "BayesianCounterfactualAuditor",
      "function": "construct_scm",
      "method_type": "analysis",
      "priority": 7,
      "description": "BayesianCounterfactualAuditor.construct_scm"
    },
    {
      "class": "BayesianCounterfactualAuditor",
      "function": "_create_default_equations",
      "method_type": "analysis",
      "priority": 8,
      "description": "BayesianCounterfactualAuditor._create_default_equations"
    },
    {
      "class": "SemanticAnalyzer",

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    "function": "extract_semantic_cube",
    "method_type": "extraction",
    "priority": 9,
    "description": "SemanticAnalyzer.extract_semantic_cube"
  }
],
"patterns": [
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    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q098-000",
    "match_type": "REGEX",
    "pattern": "para abordar la causa relacionada con|en respuesta al problema de"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q098-001",
    "match_type": "REGEX",
    "pattern": "la actividad de reforestación ataca la deforestación causada por"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q098-002",
    "match_type": "REGEX",
    "pattern": "causa estructural|factor determinante|presión sobre el ecosistema"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q098-003",
    "match_type": "REGEX",
    "pattern": "expansión de la frontera agrícola|ganadería extensiva"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q098-004",
    "match_type": "REGEX",
    "pattern": "falta de tratamiento de aguas residuales|vertimientos directos"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q098-005",
    "match_type": "REGEX",
    "pattern": "inadecuada disposición de residuos sólidos"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q098-006",
    "match_type": "REGEX",
    "pattern": "ocupación de zonas de alto riesgo"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q098-007",
    "match_type": "REGEX",
    "pattern": "árbol de problemas|diagnóstico causal ambiental"
  }
],

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    "question_global": 98,
    "question_id": "Q098",
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    "scoring_modality": "TYPE_A",
    "text": "¿El PDM vincula explícitamente las actividades (ej. reforestación) con las 'causas raíz' de los problemas ambientales (ej. expansión de la frontera agrícola) identificadas en el diagnóstico?",
    "validations": {}
  },
  {
    "base_slot": "D2-Q4",
    "cluster_id": "CL01",
    "dimension_id": "DIM02",
    "expected_elements": [
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        "required": true,
        "type": "mitigacion_propuesta"
      },
      {
        "required": true,
        "type": "riesgos_identificados"
      }
    ],
    "failure_contract": {
      "abort_if": [
        "missing_required_element",
        "incomplete_text"
      ],
      "emit_code": "ABORT-Q099-REQ"
    },
    "method_sets": [
      {
        "class": "PDETMunicipalPlanAnalyzer",
        "function": "_bayesian_risk_inference",
        "method_type": "analysis",
        "priority": 1,
        "description": "PDETMunicipalPlanAnalyzer._bayesian_risk_inference"
      },
      {
        "class": "PDETMunicipalPlanAnalyzer",
        "function": "sensitivity_analysis",
        "method_type": "analysis",
        "priority": 2,
        "description": "PDETMunicipalPlanAnalyzer.sensitivity_analysis"
      },
      {
        "class": "PDETMunicipalPlanAnalyzer",
        "function": "_interpret_risk",
        "method_type": "analysis",
        "priority": 3,
        "description": "PDETMunicipalPlanAnalyzer._interpret_risk"
      },
      {
        "class": "PDETMunicipalPlanAnalyzer",
        "function": "_compute_robustness_value",
        "method_type": "analysis",
        "priority": 4,
        "description": "PDETMunicipalPlanAnalyzer._compute_robustness_value"
      },
      {
        "class": "PDETMunicipalPlanAnalyzer",
        "function": "_compute_e_value",
        "method_type": "analysis",
        "priority": 5,
        "description": "PDETMunicipalPlanAnalyzer._compute_e_value"
      },
      {
        "class": "PDETMunicipalPlanAnalyzer",
        "function": "_interpret_sensitivity",
        "method_type": "analysis",
        "priority": 6,

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    "description": "PDETMunicipalPlanAnalyzer._interpret_sensitivity"
  },
  {
    "class": "OperationalizationAuditor",
    "function": "_audit_systemic_risk",
    "method_type": "validation",
    "priority": 7,
    "description": "OperationalizationAuditor._audit_systemic_risk"
  },
  {
    "class": "BayesianCounterfactualAuditor",
    "function": "aggregate_risk_and_prioritize",
    "method_type": "analysis",
    "priority": 8,
    "description": "BayesianCounterfactualAuditor.aggregate_risk_and_prioritize"
  },
  {
    "class": "BayesianCounterfactualAuditor",
    "function": "refutation_and_sanity_checks",
    "method_type": "analysis",
    "priority": 9,
    "description": "BayesianCounterfactualAuditor.refutation_and_sanity_checks"
  },
  {
    "class": "AdaptivePriorCalculator",
    "function": "sensitivity_analysis",
    "method_type": "analysis",
    "priority": 10,
    "description": "AdaptivePriorCalculator.sensitivity_analysis"
  }
],
"patterns": [
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q099-000",
    "match_type": "REGEX",
    "pattern": "riesgos:|posibles dificultades:|barreras a la implementación"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q099-001",
    "match_type": "REGEX",
    "pattern": "baja adopción de prácticas sostenibles por parte de los agricultores"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q099-002",
    "match_type": "REGEX",
    "pattern": "eventos climáticos extremos que superen la capacidad de las obras"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q099-003",
    "match_type": "REGEX",
    "pattern": "conflictos por el uso del suelo|resistencia de la comunidad"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q099-004",
    "match_type": "REGEX",
    "pattern": "sostenibilidad financiera de los proyectos"
  },
],

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{
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    "flags": "i",
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    {
      "required": true,
      "type": "meta_cuantitativa"
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    "method_type": "scoring",
    "priority": 7,
    "description": "IndustrialPolicyProcessor._calculate_quality_score"
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    "flags": "i",
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      "flags": "i",
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      "pattern": "informes de interventoría|actas de obra|registros de la Secretaría de
Planeación"
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    "method_type": "analysis",
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    "method_type": "scoring",
    "priority": 9,
    "description": "FinancialAuditor._calculate_sufficiency"
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    "priority": 17,
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    "method_type": "analysis",
    "priority": 19,
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    "method_type": "analysis",
    "priority": 20,
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    "method_type": "analysis",
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      "pattern": "la meta de reforestación busca compensar un X% de la tasa de deforestación"
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      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q102-001",
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      "pattern": "la cobertura de la obra protege al \\d+% de la población en riesgo"
    },
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      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q102-002",
      "match_type": "REGEX",
      "pattern": "la meta se establece en función de la capacidad operativa y el presupuesto"
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      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q102-005",
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  "question_global": 102,
  "question_id": "Q102",
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  "scoring_modality": "TYPE_A",
  "text": "¿Las metas de los productos ambientales (ej. 'reforestar 100 hectáreas') son proporcionales a la magnitud del problema diagnosticado (ej. 'se deforestan 500 hectáreas/año')?",
  "validations": {}
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    "priority": 5,
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    "priority": 6,
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    "function": "_classify_value_chain_link",
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    "priority": 14,
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    "method_type": "scoring",
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    "method_type": "analysis",
    "priority": 18,
    "description": "IndustrialPolicyProcessor._compute_evidence_confidence"
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    "method_type": "analysis",
    "priority": 19,
    "description": "PDETMunicipalPlanAnalyzer._entity_to_dict"
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  "priority": 20,
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  "function": "generate_pdq_report",
  "method_type": "analysis",
  "priority": 21,
  "description": "PolicyAnalysisEmbedder.generate_pdq_report"
},
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  "function": "generate_accountability_matrix",
  "method_type": "analysis",
  "priority": 22,
  "description": "ReportingEngine.generate_accountability_matrix"
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    "flags": "i",
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    "pattern": "código BPIN|proyecto de inversión para gestión del riesgo"
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  {
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    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q103-001",
    "match_type": "REGEX",
    "pattern": "programa del PPI|línea de inversión en sostenibilidad ambiental"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q103-002",
    "match_type": "REGEX",
    "pattern": "recursos del proyecto|presupuesto de la obra"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q103-003",
    "match_type": "REGEX",
    "pattern": "responsable:|dependencia a cargo:|entidad ejecutora"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q103-004",
    "match_type": "REGEX",
    "pattern": "Secretaría de Ambiente|Planeación|Infraestructura"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q103-005",
    "match_type": "REGEX",
    "pattern": "articulado con la CAR|CMGRD"
  },
  {

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        "category": "GENERAL",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q103-006",
        "match_type": "REGEX",
        "pattern": "convenio con|contrato de obra No."
    }
],
"policy_area_id": "PA03",
"question_global": 103,
"question_id": "Q103",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿Los productos ambientales tienen trazabilidad presupuestal (vinculados a códigos BPIN, PPI) y organizacional (asociados a una 'Secretaría de Ambiente' o entidad responsable)?",
"validations": {}
},
{
    "base_slot": "D3-Q4",
    "cluster_id": "CL01",
    "dimension_id": "DIM03",
    "expected_elements": [
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            "required": true,
            "type": "coherencia_recursos"
        },
        {
            "required": true,
            "type": "factibilidad_tecnica"
        },
        {
            "required": true,
            "type": "realismo_plazos"
        }
    ],
    "failure_contract": {
        "abort_if": [
            "missing_required_element",
            "incomplete_text"
        ],
        "emit_code": "ABORT-Q104-REQ"
    },
    "method_sets": [
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            "class": "AdvancedDAGValidator",
            "function": "calculate_acyclicity_pvalue",
            "method_type": "scoring",
            "priority": 1,
            "description": "AdvancedDAGValidator.calculate_acyclicity_pvalue"
        },
        {
            "class": "AdvancedDAGValidator",
            "function": "_is_acyclic",
            "method_type": "analysis",
            "priority": 2,
            "description": "AdvancedDAGValidator._is_acyclic"
        },
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            "class": "AdvancedDAGValidator",
            "function": "get_graph_stats",
            "method_type": "analysis",
            "priority": 3,
            "description": "AdvancedDAGValidator.get_graph_stats"
        },
        {
            "class": "AdvancedDAGValidator",
            "function": "_calculate_node_importance",
            "method_type": "scoring",
            "priority": 4,
            "description": "AdvancedDAGValidator._calculate_node_importance"
        }
    ]
}

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    "method_type": "analysis",
    "priority": 5,
    "description": "AdvancedDAGValidator._generate_subgraph"
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    "function": "add_node",
    "method_type": "analysis",
    "priority": 6,
    "description": "AdvancedDAGValidator.add_node"
  },
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    "function": "add_edge",
    "method_type": "analysis",
    "priority": 7,
    "description": "AdvancedDAGValidator.add_edge"
  },
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    "function": "export_nodes",
    "method_type": "analysis",
    "priority": 8,
    "description": "AdvancedDAGValidator.export_nodes"
  },
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    "class": "AdvancedDAGValidator",
    "function": "_initialize_rng",
    "method_type": "analysis",
    "priority": 9,
    "description": "AdvancedDAGValidator._initialize_rng"
  },
  {
    "class": "AdvancedDAGValidator",
    "function": "_calculate_statistical_power",
    "method_type": "scoring",
    "priority": 10,
    "description": "AdvancedDAGValidator._calculate_statistical_power"
  },
  {
    "class": "AdvancedDAGValidator",
    "function": "_get_node_validator",
    "method_type": "analysis",
    "priority": 11,
    "description": "AdvancedDAGValidator._get_node_validator"
  },
  {
    "class": "AdvancedDAGValidator",
    "function": "_create_empty_result",
    "method_type": "analysis",
    "priority": 12,
    "description": "AdvancedDAGValidator._create_empty_result"
  },
  {
    "class": "BayesianMechanismInference",
    "function": "_test_necessity",
    "method_type": "analysis",
    "priority": 13,
    "description": "BayesianMechanismInference._test_necessity"
  },
  {
    "class": "IndustrialGradeValidator",
    "function": "execute_suite",
    "method_type": "analysis",
    "priority": 14,
    "description": "IndustrialGradeValidator.execute_suite"
  },
  {
    "class": "IndustrialGradeValidator",
    "function": "validate_connection_matrix",

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    "method_type": "validation",
    "priority": 15,
    "description": "IndustrialGradeValidator.validate_connection_matrix"
  },
  {
    "class": "IndustrialGradeValidator",
    "function": "run_performance_benchmarks",
    "method_type": "analysis",
    "priority": 16,
    "description": "IndustrialGradeValidator.run_performance_benchmarks"
  },
  {
    "class": "IndustrialGradeValidator",
    "function": "_benchmark_operation",
    "method_type": "analysis",
    "priority": 17,
    "description": "IndustrialGradeValidator._benchmark_operation"
  },
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    "class": "IndustrialGradeValidator",
    "function": "_log_metric",
    "method_type": "analysis",
    "priority": 18,
    "description": "IndustrialGradeValidator._log_metric"
  },
  {
    "class": "IndustrialGradeValidator",
    "function": "validate_engine_readiness",
    "method_type": "validation",
    "priority": 19,
    "description": "IndustrialGradeValidator.validate_engine_readiness"
  },
  {
    "class": "PerformanceAnalyzer",
    "function": "analyze_performance",
    "method_type": "analysis",
    "priority": 20,
    "description": "PerformanceAnalyzer.analyze_performance"
  },
  {
    "class": "PerformanceAnalyzer",
    "function": "_calculate_loss_functions",
    "method_type": "scoring",
    "priority": 21,
    "description": "PerformanceAnalyzer._calculate_loss_functions"
  },
  {
    "class": "HierarchicalGenerativeModel",
    "function": "_calculate_likelihood",
    "method_type": "scoring",
    "priority": 22,
    "description": "HierarchicalGenerativeModel._calculate_likelihood"
  },
  {
    "class": "HierarchicalGenerativeModel",
    "function": "_calculate_ess",
    "method_type": "scoring",
    "priority": 23,
    "description": "HierarchicalGenerativeModel._calculate_ess"
  },
  {
    "class": "HierarchicalGenerativeModel",
    "function": "_calculate_r_hat",
    "method_type": "scoring",
    "priority": 24,
    "description": "HierarchicalGenerativeModel._calculate_r_hat"
  },
  {
    "class": "IndustrialGradeValidator",
    "function": "validate_causal_categories",
    "method_type": "validation",
    "priority": 25,

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    "description": "IndustrialGradeValidator.validate_causal_categories"
  },
  {
    "class": "TeoriaCambio",
    "function": "_extraer_categorias",
    "method_type": "analysis",
    "priority": 26,
    "description": "TeoriaCambio._extraer_categorias"
  }
],
"patterns": [
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q104-000",
    "match_type": "REGEX",
    "pattern": "factibilidad|viabilidad|es realista esperar que"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q104-001",
    "match_type": "REGEX",
    "pattern": "capacidad técnica para la construcción de la PTAR"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q104-002",
    "match_type": "REGEX",
    "pattern": "plazo de ejecución de la obra|tiempo de los estudios y diseños"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q104-003",
    "match_type": "REGEX",
    "pattern": "la meta de reforestación es ambiciosa pero alcanzable"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q104-004",
    "match_type": "REGEX",
    "pattern": "contradictorio|poco probable|desproporcionado"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q104-005",
    "match_type": "REGEX",
    "pattern": "con los recursos asignados se puede lograr"
  }
],
"policy_area_id": "PA03",
"question_global": 104,
"question_id": "Q104",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿Existe una relación factible entre la actividad (ej. 'un programa de educación ambiental') y la meta del producto asociado (ej. 'reducción del 50% de residuos sólidos') para el área ambiental? Se debe evaluar si los 'plazos' son realistas.",
"validations": {}
},
{
  "base_slot": "D3-Q5",

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"dimension_id": "DIM03",
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    "type": "conexion_producto_resultado"
  },
  {
    "required": true,
    "type": "mecanismo_causal_explicito"
  }
],
"failure_contract": {
  "abort_if": [
    "missing_required_element",
    "incomplete_text"
  ],
  "emit_code": "ABORT-Q105-REQ"
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"method_sets": [
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    "function": "_identify_confounders",
    "method_type": "analysis",
    "priority": 1,
    "description": "PDETMunicipalPlanAnalyzer._identify_confounders"
  },
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    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_effect_to_dict",
    "method_type": "analysis",
    "priority": 2,
    "description": "PDETMunicipalPlanAnalyzer._effect_to_dict"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_scenario_to_dict",
    "method_type": "analysis",
    "priority": 3,
    "description": "PDETMunicipalPlanAnalyzer._scenario_to_dict"
  },
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    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_simulate_intervention",
    "method_type": "analysis",
    "priority": 4,
    "description": "PDETMunicipalPlanAnalyzer._simulate_intervention"
  },
  {
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    "function": "_generate_recommendations",
    "method_type": "analysis",
    "priority": 5,
    "description": "PDETMunicipalPlanAnalyzer._generate_recommendations"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_identify_causal_nodes",
    "method_type": "analysis",
    "priority": 6,
    "description": "PDETMunicipalPlanAnalyzer._identify_causal_nodes"
  },
  {
    "class": "BayesianCounterfactualAuditor",
    "function": "_evaluate_factual",
    "method_type": "analysis",
    "priority": 7,
    "description": "BayesianCounterfactualAuditor._evaluate_factual"
  },
  {
    "class": "BayesianCounterfactualAuditor",
    "function": "_evaluate_counterfactual",

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    "method_type": "analysis",
    "priority": 8,
    "description": "BayesianCounterfactualAuditor._evaluate_counterfactual"
  },
  {
    "class": "CausalExtractor",
    "function": "_assess_financial_consistency",
    "method_type": "analysis",
    "priority": 9,
    "description": "CausalExtractor._assess_financial_consistency"
  },
  {
    "class": "BayesianMechanismInference",
    "function": "_infer_activity_sequence",
    "method_type": "analysis",
    "priority": 10,
    "description": "BayesianMechanismInference._infer_activity_sequence"
  },
  {
    "class": "BayesianMechanismInference",
    "function": "_generate_necessity_remediation",
    "method_type": "analysis",
    "priority": 11,
    "description": "BayesianMechanismInference._generate_necessity_remediation"
  },
  {
    "class": "BayesianCounterfactualAuditor",
    "function": "refutation_and_sanity_checks",
    "method_type": "analysis",
    "priority": 12,
    "description": "BayesianCounterfactualAuditor.refutation_and_sanity_checks"
  },
  {
    "class": "IndustrialPolicyProcessor",
    "function": "_load_questionnaire",
    "method_type": "analysis",
    "priority": 13,
    "description": "IndustrialPolicyProcessor._load_questionnaire"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "analyze_financial_feasibility",
    "method_type": "analysis",
    "priority": 14,
    "description": "PDETMunicipalPlanAnalyzer.analyze_financial_feasibility"
  },
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    "class": "PDETMunicipalPlanAnalyzer",
    "function": "construct_causal_dag",
    "method_type": "analysis",
    "priority": 15,
    "description": "PDETMunicipalPlanAnalyzer.construct_causal_dag"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "estimate_causal_effects",
    "method_type": "analysis",
    "priority": 16,
    "description": "PDETMunicipalPlanAnalyzer.estimate_causal_effects"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "generate_counterfactuals",
    "method_type": "analysis",
    "priority": 17,
    "description": "PDETMunicipalPlanAnalyzer.generate_counterfactuals"
  },
  {
    "class": "CausalExtractor",
    "function": "_build_type_hierarchy",
    "method_type": "analysis",
    "priority": 18,

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    "description": "CausalExtractor._build_type_hierarchy"
  },
  {
    "class": "CausalExtractor",
    "function": "_check_structural_violation",
    "method_type": "analysis",
    "priority": 19,
    "description": "CausalExtractor._check_structural_violation"
  },
  {
    "class": "CausalExtractor",
    "function": "_calculate_type_transition_prior",
    "method_type": "scoring",
    "priority": 20,
    "description": "CausalExtractor._calculate_type_transition_prior"
  },
  {
    "class": "CausalExtractor",
    "function": "_calculate_textual_proximity",
    "method_type": "scoring",
    "priority": 21,
    "description": "CausalExtractor._calculate_textual_proximity"
  },
  {
    "class": "TeoriaCambio",
    "function": "_validar_orden_causal",
    "method_type": "analysis",
    "priority": 22,
    "description": "TeoriaCambio._validar_orden_causal"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_refine_edge_probabilities",
    "method_type": "analysis",
    "priority": 23,
    "description": "PDETMunicipalPlanAnalyzer._refine_edge_probabilities"
  },
  {
    "class": "PolicyAnalysisEmbedder",
    "function": "compare_policy_interventions",
    "method_type": "analysis",
    "priority": 24,
    "description": "PolicyAnalysisEmbedder.compare_policy_interventions"
  },
  {
    "class": "BayesianMechanismInference",
    "function": "infer_mechanisms",
    "method_type": "analysis",
    "priority": 25,
    "description": "BayesianMechanismInference.infer_mechanisms"
  }
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    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q105-000",
    "match_type": "REGEX",
    "pattern": "esto permitirá que|lo cual contribuirá a|generando una reducción"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q105-001",
    "match_type": "LITERAL",
    "pattern": "el mecanismo es|la lógica es que"
  },
  {
    "category": "INDICADOR",
    "confidence_weight": 0.85,

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        "flags": "i",
        "id": "PAT-Q105-002",
        "match_type": "REGEX",
        "pattern": "la construcción de la PTAR removerá X% de la carga contaminante, mejorando
el IRCA"
    },
    {
        "category": "GENERAL",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q105-003",
        "match_type": "REGEX",
        "pattern": "la reforestación regula el ciclo hídrico, lo que resulta en mayor
disponibilidad de agua"
    },
    {
        "category": "GENERAL",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q105-004",
        "match_type": "REGEX",
        "pattern": "variable intermedia|mediador|eslabón causal"
    },
    {
        "category": "GENERAL",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q105-005",
        "match_type": "REGEX",
        "pattern": "cadena de valor|ruta de cambio ambiental"
    }
],
"policy_area_id": "PA03",
"question_global": 105,
"question_id": "Q105",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿El PDM explica cómo los productos (ej. 'construcción de una PTAR') contribuyen a
generar resultados (ej. 'mejora de la calidad del agua del río')? Se debe buscar la descripción de
este 'mecanismo' causal.",
"validations": {}
},
{
    "base_slot": "D4-Q1",
    "cluster_id": "CL01",
    "dimension_id": "DIM04",
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            "required": true,
            "type": "horizonte_temporal"
        },
        {
            "required": true,
            "type": "linea_base_resultado"
        },
        {
            "required": true,
            "type": "meta_resultado"
        },
        {
            "required": true,
            "type": "metrica_outcome"
        }
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    "failure_contract": {
        "abort_if": [
            "missing_required_element",
            "incomplete_text"
        ],
        "emit_code": "ABORT-Q106-REQ"
    },
    "method_sets": [

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{
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  "function": "_extract_entities_syntax",
  "method_type": "extraction",
  "priority": 1,
  "description": "PDETMunicipalPlanAnalyzer._extract_entities_syntax"
},
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  "class": "PDETMunicipalPlanAnalyzer",
  "function": "_extract_entities_ner",
  "method_type": "extraction",
  "priority": 2,
  "description": "PDETMunicipalPlanAnalyzer._extract_entities_ner"
},
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  "function": "_calculate_language_specificity",
  "method_type": "scoring",
  "priority": 3,
  "description": "CausalExtractor._calculate_language_specificity"
},
{
  "class": "CausalExtractor",
  "function": "_calculate_composite_likelihood",
  "method_type": "scoring",
  "priority": 4,
  "description": "CausalExtractor._calculate_composite_likelihood"
},
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  "class": "CausalExtractor",
  "function": "_calculate_semantic_distance",
  "method_type": "scoring",
  "priority": 5,
  "description": "CausalExtractor._calculate_semantic_distance"
},
{
  "class": "TemporalLogicVerifier",
  "function": "_classify_temporal_type",
  "method_type": "analysis",
  "priority": 6,
  "description": "TemporalLogicVerifier._classify_temporal_type"
},
{
  "class": "PDETMunicipalPlanAnalyzer",
  "function": "_score_indicators",
  "method_type": "scoring",
  "priority": 7,
  "description": "PDETMunicipalPlanAnalyzer._score_indicators"
},
{
  "class": "PDETMunicipalPlanAnalyzer",
  "function": "_find_outcome_mentions",
  "method_type": "analysis",
  "priority": 8,
  "description": "PDETMunicipalPlanAnalyzer._find_outcome_mentions"
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  "class": "PDETMunicipalPlanAnalyzer",
  "function": "_score_temporal_consistency",
  "method_type": "scoring",
  "priority": 9,
  "description": "PDETMunicipalPlanAnalyzer._score_temporal_consistency"
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  "function": "_extract_goals",
  "method_type": "extraction",
  "priority": 10,
  "description": "CausalExtractor._extract_goals"
},
{
  "class": "CausalExtractor",

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    "function": "_parse_goal_context",
    "method_type": "extraction",
    "priority": 11,
    "description": "CausalExtractor._parse_goal_context"
  },
  {
    "class": "CausalExtractor",
    "function": "_classify_goal_type",
    "method_type": "analysis",
    "priority": 12,
    "description": "CausalExtractor._classify_goal_type"
  },
  {
    "class": "TemporalLogicVerifier",
    "function": "_parse_temporal_marker",
    "method_type": "extraction",
    "priority": 13,
    "description": "TemporalLogicVerifier._parse_temporal_marker"
  },
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    "class": "TemporalLogicVerifier",
    "function": "_extract_resources",
    "method_type": "extraction",
    "priority": 14,
    "description": "TemporalLogicVerifier._extract_resources"
  },
  {
    "class": "PerformanceAnalyzer",
    "function": "analyze_performance",
    "method_type": "analysis",
    "priority": 15,
    "description": "PerformanceAnalyzer.analyze_performance"
  },
  {
    "class": "PerformanceAnalyzer",
    "function": "_generate_recommendations",
    "method_type": "analysis",
    "priority": 16,
    "description": "PerformanceAnalyzer._generate_recommendations"
  }
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    "category": "INDICADOR",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q106-000",
    "match_type": "REGEX",
    "pattern": "indicador de resultado|indicador de efecto|outcome"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q106-001",
    "match_type": "REGEX",
    "pattern": "IRCA|Índice de Riesgo de Calidad del Agua"
  },
  {
    "category": "INDICADOR",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q106-002",
    "match_type": "REGEX",
    "pattern": "Tasa de deforestación|Reducción de emisiones de GEI"
  },
  {
    "category": "INDICADOR",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q106-003",
    "match_type": "REGEX",

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    "pattern": "Porcentaje de población en riesgo mitigado"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q106-004",
    "match_type": "LITERAL",
    "pattern": "Línea Base:|LB:|valor 2023:"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q106-005",
    "match_type": "REGEX",
    "pattern": "Meta Cuatrienio:|Meta 2027:|se espera reducir a"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q106-006",
    "match_type": "REGEX",
    "pattern": "Fuente de verificación:|Medio de verificación:"
  },
  {
    "category": "INDICADOR",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q106-007",
    "match_type": "REGEX",
    "pattern": "Ficha de Indicador de Resultado (KPT)"
  },
  {
    "category": "TEMPORAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q106-008",
    "match_type": "REGEX",
    "pattern": "horizonte temporal|ventana de maduración|al final del periodo"
  }
],
"policy_area_id": "PA03",
"question_global": 106,
"question_id": "Q106",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿Los indicadores de resultado ambiental (ej. 'Índice de Riesgo de la Calidad del
Agua - IRCA', 'reducción de emisiones GEI') están definidos con línea base, meta y un horizonte
temporal?",
"validations": {}
},
{
  "base_slot": "D4-Q2",
  "cluster_id": "CL01",
  "dimension_id": "DIM04",
  "expected_elements": [
    {
      "required": true,
      "type": "cadena_causal_explicita"
    },
    {
      "required": true,
      "type": "condiciones_habilitantes"
    },
    {
      "required": true,
      "type": "supuestos_identificados"
    }
  ]
},
"failure_contract": {

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"abort_if": [
  "missing_required_element",
  "incomplete_text"
],
"emit_code": "ABORT-Q107-REQ"
},
"method_sets": [
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    "class": "TeoriaCambio",
    "function": "_encontrar_caminos_completos",
    "method_type": "analysis",
    "priority": 1,
    "description": "TeoriaCambio._encontrar_caminos_completos"
  },
  {
    "class": "TeoriaCambio",
    "function": "validacion_completa",
    "method_type": "analysis",
    "priority": 2,
    "description": "TeoriaCambio.validacion_completa"
  },
  {
    "class": "CausalExtractor",
    "function": "extract_causal_hierarchy",
    "method_type": "extraction",
    "priority": 3,
    "description": "CausalExtractor.extract_causal_hierarchy"
  },
  {
    "class": "HierarchicalGenerativeModel",
    "function": "verify_conditional_independence",
    "method_type": "analysis",
    "priority": 4,
    "description": "HierarchicalGenerativeModel.verify_conditional_independence"
  },
  {
    "class": "HierarchicalGenerativeModel",
    "function": "_generate_independence_tests",
    "method_type": "analysis",
    "priority": 5,
    "description": "HierarchicalGenerativeModel._generate_independence_tests"
  },
  {
    "class": "BayesianCounterfactualAuditor",
    "function": "construct_scm",
    "method_type": "analysis",
    "priority": 6,
    "description": "BayesianCounterfactualAuditor.construct_scm"
  },
  {
    "class": "AdvancedDAGValidator",
    "function": "_perform_sensitivity_analysis_internal",
    "method_type": "analysis",
    "priority": 7,
    "description": "AdvancedDAGValidator._perform_sensitivity_analysis_internal"
  },
  {
    "class": "BayesFactorTable",
    "function": "get_bayes_factor",
    "method_type": "analysis",
    "priority": 8,
    "description": "BayesFactorTable.get_bayes_factor"
  }
],
"patterns": [
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q107-000",
    "match_type": "REGEX",
    "pattern": "cadena causal|lógica de intervención|si... entonces..."
  }
]

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    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q107-001",
      "match_type": "REGEX",
      "pattern": "el resultado se logrará siempre y cuando|asumiendo que"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q107-002",
      "match_type": "REGEX",
      "pattern": "supuesto clave|premisa fundamental"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q107-003",
      "match_type": "REGEX",
      "pattern": "condición habilitante|factor crítico|requiere de"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q107-004",
      "match_type": "REGEX",
      "pattern": "depende del comportamiento de las lluvias|régimen climático"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q107-005",
      "match_type": "REGEX",
      "pattern": "un supuesto es que la comunidad se apropie de las obras"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q107-006",
      "match_type": "REGEX",
      "pattern": "se requiere la concurrencia de la CAR para que"
    }
  ],
  "policy_area_id": "PA03",
  "question_global": 107,
  "question_id": "Q107",
  "scoring_definition_ref": "scoring_modalities.TYPE_A",
  "scoring_modality": "TYPE_A",
  "text": "¿Se explicita la cadena causal que lleva a la mejora ambiental, mencionando 'supuestos' (ej. 'si la comunidad adopta la separación de residuos') o 'condiciones habilitantes'?",
  "validations": {}
},
{
  "base_slot": "D4-Q3",
  "cluster_id": "CL01",
  "dimension_id": "DIM04",
  "expected_elements": [
    {
      "required": true,
      "type": "evidencia_comparada"
    },
    {
      "required": true,
      "type": "justificacion_recursos"
    }
  ],

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    {
      "required": true,
      "type": "justificacion_tecnica"
    }
  ],
  "failure_contract": {
    "abort_if": [
      "missing_required_element",
      "incomplete_text"
    ],
    "emit_code": "ABORT-Q108-REQ"
  },
  "method_sets": [
    {
      "class": "PDETMunicipalPlanAnalyzer",
      "function": "_get_prior_effect",
      "method_type": "analysis",
      "priority": 1,
      "description": "PDETMunicipalPlanAnalyzer._get_prior_effect"
    },
    {
      "class": "PDETMunicipalPlanAnalyzer",
      "function": "_estimate_effect_bayesian",
      "method_type": "analysis",
      "priority": 2,
      "description": "PDETMunicipalPlanAnalyzer._estimate_effect_bayesian"
    },
    {
      "class": "PDETMunicipalPlanAnalyzer",
      "function": "_compute_robustness_value",
      "method_type": "analysis",
      "priority": 3,
      "description": "PDETMunicipalPlanAnalyzer._compute_robustness_value"
    },
    {
      "class": "AdaptivePriorCalculator",
      "function": "sensitivity_analysis",
      "method_type": "analysis",
      "priority": 4,
      "description": "AdaptivePriorCalculator.sensitivity_analysis"
    },
    {
      "class": "HierarchicalGenerativeModel",
      "function": "_calculate_r_hat",
      "method_type": "scoring",
      "priority": 5,
      "description": "HierarchicalGenerativeModel._calculate_r_hat"
    },
    {
      "class": "HierarchicalGenerativeModel",
      "function": "_calculate_ess",
      "method_type": "scoring",
      "priority": 6,
      "description": "HierarchicalGenerativeModel._calculate_ess"
    },
    {
      "class": "AdvancedDAGValidator",
      "function": "_calculate_statistical_power",
      "method_type": "scoring",
      "priority": 7,
      "description": "AdvancedDAGValidator._calculate_statistical_power"
    },
    {
      "class": "BayesianMechanismInference",
      "function": "_aggregate_bayesian_confidence",
      "method_type": "analysis",
      "priority": 8,
      "description": "BayesianMechanismInference._aggregate_bayesian_confidence"
    }
  ],
  "patterns": [
    {

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    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q108-000",
    "match_type": "REGEX",
    "pattern": "meta ambiciosa pero factible|meta realista dado el presupuesto"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q108-001",
    "match_type": "REGEX",
    "pattern": "la meta se justifica por la nueva tecnología de la PTAR"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q108-002",
    "match_type": "REGEX",
    "pattern": "con la inversión de X se espera lograr una reducción de Y"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q108-003",
    "match_type": "REGEX",
    "pattern": "la capacidad técnica de la CAR permite aspirar a esta meta"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q108-004",
    "match_type": "REGEX",
    "pattern": "en experiencias similares de otros municipios de la región"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q108-005",
    "match_type": "REGEX",
    "pattern": "benchmark|referente nacional|meta del PND en saneamiento"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q108-006",
    "match_type": "REGEX",
    "pattern": "análisis de viabilidad de la meta"
  }
],
"policy_area_id": "PA03",
"question_global": 108,
"question_id": "Q108",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿La ambición de las metas de resultado ambiental (ej. 'alcanzar un IRCA por debajo del 5%') se justifica en función de la inversión, la tecnología disponible o se compara con 'casos' de otros municipios?",
"validations": {}
},
{
  "base_slot": "D4-Q4",
  "cluster_id": "CL01",
  "dimension_id": "DIM04",
  "expected_elements": [
    {

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        "required": true,
        "type": "criterios_exito_definidos"
    },
    {
        "required": true,
        "type": "vinculo_resultado_problema"
    }
],
"failure_contract": {
    "abort_if": [
        "missing_required_element",
        "incomplete_text"
    ],
    "emit_code": "ABORT-Q109-REQ"
},
"method_sets": [
    {
        "class": "PolicyContradictionDetector",
        "function": "_calculate_objective_alignment",
        "method_type": "scoring",
        "priority": 1,
        "description": "PolicyContradictionDetector._calculate_objective_alignment"
    },
    {
        "class": "PolicyContradictionDetector",
        "function": "_identify_affected_sections",
        "method_type": "analysis",
        "priority": 2,
        "description": "PolicyContradictionDetector._identify_affected_sections"
    },
    {
        "class": "PolicyContradictionDetector",
        "function": "_generate_resolution_recommendations",
        "method_type": "analysis",
        "priority": 3,
        "description": "PolicyContradictionDetector._generate_resolution_recommendations"
    },
    {
        "class": "OperationalizationAuditor",
        "function": "_generate_optimal_remediations",
        "method_type": "analysis",
        "priority": 4,
        "description": "OperationalizationAuditor._generate_optimal_remediations"
    },
    {
        "class": "OperationalizationAuditor",
        "function": "_get_remediation_text",
        "method_type": "analysis",
        "priority": 5,
        "description": "OperationalizationAuditor._get_remediation_text"
    },
    {
        "class": "BayesianCounterfactualAuditor",
        "function": "aggregate_risk_and_prioritize",
        "method_type": "analysis",
        "priority": 6,
        "description": "BayesianCounterfactualAuditor.aggregate_risk_and_prioritize"
    },
    {
        "class": "FinancialAuditor",
        "function": "_detect_allocation_gaps",
        "method_type": "analysis",
        "priority": 7,
        "description": "FinancialAuditor._detect_allocation_gaps"
    }
],
"patterns": [
    {
        "category": "GENERAL",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q109-000",

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    "match_type": "REGEX",
    "pattern": "este resultado responde al problema de la contaminación hídrica"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q109-001",
    "match_type": "REGEX",
    "pattern": "para solucionar la alta deforestación"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q109-002",
    "match_type": "REGEX",
    "pattern": "el resultado atiende directamente el riesgo por inundación"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q109-003",
    "match_type": "REGEX",
    "pattern": "criterio de éxito|se considerará un logro si el IRCA baja de X"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q109-004",
    "match_type": "REGEX",
    "pattern": "umbral de cumplimiento|mínimo aceptable"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q109-005",
    "match_type": "REGEX",
    "pattern": "matriz de coherencia|alineación diagnóstico-estrategia"
  }
],
"policy_area_id": "PA03",
"question_global": 109,
"question_id": "Q109",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿Los resultados propuestos (ej. 'reducción de la vulnerabilidad ante inundaciones')
'atienden' o 'abordan' directamente los problemas de riesgo o ambientales priorizados en el
diagnóstico?",
"validations": {}
},
{
  "base_slot": "D4-Q5",
  "cluster_id": "CL01",
  "dimension_id": "DIM04",
  "expected_elements": [
    {
      "required": true,
      "type": "alineacion_ods"
    },
    {
      "required": true,
      "type": "alineacion_otros_marcos"
    },
    {
      "required": true,
      "type": "alineacion_pnd"
    }
  ]
},
],

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"failure_contract": {
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    "missing_required_element",
    "incomplete_text"
  ],
  "emit_code": "ABORT-Q110-REQ"
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"method_sets": [
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    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_score_pdet_alignment",
    "method_type": "scoring",
    "priority": 1,
    "description": "PDETMunicipalPlanAnalyzer._score_pdet_alignment"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_score_causal_coherence",
    "method_type": "scoring",
    "priority": 2,
    "description": "PDETMunicipalPlanAnalyzer._score_causal_coherence"
  },
  {
    "class": "CDAFFramework",
    "function": "_validate_dnp_compliance",
    "method_type": "validation",
    "priority": 3,
    "description": "CDAFFramework._validate_dnp_compliance"
  },
  {
    "class": "CDAFFramework",
    "function": "_generate_dnp_report",
    "method_type": "analysis",
    "priority": 4,
    "description": "CDAFFramework._generate_dnp_report"
  },
  {
    "class": "IndustrialPolicyProcessor",
    "function": "_analyze_causal_dimensions",
    "method_type": "analysis",
    "priority": 5,
    "description": "IndustrialPolicyProcessor._analyze_causal_dimensions"
  },
  {
    "class": "AdaptivePriorCalculator",
    "function": "validate_quality_criteria",
    "method_type": "validation",
    "priority": 6,
    "description": "AdaptivePriorCalculator.validate_quality_criteria"
  }
],
"patterns": [
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q110-000",
    "match_type": "REGEX",
    "pattern": "alineado con el Plan Nacional de Desarrollo|PND|transformación 3"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q110-001",
    "match_type": "REGEX",
    "pattern": "contribuye a los ODS 6, 11, 13, 15|Objetivos de Desarrollo Sostenible"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",

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        "id": "PAT-Q110-002",
        "match_type": "REGEX",
        "pattern": "en concordancia con la Política Nacional de Cambio Climático"
    },
    {
        "category": "GENERAL",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q110-003",
        "match_type": "REGEX",
        "pattern": "articulado con las Contribuciones Nacionalmente Determinadas|NDC"
    },
    {
        "category": "GENERAL",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q110-004",
        "match_type": "REGEX",
        "pattern": "Acuerdo de París|Convenio de Diversidad Biológica"
    }
],
"policy_area_id": "PA03",
"question_global": 110,
"question_id": "Q110",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿El plan declara la alineación de sus resultados ambientales con marcos superiores
como el PND, los ODS (6, 11, 13) o el Acuerdo de París?",
"validations": {}
},
{
    "base_slot": "D5-Q1",
    "cluster_id": "CL01",
    "dimension_id": "DIM05",
    "expected_elements": [
        {
            "required": true,
            "type": "impacto_definido"
        },
        {
            "required": true,
            "type": "rezago_temporal"
        },
        {
            "required": true,
            "type": "ruta_transmision"
        }
    ],
    "failure_contract": {
        "abort_if": [
            "missing_required_element",
            "incomplete_text"
        ],
        "emit_code": "ABORT-Q111-REQ"
    },
    "method_sets": [
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            "class": "PDETMunicipalPlanAnalyzer",
            "function": "generate_counterfactuals",
            "method_type": "analysis",
            "priority": 1,
            "description": "PDETMunicipalPlanAnalyzer.generate_counterfactuals"
        },
        {
            "class": "PDETMunicipalPlanAnalyzer",
            "function": "_simulate_intervention",
            "method_type": "analysis",
            "priority": 2,
            "description": "PDETMunicipalPlanAnalyzer._simulate_intervention"
        },
        {
            "class": "PDETMunicipalPlanAnalyzer",

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    "function": "_generate_scenario_narrative",
    "method_type": "analysis",
    "priority": 3,
    "description": "PDETMunicipalPlanAnalyzer._generate_scenario_narrative"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_find_mediator_mentions",
    "method_type": "analysis",
    "priority": 4,
    "description": "PDETMunicipalPlanAnalyzer._find_mediator_mentions"
  },
  {
    "class": "TeoriaCambio",
    "function": "_validar_orden_causal",
    "method_type": "analysis",
    "priority": 5,
    "description": "TeoriaCambio._validar_orden_causal"
  },
  {
    "class": "CausalExtractor",
    "function": "_assess_temporal_coherence",
    "method_type": "analysis",
    "priority": 6,
    "description": "CausalExtractor._assess_temporal_coherence"
  },
  {
    "class": "TextMiningEngine",
    "function": "_generate_interventions",
    "method_type": "analysis",
    "priority": 7,
    "description": "TextMiningEngine._generate_interventions"
  },
  {
    "class": "BayesianCounterfactualAuditor",
    "function": "construct_scm",
    "method_type": "analysis",
    "priority": 8,
    "description": "BayesianCounterfactualAuditor.construct_scm"
  }
],
"patterns": [
  {
    "category": "TERRITORIAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q111-000",
    "match_type": "REGEX",
    "pattern": "impacto esperado|visión de largo plazo|transformación territorial"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q111-001",
    "match_type": "REGEX",
    "pattern": "sostenibilidad ambiental|resiliencia climática del municipio"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q111-002",
    "match_type": "REGEX",
    "pattern": "seguridad hídrica|territorio ordenado y sostenible"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q111-003",
    "match_type": "REGEX",

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    "pattern": "la suma de los resultados generará el impacto de"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q111-004",
    "match_type": "REGEX",
    "pattern": "ruta de transmisión|cadena de impacto"
  },
  {
    "category": "TEMPORAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q111-005",
    "match_type": "REGEX",
    "pattern": "tiempo de maduración|se espera observar en 10-15 años"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q111-006",
    "match_type": "REGEX",
    "pattern": "rezago temporal|efectos de largo aliento"
  }
],
"policy_area_id": "PA03",
"question_global": 111,
"question_id": "Q111",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿El PDM define 'impactos' de largo plazo (ej. 'sostenibilidad hídrica del territorio')? Se debe verificar si se menciona la ruta desde los resultados y el 'tiempo de maduración' esperado.",
"validations": {}
},
{
  "base_slot": "D5-Q2",
  "cluster_id": "CL01",
  "dimension_id": "DIM05",
  "expected_elements": [
    {
      "required": true,
      "type": "justifica_validez"
    },
    {
      "required": true,
      "type": "usa_indices_compuestos"
    },
    {
      "required": true,
      "type": "usa_proxies"
    }
  ]
},
"failure_contract": {
  "abort_if": [
    "missing_required_element",
    "incomplete_text"
  ],
  "emit_code": "ABORT-Q112-REQ"
},
"method_sets": [
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "calculate_quality_score",
    "method_type": "scoring",
    "priority": 1,
    "description": "PDETMunicipalPlanAnalyzer.calculate_quality_score"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",

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    "function": "_estimate_score_confidence",
    "method_type": "scoring",
    "priority": 2,
    "description": "PDETMunicipalPlanAnalyzer._estimate_score_confidence"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_compute_e_value",
    "method_type": "analysis",
    "priority": 3,
    "description": "PDETMunicipalPlanAnalyzer._compute_e_value"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_compute_robustness_value",
    "method_type": "analysis",
    "priority": 4,
    "description": "PDETMunicipalPlanAnalyzer._compute_robustness_value"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_interpret_sensitivity",
    "method_type": "analysis",
    "priority": 5,
    "description": "PDETMunicipalPlanAnalyzer._interpret_sensitivity"
  },
  {
    "class": "ReportingEngine",
    "function": "_calculate_quality_score",
    "method_type": "scoring",
    "priority": 6,
    "description": "ReportingEngine._calculate_quality_score"
  },
  {
    "class": "BayesianMechanismInference",
    "function": "_aggregate_bayesian_confidence",
    "method_type": "analysis",
    "priority": 7,
    "description": "BayesianMechanismInference._aggregate_bayesian_confidence"
  },
  {
    "class": "PolicyAnalysisEmbedder",
    "function": "evaluate_policy_numerical_consistency",
    "method_type": "analysis",
    "priority": 8,
    "description": "PolicyAnalysisEmbedder.evaluate_policy_numerical_consistency"
  },
  {
    "class": "PolicyAnalysisEmbedder",
    "function": "get_diagnostics",
    "method_type": "analysis",
    "priority": 9,
    "description": "PolicyAnalysisEmbedder.get_diagnostics"
  },
  {
    "class": "PolicyAnalysisEmbedder",
    "function": "process_document",
    "method_type": "analysis",
    "priority": 10,
    "description": "PolicyAnalysisEmbedder.process_document"
  },
  {
    "class": "PolicyAnalysisEmbedder",
    "function": "_generate_query_from_pdq",
    "method_type": "analysis",
    "priority": 11,
    "description": "PolicyAnalysisEmbedder._generate_query_from_pdq"
  },
  {
    "class": "PolicyAnalysisEmbedder",
    "function": "_filter_by_pdq",
    "method_type": "analysis",

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    "priority": 12,
    "description": "PolicyAnalysisEmbedder._filter_by_pdq"
  },
  {
    "class": "PolicyAnalysisEmbedder",
    "function": "_extract_numerical_values",
    "method_type": "extraction",
    "priority": 13,
    "description": "PolicyAnalysisEmbedder._extract_numerical_values"
  },
  {
    "class": "PolicyAnalysisEmbedder",
    "function": "_embed_texts",
    "method_type": "analysis",
    "priority": 14,
    "description": "PolicyAnalysisEmbedder._embed_texts"
  },
  {
    "class": "PolicyAnalysisEmbedder",
    "function": "_compute_overall_confidence",
    "method_type": "analysis",
    "priority": 15,
    "description": "PolicyAnalysisEmbedder._compute_overall_confidence"
  },
  {
    "class": "FinancialAuditor",
    "function": "_calculate_sufficiency",
    "method_type": "scoring",
    "priority": 16,
    "description": "FinancialAuditor._calculate_sufficiency"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_interpret_overall_quality",
    "method_type": "analysis",
    "priority": 17,
    "description": "PDETMunicipalPlanAnalyzer._interpret_overall_quality"
  },
  {
    "class": "BayesianCounterfactualAuditor",
    "function": "aggregate_risk_and_prioritize",
    "method_type": "analysis",
    "priority": 18,
    "description": "BayesianCounterfactualAuditor.aggregate_risk_and_prioritize"
  },
  {
    "class": "PolicyTextProcessor",
    "function": "normalize_unicode",
    "method_type": "analysis",
    "priority": 19,
    "description": "PolicyTextProcessor.normalize_unicode"
  },
  {
    "class": "PolicyTextProcessor",
    "function": "segment_into_sentences",
    "method_type": "analysis",
    "priority": 20,
    "description": "PolicyTextProcessor.segment_into_sentences"
  },
  {
    "class": "IndustrialPolicyProcessor",
    "function": "_compute_evidence_confidence",
    "method_type": "analysis",
    "priority": 21,
    "description": "IndustrialPolicyProcessor._compute_evidence_confidence"
  },
  {
    "class": "IndustrialPolicyProcessor",
    "function": "_compute_avg_confidence",
    "method_type": "analysis",
    "priority": 22,
    "description": "IndustrialPolicyProcessor._compute_avg_confidence"
  }

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    },
    {
      "class": "PDETMunicipalPlanAnalyzer",
      "function": "_quality_to_dict",
      "method_type": "analysis",
      "priority": 23,
      "description": "PDETMunicipalPlanAnalyzer._quality_to_dict"
    },
    {
      "class": "IndustrialPolicyProcessor",
      "function": "_construct_evidence_bundle",
      "method_type": "analysis",
      "priority": 24,
      "description": "IndustrialPolicyProcessor._construct_evidence_bundle"
    },
    {
      "class": "PolicyTextProcessor",
      "function": "compile_pattern",
      "method_type": "analysis",
      "priority": 25,
      "description": "PolicyTextProcessor.compile_pattern"
    },
    {
      "class": "PolicyTextProcessor",
      "function": "extract_contextual_window",
      "method_type": "extraction",
      "priority": 26,
      "description": "PolicyTextProcessor.extract_contextual_window"
    },
    {
      "class": "PDETMunicipalPlanAnalyzer",
      "function": "generate_executive_report",
      "method_type": "analysis",
      "priority": 27,
      "description": "PDETMunicipalPlanAnalyzer.generate_executive_report"
    },
    {
      "class": "IndustrialPolicyProcessor",
      "function": "export_results",
      "method_type": "analysis",
      "priority": 28,
      "description": "IndustrialPolicyProcessor.export_results"
    }
  ],
  "patterns": [
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q112-000",
      "match_type": "REGEX",
      "pattern": "Índice de Sostenibilidad Ambiental|Índice de Vulnerabilidad Climática"
    },
    {
      "category": "INDICADOR",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q112-001",
      "match_type": "REGEX",
      "pattern": "indicador compuesto|indicador sintético"
    },
    {
      "category": "INDICADOR",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q112-002",
      "match_type": "REGEX",
      "pattern": "se usará como proxy|indicador aproximado"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,

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    "flags": "i",
    "id": "PAT-Q112-003",
    "match_type": "REGEX",
    "pattern": "la cobertura boscosa se usará como proxy de la biodiversidad"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q112-004",
    "match_type": "REGEX",
    "pattern": "la recurrencia de emergencias como proxy inverso de la resiliencia"
  },
  {
    "category": "INDICADOR",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q112-005",
    "match_type": "REGEX",
    "pattern": "este indicador es válido porque refleja|captura la capacidad adaptativa"
  }
],
"policy_area_id": "PA03",
"question_global": 112,
"question_id": "Q112",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿Se utilizan 'índices' (ej. Índice de Sostenibilidad Ambiental) o 'proxies' para medir los impactos en el área ambiental, justificando por qué son válidos para 'capturar el mecanismo' de resiliencia?",
"validations": {}
},
{
  "base_slot": "D5-Q3",
  "cluster_id": "CL01",
  "dimension_id": "DIM05",
  "expected_elements": [
    {
      "required": true,
      "type": "documenta_validez"
    },
    {
      "required": true,
      "type": "proxy_para_intangibles"
    },
    {
      "required": true,
      "type": "reconoce_limitaciones"
    }
  ]
},
"failure_contract": {
  "abort_if": [
    "missing_required_element",
    "incomplete_text"
  ],
  "emit_code": "ABORT-Q113-REQ"
},
"method_sets": [
  {
    "class": "CausalExtractor",
    "function": "_calculate_semantic_distance",
    "method_type": "scoring",
    "priority": 1,
    "description": "CausalExtractor._calculate_semantic_distance"
  },
  {
    "class": "SemanticAnalyzer",
    "function": "extract_semantic_cube",
    "method_type": "extraction",
    "priority": 2,
    "description": "SemanticAnalyzer.extract_semantic_cube"
  },

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{
  "class": "BayesianMechanismInference",
  "function": "_quantify_uncertainty",
  "method_type": "analysis",
  "priority": 3,
  "description": "BayesianMechanismInference._quantify_uncertainty"
},
{
  "class": "PDETMunicipalPlanAnalyzer",
  "function": "_find_mediator_mentions",
  "method_type": "analysis",
  "priority": 4,
  "description": "PDETMunicipalPlanAnalyzer._find_mediator_mentions"
},
{
  "class": "PolicyAnalysisEmbedder",
  "function": "get_diagnostics",
  "method_type": "analysis",
  "priority": 5,
  "description": "PolicyAnalysisEmbedder.get_diagnostics"
},
{
  "class": "AdaptivePriorCalculator",
  "function": "_perturb_evidence",
  "method_type": "analysis",
  "priority": 6,
  "description": "AdaptivePriorCalculator._perturb_evidence"
}
],
"patterns": [
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q113-000",
    "match_type": "REGEX",
    "pattern": "dado que es difícil medir la cultura ambiental|para aproximar la medición"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q113-001",
    "match_type": "REGEX",
    "pattern": "se utilizará como proxy|medición indirecta"
  },
  {
    "category": "INDICADOR",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q113-002",
    "match_type": "REGEX",
    "pattern": "el porcentaje de aprovechamiento de residuos como proxy de la conciencia"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q113-003",
    "match_type": "REGEX",
    "pattern": "este proxy es validado por estudios de comportamiento ambiental"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q113-004",
    "match_type": "REGEX",
    "pattern": "una limitación es que no captura las motivaciones individuales"
  },
  {
    "category": "GENERAL",

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        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q113-005",
        "match_type": "REGEX",
        "pattern": "aunque imperfecto, este proxy nos da una señal de cambio cultural"
    }
],
"policy_area_id": "PA03",
"question_global": 113,
"question_id": "Q113",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "Cuando un impacto ambiental es difícil de medir (ej. 'aumento de la conciencia ambiental'), ¿se recurre a un 'proxy'? Se valora si el texto documenta su 'validez' y reconoce sus 'limitaciones'.",
"validations": {}
},
{
    "base_slot": "D5-Q4",
    "cluster_id": "CL01",
    "dimension_id": "DIM05",
    "expected_elements": [
        {
            "required": true,
            "type": "alineacion_marcos"
        },
        {
            "required": true,
            "type": "riesgos_sistemicos"
        }
    ]
},
"failure_contract": {
    "abort_if": [
        "missing_required_element",
        "incomplete_text"
    ],
    "emit_code": "ABORT-Q114-REQ"
},
"method_sets": [
    {
        "class": "OperationalizationAuditor",
        "function": "_audit_systemic_risk",
        "method_type": "validation",
        "priority": 1,
        "description": "OperationalizationAuditor._audit_systemic_risk"
    },
    {
        "class": "BayesianCounterfactualAuditor",
        "function": "refutation_and_sanity_checks",
        "method_type": "analysis",
        "priority": 2,
        "description": "BayesianCounterfactualAuditor.refutation_and_sanity_checks"
    },
    {
        "class": "BayesianCounterfactualAuditor",
        "function": "_test_effect_stability",
        "method_type": "analysis",
        "priority": 3,
        "description": "BayesianCounterfactualAuditor._test_effect_stability"
    },
    {
        "class": "PDETMunicipalPlanAnalyzer",
        "function": "_interpret_risk",
        "method_type": "analysis",
        "priority": 4,
        "description": "PDETMunicipalPlanAnalyzer._interpret_risk"
    },
    {
        "class": "PDETMunicipalPlanAnalyzer",
        "function": "_interpret_sensitivity",
        "method_type": "analysis",
        "priority": 5,

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    "description": "PDETMunicipalPlanAnalyzer._interpret_sensitivity"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_break_cycles",
    "method_type": "analysis",
    "priority": 6,
    "description": "PDETMunicipalPlanAnalyzer._break_cycles"
  },
  {
    "class": "AdaptivePriorCalculator",
    "function": "sensitivity_analysis",
    "method_type": "analysis",
    "priority": 7,
    "description": "AdaptivePriorCalculator.sensitivity_analysis"
  }
],
"patterns": [
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q114-000",
    "match_type": "REGEX",
    "pattern": "visión 2050|Agenda 2030 de Desarrollo Sostenible"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q114-001",
    "match_type": "LITERAL",
    "pattern": "riesgo sistémico|choque externo|crisis climática"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q114-002",
    "match_type": "REGEX",
    "pattern": "cambios en los patrones de lluvia|Fenómeno de El Niño/La Niña"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q114-003",
    "match_type": "REGEX",
    "pattern": "crisis de biodiversidad a gran escala|cambios en el uso del suelo a nivel
regional"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q114-004",
    "match_type": "REGEX",
    "pattern": "estos factores podrían anular los esfuerzos de adaptación"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q114-005",
    "match_type": "LITERAL",
    "pattern": "el mecanismo causal es vulnerable a|sensible a cambios macroclimáticos"
  },
  {
    "category": "TERRITORIAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q114-006",

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    "match_type": "REGEX",
    "pattern": "estrategias de resiliencia territorial|plan de adaptación de largo plazo"
  }
],
"policy_area_id": "PA03",
"question_global": 114,
"question_id": "Q114",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿Los impactos ambientales se alinean con marcos nacionales/globales y consideran
'riesgos sistémicos' (ej. cambio en los patrones de lluvia a nivel regional) que podrían romper el
mecanismo causal?",
"validations": {}
},
{
  "base_slot": "D5-Q5",
  "cluster_id": "CL01",
  "dimension_id": "DIM05",
  "expected_elements": [
    {
      "required": true,
      "type": "analisis_realismo"
    },
    {
      "required": true,
      "type": "efectos_no_deseados"
    },
    {
      "required": true,
      "type": "hipotesis_limite"
    }
  ],
  "failure_contract": {
    "abort_if": [
      "missing_required_element",
      "incomplete_text"
    ],
    "emit_code": "ABORT-Q115-REQ"
  },
  "method_sets": [
    {
      "class": "HierarchicalGenerativeModel",
      "function": "posterior_predictive_check",
      "method_type": "analysis",
      "priority": 1,
      "description": "HierarchicalGenerativeModel.posterior_predictive_check"
    },
    {
      "class": "HierarchicalGenerativeModel",
      "function": "_ablation_analysis",
      "method_type": "analysis",
      "priority": 2,
      "description": "HierarchicalGenerativeModel._ablation_analysis"
    },
    {
      "class": "HierarchicalGenerativeModel",
      "function": "_calculate_waic_difference",
      "method_type": "scoring",
      "priority": 3,
      "description": "HierarchicalGenerativeModel._calculate_waic_difference"
    },
    {
      "class": "AdaptivePriorCalculator",
      "function": "_add_ood_noise",
      "method_type": "analysis",
      "priority": 4,
      "description": "AdaptivePriorCalculator._add_ood_noise"
    },
    {
      "class": "AdaptivePriorCalculator",
      "function": "validate_quality_criteria",
      "method_type": "validation",

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    "priority": 5,
    "description": "AdaptivePriorCalculator.validate_quality_criteria"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_compute_e_value",
    "method_type": "analysis",
    "priority": 6,
    "description": "PDETMunicipalPlanAnalyzer._compute_e_value"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_compute_robustness_value",
    "method_type": "analysis",
    "priority": 7,
    "description": "PDETMunicipalPlanAnalyzer._compute_robustness_value"
  },
  {
    "class": "BayesianMechanismInference",
    "function": "_calculate_coherence_factor",
    "method_type": "scoring",
    "priority": 8,
    "description": "BayesianMechanismInference._calculate_coherence_factor"
  }
],
"patterns": [
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q115-000",
    "match_type": "REGEX",
    "pattern": "la ambición del impacto es realista si se logra la cofinanciación"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q115-001",
    "match_type": "REGEX",
    "pattern": "efecto no deseado|consecuencia imprevista|externalidad negativa"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q115-002",
    "match_type": "REGEX",
    "pattern": "riesgo de 'gentrificación verde'|desplazamiento de comunidades"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q115-003",
    "match_type": "REGEX",
    "pattern": "conflictos por la restricción de usos del suelo en zonas protegidas"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q115-004",
    "match_type": "REGEX",
    "pattern": "trade-off entre conservación y desarrollo económico"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q115-005",
    "match_type": "REGEX",

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    "pattern": "hipótesis límite|el modelo funciona mientras los incentivos económicos se
mantengan"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q115-006",
    "match_type": "LITERAL",
    "pattern": "supuesto crítico para el impacto a largo plazo"
  }
],
"policy_area_id": "PA03",
"question_global": 115,
"question_id": "Q115",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿La ambición del impacto ambiental (ej. 'territorio carbono neutro') es realista?
Se debe buscar si se analizan posibles 'efectos no deseados' o se declaran 'hipótesis límite'.",
"validations": {}
},
{
  "base_slot": "D6-Q1",
  "cluster_id": "CL01",
  "dimension_id": "DIM06",
  "expected_elements": [
    {
      "required": true,
      "type": "diagrama_causal"
    },
    {
      "required": true,
      "type": "supuestos_verificables"
    },
    {
      "required": true,
      "type": "teoria_cambio_explicita"
    }
  ],
  "failure_contract": {
    "abort_if": [
      "missing_required_element",
      "incomplete_text"
    ],
    "emit_code": "ABORT-Q116-REQ"
  },
  "method_sets": [
    {
      "class": "TeoriaCambio",
      "function": "construir_grafo_causal",
      "method_type": "analysis",
      "priority": 1,
      "description": "TeoriaCambio.construir_grafo_causal"
    },
    {
      "class": "TeoriaCambio",
      "function": "validacion_completa",
      "method_type": "analysis",
      "priority": 2,
      "description": "TeoriaCambio.validacion_completa"
    },
    {
      "class": "TeoriaCambio",
      "function": "export_nodes",
      "method_type": "analysis",
      "priority": 3,
      "description": "TeoriaCambio.export_nodes"
    },
    {
      "class": "ReportingEngine",
      "function": "generate_causal_diagram",
      "method_type": "analysis",

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    "priority": 4,
    "description": "ReportingEngine.generate_causal_diagram"
  },
  {
    "class": "ReportingEngine",
    "function": "generate_causal_model_json",
    "method_type": "analysis",
    "priority": 5,
    "description": "ReportingEngine.generate_causal_model_json"
  },
  {
    "class": "AdvancedDAGValidator",
    "function": "export_nodes",
    "method_type": "analysis",
    "priority": 6,
    "description": "AdvancedDAGValidator.export_nodes"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "export_causal_network",
    "method_type": "analysis",
    "priority": 7,
    "description": "PDETMunicipalPlanAnalyzer.export_causal_network"
  },
  {
    "class": "CausalExtractor",
    "function": "extract_causal_hierarchy",
    "method_type": "extraction",
    "priority": 8,
    "description": "CausalExtractor.extract_causal_hierarchy"
  }
],
"patterns": [
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q116-000",
    "match_type": "REGEX",
    "pattern": "teoría de cambio|marco lógico|cadena causal|modelo lógico ambiental"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q116-001",
    "match_type": "REGEX",
    "pattern": "diagrama causal|gráfico de la teoría|esquema de intervención|figura"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q116-002",
    "match_type": "REGEX",
    "pattern": "causa raíz de la deforestación|determinante estructural de la contaminación"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q116-003",
    "match_type": "REGEX",
    "pattern": "mediador|variable intermedia|eslabón|conciencia ambiental|adopción de
tecnología"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q116-004",
    "match_type": "REGEX",

```



```

    "pattern": "moderador|factor contextual|nivel de ingresos"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q116-005",
    "match_type": "LITERAL",
    "pattern": "supuesto verificable|hipótesis a testear|premisa comprobable"
  }
],
"policy_area_id": "PA03",
"question_global": 116,
"question_id": "Q116",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿Existe una 'teoría de cambio' explícita para la gestión ambiental, preferiblemente en un 'diagrama', que identifique causas (ej. falta de POT), mediadores y 'supuestos verificables'?",
"validations": {}
},
{
  "base_slot": "D6-Q2",
  "cluster_id": "CL01",
  "dimension_id": "DIM06",
  "expected_elements": [
    {
      "required": true,
      "type": "evita_salto_logicos"
    },
    {
      "required": true,
      "type": "proporcionalidad_eslabones"
    }
  ]
},
"failure_contract": {
  "abort_if": [
    "missing_required_element",
    "incomplete_text"
  ],
  "emit_code": "ABORT-Q117-REQ"
},
"method_sets": [
  {
    "class": "BeachEvidentialTest",
    "function": "apply_test_logic",
    "method_type": "analysis",
    "priority": 1,
    "description": "BeachEvidentialTest.apply_test_logic"
  },
  {
    "class": "BayesianMechanismInference",
    "function": "_test_necessity",
    "method_type": "analysis",
    "priority": 2,
    "description": "BayesianMechanismInference._test_necessity"
  },
  {
    "class": "BayesianMechanismInference",
    "function": "_test_sufficiency",
    "method_type": "analysis",
    "priority": 3,
    "description": "BayesianMechanismInference._test_sufficiency"
  },
  {
    "class": "BayesianMechanismInference",
    "function": "_calculate_coherence_factor",
    "method_type": "scoring",
    "priority": 4,
    "description": "BayesianMechanismInference._calculate_coherence_factor"
  }
]

```

```

    "class": "BayesianCounterfactualAuditor",
    "function": "_test_effect_stability",
    "method_type": "analysis",
    "priority": 5,
    "description": "BayesianCounterfactualAuditor._test_effect_stability"
  },
  {
    "class": "IndustrialGradeValidator",
    "function": "validate_connection_matrix",
    "method_type": "validation",
    "priority": 6,
    "description": "IndustrialGradeValidator.validate_connection_matrix"
  },
  {
    "class": "PolicyAnalysisEmbedder",
    "function": "_compute_overall_confidence",
    "method_type": "analysis",
    "priority": 7,
    "description": "PolicyAnalysisEmbedder._compute_overall_confidence"
  }
],
"patterns": [
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q117-000",
    "match_type": "REGEX",
    "pattern": "proporcionalidad entre|magnitud del efecto esperado"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q117-001",
    "match_type": "REGEX",
    "pattern": "salto lógico|brecha en la argumentación|milagro de implementación"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q117-002",
    "match_type": "LITERAL",
    "pattern": "es realista esperar que|es factible que"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q117-003",
    "match_type": "REGEX",
    "pattern": "la escala de la intervención es coherente con la ambición del resultado"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q117-004",
    "match_type": "REGEX",
    "pattern": "se requieren pasos intermedios|el resultado es de mayor alcance que el
producto"
  }
],
"policy_area_id": "PA03",
"question_global": 117,
"question_id": "Q117",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿Los saltos en la cadena causal ambiental son proporcionales (ej. un programa de
reciclaje no genera por sí solo 'sostenibilidad ambiental total')?",
"validations": {}

```

```

},
{
  "base_slot": "D6-Q3",
  "cluster_id": "CL01",
  "dimension_id": "DIM06",
  "expected_elements": [
    {
      "required": true,
      "type": "propone_pilotos_o_pruebas"
    },
    {
      "required": true,
      "type": "reconoce_inconsistencias"
    }
  ],
  "failure_contract": {
    "abort_if": [
      "missing_required_element",
      "incomplete_text"
    ],
    "emit_code": "ABORT-Q118-REQ"
  },
  "method_sets": [
    {
      "class": "IndustrialGradeValidator",
      "function": "execute_suite",
      "method_type": "analysis",
      "priority": 1,
      "description": "IndustrialGradeValidator.execute_suite"
    },
    {
      "class": "IndustrialGradeValidator",
      "function": "validate_engine_readiness",
      "method_type": "validation",
      "priority": 2,
      "description": "IndustrialGradeValidator.validate_engine_readiness"
    },
    {
      "class": "IndustrialGradeValidator",
      "function": "_benchmark_operation",
      "method_type": "analysis",
      "priority": 3,
      "description": "IndustrialGradeValidator._benchmark_operation"
    },
    {
      "class": "AdaptivePriorCalculator",
      "function": "validate_quality_criteria",
      "method_type": "validation",
      "priority": 4,
      "description": "AdaptivePriorCalculator.validate_quality_criteria"
    },
    {
      "class": "HierarchicalGenerativeModel",
      "function": "_calculate_r_hat",
      "method_type": "scoring",
      "priority": 5,
      "description": "HierarchicalGenerativeModel._calculate_r_hat"
    },
    {
      "class": "HierarchicalGenerativeModel",
      "function": "_calculate_ess",
      "method_type": "scoring",
      "priority": 6,
      "description": "HierarchicalGenerativeModel._calculate_ess"
    },
    {
      "class": "AdvancedDAGValidator",
      "function": "calculate_acyclicity_pvalue",
      "method_type": "scoring",
      "priority": 7,
      "description": "AdvancedDAGValidator.calculate_acyclicity_pvalue"
    }
  ],

```

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{
  "class": "PerformanceAnalyzer",
  "function": "analyze_performance",
  "method_type": "analysis",
  "priority": 8,
  "description": "PerformanceAnalyzer.analyze_performance"
}
],
"patterns": [
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q118-000",
    "match_type": "REGEX",
    "pattern": "inconsistencia|debilidad en la teoría|supuesto débil"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q118-001",
    "match_type": "REGEX",
    "pattern": "se requiere validar|es necesario probar si el incentivo funciona"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q118-002",
    "match_type": "REGEX",
    "pattern": "plan piloto de PSA|fase experimental de compostaje|prueba de concepto"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q118-003",
    "match_type": "REGEX",
    "pattern": "testear el supuesto de la adopción de prácticas"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q118-004",
    "match_type": "REGEX",
    "pattern": "validar la hipótesis de costo-efectividad"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q118-005",
    "match_type": "REGEX",
    "pattern": "evaluación de mecanismos|monitoreo de la teoría de cambio"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q118-006",
    "match_type": "REGEX",
    "pattern": "aprendizaje adaptativo|gestión adaptativa de recursos naturales"
  }
],
"policy_area_id": "PA03",
"question_global": 118,
"question_id": "Q118",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿El plan reconoce 'inconsistencias' en su lógica ambiental y propone 'pilotos' o

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'pruebas' para 'testear los supuestos' de sus intervenciones?",
  "validations": {}
},
{
  "base_slot": "D6-Q4",
  "cluster_id": "CL01",
  "dimension_id": "DIM06",
  "expected_elements": [
    {
      "required": true,
      "type": "ciclos_aprendizaje"
    },
    {
      "required": true,
      "type": "mecanismos_correccion"
    },
    {
      "required": true,
      "type": "sistema_monitoreo"
    }
  ],
  "failure_contract": {
    "abort_if": [
      "missing_required_element",
      "incomplete_text"
    ],
    "emit_code": "ABORT-Q119-REQ"
  },
  "method_sets": [
    {
      "class": "ConfigLoader",
      "function": "update_priors_from_feedback",
      "method_type": "analysis",
      "priority": 1,
      "description": "ConfigLoader.update_priors_from_feedback"
    },
    {
      "class": "ConfigLoader",
      "function": "check_uncertainty_reduction_criterion",
      "method_type": "analysis",
      "priority": 2,
      "description": "ConfigLoader.check_uncertainty_reduction_criterion"
    },
    {
      "class": "ConfigLoader",
      "function": "_save_prior_history",
      "method_type": "analysis",
      "priority": 3,
      "description": "ConfigLoader._save_prior_history"
    },
    {
      "class": "ConfigLoader",
      "function": "_load_uncertainty_history",
      "method_type": "analysis",
      "priority": 4,
      "description": "ConfigLoader._load_uncertainty_history"
    },
    {
      "class": "CDAFFramework",
      "function": "_extract_feedback_from_audit",
      "method_type": "validation",
      "priority": 5,
      "description": "CDAFFramework._extract_feedback_from_audit"
    },
    {
      "class": "AdvancedDAGValidator",
      "function": "_calculate_node_importance",
      "method_type": "scoring",
      "priority": 6,
      "description": "AdvancedDAGValidator._calculate_node_importance"
    }
  ],
  {

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```

    "class": "BayesFactorTable",
    "function": "get_bayes_factor",
    "method_type": "analysis",
    "priority": 7,
    "description": "BayesFactorTable.get_bayes_factor"
  }
],
"patterns": [
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q119-000",
    "match_type": "REGEX",
    "pattern": "sistema de seguimiento y evaluación ambiental|M&E"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q119-001",
    "match_type": "LITERAL",
    "pattern": "monitoreo en tiempo real con imágenes satelitales"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q119-002",
    "match_type": "REGEX",
    "pattern": "alerta temprana de deforestación|alerta por calidad del aire"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q119-003",
    "match_type": "REGEX",
    "pattern": "mecanismo de ajuste|medida correctiva|reorientación de la estrategia"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q119-004",
    "match_type": "REGEX",
    "pattern": "retroalimentación de las comunidades|guardabosques"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q119-005",
    "match_type": "REGEX",
    "pattern": "ciclos de aprendizaje|reuniones del CMGRD para revisar avances"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q119-006",
    "match_type": "REGEX",
    "pattern": "lecciones aprendidas en atención de emergencias"
  }
],
"policy_area_id": "PA03",
"question_global": 119,
"question_id": "Q119",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿Se describe un sistema de monitoreo para la gestión ambiental que incluya
'mecanismos de corrección' o 'aprendizaje' para adaptar la estrategia (ej. ante una nueva mancha de

```

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deforestación)?",
  "validations": {}
},
{
  "base_slot": "D6-Q5",
  "cluster_id": "CL01",
  "dimension_id": "DIM06",
  "expected_elements": [
    {
      "required": true,
      "type": "analisis_contextual"
    },
    {
      "required": true,
      "type": "enfoque_diferencial"
    }
  ],
  "failure_contract": {
    "abort_if": [
      "missing_required_element",
      "incomplete_text"
    ],
    "emit_code": "ABORT-Q120-REQ"
  },
  "method_sets": [
    {
      "class": "CausalExtractor",
      "function": "_calculate_language_specificity",
      "method_type": "scoring",
      "priority": 1,
      "description": "CausalExtractor._calculate_language_specificity"
    },
    {
      "class": "CausalExtractor",
      "function": "_assess_temporal_coherence",
      "method_type": "analysis",
      "priority": 2,
      "description": "CausalExtractor._assess_temporal_coherence"
    },
    {
      "class": "TextMiningEngine",
      "function": "diagnose_critical_links",
      "method_type": "analysis",
      "priority": 3,
      "description": "TextMiningEngine.diagnose_critical_links"
    },
    {
      "class": "CausalInferenceSetup",
      "function": "identify_failure_points",
      "method_type": "analysis",
      "priority": 4,
      "description": "CausalInferenceSetup.identify_failure_points"
    },
    {
      "class": "CausalInferenceSetup",
      "function": "_get_dynamics_pattern",
      "method_type": "analysis",
      "priority": 5,
      "description": "CausalInferenceSetup._get_dynamics_pattern"
    },
    {
      "class": "SemanticProcessor",
      "function": "chunk_text",
      "method_type": "analysis",
      "priority": 6,
      "description": "SemanticProcessor.chunk_text"
    },
    {
      "class": "SemanticProcessor",
      "function": "_detect_pdm_structure",
      "method_type": "analysis",
      "priority": 7,

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    "description": "SemanticProcessor._detect_pdm_structure"
  },
  {
    "class": "SemanticProcessor",
    "function": "_detect_table",
    "method_type": "analysis",
    "priority": 8,
    "description": "SemanticProcessor._detect_table"
  },
  {
    "class": "AdaptivePriorCalculator",
    "function": "generate_traceability_record",
    "method_type": "analysis",
    "priority": 9,
    "description": "AdaptivePriorCalculator.generate_traceability_record"
  }
],
"patterns": [
  {
    "category": "TERRITORIAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q120-000",
    "match_type": "REGEX",
    "pattern": "enfoco diferencial|enfoco territorial"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q120-001",
    "match_type": "REGEX",
    "pattern": "comunidades ribereñas|pescadores artesanales|campesinos"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q120-002",
    "match_type": "REGEX",
    "pattern": "comunidades indígenas|territorios colectivos afrodescendientes"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q120-003",
    "match_type": "REGEX",
    "pattern": "restricciones por zonas de reserva forestal|parques nacionales"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q120-004",
    "match_type": "REGEX",
    "pattern": "contexto de frontera agrícola|minería"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q120-005",
    "match_type": "REGEX",
    "pattern": "conflictos por el uso del agua|restricciones normativas de la CAR"
  },
  {
    "category": "TERRITORIAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q120-006",
    "match_type": "REGEX",

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    "pattern": "estrategias territorializadas|acciones adaptadas a la cuenca"
  }
],
"policy_area_id": "PA03",
"question_global": 120,
"question_id": "Q120",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿La lógica causal ambiental considera el contexto, reconociendo 'grupos afectados'
(ej. comunidades ribereñas) y 'restricciones' territoriales (zonas de reserva) o regulatorias?",
"validations": {}
},
{
  "base_slot": "D1-Q1",
  "cluster_id": "CL03",
  "dimension_id": "DIM01",
  "expected_elements": [
    {
      "minimum": 2,
      "type": "fuentes_oficiales"
    },
    {
      "minimum": 3,
      "type": "indicadores_cuantitativos"
    },
    {
      "minimum": 3,
      "type": "series_temporales_años"
    }
  ],
  "failure_contract": {
    "abort_if": [
      "missing_required_element",
      "incomplete_text"
    ],
    "emit_code": "ABORT-Q121-REQ"
  },
  "method_sets": [
    {
      "class": "TextMiningEngine",
      "function": "diagnose_critical_links",
      "method_type": "analysis",
      "priority": 1,
      "description": "TextMiningEngine.diagnose_critical_links"
    },
    {
      "class": "TextMiningEngine",
      "function": "_analyze_link_text",
      "method_type": "analysis",
      "priority": 2,
      "description": "TextMiningEngine._analyze_link_text"
    },
    {
      "class": "IndustrialPolicyProcessor",
      "function": "process",
      "method_type": "analysis",
      "priority": 3,
      "description": "IndustrialPolicyProcessor.process"
    },
    {
      "class": "IndustrialPolicyProcessor",
      "function": "_match_patterns_in_sentences",
      "method_type": "analysis",
      "priority": 4,
      "description": "IndustrialPolicyProcessor._match_patterns_in_sentences"
    },
    {
      "class": "IndustrialPolicyProcessor",
      "function": "_extract_point_evidence",
      "method_type": "extraction",
      "priority": 5,
      "description": "IndustrialPolicyProcessor._extract_point_evidence"
    }
  ]
}

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```

},
{
  "class": "CausalExtractor",
  "function": "_extract_goals",
  "method_type": "extraction",
  "priority": 6,
  "description": "CausalExtractor._extract_goals"
},
{
  "class": "CausalExtractor",
  "function": "_parse_goal_context",
  "method_type": "extraction",
  "priority": 7,
  "description": "CausalExtractor._parse_goal_context"
},
{
  "class": "FinancialAuditor",
  "function": "_parse_amount",
  "method_type": "extraction",
  "priority": 8,
  "description": "FinancialAuditor._parse_amount"
},
{
  "class": "PDETMunicipalPlanAnalyzer",
  "function": "_extract_financial_amounts",
  "method_type": "extraction",
  "priority": 9,
  "description": "PDETMunicipalPlanAnalyzer._extract_financial_amounts"
},
{
  "class": "PDETMunicipalPlanAnalyzer",
  "function": "_extract_from_budget_table",
  "method_type": "extraction",
  "priority": 10,
  "description": "PDETMunicipalPlanAnalyzer._extract_from_budget_table"
},
{
  "class": "PolicyContradictionDetector",
  "function": "_extract_quantitative_claims",
  "method_type": "extraction",
  "priority": 11,
  "description": "PolicyContradictionDetector._extract_quantitative_claims"
},
{
  "class": "PolicyContradictionDetector",
  "function": "_parse_number",
  "method_type": "extraction",
  "priority": 12,
  "description": "PolicyContradictionDetector._parse_number"
},
{
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  "function": "_statistical_significance_test",
  "method_type": "analysis",
  "priority": 13,
  "description": "PolicyContradictionDetector._statistical_significance_test"
},
{
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  "function": "evaluate_policy_metric",
  "method_type": "analysis",
  "priority": 14,
  "description": "BayesianNumericalAnalyzer.evaluate_policy_metric"
},
{
  "class": "BayesianNumericalAnalyzer",
  "function": "compare_policies",
  "method_type": "analysis",
  "priority": 15,
  "description": "BayesianNumericalAnalyzer.compare_policies"
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    "function": "chunk_text",
    "method_type": "analysis",
    "priority": 16,
    "description": "SemanticProcessor.chunk_text"
  },
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    "class": "SemanticProcessor",
    "function": "embed_single",
    "method_type": "analysis",
    "priority": 17,
    "description": "SemanticProcessor.embed_single"
  }
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    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q121-000",
    "match_type": "REGEX",
    "pattern": "línea base social|diagnóstico sectorial|situación inicial"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q121-001",
    "match_type": "REGEX",
    "pattern": "fuente:|según|reportado por|con datos de"
  },
  {
    "category": "FUENTE_OFICIAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q121-002",
    "match_type": "REGEX",
    "pattern": "DANE|Censo Nacional|Encuesta de Calidad de Vida|ECV"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q121-003",
    "match_type": "REGEX",
    "pattern": "SIMAT|MinEducación|Pruebas Saber|ICFES"
  },
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    "category": "FUENTE_OFICIAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q121-004",
    "match_type": "REGEX",
    "pattern": "SISPRO|MinSalud|RUA|BDUA|SIVIGILA|ADRES"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q121-005",
    "match_type": "REGEX",
    "pattern": "SISBEN|DPS|Prosperidad Social|ICBF"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q121-006",
    "match_type": "REGEX",
    "pattern": "MinVivienda|SUI|SSPD"
  }
]

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    "flags": "i",
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  },
  {
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    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q121-008",
    "match_type": "REGEX",
    "pattern": "tasa de mortalidad infantil|tasa de mortalidad materna|desnutrición crónica"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q121-009",
    "match_type": "REGEX",
    "pattern": "déficit cuantitativo de vivienda|déficit cualitativo|hacinamiento"
  },
  {
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    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q121-010",
    "match_type": "REGEX",
    "pattern": "cobertura de acueducto|cobertura de alcantarillado|IRCA"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q121-011",
    "match_type": "REGEX",
    "pattern": "Índice de Pobreza Multidimensional|IPM"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q121-012",
    "match_type": "LITERAL",
    "pattern": "2021|2022|2023|vigencia anterior|serie histórica"
  },
  {
    "category": "INDICADOR",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q121-013",
    "match_type": "REGEX",
    "pattern": "porcentaje de hogares|tasa por 1.000 nacidos vivos|porcentaje"
  }
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"question_global": 121,
"question_id": "Q121",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿El diagnóstico presenta datos numéricos (cobertura educativa, tasa de mortalidad infantil, déficit de vivienda) para el área de Derechos económicos, sociales y culturales (DESC) que sirvan como línea base? Se debe verificar el año de referencia y fuentes (ej. DANE, SIMAT, SISPRO).",
"validations": {
  "buscar_indicadores_cuantitativos": {
    "minimum_required": 3,
    "patterns": [
      "\\d+%",
      "\\d+\\s*por\\s*\\d+",
      "tasa de",

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        "índice de",
        "cobertura de"
    ],
    "specificity": "HIGH"
},
"cobertura": {
    "minimum_required": 1,
    "patterns": [
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        "urbano",
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        "territorial",
        "poblacional"
    ],
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},
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    "minimum_years": 3,
    "patterns": [
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        "año",
        "periodo",
        "histórico",
        "serie"
    ],
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},
"unidades_medicion": {
    "minimum_required": 2,
    "patterns": [
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        "por 1.000",
        "%",
        "porcentaje",
        "tasa",
        "razón"
    ],
    "specificity": "MEDIUM"
},
"verificar_fuentes": {
    "minimum_required": 2,
    "patterns": [
        "fuente:",
        "según",
        "datos de",
        "DANE",
        "DNP",
        "SISPRO",
        "SIVIGILA",
        "Ministerio"
    ],
    "specificity": "MEDIUM"
}
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},
{
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    "cluster_id": "CL03",
    "dimension_id": "DIM01",
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        },
        {
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            "type": "cuantificacion_magnitud"
        },
        {
            "required": true,
            "type": "vacios_explicitos"
        }
    ]
}

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    }
  ],
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      "missing_required_element",
      "incomplete_text"
    ],
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      "function": "_audit_direct_evidence",
      "method_type": "validation",
      "priority": 1,
      "description": "OperationalizationAuditor._audit_direct_evidence"
    },
    {
      "class": "OperationalizationAuditor",
      "function": "_audit_systemic_risk",
      "method_type": "validation",
      "priority": 2,
      "description": "OperationalizationAuditor._audit_systemic_risk"
    },
    {
      "class": "FinancialAuditor",
      "function": "_detect_allocation_gaps",
      "method_type": "analysis",
      "priority": 3,
      "description": "FinancialAuditor._detect_allocation_gaps"
    },
    {
      "class": "BayesianMechanismInference",
      "function": "_detect_gaps",
      "method_type": "analysis",
      "priority": 4,
      "description": "BayesianMechanismInference._detect_gaps"
    },
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      "class": "PDETMunicipalPlanAnalyzer",
      "function": "_generate_optimal_remediations",
      "method_type": "analysis",
      "priority": 5,
      "description": "PDETMunicipalPlanAnalyzer._generate_optimal_remediations"
    },
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      "function": "_simulate_intervention",
      "method_type": "analysis",
      "priority": 6,
      "description": "PDETMunicipalPlanAnalyzer._simulate_intervention"
    },
    {
      "class": "BayesianCounterfactualAuditor",
      "function": "counterfactual_query",
      "method_type": "analysis",
      "priority": 7,
      "description": "BayesianCounterfactualAuditor.counterfactual_query"
    },
    {
      "class": "BayesianCounterfactualAuditor",
      "function": "_test_effect_stability",
      "method_type": "analysis",
      "priority": 8,
      "description": "BayesianCounterfactualAuditor._test_effect_stability"
    },
    {
      "class": "PolicyContradictionDetector",
      "function": "_detect_numerical_inconsistencies",
      "method_type": "analysis",
      "priority": 9,
      "description": "PolicyContradictionDetector._detect_numerical_inconsistencies"
    }
  ]
}

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    },
    {
      "class": "PolicyContradictionDetector",
      "function": "_calculate_numerical_divergence",
      "method_type": "scoring",
      "priority": 10,
      "description": "PolicyContradictionDetector._calculate_numerical_divergence"
    },
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      "class": "BayesianConfidenceCalculator",
      "function": "calculate_posterior",
      "method_type": "scoring",
      "priority": 11,
      "description": "BayesianConfidenceCalculator.calculate_posterior"
    },
    {
      "class": "PerformanceAnalyzer",
      "function": "analyze_performance",
      "method_type": "analysis",
      "priority": 12,
      "description": "PerformanceAnalyzer.analyze_performance"
    }
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      "flags": "i",
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      "match_type": "REGEX",
      "pattern": "déficit de|población sin acceso a|hogares sin cobertura"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q122-001",
      "match_type": "REGEX",
      "pattern": "barreras de acceso a la salud|barreras geográficas para la educación"
    },
    {
      "category": "INDICADOR",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q122-002",
      "match_type": "REGEX",
      "pattern": "la magnitud del problema de la desnutrición es de X%"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q122-003",
      "match_type": "REGEX",
      "pattern": "el número de familias sin vivienda digna asciende a"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q122-004",
      "match_type": "REGEX",
      "pattern": "información desactualizada del SISBEN|falta de caracterización"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q122-005",
      "match_type": "REGEX",
      "pattern": "no se cuenta con datos sobre salud mental|vacío de información"
    },
  ],

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  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q122-006",
  "match_type": "REGEX",
  "pattern": "subregistro de|dificultad en la medición de la calidad"
},
{
  "category": "GENERAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q122-007",
  "match_type": "REGEX",
  "pattern": "causas de la deserción escolar|determinantes sociales de la salud"
}
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"policy_area_id": "PA04",
"question_global": 122,
"question_id": "Q122",
"scoring_definition_ref": "scoring_modalities.TYPE_B",
"scoring_modality": "TYPE_B",
"text": "¿El texto dimensiona la magnitud de los problemas sociales (ej. desnutrición,
analfabetismo) cuantificando el déficit o la población desatendida? Se debe buscar si se mencionan
'vacíos de información' (ej. falta de caracterización de la informalidad).",
"validations": {}
},
{
  "base_slot": "D1-Q3",
  "cluster_id": "CL03",
  "dimension_id": "DIM01",
  "expected_elements": [
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      "required": true,
      "type": "asignacion_explicita"
    },
    {
      "required": true,
      "type": "suficiencia_justificada"
    },
    {
      "required": true,
      "type": "trazabilidad_ppi_bpin"
    }
  ],
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      "method_type": "analysis",
      "priority": 1,
      "description": "FinancialAuditor.trace_financial_allocation"
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      "function": "_process_financial_table",
      "method_type": "analysis",
      "priority": 2,
      "description": "FinancialAuditor._process_financial_table"
    },
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      "class": "FinancialAuditor",
      "function": "_match_program_to_node",
      "method_type": "analysis",
      "priority": 3,

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    "description": "FinancialAuditor._match_program_to_node"
  },
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    "function": "_match_goal_to_budget",
    "method_type": "analysis",
    "priority": 4,
    "description": "FinancialAuditor._match_goal_to_budget"
  },
  {
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    "function": "_perform_counterfactual_budget_check",
    "method_type": "analysis",
    "priority": 5,
    "description": "FinancialAuditor._perform_counterfactual_budget_check"
  },
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    "class": "FinancialAuditor",
    "function": "_calculate_sufficiency",
    "method_type": "scoring",
    "priority": 6,
    "description": "FinancialAuditor._calculate_sufficiency"
  },
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    "class": "PDETMunicipalPlanAnalyzer",
    "function": "analyze_financial_feasibility",
    "method_type": "analysis",
    "priority": 7,
    "description": "PDETMunicipalPlanAnalyzer.analyze_financial_feasibility"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_extract_budget_for_pillar",
    "method_type": "extraction",
    "priority": 8,
    "description": "PDETMunicipalPlanAnalyzer._extract_budget_for_pillar"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_identify_funding_source",
    "method_type": "analysis",
    "priority": 9,
    "description": "PDETMunicipalPlanAnalyzer._identify_funding_source"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_classify_tables",
    "method_type": "analysis",
    "priority": 10,
    "description": "PDETMunicipalPlanAnalyzer._classify_tables"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_analyze_funding_sources",
    "method_type": "analysis",
    "priority": 11,
    "description": "PDETMunicipalPlanAnalyzer._analyze_funding_sources"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_score_financial_component",
    "method_type": "scoring",
    "priority": 12,
    "description": "PDETMunicipalPlanAnalyzer._score_financial_component"
  },
  {
    "class": "BayesianCounterfactualAuditor",
    "function": "aggregate_risk_and_prioritize",
    "method_type": "analysis",
    "priority": 13,
    "description": "BayesianCounterfactualAuditor.aggregate_risk_and_prioritize"
  }
}

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],
"patterns": [
  {
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    "flags": "i",
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    "pattern": "Plan Plurianual de Inversiones|PPI|Plan Indicativo"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q123-001",
    "match_type": "REGEX",
    "pattern": "BPIN|Banco de Proyectos|proyecto de inversión social"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q123-002",
    "match_type": "REGEX",
    "pattern": "recursos del Sistema General de Participaciones|SGP|destinación específica"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q123-003",
    "match_type": "REGEX",
    "pattern": "presupuesto para infraestructura educativa|mejoramiento de hospitales"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q123-004",
    "match_type": "REGEX",
    "pattern": "asignación para subsidios de vivienda|proyectos VIS/VIP"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q123-005",
    "match_type": "REGEX",
    "pattern": "inversión en el Programa de Alimentación Escolar|PAE"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q123-006",
    "match_type": "REGEX",
    "pattern": "recursos de cofinanciación de los Ministerios"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q123-007",
    "match_type": "REGEX",
    "pattern": "\\$\\s*\\d+|COP\\s*\\d+|millones de pesos"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q123-008",
    "match_type": "REGEX",

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    "pattern": "el presupuesto es suficiente para|análisis de suficiencia"
  },
  "policy_area_id": "PA04",
  "question_global": 123,
  "question_id": "Q123",
  "scoring_definition_ref": "scoring_modalities.TYPE_B",
  "scoring_modality": "TYPE_B",
  "text": "¿Se identifican en el PPI recursos monetarios (con cifras en $, COP o millones)
explícitamente asignados a programas de educación, salud, vivienda, agua potable o seguridad
alimentaria?",
  "validations": {}
},
{
  "base_slot": "D1-Q4",
  "cluster_id": "CL03",
  "dimension_id": "DIM01",
  "expected_elements": [
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      "required": true,
      "type": "cuellos_botella"
    },
    {
      "required": true,
      "type": "gobernanza"
    },
    {
      "required": true,
      "type": "infraestructura_fisica"
    },
    {
      "required": true,
      "type": "procesos"
    },
    {
      "required": true,
      "type": "talento_humano"
    }
  ],
  "failure_contract": {
    "abort_if": [
      "missing_required_element",
      "incomplete_text"
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  "method_sets": [
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      "function": "identify_responsible_entities",
      "method_type": "analysis",
      "priority": 1,
      "description": "PDETMunicipalPlanAnalyzer.identify_responsible_entities"
    },
    {
      "class": "PDETMunicipalPlanAnalyzer",
      "function": "_extract_entities_ner",
      "method_type": "extraction",
      "priority": 2,
      "description": "PDETMunicipalPlanAnalyzer._extract_entities_ner"
    },
    {
      "class": "PDETMunicipalPlanAnalyzer",
      "function": "_extract_entities_syntax",
      "method_type": "extraction",
      "priority": 3,
      "description": "PDETMunicipalPlanAnalyzer._extract_entities_syntax"
    },
    {
      "class": "PDETMunicipalPlanAnalyzer",
      "function": "_classify_entity_type",
      "method_type": "analysis",

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    "priority": 4,
    "description": "PDETMunicipalPlanAnalyzer._classify_entity_type"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_score_entity_specificity",
    "method_type": "scoring",
    "priority": 5,
    "description": "PDETMunicipalPlanAnalyzer._score_entity_specificity"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_consolidate_entities",
    "method_type": "analysis",
    "priority": 6,
    "description": "PDETMunicipalPlanAnalyzer._consolidate_entities"
  },
  {
    "class": "MechanismPartExtractor",
    "function": "extract_entity_activity",
    "method_type": "extraction",
    "priority": 7,
    "description": "MechanismPartExtractor.extract_entity_activity"
  },
  {
    "class": "MechanismPartExtractor",
    "function": "_normalize_entity",
    "method_type": "analysis",
    "priority": 8,
    "description": "MechanismPartExtractor._normalize_entity"
  },
  {
    "class": "MechanismPartExtractor",
    "function": "_validate_entity_activity",
    "method_type": "validation",
    "priority": 9,
    "description": "MechanismPartExtractor._validate_entity_activity"
  },
  {
    "class": "MechanismPartExtractor",
    "function": "_calculate_ea_confidence",
    "method_type": "scoring",
    "priority": 10,
    "description": "MechanismPartExtractor._calculate_ea_confidence"
  },
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    "function": "audit_evidence_traceability",
    "method_type": "validation",
    "priority": 11,
    "description": "OperationalizationAuditor.audit_evidence_traceability"
  }
],
"patterns": [
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q124-000",
    "match_type": "REGEX",
    "pattern": "Secretaría de Educación|Salud|Desarrollo Social|Cultura"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q124-001",
    "match_type": "REGEX",
    "pattern": "ESE|Empresa Social del Estado|Hospital|puestos de salud|IPS"
  },
  {
    "category": "GENERAL",

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    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q124-002",
    "match_type": "REGEX",
    "pattern": "docentes|personal médico|talento humano en salud"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q124-003",
    "match_type": "REGEX",
    "pattern": "infraestructura educativa|infraestructura hospitalaria"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q124-004",
    "match_type": "REGEX",
    "pattern": "protocolos de atención|rutas de acceso a servicios"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q124-005",
    "match_type": "REGEX",
    "pattern": "sistema de información|historia clínica electrónica|SIMAT"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q124-006",
    "match_type": "REGEX",
    "pattern": "Consejo de Política Social|Consejo de Cultura|Juntas de Deporte"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q124-007",
    "match_type": "REGEX",
    "pattern": "articulación intersectorial|coordinación con ICBF"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q124-008",
    "match_type": "REGEX",
    "pattern": "falta de especialistas|necesidad de dotación|infraestructura deficiente"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q124-009",
    "match_type": "REGEX",
    "pattern": "cuello de botella|limitación de capacidad|barrera de acceso"
  }
],
"policy_area_id": "PA04",
"question_global": 124,
"question_id": "Q124",
"scoring_definition_ref": "scoring_modalities.TYPE_B",
"scoring_modality": "TYPE_B",
"text": "¿El PDM describe las capacidades para la gestión social, mencionando entidades (Secretarías de Educación, Salud, ESE) y sus necesidades? Se debe buscar términos como 'infraestructura educativa', 'red de prestadores de salud' y si se identifican 'limitaciones'.",
"validations": {}

```

```

},
{
  "base_slot": "D1-Q5",
  "cluster_id": "CL03",
  "dimension_id": "DIM01",
  "expected_elements": [
    {
      "required": true,
      "type": "coherencia_demostrada"
    },
    {
      "required": true,
      "type": "restricciones_capacidad"
    },
    {
      "required": true,
      "type": "restricciones_legales"
    },
    {
      "required": true,
      "type": "restricciones_presupuestales"
    }
  ],
  "failure_contract": {
    "abort_if": [
      "missing_required_element",
      "incomplete_text"
    ],
    "emit_code": "ABORT-Q125-REQ"
  },
  "method_sets": [
    {
      "class": "TemporalLogicVerifier",
      "function": "_check_deadline_constraints",
      "method_type": "analysis",
      "priority": 1,
      "description": "TemporalLogicVerifier._check_deadline_constraints"
    },
    {
      "class": "TemporalLogicVerifier",
      "function": "verify_temporal_consistency",
      "method_type": "analysis",
      "priority": 2,
      "description": "TemporalLogicVerifier.verify_temporal_consistency"
    },
    {
      "class": "CausalInferenceSetup",
      "function": "identify_failure_points",
      "method_type": "analysis",
      "priority": 3,
      "description": "CausalInferenceSetup.identify_failure_points"
    },
    {
      "class": "CausalExtractor",
      "function": "_assess_temporal_coherence",
      "method_type": "analysis",
      "priority": 4,
      "description": "CausalExtractor._assess_temporal_coherence"
    },
    {
      "class": "TextMiningEngine",
      "function": "_analyze_link_text",
      "method_type": "analysis",
      "priority": 5,
      "description": "TextMiningEngine._analyze_link_text"
    },
    {
      "class": "IndustrialPolicyProcessor",
      "function": "_analyze_causal_dimensions",
      "method_type": "analysis",
      "priority": 6,
      "description": "IndustrialPolicyProcessor._analyze_causal_dimensions"
    }
  ]
}

```

```

    },
    {
      "class": "IndustrialPolicyProcessor",
      "function": "_extract_metadata",
      "method_type": "extraction",
      "priority": 7,
      "description": "IndustrialPolicyProcessor._extract_metadata"
    }
  ],
  "patterns": [
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q125-000",
      "match_type": "REGEX",
      "pattern": "en el marco de la Ley 115 de 1994|Ley General de Educación"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q125-001",
      "match_type": "REGEX",
      "pattern": "Ley 100 de 1993|Ley Estatutaria de Salud 1751 de 2015"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q125-002",
      "match_type": "REGEX",
      "pattern": "Sistema General de Participaciones|SGP|destinación específica"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q125-003",
      "match_type": "REGEX",
      "pattern": "competencias del municipio en salud y educación"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q125-004",
      "match_type": "REGEX",
      "pattern": "responsabilidad de la Gobernación|Nación"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q125-005",
      "match_type": "REGEX",
      "pattern": "límite de recursos del SGP|techo presupuestal"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q125-006",
      "match_type": "REGEX",
      "pattern": "capacidad instalada de la ESE|déficit de docentes"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q125-007",
      "match_type": "REGEX",

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    "pattern": "restricción para la construcción de vivienda nueva"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q125-008",
    "match_type": "REGEX",
    "pattern": "durante el cuatrienio|plazo de implementación"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q125-009",
    "match_type": "REGEX",
    "pattern": "coherencia entre metas y recursos|factibilidad financiera y técnica"
  }
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"policy_area_id": "PA04",
"question_global": 125,
"question_id": "Q125",
"scoring_definition_ref": "scoring_modalities.TYPE_E",
"scoring_modality": "TYPE_E",
"text": "¿El plan justifica su alcance en DESC mencionando el marco legal (ej. leyes de salud/educación, SGP) o reconociendo restricciones explícitas de tipo presupuestal, de competencias o de capacidad instalada?",
"validations": {}
},
{
  "base_slot": "D2-Q1",
  "cluster_id": "CL03",
  "dimension_id": "DIM02",
  "expected_elements": [
    {
      "required": true,
      "type": "columna_costo"
    },
    {
      "required": true,
      "type": "columna_cronograma"
    },
    {
      "required": true,
      "type": "columna_producto"
    },
    {
      "required": true,
      "type": "columna_responsable"
    },
    {
      "required": true,
      "type": "formato_tabular"
    }
  ]
},
"failure_contract": {
  "abort_if": [
    "missing_required_element",
    "incomplete_text"
  ],
  "emit_code": "ABORT-Q126-REQ"
},
"method_sets": [
  {
    "class": "PDFProcessor",
    "function": "extract_tables",
    "method_type": "extraction",
    "priority": 1,
    "description": "PDFProcessor.extract_tables"
  },
  {
    "class": "FinanciamientoAuditor",

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    "function": "_process_financial_table",
    "method_type": "analysis",
    "priority": 2,
    "description": "FinancialAuditor._process_financial_table"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_deduplicate_tables",
    "method_type": "analysis",
    "priority": 3,
    "description": "PDETMunicipalPlanAnalyzer._deduplicate_tables"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_classify_tables",
    "method_type": "analysis",
    "priority": 4,
    "description": "PDETMunicipalPlanAnalyzer._classify_tables"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_is_likely_header",
    "method_type": "analysis",
    "priority": 5,
    "description": "PDETMunicipalPlanAnalyzer._is_likely_header"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_clean_dataframe",
    "method_type": "analysis",
    "priority": 6,
    "description": "PDETMunicipalPlanAnalyzer._clean_dataframe"
  },
  {
    "class": "ReportingEngine",
    "function": "generate_accountability_matrix",
    "method_type": "analysis",
    "priority": 7,
    "description": "ReportingEngine.generate_accountability_matrix"
  }
],
"patterns": [
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q126-000",
    "match_type": "REGEX",
    "pattern": "tabla de actividades|cuadro de seguimiento|matriz de plan de acción"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q126-001",
    "match_type": "REGEX",
    "pattern": "columna responsable|entidad a cargo|ejecutor"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q126-002",
    "match_type": "REGEX",
    "pattern": "columna producto|entregable|output|meta de producto"
  },
  {
    "category": "TEMPORAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q126-003",
    "match_type": "LITERAL",

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    "pattern": "columna cronograma|plazo|vigencia|año 1|trimestre"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q126-004",
    "match_type": "LITERAL",
    "pattern": "columna costo|presupuesto|valor|recursos|monto"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q126-005",
    "match_type": "REGEX",
    "pattern": "Secretaría de Educación|Salud|Desarrollo Social|Vivienda"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q126-006",
    "match_type": "REGEX",
    "pattern": "Plan Indicativo|Anexo de metas"
  }
],
"policy_area_id": "PA04",
"question_global": 126,
"question_id": "Q126",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿Las actividades para garantizar los DESC se presentan en un formato estructurado (tabla, cuadro) que incluya columnas para 'responsable', 'producto', 'cronograma' y 'presupuesto'?",
"validations": {}
},
{
  "base_slot": "D2-Q2",
  "cluster_id": "CL03",
  "dimension_id": "DIM02",
  "expected_elements": [
    {
      "required": true,
      "type": "instrumento_especificado"
    },
    {
      "required": true,
      "type": "logica_causal_explicita"
    },
    {
      "required": true,
      "type": "poblacion_objetivo_definida"
    }
  ],
  "failure_contract": {
    "abort_if": [
      "missing_required_element",
      "incomplete_text"
    ],
    "emit_code": "ABORT-Q127-REQ"
  },
  "method_sets": [
    {
      "class": "BayesianMechanismInference",
      "function": "infer_mechanisms",
      "method_type": "analysis",
      "priority": 1,
      "description": "BayesianMechanismInference.infer_mechanisms"
    },
    {
      "class": "BayesianMechanismInference",
      "function": "_infer_single_mechanism",

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    "method_type": "analysis",
    "priority": 2,
    "description": "BayesianMechanismInference._infer_single_mechanism"
  },
  {
    "class": "BayesianMechanismInference",
    "function": "_infer_mechanism_type",
    "method_type": "analysis",
    "priority": 3,
    "description": "BayesianMechanismInference._infer_mechanism_type"
  },
  {
    "class": "BayesianMechanismInference",
    "function": "_test_sufficiency",
    "method_type": "analysis",
    "priority": 4,
    "description": "BayesianMechanismInference._test_sufficiency"
  },
  {
    "class": "BayesianMechanismInference",
    "function": "_test_necessity",
    "method_type": "analysis",
    "priority": 5,
    "description": "BayesianMechanismInference._test_necessity"
  },
  {
    "class": "CausalExtractor",
    "function": "extract_causal_hierarchy",
    "method_type": "extraction",
    "priority": 6,
    "description": "CausalExtractor.extract_causal_hierarchy"
  },
  {
    "class": "TeoriaCambio",
    "function": "construir_grafo_causal",
    "method_type": "analysis",
    "priority": 7,
    "description": "TeoriaCambio.construir_grafo_causal"
  },
  {
    "class": "TeoriaCambio",
    "function": "_es_conexion_valida",
    "method_type": "analysis",
    "priority": 8,
    "description": "TeoriaCambio._es_conexion_valida"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "construct_causal_dag",
    "method_type": "analysis",
    "priority": 9,
    "description": "PDETMunicipalPlanAnalyzer.construct_causal_dag"
  },
  {
    "class": "BeachEvidentialTest",
    "function": "classify_test",
    "method_type": "analysis",
    "priority": 10,
    "description": "BeachEvidentialTest.classify_test"
  },
  {
    "class": "IndustrialPolicyProcessor",
    "function": "_analyze_causal_dimensions",
    "method_type": "analysis",
    "priority": 11,
    "description": "IndustrialPolicyProcessor._analyze_causal_dimensions"
  }
],
"patterns": [
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,

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    "flags": "i",
    "id": "PAT-Q127-000",
    "match_type": "REGEX",
    "pattern": "mediante|a través de|con la implementación de"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q127-001",
    "match_type": "REGEX",
    "pattern": "subsidios de vivienda|mejoramientos de vivienda"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q127-002",
    "match_type": "REGEX",
    "pattern": "construcción de aulas|dotación escolar|brigadas de salud"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q127-003",
    "match_type": "REGEX",
    "pattern": "población objetivo:|dirigido a|beneficiarios serán"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q127-004",
    "match_type": "REGEX",
    "pattern": "hogares clasificados en SISBEN|población en pobreza extrema"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q127-005",
    "match_type": "REGEX",
    "pattern": "estudiantes de zonas rurales|primera infancia|adulto mayor"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q127-006",
    "match_type": "REGEX",
    "pattern": "población migrante|personas con discapacidad"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q127-007",
    "match_type": "REGEX",
    "pattern": "con el fin de mejorar el acceso|para garantizar la permanencia"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q127-008",
    "match_type": "REGEX",
    "pattern": "lo cual reduce las barreras|porque mejora la calidad de vida"
  }
],
"policy_area_id": "PA04",
"question_global": 127,

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"question_id": "Q127",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿La descripción de las actividades sociales detalla el instrumento ('mediante subsidios', 'a través de la construcción de aulas'), la población objetivo ('hogares con IPM alto', 'estudiantes de zonas rurales') y la lógica causal?",
"validations": {}
},
{
  "base_slot": "D2-Q3",
  "cluster_id": "CL03",
  "dimension_id": "DIM02",
  "expected_elements": [
    {
      "required": true,
      "type": "aborda_causa_raiz"
    },
    {
      "required": true,
      "type": "vinculo_diagnostico_actividad"
    }
  ],
  "failure_contract": {
    "abort_if": [
      "missing_required_element",
      "incomplete_text"
    ],
    "emit_code": "ABORT-Q128-REQ"
  },
  "method_sets": [
    {
      "class": "CausalExtractor",
      "function": "_extract_causal_links",
      "method_type": "extraction",
      "priority": 1,
      "description": "CausalExtractor._extract_causal_links"
    },
    {
      "class": "CausalExtractor",
      "function": "_calculate_composite_likelihood",
      "method_type": "scoring",
      "priority": 2,
      "description": "CausalExtractor._calculate_composite_likelihood"
    },
    {
      "class": "CausalExtractor",
      "function": "_initialize_prior",
      "method_type": "analysis",
      "priority": 3,
      "description": "CausalExtractor._initialize_prior"
    },
    {
      "class": "CausalExtractor",
      "function": "_calculate_type_transition_prior",
      "method_type": "scoring",
      "priority": 4,
      "description": "CausalExtractor._calculate_type_transition_prior"
    },
    {
      "class": "PDETMunicipalPlanAnalyzer",
      "function": "_identify_causal_edges",
      "method_type": "analysis",
      "priority": 5,
      "description": "PDETMunicipalPlanAnalyzer._identify_causal_edges"
    },
    {
      "class": "PDETMunicipalPlanAnalyzer",
      "function": "_refine_edge_probabilities",
      "method_type": "analysis",
      "priority": 6,
      "description": "PDETMunicipalPlanAnalyzer._refine_edge_probabilities"
    }
  ],

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{
  "class": "BayesianCounterfactualAuditor",
  "function": "construct_scm",
  "method_type": "analysis",
  "priority": 7,
  "description": "BayesianCounterfactualAuditor.construct_scm"
},
{
  "class": "BayesianCounterfactualAuditor",
  "function": "_create_default_equations",
  "method_type": "analysis",
  "priority": 8,
  "description": "BayesianCounterfactualAuditor._create_default_equations"
},
{
  "class": "SemanticAnalyzer",
  "function": "extract_semantic_cube",
  "method_type": "extraction",
  "priority": 9,
  "description": "SemanticAnalyzer.extract_semantic_cube"
}
],
"patterns": [
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q128-000",
    "match_type": "REGEX",
    "pattern": "para abordar la causa de la deserción|en respuesta al déficit de vivienda"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q128-001",
    "match_type": "REGEX",
    "pattern": "la actividad ataca el determinante de la desnutrición"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q128-002",
    "match_type": "REGEX",
    "pattern": "causa estructural|factor determinante|nudo crítico"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q128-003",
    "match_type": "REGEX",
    "pattern": "baja calidad educativa|infraestructura deficiente"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q128-004",
    "match_type": "REGEX",
    "pattern": "barreras de acceso a servicios de salud"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q128-005",
    "match_type": "REGEX",
    "pattern": "inseguridad alimentaria en los hogares"
  },
  {

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        "category": "GENERAL",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q128-006",
        "match_type": "REGEX",
        "pattern": "falta de saneamiento básico"
    },
    {
        "category": "GENERAL",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q128-007",
        "match_type": "REGEX",
        "pattern": "árbol de problemas|diagnóstico causal del sector social"
    }
],
"policy_area_id": "PA04",
"question_global": 128,
"question_id": "Q128",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿El PDM vincula explícitamente las actividades (ej. programa de alimentación
escolar) con las 'causas raíz' de los problemas sociales (ej. desnutrición crónica) identificadas en
el diagnóstico?",
"validations": {}
},
{
    "base_slot": "D2-Q4",
    "cluster_id": "CL03",
    "dimension_id": "DIM02",
    "expected_elements": [
        {
            "required": true,
            "type": "mitigacion_propuesta"
        },
        {
            "required": true,
            "type": "riesgos_identificados"
        }
    ],
    "failure_contract": {
        "abort_if": [
            "missing_required_element",
            "incomplete_text"
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        {
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            "function": "_bayesian_risk_inference",
            "method_type": "analysis",
            "priority": 1,
            "description": "PDETMunicipalPlanAnalyzer._bayesian_risk_inference"
        },
        {
            "class": "PDETMunicipalPlanAnalyzer",
            "function": "sensitivity_analysis",
            "method_type": "analysis",
            "priority": 2,
            "description": "PDETMunicipalPlanAnalyzer.sensitivity_analysis"
        },
        {
            "class": "PDETMunicipalPlanAnalyzer",
            "function": "_interpret_risk",
            "method_type": "analysis",
            "priority": 3,
            "description": "PDETMunicipalPlanAnalyzer._interpret_risk"
        },
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            "function": "_compute_robustness_value",

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    "priority": 4,
    "description": "PDETMunicipalPlanAnalyzer._compute_robustness_value"
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    "function": "_compute_e_value",
    "method_type": "analysis",
    "priority": 5,
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    "function": "_interpret_sensitivity",
    "method_type": "analysis",
    "priority": 6,
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    "function": "_audit_systemic_risk",
    "method_type": "validation",
    "priority": 7,
    "description": "OperationalizationAuditor._audit_systemic_risk"
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  {
    "class": "BayesianCounterfactualAuditor",
    "function": "aggregate_risk_and_prioritize",
    "method_type": "analysis",
    "priority": 8,
    "description": "BayesianCounterfactualAuditor.aggregate_risk_and_prioritize"
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  {
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    "function": "refutation_and_sanity_checks",
    "method_type": "analysis",
    "priority": 9,
    "description": "BayesianCounterfactualAuditor.refutation_and_sanity_checks"
  },
  {
    "class": "AdaptivePriorCalculator",
    "function": "sensitivity_analysis",
    "method_type": "analysis",
    "priority": 10,
    "description": "AdaptivePriorCalculator.sensitivity_analysis"
  }
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"patterns": [
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q129-000",
    "match_type": "REGEX",
    "pattern": "riesgos:|posibles dificultades:|barreras a la implementación"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q129-001",
    "match_type": "REGEX",
    "pattern": "baja calidad en la prestación del PAE|retrasos en las obras"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q129-002",
    "match_type": "REGEX",
    "pattern": "focalización inadecuada de subsidios|colados en el SISBEN"
  }
],

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  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q129-003",
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},
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  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q129-004",
  "match_type": "REGEX",
  "pattern": "resistencia de la comunidad|baja participación en programas"
},
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  "category": "GENERAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q129-005",
  "match_type": "LITERAL",
  "pattern": "corrupción en la contratación"
},
{
  "category": "GENERAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q129-006",
  "match_type": "REGEX",
  "pattern": "medidas de mitigación|plan de contingencia|para mitigar"
},
{
  "category": "GENERAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q129-007",
  "match_type": "REGEX",
  "pattern": "supervisión|interventoría|auditorías visibles|veedurías ciudadanas"
}
],
"policy_area_id": "PA04",
"question_global": 129,
"question_id": "Q129",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿El plan identifica posibles riesgos en la implementación de los programas sociales (ej. focalización inadecuada, baja calidad de los servicios) y propone 'medidas de mitigación'?",
"validations": {}
},
{
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  "cluster_id": "CL03",
  "dimension_id": "DIM02",
  "expected_elements": [
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    },
    {
      "required": true,
      "type": "secuenciacion_logica"
    }
  ],
  "failure_contract": {
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      "incomplete_text"
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  "method_sets": [

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  "method_type": "scoring",
  "priority": 2,
  "description": "PolicyContradictionDetector._calculate_coherence_metrics"
},
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  "method_type": "scoring",
  "priority": 3,
  "description": "PolicyContradictionDetector._calculate_objective_alignment"
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  "method_type": "scoring",
  "priority": 4,
  "description": "PolicyContradictionDetector._calculate_graph_fragmentation"
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  "function": "audit_sequence_logic",
  "method_type": "validation",
  "priority": 5,
  "description": "OperationalizationAuditor.audit_sequence_logic"
},
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  "function": "_calculate_coherence_factor",
  "method_type": "scoring",
  "priority": 6,
  "description": "BayesianMechanismInference._calculate_coherence_factor"
},
{
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  "method_type": "scoring",
  "priority": 7,
  "description": "PDETMunicipalPlanAnalyzer._score_causal_coherence"
},
{
  "class": "AdaptivePriorCalculator",
  "function": "calculate_likelihood_adaptativo",
  "method_type": "scoring",
  "priority": 8,
  "description": "AdaptivePriorCalculator.calculate_likelihood_adaptativo"
}
],
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{
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  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q130-000",
  "match_type": "REGEX",
  "pattern": "estrategia integral|de manera articulada|intersectorial"
},
{
  "category": "GENERAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q130-001",
  "match_type": "REGEX",

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    "pattern": "la mejora de la vivienda se complementa con el acceso a servicios"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q130-002",
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    "pattern": "sinergia entre educación y cultura"
  },
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    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q130-003",
    "match_type": "REGEX",
    "pattern": "la atención en salud es un prerequisite para la permanencia escolar"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q130-004",
    "match_type": "REGEX",
    "pattern": "en una primera fase se construirá la infraestructura y luego la dotación"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q130-005",
    "match_type": "REGEX",
    "pattern": "la estrategia combina acceso, calidad y permanencia"
  }
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"question_global": 130,
"question_id": "Q130",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿El conjunto de actividades sociales demuestra una estrategia coherente? Se debe
buscar evidencia de 'complementariedad' (ej. mejora de vías + transporte escolar) o 'secuencia'
lógica.",
"validations": {}
},
{
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  "cluster_id": "CL03",
  "dimension_id": "DIM03",
  "expected_elements": [
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      "type": "fuente_verificacion"
    },
    {
      "required": true,
      "type": "linea_base_producto"
    },
    {
      "required": true,
      "type": "meta_cuantitativa"
    }
  ],
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      "incomplete_text"
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  },
  "method_sets": [
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    "method_type": "scoring",
    "priority": 1,
    "description": "PDETMunicipalPlanAnalyzer._score_indicators"
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    "function": "audit_evidence_traceability",
    "method_type": "validation",
    "priority": 2,
    "description": "OperationalizationAuditor.audit_evidence_traceability"
  },
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    "method_type": "analysis",
    "priority": 3,
    "description": "CausalInferenceSetup.assign_probative_value"
  },
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    "method_type": "analysis",
    "priority": 4,
    "description": "BeachEvidentialTest.apply_test_logic"
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    "class": "TextMiningEngine",
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    "method_type": "analysis",
    "priority": 5,
    "description": "TextMiningEngine.diagnose_critical_links"
  },
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    "function": "_extract_metadata",
    "method_type": "extraction",
    "priority": 6,
    "description": "IndustrialPolicyProcessor._extract_metadata"
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  {
    "class": "IndustrialPolicyProcessor",
    "function": "_calculate_quality_score",
    "method_type": "scoring",
    "priority": 7,
    "description": "IndustrialPolicyProcessor._calculate_quality_score"
  },
  {
    "class": "AdaptivePriorCalculator",
    "function": "generate_traceability_record",
    "method_type": "analysis",
    "priority": 8,
    "description": "AdaptivePriorCalculator.generate_traceability_record"
  }
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    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q131-000",
    "match_type": "REGEX",
    "pattern": "indicador de producto|meta de producto"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q131-001",
    "match_type": "REGEX",
    "pattern": "cupos escolares creados|estudiantes beneficiados|raciones PAE entregadas"
  }
]

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    },
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      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q131-002",
      "match_type": "REGEX",
      "pattern": "familias con subsidio de vivienda|mejoramientos de vivienda realizados"
    },
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      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q131-003",
      "match_type": "REGEX",
      "pattern": "personas afiliadas al régimen subsidiado|vacunas aplicadas"
    },
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      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q131-004",
      "match_type": "LITERAL",
      "pattern": "Línea Base:|LB:|Valor inicial:"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q131-005",
      "match_type": "REGEX",
      "pattern": "Meta Cuatrienio:|Meta:|Valor esperado:"
    },
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      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q131-006",
      "match_type": "REGEX",
      "pattern": "Fuente de verificación:|Medio de verificación:|Fuente:"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q131-007",
      "match_type": "REGEX",
      "pattern": "registros del SIMAT|listados de beneficiarios del SISBEN|actas de obra"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q131-008",
      "match_type": "REGEX",
      "pattern": "informes de la ESE|reportes de la Secretaría de Educación"
    }
  ],
  "policy_area_id": "PA04",
  "question_global": 131,
  "question_id": "Q131",
  "scoring_definition_ref": "scoring_modalities.TYPE_A",
  "scoring_modality": "TYPE_A",
  "text": "¿Los indicadores de producto social (ej. cupos escolares creados, familias con subsidio de vivienda) incluyen 'línea base', 'meta' cuantitativa y 'fuente de verificación'?",
  "validations": {}
},
{
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  "cluster_id": "CL03",
  "dimension_id": "DIM03",
  "expected_elements": [

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      "type": "proporcionalidad_meta_problema"
    }
  ],
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      "method_type": "scoring",
      "priority": 1,
      "description": "AdvancedDAGValidator._calculate_bayesian_posterior"
    },
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      "function": "_calculate_confidence_interval",
      "method_type": "scoring",
      "priority": 2,
      "description": "AdvancedDAGValidator._calculate_confidence_interval"
    },
    {
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      "function": "_adjust_domain_weights",
      "method_type": "analysis",
      "priority": 3,
      "description": "AdaptivePriorCalculator._adjust_domain_weights"
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      "function": "_get_spanish_stopwords",
      "method_type": "analysis",
      "priority": 4,
      "description": "PDETMunicipalPlanAnalyzer._get_spanish_stopwords"
    },
    {
      "class": "BayesianMechanismInference",
      "function": "_log_refactored_components",
      "method_type": "analysis",
      "priority": 5,
      "description": "BayesianMechanismInference._log_refactored_components"
    },
    {
      "class": "PDETMunicipalPlanAnalyzer",
      "function": "analyze_financial_feasibility",
      "method_type": "analysis",
      "priority": 6,
      "description": "PDETMunicipalPlanAnalyzer.analyze_financial_feasibility"
    },
    {
      "class": "PDETMunicipalPlanAnalyzer",
      "function": "_score_indicators",
      "method_type": "scoring",
      "priority": 7,
      "description": "PDETMunicipalPlanAnalyzer._score_indicators"
    },
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      "function": "_interpret_risk",
      "method_type": "analysis",
      "priority": 8,
      "description": "PDETMunicipalPlanAnalyzer._interpret_risk"
    },
    {
      "class": "FinancialAuditor",
      "function": "_calculate_sufficiency",

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    "method_type": "scoring",
    "priority": 9,
    "description": "FinancialAuditor._calculate_sufficiency"
  },
  {
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    "function": "_test_sufficiency",
    "method_type": "analysis",
    "priority": 10,
    "description": "BayesianMechanismInference._test_sufficiency"
  },
  {
    "class": "BayesianMechanismInference",
    "function": "_test_necessity",
    "method_type": "analysis",
    "priority": 11,
    "description": "BayesianMechanismInference._test_necessity"
  },
  {
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    "function": "_assess_financial_sustainability",
    "method_type": "analysis",
    "priority": 12,
    "description": "PDETMunicipalPlanAnalyzer._assess_financial_sustainability"
  },
  {
    "class": "AdaptivePriorCalculator",
    "function": "calculate_likelihood_adaptativo",
    "method_type": "scoring",
    "priority": 13,
    "description": "AdaptivePriorCalculator.calculate_likelihood_adaptativo"
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    "function": "_calculate_quality_score",
    "method_type": "scoring",
    "priority": 14,
    "description": "IndustrialPolicyProcessor._calculate_quality_score"
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    "function": "_generar_sugerencias_internas",
    "method_type": "analysis",
    "priority": 15,
    "description": "TeoriaCambio._generar_sugerencias_internas"
  },
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    "function": "_deduplicate_tables",
    "method_type": "analysis",
    "priority": 16,
    "description": "PDETMunicipalPlanAnalyzer._deduplicate_tables"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_indicator_to_dict",
    "method_type": "analysis",
    "priority": 17,
    "description": "PDETMunicipalPlanAnalyzer._indicator_to_dict"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_generate_recommendations",
    "method_type": "analysis",
    "priority": 18,
    "description": "PDETMunicipalPlanAnalyzer._generate_recommendations"
  },
  {
    "class": "IndustrialPolicyProcessor",
    "function": "_compile_pattern_registry",
    "method_type": "analysis",
    "priority": 19,

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    "description": "IndustrialPolicyProcessor._compile_pattern_registry"
  },
  {
    "class": "IndustrialPolicyProcessor",
    "function": "_build_point_patterns",
    "method_type": "analysis",
    "priority": 20,
    "description": "IndustrialPolicyProcessor._build_point_patterns"
  },
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    "function": "_empty_result",
    "method_type": "analysis",
    "priority": 21,
    "description": "IndustrialPolicyProcessor._empty_result"
  }
],
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    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q132-000",
    "match_type": "REGEX",
    "pattern": "la meta de construcción de vivienda reduce en un 20% el déficit
cuantitativo"
  },
  {
    "category": "INDICADOR",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q132-001",
    "match_type": "REGEX",
    "pattern": "se cubrirá al \\d+% de la población sin aseguramiento"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q132-002",
    "match_type": "REGEX",
    "pattern": "universo de atención|población con NBI"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q132-003",
    "match_type": "REGEX",
    "pattern": "la meta se establece en función de los recursos SGP"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q132-004",
    "match_type": "LITERAL",
    "pattern": "se priorizarán los hogares con mayor puntaje SISBEN"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q132-005",
    "match_type": "REGEX",
    "pattern": "frecuencia de las brigadas de salud|intensidad horaria de los programas
culturales"
  }
],
"policy_area_id": "PA04",
"question_global": 132,
"question_id": "Q132",

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    "scoring_definition_ref": "scoring_modalities.TYPE_A",
    "scoring_modality": "TYPE_A",
    "text": "¿Las metas de los productos sociales (ej. 'construir 200 viviendas') son
proporcionales a la magnitud del problema diagnosticado (ej. 'déficit de 1.000 viviendas')?",
    "validations": {}
  },
  {
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    "cluster_id": "CL03",
    "dimension_id": "DIM03",
    "expected_elements": [
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        "required": true,
        "type": "trazabilidad_organizacional"
      },
      {
        "required": true,
        "type": "trazabilidad_presupuestal"
      }
    ],
    "failure_contract": {
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        "missing_required_element",
        "incomplete_text"
      ],
      "emit_code": "ABORT-Q133-REQ"
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        "method_type": "analysis",
        "priority": 1,
        "description": "FinancialAuditor._match_program_to_node"
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        "function": "_match_goal_to_budget",
        "method_type": "analysis",
        "priority": 2,
        "description": "FinancialAuditor._match_goal_to_budget"
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        "method_type": "extraction",
        "priority": 3,
        "description": "PDETMunicipalPlanAnalyzer._extract_from_responsibility_tables"
      },
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        "function": "_consolidate_entities",
        "method_type": "analysis",
        "priority": 4,
        "description": "PDETMunicipalPlanAnalyzer._consolidate_entities"
      },
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        "class": "PDETMunicipalPlanAnalyzer",
        "function": "identify_responsible_entities",
        "method_type": "analysis",
        "priority": 5,
        "description": "PDETMunicipalPlanAnalyzer.identify_responsible_entities"
      },
      {
        "class": "PDETMunicipalPlanAnalyzer",
        "function": "_score_responsibility_clarity",
        "method_type": "scoring",
        "priority": 6,
        "description": "PDETMunicipalPlanAnalyzer._score_responsibility_clarity"
      },
      {
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    "function": "process_document",
    "method_type": "analysis",
    "priority": 7,
    "description": "PolicyAnalysisEmbedder.process_document"
  },
  {
    "class": "PolicyAnalysisEmbedder",
    "function": "_generate_query_from_pdq",
    "method_type": "analysis",
    "priority": 8,
    "description": "PolicyAnalysisEmbedder._generate_query_from_pdq"
  },
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    "class": "PolicyAnalysisEmbedder",
    "function": "semantic_search",
    "method_type": "analysis",
    "priority": 9,
    "description": "PolicyAnalysisEmbedder.semantic_search"
  },
  {
    "class": "PolicyAnalysisEmbedder",
    "function": "_apply_mmr",
    "method_type": "analysis",
    "priority": 10,
    "description": "PolicyAnalysisEmbedder._apply_mmr"
  },
  {
    "class": "SemanticAnalyzer",
    "function": "_empty_semantic_cube",
    "method_type": "analysis",
    "priority": 11,
    "description": "SemanticAnalyzer._empty_semantic_cube"
  },
  {
    "class": "SemanticAnalyzer",
    "function": "_classify_policy_domain",
    "method_type": "analysis",
    "priority": 12,
    "description": "SemanticAnalyzer._classify_policy_domain"
  },
  {
    "class": "SemanticAnalyzer",
    "function": "_classify_cross_cutting_themes",
    "method_type": "analysis",
    "priority": 13,
    "description": "SemanticAnalyzer._classify_cross_cutting_themes"
  },
  {
    "class": "SemanticAnalyzer",
    "function": "_classify_value_chain_link",
    "method_type": "analysis",
    "priority": 14,
    "description": "SemanticAnalyzer._classify_value_chain_link"
  },
  {
    "class": "SemanticAnalyzer",
    "function": "_vectorize_segments",
    "method_type": "analysis",
    "priority": 15,
    "description": "SemanticAnalyzer._vectorize_segments"
  },
  {
    "class": "SemanticAnalyzer",
    "function": "_process_segment",
    "method_type": "analysis",
    "priority": 16,
    "description": "SemanticAnalyzer._process_segment"
  },
  {
    "class": "SemanticAnalyzer",
    "function": "_calculate_semantic_complexity",
    "method_type": "scoring",

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    "priority": 17,
    "description": "SemanticAnalyzer._calculate_semantic_complexity"
  },
  {
    "class": "IndustrialPolicyProcessor",
    "function": "_compute_evidence_confidence",
    "method_type": "analysis",
    "priority": 18,
    "description": "IndustrialPolicyProcessor._compute_evidence_confidence"
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    "function": "_entity_to_dict",
    "method_type": "analysis",
    "priority": 19,
    "description": "PDETMunicipalPlanAnalyzer._entity_to_dict"
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    "function": "generate_traceability_record",
    "method_type": "analysis",
    "priority": 20,
    "description": "AdaptivePriorCalculator.generate_traceability_record"
  },
  {
    "class": "PolicyAnalysisEmbedder",
    "function": "generate_pdq_report",
    "method_type": "analysis",
    "priority": 21,
    "description": "PolicyAnalysisEmbedder.generate_pdq_report"
  },
  {
    "class": "ReportingEngine",
    "function": "generate_accountability_matrix",
    "method_type": "analysis",
    "priority": 22,
    "description": "ReportingEngine.generate_accountability_matrix"
  }
],
"patterns": [
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q133-000",
    "match_type": "REGEX",
    "pattern": "código BPIN|proyecto de inversión para educación/salud/vivienda"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q133-001",
    "match_type": "REGEX",
    "pattern": "programa del PPI|línea de inversión en desarrollo social"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q133-002",
    "match_type": "REGEX",
    "pattern": "recursos del proyecto|presupuesto del PAE"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q133-003",
    "match_type": "REGEX",
    "pattern": "responsable:|dependencia a cargo:|entidad ejecutora"
  },

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{
  "category": "GENERAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q133-004",
  "match_type": "REGEX",
  "pattern": "Secretaría de Educación|Secretaría de Salud|Oficina de Vivienda"
},
{
  "category": "GENERAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q133-005",
  "match_type": "REGEX",
  "pattern": "articulado con la ESE Hospital|ICBF"
},
{
  "category": "GENERAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q133-006",
  "match_type": "REGEX",
  "pattern": "convenio con|contrato de obra No."
}
],
"policy_area_id": "PA04",
"question_global": 133,
"question_id": "Q133",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿Los productos sociales tienen trazabilidad presupuestal (vinculados a códigos BPIN, PPI) y organizacional (asociados a una 'Secretaría de Desarrollo Social' o entidad responsable)?",
"validations": {}
},
{
  "base_slot": "D3-Q4",
  "cluster_id": "CL03",
  "dimension_id": "DIM03",
  "expected_elements": [
    {
      "required": true,
      "type": "coherencia_recursos"
    },
    {
      "required": true,
      "type": "factibilidad_tecnica"
    },
    {
      "required": true,
      "type": "realismo_plazos"
    }
  ],
  "failure_contract": {
    "abort_if": [
      "missing_required_element",
      "incomplete_text"
    ],
    "emit_code": "ABORT-Q134-REQ"
  },
  "method_sets": [
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      "class": "AdvancedDAGValidator",
      "function": "calculate_acyclicity_pvalue",
      "method_type": "scoring",
      "priority": 1,
      "description": "AdvancedDAGValidator.calculate_acyclicity_pvalue"
    },
    {
      "class": "AdvancedDAGValidator",
      "function": "_is_acyclic",
      "method_type": "analysis",

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    "priority": 2,
    "description": "AdvancedDAGValidator._is_acyclic"
  },
  {
    "class": "AdvancedDAGValidator",
    "function": "get_graph_stats",
    "method_type": "analysis",
    "priority": 3,
    "description": "AdvancedDAGValidator.get_graph_stats"
  },
  {
    "class": "AdvancedDAGValidator",
    "function": "_calculate_node_importance",
    "method_type": "scoring",
    "priority": 4,
    "description": "AdvancedDAGValidator._calculate_node_importance"
  },
  {
    "class": "AdvancedDAGValidator",
    "function": "_generate_subgraph",
    "method_type": "analysis",
    "priority": 5,
    "description": "AdvancedDAGValidator._generate_subgraph"
  },
  {
    "class": "AdvancedDAGValidator",
    "function": "add_node",
    "method_type": "analysis",
    "priority": 6,
    "description": "AdvancedDAGValidator.add_node"
  },
  {
    "class": "AdvancedDAGValidator",
    "function": "add_edge",
    "method_type": "analysis",
    "priority": 7,
    "description": "AdvancedDAGValidator.add_edge"
  },
  {
    "class": "AdvancedDAGValidator",
    "function": "export_nodes",
    "method_type": "analysis",
    "priority": 8,
    "description": "AdvancedDAGValidator.export_nodes"
  },
  {
    "class": "AdvancedDAGValidator",
    "function": "_initialize_rng",
    "method_type": "analysis",
    "priority": 9,
    "description": "AdvancedDAGValidator._initialize_rng"
  },
  {
    "class": "AdvancedDAGValidator",
    "function": "_calculate_statistical_power",
    "method_type": "scoring",
    "priority": 10,
    "description": "AdvancedDAGValidator._calculate_statistical_power"
  },
  {
    "class": "AdvancedDAGValidator",
    "function": "_get_node_validator",
    "method_type": "analysis",
    "priority": 11,
    "description": "AdvancedDAGValidator._get_node_validator"
  },
  {
    "class": "AdvancedDAGValidator",
    "function": "_create_empty_result",
    "method_type": "analysis",
    "priority": 12,
    "description": "AdvancedDAGValidator._create_empty_result"
  }

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},
{
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  "function": "_test_necessity",
  "method_type": "analysis",
  "priority": 13,
  "description": "BayesianMechanismInference._test_necessity"
},
{
  "class": "IndustrialGradeValidator",
  "function": "execute_suite",
  "method_type": "analysis",
  "priority": 14,
  "description": "IndustrialGradeValidator.execute_suite"
},
{
  "class": "IndustrialGradeValidator",
  "function": "validate_connection_matrix",
  "method_type": "validation",
  "priority": 15,
  "description": "IndustrialGradeValidator.validate_connection_matrix"
},
{
  "class": "IndustrialGradeValidator",
  "function": "run_performance_benchmarks",
  "method_type": "analysis",
  "priority": 16,
  "description": "IndustrialGradeValidator.run_performance_benchmarks"
},
{
  "class": "IndustrialGradeValidator",
  "function": "_benchmark_operation",
  "method_type": "analysis",
  "priority": 17,
  "description": "IndustrialGradeValidator._benchmark_operation"
},
{
  "class": "IndustrialGradeValidator",
  "function": "_log_metric",
  "method_type": "analysis",
  "priority": 18,
  "description": "IndustrialGradeValidator._log_metric"
},
{
  "class": "IndustrialGradeValidator",
  "function": "validate_engine_readiness",
  "method_type": "validation",
  "priority": 19,
  "description": "IndustrialGradeValidator.validate_engine_readiness"
},
{
  "class": "PerformanceAnalyzer",
  "function": "analyze_performance",
  "method_type": "analysis",
  "priority": 20,
  "description": "PerformanceAnalyzer.analyze_performance"
},
{
  "class": "PerformanceAnalyzer",
  "function": "_calculate_loss_functions",
  "method_type": "scoring",
  "priority": 21,
  "description": "PerformanceAnalyzer._calculate_loss_functions"
},
{
  "class": "HierarchicalGenerativeModel",
  "function": "_calculate_likelihood",
  "method_type": "scoring",
  "priority": 22,
  "description": "HierarchicalGenerativeModel._calculate_likelihood"
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{

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    "class": "HierarchicalGenerativeModel",
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    "method_type": "scoring",
    "priority": 23,
    "description": "HierarchicalGenerativeModel._calculate_ess"
  },
  {
    "class": "HierarchicalGenerativeModel",
    "function": "_calculate_r_hat",
    "method_type": "scoring",
    "priority": 24,
    "description": "HierarchicalGenerativeModel._calculate_r_hat"
  },
  {
    "class": "IndustrialGradeValidator",
    "function": "validate_causal_categories",
    "method_type": "validation",
    "priority": 25,
    "description": "IndustrialGradeValidator.validate_causal_categories"
  },
  {
    "class": "TeoriaCambio",
    "function": "_extraer_categorias",
    "method_type": "analysis",
    "priority": 26,
    "description": "TeoriaCambio._extraer_categorias"
  }
],
"patterns": [
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    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q134-000",
    "match_type": "REGEX",
    "pattern": "factibilidad|viabilidad|es realista esperar que"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q134-001",
    "match_type": "REGEX",
    "pattern": "capacidad operativa de la Secretaría de Salud para afiliar"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q134-002",
    "match_type": "REGEX",
    "pattern": "plazo de ejecución de las obras de infraestructura educativa"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q134-003",
    "match_type": "LITERAL",
    "pattern": "la meta es ambiciosa pero alcanzable con los recursos SGP"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q134-004",
    "match_type": "REGEX",
    "pattern": "contradictorio|poco probable|desproporcionado"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,

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        "flags": "i",
        "id": "PAT-Q134-005",
        "match_type": "REGEX",
        "pattern": "con los recursos asignados se puede lograr"
    }
],
"policy_area_id": "PA04",
"question_global": 134,
"question_id": "Q134",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿Existe una relación factible entre la actividad (ej. 'jornadas de afiliación') y la meta del producto asociado (ej. '10.000 nuevos afiliados a salud') para el área de DESC? Se debe evaluar si los 'plazos' y recursos son realistas.",
"validations": {}
},
{
    "base_slot": "D3-Q5",
    "cluster_id": "CL03",
    "dimension_id": "DIM03",
    "expected_elements": [
        {
            "required": true,
            "type": "conexion_producto_resultado"
        },
        {
            "required": true,
            "type": "mecanismo_causal_explicito"
        }
    ],
    "failure_contract": {
        "abort_if": [
            "missing_required_element",
            "incomplete_text"
        ],
        "emit_code": "ABORT-Q135-REQ"
    },
    "method_sets": [
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            "class": "PDETMunicipalPlanAnalyzer",
            "function": "_identify_confounders",
            "method_type": "analysis",
            "priority": 1,
            "description": "PDETMunicipalPlanAnalyzer._identify_confounders"
        },
        {
            "class": "PDETMunicipalPlanAnalyzer",
            "function": "_effect_to_dict",
            "method_type": "analysis",
            "priority": 2,
            "description": "PDETMunicipalPlanAnalyzer._effect_to_dict"
        },
        {
            "class": "PDETMunicipalPlanAnalyzer",
            "function": "_scenario_to_dict",
            "method_type": "analysis",
            "priority": 3,
            "description": "PDETMunicipalPlanAnalyzer._scenario_to_dict"
        },
        {
            "class": "PDETMunicipalPlanAnalyzer",
            "function": "_simulate_intervention",
            "method_type": "analysis",
            "priority": 4,
            "description": "PDETMunicipalPlanAnalyzer._simulate_intervention"
        },
        {
            "class": "PDETMunicipalPlanAnalyzer",
            "function": "_generate_recommendations",
            "method_type": "analysis",
            "priority": 5,
            "description": "PDETMunicipalPlanAnalyzer._generate_recommendations"
        }
    ]
}

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},
{
  "class": "PDETMunicipalPlanAnalyzer",
  "function": "_identify_causal_nodes",
  "method_type": "analysis",
  "priority": 6,
  "description": "PDETMunicipalPlanAnalyzer._identify_causal_nodes"
},
{
  "class": "BayesianCounterfactualAuditor",
  "function": "_evaluate_factual",
  "method_type": "analysis",
  "priority": 7,
  "description": "BayesianCounterfactualAuditor._evaluate_factual"
},
{
  "class": "BayesianCounterfactualAuditor",
  "function": "_evaluate_counterfactual",
  "method_type": "analysis",
  "priority": 8,
  "description": "BayesianCounterfactualAuditor._evaluate_counterfactual"
},
{
  "class": "CausalExtractor",
  "function": "_assess_financial_consistency",
  "method_type": "analysis",
  "priority": 9,
  "description": "CausalExtractor._assess_financial_consistency"
},
{
  "class": "BayesianMechanismInference",
  "function": "_infer_activity_sequence",
  "method_type": "analysis",
  "priority": 10,
  "description": "BayesianMechanismInference._infer_activity_sequence"
},
{
  "class": "BayesianMechanismInference",
  "function": "_generate_necessity_remediation",
  "method_type": "analysis",
  "priority": 11,
  "description": "BayesianMechanismInference._generate_necessity_remediation"
},
{
  "class": "BayesianCounterfactualAuditor",
  "function": "refutation_and_sanity_checks",
  "method_type": "analysis",
  "priority": 12,
  "description": "BayesianCounterfactualAuditor.refutation_and_sanity_checks"
},
{
  "class": "IndustrialPolicyProcessor",
  "function": "_load_questionnaire",
  "method_type": "analysis",
  "priority": 13,
  "description": "IndustrialPolicyProcessor._load_questionnaire"
},
{
  "class": "PDETMunicipalPlanAnalyzer",
  "function": "analyze_financial_feasibility",
  "method_type": "analysis",
  "priority": 14,
  "description": "PDETMunicipalPlanAnalyzer.analyze_financial_feasibility"
},
{
  "class": "PDETMunicipalPlanAnalyzer",
  "function": "construct_causal_dag",
  "method_type": "analysis",
  "priority": 15,
  "description": "PDETMunicipalPlanAnalyzer.construct_causal_dag"
},
{

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    "class": "PDETMunicipalPlanAnalyzer",
    "function": "estimate_causal_effects",
    "method_type": "analysis",
    "priority": 16,
    "description": "PDETMunicipalPlanAnalyzer.estimate_causal_effects"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "generate_counterfactuals",
    "method_type": "analysis",
    "priority": 17,
    "description": "PDETMunicipalPlanAnalyzer.generate_counterfactuals"
  },
  {
    "class": "CausalExtractor",
    "function": "_build_type_hierarchy",
    "method_type": "analysis",
    "priority": 18,
    "description": "CausalExtractor._build_type_hierarchy"
  },
  {
    "class": "CausalExtractor",
    "function": "_check_structural_violation",
    "method_type": "analysis",
    "priority": 19,
    "description": "CausalExtractor._check_structural_violation"
  },
  {
    "class": "CausalExtractor",
    "function": "_calculate_type_transition_prior",
    "method_type": "scoring",
    "priority": 20,
    "description": "CausalExtractor._calculate_type_transition_prior"
  },
  {
    "class": "CausalExtractor",
    "function": "_calculate_textual_proximity",
    "method_type": "scoring",
    "priority": 21,
    "description": "CausalExtractor._calculate_textual_proximity"
  },
  {
    "class": "TeoriaCambio",
    "function": "_validar_orden_causal",
    "method_type": "analysis",
    "priority": 22,
    "description": "TeoriaCambio._validar_orden_causal"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_refine_edge_probabilities",
    "method_type": "analysis",
    "priority": 23,
    "description": "PDETMunicipalPlanAnalyzer._refine_edge_probabilities"
  },
  {
    "class": "PolicyAnalysisEmbedder",
    "function": "compare_policy_interventions",
    "method_type": "analysis",
    "priority": 24,
    "description": "PolicyAnalysisEmbedder.compare_policy_interventions"
  },
  {
    "class": "BayesianMechanismInference",
    "function": "infer_mechanisms",
    "method_type": "analysis",
    "priority": 25,
    "description": "BayesianMechanismInference.infer_mechanisms"
  }
],
"patterns": [
  {

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        "category": "GENERAL",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q135-000",
        "match_type": "REGEX",
        "pattern": "esto permitirá que|lo cual contribuirá a|generando una reducción de"
    },
    {
        "category": "GENERAL",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q135-001",
        "match_type": "REGEX",
        "pattern": "el mecanismo es que el PAE reduce los costos de asistencia para las
familias"
    },
    {
        "category": "GENERAL",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q135-002",
        "match_type": "REGEX",
        "pattern": "la construcción de aulas permite ampliar la cobertura, lo que resulta en..."
    },
    {
        "category": "GENERAL",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q135-003",
        "match_type": "REGEX",
        "pattern": "la afiliación a salud elimina las barreras de acceso, mejorando el estado de
salud"
    },
    {
        "category": "GENERAL",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q135-004",
        "match_type": "REGEX",
        "pattern": "variable intermedia|mediador|eslabón causal|permanencia escolar"
    },
    {
        "category": "GENERAL",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q135-005",
        "match_type": "REGEX",
        "pattern": "cadena de valor|ruta de cambio"
    }
],
"policy_area_id": "PA04",
"question_global": 135,
"question_id": "Q135",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿El PDM explica cómo los productos sociales (ej. 'estudiantes beneficiados con
PAE') contribuyen a generar resultados (ej. 'reducción de la deserción escolar')? Se debe buscar la
descripción de este 'mecanismo'.",
"validations": {}
},
{
    "base_slot": "D4-Q1",
    "cluster_id": "CL03",
    "dimension_id": "DIM04",
    "expected_elements": [
        {
            "required": true,
            "type": "horizonte_temporal"
        },
        {
            "required": true,
            "type": "linea_base_resultado"
        }
    ]
}

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    },
    {
      "required": true,
      "type": "meta_resultado"
    },
    {
      "required": true,
      "type": "metrica_outcome"
    }
  ],
  "failure_contract": {
    "abort_if": [
      "missing_required_element",
      "incomplete_text"
    ],
    "emit_code": "ABORT-Q136-REQ"
  },
  "method_sets": [
    {
      "class": "PDETMunicipalPlanAnalyzer",
      "function": "_extract_entities_syntax",
      "method_type": "extraction",
      "priority": 1,
      "description": "PDETMunicipalPlanAnalyzer._extract_entities_syntax"
    },
    {
      "class": "PDETMunicipalPlanAnalyzer",
      "function": "_extract_entities_ner",
      "method_type": "extraction",
      "priority": 2,
      "description": "PDETMunicipalPlanAnalyzer._extract_entities_ner"
    },
    {
      "class": "CausalExtractor",
      "function": "_calculate_language_specificity",
      "method_type": "scoring",
      "priority": 3,
      "description": "CausalExtractor._calculate_language_specificity"
    },
    {
      "class": "CausalExtractor",
      "function": "_calculate_composite_likelihood",
      "method_type": "scoring",
      "priority": 4,
      "description": "CausalExtractor._calculate_composite_likelihood"
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      "class": "CausalExtractor",
      "function": "_calculate_semantic_distance",
      "method_type": "scoring",
      "priority": 5,
      "description": "CausalExtractor._calculate_semantic_distance"
    },
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      "function": "_classify_temporal_type",
      "method_type": "analysis",
      "priority": 6,
      "description": "TemporalLogicVerifier._classify_temporal_type"
    },
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      "class": "PDETMunicipalPlanAnalyzer",
      "function": "_score_indicators",
      "method_type": "scoring",
      "priority": 7,
      "description": "PDETMunicipalPlanAnalyzer._score_indicators"
    },
    {
      "class": "PDETMunicipalPlanAnalyzer",
      "function": "_find_outcome_mentions",
      "method_type": "analysis",
      "priority": 8,

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    "description": "PDETMunicipalPlanAnalyzer._find_outcome_mentions"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_score_temporal_consistency",
    "method_type": "scoring",
    "priority": 9,
    "description": "PDETMunicipalPlanAnalyzer._score_temporal_consistency"
  },
  {
    "class": "CausalExtractor",
    "function": "_extract_goals",
    "method_type": "extraction",
    "priority": 10,
    "description": "CausalExtractor._extract_goals"
  },
  {
    "class": "CausalExtractor",
    "function": "_parse_goal_context",
    "method_type": "extraction",
    "priority": 11,
    "description": "CausalExtractor._parse_goal_context"
  },
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    "function": "_classify_goal_type",
    "method_type": "analysis",
    "priority": 12,
    "description": "CausalExtractor._classify_goal_type"
  },
  {
    "class": "TemporalLogicVerifier",
    "function": "_parse_temporal_marker",
    "method_type": "extraction",
    "priority": 13,
    "description": "TemporalLogicVerifier._parse_temporal_marker"
  },
  {
    "class": "TemporalLogicVerifier",
    "function": "_extract_resources",
    "method_type": "extraction",
    "priority": 14,
    "description": "TemporalLogicVerifier._extract_resources"
  },
  {
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    "function": "analyze_performance",
    "method_type": "analysis",
    "priority": 15,
    "description": "PerformanceAnalyzer.analyze_performance"
  },
  {
    "class": "PerformanceAnalyzer",
    "function": "_generate_recommendations",
    "method_type": "analysis",
    "priority": 16,
    "description": "PerformanceAnalyzer._generate_recommendations"
  }
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"patterns": [
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    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q136-000",
    "match_type": "REGEX",
    "pattern": "indicador de resultado|indicador de efecto|outcome"
  },
  {
    "category": "INDICADOR",
    "confidence_weight": 0.85,
    "flags": "i",

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      "id": "PAT-Q136-001",
      "match_type": "REGEX",
      "pattern": "tasa de cobertura neta|tasa de deserción escolar"
    },
    {
      "category": "INDICADOR",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q136-002",
      "match_type": "REGEX",
      "pattern": "tasa de mortalidad infantil|razón de mortalidad materna"
    },
    {
      "category": "INDICADOR",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q136-003",
      "match_type": "REGEX",
      "pattern": "porcentaje de hogares con déficit habitacional|IPM"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q136-004",
      "match_type": "LITERAL",
      "pattern": "Línea Base:|LB:|valor 2023:"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q136-005",
      "match_type": "REGEX",
      "pattern": "Meta Cuatrienio:|Meta 2027:|se espera reducir a"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q136-006",
      "match_type": "REGEX",
      "pattern": "Fuente de verificación:|Medio de verificación:"
    },
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      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q136-007",
      "match_type": "REGEX",
      "pattern": "Ficha de Indicador de Resultado (KPT del DNP)"
    },
    {
      "category": "TEMPORAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q136-008",
      "match_type": "REGEX",
      "pattern": "horizonte temporal|ventana de maduración|al final del periodo"
    }
  ],
  "policy_area_id": "PA04",
  "question_global": 136,
  "question_id": "Q136",
  "scoring_definition_ref": "scoring_modalities.TYPE_A",
  "scoring_modality": "TYPE_A",
  "text": "¿Los indicadores de resultado social (ej. 'tasa de cobertura neta en educación', 'reducción del IPM') están definidos con línea base, meta y un horizonte temporal?",
  "validations": {}
},
{
  "base_slot": "D4-Q2",

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"cluster_id": "CL03",
"dimension_id": "DIM04",
"expected_elements": [
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    "required": true,
    "type": "cadena_causal_explicita"
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  {
    "required": true,
    "type": "condiciones_habilitantes"
  },
  {
    "required": true,
    "type": "supuestos_identificados"
  }
],
"failure_contract": {
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    "missing_required_element",
    "incomplete_text"
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"method_sets": [
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    "function": "_encontrar_caminos_completos",
    "method_type": "analysis",
    "priority": 1,
    "description": "TeoriaCambio._encontrar_caminos_completos"
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    "function": "validacion_completa",
    "method_type": "analysis",
    "priority": 2,
    "description": "TeoriaCambio.validacion_completa"
  },
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    "function": "extract_causal_hierarchy",
    "method_type": "extraction",
    "priority": 3,
    "description": "CausalExtractor.extract_causal_hierarchy"
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    "function": "verify_conditional_independence",
    "method_type": "analysis",
    "priority": 4,
    "description": "HierarchicalGenerativeModel.verify_conditional_independence"
  },
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    "function": "_generate_independence_tests",
    "method_type": "analysis",
    "priority": 5,
    "description": "HierarchicalGenerativeModel._generate_independence_tests"
  },
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    "function": "construct_scm",
    "method_type": "analysis",
    "priority": 6,
    "description": "BayesianCounterfactualAuditor.construct_scm"
  },
  {
    "class": "AdvancedDAGValidator",
    "function": "_perform_sensitivity_analysis_internal",
    "method_type": "analysis",
    "priority": 7,
    "description": "AdvancedDAGValidator._perform_sensitivity_analysis_internal"
  }
]

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    },
    {
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      "function": "get_bayes_factor",
      "method_type": "analysis",
      "priority": 8,
      "description": "BayesFactorTable.get_bayes_factor"
    }
  ],
  "patterns": [
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      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q137-000",
      "match_type": "REGEX",
      "pattern": "cadena causal|lógica de intervención|si... entonces..."
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q137-001",
      "match_type": "REGEX",
      "pattern": "el resultado se logrará siempre y cuando|asumiendo que"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q137-002",
      "match_type": "REGEX",
      "pattern": "supuesto clave|premisa fundamental"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q137-003",
      "match_type": "REGEX",
      "pattern": "condición habilitante|factor crítico|requiere de"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q137-004",
      "match_type": "REGEX",
      "pattern": "depende de la calidad de los docentes|corresponsabilidad de las familias"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q137-005",
      "match_type": "REGEX",
      "pattern": "un supuesto es que los hogares usen adecuadamente la vivienda mejorada"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q137-006",
      "match_type": "REGEX",
      "pattern": "se requiere que la ESE garantice la disponibilidad de medicamentos"
    }
  ],
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  "question_global": 137,
  "question_id": "Q137",
  "scoring_definition_ref": "scoring_modalities.TYPE_A",
  "scoring_modality": "TYPE_A",

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    "text": "¿Se explicita la cadena causal que lleva a la mejora social, mencionando
'supuestos' (ej. 'si los padres llevan a sus hijos a la escuela') o 'condiciones habilitantes'?",
    "validations": {}
  },
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    "cluster_id": "CL03",
    "dimension_id": "DIM04",
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      {
        "required": true,
        "type": "justificacion_capacidad"
      },
      {
        "required": true,
        "type": "justificacion_recursos"
      }
    ],
    "failure_contract": {
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        "incomplete_text"
      ],
      "emit_code": "ABORT-Q138-REQ"
    },
    "method_sets": [
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        "function": "_get_prior_effect",
        "method_type": "analysis",
        "priority": 1,
        "description": "PDETMunicipalPlanAnalyzer._get_prior_effect"
      },
      {
        "class": "PDETMunicipalPlanAnalyzer",
        "function": "_estimate_effect_bayesian",
        "method_type": "analysis",
        "priority": 2,
        "description": "PDETMunicipalPlanAnalyzer._estimate_effect_bayesian"
      },
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        "class": "PDETMunicipalPlanAnalyzer",
        "function": "_compute_robustness_value",
        "method_type": "analysis",
        "priority": 3,
        "description": "PDETMunicipalPlanAnalyzer._compute_robustness_value"
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      {
        "class": "AdaptivePriorCalculator",
        "function": "sensitivity_analysis",
        "method_type": "analysis",
        "priority": 4,
        "description": "AdaptivePriorCalculator.sensitivity_analysis"
      },
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        "class": "HierarchicalGenerativeModel",
        "function": "_calculate_r_hat",
        "method_type": "scoring",
        "priority": 5,
        "description": "HierarchicalGenerativeModel._calculate_r_hat"
      },
      {
        "class": "HierarchicalGenerativeModel",
        "function": "_calculate_ess",
        "method_type": "scoring",
        "priority": 6,
        "description": "HierarchicalGenerativeModel._calculate_ess"
      }
    ]
  },

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{
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  "function": "_calculate_statistical_power",
  "method_type": "scoring",
  "priority": 7,
  "description": "AdvancedDAGValidator._calculate_statistical_power"
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  "function": "_aggregate_bayesian_confidence",
  "method_type": "analysis",
  "priority": 8,
  "description": "BayesianMechanismInference._aggregate_bayesian_confidence"
}
],
"patterns": [
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    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q138-000",
    "match_type": "REGEX",
    "pattern": "meta ambiciosa pero factible|meta realista dado el presupuesto del SGP"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q138-001",
    "match_type": "REGEX",
    "pattern": "la meta se justifica por la construcción de la nueva infraestructura"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q138-002",
    "match_type": "REGEX",
    "pattern": "con la inversión de X se espera lograr una reducción de Y"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q138-003",
    "match_type": "REGEX",
    "pattern": "la capacidad de la red hospitalaria permite aspirar a esta meta"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q138-004",
    "match_type": "REGEX",
    "pattern": "en experiencias similares de otros municipios con programas de APS"
  },
  {
    "category": "TERRITORIAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q138-005",
    "match_type": "REGEX",
    "pattern": "benchmark|referente departamental|meta del PND en educación"
  }
],
"policy_area_id": "PA04",
"question_global": 138,
"question_id": "Q138",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿La ambición de las metas de resultado social (ej. 'aumentar la cobertura educativa en 5 puntos') se justifica en función de la inversión, la capacidad instalada o se compara con

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'casos' similares?",
  "validations": {}
},
{
  "base_slot": "D4-Q4",
  "cluster_id": "CL03",
  "dimension_id": "DIM04",
  "expected_elements": [
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      "type": "criterios_exito_definidos"
    },
    {
      "required": true,
      "type": "vinculo_resultado_problema"
    }
  ],
  "failure_contract": {
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      "missing_required_element",
      "incomplete_text"
    ],
    "emit_code": "ABORT-Q139-REQ"
  },
  "method_sets": [
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      "class": "PolicyContradictionDetector",
      "function": "_calculate_objective_alignment",
      "method_type": "scoring",
      "priority": 1,
      "description": "PolicyContradictionDetector._calculate_objective_alignment"
    },
    {
      "class": "PolicyContradictionDetector",
      "function": "_identify_affected_sections",
      "method_type": "analysis",
      "priority": 2,
      "description": "PolicyContradictionDetector._identify_affected_sections"
    },
    {
      "class": "PolicyContradictionDetector",
      "function": "_generate_resolution_recommendations",
      "method_type": "analysis",
      "priority": 3,
      "description": "PolicyContradictionDetector._generate_resolution_recommendations"
    },
    {
      "class": "OperationalizationAuditor",
      "function": "_generate_optimal_remediations",
      "method_type": "analysis",
      "priority": 4,
      "description": "OperationalizationAuditor._generate_optimal_remediations"
    },
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      "class": "OperationalizationAuditor",
      "function": "_get_remediation_text",
      "method_type": "analysis",
      "priority": 5,
      "description": "OperationalizationAuditor._get_remediation_text"
    },
    {
      "class": "BayesianCounterfactualAuditor",
      "function": "aggregate_risk_and_prioritize",
      "method_type": "analysis",
      "priority": 6,
      "description": "BayesianCounterfactualAuditor.aggregate_risk_and_prioritize"
    },
    {
      "class": "FinancialAuditor",
      "function": "_detect_allocation_gaps",
      "method_type": "analysis",
      "priority": 7,

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    "description": "FinancialAuditor._detect_allocation_gaps"
  }
],
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    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q139-000",
    "match_type": "REGEX",
    "pattern": "este resultado responde al problema del déficit habitacional"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q139-001",
    "match_type": "REGEX",
    "pattern": "para solucionar la baja cobertura educativa"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q139-002",
    "match_type": "REGEX",
    "pattern": "el resultado atiende directamente las causas de la mortalidad materna"
  },
  {
    "category": "INDICADOR",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q139-003",
    "match_type": "REGEX",
    "pattern": "criterio de éxito|se considerará un logro si la deserción baja de X%"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q139-004",
    "match_type": "REGEX",
    "pattern": "umbral de cumplimiento|mínimo aceptable"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q139-005",
    "match_type": "REGEX",
    "pattern": "matriz de coherencia|alineación diagnóstico-estrategia"
  }
],
"policy_area_id": "PA04",
"question_global": 139,
"question_id": "Q139",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿Los resultados propuestos (ej. 'mejora en las condiciones de habitabilidad' 'atienden' o 'abordan' directamente los problemas de déficit de vivienda o salud priorizados en el diagnóstico?",
"validations": {}
},
{
  "base_slot": "D4-Q5",
  "cluster_id": "CL03",
  "dimension_id": "DIM04",
  "expected_elements": [
    {
      "required": true,
      "type": "alineacion_ods"
    }
  ],

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    {
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      "type": "alineacion_pnd"
    }
  ],
  "failure_contract": {
    "abort_if": [
      "missing_required_element",
      "incomplete_text"
    ],
    "emit_code": "ABORT-Q140-REQ"
  },
  "method_sets": [
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      "function": "_score_pdet_alignment",
      "method_type": "scoring",
      "priority": 1,
      "description": "PDETMunicipalPlanAnalyzer._score_pdet_alignment"
    },
    {
      "class": "PDETMunicipalPlanAnalyzer",
      "function": "_score_causal_coherence",
      "method_type": "scoring",
      "priority": 2,
      "description": "PDETMunicipalPlanAnalyzer._score_causal_coherence"
    },
    {
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      "function": "_validate_dnp_compliance",
      "method_type": "validation",
      "priority": 3,
      "description": "CDAFFramework._validate_dnp_compliance"
    },
    {
      "class": "CDAFFramework",
      "function": "_generate_dnp_report",
      "method_type": "analysis",
      "priority": 4,
      "description": "CDAFFramework._generate_dnp_report"
    },
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      "class": "IndustrialPolicyProcessor",
      "function": "_analyze_causal_dimensions",
      "method_type": "analysis",
      "priority": 5,
      "description": "IndustrialPolicyProcessor._analyze_causal_dimensions"
    },
    {
      "class": "AdaptivePriorCalculator",
      "function": "validate_quality_criteria",
      "method_type": "validation",
      "priority": 6,
      "description": "AdaptivePriorCalculator.validate_quality_criteria"
    }
  ],
  "patterns": [
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      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q140-000",
      "match_type": "REGEX",
      "pattern": "alineado con el Plan Nacional de Desarrollo|PND|transformación"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q140-001",
      "match_type": "REGEX",
      "pattern": "contribuye a los ODS 1, 2, 3, 4, 6, 11|Objetivos de Desarrollo Sostenible"
    }
  ]
}

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    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q140-002",
      "match_type": "REGEX",
      "pattern": "en concordancia con las políticas nacionales de salud y educación"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q140-003",
      "match_type": "REGEX",
      "pattern": "articulado con el CONPES de Primera Infancia|Seguridad Alimentaria"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q140-004",
      "match_type": "REGEX",
      "pattern": "eje de convergencia social-regional|transformación productiva"
    }
  ],
  "policy_area_id": "PA04",
  "question_global": 140,
  "question_id": "Q140",
  "scoring_definition_ref": "scoring_modalities.TYPE_A",
  "scoring_modality": "TYPE_A",
  "text": "¿El plan declara la alineación de sus resultados sociales con marcos superiores
como el PND o los ODS (1, 2, 3, 4)?",
  "validations": {}
},
{
  "base_slot": "D5-Q1",
  "cluster_id": "CL03",
  "dimension_id": "DIM05",
  "expected_elements": [
    {
      "required": true,
      "type": "impacto_definido"
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    {
      "required": true,
      "type": "rezago_temporal"
    },
    {
      "required": true,
      "type": "ruta_transmision"
    }
  ],
  "failure_contract": {
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      "incomplete_text"
    ],
    "emit_code": "ABORT-Q141-REQ"
  },
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      "class": "PDETMunicipalPlanAnalyzer",
      "function": "generate_counterfactuals",
      "method_type": "analysis",
      "priority": 1,
      "description": "PDETMunicipalPlanAnalyzer.generate_counterfactuals"
    },
    {
      "class": "PDETMunicipalPlanAnalyzer",
      "function": "_simulate_intervention",
      "method_type": "analysis",

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    "priority": 2,
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  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_generate_scenario_narrative",
    "method_type": "analysis",
    "priority": 3,
    "description": "PDETMunicipalPlanAnalyzer._generate_scenario_narrative"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_find_mediator_mentions",
    "method_type": "analysis",
    "priority": 4,
    "description": "PDETMunicipalPlanAnalyzer._find_mediator_mentions"
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  {
    "class": "TeoriaCambio",
    "function": "_validar_orden_causal",
    "method_type": "analysis",
    "priority": 5,
    "description": "TeoriaCambio._validar_orden_causal"
  },
  {
    "class": "CausalExtractor",
    "function": "_assess_temporal_coherence",
    "method_type": "analysis",
    "priority": 6,
    "description": "CausalExtractor._assess_temporal_coherence"
  },
  {
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    "function": "_generate_interventions",
    "method_type": "analysis",
    "priority": 7,
    "description": "TextMiningEngine._generate_interventions"
  },
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    "class": "BayesianCounterfactualAuditor",
    "function": "construct_scm",
    "method_type": "analysis",
    "priority": 8,
    "description": "BayesianCounterfactualAuditor.construct_scm"
  }
],
"patterns": [
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q141-000",
    "match_type": "REGEX",
    "pattern": "impacto esperado|visión de largo plazo|transformación social"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q141-001",
    "match_type": "REGEX",
    "pattern": "mejora del capital humano|desarrollo humano integral"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q141-002",
    "match_type": "REGEX",
    "pattern": "reducción de la pobreza multidimensional y monetaria"
  },
  {

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        "category": "GENERAL",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q141-003",
        "match_type": "REGEX",
        "pattern": "cierre de brechas sociales|mayor equidad"
    },
    {
        "category": "GENERAL",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q141-004",
        "match_type": "REGEX",
        "pattern": "la suma de los resultados en salud y educación generará el impacto de"
    },
    {
        "category": "GENERAL",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q141-005",
        "match_type": "REGEX",
        "pattern": "ruta de transmisión|cadena de impacto"
    },
    {
        "category": "TEMPORAL",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q141-006",
        "match_type": "REGEX",
        "pattern": "tiempo de maduración|efectos intergeneracionales|se espera observar en 10
años"
    }
],
"policy_area_id": "PA04",
"question_global": 141,
"question_id": "Q141",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿El PDM define 'impactos' de largo plazo para los DESC (ej. 'mejora del capital humano', 'reducción de la pobreza multidimensional')? Se debe verificar si se menciona la ruta desde los resultados y el 'tiempo de maduración' esperado.",
"validations": {}
},
{
    "base_slot": "D5-Q2",
    "cluster_id": "CL03",
    "dimension_id": "DIM05",
    "expected_elements": [
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            "required": true,
            "type": "justifica_validez"
        },
        {
            "required": true,
            "type": "usa_indices_compuestos"
        },
        {
            "required": true,
            "type": "usa_proxies"
        }
    ]
},
"failure_contract": {
    "abort_if": [
        "missing_required_element",
        "incomplete_text"
    ],
    "emit_code": "ABORT-Q142-REQ"
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"method_sets": [
    {
        "class": "PDETMunicipalPlanAnalyzer",
        "function": "calculate_quality_score",

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    "method_type": "scoring",
    "priority": 1,
    "description": "PDETMunicipalPlanAnalyzer.calculate_quality_score"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_estimate_score_confidence",
    "method_type": "scoring",
    "priority": 2,
    "description": "PDETMunicipalPlanAnalyzer._estimate_score_confidence"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_compute_e_value",
    "method_type": "analysis",
    "priority": 3,
    "description": "PDETMunicipalPlanAnalyzer._compute_e_value"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_compute_robustness_value",
    "method_type": "analysis",
    "priority": 4,
    "description": "PDETMunicipalPlanAnalyzer._compute_robustness_value"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_interpret_sensitivity",
    "method_type": "analysis",
    "priority": 5,
    "description": "PDETMunicipalPlanAnalyzer._interpret_sensitivity"
  },
  {
    "class": "ReportingEngine",
    "function": "_calculate_quality_score",
    "method_type": "scoring",
    "priority": 6,
    "description": "ReportingEngine._calculate_quality_score"
  },
  {
    "class": "BayesianMechanismInference",
    "function": "_aggregate_bayesian_confidence",
    "method_type": "analysis",
    "priority": 7,
    "description": "BayesianMechanismInference._aggregate_bayesian_confidence"
  },
  {
    "class": "PolicyAnalysisEmbedder",
    "function": "evaluate_policy_numerical_consistency",
    "method_type": "analysis",
    "priority": 8,
    "description": "PolicyAnalysisEmbedder.evaluate_policy_numerical_consistency"
  },
  {
    "class": "PolicyAnalysisEmbedder",
    "function": "get_diagnostics",
    "method_type": "analysis",
    "priority": 9,
    "description": "PolicyAnalysisEmbedder.get_diagnostics"
  },
  {
    "class": "PolicyAnalysisEmbedder",
    "function": "process_document",
    "method_type": "analysis",
    "priority": 10,
    "description": "PolicyAnalysisEmbedder.process_document"
  },
  {
    "class": "PolicyAnalysisEmbedder",
    "function": "_generate_query_from_pdq",
    "method_type": "analysis",
    "priority": 11,

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    "description": "PolicyAnalysisEmbedder._generate_query_from_pdq"
  },
  {
    "class": "PolicyAnalysisEmbedder",
    "function": "_filter_by_pdq",
    "method_type": "analysis",
    "priority": 12,
    "description": "PolicyAnalysisEmbedder._filter_by_pdq"
  },
  {
    "class": "PolicyAnalysisEmbedder",
    "function": "_extract_numerical_values",
    "method_type": "extraction",
    "priority": 13,
    "description": "PolicyAnalysisEmbedder._extract_numerical_values"
  },
  {
    "class": "PolicyAnalysisEmbedder",
    "function": "_embed_texts",
    "method_type": "analysis",
    "priority": 14,
    "description": "PolicyAnalysisEmbedder._embed_texts"
  },
  {
    "class": "PolicyAnalysisEmbedder",
    "function": "_compute_overall_confidence",
    "method_type": "analysis",
    "priority": 15,
    "description": "PolicyAnalysisEmbedder._compute_overall_confidence"
  },
  {
    "class": "FinancialAuditor",
    "function": "_calculate_sufficiency",
    "method_type": "scoring",
    "priority": 16,
    "description": "FinancialAuditor._calculate_sufficiency"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_interpret_overall_quality",
    "method_type": "analysis",
    "priority": 17,
    "description": "PDETMunicipalPlanAnalyzer._interpret_overall_quality"
  },
  {
    "class": "BayesianCounterfactualAuditor",
    "function": "aggregate_risk_and_prioritize",
    "method_type": "analysis",
    "priority": 18,
    "description": "BayesianCounterfactualAuditor.aggregate_risk_and_prioritize"
  },
  {
    "class": "PolicyTextProcessor",
    "function": "normalize_unicode",
    "method_type": "analysis",
    "priority": 19,
    "description": "PolicyTextProcessor.normalize_unicode"
  },
  {
    "class": "PolicyTextProcessor",
    "function": "segment_into_sentences",
    "method_type": "analysis",
    "priority": 20,
    "description": "PolicyTextProcessor.segment_into_sentences"
  },
  {
    "class": "IndustrialPolicyProcessor",
    "function": "_compute_evidence_confidence",
    "method_type": "analysis",
    "priority": 21,
    "description": "IndustrialPolicyProcessor._compute_evidence_confidence"
  },

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{
  "class": "IndustrialPolicyProcessor",
  "function": "_compute_avg_confidence",
  "method_type": "analysis",
  "priority": 22,
  "description": "IndustrialPolicyProcessor._compute_avg_confidence"
},
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  "class": "PDETMunicipalPlanAnalyzer",
  "function": "_quality_to_dict",
  "method_type": "analysis",
  "priority": 23,
  "description": "PDETMunicipalPlanAnalyzer._quality_to_dict"
},
{
  "class": "IndustrialPolicyProcessor",
  "function": "_construct_evidence_bundle",
  "method_type": "analysis",
  "priority": 24,
  "description": "IndustrialPolicyProcessor._construct_evidence_bundle"
},
{
  "class": "PolicyTextProcessor",
  "function": "compile_pattern",
  "method_type": "analysis",
  "priority": 25,
  "description": "PolicyTextProcessor.compile_pattern"
},
{
  "class": "PolicyTextProcessor",
  "function": "extract_contextual_window",
  "method_type": "extraction",
  "priority": 26,
  "description": "PolicyTextProcessor.extract_contextual_window"
},
{
  "class": "PDETMunicipalPlanAnalyzer",
  "function": "generate_executive_report",
  "method_type": "analysis",
  "priority": 27,
  "description": "PDETMunicipalPlanAnalyzer.generate_executive_report"
},
{
  "class": "IndustrialPolicyProcessor",
  "function": "export_results",
  "method_type": "analysis",
  "priority": 28,
  "description": "IndustrialPolicyProcessor.export_results"
}
],
"patterns": [
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    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q142-000",
    "match_type": "REGEX",
    "pattern": "Índice de Desarrollo Humano|IDH|Índice de Pobreza Multidimensional|IPM"
  },
  {
    "category": "INDICADOR",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q142-001",
    "match_type": "REGEX",
    "pattern": "Coeficiente de Gini|indicador compuesto de calidad de vida"
  },
  {
    "category": "INDICADOR",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q142-002",

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    "match_type": "REGEX",
    "pattern": "se usará como proxy|indicador aproximado"
  },
  {
    "category": "TEMPORAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q142-003",
    "match_type": "REGEX",
    "pattern": "los años promedio de escolaridad como proxy del capital humano"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q142-004",
    "match_type": "REGEX",
    "pattern": "la esperanza de vida al nacer como proxy del bienestar general"
  },
  {
    "category": "INDICADOR",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q142-005",
    "match_type": "REGEX",
    "pattern": "este indicador es válido porque es un estándar internacional"
  }
],
"policy_area_id": "PA04",
"question_global": 142,
"question_id": "Q142",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿Se utilizan 'índices' (ej. Índice de Desarrollo Humano, IPM) o 'proxies' para
medir los impactos en el bienestar, justificando su validez?",
"validations": {}
},
{
  "base_slot": "D5-Q3",
  "cluster_id": "CL03",
  "dimension_id": "DIM05",
  "expected_elements": [
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      "required": true,
      "type": "documenta_validez"
    },
    {
      "required": true,
      "type": "proxy_para_intangibles"
    },
    {
      "required": true,
      "type": "reconoce_limitaciones"
    }
  ],
  "failure_contract": {
    "abort_if": [
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      "incomplete_text"
    ],
    "emit_code": "ABORT-Q143-REQ"
  },
  "method_sets": [
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      "class": "CausalExtractor",
      "function": "_calculate_semantic_distance",
      "method_type": "scoring",
      "priority": 1,
      "description": "CausalExtractor._calculate_semantic_distance"
    },
    {
      "class": "SemanticAnalyzer",

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    "function": "extract_semantic_cube",
    "method_type": "extraction",
    "priority": 2,
    "description": "SemanticAnalyzer.extract_semantic_cube"
  },
  {
    "class": "BayesianMechanismInference",
    "function": "_quantify_uncertainty",
    "method_type": "analysis",
    "priority": 3,
    "description": "BayesianMechanismInference._quantify_uncertainty"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_find_mediator_mentions",
    "method_type": "analysis",
    "priority": 4,
    "description": "PDETMunicipalPlanAnalyzer._find_mediator_mentions"
  },
  {
    "class": "PolicyAnalysisEmbedder",
    "function": "get_diagnostics",
    "method_type": "analysis",
    "priority": 5,
    "description": "PolicyAnalysisEmbedder.get_diagnostics"
  },
  {
    "class": "AdaptivePriorCalculator",
    "function": "_perturb_evidence",
    "method_type": "analysis",
    "priority": 6,
    "description": "AdaptivePriorCalculator._perturb_evidence"
  }
],
"patterns": [
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q143-000",
    "match_type": "REGEX",
    "pattern": "dado que es difícil medir el tejido social|para aproximar la medición de"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q143-001",
    "match_type": "REGEX",
    "pattern": "se utilizará como proxy|medición indirecta"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q143-002",
    "match_type": "REGEX",
    "pattern": "el número de organizaciones comunitarias activas como proxy de capital
social"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q143-003",
    "match_type": "REGEX",
    "pattern": "este proxy es validado por estudios de sociología|evidencia académica"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",

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      "id": "PAT-Q143-004",
      "match_type": "REGEX",
      "pattern": "una limitación es que no captura la calidad de las interacciones"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q143-005",
      "match_type": "REGEX",
      "pattern": "aunque imperfecto, este proxy nos da una señal de cohesión"
    }
  ],
  "policy_area_id": "PA04",
  "question_global": 143,
  "question_id": "Q143",
  "scoring_definition_ref": "scoring_modalities.TYPE_A",
  "scoring_modality": "TYPE_A",
  "text": "Cuando un impacto social es difícil de medir (ej. 'fortalecimiento del tejido social'), ¿se recurre a un 'proxy'? Se valora si el texto documenta su 'validez' y reconoce sus 'limitaciones'.",
  "validations": {}
},
{
  "base_slot": "D5-Q4",
  "cluster_id": "CL03",
  "dimension_id": "DIM05",
  "expected_elements": [
    {
      "required": true,
      "type": "alineacion_marcos"
    },
    {
      "required": true,
      "type": "riesgos_sistemicos"
    }
  ],
  "failure_contract": {
    "abort_if": [
      "missing_required_element",
      "incomplete_text"
    ],
    "emit_code": "ABORT-Q144-REQ"
  },
  "method_sets": [
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      "class": "OperationalizationAuditor",
      "function": "_audit_systemic_risk",
      "method_type": "validation",
      "priority": 1,
      "description": "OperationalizationAuditor._audit_systemic_risk"
    },
    {
      "class": "BayesianCounterfactualAuditor",
      "function": "refutation_and_sanity_checks",
      "method_type": "analysis",
      "priority": 2,
      "description": "BayesianCounterfactualAuditor.refutation_and_sanity_checks"
    },
    {
      "class": "BayesianCounterfactualAuditor",
      "function": "_test_effect_stability",
      "method_type": "analysis",
      "priority": 3,
      "description": "BayesianCounterfactualAuditor._test_effect_stability"
    },
    {
      "class": "PDETMunicipalPlanAnalyzer",
      "function": "_interpret_risk",
      "method_type": "analysis",
      "priority": 4,
      "description": "PDETMunicipalPlanAnalyzer._interpret_risk"
    }
  ]
}

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    },
    {
      "class": "PDETMunicipalPlanAnalyzer",
      "function": "_interpret_sensitivity",
      "method_type": "analysis",
      "priority": 5,
      "description": "PDETMunicipalPlanAnalyzer._interpret_sensitivity"
    },
    {
      "class": "PDETMunicipalPlanAnalyzer",
      "function": "_break_cycles",
      "method_type": "analysis",
      "priority": 6,
      "description": "PDETMunicipalPlanAnalyzer._break_cycles"
    },
    {
      "class": "AdaptivePriorCalculator",
      "function": "sensitivity_analysis",
      "method_type": "analysis",
      "priority": 7,
      "description": "AdaptivePriorCalculator.sensitivity_analysis"
    }
  ],
  "patterns": [
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      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q144-000",
      "match_type": "REGEX",
      "pattern": "visión de largo plazo del país|Agenda 2030"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q144-001",
      "match_type": "REGEX",
      "pattern": "riesgo sistémico|choque externo|crisis económica|desempleo masivo"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q144-002",
      "match_type": "REGEX",
      "pattern": "pandemia|emergencia sanitaria|desastre natural"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q144-003",
      "match_type": "LITERAL",
      "pattern": "una crisis fiscal que recorte el SGP"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q144-004",
      "match_type": "REGEX",
      "pattern": "estos factores podrían revertir los avances en reducción de pobreza"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q144-005",
      "match_type": "LITERAL",
      "pattern": "el mecanismo causal es vulnerable a|sensible a la situación macroeconómica"
    }
  ],

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    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q144-006",
      "match_type": "REGEX",
      "pattern": "estrategias de resiliencia social|redes de apoyo"
    }
  ],
  "policy_area_id": "PA04",
  "question_global": 144,
  "question_id": "Q144",
  "scoring_definition_ref": "scoring_modalities.TYPE_A",
  "scoring_modality": "TYPE_A",
  "text": "¿Los impactos sociales se alinean con marcos nacionales/globales y consideran 'riesgos sistémicos' (ej. crisis económica, pandemia) que podrían romper el mecanismo causal?",
  "validations": {}
},
{
  "base_slot": "D5-Q5",
  "cluster_id": "CL03",
  "dimension_id": "DIM05",
  "expected_elements": [
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      "required": true,
      "type": "analisis_realismo"
    },
    {
      "required": true,
      "type": "efectos_no_deseados"
    },
    {
      "required": true,
      "type": "hipotesis_limite"
    }
  ],
  "failure_contract": {
    "abort_if": [
      "missing_required_element",
      "incomplete_text"
    ],
    "emit_code": "ABORT-Q145-REQ"
  },
  "method_sets": [
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      "class": "HierarchicalGenerativeModel",
      "function": "posterior_predictive_check",
      "method_type": "analysis",
      "priority": 1,
      "description": "HierarchicalGenerativeModel.posterior_predictive_check"
    },
    {
      "class": "HierarchicalGenerativeModel",
      "function": "_ablation_analysis",
      "method_type": "analysis",
      "priority": 2,
      "description": "HierarchicalGenerativeModel._ablation_analysis"
    },
    {
      "class": "HierarchicalGenerativeModel",
      "function": "_calculate_waic_difference",
      "method_type": "scoring",
      "priority": 3,
      "description": "HierarchicalGenerativeModel._calculate_waic_difference"
    },
    {
      "class": "AdaptivePriorCalculator",
      "function": "_add_ood_noise",
      "method_type": "analysis",
      "priority": 4,
      "description": "AdaptivePriorCalculator._add_ood_noise"
    },
  ],

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{
  "class": "AdaptivePriorCalculator",
  "function": "validate_quality_criteria",
  "method_type": "validation",
  "priority": 5,
  "description": "AdaptivePriorCalculator.validate_quality_criteria"
},
{
  "class": "PDETMunicipalPlanAnalyzer",
  "function": "_compute_e_value",
  "method_type": "analysis",
  "priority": 6,
  "description": "PDETMunicipalPlanAnalyzer._compute_e_value"
},
{
  "class": "PDETMunicipalPlanAnalyzer",
  "function": "_compute_robustness_value",
  "method_type": "analysis",
  "priority": 7,
  "description": "PDETMunicipalPlanAnalyzer._compute_robustness_value"
},
{
  "class": "BayesianMechanismInference",
  "function": "_calculate_coherence_factor",
  "method_type": "scoring",
  "priority": 8,
  "description": "BayesianMechanismInference._calculate_coherence_factor"
}
],
"patterns": [
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q145-000",
    "match_type": "REGEX",
    "pattern": "la ambición del impacto es realista si se mantiene el crecimiento económico"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q145-001",
    "match_type": "REGEX",
    "pattern": "efecto no deseado|consecuencia imprevista|externalidad negativa"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q145-002",
    "match_type": "REGEX",
    "pattern": "riesgo de dependencia de los subsidios"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q145-003",
    "match_type": "REGEX",
    "pattern": "posible congestión de los servicios de salud por mayor acceso"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q145-004",
    "match_type": "REGEX",
    "pattern": "trade-off entre cobertura y calidad"
  },
  {
    "category": "GENERAL",

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    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q145-005",
    "match_type": "REGEX",
    "pattern": "hipótesis límite|el modelo funciona mientras haya recursos del SGP"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q145-006",
    "match_type": "LITERAL",
    "pattern": "supuesto crítico para el impacto a largo plazo"
  }
],
"policy_area_id": "PA04",
"question_global": 145,
"question_id": "Q145",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿La ambición del impacto social (ej. 'pobreza cero') es realista? Se debe buscar si se analizan posibles 'efectos no deseados' o se declaran 'hipótesis límite'.",
"validations": {}
},
{
  "base_slot": "D6-Q1",
  "cluster_id": "CL03",
  "dimension_id": "DIM06",
  "expected_elements": [
    {
      "required": true,
      "type": "diagrama_causal"
    },
    {
      "required": true,
      "type": "supuestos_verificables"
    },
    {
      "required": true,
      "type": "teoria_cambio_explicita"
    }
  ],
  "failure_contract": {
    "abort_if": [
      "missing_required_element",
      "incomplete_text"
    ],
    "emit_code": "ABORT-Q146-REQ"
  },
  "method_sets": [
    {
      "class": "TeoriaCambio",
      "function": "construir_grafo_causal",
      "method_type": "analysis",
      "priority": 1,
      "description": "TeoriaCambio.construir_grafo_causal"
    },
    {
      "class": "TeoriaCambio",
      "function": "validacion_completa",
      "method_type": "analysis",
      "priority": 2,
      "description": "TeoriaCambio.validacion_completa"
    },
    {
      "class": "TeoriaCambio",
      "function": "export_nodes",
      "method_type": "analysis",
      "priority": 3,
      "description": "TeoriaCambio.export_nodes"
    }
  ]
}

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    "class": "ReportingEngine",
    "function": "generate_causal_diagram",
    "method_type": "analysis",
    "priority": 4,
    "description": "ReportingEngine.generate_causal_diagram"
  },
  {
    "class": "ReportingEngine",
    "function": "generate_causal_model_json",
    "method_type": "analysis",
    "priority": 5,
    "description": "ReportingEngine.generate_causal_model_json"
  },
  {
    "class": "AdvancedDAGValidator",
    "function": "export_nodes",
    "method_type": "analysis",
    "priority": 6,
    "description": "AdvancedDAGValidator.export_nodes"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "export_causal_network",
    "method_type": "analysis",
    "priority": 7,
    "description": "PDETMunicipalPlanAnalyzer.export_causal_network"
  },
  {
    "class": "CausalExtractor",
    "function": "extract_causal_hierarchy",
    "method_type": "extraction",
    "priority": 8,
    "description": "CausalExtractor.extract_causal_hierarchy"
  }
],
"patterns": [
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q146-000",
    "match_type": "REGEX",
    "pattern": "teoría de cambio|marco lógico|cadena causal|modelo lógico del sector social"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q146-001",
    "match_type": "REGEX",
    "pattern": "diagrama causal|gráfico de la teoría|esquema de intervención|figura"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q146-002",
    "match_type": "REGEX",
    "pattern": "causa raíz de la pobreza|determinante estructural de la inequidad"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q146-003",
    "match_type": "REGEX",
    "pattern": "mediador|variable intermedia|eslabón|acceso a servicios|calidad de la
educación"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,

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    "flags": "i",
    "id": "PAT-Q146-004",
    "match_type": "REGEX",
    "pattern": "moderador|factor contextual|zona de residencia (rural/urbano)"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q146-005",
    "match_type": "LITERAL",
    "pattern": "supuesto verificable|hipótesis a testear|premisa comprobable"
  }
],
"policy_area_id": "PA04",
"question_global": 146,
"question_id": "Q146",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿Existe una 'teoría de cambio' explícita para la política social, preferiblemente en un 'diagrama', que identifique causas (ej. bajo logro educativo), mediadores y 'supuestos verificables'?",
"validations": {}
},
{
  "base_slot": "D6-Q2",
  "cluster_id": "CL03",
  "dimension_id": "DIM06",
  "expected_elements": [
    {
      "required": true,
      "type": "evita_saltos_logicos"
    },
    {
      "required": true,
      "type": "proporcionalidad_eslabones"
    }
  ]
},
"failure_contract": {
  "abort_if": [
    "missing_required_element",
    "incomplete_text"
  ],
  "emit_code": "ABORT-Q147-REQ"
},
"method_sets": [
  {
    "class": "BeachEvidentialTest",
    "function": "apply_test_logic",
    "method_type": "analysis",
    "priority": 1,
    "description": "BeachEvidentialTest.apply_test_logic"
  },
  {
    "class": "BayesianMechanismInference",
    "function": "_test_necessity",
    "method_type": "analysis",
    "priority": 2,
    "description": "BayesianMechanismInference._test_necessity"
  },
  {
    "class": "BayesianMechanismInference",
    "function": "_test_sufficiency",
    "method_type": "analysis",
    "priority": 3,
    "description": "BayesianMechanismInference._test_sufficiency"
  },
  {
    "class": "BayesianMechanismInference",
    "function": "_calculate_coherence_factor",
    "method_type": "scoring",
    "priority": 4,

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    "description": "BayesianMechanismInference._calculate_coherence_factor"
  },
  {
    "class": "BayesianCounterfactualAuditor",
    "function": "_test_effect_stability",
    "method_type": "analysis",
    "priority": 5,
    "description": "BayesianCounterfactualAuditor._test_effect_stability"
  },
  {
    "class": "IndustrialGradeValidator",
    "function": "validate_connection_matrix",
    "method_type": "validation",
    "priority": 6,
    "description": "IndustrialGradeValidator.validate_connection_matrix"
  },
  {
    "class": "PolicyAnalysisEmbedder",
    "function": "_compute_overall_confidence",
    "method_type": "analysis",
    "priority": 7,
    "description": "PolicyAnalysisEmbedder._compute_overall_confidence"
  }
],
"patterns": [
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q147-000",
    "match_type": "REGEX",
    "pattern": "proporcionalidad entre|magnitud del efecto esperado"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q147-001",
    "match_type": "REGEX",
    "pattern": "salto lógico|brecha en la argumentación|milagro de implementación"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q147-002",
    "match_type": "LITERAL",
    "pattern": "es realista esperar que|es factible que"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q147-003",
    "match_type": "REGEX",
    "pattern": "la escala de la intervención es coherente con la ambición del resultado"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q147-004",
    "match_type": "REGEX",
    "pattern": "se requieren pasos intermedios|la calidad educativa depende de múltiples
factores"
  }
],
"policy_area_id": "PA04",
"question_global": 147,
"question_id": "Q147",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",

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    "text": "¿Los saltos en la cadena causal social son proporcionales (ej. la entrega de un kit
escolar no garantiza por sí sola la calidad educativa)?",
    "validations": {}
  },
  {
    "base_slot": "D6-Q3",
    "cluster_id": "CL03",
    "dimension_id": "DIM06",
    "expected_elements": [
      {
        "required": true,
        "type": "propone_pilotos_o_pruebas"
      },
      {
        "required": true,
        "type": "reconoce_inconsistencias"
      }
    ],
    "failure_contract": {
      "abort_if": [
        "missing_required_element",
        "incomplete_text"
      ],
      "emit_code": "ABORT-Q148-REQ"
    },
    "method_sets": [
      {
        "class": "IndustrialGradeValidator",
        "function": "execute_suite",
        "method_type": "analysis",
        "priority": 1,
        "description": "IndustrialGradeValidator.execute_suite"
      },
      {
        "class": "IndustrialGradeValidator",
        "function": "validate_engine_readiness",
        "method_type": "validation",
        "priority": 2,
        "description": "IndustrialGradeValidator.validate_engine_readiness"
      },
      {
        "class": "IndustrialGradeValidator",
        "function": "_benchmark_operation",
        "method_type": "analysis",
        "priority": 3,
        "description": "IndustrialGradeValidator._benchmark_operation"
      },
      {
        "class": "AdaptivePriorCalculator",
        "function": "validate_quality_criteria",
        "method_type": "validation",
        "priority": 4,
        "description": "AdaptivePriorCalculator.validate_quality_criteria"
      },
      {
        "class": "HierarchicalGenerativeModel",
        "function": "_calculate_r_hat",
        "method_type": "scoring",
        "priority": 5,
        "description": "HierarchicalGenerativeModel._calculate_r_hat"
      },
      {
        "class": "HierarchicalGenerativeModel",
        "function": "_calculate_ess",
        "method_type": "scoring",
        "priority": 6,
        "description": "HierarchicalGenerativeModel._calculate_ess"
      },
      {
        "class": "AdvancedDAGValidator",
        "function": "calculate_acyclicity_pvalue",
        "method_type": "scoring",

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    "priority": 7,
    "description": "AdvancedDAGValidator.calculate_acyclicity_pvalue"
  },
  {
    "class": "PerformanceAnalyzer",
    "function": "analyze_performance",
    "method_type": "analysis",
    "priority": 8,
    "description": "PerformanceAnalyzer.analyze_performance"
  }
],
"patterns": [
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q148-000",
    "match_type": "REGEX",
    "pattern": "inconsistencia|debilidad en la teoría|supuesto débil"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q148-001",
    "match_type": "REGEX",
    "pattern": "se requiere validar|es necesario probar si el subsidio genera los incentivos
correctos"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q148-002",
    "match_type": "REGEX",
    "pattern": "plan piloto de jornada única|fase experimental de un modelo de salud"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q148-003",
    "match_type": "REGEX",
    "pattern": "testear el supuesto de la participación comunitaria"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q148-004",
    "match_type": "REGEX",
    "pattern": "validar la hipótesis de la efectividad del programa"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q148-005",
    "match_type": "REGEX",
    "pattern": "evaluación de impacto|evaluación de mecanismos"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q148-006",
    "match_type": "REGEX",
    "pattern": "aprendizaje adaptativo|gestión adaptativa de la política social"
  }
],
"policy_area_id": "PA04",
"question_global": 148,

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"question_id": "Q148",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿El plan reconoce 'inconsistencias' en su lógica social y propone 'pilotos' o
'pruebas' para 'testear los supuestos' de sus intervenciones?",
"validations": {}
},
{
"base_slot": "D6-Q4",
"cluster_id": "CL03",
"dimension_id": "DIM06",
"expected_elements": [
{
"required": true,
"type": "ciclos_aprendizaje"
},
{
"required": true,
"type": "mecanismos_correccion"
},
{
"required": true,
"type": "sistema_monitoreo"
}
],
"failure_contract": {
"abort_if": [
"missing_required_element",
"incomplete_text"
],
"emit_code": "ABORT-Q149-REQ"
},
"method_sets": [
{
"class": "ConfigLoader",
"function": "update_priors_from_feedback",
"method_type": "analysis",
"priority": 1,
"description": "ConfigLoader.update_priors_from_feedback"
},
{
"class": "ConfigLoader",
"function": "check_uncertainty_reduction_criterion",
"method_type": "analysis",
"priority": 2,
"description": "ConfigLoader.check_uncertainty_reduction_criterion"
},
{
"class": "ConfigLoader",
"function": "_save_prior_history",
"method_type": "analysis",
"priority": 3,
"description": "ConfigLoader._save_prior_history"
},
{
"class": "ConfigLoader",
"function": "_load_uncertainty_history",
"method_type": "analysis",
"priority": 4,
"description": "ConfigLoader._load_uncertainty_history"
},
{
"class": "CDAFFramework",
"function": "_extract_feedback_from_audit",
"method_type": "validation",
"priority": 5,
"description": "CDAFFramework._extract_feedback_from_audit"
},
{
"class": "AdvancedDAGValidator",
"function": "_calculate_node_importance",
"method_type": "scoring",

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    "priority": 6,
    "description": "AdvancedDAGValidator._calculate_node_importance"
  },
  {
    "class": "BayesFactorTable",
    "function": "get_bayes_factor",
    "method_type": "analysis",
    "priority": 7,
    "description": "BayesFactorTable.get_bayes_factor"
  }
],
"patterns": [
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q149-000",
    "match_type": "REGEX",
    "pattern": "sistema de seguimiento y evaluación|M&E social"
  },
  {
    "category": "FUENTE_OFICIAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q149-001",
    "match_type": "REGEX",
    "pattern": "monitoreo a través de los sistemas de información (SIMAT, SIVIGILA)"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q149-002",
    "match_type": "REGEX",
    "pattern": "alerta temprana sobre deserción|alerta por brote epidemiológico"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q149-003",
    "match_type": "REGEX",
    "pattern": "mecanismo de ajuste del PAE|medida correctiva en la focalización"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q149-004",
    "match_type": "REGEX",
    "pattern": "retroalimentación desde los usuarios|veedurías ciudadanas en salud"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q149-005",
    "match_type": "REGEX",
    "pattern": "ciclos de aprendizaje|reuniones del Consejo de Política Social para revisar
avances"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q149-006",
    "match_type": "REGEX",
    "pattern": "lecciones aprendidas en la implementación de programas"
  }
],
"policy_area_id": "PA04",
"question_global": 149,

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"question_id": "Q149",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿Se describe un sistema de monitoreo para la política social que incluya
'mecanismos de corrección', 'retroalimentación' o 'aprendizaje' para adaptar la estrategia?",
"validations": {}
},
{
  "base_slot": "D6-Q5",
  "cluster_id": "CL03",
  "dimension_id": "DIM06",
  "expected_elements": [
    {
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      "type": "analisis_contextual"
    },
    {
      "required": true,
      "type": "enfoque_diferencial"
    }
  ],
  "failure_contract": {
    "abort_if": [
      "missing_required_element",
      "incomplete_text"
    ],
    "emit_code": "ABORT-Q150-REQ"
  },
  "method_sets": [
    {
      "class": "CausalExtractor",
      "function": "_calculate_language_specificity",
      "method_type": "scoring",
      "priority": 1,
      "description": "CausalExtractor._calculate_language_specificity"
    },
    {
      "class": "CausalExtractor",
      "function": "_assess_temporal_coherence",
      "method_type": "analysis",
      "priority": 2,
      "description": "CausalExtractor._assess_temporal_coherence"
    },
    {
      "class": "TextMiningEngine",
      "function": "diagnose_critical_links",
      "method_type": "analysis",
      "priority": 3,
      "description": "TextMiningEngine.diagnose_critical_links"
    },
    {
      "class": "CausalInferenceSetup",
      "function": "identify_failure_points",
      "method_type": "analysis",
      "priority": 4,
      "description": "CausalInferenceSetup.identify_failure_points"
    },
    {
      "class": "CausalInferenceSetup",
      "function": "_get_dynamics_pattern",
      "method_type": "analysis",
      "priority": 5,
      "description": "CausalInferenceSetup._get_dynamics_pattern"
    },
    {
      "class": "SemanticProcessor",
      "function": "chunk_text",
      "method_type": "analysis",
      "priority": 6,
      "description": "SemanticProcessor.chunk_text"
    }
  ]
}

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    "class": "SemanticProcessor",
    "function": "_detect_pdm_structure",
    "method_type": "analysis",
    "priority": 7,
    "description": "SemanticProcessor._detect_pdm_structure"
  },
  {
    "class": "SemanticProcessor",
    "function": "_detect_table",
    "method_type": "analysis",
    "priority": 8,
    "description": "SemanticProcessor._detect_table"
  },
  {
    "class": "AdaptivePriorCalculator",
    "function": "generate_traceability_record",
    "method_type": "analysis",
    "priority": 9,
    "description": "AdaptivePriorCalculator.generate_traceability_record"
  }
],
"patterns": [
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q150-000",
    "match_type": "REGEX",
    "pattern": "enfoque diferencial|enfoque interseccional"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q150-001",
    "match_type": "REGEX",
    "pattern": "población rural dispersa|comunidades étnicas"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q150-002",
    "match_type": "REGEX",
    "pattern": "personas con discapacidad|población migrante|víctimas del conflicto"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q150-003",
    "match_type": "REGEX",
    "pattern": "primera infancia|adulto mayor|jóvenes"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q150-004",
    "match_type": "REGEX",
    "pattern": "restricciones de acceso geográfico a escuelas y hospitales"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q150-005",
    "match_type": "REGEX",
    "pattern": "contexto cultural|barreras culturales para la salud sexual"
  },
  {
    "category": "GENERAL",

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        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q150-006",
        "match_type": "REGEX",
        "pattern": "restricciones normativas del SGP"
    },
    {
        "category": "TERRITORIAL",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q150-007",
        "match_type": "REGEX",
        "pattern": "estrategias territorializadas|modelos de salud y educación rural"
    }
],
"policy_area_id": "PA04",
"question_global": 150,
"question_id": "Q150",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿La lógica causal de la política social considera el contexto, reconociendo 'grupos afectados' (población rural, migrantes, discapacitados) y 'restricciones' territoriales o culturales?",
"validations": {}
},
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    "dimension_id": "DIM01",
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        {
            "minimum": 3,
            "type": "indicadores_cuantitativos"
        },
        {
            "minimum": 3,
            "type": "series_temporales_años"
        }
    ],
    "failure_contract": {
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            "incomplete_text"
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            "function": "diagnose_critical_links",
            "method_type": "analysis",
            "priority": 1,
            "description": "TextMiningEngine.diagnose_critical_links"
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            "function": "_analyze_link_text",
            "method_type": "analysis",
            "priority": 2,
            "description": "TextMiningEngine._analyze_link_text"
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        {
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            "function": "process",
            "method_type": "analysis",
            "priority": 3,
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  "function": "_match_patterns_in_sentences",
  "method_type": "analysis",
  "priority": 4,
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  "function": "_extract_point_evidence",
  "method_type": "extraction",
  "priority": 5,
  "description": "IndustrialPolicyProcessor._extract_point_evidence"
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  "function": "_extract_goals",
  "method_type": "extraction",
  "priority": 6,
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  "function": "_parse_goal_context",
  "method_type": "extraction",
  "priority": 7,
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  "function": "_parse_amount",
  "method_type": "extraction",
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  "method_type": "extraction",
  "priority": 9,
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  "method_type": "extraction",
  "priority": 10,
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  "method_type": "extraction",
  "priority": 11,
  "description": "PolicyContradictionDetector._extract_quantitative_claims"
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  "function": "_parse_number",
  "method_type": "extraction",
  "priority": 12,
  "description": "PolicyContradictionDetector._parse_number"
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  "function": "_statistical_significance_test",
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    "function": "compare_policies",
    "method_type": "analysis",
    "priority": 15,
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    "method_type": "analysis",
    "priority": 16,
    "description": "SemanticProcessor.chunk_text"
  },
  {
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    "function": "embed_single",
    "method_type": "analysis",
    "priority": 17,
    "description": "SemanticProcessor.embed_single"
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    "category": "GENERAL",
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    "flags": "i",
    "id": "PAT-Q151-000",
    "match_type": "REGEX",
    "pattern": "línea base|diagnóstico de víctimas|caracterización de la población víctima"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q151-001",
    "match_type": "REGEX",
    "pattern": "fuente:|según|reportado por|con datos de|corte a (fecha)"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q151-002",
    "match_type": "REGEX",
    "pattern": "UARIV|Red Nacional de Información|RNI|Registro Único de Víctimas|RUV"
  },
  {
    "category": "TERRITORIAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q151-003",
    "match_type": "REGEX",
    "pattern": "Personería Municipal|Defensoría del Pueblo|Observatorio de DDHH"
  },
  {
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    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q151-004",
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    "pattern": "JEP|UBPD|CNMH|Centro Nacional de Memoria Histórica"
  },
  {
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    "confidence_weight": 0.85,
    "flags": "i",

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      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q151-006",
      "match_type": "REGEX",
      "pattern": "hecho victimizante|desplazamiento forzado|homicidio|desaparición forzada"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q151-007",
      "match_type": "REGEX",
      "pattern": "víctimas de violencia sexual|minas antipersonal|reclutamiento"
    },
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      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q151-008",
      "match_type": "REGEX",
      "pattern": "universo por indemnizar|víctimas por atender"
    },
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      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q151-009",
      "match_type": "REGEX",
      "pattern": "Sujetos de Reparación Colectiva|SRC|comunidades étnicas víctimas"
    },
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      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q151-010",
      "match_type": "REGEX",
      "pattern": "2021|2022|2023|vigencia anterior|serie histórica de victimización"
    },
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      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q151-011",
      "match_type": "REGEX",
      "pattern": "\\d+\\s*víctimas|\\d+\\s*hogares|\\d+\\s*personas"
    }
  ],
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  "question_global": 151,
  "question_id": "Q151",
  "scoring_definition_ref": "scoring_modalities.TYPE_A",
  "scoring_modality": "TYPE_A",
  "text": "¿El diagnóstico presenta datos numéricos del Registro Único de Víctimas (RUV) para el área de Derechos de las víctimas y construcción de paz, como número de personas a reparar o solicitudes de retorno, que sirvan como línea base? Se debe verificar el año y fuentes (ej. UARIV, personería).",
  "validations": {
    "buscar_indicadores_cuantitativos": {
      "minimum_required": 3,
      "patterns": [
        "\\d+%",
        "\\d+\\s*por\\s*\\d+",
        "tasa de",
        "índice de",
        "cobertura de"
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    }
  },

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    "specificity": "HIGH"
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    "minimum_years": 3,
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      "histórico",
      "serie"
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  "verificar_fuentes": {
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      "según",
      "datos de",
      "DANE",
      "DNP",
      "SISPRO",
      "SIVIGILA",
      "Ministerio"
    ],
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    {
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      "type": "cuantificacion_magnitud"
    },
    {
      "required": true,
      "type": "vacios_explicitos"
    }
  ],
  "failure_contract": {

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    "priority": 1,
    "description": "OperationalizationAuditor._audit_direct_evidence"
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    "function": "_audit_systemic_risk",
    "method_type": "validation",
    "priority": 2,
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    "method_type": "analysis",
    "priority": 3,
    "description": "FinancialAuditor._detect_allocation_gaps"
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    "function": "_detect_gaps",
    "method_type": "analysis",
    "priority": 4,
    "description": "BayesianMechanismInference._detect_gaps"
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    "method_type": "analysis",
    "priority": 5,
    "description": "PDETMunicipalPlanAnalyzer._generate_optimal_remediations"
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    "function": "_simulate_intervention",
    "method_type": "analysis",
    "priority": 6,
    "description": "PDETMunicipalPlanAnalyzer._simulate_intervention"
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    "method_type": "analysis",
    "priority": 7,
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    "method_type": "analysis",
    "priority": 8,
    "description": "BayesianCounterfactualAuditor._test_effect_stability"
  },
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    "method_type": "analysis",
    "priority": 9,
    "description": "PolicyContradictionDetector._detect_numerical_inconsistencies"
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    "priority": 10,
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    "function": "calculate_posterior",
    "method_type": "scoring",
    "priority": 11,
    "description": "BayesianConfidenceCalculator.calculate_posterior"
  },
  {
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    "function": "analyze_performance",
    "method_type": "analysis",
    "priority": 12,
    "description": "PerformanceAnalyzer.analyze_performance"
  }
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    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q152-000",
    "match_type": "REGEX",
    "pattern": "brecha de reparación|déficit en la atención|rezago en la indemnización"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q152-001",
    "match_type": "REGEX",
    "pattern": "universo de víctimas vs. víctimas atendidas"
  },
  {
    "category": "INDICADOR",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q152-002",
    "match_type": "REGEX",
    "pattern": "porcentaje de víctimas sin acceso a la oferta"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q152-003",
    "match_type": "REGEX",
    "pattern": "barreras de acceso a la declaración|dificultades para acceder al RUV"
  },
  {
    "category": "INDICADOR",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q152-004",
    "match_type": "REGEX",
    "pattern": "subregistro de hechos como la violencia sexual|cifra negra"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q152-005",
    "match_type": "REGEX",
    "pattern": "información desactualizada|falta de caracterización psicosocial"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,

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    "flags": "i",
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    "match_type": "REGEX",
    "pattern": "se desconoce el estado de los procesos de restitución de tierras"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q152-007",
    "match_type": "REGEX",
    "pattern": "limitaciones en la información sobre retornos no acompañados"
  }
],
"policy_area_id": "PA05",
"question_global": 152,
"question_id": "Q152",
"scoring_definition_ref": "scoring_modalities.TYPE_B",
"scoring_modality": "TYPE_B",
"text": "¿El texto dimensiona la magnitud del problema de la atención a víctimas
cuantificando la brecha de reparación (ej. porcentaje de víctimas sin reparar)? Se debe buscar si se
mencionan 'vacíos de información' o 'subregistro' en el RUV.",
"validations": {}
},
{
  "base_slot": "D1-Q3",
  "cluster_id": "CL02",
  "dimension_id": "DIM01",
  "expected_elements": [
    {
      "required": true,
      "type": "asignacion_explicita"
    },
    {
      "required": true,
      "type": "suficiencia_justificada"
    },
    {
      "required": true,
      "type": "trazabilidad_ppi_bpin"
    }
  ]
},
"failure_contract": {
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    "missing_required_element",
    "incomplete_text"
  ],
  "emit_code": "ABORT-Q153-REQ"
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"method_sets": [
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    "class": "FinancialAuditor",
    "function": "trace_financial_allocation",
    "method_type": "analysis",
    "priority": 1,
    "description": "FinancialAuditor.trace_financial_allocation"
  },
  {
    "class": "FinancialAuditor",
    "function": "_process_financial_table",
    "method_type": "analysis",
    "priority": 2,
    "description": "FinancialAuditor._process_financial_table"
  },
  {
    "class": "FinancialAuditor",
    "function": "_match_program_to_node",
    "method_type": "analysis",
    "priority": 3,
    "description": "FinancialAuditor._match_program_to_node"
  }
],
{

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    "class": "FinancialAuditor",
    "function": "_match_goal_to_budget",
    "method_type": "analysis",
    "priority": 4,
    "description": "FinancialAuditor._match_goal_to_budget"
  },
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    "class": "FinancialAuditor",
    "function": "_perform_counterfactual_budget_check",
    "method_type": "analysis",
    "priority": 5,
    "description": "FinancialAuditor._perform_counterfactual_budget_check"
  },
  {
    "class": "FinancialAuditor",
    "function": "_calculate_sufficiency",
    "method_type": "scoring",
    "priority": 6,
    "description": "FinancialAuditor._calculate_sufficiency"
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    "class": "PDETMunicipalPlanAnalyzer",
    "function": "analyze_financial_feasibility",
    "method_type": "analysis",
    "priority": 7,
    "description": "PDETMunicipalPlanAnalyzer.analyze_financial_feasibility"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_extract_budget_for_pillar",
    "method_type": "extraction",
    "priority": 8,
    "description": "PDETMunicipalPlanAnalyzer._extract_budget_for_pillar"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_identify_funding_source",
    "method_type": "analysis",
    "priority": 9,
    "description": "PDETMunicipalPlanAnalyzer._identify_funding_source"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_classify_tables",
    "method_type": "analysis",
    "priority": 10,
    "description": "PDETMunicipalPlanAnalyzer._classify_tables"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_analyze_funding_sources",
    "method_type": "analysis",
    "priority": 11,
    "description": "PDETMunicipalPlanAnalyzer._analyze_funding_sources"
  },
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    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_score_financial_component",
    "method_type": "scoring",
    "priority": 12,
    "description": "PDETMunicipalPlanAnalyzer._score_financial_component"
  },
  {
    "class": "BayesianCounterfactualAuditor",
    "function": "aggregate_risk_and_prioritize",
    "method_type": "analysis",
    "priority": 13,
    "description": "BayesianCounterfactualAuditor.aggregate_risk_and_prioritize"
  }
],
"patterns": [
  {

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    "id": "PAT-Q153-000",
    "match_type": "REGEX",
    "pattern": "Plan Plurianual de Inversiones|PPI|Plan Indicativo"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q153-001",
    "match_type": "REGEX",
    "pattern": "BPIN|Banco de Proyectos|proyecto de inversión para víctimas y paz"
  },
  {
    "category": "TERRITORIAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q153-002",
    "match_type": "REGEX",
    "pattern": "recursos para el Plan de Acción Territorial|PAT"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q153-003",
    "match_type": "REGEX",
    "pattern": "presupuesto para el Comité de Justicia Transicional|CTJT"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q153-004",
    "match_type": "REGEX",
    "pattern": "asignación para atención humanitaria|ayuda inmediata"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q153-005",
    "match_type": "REGEX",
    "pattern": "inversión en medidas de rehabilitación psicosocial|retornos y reubicaciones"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q153-006",
    "match_type": "REGEX",
    "pattern": "fondos para la implementación del Acuerdo de Paz|PDET"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q153-007",
    "match_type": "REGEX",
    "pattern": "\\$\\s*\\d+|COP\\s*\\d+|millones de pesos"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q153-008",
    "match_type": "LITERAL",
    "pattern": "fuentes: SGP, recursos propios, cofinanciación UARIV, cooperación
internacional"
  }
}

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],
"policy_area_id": "PA05",
"question_global": 153,
"question_id": "Q153",
"scoring_definition_ref": "scoring_modalities.TYPE_B",
"scoring_modality": "TYPE_B",
"text": "¿Se identifican en el PPI recursos monetarios (con cifras en $, COP o millones)
explícitamente asignados a programas de reparación integral, asistencia humanitaria, retornos, o
medidas de satisfacción y memoria?",
"validations": {}
},
{
"base_slot": "D1-Q4",
"cluster_id": "CL02",
"dimension_id": "DIM01",
"expected_elements": [
{
"required": true,
"type": "cuellos_botella"
},
{
"required": true,
"type": "gobernanza"
},
{
"required": true,
"type": "infraestructura_fisica"
},
{
"required": true,
"type": "procesos"
},
{
"required": true,
"type": "talento_humano"
}
],
"failure_contract": {
"abort_if": [
"missing_required_element",
"incomplete_text"
],
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"method_sets": [
{
"class": "PDETMunicipalPlanAnalyzer",
"function": "identify_responsible_entities",
"method_type": "analysis",
"priority": 1,
"description": "PDETMunicipalPlanAnalyzer.identify_responsible_entities"
},
{
"class": "PDETMunicipalPlanAnalyzer",
"function": "_extract_entities_ner",
"method_type": "extraction",
"priority": 2,
"description": "PDETMunicipalPlanAnalyzer._extract_entities_ner"
},
{
"class": "PDETMunicipalPlanAnalyzer",
"function": "_extract_entities_syntax",
"method_type": "extraction",
"priority": 3,
"description": "PDETMunicipalPlanAnalyzer._extract_entities_syntax"
},
{
"class": "PDETMunicipalPlanAnalyzer",
"function": "_classify_entity_type",
"method_type": "analysis",
"priority": 4,
"description": "PDETMunicipalPlanAnalyzer._classify_entity_type"
}
]
}

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    },
    {
      "class": "PDETMunicipalPlanAnalyzer",
      "function": "_score_entity_specificity",
      "method_type": "scoring",
      "priority": 5,
      "description": "PDETMunicipalPlanAnalyzer._score_entity_specificity"
    },
    {
      "class": "PDETMunicipalPlanAnalyzer",
      "function": "_consolidate_entities",
      "method_type": "analysis",
      "priority": 6,
      "description": "PDETMunicipalPlanAnalyzer._consolidate_entities"
    },
    {
      "class": "MechanismPartExtractor",
      "function": "extract_entity_activity",
      "method_type": "extraction",
      "priority": 7,
      "description": "MechanismPartExtractor.extract_entity_activity"
    },
    {
      "class": "MechanismPartExtractor",
      "function": "_normalize_entity",
      "method_type": "analysis",
      "priority": 8,
      "description": "MechanismPartExtractor._normalize_entity"
    },
    {
      "class": "MechanismPartExtractor",
      "function": "_validate_entity_activity",
      "method_type": "validation",
      "priority": 9,
      "description": "MechanismPartExtractor._validate_entity_activity"
    },
    {
      "class": "MechanismPartExtractor",
      "function": "_calculate_ea_confidence",
      "method_type": "scoring",
      "priority": 10,
      "description": "MechanismPartExtractor._calculate_ea_confidence"
    },
    {
      "class": "OperationalizationAuditor",
      "function": "audit_evidence_traceability",
      "method_type": "validation",
      "priority": 11,
      "description": "OperationalizationAuditor.audit_evidence_traceability"
    }
  ],
  "patterns": [
    {
      "category": "TERRITORIAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q154-000",
      "match_type": "REGEX",
      "pattern": "Enlace Municipal de Víctimas|equipo del Enlace"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q154-001",
      "match_type": "REGEX",
      "pattern": "Punto de Atención a Víctimas|PAV|Centro Regional de Atención|CRAV"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",

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    "id": "PAT-Q154-002",
    "match_type": "REGEX",
    "pattern": "Mesa de Participación Efectiva de las Víctimas|MPEV"
  },
  {
    "category": "TERRITORIAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q154-003",
    "match_type": "REGEX",
    "pattern": "Comité Territorial de Justicia Transicional|CTJT"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q154-004",
    "match_type": "REGEX",
    "pattern": "capacidad instalada para la atención|talento humano con enfoque psicosocial"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q154-005",
    "match_type": "REGEX",
    "pattern": "ruta de atención y asistencia|protocolo de declaración"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q154-006",
    "match_type": "REGEX",
    "pattern": "sistema de información para seguimiento de casos|articulación con
Vivanto/RNI"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q154-007",
    "match_type": "REGEX",
    "pattern": "articulación con el SNARIV|coordinación con la UARIV"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q154-008",
    "match_type": "REGEX",
    "pattern": "falta de personal|limitada capacidad técnica|necesidad de fortalecer el
Enlace"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q154-009",
    "match_type": "REGEX",
    "pattern": "cuello de botella|barrera de acceso|insuficiencia del PAV"
  }
],
"policy_area_id": "PA05",
"question_global": 154,
"question_id": "Q154",
"scoring_definition_ref": "scoring_modalities.TYPE_B",
"scoring_modality": "TYPE_B",
"text": "¿El PDM describe las capacidades para la atención a víctimas, mencionando entidades
(Enlace de Víctimas, Mesa de Participación) y sus necesidades? Se debe buscar términos como 'centro
de atención', 'equipo psicosocial' y si se identifican 'limitaciones'.",
"validations": {}

```



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},
{
  "base_slot": "D1-Q5",
  "cluster_id": "CL02",
  "dimension_id": "DIM01",
  "expected_elements": [
    {
      "required": true,
      "type": "coherencia_demostrada"
    },
    {
      "required": true,
      "type": "restricciones_competencias"
    },
    {
      "required": true,
      "type": "restricciones_legales"
    },
    {
      "required": true,
      "type": "restricciones_presupuestales"
    }
  ],
  "failure_contract": {
    "abort_if": [
      "missing_required_element",
      "incomplete_text"
    ],
    "emit_code": "ABORT-Q155-REQ"
  },
  "method_sets": [
    {
      "class": "TemporalLogicVerifier",
      "function": "_check_deadline_constraints",
      "method_type": "analysis",
      "priority": 1,
      "description": "TemporalLogicVerifier._check_deadline_constraints"
    },
    {
      "class": "TemporalLogicVerifier",
      "function": "verify_temporal_consistency",
      "method_type": "analysis",
      "priority": 2,
      "description": "TemporalLogicVerifier.verify_temporal_consistency"
    },
    {
      "class": "CausalInferenceSetup",
      "function": "identify_failure_points",
      "method_type": "analysis",
      "priority": 3,
      "description": "CausalInferenceSetup.identify_failure_points"
    },
    {
      "class": "CausalExtractor",
      "function": "_assess_temporal_coherence",
      "method_type": "analysis",
      "priority": 4,
      "description": "CausalExtractor._assess_temporal_coherence"
    },
    {
      "class": "TextMiningEngine",
      "function": "_analyze_link_text",
      "method_type": "analysis",
      "priority": 5,
      "description": "TextMiningEngine._analyze_link_text"
    },
    {
      "class": "IndustrialPolicyProcessor",
      "function": "_analyze_causal_dimensions",
      "method_type": "analysis",
      "priority": 6,
      "description": "IndustrialPolicyProcessor._analyze_causal_dimensions"
    }
  ]
}

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    },
    {
      "class": "IndustrialPolicyProcessor",
      "function": "_extract_metadata",
      "method_type": "extraction",
      "priority": 7,
      "description": "IndustrialPolicyProcessor._extract_metadata"
    }
  ],
  "patterns": [
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q155-000",
      "match_type": "REGEX",
      "pattern": "en el marco de la Ley 1448 de 2011|Ley de Víctimas y Restitución de Tierras"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q155-001",
      "match_type": "LITERAL",
      "pattern": "Decretos Ley Étnicos 4633, 4634, 4635"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q155-002",
      "match_type": "REGEX",
      "pattern": "Acuerdo de Paz|Punto 5 sobre Víctimas|PDET"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q155-003",
      "match_type": "REGEX",
      "pattern": "competencias del municipio en atención y asistencia|principio de subsidiariedad"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q155-004",
      "match_type": "REGEX",
      "pattern": "la indemnización es competencia de la UARIV|la restitución es de la URT"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q155-005",
      "match_type": "LITERAL",
      "pattern": "recursos insuficientes para la reparación integral"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q155-006",
      "match_type": "REGEX",
      "pattern": "limitaciones presupuestales del FONSET"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q155-007",

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    "match_type": "REGEX",
    "pattern": "durante el cuatrienio|plazo de implementación del PAT"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q155-008",
    "match_type": "REGEX",
    "pattern": "coherencia entre metas y recursos disponibles|factibilidad financiera"
  }
],
"policy_area_id": "PA05",
"question_global": 155,
"question_id": "Q155",
"scoring_definition_ref": "scoring_modalities.TYPE_E",
"scoring_modality": "TYPE_E",
"text": "¿El plan justifica su alcance en la política de víctimas mencionando el marco legal (Ley 1448, Decretos Ley) o reconociendo restricciones explícitas de tipo presupuestal o de competencias (UARIV vs. municipio)?",
"validations": {}
},
{
  "base_slot": "D2-Q1",
  "cluster_id": "CL02",
  "dimension_id": "DIM02",
  "expected_elements": [
    {
      "required": true,
      "type": "columna_costo"
    },
    {
      "required": true,
      "type": "columna_cronograma"
    },
    {
      "required": true,
      "type": "columna_producto"
    },
    {
      "required": true,
      "type": "columna_responsable"
    },
    {
      "required": true,
      "type": "formato_tabular"
    }
  ],
  "failure_contract": {
    "abort_if": [
      "missing_required_element",
      "incomplete_text"
    ],
    "emit_code": "ABORT-Q156-REQ"
  },
  "method_sets": [
    {
      "class": "PDFProcessor",
      "function": "extract_tables",
      "method_type": "extraction",
      "priority": 1,
      "description": "PDFProcessor.extract_tables"
    },
    {
      "class": "FinancialAuditor",
      "function": "_process_financial_table",
      "method_type": "analysis",
      "priority": 2,
      "description": "FinancialAuditor._process_financial_table"
    },
    {
      "class": "PDETMunicipalPlanAnalyzer",

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    "function": "_deduplicate_tables",
    "method_type": "analysis",
    "priority": 3,
    "description": "PDETMunicipalPlanAnalyzer._deduplicate_tables"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_classify_tables",
    "method_type": "analysis",
    "priority": 4,
    "description": "PDETMunicipalPlanAnalyzer._classify_tables"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_is_likely_header",
    "method_type": "analysis",
    "priority": 5,
    "description": "PDETMunicipalPlanAnalyzer._is_likely_header"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_clean_dataframe",
    "method_type": "analysis",
    "priority": 6,
    "description": "PDETMunicipalPlanAnalyzer._clean_dataframe"
  },
  {
    "class": "ReportingEngine",
    "function": "generate_accountability_matrix",
    "method_type": "analysis",
    "priority": 7,
    "description": "ReportingEngine.generate_accountability_matrix"
  }
],
"patterns": [
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q156-000",
    "match_type": "REGEX",
    "pattern": "tabla de actividades|cuadro de seguimiento|matriz del PAT"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q156-001",
    "match_type": "REGEX",
    "pattern": "columna responsable|entidad a cargo|ejecutor|SNARIV"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q156-002",
    "match_type": "REGEX",
    "pattern": "columna producto|entregable|output|meta de producto"
  },
  {
    "category": "TEMPORAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q156-003",
    "match_type": "LITERAL",
    "pattern": "columna cronograma|plazo|vigencia|año 1|trimestre"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q156-004",

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    "match_type": "LITERAL",
    "pattern": "columna costo|presupuesto|valor|recursos|monto"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q156-005",
    "match_type": "REGEX",
    "pattern": "Secretaría de Gobierno|Enlace de Víctimas|Personería"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q156-006",
    "match_type": "REGEX",
    "pattern": "Plan Indicativo|Anexo de metas"
  }
],
"policy_area_id": "PA05",
"question_global": 156,
"question_id": "Q156",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿Las actividades para las víctimas y la paz se presentan en un formato estructurado (tabla, cuadro) que incluya columnas para 'responsable', 'producto', 'cronograma' y 'presupuesto'?",
"validations": {}
},
{
  "base_slot": "D2-Q2",
  "cluster_id": "CL02",
  "dimension_id": "DIM02",
  "expected_elements": [
    {
      "required": true,
      "type": "instrumento_especificado"
    },
    {
      "required": true,
      "type": "logica_causal_explicita"
    },
    {
      "required": true,
      "type": "poblacion_objetivo_definida"
    }
  ],
  "failure_contract": {
    "abort_if": [
      "missing_required_element",
      "incomplete_text"
    ],
    "emit_code": "ABORT-Q157-REQ"
  },
  "method_sets": [
    {
      "class": "BayesianMechanismInference",
      "function": "infer_mechanisms",
      "method_type": "analysis",
      "priority": 1,
      "description": "BayesianMechanismInference.infer_mechanisms"
    },
    {
      "class": "BayesianMechanismInference",
      "function": "_infer_single_mechanism",
      "method_type": "analysis",
      "priority": 2,
      "description": "BayesianMechanismInference._infer_single_mechanism"
    },
    {
      "class": "BayesianMechanismInference",

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    "function": "_infer_mechanism_type",
    "method_type": "analysis",
    "priority": 3,
    "description": "BayesianMechanismInference._infer_mechanism_type"
  },
  {
    "class": "BayesianMechanismInference",
    "function": "_test_sufficiency",
    "method_type": "analysis",
    "priority": 4,
    "description": "BayesianMechanismInference._test_sufficiency"
  },
  {
    "class": "BayesianMechanismInference",
    "function": "_test_necessity",
    "method_type": "analysis",
    "priority": 5,
    "description": "BayesianMechanismInference._test_necessity"
  },
  {
    "class": "CausalExtractor",
    "function": "extract_causal_hierarchy",
    "method_type": "extraction",
    "priority": 6,
    "description": "CausalExtractor.extract_causal_hierarchy"
  },
  {
    "class": "TeoriaCambio",
    "function": "construir_grafo_causal",
    "method_type": "analysis",
    "priority": 7,
    "description": "TeoriaCambio.construir_grafo_causal"
  },
  {
    "class": "TeoriaCambio",
    "function": "_es_conexion_valida",
    "method_type": "analysis",
    "priority": 8,
    "description": "TeoriaCambio._es_conexion_valida"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "construct_causal_dag",
    "method_type": "analysis",
    "priority": 9,
    "description": "PDETMunicipalPlanAnalyzer.construct_causal_dag"
  },
  {
    "class": "BeachEvidentialTest",
    "function": "classify_test",
    "method_type": "analysis",
    "priority": 10,
    "description": "BeachEvidentialTest.classify_test"
  },
  {
    "class": "IndustrialPolicyProcessor",
    "function": "_analyze_causal_dimensions",
    "method_type": "analysis",
    "priority": 11,
    "description": "IndustrialPolicyProcessor._analyze_causal_dimensions"
  }
],
"patterns": [
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q157-000",
    "match_type": "REGEX",
    "pattern": "mediante|a través de|con la implementación de"
  },
  {

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        "category": "GENERAL",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q157-001",
        "match_type": "REGEX",
        "pattern": "entrega de ayuda humanitaria|asistencia funeraria"
    },
    {
        "category": "GENERAL",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q157-002",
        "match_type": "LITERAL",
        "pattern": "acompañamiento psicosocial|rehabilitación comunitaria"
    },
    {
        "category": "GENERAL",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q157-003",
        "match_type": "REGEX",
        "pattern": "proyectos productivos|generación de ingresos para víctimas"
    },
    {
        "category": "GENERAL",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q157-004",
        "match_type": "REGEX",
        "pattern": "población objetivo:|dirigido a|beneficiarios serán"
    },
    {
        "category": "GENERAL",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q157-005",
        "match_type": "REGEX",
        "pattern": "víctimas de desplazamiento forzado|víctimas de violencia sexual"
    },
    {
        "category": "GENERAL",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q157-006",
        "match_type": "REGEX",
        "pattern": "Sujetos de Reparación Colectiva|SRC|comunidades étnicas víctimas"
    },
    {
        "category": "GENERAL",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q157-007",
        "match_type": "REGEX",
        "pattern": "con el fin de dignificar|para contribuir a la reparación"
    },
    {
        "category": "GENERAL",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q157-008",
        "match_type": "REGEX",
        "pattern": "lo cual permite la estabilización socioeconómica|porque fortalece el tejido
social"
    }
],
"policy_area_id": "PA05",
"question_global": 157,
"question_id": "Q157",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿La descripción de las actividades para víctimas detalla el instrumento ('mediante
indemnización administrativa', 'a través de proyectos productivos'), la población objetivo

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('víctimas de desplazamiento forzado', 'sujetos de reparación colectiva') y la lógica causal?",
  "validations": {}
},
{
  "base_slot": "D2-Q3",
  "cluster_id": "CL02",
  "dimension_id": "DIM02",
  "expected_elements": [
    {
      "required": true,
      "type": "aborda_causa_raiz"
    },
    {
      "required": true,
      "type": "vinculo_diagnostico_actividad"
    }
  ],
  "failure_contract": {
    "abort_if": [
      "missing_required_element",
      "incomplete_text"
    ],
    "emit_code": "ABORT-Q158-REQ"
  },
  "method_sets": [
    {
      "class": "CausalExtractor",
      "function": "_extract_causal_links",
      "method_type": "extraction",
      "priority": 1,
      "description": "CausalExtractor._extract_causal_links"
    },
    {
      "class": "CausalExtractor",
      "function": "_calculate_composite_likelihood",
      "method_type": "scoring",
      "priority": 2,
      "description": "CausalExtractor._calculate_composite_likelihood"
    },
    {
      "class": "CausalExtractor",
      "function": "_initialize_prior",
      "method_type": "analysis",
      "priority": 3,
      "description": "CausalExtractor._initialize_prior"
    },
    {
      "class": "CausalExtractor",
      "function": "_calculate_type_transition_prior",
      "method_type": "scoring",
      "priority": 4,
      "description": "CausalExtractor._calculate_type_transition_prior"
    },
    {
      "class": "PDETMunicipalPlanAnalyzer",
      "function": "_identify_causal_edges",
      "method_type": "analysis",
      "priority": 5,
      "description": "PDETMunicipalPlanAnalyzer._identify_causal_edges"
    },
    {
      "class": "PDETMunicipalPlanAnalyzer",
      "function": "_refine_edge_probabilities",
      "method_type": "analysis",
      "priority": 6,
      "description": "PDETMunicipalPlanAnalyzer._refine_edge_probabilities"
    },
    {
      "class": "BayesianCounterfactualAuditor",
      "function": "construct_scm",
      "method_type": "analysis",
      "priority": 7,

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    "description": "BayesianCounterfactualAuditor.construct_scm"
  },
  {
    "class": "BayesianCounterfactualAuditor",
    "function": "_create_default_equations",
    "method_type": "analysis",
    "priority": 8,
    "description": "BayesianCounterfactualAuditor._create_default_equations"
  },
  {
    "class": "SemanticAnalyzer",
    "function": "extract_semantic_cube",
    "method_type": "extraction",
    "priority": 9,
    "description": "SemanticAnalyzer.extract_semantic_cube"
  }
],
"patterns": [
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    "match_type": "REGEX",
    "pattern": "para abordar el daño causado|en respuesta a la necesidad de"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q158-001",
    "match_type": "REGEX",
    "pattern": "esta actividad de memoria contribuye a la satisfacción y no repetición"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q158-002",
    "match_type": "REGEX",
    "pattern": "causa estructural del conflicto|factor de persistencia de la violencia"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q158-003",
    "match_type": "REGEX",
    "pattern": "necesidades de rehabilitación psicosocial|requerimientos de generación de
ingresos"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q158-004",
    "match_type": "REGEX",
    "pattern": "dignificación de las víctimas|reconocimiento del buen nombre"
  },
  {
    "category": "TEMPORAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q158-005",
    "match_type": "REGEX",
    "pattern": "árbol de problemas|diagnóstico del daño"
  }
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"policy_area_id": "PA05",
"question_global": 158,
"question_id": "Q158",
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    "scoring_modality": "TYPE_A",
    "text": "¿El PDM vincula explícitamente las actividades (ej. actos de memoria) con las
'causas raíz' del conflicto y las necesidades de las víctimas (ej. dignificación) identificadas en
el diagnóstico?",
    "validations": {}
  },
  {
    "base_slot": "D2-Q4",
    "cluster_id": "CL02",
    "dimension_id": "DIM02",
    "expected_elements": [
      {
        "required": true,
        "type": "mitigacion_propuesta"
      },
      {
        "required": true,
        "type": "riesgos_identificados"
      }
    ],
    "failure_contract": {
      "abort_if": [
        "missing_required_element",
        "incomplete_text"
      ],
      "emit_code": "ABORT-Q159-REQ"
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        "class": "PDETMunicipalPlanAnalyzer",
        "function": "_bayesian_risk_inference",
        "method_type": "analysis",
        "priority": 1,
        "description": "PDETMunicipalPlanAnalyzer._bayesian_risk_inference"
      },
      {
        "class": "PDETMunicipalPlanAnalyzer",
        "function": "sensitivity_analysis",
        "method_type": "analysis",
        "priority": 2,
        "description": "PDETMunicipalPlanAnalyzer.sensitivity_analysis"
      },
      {
        "class": "PDETMunicipalPlanAnalyzer",
        "function": "_interpret_risk",
        "method_type": "analysis",
        "priority": 3,
        "description": "PDETMunicipalPlanAnalyzer._interpret_risk"
      },
      {
        "class": "PDETMunicipalPlanAnalyzer",
        "function": "_compute_robustness_value",
        "method_type": "analysis",
        "priority": 4,
        "description": "PDETMunicipalPlanAnalyzer._compute_robustness_value"
      },
      {
        "class": "PDETMunicipalPlanAnalyzer",
        "function": "_compute_e_value",
        "method_type": "analysis",
        "priority": 5,
        "description": "PDETMunicipalPlanAnalyzer._compute_e_value"
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      {
        "class": "PDETMunicipalPlanAnalyzer",
        "function": "_interpret_sensitivity",
        "method_type": "analysis",
        "priority": 6,
        "description": "PDETMunicipalPlanAnalyzer._interpret_sensitivity"
      },
      {
        "class": "OperationalizationAuditor",

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    "function": "_audit_systemic_risk",
    "method_type": "validation",
    "priority": 7,
    "description": "OperationalizationAuditor._audit_systemic_risk"
  },
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    "class": "BayesianCounterfactualAuditor",
    "function": "aggregate_risk_and_prioritize",
    "method_type": "analysis",
    "priority": 8,
    "description": "BayesianCounterfactualAuditor.aggregate_risk_and_prioritize"
  },
  {
    "class": "BayesianCounterfactualAuditor",
    "function": "refutation_and_sanity_checks",
    "method_type": "analysis",
    "priority": 9,
    "description": "BayesianCounterfactualAuditor.refutation_and_sanity_checks"
  },
  {
    "class": "AdaptivePriorCalculator",
    "function": "sensitivity_analysis",
    "method_type": "analysis",
    "priority": 10,
    "description": "AdaptivePriorCalculator.sensitivity_analysis"
  }
],
"patterns": [
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q159-000",
    "match_type": "REGEX",
    "pattern": "riesgos:|posibles dificultades:|barreras a la implementación"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q159-001",
    "match_type": "REGEX",
    "pattern": "riesgos de seguridad para los retornados|falta de garantías de no
repetición"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q159-002",
    "match_type": "REGEX",
    "pattern": "revictimización institucional|barreras administrativas"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q159-003",
    "match_type": "REGEX",
    "pattern": "sostenibilidad de los proyectos productivos"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q159-004",
    "match_type": "REGEX",
    "pattern": "conflictos entre víctimas y comunidad de acogida"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,

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    "flags": "i",
    "id": "PAT-Q159-005",
    "match_type": "REGEX",
    "pattern": "agotamiento de los recursos para ayuda humanitaria"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q159-006",
    "match_type": "REGEX",
    "pattern": "medidas de mitigación|plan de contingencia|para mitigar"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q159-007",
    "match_type": "REGEX",
    "pattern": "protocolos de seguridad|acompañamiento psicosocial permanente"
  }
],
"policy_area_id": "PA05",
"question_global": 159,
"question_id": "Q159",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿El plan identifica posibles riesgos en la implementación de la política de víctimas (ej. revictimización, riesgos de seguridad en retornos) y propone 'medidas de mitigación'?",
"validations": {}
},
{
  "base_slot": "D2-Q5",
  "cluster_id": "CL02",
  "dimension_id": "DIM02",
  "expected_elements": [
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      "required": true,
      "type": "complementariedad_explicita"
    },
    {
      "required": true,
      "type": "secuenciacion_logica"
    }
  ],
  "failure_contract": {
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      "incomplete_text"
    ],
    "emit_code": "ABORT-Q160-REQ"
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      "method_type": "analysis",
      "priority": 1,
      "description": "PolicyContradictionDetector._detect_logical_incompatibilities"
    },
    {
      "class": "PolicyContradictionDetector",
      "function": "_calculate_coherence_metrics",
      "method_type": "scoring",
      "priority": 2,
      "description": "PolicyContradictionDetector._calculate_coherence_metrics"
    },
    {
      "class": "PolicyContradictionDetector",
      "function": "_calculate_objective_alignment",
      "method_type": "scoring",

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    "priority": 3,
    "description": "PolicyContradictionDetector._calculate_objective_alignment"
  },
  {
    "class": "PolicyContradictionDetector",
    "function": "_calculate_graph_fragmentation",
    "method_type": "scoring",
    "priority": 4,
    "description": "PolicyContradictionDetector._calculate_graph_fragmentation"
  },
  {
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    "function": "audit_sequence_logic",
    "method_type": "validation",
    "priority": 5,
    "description": "OperationalizationAuditor.audit_sequence_logic"
  },
  {
    "class": "BayesianMechanismInference",
    "function": "_calculate_coherence_factor",
    "method_type": "scoring",
    "priority": 6,
    "description": "BayesianMechanismInference._calculate_coherence_factor"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_score_causal_coherence",
    "method_type": "scoring",
    "priority": 7,
    "description": "PDETMunicipalPlanAnalyzer._score_causal_coherence"
  },
  {
    "class": "AdaptivePriorCalculator",
    "function": "calculate_likelihood_adaptativo",
    "method_type": "scoring",
    "priority": 8,
    "description": "AdaptivePriorCalculator.calculate_likelihood_adaptativo"
  }
],
"patterns": [
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q160-000",
    "match_type": "REGEX",
    "pattern": "estrategia integral de reparación|de manera articulada"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q160-001",
    "match_type": "REGEX",
    "pattern": "la rehabilitación psicosocial complementa la indemnización"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q160-002",
    "match_type": "REGEX",
    "pattern": "sinergia entre las medidas individuales y colectivas"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q160-003",
    "match_type": "REGEX",
    "pattern": "la atención humanitaria es el primer paso antes de la reparación"
  },

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{
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  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q160-004",
  "match_type": "LITERAL",
  "pattern": "en una primera fase se garantiza la asistencia, luego la reparación"
},
{
  "category": "GENERAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q160-005",
  "match_type": "REGEX",
  "pattern": "la estrategia combina los cinco componentes de la reparación integral"
}
],
"policy_area_id": "PA05",
"question_global": 160,
"question_id": "Q160",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿El conjunto de actividades para las víctimas demuestra una estrategia coherente? Se debe buscar evidencia de 'complementariedad' (ej. reparación individual + reparación colectiva) o una 'secuencia' lógica.",
"validations": {}
},
{
  "base_slot": "D3-Q1",
  "cluster_id": "CL02",
  "dimension_id": "DIM03",
  "expected_elements": [
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      "type": "fuente_verificacion"
    },
    {
      "required": true,
      "type": "linea_base_producto"
    },
    {
      "required": true,
      "type": "meta_cuantitativa"
    }
  ],
  "failure_contract": {
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      "incomplete_text"
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      "function": "_score_indicators",
      "method_type": "scoring",
      "priority": 1,
      "description": "PDETMunicipalPlanAnalyzer._score_indicators"
    },
    {
      "class": "OperationalizationAuditor",
      "function": "audit_evidence_traceability",
      "method_type": "validation",
      "priority": 2,
      "description": "OperationalizationAuditor.audit_evidence_traceability"
    },
    {
      "class": "CausalInferenceSetup",
      "function": "assign_probative_value",
      "method_type": "analysis",
      "priority": 3,

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    "description": "CausalInferenceSetup.assign_probative_value"
  },
  {
    "class": "BeachEvidentialTest",
    "function": "apply_test_logic",
    "method_type": "analysis",
    "priority": 4,
    "description": "BeachEvidentialTest.apply_test_logic"
  },
  {
    "class": "TextMiningEngine",
    "function": "diagnose_critical_links",
    "method_type": "analysis",
    "priority": 5,
    "description": "TextMiningEngine.diagnose_critical_links"
  },
  {
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    "function": "_extract_metadata",
    "method_type": "extraction",
    "priority": 6,
    "description": "IndustrialPolicyProcessor._extract_metadata"
  },
  {
    "class": "IndustrialPolicyProcessor",
    "function": "_calculate_quality_score",
    "method_type": "scoring",
    "priority": 7,
    "description": "IndustrialPolicyProcessor._calculate_quality_score"
  },
  {
    "class": "AdaptivePriorCalculator",
    "function": "generate_traceability_record",
    "method_type": "analysis",
    "priority": 8,
    "description": "AdaptivePriorCalculator.generate_traceability_record"
  }
],
"patterns": [
  {
    "category": "INDICADOR",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q161-000",
    "match_type": "REGEX",
    "pattern": "indicador de producto|meta de producto"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q161-001",
    "match_type": "REGEX",
    "pattern": "número de víctimas indemnizadas|giros de indemnización realizados"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q161-002",
    "match_type": "REGEX",
    "pattern": "familias retornadas o reubicadas|planes de retorno aprobados"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q161-003",
    "match_type": "REGEX",
    "pattern": "Sujetos de Reparación Colectiva con PIRC implementado"
  }
]

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    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q161-004",
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    "pattern": "víctimas que accedieron a rehabilitación"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q161-005",
    "match_type": "LITERAL",
    "pattern": "Línea Base:|LB:|Valor inicial:"
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  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q161-006",
    "match_type": "REGEX",
    "pattern": "Meta Cuatrienio:|Meta:|Valor esperado:"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q161-007",
    "match_type": "REGEX",
    "pattern": "Fuente de verificación:|Medio de verificación:|Fuente:"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q161-008",
    "match_type": "REGEX",
    "pattern": "RUV|Red Nacional de Información|Vivanto"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q161-009",
    "match_type": "REGEX",
    "pattern": "informes de la UARIV|actas del CTJT|listados de beneficiarios"
  }
],
"policy_area_id": "PA05",
"question_global": 161,
"question_id": "Q161",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿Los indicadores de producto para víctimas (ej. indemnizaciones pagadas, familias retornadas) incluyen 'línea base', 'meta' cuantitativa y 'fuente de verificación' (ej. RUV)?",
"validations": {}
},
{
  "base_slot": "D3-Q2",
  "cluster_id": "CL02",
  "dimension_id": "DIM03",
  "expected_elements": [
    {
      "required": true,
      "type": "proporcionalidad_meta_problema"
    }
  ]
},
"failure_contract": {
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    "incomplete_text"
  ]
},

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      "method_type": "scoring",
      "priority": 1,
      "description": "AdvancedDAGValidator._calculate_bayesian_posterior"
    },
    {
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      "function": "_calculate_confidence_interval",
      "method_type": "scoring",
      "priority": 2,
      "description": "AdvancedDAGValidator._calculate_confidence_interval"
    },
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      "function": "_adjust_domain_weights",
      "method_type": "analysis",
      "priority": 3,
      "description": "AdaptivePriorCalculator._adjust_domain_weights"
    },
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      "class": "PDETMunicipalPlanAnalyzer",
      "function": "_get_spanish_stopwords",
      "method_type": "analysis",
      "priority": 4,
      "description": "PDETMunicipalPlanAnalyzer._get_spanish_stopwords"
    },
    {
      "class": "BayesianMechanismInference",
      "function": "_log_refactored_components",
      "method_type": "analysis",
      "priority": 5,
      "description": "BayesianMechanismInference._log_refactored_components"
    },
    {
      "class": "PDETMunicipalPlanAnalyzer",
      "function": "analyze_financial_feasibility",
      "method_type": "analysis",
      "priority": 6,
      "description": "PDETMunicipalPlanAnalyzer.analyze_financial_feasibility"
    },
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      "class": "PDETMunicipalPlanAnalyzer",
      "function": "_score_indicators",
      "method_type": "scoring",
      "priority": 7,
      "description": "PDETMunicipalPlanAnalyzer._score_indicators"
    },
    {
      "class": "PDETMunicipalPlanAnalyzer",
      "function": "_interpret_risk",
      "method_type": "analysis",
      "priority": 8,
      "description": "PDETMunicipalPlanAnalyzer._interpret_risk"
    },
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      "function": "_calculate_sufficiency",
      "method_type": "scoring",
      "priority": 9,
      "description": "FinancialAuditor._calculate_sufficiency"
    },
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      "class": "BayesianMechanismInference",
      "function": "_test_sufficiency",
      "method_type": "analysis",
      "priority": 10,
      "description": "BayesianMechanismInference._test_sufficiency"
    }
  ]
}

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},
{
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  "function": "_test_necessity",
  "method_type": "analysis",
  "priority": 11,
  "description": "BayesianMechanismInference._test_necessity"
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  "class": "PDETMunicipalPlanAnalyzer",
  "function": "_assess_financial_sustainability",
  "method_type": "analysis",
  "priority": 12,
  "description": "PDETMunicipalPlanAnalyzer._assess_financial_sustainability"
},
{
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  "function": "calculate_likelihood_adaptativo",
  "method_type": "scoring",
  "priority": 13,
  "description": "AdaptivePriorCalculator.calculate_likelihood_adaptativo"
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  "function": "_calculate_quality_score",
  "method_type": "scoring",
  "priority": 14,
  "description": "IndustrialPolicyProcessor._calculate_quality_score"
},
{
  "class": "TeoriaCambio",
  "function": "_generar_sugerencias_internas",
  "method_type": "analysis",
  "priority": 15,
  "description": "TeoriaCambio._generar_sugerencias_internas"
},
{
  "class": "PDETMunicipalPlanAnalyzer",
  "function": "_deduplicate_tables",
  "method_type": "analysis",
  "priority": 16,
  "description": "PDETMunicipalPlanAnalyzer._deduplicate_tables"
},
{
  "class": "PDETMunicipalPlanAnalyzer",
  "function": "_indicator_to_dict",
  "method_type": "analysis",
  "priority": 17,
  "description": "PDETMunicipalPlanAnalyzer._indicator_to_dict"
},
{
  "class": "PDETMunicipalPlanAnalyzer",
  "function": "_generate_recommendations",
  "method_type": "analysis",
  "priority": 18,
  "description": "PDETMunicipalPlanAnalyzer._generate_recommendations"
},
{
  "class": "IndustrialPolicyProcessor",
  "function": "_compile_pattern_registry",
  "method_type": "analysis",
  "priority": 19,
  "description": "IndustrialPolicyProcessor._compile_pattern_registry"
},
{
  "class": "IndustrialPolicyProcessor",
  "function": "_build_point_patterns",
  "method_type": "analysis",
  "priority": 20,
  "description": "IndustrialPolicyProcessor._build_point_patterns"
},
{

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        "function": "_empty_result",
        "method_type": "analysis",
        "priority": 21,
        "description": "IndustrialPolicyProcessor._empty_result"
    }
],
"patterns": [
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        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q162-000",
        "match_type": "REGEX",
        "pattern": "la meta de indemnización cubre un X% del universo por indemnizar"
    },
    {
        "category": "INDICADOR",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q162-001",
        "match_type": "REGEX",
        "pattern": "se atenderá al \\d+% de las familias que solicitaron retorno"
    },
    {
        "category": "GENERAL",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q162-002",
        "match_type": "REGEX",
        "pattern": "universo de atención|población víctima total en el RUV"
    },
    {
        "category": "GENERAL",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q162-003",
        "match_type": "REGEX",
        "pattern": "la meta se establece en función de la concurrencia de la UARIV"
    },
    {
        "category": "GENERAL",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q162-004",
        "match_type": "REGEX",
        "pattern": "se priorizarán las víctimas de mayor edad o con discapacidad"
    },
    {
        "category": "GENERAL",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q162-005",
        "match_type": "REGEX",
        "pattern": "la dosificación de la ayuda humanitaria sigue los estándares"
    }
],
"policy_area_id": "PA05",
"question_global": 162,
"question_id": "Q162",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿Las metas de los productos (ej. 'reparar a 1.000 víctimas') son proporcionales a la magnitud del universo de víctimas diagnosticado?",
"validations": {}
},
{
    "base_slot": "D3-Q3",
    "cluster_id": "CL02",
    "dimension_id": "DIM03",
    "expected_elements": [
        {

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        "required": true,
        "type": "trazabilidad_organizacional"
    },
    {
        "required": true,
        "type": "trazabilidad_presupuestal"
    }
],
"failure_contract": {
    "abort_if": [
        "missing_required_element",
        "incomplete_text"
    ],
    "emit_code": "ABORT-Q163-REQ"
},
"method_sets": [
    {
        "class": "FinancialAuditor",
        "function": "_match_program_to_node",
        "method_type": "analysis",
        "priority": 1,
        "description": "FinancialAuditor._match_program_to_node"
    },
    {
        "class": "FinancialAuditor",
        "function": "_match_goal_to_budget",
        "method_type": "analysis",
        "priority": 2,
        "description": "FinancialAuditor._match_goal_to_budget"
    },
    {
        "class": "PDETMunicipalPlanAnalyzer",
        "function": "_extract_from_responsibility_tables",
        "method_type": "extraction",
        "priority": 3,
        "description": "PDETMunicipalPlanAnalyzer._extract_from_responsibility_tables"
    },
    {
        "class": "PDETMunicipalPlanAnalyzer",
        "function": "_consolidate_entities",
        "method_type": "analysis",
        "priority": 4,
        "description": "PDETMunicipalPlanAnalyzer._consolidate_entities"
    },
    {
        "class": "PDETMunicipalPlanAnalyzer",
        "function": "identify_responsible_entities",
        "method_type": "analysis",
        "priority": 5,
        "description": "PDETMunicipalPlanAnalyzer.identify_responsible_entities"
    },
    {
        "class": "PDETMunicipalPlanAnalyzer",
        "function": "_score_responsibility_clarity",
        "method_type": "scoring",
        "priority": 6,
        "description": "PDETMunicipalPlanAnalyzer._score_responsibility_clarity"
    },
    {
        "class": "PolicyAnalysisEmbedder",
        "function": "process_document",
        "method_type": "analysis",
        "priority": 7,
        "description": "PolicyAnalysisEmbedder.process_document"
    },
    {
        "class": "PolicyAnalysisEmbedder",
        "function": "_generate_query_from_pdq",
        "method_type": "analysis",
        "priority": 8,
        "description": "PolicyAnalysisEmbedder._generate_query_from_pdq"
    },

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{
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  "function": "semantic_search",
  "method_type": "analysis",
  "priority": 9,
  "description": "PolicyAnalysisEmbedder.semantic_search"
},
{
  "class": "PolicyAnalysisEmbedder",
  "function": "_apply_mmr",
  "method_type": "analysis",
  "priority": 10,
  "description": "PolicyAnalysisEmbedder._apply_mmr"
},
{
  "class": "SemanticAnalyzer",
  "function": "_empty_semantic_cube",
  "method_type": "analysis",
  "priority": 11,
  "description": "SemanticAnalyzer._empty_semantic_cube"
},
{
  "class": "SemanticAnalyzer",
  "function": "_classify_policy_domain",
  "method_type": "analysis",
  "priority": 12,
  "description": "SemanticAnalyzer._classify_policy_domain"
},
{
  "class": "SemanticAnalyzer",
  "function": "_classify_cross_cutting_themes",
  "method_type": "analysis",
  "priority": 13,
  "description": "SemanticAnalyzer._classify_cross_cutting_themes"
},
{
  "class": "SemanticAnalyzer",
  "function": "_classify_value_chain_link",
  "method_type": "analysis",
  "priority": 14,
  "description": "SemanticAnalyzer._classify_value_chain_link"
},
{
  "class": "SemanticAnalyzer",
  "function": "_vectorize_segments",
  "method_type": "analysis",
  "priority": 15,
  "description": "SemanticAnalyzer._vectorize_segments"
},
{
  "class": "SemanticAnalyzer",
  "function": "_process_segment",
  "method_type": "analysis",
  "priority": 16,
  "description": "SemanticAnalyzer._process_segment"
},
{
  "class": "SemanticAnalyzer",
  "function": "_calculate_semantic_complexity",
  "method_type": "scoring",
  "priority": 17,
  "description": "SemanticAnalyzer._calculate_semantic_complexity"
},
{
  "class": "IndustrialPolicyProcessor",
  "function": "_compute_evidence_confidence",
  "method_type": "analysis",
  "priority": 18,
  "description": "IndustrialPolicyProcessor._compute_evidence_confidence"
},
{
  "class": "PDETMunicipalPlanAnalyzer",

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    "function": "_entity_to_dict",
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    "priority": 19,
    "description": "PDETMunicipalPlanAnalyzer._entity_to_dict"
  },
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    "function": "generate_traceability_record",
    "method_type": "analysis",
    "priority": 20,
    "description": "AdaptivePriorCalculator.generate_traceability_record"
  },
  {
    "class": "PolicyAnalysisEmbedder",
    "function": "generate_pdq_report",
    "method_type": "analysis",
    "priority": 21,
    "description": "PolicyAnalysisEmbedder.generate_pdq_report"
  },
  {
    "class": "ReportingEngine",
    "function": "generate_accountability_matrix",
    "method_type": "analysis",
    "priority": 22,
    "description": "ReportingEngine.generate_accountability_matrix"
  }
],
"patterns": [
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q163-000",
    "match_type": "REGEX",
    "pattern": "código BPIN|proyecto de inversión para la paz y reconciliación"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q163-001",
    "match_type": "REGEX",
    "pattern": "programa del PPI|línea de inversión en víctimas"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q163-002",
    "match_type": "REGEX",
    "pattern": "recursos del FONSET|presupuesto para el PAT"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q163-003",
    "match_type": "REGEX",
    "pattern": "responsable:|dependencia a cargo:|entidad ejecutora"
  },
  {
    "category": "TERRITORIAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q163-004",
    "match_type": "REGEX",
    "pattern": "Enlace Municipal de Víctimas|Secretaría de Gobierno"
  },
  {
    "category": "TERRITORIAL",
    "confidence_weight": 0.85,
    "flags": "i",

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        "id": "PAT-Q163-005",
        "match_type": "REGEX",
        "pattern": "articulado con la Personería|UARIV territorial"
    },
    {
        "category": "GENERAL",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q163-006",
        "match_type": "REGEX",
        "pattern": "convenio con|operado por"
    }
],
"policy_area_id": "PA05",
"question_global": 163,
"question_id": "Q163",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿Los productos para víctimas tienen trazabilidad presupuestal (vinculados a códigos BPIN, PPI) y organizacional (asociados al 'Enlace de Víctimas' o entidad responsable)?",
"validations": {}
},
{
    "base_slot": "D3-Q4",
    "cluster_id": "CL02",
    "dimension_id": "DIM03",
    "expected_elements": [
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            "required": true,
            "type": "coherencia_recursos"
        },
        {
            "required": true,
            "type": "factibilidad_tecnica"
        },
        {
            "required": true,
            "type": "realismo_plazos"
        }
    ],
    "failure_contract": {
        "abort_if": [
            "missing_required_element",
            "incomplete_text"
        ],
        "emit_code": "ABORT-Q164-REQ"
    },
    "method_sets": [
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            "class": "AdvancedDAGValidator",
            "function": "calculate_acyclicity_pvalue",
            "method_type": "scoring",
            "priority": 1,
            "description": "AdvancedDAGValidator.calculate_acyclicity_pvalue"
        },
        {
            "class": "AdvancedDAGValidator",
            "function": "_is_acyclic",
            "method_type": "analysis",
            "priority": 2,
            "description": "AdvancedDAGValidator._is_acyclic"
        },
        {
            "class": "AdvancedDAGValidator",
            "function": "get_graph_stats",
            "method_type": "analysis",
            "priority": 3,
            "description": "AdvancedDAGValidator.get_graph_stats"
        },
        {
            "class": "AdvancedDAGValidator",
            "function": "_calculate_node_importance",

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    "method_type": "scoring",
    "priority": 4,
    "description": "AdvancedDAGValidator._calculate_node_importance"
  },
  {
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    "function": "_generate_subgraph",
    "method_type": "analysis",
    "priority": 5,
    "description": "AdvancedDAGValidator._generate_subgraph"
  },
  {
    "class": "AdvancedDAGValidator",
    "function": "add_node",
    "method_type": "analysis",
    "priority": 6,
    "description": "AdvancedDAGValidator.add_node"
  },
  {
    "class": "AdvancedDAGValidator",
    "function": "add_edge",
    "method_type": "analysis",
    "priority": 7,
    "description": "AdvancedDAGValidator.add_edge"
  },
  {
    "class": "AdvancedDAGValidator",
    "function": "export_nodes",
    "method_type": "analysis",
    "priority": 8,
    "description": "AdvancedDAGValidator.export_nodes"
  },
  {
    "class": "AdvancedDAGValidator",
    "function": "_initialize_rng",
    "method_type": "analysis",
    "priority": 9,
    "description": "AdvancedDAGValidator._initialize_rng"
  },
  {
    "class": "AdvancedDAGValidator",
    "function": "_calculate_statistical_power",
    "method_type": "scoring",
    "priority": 10,
    "description": "AdvancedDAGValidator._calculate_statistical_power"
  },
  {
    "class": "AdvancedDAGValidator",
    "function": "_get_node_validator",
    "method_type": "analysis",
    "priority": 11,
    "description": "AdvancedDAGValidator._get_node_validator"
  },
  {
    "class": "AdvancedDAGValidator",
    "function": "_create_empty_result",
    "method_type": "analysis",
    "priority": 12,
    "description": "AdvancedDAGValidator._create_empty_result"
  },
  {
    "class": "BayesianMechanismInference",
    "function": "_test_necessity",
    "method_type": "analysis",
    "priority": 13,
    "description": "BayesianMechanismInference._test_necessity"
  },
  {
    "class": "IndustrialGradeValidator",
    "function": "execute_suite",
    "method_type": "analysis",
    "priority": 14,

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    "description": "IndustrialGradeValidator.execute_suite"
  },
  {
    "class": "IndustrialGradeValidator",
    "function": "validate_connection_matrix",
    "method_type": "validation",
    "priority": 15,
    "description": "IndustrialGradeValidator.validate_connection_matrix"
  },
  {
    "class": "IndustrialGradeValidator",
    "function": "run_performance_benchmarks",
    "method_type": "analysis",
    "priority": 16,
    "description": "IndustrialGradeValidator.run_performance_benchmarks"
  },
  {
    "class": "IndustrialGradeValidator",
    "function": "_benchmark_operation",
    "method_type": "analysis",
    "priority": 17,
    "description": "IndustrialGradeValidator._benchmark_operation"
  },
  {
    "class": "IndustrialGradeValidator",
    "function": "_log_metric",
    "method_type": "analysis",
    "priority": 18,
    "description": "IndustrialGradeValidator._log_metric"
  },
  {
    "class": "IndustrialGradeValidator",
    "function": "validate_engine_readiness",
    "method_type": "validation",
    "priority": 19,
    "description": "IndustrialGradeValidator.validate_engine_readiness"
  },
  {
    "class": "PerformanceAnalyzer",
    "function": "analyze_performance",
    "method_type": "analysis",
    "priority": 20,
    "description": "PerformanceAnalyzer.analyze_performance"
  },
  {
    "class": "PerformanceAnalyzer",
    "function": "_calculate_loss_functions",
    "method_type": "scoring",
    "priority": 21,
    "description": "PerformanceAnalyzer._calculate_loss_functions"
  },
  {
    "class": "HierarchicalGenerativeModel",
    "function": "_calculate_likelihood",
    "method_type": "scoring",
    "priority": 22,
    "description": "HierarchicalGenerativeModel._calculate_likelihood"
  },
  {
    "class": "HierarchicalGenerativeModel",
    "function": "_calculate_ess",
    "method_type": "scoring",
    "priority": 23,
    "description": "HierarchicalGenerativeModel._calculate_ess"
  },
  {
    "class": "HierarchicalGenerativeModel",
    "function": "_calculate_r_hat",
    "method_type": "scoring",
    "priority": 24,
    "description": "HierarchicalGenerativeModel._calculate_r_hat"
  },

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{
  "class": "IndustrialGradeValidator",
  "function": "validate_causal_categories",
  "method_type": "validation",
  "priority": 25,
  "description": "IndustrialGradeValidator.validate_causal_categories"
},
{
  "class": "TeoriaCambio",
  "function": "_extraer_categorias",
  "method_type": "analysis",
  "priority": 26,
  "description": "TeoriaCambio._extraer_categorias"
}
],
"patterns": [
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q164-000",
    "match_type": "REGEX",
    "pattern": "factibilidad|viabilidad|es realista esperar que"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q164-001",
    "match_type": "REGEX",
    "pattern": "capacidad operativa del Enlace de Víctimas para acompañar"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q164-002",
    "match_type": "REGEX",
    "pattern": "plazo para concertar los planes de retorno"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q164-003",
    "match_type": "REGEX",
    "pattern": "la meta de indemnización depende de los giros de la UARIV"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q164-004",
    "match_type": "REGEX",
    "pattern": "contradictorio|poco probable|desproporcionado"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q164-005",
    "match_type": "REGEX",
    "pattern": "con los recursos asignados se puede lograr el acompañamiento"
  }
]

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],
"policy_area_id": "PA05",
"question_global": 164,
"question_id": "Q164",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿Existe una relación factible entre la actividad (ej. 'acompañamiento a retornos')
y la meta del producto asociado (ej. '500 familias retornadas con sostenibilidad') para la política

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de víctimas? Se debe evaluar si los 'plazos' son realistas.",
  "validations": {}
},
{
  "base_slot": "D3-Q5",
  "cluster_id": "CL02",
  "dimension_id": "DIM03",
  "expected_elements": [
    {
      "required": true,
      "type": "conexion_producto_resultado"
    },
    {
      "required": true,
      "type": "mecanismo_causal_explicito"
    }
  ],
  "failure_contract": {
    "abort_if": [
      "missing_required_element",
      "incomplete_text"
    ],
    "emit_code": "ABORT-Q165-REQ"
  },
  "method_sets": [
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      "class": "PDETMunicipalPlanAnalyzer",
      "function": "_identify_confounders",
      "method_type": "analysis",
      "priority": 1,
      "description": "PDETMunicipalPlanAnalyzer._identify_confounders"
    },
    {
      "class": "PDETMunicipalPlanAnalyzer",
      "function": "_effect_to_dict",
      "method_type": "analysis",
      "priority": 2,
      "description": "PDETMunicipalPlanAnalyzer._effect_to_dict"
    },
    {
      "class": "PDETMunicipalPlanAnalyzer",
      "function": "_scenario_to_dict",
      "method_type": "analysis",
      "priority": 3,
      "description": "PDETMunicipalPlanAnalyzer._scenario_to_dict"
    },
    {
      "class": "PDETMunicipalPlanAnalyzer",
      "function": "_simulate_intervention",
      "method_type": "analysis",
      "priority": 4,
      "description": "PDETMunicipalPlanAnalyzer._simulate_intervention"
    },
    {
      "class": "PDETMunicipalPlanAnalyzer",
      "function": "_generate_recommendations",
      "method_type": "analysis",
      "priority": 5,
      "description": "PDETMunicipalPlanAnalyzer._generate_recommendations"
    },
    {
      "class": "PDETMunicipalPlanAnalyzer",
      "function": "_identify_causal_nodes",
      "method_type": "analysis",
      "priority": 6,
      "description": "PDETMunicipalPlanAnalyzer._identify_causal_nodes"
    },
    {
      "class": "BayesianCounterfactualAuditor",
      "function": "_evaluate_factual",
      "method_type": "analysis",
      "priority": 7,

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    "description": "BayesianCounterfactualAuditor._evaluate_factual"
  },
  {
    "class": "BayesianCounterfactualAuditor",
    "function": "_evaluate_counterfactual",
    "method_type": "analysis",
    "priority": 8,
    "description": "BayesianCounterfactualAuditor._evaluate_counterfactual"
  },
  {
    "class": "CausalExtractor",
    "function": "_assess_financial_consistency",
    "method_type": "analysis",
    "priority": 9,
    "description": "CausalExtractor._assess_financial_consistency"
  },
  {
    "class": "BayesianMechanismInference",
    "function": "_infer_activity_sequence",
    "method_type": "analysis",
    "priority": 10,
    "description": "BayesianMechanismInference._infer_activity_sequence"
  },
  {
    "class": "BayesianMechanismInference",
    "function": "_generate_necessity_remediation",
    "method_type": "analysis",
    "priority": 11,
    "description": "BayesianMechanismInference._generate_necessity_remediation"
  },
  {
    "class": "BayesianCounterfactualAuditor",
    "function": "refutation_and_sanity_checks",
    "method_type": "analysis",
    "priority": 12,
    "description": "BayesianCounterfactualAuditor.refutation_and_sanity_checks"
  },
  {
    "class": "IndustrialPolicyProcessor",
    "function": "_load_questionnaire",
    "method_type": "analysis",
    "priority": 13,
    "description": "IndustrialPolicyProcessor._load_questionnaire"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "analyze_financial_feasibility",
    "method_type": "analysis",
    "priority": 14,
    "description": "PDETMunicipalPlanAnalyzer.analyze_financial_feasibility"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "construct_causal_dag",
    "method_type": "analysis",
    "priority": 15,
    "description": "PDETMunicipalPlanAnalyzer.construct_causal_dag"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "estimate_causal_effects",
    "method_type": "analysis",
    "priority": 16,
    "description": "PDETMunicipalPlanAnalyzer.estimate_causal_effects"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "generate_counterfactuals",
    "method_type": "analysis",
    "priority": 17,
    "description": "PDETMunicipalPlanAnalyzer.generate_counterfactuals"
  },

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{
  "class": "CausalExtractor",
  "function": "_build_type_hierarchy",
  "method_type": "analysis",
  "priority": 18,
  "description": "CausalExtractor._build_type_hierarchy"
},
{
  "class": "CausalExtractor",
  "function": "_check_structural_violation",
  "method_type": "analysis",
  "priority": 19,
  "description": "CausalExtractor._check_structural_violation"
},
{
  "class": "CausalExtractor",
  "function": "_calculate_type_transition_prior",
  "method_type": "scoring",
  "priority": 20,
  "description": "CausalExtractor._calculate_type_transition_prior"
},
{
  "class": "CausalExtractor",
  "function": "_calculate_textual_proximity",
  "method_type": "scoring",
  "priority": 21,
  "description": "CausalExtractor._calculate_textual_proximity"
},
{
  "class": "TeoriaCambio",
  "function": "_validar_orden_causal",
  "method_type": "analysis",
  "priority": 22,
  "description": "TeoriaCambio._validar_orden_causal"
},
{
  "class": "PDETMunicipalPlanAnalyzer",
  "function": "_refine_edge_probabilities",
  "method_type": "analysis",
  "priority": 23,
  "description": "PDETMunicipalPlanAnalyzer._refine_edge_probabilities"
},
{
  "class": "PolicyAnalysisEmbedder",
  "function": "compare_policy_interventions",
  "method_type": "analysis",
  "priority": 24,
  "description": "PolicyAnalysisEmbedder.compare_policy_interventions"
},
{
  "class": "BayesianMechanismInference",
  "function": "infer_mechanisms",
  "method_type": "analysis",
  "priority": 25,
  "description": "BayesianMechanismInference.infer_mechanisms"
}
],
"patterns": [
{
  "category": "GENERAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q165-000",
  "match_type": "REGEX",
  "pattern": "esto permitirá que|lo cual contribuirá a|generando así"
},
{
  "category": "GENERAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q165-001",
  "match_type": "LITERAL",

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        "pattern": "el mecanismo es que la reparación material facilita la estabilización
socioeconómica"
    },
    {
        "category": "GENERAL",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q165-002",
        "match_type": "REGEX",
        "pattern": "a través de los actos de memoria, se avanza en la dignificación y la no
repetición"
    },
    {
        "category": "GENERAL",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q165-003",
        "match_type": "REGEX",
        "pattern": "la participación en la Mesa fortalece la ciudadanía de las víctimas"
    },
    {
        "category": "GENERAL",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q165-004",
        "match_type": "REGEX",
        "pattern": "variable intermedia|mediador|eslabón causal|confianza|dignificación"
    },
    {
        "category": "GENERAL",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q165-005",
        "match_type": "REGEX",
        "pattern": "cadena de valor|ruta de cambio"
    }
],
"policy_area_id": "PA05",
"question_global": 165,
"question_id": "Q165",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿El PDM explica cómo los productos (ej. 'medidas de satisfacción') contribuyen a
generar resultados (ej. 'restablecimiento de la confianza')? Se debe buscar la descripción de este
'mecanismo'.",
"validations": {}
},
{
    "base_slot": "D4-Q1",
    "cluster_id": "CL02",
    "dimension_id": "DIM04",
    "expected_elements": [
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        {
            "required": true,
            "type": "linea_base_resultado"
        },
        {
            "required": true,
            "type": "meta_resultado"
        },
        {
            "required": true,
            "type": "metrica_outcome"
        }
    ],
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    "incomplete_text"
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    "priority": 1,
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    "method_type": "extraction",
    "priority": 2,
    "description": "PDETMunicipalPlanAnalyzer._extract_entities_ner"
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    "function": "_calculate_language_specificity",
    "method_type": "scoring",
    "priority": 3,
    "description": "CausalExtractor._calculate_language_specificity"
  },
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    "function": "_calculate_composite_likelihood",
    "method_type": "scoring",
    "priority": 4,
    "description": "CausalExtractor._calculate_composite_likelihood"
  },
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    "function": "_calculate_semantic_distance",
    "method_type": "scoring",
    "priority": 5,
    "description": "CausalExtractor._calculate_semantic_distance"
  },
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    "function": "_classify_temporal_type",
    "method_type": "analysis",
    "priority": 6,
    "description": "TemporalLogicVerifier._classify_temporal_type"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_score_indicators",
    "method_type": "scoring",
    "priority": 7,
    "description": "PDETMunicipalPlanAnalyzer._score_indicators"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_find_outcome_mentions",
    "method_type": "analysis",
    "priority": 8,
    "description": "PDETMunicipalPlanAnalyzer._find_outcome_mentions"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_score_temporal_consistency",
    "method_type": "scoring",
    "priority": 9,
    "description": "PDETMunicipalPlanAnalyzer._score_temporal_consistency"
  },
  {
    "class": "CausalExtractor",
    "function": "_extract_goals",
    "method_type": "extraction",

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    "priority": 10,
    "description": "CausalExtractor._extract_goals"
  },
  {
    "class": "CausalExtractor",
    "function": "_parse_goal_context",
    "method_type": "extraction",
    "priority": 11,
    "description": "CausalExtractor._parse_goal_context"
  },
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    "class": "CausalExtractor",
    "function": "_classify_goal_type",
    "method_type": "analysis",
    "priority": 12,
    "description": "CausalExtractor._classify_goal_type"
  },
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    "function": "_parse_temporal_marker",
    "method_type": "extraction",
    "priority": 13,
    "description": "TemporalLogicVerifier._parse_temporal_marker"
  },
  {
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    "function": "_extract_resources",
    "method_type": "extraction",
    "priority": 14,
    "description": "TemporalLogicVerifier._extract_resources"
  },
  {
    "class": "PerformanceAnalyzer",
    "function": "analyze_performance",
    "method_type": "analysis",
    "priority": 15,
    "description": "PerformanceAnalyzer.analyze_performance"
  },
  {
    "class": "PerformanceAnalyzer",
    "function": "_generate_recommendations",
    "method_type": "analysis",
    "priority": 16,
    "description": "PerformanceAnalyzer._generate_recommendations"
  }
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"patterns": [
  {
    "category": "INDICADOR",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q166-000",
    "match_type": "REGEX",
    "pattern": "indicador de resultado|indicador de efecto|outcome"
  },
  {
    "category": "INDICADOR",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q166-001",
    "match_type": "REGEX",
    "pattern": "porcentaje de víctimas con su plan de reparación integral avanzado"
  },
  {
    "category": "INDICADOR",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q166-002",
    "match_type": "REGEX",
    "pattern": "tasa de retornos o reubicaciones con sostenibilidad"
  }
],

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        "flags": "i",
        "id": "PAT-Q166-003",
        "match_type": "REGEX",
        "pattern": "Índice de Goce Efectivo de Derechos (si se menciona)"
    },
    {
        "category": "GENERAL",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q166-004",
        "match_type": "LITERAL",
        "pattern": "Línea Base:|LB:|valor 2023:"
    },
    {
        "category": "INDICADOR",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q166-005",
        "match_type": "LITERAL",
        "pattern": "Meta Cuatrienio:|Meta 2027:|se espera avanzar a un X%"
    },
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        "category": "GENERAL",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q166-006",
        "match_type": "REGEX",
        "pattern": "Fuente de verificación:|Medio de verificación:"
    },
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        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q166-007",
        "match_type": "REGEX",
        "pattern": "Ficha de Indicador de Resultado (KPT del DNP)"
    },
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        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q166-008",
        "match_type": "REGEX",
        "pattern": "horizonte temporal|ventana de maduración|al final del periodo"
    }
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"policy_area_id": "PA05",
"question_global": 166,
"question_id": "Q166",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿Los indicadores de resultado para víctimas (ej. 'porcentaje de víctimas con reparación integral', 'tasa de retornos sostenibles') están definidos con línea base, meta y un horizonte temporal?",
"validations": {}
},
{
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    "dimension_id": "DIM04",
    "expected_elements": [
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            "required": true,
            "type": "cadena_causal_explicita"
        },
        {
            "required": true,
            "type": "condiciones_habilitantes"
        }
    ],
    {

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        "required": true,
        "type": "supuestos_identificados"
    }
],
"failure_contract": {
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        "incomplete_text"
    ],
    "emit_code": "ABORT-Q167-REQ"
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"method_sets": [
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        "function": "_encontrar_caminos_completos",
        "method_type": "analysis",
        "priority": 1,
        "description": "TeoriaCambio._encontrar_caminos_completos"
    },
    {
        "class": "TeoriaCambio",
        "function": "validacion_completa",
        "method_type": "analysis",
        "priority": 2,
        "description": "TeoriaCambio.validacion_completa"
    },
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        "method_type": "extraction",
        "priority": 3,
        "description": "CausalExtractor.extract_causal_hierarchy"
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        "function": "verify_conditional_independence",
        "method_type": "analysis",
        "priority": 4,
        "description": "HierarchicalGenerativeModel.verify_conditional_independence"
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    {
        "class": "HierarchicalGenerativeModel",
        "function": "_generate_independence_tests",
        "method_type": "analysis",
        "priority": 5,
        "description": "HierarchicalGenerativeModel._generate_independence_tests"
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    {
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        "function": "construct_scm",
        "method_type": "analysis",
        "priority": 6,
        "description": "BayesianCounterfactualAuditor.construct_scm"
    },
    {
        "class": "AdvancedDAGValidator",
        "function": "_perform_sensitivity_analysis_internal",
        "method_type": "analysis",
        "priority": 7,
        "description": "AdvancedDAGValidator._perform_sensitivity_analysis_internal"
    },
    {
        "class": "BayesFactorTable",
        "function": "get_bayes_factor",
        "method_type": "analysis",
        "priority": 8,
        "description": "BayesFactorTable.get_bayes_factor"
    }
],
"patterns": [
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    "flags": "i",
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    "match_type": "REGEX",
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  },
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    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q167-001",
    "match_type": "REGEX",
    "pattern": "el resultado se logrará siempre y cuando|asumiendo que"
  },
  {
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    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q167-002",
    "match_type": "REGEX",
    "pattern": "supuesto clave|premisa fundamental"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q167-003",
    "match_type": "REGEX",
    "pattern": "condición habilitante|factor crítico|requiere de"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q167-004",
    "match_type": "REGEX",
    "pattern": "depende de las condiciones de seguridad en la zona de retorno"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q167-005",
    "match_type": "REGEX",
    "pattern": "un supuesto es que las víctimas inviertan la indemnización en proyectos
sostenibles"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q167-006",
    "match_type": "REGEX",
    "pattern": "se requiere la voluntad de paz de los actores armados"
  }
],
"policy_area_id": "PA05",
"question_global": 167,
"question_id": "Q167",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿Se explicita la cadena causal que lleva a la reparación y reconciliación,
mencionando 'supuestos' clave (ej. 'si las condiciones de seguridad lo permiten') o 'condiciones
habilitantes'?",
"validations": {}
},
{
  "base_slot": "D4-Q3",
  "cluster_id": "CL02",
  "dimension_id": "DIM04",
  "expected_elements": [
    {

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    "required": true,
    "type": "evidencia_comparada"
  },
  {
    "required": true,
    "type": "justificacion_capacidad"
  },
  {
    "required": true,
    "type": "justificacion_recursos"
  }
],
"failure_contract": {
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    "incomplete_text"
  ],
  "emit_code": "ABORT-Q168-REQ"
},
"method_sets": [
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    "function": "_get_prior_effect",
    "method_type": "analysis",
    "priority": 1,
    "description": "PDETMunicipalPlanAnalyzer._get_prior_effect"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_estimate_effect_bayesian",
    "method_type": "analysis",
    "priority": 2,
    "description": "PDETMunicipalPlanAnalyzer._estimate_effect_bayesian"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_compute_robustness_value",
    "method_type": "analysis",
    "priority": 3,
    "description": "PDETMunicipalPlanAnalyzer._compute_robustness_value"
  },
  {
    "class": "AdaptivePriorCalculator",
    "function": "sensitivity_analysis",
    "method_type": "analysis",
    "priority": 4,
    "description": "AdaptivePriorCalculator.sensitivity_analysis"
  },
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    "class": "HierarchicalGenerativeModel",
    "function": "_calculate_r_hat",
    "method_type": "scoring",
    "priority": 5,
    "description": "HierarchicalGenerativeModel._calculate_r_hat"
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    "function": "_calculate_ess",
    "method_type": "scoring",
    "priority": 6,
    "description": "HierarchicalGenerativeModel._calculate_ess"
  },
  {
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    "function": "_calculate_statistical_power",
    "method_type": "scoring",
    "priority": 7,
    "description": "AdvancedDAGValidator._calculate_statistical_power"
  },
  {
    "class": "BayesianMechanismInference",
    "function": "_aggregate_bayesian_confidence",

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    "method_type": "analysis",
    "priority": 8,
    "description": "BayesianMechanismInference._aggregate_bayesian_confidence"
  }
],
"patterns": [
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    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q168-000",
    "match_type": "REGEX",
    "pattern": "meta ambiciosa pero factible|meta realista dada la magnitud del universo"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q168-001",
    "match_type": "REGEX",
    "pattern": "la meta se justifica por la concurrencia de recursos de la UARIV"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q168-002",
    "match_type": "REGEX",
    "pattern": "con la inversión de X se espera lograr la reparación de Y víctimas"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q168-003",
    "match_type": "REGEX",
    "pattern": "la capacidad del Enlace de Víctimas permite gestionar este número de casos"
  },
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    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q168-004",
    "match_type": "REGEX",
    "pattern": "en experiencias similares de otros municipios PDET"
  },
  {
    "category": "TERRITORIAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q168-005",
    "match_type": "REGEX",
    "pattern": "benchmark|referente departamental|meta del PND para víctimas"
  }
],
"policy_area_id": "PA05",
"question_global": 168,
"question_id": "Q168",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿La ambición de las metas de resultado (ej. 'lograr la reparación del 60% del universo de víctimas') se justifica en función de los recursos, la capacidad de la UARIV o se compara con 'casos' de otros municipios?",
"validations": {}
},
{
  "base_slot": "D4-Q4",
  "cluster_id": "CL02",
  "dimension_id": "DIM04",
  "expected_elements": [
    {
      "required": true,

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    "type": "criterios_exito_definidos"
  },
  {
    "required": true,
    "type": "vinculo_resultado_problema"
  }
],
"failure_contract": {
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    "function": "_calculate_objective_alignment",
    "method_type": "scoring",
    "priority": 1,
    "description": "PolicyContradictionDetector._calculate_objective_alignment"
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    "function": "_identify_affected_sections",
    "method_type": "analysis",
    "priority": 2,
    "description": "PolicyContradictionDetector._identify_affected_sections"
  },
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    "class": "PolicyContradictionDetector",
    "function": "_generate_resolution_recommendations",
    "method_type": "analysis",
    "priority": 3,
    "description": "PolicyContradictionDetector._generate_resolution_recommendations"
  },
  {
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    "function": "_generate_optimal_remediations",
    "method_type": "analysis",
    "priority": 4,
    "description": "OperationalizationAuditor._generate_optimal_remediations"
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    "class": "OperationalizationAuditor",
    "function": "_get_remediation_text",
    "method_type": "analysis",
    "priority": 5,
    "description": "OperationalizationAuditor._get_remediation_text"
  },
  {
    "class": "BayesianCounterfactualAuditor",
    "function": "aggregate_risk_and_prioritize",
    "method_type": "analysis",
    "priority": 6,
    "description": "BayesianCounterfactualAuditor.aggregate_risk_and_prioritize"
  },
  {
    "class": "FinancialAuditor",
    "function": "_detect_allocation_gaps",
    "method_type": "analysis",
    "priority": 7,
    "description": "FinancialAuditor._detect_allocation_gaps"
  }
],
"patterns": [
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q169-000",
    "match_type": "REGEX",

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    "pattern": "este resultado responde a la necesidad de reparación psicosocial"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q169-001",
    "match_type": "REGEX",
    "pattern": "para avanzar en las garantías de no repetición"
  },
  {
    "category": "TEMPORAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q169-002",
    "match_type": "REGEX",
    "pattern": "el resultado atiende directamente el daño colectivo"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q169-003",
    "match_type": "REGEX",
    "pattern": "criterio de éxito|se considerará un logro si mejora la convivencia"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q169-004",
    "match_type": "REGEX",
    "pattern": "umbral de cumplimiento|mínimo aceptable"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q169-005",
    "match_type": "REGEX",
    "pattern": "matriz de coherencia|alineación diagnóstico-estrategia"
  }
],
"policy_area_id": "PA05",
"question_global": 169,
"question_id": "Q169",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿Los resultados propuestos (ej. 'avance en la reconciliación comunitaria')
'atienden' o 'abordan' directamente las necesidades de reparación y no repetición identificadas en
el diagnóstico?",
"validations": {}
},
{
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  "dimension_id": "DIM04",
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      "type": "alineacion_acuerdo_paz"
    },
    {
      "required": true,
      "type": "alineacion_ods"
    },
    {
      "required": true,
      "type": "alineacion_pnd"
    }
  ]
},
"failure_contract": {

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"abort_if": [
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  "incomplete_text"
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    "method_type": "scoring",
    "priority": 1,
    "description": "PDETMunicipalPlanAnalyzer._score_pdet_alignment"
  },
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    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_score_causal_coherence",
    "method_type": "scoring",
    "priority": 2,
    "description": "PDETMunicipalPlanAnalyzer._score_causal_coherence"
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    "function": "_validate_dnp_compliance",
    "method_type": "validation",
    "priority": 3,
    "description": "CDAFFramework._validate_dnp_compliance"
  },
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    "class": "CDAFFramework",
    "function": "_generate_dnp_report",
    "method_type": "analysis",
    "priority": 4,
    "description": "CDAFFramework._generate_dnp_report"
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    "function": "_analyze_causal_dimensions",
    "method_type": "analysis",
    "priority": 5,
    "description": "IndustrialPolicyProcessor._analyze_causal_dimensions"
  },
  {
    "class": "AdaptivePriorCalculator",
    "function": "validate_quality_criteria",
    "method_type": "validation",
    "priority": 6,
    "description": "AdaptivePriorCalculator.validate_quality_criteria"
  }
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    "id": "PAT-Q170-000",
    "match_type": "REGEX",
    "pattern": "alineado con el Plan Nacional de Desarrollo|PND"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q170-001",
    "match_type": "REGEX",
    "pattern": "contribuye al Punto 5 del Acuerdo de Paz|Paz Total"
  },
  {
    "category": "TERRITORIAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q170-002",

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        "pattern": "implementación de iniciativas PDET|Programas de Desarrollo con Enfoque
Territorial"
    },
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        "category": "GENERAL",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q170-003",
        "match_type": "REGEX",
        "pattern": "aporta al ODS 16|Paz, Justicia e Instituciones Sólidas"
    },
    {
        "category": "GENERAL",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q170-004",
        "match_type": "REGEX",
        "pattern": "en concordancia con la Ley 1448 de 2011"
    }
],
"policy_area_id": "PA05",
"question_global": 170,
"question_id": "Q170",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿El plan declara la alineación de sus resultados de paz y víctimas con marcos
superiores como el PND, los Acuerdos de Paz o los ODS?",
"validations": {}
},
{
    "base_slot": "D5-Q1",
    "cluster_id": "CL02",
    "dimension_id": "DIM05",
    "expected_elements": [
        {
            "required": true,
            "type": "impacto_definido"
        },
        {
            "required": true,
            "type": "rezago_temporal"
        },
        {
            "required": true,
            "type": "ruta_transmision"
        }
    ],
    "failure_contract": {
        "abort_if": [
            "missing_required_element",
            "incomplete_text"
        ],
        "emit_code": "ABORT-Q171-REQ"
    },
    "method_sets": [
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            "class": "PDETMunicipalPlanAnalyzer",
            "function": "generate_counterfactuals",
            "method_type": "analysis",
            "priority": 1,
            "description": "PDETMunicipalPlanAnalyzer.generate_counterfactuals"
        },
        {
            "class": "PDETMunicipalPlanAnalyzer",
            "function": "_simulate_intervention",
            "method_type": "analysis",
            "priority": 2,
            "description": "PDETMunicipalPlanAnalyzer._simulate_intervention"
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        {
            "class": "PDETMunicipalPlanAnalyzer",

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    "function": "_generate_scenario_narrative",
    "method_type": "analysis",
    "priority": 3,
    "description": "PDETMunicipalPlanAnalyzer._generate_scenario_narrative"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_find_mediator_mentions",
    "method_type": "analysis",
    "priority": 4,
    "description": "PDETMunicipalPlanAnalyzer._find_mediator_mentions"
  },
  {
    "class": "TeoriaCambio",
    "function": "_validar_orden_causal",
    "method_type": "analysis",
    "priority": 5,
    "description": "TeoriaCambio._validar_orden_causal"
  },
  {
    "class": "CausalExtractor",
    "function": "_assess_temporal_coherence",
    "method_type": "analysis",
    "priority": 6,
    "description": "CausalExtractor._assess_temporal_coherence"
  },
  {
    "class": "TextMiningEngine",
    "function": "_generate_interventions",
    "method_type": "analysis",
    "priority": 7,
    "description": "TextMiningEngine._generate_interventions"
  },
  {
    "class": "BayesianCounterfactualAuditor",
    "function": "construct_scm",
    "method_type": "analysis",
    "priority": 8,
    "description": "BayesianCounterfactualAuditor.construct_scm"
  }
],
"patterns": [
  {
    "category": "TERRITORIAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q171-000",
    "match_type": "REGEX",
    "pattern": "impacto esperado|visión de largo plazo|transformación territorial"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q171-001",
    "match_type": "REGEX",
    "pattern": "reconciliación|paz estable y duradera|superación del conflicto"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q171-002",
    "match_type": "REGEX",
    "pattern": "restablecimiento del tejido social|confianza ciudadana"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q171-003",
    "match_type": "REGEX",

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    "pattern": "la suma de los resultados de reparación y seguridad generará el impacto de"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q171-004",
    "match_type": "REGEX",
    "pattern": "ruta de transmisión|cadena de impacto"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q171-005",
    "match_type": "REGEX",
    "pattern": "tiempo de maduración|efectos intergeneracionales|se espera observar en una
década"
  }
],
"policy_area_id": "PA05",
"question_global": 171,
"question_id": "Q171",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿El PDM define 'impactos' de largo plazo para la construcción de paz (ej.
'reconciliación territorial', 'garantías de no repetición')? Se debe verificar si se menciona la
ruta desde los resultados y el 'tiempo de maduración' esperado.",
"validations": {}
},
{
  "base_slot": "D5-Q2",
  "cluster_id": "CL02",
  "dimension_id": "DIM05",
  "expected_elements": [
    {
      "required": true,
      "type": "justifica_validez"
    },
    {
      "required": true,
      "type": "usa_indices_compuestos"
    },
    {
      "required": true,
      "type": "usa_proxies"
    }
  ]
},
"failure_contract": {
  "abort_if": [
    "missing_required_element",
    "incomplete_text"
  ],
  "emit_code": "ABORT-Q172-REQ"
},
"method_sets": [
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "calculate_quality_score",
    "method_type": "scoring",
    "priority": 1,
    "description": "PDETMunicipalPlanAnalyzer.calculate_quality_score"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_estimate_score_confidence",
    "method_type": "scoring",
    "priority": 2,
    "description": "PDETMunicipalPlanAnalyzer._estimate_score_confidence"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",

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    "function": "_compute_e_value",
    "method_type": "analysis",
    "priority": 3,
    "description": "PDETMunicipalPlanAnalyzer._compute_e_value"
  },
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    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_compute_robustness_value",
    "method_type": "analysis",
    "priority": 4,
    "description": "PDETMunicipalPlanAnalyzer._compute_robustness_value"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_interpret_sensitivity",
    "method_type": "analysis",
    "priority": 5,
    "description": "PDETMunicipalPlanAnalyzer._interpret_sensitivity"
  },
  {
    "class": "ReportingEngine",
    "function": "_calculate_quality_score",
    "method_type": "scoring",
    "priority": 6,
    "description": "ReportingEngine._calculate_quality_score"
  },
  {
    "class": "BayesianMechanismInference",
    "function": "_aggregate_bayesian_confidence",
    "method_type": "analysis",
    "priority": 7,
    "description": "BayesianMechanismInference._aggregate_bayesian_confidence"
  },
  {
    "class": "PolicyAnalysisEmbedder",
    "function": "evaluate_policy_numerical_consistency",
    "method_type": "analysis",
    "priority": 8,
    "description": "PolicyAnalysisEmbedder.evaluate_policy_numerical_consistency"
  },
  {
    "class": "PolicyAnalysisEmbedder",
    "function": "get_diagnostics",
    "method_type": "analysis",
    "priority": 9,
    "description": "PolicyAnalysisEmbedder.get_diagnostics"
  },
  {
    "class": "PolicyAnalysisEmbedder",
    "function": "process_document",
    "method_type": "analysis",
    "priority": 10,
    "description": "PolicyAnalysisEmbedder.process_document"
  },
  {
    "class": "PolicyAnalysisEmbedder",
    "function": "_generate_query_from_pdq",
    "method_type": "analysis",
    "priority": 11,
    "description": "PolicyAnalysisEmbedder._generate_query_from_pdq"
  },
  {
    "class": "PolicyAnalysisEmbedder",
    "function": "_filter_by_pdq",
    "method_type": "analysis",
    "priority": 12,
    "description": "PolicyAnalysisEmbedder._filter_by_pdq"
  },
  {
    "class": "PolicyAnalysisEmbedder",
    "function": "_extract_numerical_values",
    "method_type": "extraction",

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    "priority": 13,
    "description": "PolicyAnalysisEmbedder._extract_numerical_values"
  },
  {
    "class": "PolicyAnalysisEmbedder",
    "function": "_embed_texts",
    "method_type": "analysis",
    "priority": 14,
    "description": "PolicyAnalysisEmbedder._embed_texts"
  },
  {
    "class": "PolicyAnalysisEmbedder",
    "function": "_compute_overall_confidence",
    "method_type": "analysis",
    "priority": 15,
    "description": "PolicyAnalysisEmbedder._compute_overall_confidence"
  },
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    "class": "FinancialAuditor",
    "function": "_calculate_sufficiency",
    "method_type": "scoring",
    "priority": 16,
    "description": "FinancialAuditor._calculate_sufficiency"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_interpret_overall_quality",
    "method_type": "analysis",
    "priority": 17,
    "description": "PDETMunicipalPlanAnalyzer._interpret_overall_quality"
  },
  {
    "class": "BayesianCounterfactualAuditor",
    "function": "aggregate_risk_and_prioritize",
    "method_type": "analysis",
    "priority": 18,
    "description": "BayesianCounterfactualAuditor.aggregate_risk_and_prioritize"
  },
  {
    "class": "PolicyTextProcessor",
    "function": "normalize_unicode",
    "method_type": "analysis",
    "priority": 19,
    "description": "PolicyTextProcessor.normalize_unicode"
  },
  {
    "class": "PolicyTextProcessor",
    "function": "segment_into_sentences",
    "method_type": "analysis",
    "priority": 20,
    "description": "PolicyTextProcessor.segment_into_sentences"
  },
  {
    "class": "IndustrialPolicyProcessor",
    "function": "_compute_evidence_confidence",
    "method_type": "analysis",
    "priority": 21,
    "description": "IndustrialPolicyProcessor._compute_evidence_confidence"
  },
  {
    "class": "IndustrialPolicyProcessor",
    "function": "_compute_avg_confidence",
    "method_type": "analysis",
    "priority": 22,
    "description": "IndustrialPolicyProcessor._compute_avg_confidence"
  },
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    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_quality_to_dict",
    "method_type": "analysis",
    "priority": 23,
    "description": "PDETMunicipalPlanAnalyzer._quality_to_dict"
  }

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    },
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      "function": "_construct_evidence_bundle",
      "method_type": "analysis",
      "priority": 24,
      "description": "IndustrialPolicyProcessor._construct_evidence_bundle"
    },
    {
      "class": "PolicyTextProcessor",
      "function": "compile_pattern",
      "method_type": "analysis",
      "priority": 25,
      "description": "PolicyTextProcessor.compile_pattern"
    },
    {
      "class": "PolicyTextProcessor",
      "function": "extract_contextual_window",
      "method_type": "extraction",
      "priority": 26,
      "description": "PolicyTextProcessor.extract_contextual_window"
    },
    {
      "class": "PDETMunicipalPlanAnalyzer",
      "function": "generate_executive_report",
      "method_type": "analysis",
      "priority": 27,
      "description": "PDETMunicipalPlanAnalyzer.generate_executive_report"
    },
    {
      "class": "IndustrialPolicyProcessor",
      "function": "export_results",
      "method_type": "analysis",
      "priority": 28,
      "description": "IndustrialPolicyProcessor.export_results"
    }
  ],
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      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q172-000",
      "match_type": "REGEX",
      "pattern": "Índice de Paz Territorial|Índice de Reconciliación|Índice de Confianza
Institucional"
    },
    {
      "category": "INDICADOR",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q172-001",
      "match_type": "REGEX",
      "pattern": "indicador compuesto|indicador sintético"
    },
    {
      "category": "INDICADOR",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q172-002",
      "match_type": "REGEX",
      "pattern": "se usará como proxy|indicador aproximado"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q172-003",
      "match_type": "REGEX",
      "pattern": "las encuestas de confianza interpersonal como proxy del tejido social"
    }
  ]
}

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        "category": "GENERAL",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q172-004",
        "match_type": "REGEX",
        "pattern": "el número de acciones colectivas entre excombatientes y víctimas como proxy
de reconciliación"
    },
    {
        "category": "INDICADOR",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q172-005",
        "match_type": "REGEX",
        "pattern": "este indicador es válido porque refleja|captura la percepción de paz"
    }
],
"policy_area_id": "PA05",
"question_global": 172,
"question_id": "Q172",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿Se utilizan 'índices' o 'proxies' (ej. encuestas de confianza interpersonal) para
medir los impactos en la reconciliación, justificando su validez?",
"validations": {}
},
{
    "base_slot": "D5-Q3",
    "cluster_id": "CL02",
    "dimension_id": "DIM05",
    "expected_elements": [
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            "required": true,
            "type": "documenta_validez"
        },
        {
            "required": true,
            "type": "proxy_para_intangibles"
        },
        {
            "required": true,
            "type": "reconoce_limitaciones"
        }
    ],
    "failure_contract": {
        "abort_if": [
            "missing_required_element",
            "incomplete_text"
        ],
        "emit_code": "ABORT-Q173-REQ"
    },
    "method_sets": [
        {
            "class": "CausalExtractor",
            "function": "_calculate_semantic_distance",
            "method_type": "scoring",
            "priority": 1,
            "description": "CausalExtractor._calculate_semantic_distance"
        },
        {
            "class": "SemanticAnalyzer",
            "function": "extract_semantic_cube",
            "method_type": "extraction",
            "priority": 2,
            "description": "SemanticAnalyzer.extract_semantic_cube"
        },
        {
            "class": "BayesianMechanismInference",
            "function": "_quantify_uncertainty",
            "method_type": "analysis",
            "priority": 3,
            "description": "BayesianMechanismInference._quantify_uncertainty"
        }
    ]
}

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    },
    {
      "class": "PDETMunicipalPlanAnalyzer",
      "function": "_find_mediator_mentions",
      "method_type": "analysis",
      "priority": 4,
      "description": "PDETMunicipalPlanAnalyzer._find_mediator_mentions"
    },
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      "class": "PolicyAnalysisEmbedder",
      "function": "get_diagnostics",
      "method_type": "analysis",
      "priority": 5,
      "description": "PolicyAnalysisEmbedder.get_diagnostics"
    },
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      "class": "AdaptivePriorCalculator",
      "function": "_perturb_evidence",
      "method_type": "analysis",
      "priority": 6,
      "description": "AdaptivePriorCalculator._perturb_evidence"
    }
  ],
  "patterns": [
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      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q173-000",
      "match_type": "REGEX",
      "pattern": "dado que es difícil medir la reconciliación|para aproximar la medición de"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q173-001",
      "match_type": "REGEX",
      "pattern": "se utilizará como proxy|medición indirecta"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q173-002",
      "match_type": "REGEX",
      "pattern": "el número de iniciativas conjuntas entre grupos antes enfrentados"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q173-003",
      "match_type": "REGEX",
      "pattern": "este proxy es validado por estudios de construcción de paz"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q173-004",
      "match_type": "REGEX",
      "pattern": "una limitación es que no captura las percepciones individuales"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q173-005",
      "match_type": "REGEX",
      "pattern": "aunque imperfecto, este proxy nos da una señal de cohesión social"
    }
  ]
}

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],
"policy_area_id": "PA05",
"question_global": 173,
"question_id": "Q173",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "Cuando un impacto en la paz es difícil de medir (ej. 'sanación del tejido social'), ¿se recurre a un 'proxy'? Se valora si el texto documenta su 'validez' y reconoce sus 'limitaciones'.",
"validations": {}
},
{
"base_slot": "D5-Q4",
"cluster_id": "CL02",
"dimension_id": "DIM05",
"expected_elements": [
{
"required": true,
"type": "alineacion_marcos"
},
{
"required": true,
"type": "riesgos_sistemicos"
}
],
"failure_contract": {
"abort_if": [
"missing_required_element",
"incomplete_text"
],
"emit_code": "ABORT-Q174-REQ"
},
"method_sets": [
{
"class": "OperationalizationAuditor",
"function": "_audit_systemic_risk",
"method_type": "validation",
"priority": 1,
"description": "OperationalizationAuditor._audit_systemic_risk"
},
{
"class": "BayesianCounterfactualAuditor",
"function": "refutation_and_sanity_checks",
"method_type": "analysis",
"priority": 2,
"description": "BayesianCounterfactualAuditor.refutation_and_sanity_checks"
},
{
"class": "BayesianCounterfactualAuditor",
"function": "_test_effect_stability",
"method_type": "analysis",
"priority": 3,
"description": "BayesianCounterfactualAuditor._test_effect_stability"
},
{
"class": "PDETMunicipalPlanAnalyzer",
"function": "_interpret_risk",
"method_type": "analysis",
"priority": 4,
"description": "PDETMunicipalPlanAnalyzer._interpret_risk"
},
{
"class": "PDETMunicipalPlanAnalyzer",
"function": "_interpret_sensitivity",
"method_type": "analysis",
"priority": 5,
"description": "PDETMunicipalPlanAnalyzer._interpret_sensitivity"
},
{
"class": "PDETMunicipalPlanAnalyzer",
"function": "_break_cycles",
"method_type": "analysis",

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    "priority": 6,
    "description": "PDETMunicipalPlanAnalyzer._break_cycles"
  },
  {
    "class": "AdaptivePriorCalculator",
    "function": "sensitivity_analysis",
    "method_type": "analysis",
    "priority": 7,
    "description": "AdaptivePriorCalculator.sensitivity_analysis"
  }
],
"patterns": [
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q174-000",
    "match_type": "REGEX",
    "pattern": "visión de Paz Total|Acuerdo de Paz a largo plazo"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q174-001",
    "match_type": "LITERAL",
    "pattern": "riesgo sistémico|choque externo"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q174-002",
    "match_type": "REGEX",
    "pattern": "reconfiguración del conflicto armado|surgimiento de nuevos actores"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q174-003",
    "match_type": "LITERAL",
    "pattern": "crisis social o económica que exacerbe las tensiones"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q174-004",
    "match_type": "REGEX",
    "pattern": "estos factores podrían revertir los avances en la construcción de paz"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q174-005",
    "match_type": "REGEX",
    "pattern": "el mecanismo causal es vulnerable a|sensible a la voluntad política
nacional"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q174-006",
    "match_type": "REGEX",
    "pattern": "estrategias de resiliencia comunitaria|diplomacia local"
  }
],
"policy_area_id": "PA05",
"question_global": 174,

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"question_id": "Q174",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿Los impactos en la paz se alinean con marcos nacionales/globales y consideran
'riesgos sistémicos' (ej. reconfiguración del conflicto) que podrían romper el mecanismo causal?",
"validations": {}
},
{
  "base_slot": "D5-Q5",
  "cluster_id": "CL02",
  "dimension_id": "DIM05",
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      "required": true,
      "type": "analisis_realismo"
    },
    {
      "required": true,
      "type": "efectos_no_deseados"
    },
    {
      "required": true,
      "type": "hipotesis_limite"
    }
  ],
  "failure_contract": {
    "abort_if": [
      "missing_required_element",
      "incomplete_text"
    ],
    "emit_code": "ABORT-Q175-REQ"
  },
  "method_sets": [
    {
      "class": "HierarchicalGenerativeModel",
      "function": "posterior_predictive_check",
      "method_type": "analysis",
      "priority": 1,
      "description": "HierarchicalGenerativeModel.posterior_predictive_check"
    },
    {
      "class": "HierarchicalGenerativeModel",
      "function": "_ablation_analysis",
      "method_type": "analysis",
      "priority": 2,
      "description": "HierarchicalGenerativeModel._ablation_analysis"
    },
    {
      "class": "HierarchicalGenerativeModel",
      "function": "_calculate_waic_difference",
      "method_type": "scoring",
      "priority": 3,
      "description": "HierarchicalGenerativeModel._calculate_waic_difference"
    },
    {
      "class": "AdaptivePriorCalculator",
      "function": "_add_ood_noise",
      "method_type": "analysis",
      "priority": 4,
      "description": "AdaptivePriorCalculator._add_ood_noise"
    },
    {
      "class": "AdaptivePriorCalculator",
      "function": "validate_quality_criteria",
      "method_type": "validation",
      "priority": 5,
      "description": "AdaptivePriorCalculator.validate_quality_criteria"
    },
    {
      "class": "PDETMunicipalPlanAnalyzer",
      "function": "_compute_e_value",
      "method_type": "analysis",

```

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    "priority": 6,
    "description": "PDETMunicipalPlanAnalyzer._compute_e_value"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_compute_robustness_value",
    "method_type": "analysis",
    "priority": 7,
    "description": "PDETMunicipalPlanAnalyzer._compute_robustness_value"
  },
  {
    "class": "BayesianMechanismInference",
    "function": "_calculate_coherence_factor",
    "method_type": "scoring",
    "priority": 8,
    "description": "BayesianMechanismInference._calculate_coherence_factor"
  }
],
"patterns": [
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q175-000",
    "match_type": "REGEX",
    "pattern": "la ambición del impacto es realista si se mantiene el compromiso de todos
los actores"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q175-001",
    "match_type": "REGEX",
    "pattern": "efecto no deseado|consecuencia imprevista|externalidad negativa"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q175-002",
    "match_type": "REGEX",
    "pattern": "riesgo de generar tensiones con quienes no se consideran víctimas"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q175-003",
    "match_type": "REGEX",
    "pattern": "posible estigmatización de personas en reincorporación"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q175-004",
    "match_type": "REGEX",
    "pattern": "trade-off entre justicia y paz|costo de oportunidad"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q175-005",
    "match_type": "REGEX",
    "pattern": "hipótesis límite|el modelo funciona mientras haya voluntad de paz de los
armados"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,

```

```

    "flags": "i",
    "id": "PAT-Q175-006",
    "match_type": "LITERAL",
    "pattern": "supuesto crítico para el impacto a largo plazo"
  }
],
"policy_area_id": "PA05",
"question_global": 175,
"question_id": "Q175",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿La ambición del impacto de la construcción de paz (ej. 'paz total y duradera') es realista? Se debe buscar si se analizan 'efectos no deseados' o se declaran 'hipótesis límite'.",
"validations": {}
},
{
  "base_slot": "D6-Q1",
  "cluster_id": "CL02",
  "dimension_id": "DIM06",
  "expected_elements": [
    {
      "required": true,
      "type": "diagrama_causal"
    },
    {
      "required": true,
      "type": "supuestos_verificables"
    },
    {
      "required": true,
      "type": "teoria_cambio_explicita"
    }
  ],
  "failure_contract": {
    "abort_if": [
      "missing_required_element",
      "incomplete_text"
    ],
    "emit_code": "ABORT-Q176-REQ"
  },
  "method_sets": [
    {
      "class": "TeoriaCambio",
      "function": "construir_grafo_causal",
      "method_type": "analysis",
      "priority": 1,
      "description": "TeoriaCambio.construir_grafo_causal"
    },
    {
      "class": "TeoriaCambio",
      "function": "validacion_completa",
      "method_type": "analysis",
      "priority": 2,
      "description": "TeoriaCambio.validacion_completa"
    },
    {
      "class": "TeoriaCambio",
      "function": "export_nodes",
      "method_type": "analysis",
      "priority": 3,
      "description": "TeoriaCambio.export_nodes"
    },
    {
      "class": "ReportingEngine",
      "function": "generate_causal_diagram",
      "method_type": "analysis",
      "priority": 4,
      "description": "ReportingEngine.generate_causal_diagram"
    },
    {
      "class": "ReportingEngine",
      "function": "generate_causal_model_json",

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    "method_type": "analysis",
    "priority": 5,
    "description": "ReportingEngine.generate_causal_model_json"
  },
  {
    "class": "AdvancedDAGValidator",
    "function": "export_nodes",
    "method_type": "analysis",
    "priority": 6,
    "description": "AdvancedDAGValidator.export_nodes"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "export_causal_network",
    "method_type": "analysis",
    "priority": 7,
    "description": "PDETMunicipalPlanAnalyzer.export_causal_network"
  },
  {
    "class": "CausalExtractor",
    "function": "extract_causal_hierarchy",
    "method_type": "extraction",
    "priority": 8,
    "description": "CausalExtractor.extract_causal_hierarchy"
  }
],
"patterns": [
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q176-000",
    "match_type": "REGEX",
    "pattern": "teoría de cambio|marco lógico|cadena causal|modelo lógico de paz"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q176-001",
    "match_type": "REGEX",
    "pattern": "diagrama causal|gráfico de la teoría|esquema de intervención|figura"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q176-002",
    "match_type": "REGEX",
    "pattern": "causa raíz del conflicto|determinante estructural de la violencia"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q176-003",
    "match_type": "REGEX",
    "pattern": "mediador|variable intermedia|eslabón|confianza institucional|reconciliación"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q176-004",
    "match_type": "REGEX",
    "pattern": "moderador|factor contextual|voluntad política"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q176-005",

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    "match_type": "LITERAL",
    "pattern": "supuesto verificable|hipótesis a testear|premisa comprobable"
  }
],
"policy_area_id": "PA05",
"question_global": 176,
"question_id": "Q176",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿Existe una 'teoría de cambio' explícita para la política de víctimas y construcción de paz, preferiblemente en un 'diagrama', que identifique causas, mediadores (ej. confianza) y 'supuestos verificables'?",
"validations": {}
},
{
  "base_slot": "D6-Q2",
  "cluster_id": "CL02",
  "dimension_id": "DIM06",
  "expected_elements": [
    {
      "required": true,
      "type": "evita_saltos_logicos"
    },
    {
      "required": true,
      "type": "proporcionalidad_eslabones"
    }
  ],
  "failure_contract": {
    "abort_if": [
      "missing_required_element",
      "incomplete_text"
    ],
    "emit_code": "ABORT-Q177-REQ"
  },
  "method_sets": [
    {
      "class": "BeachEvidentialTest",
      "function": "apply_test_logic",
      "method_type": "analysis",
      "priority": 1,
      "description": "BeachEvidentialTest.apply_test_logic"
    },
    {
      "class": "BayesianMechanismInference",
      "function": "_test_necessity",
      "method_type": "analysis",
      "priority": 2,
      "description": "BayesianMechanismInference._test_necessity"
    },
    {
      "class": "BayesianMechanismInference",
      "function": "_test_sufficiency",
      "method_type": "analysis",
      "priority": 3,
      "description": "BayesianMechanismInference._test_sufficiency"
    },
    {
      "class": "BayesianMechanismInference",
      "function": "_calculate_coherence_factor",
      "method_type": "scoring",
      "priority": 4,
      "description": "BayesianMechanismInference._calculate_coherence_factor"
    },
    {
      "class": "BayesianCounterfactualAuditor",
      "function": "_test_effect_stability",
      "method_type": "analysis",
      "priority": 5,
      "description": "BayesianCounterfactualAuditor._test_effect_stability"
    }
  ]
}

```

```

    "class": "IndustrialGradeValidator",
    "function": "validate_connection_matrix",
    "method_type": "validation",
    "priority": 6,
    "description": "IndustrialGradeValidator.validate_connection_matrix"
  },
  {
    "class": "PolicyAnalysisEmbedder",
    "function": "_compute_overall_confidence",
    "method_type": "analysis",
    "priority": 7,
    "description": "PolicyAnalysisEmbedder._compute_overall_confidence"
  }
],
"patterns": [
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q177-000",
    "match_type": "REGEX",
    "pattern": "proporcionalidad entre|magnitud del efecto esperado"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q177-001",
    "match_type": "REGEX",
    "pattern": "salto lógico|brecha en la argumentación|milagro de implementación"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q177-002",
    "match_type": "LITERAL",
    "pattern": "es realista esperar que|es factible que"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q177-003",
    "match_type": "REGEX",
    "pattern": "la escala de la intervención es coherente con la ambición del resultado"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q177-004",
    "match_type": "REGEX",
    "pattern": "se requieren pasos intermedios para la reconciliación"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q177-005",
    "match_type": "REGEX",
    "pattern": "el resultado es de mayor alcance que el producto"
  }
],
"policy_area_id": "PA05",
"question_global": 177,
"question_id": "Q177",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿Los saltos en la cadena causal de la paz son proporcionales (ej. un acto de memoria no genera por sí solo 'reconciliación total')?",
"validations": {}

```



```

},
{
  "base_slot": "D6-Q3",
  "cluster_id": "CL02",
  "dimension_id": "DIM06",
  "expected_elements": [
    {
      "required": true,
      "type": "propone_pilotos_o_pruebas"
    },
    {
      "required": true,
      "type": "reconoce_inconsistencias"
    }
  ],
  "failure_contract": {
    "abort_if": [
      "missing_required_element",
      "incomplete_text"
    ],
    "emit_code": "ABORT-Q178-REQ"
  },
  "method_sets": [
    {
      "class": "IndustrialGradeValidator",
      "function": "execute_suite",
      "method_type": "analysis",
      "priority": 1,
      "description": "IndustrialGradeValidator.execute_suite"
    },
    {
      "class": "IndustrialGradeValidator",
      "function": "validate_engine_readiness",
      "method_type": "validation",
      "priority": 2,
      "description": "IndustrialGradeValidator.validate_engine_readiness"
    },
    {
      "class": "IndustrialGradeValidator",
      "function": "_benchmark_operation",
      "method_type": "analysis",
      "priority": 3,
      "description": "IndustrialGradeValidator._benchmark_operation"
    },
    {
      "class": "AdaptivePriorCalculator",
      "function": "validate_quality_criteria",
      "method_type": "validation",
      "priority": 4,
      "description": "AdaptivePriorCalculator.validate_quality_criteria"
    },
    {
      "class": "HierarchicalGenerativeModel",
      "function": "_calculate_r_hat",
      "method_type": "scoring",
      "priority": 5,
      "description": "HierarchicalGenerativeModel._calculate_r_hat"
    },
    {
      "class": "HierarchicalGenerativeModel",
      "function": "_calculate_ess",
      "method_type": "scoring",
      "priority": 6,
      "description": "HierarchicalGenerativeModel._calculate_ess"
    },
    {
      "class": "AdvancedDAGValidator",
      "function": "calculate_acyclicity_pvalue",
      "method_type": "scoring",
      "priority": 7,
      "description": "AdvancedDAGValidator.calculate_acyclicity_pvalue"
    }
  ],

```

```

{
  "class": "PerformanceAnalyzer",
  "function": "analyze_performance",
  "method_type": "analysis",
  "priority": 8,
  "description": "PerformanceAnalyzer.analyze_performance"
}
],
"patterns": [
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q178-000",
    "match_type": "REGEX",
    "pattern": "inconsistencia|debilidad en la teoría|supuesto débil"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q178-001",
    "match_type": "REGEX",
    "pattern": "se requiere validar si las medidas de satisfacción son efectivas"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q178-002",
    "match_type": "REGEX",
    "pattern": "plan piloto de reconciliación en una vereda"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q178-003",
    "match_type": "REGEX",
    "pattern": "testear el supuesto de que la indemnización genera bienestar"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q178-004",
    "match_type": "REGEX",
    "pattern": "validar la hipótesis sobre la sostenibilidad de los retornos"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q178-005",
    "match_type": "REGEX",
    "pattern": "evaluación de mecanismos|monitoreo de la teoría de cambio"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q178-006",
    "match_type": "REGEX",
    "pattern": "aprendizaje adaptativo|gestión adaptativa de la paz"
  }
],
"policy_area_id": "PA05",
"question_global": 178,
"question_id": "Q178",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿El plan reconoce 'inconsistencias' en su lógica de reparación y propone 'pilotos'

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o 'pruebas' para 'testear los supuestos' de sus intervenciones?",
  "validations": {}
},
{
  "base_slot": "D6-Q4",
  "cluster_id": "CL02",
  "dimension_id": "DIM06",
  "expected_elements": [
    {
      "required": true,
      "type": "ciclos_aprendizaje"
    },
    {
      "required": true,
      "type": "mecanismos_correccion"
    },
    {
      "required": true,
      "type": "sistema_monitoreo"
    }
  ],
  "failure_contract": {
    "abort_if": [
      "missing_required_element",
      "incomplete_text"
    ],
    "emit_code": "ABORT-Q179-REQ"
  },
  "method_sets": [
    {
      "class": "ConfigLoader",
      "function": "update_priors_from_feedback",
      "method_type": "analysis",
      "priority": 1,
      "description": "ConfigLoader.update_priors_from_feedback"
    },
    {
      "class": "ConfigLoader",
      "function": "check_uncertainty_reduction_criterion",
      "method_type": "analysis",
      "priority": 2,
      "description": "ConfigLoader.check_uncertainty_reduction_criterion"
    },
    {
      "class": "ConfigLoader",
      "function": "_save_prior_history",
      "method_type": "analysis",
      "priority": 3,
      "description": "ConfigLoader._save_prior_history"
    },
    {
      "class": "ConfigLoader",
      "function": "_load_uncertainty_history",
      "method_type": "analysis",
      "priority": 4,
      "description": "ConfigLoader._load_uncertainty_history"
    },
    {
      "class": "CDAFFramework",
      "function": "_extract_feedback_from_audit",
      "method_type": "validation",
      "priority": 5,
      "description": "CDAFFramework._extract_feedback_from_audit"
    },
    {
      "class": "AdvancedDAGValidator",
      "function": "_calculate_node_importance",
      "method_type": "scoring",
      "priority": 6,
      "description": "AdvancedDAGValidator._calculate_node_importance"
    },
    {

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```

    "class": "BayesFactorTable",
    "function": "get_bayes_factor",
    "method_type": "analysis",
    "priority": 7,
    "description": "BayesFactorTable.get_bayes_factor"
  }
],
"patterns": [
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q179-000",
    "match_type": "REGEX",
    "pattern": "sistema de seguimiento y evaluación|M&E del PAT"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q179-001",
    "match_type": "REGEX",
    "pattern": "monitoreo a través del RUV y otros registros"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q179-002",
    "match_type": "LITERAL",
    "pattern": "alerta temprana sobre riesgos en retornos"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q179-003",
    "match_type": "REGEX",
    "pattern": "mecanismo de ajuste del PIRC|medida correctiva"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q179-004",
    "match_type": "REGEX",
    "pattern": "retroalimentación desde la Mesa de Participación de Víctimas"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q179-005",
    "match_type": "REGEX",
    "pattern": "ciclos de aprendizaje|sesiones del CTJT para revisar avances"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q179-006",
    "match_type": "REGEX",
    "pattern": "lecciones aprendidas en la implementación de la Ley 1448"
  }
],
"policy_area_id": "PA05",
"question_global": 179,
"question_id": "Q179",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿Se describe un sistema de monitoreo para la política de víctimas que incluya 'mecanismos de corrección', 'retroalimentación' o 'aprendizaje' para adaptar la estrategia?",

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"validations": {}
},
{
  "base_slot": "D6-Q5",
  "cluster_id": "CL02",
  "dimension_id": "DIM06",
  "expected_elements": [
    {
      "required": true,
      "type": "analisis_contextual"
    },
    {
      "required": true,
      "type": "enfoque_diferencial"
    }
  ],
  "failure_contract": {
    "abort_if": [
      "missing_required_element",
      "incomplete_text"
    ],
    "emit_code": "ABORT-Q180-REQ"
  },
  "method_sets": [
    {
      "class": "CausalExtractor",
      "function": "_calculate_language_specificity",
      "method_type": "scoring",
      "priority": 1,
      "description": "CausalExtractor._calculate_language_specificity"
    },
    {
      "class": "CausalExtractor",
      "function": "_assess_temporal_coherence",
      "method_type": "analysis",
      "priority": 2,
      "description": "CausalExtractor._assess_temporal_coherence"
    },
    {
      "class": "TextMiningEngine",
      "function": "diagnose_critical_links",
      "method_type": "analysis",
      "priority": 3,
      "description": "TextMiningEngine.diagnose_critical_links"
    },
    {
      "class": "CausalInferenceSetup",
      "function": "identify_failure_points",
      "method_type": "analysis",
      "priority": 4,
      "description": "CausalInferenceSetup.identify_failure_points"
    },
    {
      "class": "CausalInferenceSetup",
      "function": "_get_dynamics_pattern",
      "method_type": "analysis",
      "priority": 5,
      "description": "CausalInferenceSetup._get_dynamics_pattern"
    },
    {
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      "function": "chunk_text",
      "method_type": "analysis",
      "priority": 6,
      "description": "SemanticProcessor.chunk_text"
    },
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      "class": "SemanticProcessor",
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      "priority": 7,
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      "function": "generate_traceability_record",
      "method_type": "analysis",
      "priority": 9,
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      "match_type": "REGEX",
      "pattern": "enfoque diferencial|Decretos Ley Étnicos"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q180-001",
      "match_type": "REGEX",
      "pattern": "Sujetos de Reparación Colectiva|comunidades campesinas|pueblos indígenas"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q180-002",
      "match_type": "REGEX",
      "pattern": "víctimas en el exterior|mujeres víctimas de violencia sexual"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q180-003",
      "match_type": "REGEX",
      "pattern": "personas en situación de discapacidad por el conflicto"
    },
    {
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      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q180-004",
      "match_type": "REGEX",
      "pattern": "restricciones de seguridad en la zona|presencia de actores armados"
    },
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      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q180-005",
      "match_type": "REGEX",
      "pattern": "contexto de despojo de tierras|cultura local"
    },
    {
      "category": "TEMPORAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q180-006",
      "match_type": "REGEX",
      "pattern": "estrategias territorializadas|medidas adaptadas al daño"
    }
  ]
}

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  "scoring_modality": "TYPE_A",
  "text": "¿La lógica causal para la reparación considera el contexto, reconociendo 'grupos
afectados' (sujetos de reparación colectiva, víctimas en el exterior) y 'restricciones'
territoriales o de seguridad?",
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},
{
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  "dimension_id": "DIM01",
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    },
    {
      "minimum": 3,
      "type": "series_temporales_años"
    }
  ],
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      "function": "diagnose_critical_links",
      "method_type": "analysis",
      "priority": 1,
      "description": "TextMiningEngine.diagnose_critical_links"
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      "function": "_analyze_link_text",
      "method_type": "analysis",
      "priority": 2,
      "description": "TextMiningEngine._analyze_link_text"
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      "function": "process",
      "method_type": "analysis",
      "priority": 3,
      "description": "IndustrialPolicyProcessor.process"
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    {
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      "function": "_match_patterns_in_sentences",
      "method_type": "analysis",
      "priority": 4,
      "description": "IndustrialPolicyProcessor._match_patterns_in_sentences"
    },
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      "function": "_extract_point_evidence",
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      "priority": 5,
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  ]
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  "method_type": "extraction",
  "priority": 7,
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  "function": "_parse_amount",
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  "priority": 8,
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  "class": "PDETMunicipalPlanAnalyzer",
  "function": "_extract_financial_amounts",
  "method_type": "extraction",
  "priority": 9,
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},
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  "function": "_extract_from_budget_table",
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  "priority": 10,
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  "priority": 11,
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  "method_type": "extraction",
  "priority": 12,
  "description": "PolicyContradictionDetector._parse_number"
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  "function": "_statistical_significance_test",
  "method_type": "analysis",
  "priority": 13,
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  "function": "evaluate_policy_metric",
  "method_type": "analysis",
  "priority": 14,
  "description": "BayesianNumericalAnalyzer.evaluate_policy_metric"
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  "function": "compare_policies",
  "method_type": "analysis",
  "priority": 15,
  "description": "BayesianNumericalAnalyzer.compare_policies"
},
{

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    "priority": 16,
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    "function": "embed_single",
    "method_type": "analysis",
    "priority": 17,
    "description": "SemanticProcessor.embed_single"
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    "flags": "i",
    "id": "PAT-Q181-000",
    "match_type": "REGEX",
    "pattern": "línea base|diagnóstico de infancia y adolescencia|situación inicial de la
juventud"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q181-001",
    "match_type": "REGEX",
    "pattern": "fuente:|según|reportado por|con datos de"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q181-002",
    "match_type": "REGEX",
    "pattern": "ICBF|SIMPÁTICO|SNBF|SIMAT|MinEducación"
  },
  {
    "category": "FUENTE_OFICIAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q181-003",
    "match_type": "REGEX",
    "pattern": "SISPRO|SIVIGILA|Estadísticas Vitales|DANE"
  },
  {
    "category": "FUENTE_OFICIAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q181-004",
    "match_type": "REGEX",
    "pattern": "Comisaría de Familia|Personería Municipal|Policía de Infancia y
Adolescencia"
  },
  {
    "category": "INDICADOR",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q181-005",
    "match_type": "REGEX",
    "pattern": "tasa de deserción escolar|cobertura neta|repitencia"
  },
  {
    "category": "INDICADOR",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q181-006",
    "match_type": "REGEX",
    "pattern": "tasa de fecundidad adolescente|embarazo en niñas de 10-14 años"
  }
]

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    },
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      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q181-007",
      "match_type": "REGEX",
      "pattern": "tasa de trabajo infantil|peores formas de trabajo infantil"
    },
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      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q181-008",
      "match_type": "REGEX",
      "pattern": "prevalencia de desnutrición crónica|aguda|global"
    },
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      "category": "INDICADOR",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q181-009",
      "match_type": "REGEX",
      "pattern": "tasa de mortalidad en menores de 5 años|mortalidad infantil"
    },
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      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q181-010",
      "match_type": "REGEX",
      "pattern": "casos de violencia intrafamiliar|violencia sexual contra NNA"
    },
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      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q181-011",
      "match_type": "REGEX",
      "pattern": "consumo de SPA|ideación suicida en jóvenes"
    },
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      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q181-012",
      "match_type": "LITERAL",
      "pattern": "2021|2022|2023|vigencia anterior|serie histórica"
    },
    {
      "category": "INDICADOR",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q181-013",
      "match_type": "REGEX",
      "pattern": "porcentaje|tasa por 1.000|número de casos"
    }
  ],
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  "question_global": 181,
  "question_id": "Q181",
  "scoring_definition_ref": "scoring_modalities.TYPE_A",
  "scoring_modality": "TYPE_A",
  "text": "¿El diagnóstico presenta datos numéricos (tasa de deserción escolar, embarazo adolescente, trabajo infantil) para el área de Derechos de la niñez, adolescencia y juventud que sirvan como línea base? Se debe verificar el año y fuentes (ej. SIMAT, SISPRO, ICBF).",
  "validations": {
    "buscar_indicadores_cuantitativos": {
      "minimum_required": 3,
      "patterns": [
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        "\\d+\\s*por\\s*\\d+",

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        "índice de",
        "cobertura de"
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        "urbano",
        "rural",
        "territorial",
        "poblacional"
    ],
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        "año",
        "periodo",
        "histórico",
        "serie"
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    "patterns": [
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        "por 1.000",
        "%",
        "porcentaje",
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        "razón"
    ],
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},
"verificar_fuentes": {
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    "patterns": [
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        "según",
        "datos de",
        "DANE",
        "DNP",
        "SISPRO",
        "SIVIGILA",
        "Ministerio"
    ],
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}
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    "cluster_id": "CL02",
    "dimension_id": "DIM01",
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            "type": "analisis_causal_problema"
        },
        {
            "required": true,
            "type": "cuantificacion_magnitud"
        },
        {
            "required": true,

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    }
},
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        "function": "_audit_direct_evidence",
        "method_type": "validation",
        "priority": 1,
        "description": "OperationalizationAuditor._audit_direct_evidence"
    },
    {
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        "function": "_audit_systemic_risk",
        "method_type": "validation",
        "priority": 2,
        "description": "OperationalizationAuditor._audit_systemic_risk"
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        "method_type": "analysis",
        "priority": 3,
        "description": "FinancialAuditor._detect_allocation_gaps"
    },
    {
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        "function": "_detect_gaps",
        "method_type": "analysis",
        "priority": 4,
        "description": "BayesianMechanismInference._detect_gaps"
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        "function": "_generate_optimal_remediations",
        "method_type": "analysis",
        "priority": 5,
        "description": "PDETMunicipalPlanAnalyzer._generate_optimal_remediations"
    },
    {
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        "function": "_simulate_intervention",
        "method_type": "analysis",
        "priority": 6,
        "description": "PDETMunicipalPlanAnalyzer._simulate_intervention"
    },
    {
        "class": "BayesianCounterfactualAuditor",
        "function": "counterfactual_query",
        "method_type": "analysis",
        "priority": 7,
        "description": "BayesianCounterfactualAuditor.counterfactual_query"
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    {
        "class": "BayesianCounterfactualAuditor",
        "function": "_test_effect_stability",
        "method_type": "analysis",
        "priority": 8,
        "description": "BayesianCounterfactualAuditor._test_effect_stability"
    },
    {
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        "function": "_detect_numerical_inconsistencies",
        "method_type": "analysis",
        "priority": 9,

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    "description": "PolicyContradictionDetector._detect_numerical_inconsistencies"
  },
  {
    "class": "PolicyContradictionDetector",
    "function": "_calculate_numerical_divergence",
    "method_type": "scoring",
    "priority": 10,
    "description": "PolicyContradictionDetector._calculate_numerical_divergence"
  },
  {
    "class": "BayesianConfidenceCalculator",
    "function": "calculate_posterior",
    "method_type": "scoring",
    "priority": 11,
    "description": "BayesianConfidenceCalculator.calculate_posterior"
  },
  {
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    "function": "analyze_performance",
    "method_type": "analysis",
    "priority": 12,
    "description": "PerformanceAnalyzer.analyze_performance"
  }
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"patterns": [
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    "flags": "i",
    "id": "PAT-Q182-000",
    "match_type": "REGEX",
    "pattern": "déficit de cupos en primera infancia|población desescolarizada"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q182-001",
    "match_type": "REGEX",
    "pattern": "magnitud del problema del consumo de SPA|población juvenil en riesgo"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q182-002",
    "match_type": "REGEX",
    "pattern": "el número de NNA sin esquema de vacunación completo es de"
  },
  {
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    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q182-003",
    "match_type": "REGEX",
    "pattern": "comparado con el promedio departamental de embarazo adolescente"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q182-004",
    "match_type": "REGEX",
    "pattern": "aumento de los casos de violencia intrafamiliar reportados"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q182-005",
    "match_type": "REGEX",
    "pattern": "información insuficiente sobre salud mental en adolescentes"
  }
]

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    },
    {
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      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q182-006",
      "match_type": "REGEX",
      "pattern": "subregistro de casos de violencia sexual|cifra negra"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q182-007",
      "match_type": "REGEX",
      "pattern": "falta de caracterización de la población NINI"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q182-008",
      "match_type": "REGEX",
      "pattern": "causas de la deserción|factores de riesgo para el reclutamiento"
    }
  ],
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  "question_global": 182,
  "question_id": "Q182",
  "scoring_definition_ref": "scoring_modalities.TYPE_B",
  "scoring_modality": "TYPE_B",
  "text": "¿El texto dimensiona la magnitud de los problemas de la niñez y juventud (ej. consumo de SPA, violencia intrafamiliar) cuantificando el déficit de atención o la población en riesgo? Se debe buscar si se mencionan 'vacíos de información'.",
  "validations": {}
},
{
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  "cluster_id": "CL02",
  "dimension_id": "DIM01",
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      "type": "asignacion_explicita"
    },
    {
      "required": true,
      "type": "suficiencia_justificada"
    },
    {
      "required": true,
      "type": "trazabilidad_ppi_bpin"
    }
  ],
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      "function": "trace_financial_allocation",
      "method_type": "analysis",
      "priority": 1,
      "description": "FinancialAuditor.trace_financial_allocation"
    },
    {
      "class": "FinancialAuditor",
      "function": "_process_financial_table",

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    "method_type": "analysis",
    "priority": 2,
    "description": "FinancialAuditor._process_financial_table"
  },
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    "class": "FinancialAuditor",
    "function": "_match_program_to_node",
    "method_type": "analysis",
    "priority": 3,
    "description": "FinancialAuditor._match_program_to_node"
  },
  {
    "class": "FinancialAuditor",
    "function": "_match_goal_to_budget",
    "method_type": "analysis",
    "priority": 4,
    "description": "FinancialAuditor._match_goal_to_budget"
  },
  {
    "class": "FinancialAuditor",
    "function": "_perform_counterfactual_budget_check",
    "method_type": "analysis",
    "priority": 5,
    "description": "FinancialAuditor._perform_counterfactual_budget_check"
  },
  {
    "class": "FinancialAuditor",
    "function": "_calculate_sufficiency",
    "method_type": "scoring",
    "priority": 6,
    "description": "FinancialAuditor._calculate_sufficiency"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "analyze_financial_feasibility",
    "method_type": "analysis",
    "priority": 7,
    "description": "PDETMunicipalPlanAnalyzer.analyze_financial_feasibility"
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    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_extract_budget_for_pillar",
    "method_type": "extraction",
    "priority": 8,
    "description": "PDETMunicipalPlanAnalyzer._extract_budget_for_pillar"
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    "function": "_identify_funding_source",
    "method_type": "analysis",
    "priority": 9,
    "description": "PDETMunicipalPlanAnalyzer._identify_funding_source"
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    "function": "_classify_tables",
    "method_type": "analysis",
    "priority": 10,
    "description": "PDETMunicipalPlanAnalyzer._classify_tables"
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  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_analyze_funding_sources",
    "method_type": "analysis",
    "priority": 11,
    "description": "PDETMunicipalPlanAnalyzer._analyze_funding_sources"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_score_financial_component",
    "method_type": "scoring",
    "priority": 12,

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    "description": "PDETMunicipalPlanAnalyzer._score_financial_component"
  },
  {
    "class": "BayesianCounterfactualAuditor",
    "function": "aggregate_risk_and_prioritize",
    "method_type": "analysis",
    "priority": 13,
    "description": "BayesianCounterfactualAuditor.aggregate_risk_and_prioritize"
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    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q183-000",
    "match_type": "REGEX",
    "pattern": "Plan Plurianual de Inversiones|PPI|Plan Indicativo"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q183-001",
    "match_type": "REGEX",
    "pattern": "BPIN|Banco de Proyectos|proyecto de inversión para infancia/juventud"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q183-002",
    "match_type": "REGEX",
    "pattern": "recursos del SGP para educación|recursos para el PAE"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q183-003",
    "match_type": "REGEX",
    "pattern": "presupuesto para el fortalecimiento de Comisaría de Familia"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q183-004",
    "match_type": "REGEX",
    "pattern": "asignación para la Política Pública de Juventud"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q183-005",
    "match_type": "REGEX",
    "pattern": "inversión en Centros de Desarrollo Infantil|CDI"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q183-006",
    "match_type": "REGEX",
    "pattern": "fondos para programas de prevención de SPA o embarazo adolescente"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q183-007",

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    "match_type": "REGEX",
    "pattern": "\\$\\s*\\d+|COP\\s*\\d+|millones de pesos"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q183-008",
    "match_type": "LITERAL",
    "pattern": "fuentes: SGP, recursos propios, cofinanciación ICBF"
  }
],
"policy_area_id": "PA06",
"question_global": 183,
"question_id": "Q183",
"scoring_definition_ref": "scoring_modalities.TYPE_B",
"scoring_modality": "TYPE_B",
"text": "¿Se identifican en el PPI recursos monetarios (con cifras en $, COP o millones) explícitamente asignados a programas de primera infancia, alimentación escolar (PAE), prevención del reclutamiento o empleo juvenil?",
"validations": {}
},
{
  "base_slot": "D1-Q4",
  "cluster_id": "CL02",
  "dimension_id": "DIM01",
  "expected_elements": [
    {
      "required": true,
      "type": "cuellos_botella"
    },
    {
      "required": true,
      "type": "gobernanza"
    },
    {
      "required": true,
      "type": "infraestructura_fisica"
    },
    {
      "required": true,
      "type": "procesos"
    },
    {
      "required": true,
      "type": "talento_humano"
    }
  ],
  "failure_contract": {
    "abort_if": [
      "missing_required_element",
      "incomplete_text"
    ],
    "emit_code": "ABORT-Q184-REQ"
  },
  "method_sets": [
    {
      "class": "PDETMunicipalPlanAnalyzer",
      "function": "identify_responsible_entities",
      "method_type": "analysis",
      "priority": 1,
      "description": "PDETMunicipalPlanAnalyzer.identify_responsible_entities"
    },
    {
      "class": "PDETMunicipalPlanAnalyzer",
      "function": "_extract_entities_ner",
      "method_type": "extraction",
      "priority": 2,
      "description": "PDETMunicipalPlanAnalyzer._extract_entities_ner"
    },
    {
      "class": "PDETMunicipalPlanAnalyzer",

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    "function": "_extract_entities_syntax",
    "method_type": "extraction",
    "priority": 3,
    "description": "PDETMunicipalPlanAnalyzer._extract_entities_syntax"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_classify_entity_type",
    "method_type": "analysis",
    "priority": 4,
    "description": "PDETMunicipalPlanAnalyzer._classify_entity_type"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_score_entity_specificity",
    "method_type": "scoring",
    "priority": 5,
    "description": "PDETMunicipalPlanAnalyzer._score_entity_specificity"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_consolidate_entities",
    "method_type": "analysis",
    "priority": 6,
    "description": "PDETMunicipalPlanAnalyzer._consolidate_entities"
  },
  {
    "class": "MechanismPartExtractor",
    "function": "extract_entity_activity",
    "method_type": "extraction",
    "priority": 7,
    "description": "MechanismPartExtractor.extract_entity_activity"
  },
  {
    "class": "MechanismPartExtractor",
    "function": "_normalize_entity",
    "method_type": "analysis",
    "priority": 8,
    "description": "MechanismPartExtractor._normalize_entity"
  },
  {
    "class": "MechanismPartExtractor",
    "function": "_validate_entity_activity",
    "method_type": "validation",
    "priority": 9,
    "description": "MechanismPartExtractor._validate_entity_activity"
  },
  {
    "class": "MechanismPartExtractor",
    "function": "_calculate_ea_confidence",
    "method_type": "scoring",
    "priority": 10,
    "description": "MechanismPartExtractor._calculate_ea_confidence"
  },
  {
    "class": "OperationalizationAuditor",
    "function": "audit_evidence_traceability",
    "method_type": "validation",
    "priority": 11,
    "description": "OperationalizationAuditor.audit_evidence_traceability"
  }
],
"patterns": [
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q184-000",
    "match_type": "REGEX",
    "pattern": "Comisaría de Familia|equipo psicosocial de la comisaría"
  },
  {

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    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q184-001",
    "match_type": "LITERAL",
    "pattern": "ICBF Zonal|articulación con el ICBF"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q184-002",
    "match_type": "REGEX",
    "pattern": "Secretaría de Desarrollo Social|Educación|Salud"
  },
  {
    "category": "TERRITORIAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q184-003",
    "match_type": "REGEX",
    "pattern": "Plataforma Municipal de Juventud|Consejo de Juventud"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q184-004",
    "match_type": "REGEX",
    "pattern": "Consejo de Política Social|Mesa de Infancia y Adolescencia"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q184-005",
    "match_type": "REGEX",
    "pattern": "capacidad instalada de los CDI|infraestructura educativa"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q184-006",
    "match_type": "REGEX",
    "pattern": "ruta de atención a NNA con derechos vulnerados|protocolo SRPA"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q184-007",
    "match_type": "REGEX",
    "pattern": "orientadores escolares|docentes de apoyo"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q184-008",
    "match_type": "REGEX",
    "pattern": "falta de personal en comisarías|necesidad de fortalecer equipos"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q184-009",
    "match_type": "REGEX",
    "pattern": "cuello de botella|limitación en la oferta de programas|barrera de acceso"
  }
],

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    "policy_area_id": "PA06",
    "question_global": 184,
    "question_id": "Q184",
    "scoring_definition_ref": "scoring_modalities.TYPE_B",
    "scoring_modality": "TYPE_B",
    "text": "¿El PDM describe las capacidades para la gestión de políticas de niñez y juventud,
mencionando entidades (Comisariías, ICBF, Plataformas Juveniles) y sus necesidades? Se debe buscar
términos como 'orientación escolar', 'programas de prevención' y si se identifican 'limitaciones'.",
    "validations": {}
  },
  {
    "base_slot": "D1-Q5",
    "cluster_id": "CL02",
    "dimension_id": "DIM01",
    "expected_elements": [
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        "required": true,
        "type": "coherencia_demostrada"
      },
      {
        "required": true,
        "type": "restricciones_competencias"
      },
      {
        "required": true,
        "type": "restricciones_legales"
      },
      {
        "required": true,
        "type": "restricciones_presupuestales"
      }
    ],
    "failure_contract": {
      "abort_if": [
        "missing_required_element",
        "incomplete_text"
      ],
      "emit_code": "ABORT-Q185-REQ"
    },
    "method_sets": [
      {
        "class": "TemporalLogicVerifier",
        "function": "_check_deadline_constraints",
        "method_type": "analysis",
        "priority": 1,
        "description": "TemporalLogicVerifier._check_deadline_constraints"
      },
      {
        "class": "TemporalLogicVerifier",
        "function": "verify_temporal_consistency",
        "method_type": "analysis",
        "priority": 2,
        "description": "TemporalLogicVerifier.verify_temporal_consistency"
      },
      {
        "class": "CausalInferenceSetup",
        "function": "identify_failure_points",
        "method_type": "analysis",
        "priority": 3,
        "description": "CausalInferenceSetup.identify_failure_points"
      },
      {
        "class": "CausalExtractor",
        "function": "_assess_temporal_coherence",
        "method_type": "analysis",
        "priority": 4,
        "description": "CausalExtractor._assess_temporal_coherence"
      },
      {
        "class": "TextMiningEngine",
        "function": "_analyze_link_text",
        "method_type": "analysis",

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    "priority": 5,
    "description": "TextMiningEngine._analyze_link_text"
  },
  {
    "class": "IndustrialPolicyProcessor",
    "function": "_analyze_causal_dimensions",
    "method_type": "analysis",
    "priority": 6,
    "description": "IndustrialPolicyProcessor._analyze_causal_dimensions"
  },
  {
    "class": "IndustrialPolicyProcessor",
    "function": "_extract_metadata",
    "method_type": "extraction",
    "priority": 7,
    "description": "IndustrialPolicyProcessor._extract_metadata"
  }
],
"patterns": [
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q185-000",
    "match_type": "REGEX",
    "pattern": "en el marco de la Ley 1098 de 2006|Código de la Infancia y la Adolescencia"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q185-001",
    "match_type": "REGEX",
    "pattern": "Ley 1622 de 2013|Estatuto de Ciudadanía Juvenil"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q185-002",
    "match_type": "REGEX",
    "pattern": "Política 'De Cero a Siempre'|Política Nacional de Juventud"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q185-003",
    "match_type": "REGEX",
    "pattern": "competencias del municipio en|responsabilidad del ICBF|SNBF"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q185-004",
    "match_type": "REGEX",
    "pattern": "recursos del SGP para primera infancia y educación"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q185-005",
    "match_type": "REGEX",
    "pattern": "restricción presupuestal para ampliar la cobertura del PAE"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q185-006",

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    "match_type": "REGEX",
    "pattern": "capacidad limitada de la Comisaría de Familia"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q185-007",
    "match_type": "REGEX",
    "pattern": "durante el cuatrienio|plazo de implementación"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q185-008",
    "match_type": "REGEX",
    "pattern": "coherencia entre metas y recursos disponibles|factibilidad financiera y
técnica"
  }
],
"policy_area_id": "PA06",
"question_global": 185,
"question_id": "Q185",
"scoring_definition_ref": "scoring_modalities.TYPE_E",
"scoring_modality": "TYPE_E",
"text": "¿El plan justifica su alcance en niñez y juventud mencionando el marco legal
(Código de Infancia y Adolescencia, Ley de Juventud) o reconociendo restricciones explícitas de tipo
presupuestal o de competencias?",
"validations": {}
},
{
  "base_slot": "D2-Q1",
  "cluster_id": "CL02",
  "dimension_id": "DIM02",
  "expected_elements": [
    {
      "required": true,
      "type": "columna_costo"
    },
    {
      "required": true,
      "type": "columna_cronograma"
    },
    {
      "required": true,
      "type": "columna_producto"
    },
    {
      "required": true,
      "type": "columna_responsable"
    },
    {
      "required": true,
      "type": "formato_tabular"
    }
  ],
  "failure_contract": {
    "abort_if": [
      "missing_required_element",
      "incomplete_text"
    ],
    "emit_code": "ABORT-Q186-REQ"
  },
  "method_sets": [
    {
      "class": "PDFProcessor",
      "function": "extract_tables",
      "method_type": "extraction",
      "priority": 1,
      "description": "PDFProcessor.extract_tables"
    },

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{
  "class": "FinancialAuditor",
  "function": "_process_financial_table",
  "method_type": "analysis",
  "priority": 2,
  "description": "FinancialAuditor._process_financial_table"
},
{
  "class": "PDETMunicipalPlanAnalyzer",
  "function": "_deduplicate_tables",
  "method_type": "analysis",
  "priority": 3,
  "description": "PDETMunicipalPlanAnalyzer._deduplicate_tables"
},
{
  "class": "PDETMunicipalPlanAnalyzer",
  "function": "_classify_tables",
  "method_type": "analysis",
  "priority": 4,
  "description": "PDETMunicipalPlanAnalyzer._classify_tables"
},
{
  "class": "PDETMunicipalPlanAnalyzer",
  "function": "_is_likely_header",
  "method_type": "analysis",
  "priority": 5,
  "description": "PDETMunicipalPlanAnalyzer._is_likely_header"
},
{
  "class": "PDETMunicipalPlanAnalyzer",
  "function": "_clean_dataframe",
  "method_type": "analysis",
  "priority": 6,
  "description": "PDETMunicipalPlanAnalyzer._clean_dataframe"
},
{
  "class": "ReportingEngine",
  "function": "generate_accountability_matrix",
  "method_type": "analysis",
  "priority": 7,
  "description": "ReportingEngine.generate_accountability_matrix"
}
],
"patterns": [
{
  "category": "GENERAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q186-000",
  "match_type": "REGEX",
  "pattern": "tabla de actividades|cuadro de seguimiento|matriz de plan de acción"
},
{
  "category": "GENERAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q186-001",
  "match_type": "REGEX",
  "pattern": "columna responsable|entidad a cargo|ejecutor|SNBF"
},
{
  "category": "GENERAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q186-002",
  "match_type": "REGEX",
  "pattern": "columna producto|entregable|output|meta de producto"
},
{
  "category": "TEMPORAL",
  "confidence_weight": 0.85,
  "flags": "i",

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      "id": "PAT-Q186-003",
      "match_type": "LITERAL",
      "pattern": "columna cronograma|plazo|vigencia|año 1|trimestre"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q186-004",
      "match_type": "LITERAL",
      "pattern": "columna costo|presupuesto|valor|recursos|monto"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q186-005",
      "match_type": "REGEX",
      "pattern": "Secretaría de Desarrollo Social|Educación|Salud|Comisaría"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q186-006",
      "match_type": "REGEX",
      "pattern": "Plan Indicativo|Anexo de metas"
    }
  ],
  "policy_area_id": "PA06",
  "question_global": 186,
  "question_id": "Q186",
  "scoring_definition_ref": "scoring_modalities.TYPE_A",
  "scoring_modality": "TYPE_A",
  "text": "¿Las actividades para niñez y juventud se presentan en un formato estructurado (tabla, cuadro) que incluya columnas para 'responsable', 'producto', 'cronograma' y 'presupuesto'?",
  "validations": {}
},
{
  "base_slot": "D2-Q2",
  "cluster_id": "CL02",
  "dimension_id": "DIM02",
  "expected_elements": [
    {
      "required": true,
      "type": "instrumento_especificado"
    },
    {
      "required": true,
      "type": "logica_causal_explicita"
    },
    {
      "required": true,
      "type": "poblacion_objetivo_definida"
    }
  ],
  "failure_contract": {
    "abort_if": [
      "missing_required_element",
      "incomplete_text"
    ],
    "emit_code": "ABORT-Q187-REQ"
  },
  "method_sets": [
    {
      "class": "BayesianMechanismInference",
      "function": "infer_mechanisms",
      "method_type": "analysis",
      "priority": 1,
      "description": "BayesianMechanismInference.infer_mechanisms"
    },
    {

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    "class": "BayesianMechanismInference",
    "function": "_infer_single_mechanism",
    "method_type": "analysis",
    "priority": 2,
    "description": "BayesianMechanismInference._infer_single_mechanism"
  },
  {
    "class": "BayesianMechanismInference",
    "function": "_infer_mechanism_type",
    "method_type": "analysis",
    "priority": 3,
    "description": "BayesianMechanismInference._infer_mechanism_type"
  },
  {
    "class": "BayesianMechanismInference",
    "function": "_test_sufficiency",
    "method_type": "analysis",
    "priority": 4,
    "description": "BayesianMechanismInference._test_sufficiency"
  },
  {
    "class": "BayesianMechanismInference",
    "function": "_test_necessity",
    "method_type": "analysis",
    "priority": 5,
    "description": "BayesianMechanismInference._test_necessity"
  },
  {
    "class": "CausalExtractor",
    "function": "extract_causal_hierarchy",
    "method_type": "extraction",
    "priority": 6,
    "description": "CausalExtractor.extract_causal_hierarchy"
  },
  {
    "class": "TeoriaCambio",
    "function": "construir_grafo_causal",
    "method_type": "analysis",
    "priority": 7,
    "description": "TeoriaCambio.construir_grafo_causal"
  },
  {
    "class": "TeoriaCambio",
    "function": "_es_conexion_valida",
    "method_type": "analysis",
    "priority": 8,
    "description": "TeoriaCambio._es_conexion_valida"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "construct_causal_dag",
    "method_type": "analysis",
    "priority": 9,
    "description": "PDETMunicipalPlanAnalyzer.construct_causal_dag"
  },
  {
    "class": "BeachEvidentialTest",
    "function": "classify_test",
    "method_type": "analysis",
    "priority": 10,
    "description": "BeachEvidentialTest.classify_test"
  },
  {
    "class": "IndustrialPolicyProcessor",
    "function": "_analyze_causal_dimensions",
    "method_type": "analysis",
    "priority": 11,
    "description": "IndustrialPolicyProcessor._analyze_causal_dimensions"
  }
],
"patterns": [
  {

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    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q187-000",
    "match_type": "REGEX",
    "pattern": "mediante|a través de|con la implementación de"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q187-001",
    "match_type": "REGEX",
    "pattern": "escuelas de formación deportiva/artística|jornada escolar complementaria"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q187-002",
    "match_type": "REGEX",
    "pattern": "centros de escucha|servicios amigables en salud sexual"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q187-003",
    "match_type": "REGEX",
    "pattern": "orientación socio-ocupacional|ferias de empleo juvenil"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q187-004",
    "match_type": "REGEX",
    "pattern": "población objetivo:|dirigido a|beneficiarios serán"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q187-005",
    "match_type": "REGEX",
    "pattern": "niños y niñas de primera infancia|NNA desescolarizados"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q187-006",
    "match_type": "REGEX",
    "pattern": "jóvenes en riesgo de consumo de SPA o reclutamiento"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q187-007",
    "match_type": "REGEX",
    "pattern": "con el fin de promover el uso del tiempo libre|para prevenir"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q187-008",
    "match_type": "REGEX",
    "pattern": "lo cual fortalece su proyecto de vida|porque reduce los factores de riesgo"
  }
],

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    "text": "¿La descripción de las actividades para jóvenes detalla el instrumento ('mediante
    escuelas de formación deportiva', 'a través de centros de escucha'), la población objetivo ('jóvenes
    en riesgo', 'NNA desescolarizados') y la lógica causal?",
    "validations": {}
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    "cluster_id": "CL02",
    "dimension_id": "DIM02",
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        "type": "aborda_causa_raiz"
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      {
        "required": true,
        "type": "vinculo_diagnostico_actividad"
      }
    ],
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        "missing_required_element",
        "incomplete_text"
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      "emit_code": "ABORT-Q188-REQ"
    },
    "method_sets": [
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        "method_type": "extraction",
        "priority": 1,
        "description": "CausalExtractor._extract_causal_links"
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        "function": "_calculate_composite_likelihood",
        "method_type": "scoring",
        "priority": 2,
        "description": "CausalExtractor._calculate_composite_likelihood"
      },
      {
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        "function": "_initialize_prior",
        "method_type": "analysis",
        "priority": 3,
        "description": "CausalExtractor._initialize_prior"
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        "function": "_calculate_type_transition_prior",
        "method_type": "scoring",
        "priority": 4,
        "description": "CausalExtractor._calculate_type_transition_prior"
      },
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        "method_type": "analysis",
        "priority": 5,
        "description": "PDETMunicipalPlanAnalyzer._identify_causal_edges"
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        "function": "_refine_edge_probabilities",
        "method_type": "analysis",
        "priority": 6,

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    "description": "PDETMunicipalPlanAnalyzer._refine_edge_probabilities"
  },
  {
    "class": "BayesianCounterfactualAuditor",
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    "method_type": "analysis",
    "priority": 7,
    "description": "BayesianCounterfactualAuditor.construct_scm"
  },
  {
    "class": "BayesianCounterfactualAuditor",
    "function": "_create_default_equations",
    "method_type": "analysis",
    "priority": 8,
    "description": "BayesianCounterfactualAuditor._create_default_equations"
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    "function": "extract_semantic_cube",
    "method_type": "extraction",
    "priority": 9,
    "description": "SemanticAnalyzer.extract_semantic_cube"
  }
],
"patterns": [
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    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q188-000",
    "match_type": "REGEX",
    "pattern": "para abordar la causa de la deserción|en respuesta al problema de"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q188-001",
    "match_type": "REGEX",
    "pattern": "esta actividad ataca el determinante del embarazo adolescente"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q188-002",
    "match_type": "REGEX",
    "pattern": "causa estructural|factor de riesgo|nudo crítico"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q188-003",
    "match_type": "REGEX",
    "pattern": "barreras de acceso geográfico a la educación"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q188-004",
    "match_type": "REGEX",
    "pattern": "falta de oportunidades laborales para jóvenes"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q188-005",
    "match_type": "REGEX",
    "pattern": "entornos familiares violentos|vulnerabilidad socioeconómica"
  }
]

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    },
    {
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      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q188-006",
      "match_type": "REGEX",
      "pattern": "falta de información sobre salud sexual y reproductiva"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q188-007",
      "match_type": "REGEX",
      "pattern": "árbol de problemas|diagnóstico causal de infancia y juventud"
    }
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  "policy_area_id": "PA06",
  "question_global": 188,
  "question_id": "Q188",
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  "scoring_modality": "TYPE_A",
  "text": "¿El PDM vincula explícitamente las actividades (ej. transporte escolar) con las 'causas raíz' de los problemas (ej. deserción escolar por barreras de acceso) identificadas en el diagnóstico?",
  "validations": {}
},
{
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  "cluster_id": "CL02",
  "dimension_id": "DIM02",
  "expected_elements": [
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      "type": "mitigacion_propuesta"
    },
    {
      "required": true,
      "type": "riesgos_identificados"
    }
  ],
  "failure_contract": {
    "abort_if": [
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      "incomplete_text"
    ],
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      "function": "_bayesian_risk_inference",
      "method_type": "analysis",
      "priority": 1,
      "description": "PDETMunicipalPlanAnalyzer._bayesian_risk_inference"
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    {
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      "function": "sensitivity_analysis",
      "method_type": "analysis",
      "priority": 2,
      "description": "PDETMunicipalPlanAnalyzer.sensitivity_analysis"
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      "function": "_interpret_risk",
      "method_type": "analysis",
      "priority": 3,
      "description": "PDETMunicipalPlanAnalyzer._interpret_risk"
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  ],
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    "method_type": "analysis",
    "priority": 4,
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    "function": "_compute_e_value",
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    "priority": 5,
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    "function": "_interpret_sensitivity",
    "method_type": "analysis",
    "priority": 6,
    "description": "PDETMunicipalPlanAnalyzer._interpret_sensitivity"
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    "function": "_audit_systemic_risk",
    "method_type": "validation",
    "priority": 7,
    "description": "OperationalizationAuditor._audit_systemic_risk"
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    "function": "aggregate_risk_and_prioritize",
    "method_type": "analysis",
    "priority": 8,
    "description": "BayesianCounterfactualAuditor.aggregate_risk_and_prioritize"
  },
  {
    "class": "BayesianCounterfactualAuditor",
    "function": "refutation_and_sanity_checks",
    "method_type": "analysis",
    "priority": 9,
    "description": "BayesianCounterfactualAuditor.refutation_and_sanity_checks"
  },
  {
    "class": "AdaptivePriorCalculator",
    "function": "sensitivity_analysis",
    "method_type": "analysis",
    "priority": 10,
    "description": "AdaptivePriorCalculator.sensitivity_analysis"
  }
],
"patterns": [
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q189-000",
    "match_type": "REGEX",
    "pattern": "riesgos:|posibles dificultades:|barreras a la implementación"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q189-001",
    "match_type": "REGEX",
    "pattern": "baja participación de los jóvenes|poca adherencia a los programas"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q189-002",
    "match_type": "REGEX",

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    "pattern": "estigmatización de los beneficiarios del SRPA"
  },
  {
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    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q189-003",
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    "pattern": "sostenibilidad de las escuelas de formación"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q189-004",
    "match_type": "REGEX",
    "pattern": "resistencia de los padres de familia a la educación sexual"
  },
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    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q189-005",
    "match_type": "REGEX",
    "pattern": "falta de articulación con el ICBF o las EPS"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q189-006",
    "match_type": "REGEX",
    "pattern": "medidas de mitigación|plan de contingencia|para mitigar"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q189-007",
    "match_type": "REGEX",
    "pattern": "estrategias de convocatoria|concertación con las comunidades"
  }
],
"policy_area_id": "PA06",
"question_global": 189,
"question_id": "Q189",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿El plan identifica posibles riesgos en la implementación de los programas para
niñez y juventud (ej. baja participación, estigmatización) y propone 'medidas de mitigación'?",
"validations": {}
},
{
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  "cluster_id": "CL02",
  "dimension_id": "DIM02",
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      "type": "complementariedad_explicita"
    },
    {
      "required": true,
      "type": "secuenciacion_logica"
    }
  ],
  "failure_contract": {
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  }
}

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    "function": "_detect_logical_incompatibilities",
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    "priority": 1,
    "description": "PolicyContradictionDetector._detect_logical_incompatibilities"
  },
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    "method_type": "scoring",
    "priority": 2,
    "description": "PolicyContradictionDetector._calculate_coherence_metrics"
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    "function": "_calculate_objective_alignment",
    "method_type": "scoring",
    "priority": 3,
    "description": "PolicyContradictionDetector._calculate_objective_alignment"
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    "function": "_calculate_graph_fragmentation",
    "method_type": "scoring",
    "priority": 4,
    "description": "PolicyContradictionDetector._calculate_graph_fragmentation"
  },
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    "function": "audit_sequence_logic",
    "method_type": "validation",
    "priority": 5,
    "description": "OperationalizationAuditor.audit_sequence_logic"
  },
  {
    "class": "BayesianMechanismInference",
    "function": "_calculate_coherence_factor",
    "method_type": "scoring",
    "priority": 6,
    "description": "BayesianMechanismInference._calculate_coherence_factor"
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  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_score_causal_coherence",
    "method_type": "scoring",
    "priority": 7,
    "description": "PDETMunicipalPlanAnalyzer._score_causal_coherence"
  },
  {
    "class": "AdaptivePriorCalculator",
    "function": "calculate_likelihood_adaptativo",
    "method_type": "scoring",
    "priority": 8,
    "description": "AdaptivePriorCalculator.calculate_likelihood_adaptativo"
  }
],
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    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q190-000",
    "match_type": "REGEX",
    "pattern": "estrategia integral de protección|atención articulada"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",

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      "id": "PAT-Q190-001",
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      "pattern": "la jornada complementaria se articula con la prevención del consumo de SPA"
    },
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      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q190-002",
      "match_type": "REGEX",
      "pattern": "sinergia entre la oferta cultural y la prevención de la violencia"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q190-003",
      "match_type": "REGEX",
      "pattern": "la atención en primera infancia es prerequisite para una trayectoria
educativa exitosa"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q190-004",
      "match_type": "REGEX",
      "pattern": "en una primera fase se fortalecerá la oferta, luego se promoverá la demanda"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q190-005",
      "match_type": "LITERAL",
      "pattern": "la estrategia combina promoción, prevención y atención"
    }
  ],
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  "question_global": 190,
  "question_id": "Q190",
  "scoring_definition_ref": "scoring_modalities.TYPE_A",
  "scoring_modality": "TYPE_A",
  "text": "¿El conjunto de actividades para niñez y juventud demuestra una estrategia
coherente? Se debe buscar evidencia de 'complementariedad' (ej. jornada escolar complementaria +
prevención de SPA) o 'secuencia' lógica.",
  "validations": {}
},
{
  "base_slot": "D3-Q1",
  "cluster_id": "CL02",
  "dimension_id": "DIM03",
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      "type": "fuente_verificacion"
    },
    {
      "required": true,
      "type": "linea_base_producto"
    },
    {
      "required": true,
      "type": "meta_cuantitativa"
    }
  ],
  "failure_contract": {
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      "incomplete_text"
    ],
    "emit_code": "ABORT-Q191-REQ"
  }
}

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},
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    "function": "_score_indicators",
    "method_type": "scoring",
    "priority": 1,
    "description": "PDETMunicipalPlanAnalyzer._score_indicators"
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    "class": "OperationalizationAuditor",
    "function": "audit_evidence_traceability",
    "method_type": "validation",
    "priority": 2,
    "description": "OperationalizationAuditor.audit_evidence_traceability"
  },
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    "function": "assign_probative_value",
    "method_type": "analysis",
    "priority": 3,
    "description": "CausalInferenceSetup.assign_probative_value"
  },
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    "class": "BeachEvidentialTest",
    "function": "apply_test_logic",
    "method_type": "analysis",
    "priority": 4,
    "description": "BeachEvidentialTest.apply_test_logic"
  },
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    "function": "diagnose_critical_links",
    "method_type": "analysis",
    "priority": 5,
    "description": "TextMiningEngine.diagnose_critical_links"
  },
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    "function": "_extract_metadata",
    "method_type": "extraction",
    "priority": 6,
    "description": "IndustrialPolicyProcessor._extract_metadata"
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  {
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    "function": "_calculate_quality_score",
    "method_type": "scoring",
    "priority": 7,
    "description": "IndustrialPolicyProcessor._calculate_quality_score"
  },
  {
    "class": "AdaptivePriorCalculator",
    "function": "generate_traceability_record",
    "method_type": "analysis",
    "priority": 8,
    "description": "AdaptivePriorCalculator.generate_traceability_record"
  }
],
"patterns": [
  {
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    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q191-000",
    "match_type": "REGEX",
    "pattern": "indicador de producto|meta de producto"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",

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    "id": "PAT-Q191-001",
    "match_type": "REGEX",
    "pattern": "niños y niñas atendidos en CDI|cupos de atención a primera infancia"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q191-002",
    "match_type": "REGEX",
    "pattern": "estudiantes beneficiados con PAE|raciones entregadas"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q191-003",
    "match_type": "REGEX",
    "pattern": "jóvenes formados para el empleo|jóvenes en escuelas deportivas"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q191-004",
    "match_type": "REGEX",
    "pattern": "familias atendidas por la Comisaría"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q191-005",
    "match_type": "LITERAL",
    "pattern": "Línea Base:|LB:|Valor inicial:"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q191-006",
    "match_type": "REGEX",
    "pattern": "Meta Cuatrienio:|Meta:|Valor esperado:"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q191-007",
    "match_type": "REGEX",
    "pattern": "Fuente de verificación:|Medio de verificación:|Fuente:"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q191-008",
    "match_type": "REGEX",
    "pattern": "listados del ICBF|registros del SIMAT|informes de la Secretaría de
Educación"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q191-009",
    "match_type": "REGEX",
    "pattern": "actas de entrega|registros de la Comisaría de Familia"
  }
],
"policy_area_id": "PA06",
"question_global": 191,

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"question_id": "Q191",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿Los indicadores de producto para niñez y juventud (ej. cupos en CDI, raciones de
PAE entregadas) incluyen 'línea base', 'meta' cuantitativa y 'fuente de verificación'?",
"validations": {}
},
{
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  "dimension_id": "DIM03",
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      "type": "dosificacion_definida"
    },
    {
      "required": true,
      "type": "proporcionalidad_meta_problema"
    }
  ],
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      "incomplete_text"
    ],
    "emit_code": "ABORT-Q192-REQ"
  },
  "method_sets": [
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      "function": "_calculate_bayesian_posterior",
      "method_type": "scoring",
      "priority": 1,
      "description": "AdvancedDAGValidator._calculate_bayesian_posterior"
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      "function": "_calculate_confidence_interval",
      "method_type": "scoring",
      "priority": 2,
      "description": "AdvancedDAGValidator._calculate_confidence_interval"
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      "class": "AdaptivePriorCalculator",
      "function": "_adjust_domain_weights",
      "method_type": "analysis",
      "priority": 3,
      "description": "AdaptivePriorCalculator._adjust_domain_weights"
    },
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      "class": "PDETMunicipalPlanAnalyzer",
      "function": "_get_spanish_stopwords",
      "method_type": "analysis",
      "priority": 4,
      "description": "PDETMunicipalPlanAnalyzer._get_spanish_stopwords"
    },
    {
      "class": "BayesianMechanismInference",
      "function": "_log_refactored_components",
      "method_type": "analysis",
      "priority": 5,
      "description": "BayesianMechanismInference._log_refactored_components"
    },
    {
      "class": "PDETMunicipalPlanAnalyzer",
      "function": "analyze_financial_feasibility",
      "method_type": "analysis",
      "priority": 6,
      "description": "PDETMunicipalPlanAnalyzer.analyze_financial_feasibility"
    }
  ]
}

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    "class": "PDETMunicipalPlanAnalyzer",
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    "method_type": "scoring",
    "priority": 7,
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    "priority": 10,
    "description": "BayesianMechanismInference._test_sufficiency"
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    "method_type": "analysis",
    "priority": 11,
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    "priority": 12,
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    "function": "calculate_likelihood_adaptativo",
    "method_type": "scoring",
    "priority": 13,
    "description": "AdaptivePriorCalculator.calculate_likelihood_adaptativo"
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    "function": "_calculate_quality_score",
    "method_type": "scoring",
    "priority": 14,
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    "function": "_generar_sugerencias_internas",
    "method_type": "analysis",
    "priority": 15,
    "description": "TeoriaCambio._generar_sugerencias_internas"
  },
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    "function": "_deduplicate_tables",
    "method_type": "analysis",
    "priority": 16,
    "description": "PDETMunicipalPlanAnalyzer._deduplicate_tables"
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  {
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    "function": "_indicator_to_dict",

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    "method_type": "analysis",
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    "priority": 18,
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    "priority": 19,
    "description": "IndustrialPolicyProcessor._compile_pattern_registry"
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    "method_type": "analysis",
    "priority": 20,
    "description": "IndustrialPolicyProcessor._build_point_patterns"
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    "function": "_empty_result",
    "method_type": "analysis",
    "priority": 21,
    "description": "IndustrialPolicyProcessor._empty_result"
  }
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    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q192-000",
    "match_type": "REGEX",
    "pattern": "cobertura universal del PAE|atenderá al \\d+% de los NNA"
  },
  {
    "category": "INDICADOR",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q192-001",
    "match_type": "REGEX",
    "pattern": "la meta de cupos en CDI cubre el X% del déficit de atención"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q192-002",
    "match_type": "REGEX",
    "pattern": "universo de atención|población total de jóvenes"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q192-003",
    "match_type": "REGEX",
    "pattern": "la meta se establece en función de la capacidad instalada"
  },
  {
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    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q192-004",
    "match_type": "REGEX",

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    "pattern": "se priorizarán los NNA en mayor vulnerabilidad"
  },
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    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q192-005",
    "match_type": "REGEX",
    "pattern": "intensidad horaria de los programas de jornada complementaria"
  },
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    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q192-006",
    "match_type": "REGEX",
    "pattern": "frecuencia de las intervenciones psicosociales"
  }
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"question_global": 192,
"question_id": "Q192",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿Las metas de los productos para niñez y juventud (ej. 'cobertura del PAE al 90% de la matrícula') son proporcionales a la magnitud de la población objetivo diagnosticada?",
"validations": {}
},
{
  "base_slot": "D3-Q3",
  "cluster_id": "CL02",
  "dimension_id": "DIM03",
  "expected_elements": [
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      "required": true,
      "type": "trazabilidad_organizacional"
    },
    {
      "required": true,
      "type": "trazabilidad_presupuestal"
    }
  ]
},
"failure_contract": {
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  ],
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"method_sets": [
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    "function": "_match_program_to_node",
    "method_type": "analysis",
    "priority": 1,
    "description": "FinancialAuditor._match_program_to_node"
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    "function": "_match_goal_to_budget",
    "method_type": "analysis",
    "priority": 2,
    "description": "FinancialAuditor._match_goal_to_budget"
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    "priority": 3,
    "description": "PDETMunicipalPlanAnalyzer._extract_from_responsibility_tables"
  }
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    "method_type": "analysis",
    "priority": 5,
    "description": "PDETMunicipalPlanAnalyzer.identify_responsible_entities"
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    "method_type": "scoring",
    "priority": 6,
    "description": "PDETMunicipalPlanAnalyzer._score_responsibility_clarity"
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    "function": "process_document",
    "method_type": "analysis",
    "priority": 7,
    "description": "PolicyAnalysisEmbedder.process_document"
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    "function": "_generate_query_from_pdq",
    "method_type": "analysis",
    "priority": 8,
    "description": "PolicyAnalysisEmbedder._generate_query_from_pdq"
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    "function": "semantic_search",
    "method_type": "analysis",
    "priority": 9,
    "description": "PolicyAnalysisEmbedder.semantic_search"
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    "function": "_apply_mmr",
    "method_type": "analysis",
    "priority": 10,
    "description": "PolicyAnalysisEmbedder._apply_mmr"
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    "function": "_empty_semantic_cube",
    "method_type": "analysis",
    "priority": 11,
    "description": "SemanticAnalyzer._empty_semantic_cube"
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    "function": "_classify_policy_domain",
    "method_type": "analysis",
    "priority": 12,
    "description": "SemanticAnalyzer._classify_policy_domain"
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    "function": "_classify_cross_cutting_themes",
    "method_type": "analysis",
    "priority": 13,
    "description": "SemanticAnalyzer._classify_cross_cutting_themes"
  },
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    "function": "_classify_value_chain_link",

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    "priority": 15,
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    "method_type": "scoring",
    "priority": 17,
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    "method_type": "analysis",
    "priority": 18,
    "description": "IndustrialPolicyProcessor._compute_evidence_confidence"
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    "function": "_entity_to_dict",
    "method_type": "analysis",
    "priority": 19,
    "description": "PDETMunicipalPlanAnalyzer._entity_to_dict"
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    "method_type": "analysis",
    "priority": 20,
    "description": "AdaptivePriorCalculator.generate_traceability_record"
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    "function": "generate_pdq_report",
    "method_type": "analysis",
    "priority": 21,
    "description": "PolicyAnalysisEmbedder.generate_pdq_report"
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    "function": "generate_accountability_matrix",
    "method_type": "analysis",
    "priority": 22,
    "description": "ReportingEngine.generate_accountability_matrix"
  }
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    "pattern": "código BPIN|proyecto de inversión para primera infancia"
  },
  {
    "category": "GENERAL",

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    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q193-001",
    "match_type": "REGEX",
    "pattern": "programa del PPI|línea de inversión en juventud"
  },
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    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q193-002",
    "match_type": "REGEX",
    "pattern": "recursos del SGP para educación|presupuesto del PAE"
  },
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    "confidence_weight": 0.85,
    "flags": "i",
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    "match_type": "REGEX",
    "pattern": "responsable:|dependencia a cargo:|entidad ejecutora"
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    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q193-004",
    "match_type": "REGEX",
    "pattern": "Secretaría de Desarrollo Social|Educación|Salud"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q193-005",
    "match_type": "REGEX",
    "pattern": "articulado con el ICBF|Comisaría de Familia"
  },
  {
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    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q193-006",
    "match_type": "REGEX",
    "pattern": "convenio con|operado por"
  }
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"question_global": 193,
"question_id": "Q193",
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"scoring_modality": "TYPE_A",
"text": "¿Los productos para niñez y juventud tienen trazabilidad presupuestal (vinculados a
códigos BPIN, PPI) y organizacional (asociados a una 'Secretaría de Desarrollo Social' o entidad
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"validations": {}
},
{
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  "cluster_id": "CL02",
  "dimension_id": "DIM03",
  "expected_elements": [
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      "required": true,
      "type": "coherencia_recursos"
    },
    {
      "required": true,
      "type": "factibilidad_tecnica"
    },
    {
      "required": true,

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    "type": "realismo_plazos"
  }
],
"failure_contract": {
  "abort_if": [
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  ],
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    "priority": 1,
    "description": "AdvancedDAGValidator.calculate_acyclicity_pvalue"
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    "function": "_is_acyclic",
    "method_type": "analysis",
    "priority": 2,
    "description": "AdvancedDAGValidator._is_acyclic"
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    "method_type": "analysis",
    "priority": 3,
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    "method_type": "scoring",
    "priority": 4,
    "description": "AdvancedDAGValidator._calculate_node_importance"
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    "method_type": "analysis",
    "priority": 7,
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    "method_type": "analysis",
    "priority": 8,
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    "method_type": "analysis",
    "priority": 9,

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    "method_type": "scoring",
    "priority": 10,
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  },
  {
    "class": "AdvancedDAGValidator",
    "function": "_get_node_validator",
    "method_type": "analysis",
    "priority": 11,
    "description": "AdvancedDAGValidator._get_node_validator"
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    "function": "_create_empty_result",
    "method_type": "analysis",
    "priority": 12,
    "description": "AdvancedDAGValidator._create_empty_result"
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    "method_type": "analysis",
    "priority": 13,
    "description": "BayesianMechanismInference._test_necessity"
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    "method_type": "analysis",
    "priority": 14,
    "description": "IndustrialGradeValidator.execute_suite"
  },
  {
    "class": "IndustrialGradeValidator",
    "function": "validate_connection_matrix",
    "method_type": "validation",
    "priority": 15,
    "description": "IndustrialGradeValidator.validate_connection_matrix"
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    "function": "run_performance_benchmarks",
    "method_type": "analysis",
    "priority": 16,
    "description": "IndustrialGradeValidator.run_performance_benchmarks"
  },
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    "function": "_benchmark_operation",
    "method_type": "analysis",
    "priority": 17,
    "description": "IndustrialGradeValidator._benchmark_operation"
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    "function": "_log_metric",
    "method_type": "analysis",
    "priority": 18,
    "description": "IndustrialGradeValidator._log_metric"
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    "class": "IndustrialGradeValidator",
    "function": "validate_engine_readiness",
    "method_type": "validation",
    "priority": 19,
    "description": "IndustrialGradeValidator.validate_engine_readiness"
  },

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  "method_type": "analysis",
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  "function": "_calculate_loss_functions",
  "method_type": "scoring",
  "priority": 21,
  "description": "PerformanceAnalyzer._calculate_loss_functions"
},
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  "function": "_calculate_likelihood",
  "method_type": "scoring",
  "priority": 22,
  "description": "HierarchicalGenerativeModel._calculate_likelihood"
},
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  "class": "HierarchicalGenerativeModel",
  "function": "_calculate_ess",
  "method_type": "scoring",
  "priority": 23,
  "description": "HierarchicalGenerativeModel._calculate_ess"
},
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  "class": "HierarchicalGenerativeModel",
  "function": "_calculate_r_hat",
  "method_type": "scoring",
  "priority": 24,
  "description": "HierarchicalGenerativeModel._calculate_r_hat"
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  "function": "validate_causal_categories",
  "method_type": "validation",
  "priority": 25,
  "description": "IndustrialGradeValidator.validate_causal_categories"
},
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  "class": "TeoriaCambio",
  "function": "_extraer_categorias",
  "method_type": "analysis",
  "priority": 26,
  "description": "TeoriaCambio._extraer_categorias"
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    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q194-000",
    "match_type": "REGEX",
    "pattern": "factibilidad|viabilidad|es realista esperar que"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q194-001",
    "match_type": "REGEX",
    "pattern": "capacidad operativa de los orientadores escolares para"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q194-002",

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    "match_type": "REGEX",
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  },
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    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q194-003",
    "match_type": "REGEX",
    "pattern": "la meta de cobertura del PAE es ambiciosa pero alcanzable"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q194-004",
    "match_type": "REGEX",
    "pattern": "contradictorio|poco probable|desproporcionado"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q194-005",
    "match_type": "REGEX",
    "pattern": "con los recursos asignados se puede lograr"
  }
],
"policy_area_id": "PA06",
"question_global": 194,
"question_id": "Q194",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿Existe una relación factible entre la actividad (ej. 'un taller vocacional') y la meta del producto asociado (ej. '500 jóvenes con proyecto de vida estructurado') para el área de niñez y juventud? Se debe evaluar si los 'plazos' son realistas.",
"validations": {}
},
{
  "base_slot": "D3-Q5",
  "cluster_id": "CL02",
  "dimension_id": "DIM03",
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      "required": true,
      "type": "conexion_producto_resultado"
    },
    {
      "required": true,
      "type": "mecanismo_causal_explicito"
    }
  ],
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  },
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      "method_type": "analysis",
      "priority": 1,
      "description": "PDETMunicipalPlanAnalyzer._identify_confounders"
    },
    {
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      "function": "_effect_to_dict",
      "method_type": "analysis",
      "priority": 2,

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    "description": "PDETMunicipalPlanAnalyzer._effect_to_dict"
  },
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    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_scenario_to_dict",
    "method_type": "analysis",
    "priority": 3,
    "description": "PDETMunicipalPlanAnalyzer._scenario_to_dict"
  },
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    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_simulate_intervention",
    "method_type": "analysis",
    "priority": 4,
    "description": "PDETMunicipalPlanAnalyzer._simulate_intervention"
  },
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    "function": "_generate_recommendations",
    "method_type": "analysis",
    "priority": 5,
    "description": "PDETMunicipalPlanAnalyzer._generate_recommendations"
  },
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    "function": "_identify_causal_nodes",
    "method_type": "analysis",
    "priority": 6,
    "description": "PDETMunicipalPlanAnalyzer._identify_causal_nodes"
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    "class": "BayesianCounterfactualAuditor",
    "function": "_evaluate_factual",
    "method_type": "analysis",
    "priority": 7,
    "description": "BayesianCounterfactualAuditor._evaluate_factual"
  },
  {
    "class": "BayesianCounterfactualAuditor",
    "function": "_evaluate_counterfactual",
    "method_type": "analysis",
    "priority": 8,
    "description": "BayesianCounterfactualAuditor._evaluate_counterfactual"
  },
  {
    "class": "CausalExtractor",
    "function": "_assess_financial_consistency",
    "method_type": "analysis",
    "priority": 9,
    "description": "CausalExtractor._assess_financial_consistency"
  },
  {
    "class": "BayesianMechanismInference",
    "function": "_infer_activity_sequence",
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    "method_type": "analysis",
    "priority": 11,
    "description": "BayesianMechanismInference._generate_necessity_remediation"
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    "method_type": "analysis",
    "priority": 12,
    "description": "BayesianCounterfactualAuditor.refutation_and_sanity_checks"
  },

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  "method_type": "analysis",
  "priority": 14,
  "description": "PDETMunicipalPlanAnalyzer.analyze_financial_feasibility"
},
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  "priority": 15,
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  "function": "estimate_causal_effects",
  "method_type": "analysis",
  "priority": 16,
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  "method_type": "analysis",
  "priority": 17,
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  "priority": 18,
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  "priority": 19,
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  "priority": 20,
  "description": "CausalExtractor._calculate_type_transition_prior"
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  "function": "_calculate_textual_proximity",
  "method_type": "scoring",
  "priority": 21,
  "description": "CausalExtractor._calculate_textual_proximity"
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  "function": "_validar_orden_causal",
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  "priority": 22,
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    "priority": 24,
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    "method_type": "analysis",
    "priority": 25,
    "description": "BayesianMechanismInference.infer_mechanisms"
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    "id": "PAT-Q195-000",
    "match_type": "REGEX",
    "pattern": "esto permitirá que|lo cual contribuirá a|generando una reducción de"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q195-001",
    "match_type": "LITERAL",
    "pattern": "el mecanismo es que el PAE mejora la nutrición y con ello la permanencia
escolar"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q195-002",
    "match_type": "REGEX",
    "pattern": "a través de la formación para el trabajo, los jóvenes mejoran su
empleabilidad"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q195-003",
    "match_type": "REGEX",
    "pattern": "la atención en primera infancia fortalece el desarrollo cognitivo, lo que
resulta en..."
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q195-004",
    "match_type": "REGEX",
    "pattern": "variable intermedia|mediador|eslabón causal|permanencia
escolar|empleabilidad"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q195-005",
    "match_type": "REGEX",
    "pattern": "cadena de valor|ruta de cambio"
  }
]

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    }
  ],
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  "question_global": 195,
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  "scoring_modality": "TYPE_A",
  "text": "¿El PDM explica cómo los productos (ej. 'jóvenes formados en habilidades para el empleo') contribuyen a generar resultados (ej. 'aumento de la tasa de ocupación juvenil')? Se debe buscar este 'mecanismo'.",
  "validations": {}
},
{
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  "cluster_id": "CL02",
  "dimension_id": "DIM04",
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      "type": "horizonte_temporal"
    },
    {
      "required": true,
      "type": "linea_base_resultado"
    },
    {
      "required": true,
      "type": "meta_resultado"
    },
    {
      "required": true,
      "type": "metrica_outcome"
    }
  ],
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      "incomplete_text"
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      "method_type": "extraction",
      "priority": 1,
      "description": "PDETMunicipalPlanAnalyzer._extract_entities_syntax"
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      "method_type": "extraction",
      "priority": 2,
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      "priority": 3,
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      "priority": 4,
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    "priority": 5,
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    "method_type": "analysis",
    "priority": 6,
    "description": "TemporalLogicVerifier._classify_temporal_type"
  },
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    "method_type": "scoring",
    "priority": 7,
    "description": "PDETMunicipalPlanAnalyzer._score_indicators"
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    "function": "_find_outcome_mentions",
    "method_type": "analysis",
    "priority": 8,
    "description": "PDETMunicipalPlanAnalyzer._find_outcome_mentions"
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    "function": "_score_temporal_consistency",
    "method_type": "scoring",
    "priority": 9,
    "description": "PDETMunicipalPlanAnalyzer._score_temporal_consistency"
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    "function": "_extract_goals",
    "method_type": "extraction",
    "priority": 10,
    "description": "CausalExtractor._extract_goals"
  },
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    "function": "_parse_goal_context",
    "method_type": "extraction",
    "priority": 11,
    "description": "CausalExtractor._parse_goal_context"
  },
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    "function": "_classify_goal_type",
    "method_type": "analysis",
    "priority": 12,
    "description": "CausalExtractor._classify_goal_type"
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    "function": "_parse_temporal_marker",
    "method_type": "extraction",
    "priority": 13,
    "description": "TemporalLogicVerifier._parse_temporal_marker"
  },
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    "method_type": "extraction",
    "priority": 14,
    "description": "TemporalLogicVerifier._extract_resources"
  },
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    "function": "analyze_performance",
    "method_type": "analysis",

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    "priority": 15,
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  },
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    "class": "PerformanceAnalyzer",
    "function": "_generate_recommendations",
    "method_type": "analysis",
    "priority": 16,
    "description": "PerformanceAnalyzer._generate_recommendations"
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    "flags": "i",
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    "pattern": "indicador de resultado|indicador de efecto|outcome"
  },
  {
    "category": "INDICADOR",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q196-001",
    "match_type": "REGEX",
    "pattern": "tasa de deserción escolar|tasa de fecundidad en adolescentes"
  },
  {
    "category": "INDICADOR",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q196-002",
    "match_type": "REGEX",
    "pattern": "tasa de trabajo infantil|prevalencia de desnutrición crónica"
  },
  {
    "category": "INDICADOR",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q196-003",
    "match_type": "REGEX",
    "pattern": "porcentaje de jóvenes NINI"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q196-004",
    "match_type": "LITERAL",
    "pattern": "Línea Base:|LB:|valor 2023:"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q196-005",
    "match_type": "REGEX",
    "pattern": "Meta Cuatrienio:|Meta 2027:|se espera reducir a"
  },
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    "confidence_weight": 0.85,
    "flags": "i",
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    "match_type": "REGEX",
    "pattern": "Fuente de verificación:|Medio de verificación:"
  },
  {
    "category": "INDICADOR",
    "confidence_weight": 0.85,
    "flags": "i",

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        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q196-008",
        "match_type": "REGEX",
        "pattern": "horizonte temporal|ventana de maduraci3n|al final del periodo"
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],
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"question_global": 196,
"question_id": "Q196",
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"scoring_modality": "TYPE_A",
"text": "¿Los indicadores de resultado para niñez y juventud (ej. 'tasa de deserci3n escolar', 'tasa de fecundidad adolescente') est3n definidos con l3nea base, meta y un horizonte temporal?",
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{
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    "dimension_id": "DIM04",
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        },
        {
            "required": true,
            "type": "condiciones_habilitantes"
        },
        {
            "required": true,
            "type": "supuestos_identificados"
        }
    ],
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            "incomplete_text"
        ],
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            "method_type": "analysis",
            "priority": 1,
            "description": "TeoriaCambio._encontrar_caminos_completos"
        },
        {
            "class": "TeoriaCambio",
            "function": "validacion_completa",
            "method_type": "analysis",
            "priority": 2,
            "description": "TeoriaCambio.validacion_completa"
        },
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            "function": "extract_causal_hierarchy",
            "method_type": "extraction",
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    "method_type": "analysis",
    "priority": 5,
    "description": "HierarchicalGenerativeModel._generate_independence_tests"
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    "function": "construct_scm",
    "method_type": "analysis",
    "priority": 6,
    "description": "BayesianCounterfactualAuditor.construct_scm"
  },
  {
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    "function": "_perform_sensitivity_analysis_internal",
    "method_type": "analysis",
    "priority": 7,
    "description": "AdvancedDAGValidator._perform_sensitivity_analysis_internal"
  },
  {
    "class": "BayesFactorTable",
    "function": "get_bayes_factor",
    "method_type": "analysis",
    "priority": 8,
    "description": "BayesFactorTable.get_bayes_factor"
  }
],
"patterns": [
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    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q197-000",
    "match_type": "REGEX",
    "pattern": "cadena causal|lógica de intervención|si... entonces..."
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q197-001",
    "match_type": "REGEX",
    "pattern": "el resultado se logrará siempre y cuando|asumiendo que"
  },
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    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q197-002",
    "match_type": "REGEX",
    "pattern": "supuesto clave|premisa fundamental"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q197-003",
    "match_type": "REGEX",
    "pattern": "condición habilitante|factor crítico|requiere de"
  },
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    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q197-004",

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    "flags": "i",
    "id": "PAT-Q197-005",
    "match_type": "REGEX",
    "pattern": "un supuesto es que el mercado laboral absorba a los jóvenes formados"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q197-006",
    "match_type": "REGEX",
    "pattern": "se requiere un cambio en las dinámicas familiares"
  }
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"question_global": 197,
"question_id": "Q197",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿Se explicita la cadena causal que lleva a la mejora del bienestar juvenil, mencionando 'supuestos' clave (ej. 'si los jóvenes aplican a las ofertas laborales') o 'condiciones habilitantes'?",
"validations": {}
},
{
  "base_slot": "D4-Q3",
  "cluster_id": "CL02",
  "dimension_id": "DIM04",
  "expected_elements": [
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      "required": true,
      "type": "evidencia_comparada"
    },
    {
      "required": true,
      "type": "justificacion_capacidad"
    },
    {
      "required": true,
      "type": "justificacion_recursos"
    }
  ],
  "failure_contract": {
    "abort_if": [
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      "incomplete_text"
    ],
    "emit_code": "ABORT-Q198-REQ"
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  "method_sets": [
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      "function": "_get_prior_effect",
      "method_type": "analysis",
      "priority": 1,
      "description": "PDETMunicipalPlanAnalyzer._get_prior_effect"
    },
    {
      "class": "PDETMunicipalPlanAnalyzer",
      "function": "_estimate_effect_bayesian",
      "method_type": "analysis",
      "priority": 2,
      "description": "PDETMunicipalPlanAnalyzer._estimate_effect_bayesian"
    },
    {
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    "priority": 3,
    "description": "PDETMunicipalPlanAnalyzer._compute_robustness_value"
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    "class": "AdaptivePriorCalculator",
    "function": "sensitivity_analysis",
    "method_type": "analysis",
    "priority": 4,
    "description": "AdaptivePriorCalculator.sensitivity_analysis"
  },
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    "class": "HierarchicalGenerativeModel",
    "function": "_calculate_r_hat",
    "method_type": "scoring",
    "priority": 5,
    "description": "HierarchicalGenerativeModel._calculate_r_hat"
  },
  {
    "class": "HierarchicalGenerativeModel",
    "function": "_calculate_ess",
    "method_type": "scoring",
    "priority": 6,
    "description": "HierarchicalGenerativeModel._calculate_ess"
  },
  {
    "class": "AdvancedDAGValidator",
    "function": "_calculate_statistical_power",
    "method_type": "scoring",
    "priority": 7,
    "description": "AdvancedDAGValidator._calculate_statistical_power"
  },
  {
    "class": "BayesianMechanismInference",
    "function": "_aggregate_bayesian_confidence",
    "method_type": "analysis",
    "priority": 8,
    "description": "BayesianMechanismInference._aggregate_bayesian_confidence"
  }
],
"patterns": [
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    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q198-000",
    "match_type": "REGEX",
    "pattern": "meta ambiciosa pero factible|meta realista dado el presupuesto de SGP"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q198-001",
    "match_type": "REGEX",
    "pattern": "la meta se justifica por la ampliación de la cobertura del PAE"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q198-002",
    "match_type": "REGEX",
    "pattern": "con la inversión en X se espera lograr una reducción de Y"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q198-003",
    "match_type": "REGEX",

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    "pattern": "la capacidad de los orientadores escolares permite esta meta"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q198-004",
    "match_type": "REGEX",
    "pattern": "en experiencias similares de otros municipios con programas de prevención"
  },
  {
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    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q198-005",
    "match_type": "REGEX",
    "pattern": "benchmark|referente departamental|meta del Plan Decenal de Educación"
  }
],
"policy_area_id": "PA06",
"question_global": 198,
"question_id": "Q198",
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"scoring_modality": "TYPE_A",
"text": "¿La ambición de las metas de resultado (ej. 'reducir la deserción en 3 puntos porcentuales') se justifica en función de la inversión, la capacidad de las instituciones educativas o se compara con 'casos' similares?",
"validations": {}
},
{
  "base_slot": "D4-Q4",
  "cluster_id": "CL02",
  "dimension_id": "DIM04",
  "expected_elements": [
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      "required": true,
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    },
    {
      "required": true,
      "type": "vinculo_resultado_problema"
    }
  ]
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    "priority": 1,
    "description": "PolicyContradictionDetector._calculate_objective_alignment"
  },
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    "function": "_identify_affected_sections",
    "method_type": "analysis",
    "priority": 2,
    "description": "PolicyContradictionDetector._identify_affected_sections"
  },
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    "function": "_generate_resolution_recommendations",
    "method_type": "analysis",
    "priority": 3,
    "description": "PolicyContradictionDetector._generate_resolution_recommendations"
  }
],

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  "function": "_generate_optimal_remediations",
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  "priority": 4,
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  "function": "_get_remediation_text",
  "method_type": "analysis",
  "priority": 5,
  "description": "OperationalizationAuditor._get_remediation_text"
},
{
  "class": "BayesianCounterfactualAuditor",
  "function": "aggregate_risk_and_prioritize",
  "method_type": "analysis",
  "priority": 6,
  "description": "BayesianCounterfactualAuditor.aggregate_risk_and_prioritize"
},
{
  "class": "FinancialAuditor",
  "function": "_detect_allocation_gaps",
  "method_type": "analysis",
  "priority": 7,
  "description": "FinancialAuditor._detect_allocation_gaps"
}
],
"patterns": [
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q199-000",
    "match_type": "REGEX",
    "pattern": "este resultado responde al problema del trabajo infantil"
  },
  {
    "category": "INDICADOR",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q199-001",
    "match_type": "REGEX",
    "pattern": "para solucionar la alta tasa de embarazo adolescente"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q199-002",
    "match_type": "REGEX",
    "pattern": "el resultado atiende directamente las causas de la desnutrición"
  },
  {
    "category": "INDICADOR",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q199-003",
    "match_type": "REGEX",
    "pattern": "criterio de éxito|se considerará un logro si la tasa baja de X%"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q199-004",
    "match_type": "REGEX",
    "pattern": "umbral de cumplimiento|mínimo aceptable"
  },
  {
    "category": "GENERAL",

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        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q199-005",
        "match_type": "REGEX",
        "pattern": "matriz de coherencia|alineación diagnóstico-estrategia"
    }
],
"policy_area_id": "PA06",
"question_global": 199,
"question_id": "Q199",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿Los resultados propuestos (ej. 'reducción del trabajo infantil') 'atienden' o 'abordan' directamente los problemas de vulneración de derechos priorizados en el diagnóstico?",
"validations": {}
},
{
    "base_slot": "D4-Q5",
    "cluster_id": "CL02",
    "dimension_id": "DIM04",
    "expected_elements": [
        {
            "required": true,
            "type": "alineacion_ods"
        },
        {
            "required": true,
            "type": "alineacion_pnd"
        }
    ],
    "failure_contract": {
        "abort_if": [
            "missing_required_element",
            "incomplete_text"
        ],
        "emit_code": "ABORT-Q200-REQ"
    },
    "method_sets": [
        {
            "class": "PDETMunicipalPlanAnalyzer",
            "function": "_score_pdet_alignment",
            "method_type": "scoring",
            "priority": 1,
            "description": "PDETMunicipalPlanAnalyzer._score_pdet_alignment"
        },
        {
            "class": "PDETMunicipalPlanAnalyzer",
            "function": "_score_causal_coherence",
            "method_type": "scoring",
            "priority": 2,
            "description": "PDETMunicipalPlanAnalyzer._score_causal_coherence"
        },
        {
            "class": "CDAFFramework",
            "function": "_validate_dnp_compliance",
            "method_type": "validation",
            "priority": 3,
            "description": "CDAFFramework._validate_dnp_compliance"
        },
        {
            "class": "CDAFFramework",
            "function": "_generate_dnp_report",
            "method_type": "analysis",
            "priority": 4,
            "description": "CDAFFramework._generate_dnp_report"
        },
        {
            "class": "IndustrialPolicyProcessor",
            "function": "_analyze_causal_dimensions",
            "method_type": "analysis",
            "priority": 5,
            "description": "IndustrialPolicyProcessor._analyze_causal_dimensions"
        }
    ]
}

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    },
    {
      "class": "AdaptivePriorCalculator",
      "function": "validate_quality_criteria",
      "method_type": "validation",
      "priority": 6,
      "description": "AdaptivePriorCalculator.validate_quality_criteria"
    }
  ],
  "patterns": [
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      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q200-000",
      "match_type": "REGEX",
      "pattern": "alineado con el Plan Nacional de Desarrollo|PND"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q200-001",
      "match_type": "REGEX",
      "pattern": "contribuye a los ODS 1, 2, 3, 4, 5, 8, 16|Objetivos de Desarrollo
Sostenible"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q200-002",
      "match_type": "REGEX",
      "pattern": "en concordancia con la Política 'De Cero a Siempre'|Estatuto de Ciudadanía
Juvenil"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q200-003",
      "match_type": "REGEX",
      "pattern": "articulado con el CONPES de Primera Infancia|Salud Mental"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q200-004",
      "match_type": "REGEX",
      "pattern": "transformación del PND|eje de convergencia social-regional"
    }
  ],
  "policy_area_id": "PA06",
  "question_global": 200,
  "question_id": "Q200",
  "scoring_definition_ref": "scoring_modalities.TYPE_A",
  "scoring_modality": "TYPE_A",
  "text": "¿El plan declara la alineación de sus resultados de niñez y juventud con marcos
superiores como el PND o los ODS (4, 5, 8)?",
  "validations": {}
},
{
  "base_slot": "D5-Q1",
  "cluster_id": "CL02",
  "dimension_id": "DIM05",
  "expected_elements": [
    {
      "required": true,
      "type": "impacto_definido"
    }
  ],
  {

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        "required": true,
        "type": "rezago_temporal"
    },
    {
        "required": true,
        "type": "ruta_transmision"
    }
],
"failure_contract": {
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        "missing_required_element",
        "incomplete_text"
    ],
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"method_sets": [
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        "function": "generate_counterfactuals",
        "method_type": "analysis",
        "priority": 1,
        "description": "PDETMunicipalPlanAnalyzer.generate_counterfactuals"
    },
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        "class": "PDETMunicipalPlanAnalyzer",
        "function": "_simulate_intervention",
        "method_type": "analysis",
        "priority": 2,
        "description": "PDETMunicipalPlanAnalyzer._simulate_intervention"
    },
    {
        "class": "PDETMunicipalPlanAnalyzer",
        "function": "_generate_scenario_narrative",
        "method_type": "analysis",
        "priority": 3,
        "description": "PDETMunicipalPlanAnalyzer._generate_scenario_narrative"
    },
    {
        "class": "PDETMunicipalPlanAnalyzer",
        "function": "_find_mediator_mentions",
        "method_type": "analysis",
        "priority": 4,
        "description": "PDETMunicipalPlanAnalyzer._find_mediator_mentions"
    },
    {
        "class": "TeoriaCambio",
        "function": "_validar_orden_causal",
        "method_type": "analysis",
        "priority": 5,
        "description": "TeoriaCambio._validar_orden_causal"
    },
    {
        "class": "CausalExtractor",
        "function": "_assess_temporal_coherence",
        "method_type": "analysis",
        "priority": 6,
        "description": "CausalExtractor._assess_temporal_coherence"
    },
    {
        "class": "TextMiningEngine",
        "function": "_generate_interventions",
        "method_type": "analysis",
        "priority": 7,
        "description": "TextMiningEngine._generate_interventions"
    },
    {
        "class": "BayesianCounterfactualAuditor",
        "function": "construct_scm",
        "method_type": "analysis",
        "priority": 8,
        "description": "BayesianCounterfactualAuditor.construct_scm"
    }
]

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],
"patterns": [
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q201-000",
    "match_type": "REGEX",
    "pattern": "impacto esperado|visión de largo plazo|transformación generacional"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q201-001",
    "match_type": "REGEX",
    "pattern": "desarrollo integral de la niñez y la juventud|bienestar generacional"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q201-002",
    "match_type": "REGEX",
    "pattern": "ruptura de ciclos intergeneracionales de pobreza"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q201-003",
    "match_type": "REGEX",
    "pattern": "formación de capital humano para el futuro del municipio"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q201-004",
    "match_type": "REGEX",
    "pattern": "la suma de los resultados en educación y salud generará el impacto de"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q201-005",
    "match_type": "REGEX",
    "pattern": "ruta de transmisión|cadena de impacto"
  },
  {
    "category": "TEMPORAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q201-006",
    "match_type": "REGEX",
    "pattern": "tiempo de maduración|efectos en el largo plazo|se espera observar en 15-20
años"
  }
],
"policy_area_id": "PA06",
"question_global": 201,
"question_id": "Q201",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿El PDM define 'impactos' de largo plazo (ej. 'desarrollo integral de la juventud',
'ruptura de ciclos de pobreza')? Se debe verificar si se menciona la ruta desde los resultados y el
'tiempo de maduración'.",
"validations": {}
},
{
  "base_slot": "D5-Q2",

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"cluster_id": "CL02",
"dimension_id": "DIM05",
"expected_elements": [
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    "required": true,
    "type": "justifica_validez"
  },
  {
    "required": true,
    "type": "usa_indices_compuestos"
  },
  {
    "required": true,
    "type": "usa_proxies"
  }
],
"failure_contract": {
  "abort_if": [
    "missing_required_element",
    "incomplete_text"
  ],
  "emit_code": "ABORT-Q202-REQ"
},
"method_sets": [
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    "class": "PDETMunicipalPlanAnalyzer",
    "function": "calculate_quality_score",
    "method_type": "scoring",
    "priority": 1,
    "description": "PDETMunicipalPlanAnalyzer.calculate_quality_score"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_estimate_score_confidence",
    "method_type": "scoring",
    "priority": 2,
    "description": "PDETMunicipalPlanAnalyzer._estimate_score_confidence"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_compute_e_value",
    "method_type": "analysis",
    "priority": 3,
    "description": "PDETMunicipalPlanAnalyzer._compute_e_value"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_compute_robustness_value",
    "method_type": "analysis",
    "priority": 4,
    "description": "PDETMunicipalPlanAnalyzer._compute_robustness_value"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_interpret_sensitivity",
    "method_type": "analysis",
    "priority": 5,
    "description": "PDETMunicipalPlanAnalyzer._interpret_sensitivity"
  },
  {
    "class": "ReportingEngine",
    "function": "_calculate_quality_score",
    "method_type": "scoring",
    "priority": 6,
    "description": "ReportingEngine._calculate_quality_score"
  },
  {
    "class": "BayesianMechanismInference",
    "function": "_aggregate_bayesian_confidence",
    "method_type": "analysis",
    "priority": 7,
    "description": "BayesianMechanismInference._aggregate_bayesian_confidence"
  }
]

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},
{
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  "function": "evaluate_policy_numerical_consistency",
  "method_type": "analysis",
  "priority": 8,
  "description": "PolicyAnalysisEmbedder.evaluate_policy_numerical_consistency"
},
{
  "class": "PolicyAnalysisEmbedder",
  "function": "get_diagnostics",
  "method_type": "analysis",
  "priority": 9,
  "description": "PolicyAnalysisEmbedder.get_diagnostics"
},
{
  "class": "PolicyAnalysisEmbedder",
  "function": "process_document",
  "method_type": "analysis",
  "priority": 10,
  "description": "PolicyAnalysisEmbedder.process_document"
},
{
  "class": "PolicyAnalysisEmbedder",
  "function": "_generate_query_from_pdq",
  "method_type": "analysis",
  "priority": 11,
  "description": "PolicyAnalysisEmbedder._generate_query_from_pdq"
},
{
  "class": "PolicyAnalysisEmbedder",
  "function": "_filter_by_pdq",
  "method_type": "analysis",
  "priority": 12,
  "description": "PolicyAnalysisEmbedder._filter_by_pdq"
},
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  "class": "PolicyAnalysisEmbedder",
  "function": "_extract_numerical_values",
  "method_type": "extraction",
  "priority": 13,
  "description": "PolicyAnalysisEmbedder._extract_numerical_values"
},
{
  "class": "PolicyAnalysisEmbedder",
  "function": "_embed_texts",
  "method_type": "analysis",
  "priority": 14,
  "description": "PolicyAnalysisEmbedder._embed_texts"
},
{
  "class": "PolicyAnalysisEmbedder",
  "function": "_compute_overall_confidence",
  "method_type": "analysis",
  "priority": 15,
  "description": "PolicyAnalysisEmbedder._compute_overall_confidence"
},
{
  "class": "FinancialAuditor",
  "function": "_calculate_sufficiency",
  "method_type": "scoring",
  "priority": 16,
  "description": "FinancialAuditor._calculate_sufficiency"
},
{
  "class": "PDETMunicipalPlanAnalyzer",
  "function": "_interpret_overall_quality",
  "method_type": "analysis",
  "priority": 17,
  "description": "PDETMunicipalPlanAnalyzer._interpret_overall_quality"
},
{

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    "class": "BayesianCounterfactualAuditor",
    "function": "aggregate_risk_and_prioritize",
    "method_type": "analysis",
    "priority": 18,
    "description": "BayesianCounterfactualAuditor.aggregate_risk_and_prioritize"
  },
  {
    "class": "PolicyTextProcessor",
    "function": "normalize_unicode",
    "method_type": "analysis",
    "priority": 19,
    "description": "PolicyTextProcessor.normalize_unicode"
  },
  {
    "class": "PolicyTextProcessor",
    "function": "segment_into_sentences",
    "method_type": "analysis",
    "priority": 20,
    "description": "PolicyTextProcessor.segment_into_sentences"
  },
  {
    "class": "IndustrialPolicyProcessor",
    "function": "_compute_evidence_confidence",
    "method_type": "analysis",
    "priority": 21,
    "description": "IndustrialPolicyProcessor._compute_evidence_confidence"
  },
  {
    "class": "IndustrialPolicyProcessor",
    "function": "_compute_avg_confidence",
    "method_type": "analysis",
    "priority": 22,
    "description": "IndustrialPolicyProcessor._compute_avg_confidence"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_quality_to_dict",
    "method_type": "analysis",
    "priority": 23,
    "description": "PDETMunicipalPlanAnalyzer._quality_to_dict"
  },
  {
    "class": "IndustrialPolicyProcessor",
    "function": "_construct_evidence_bundle",
    "method_type": "analysis",
    "priority": 24,
    "description": "IndustrialPolicyProcessor._construct_evidence_bundle"
  },
  {
    "class": "PolicyTextProcessor",
    "function": "compile_pattern",
    "method_type": "analysis",
    "priority": 25,
    "description": "PolicyTextProcessor.compile_pattern"
  },
  {
    "class": "PolicyTextProcessor",
    "function": "extract_contextual_window",
    "method_type": "extraction",
    "priority": 26,
    "description": "PolicyTextProcessor.extract_contextual_window"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "generate_executive_report",
    "method_type": "analysis",
    "priority": 27,
    "description": "PDETMunicipalPlanAnalyzer.generate_executive_report"
  },
  {
    "class": "IndustrialPolicyProcessor",
    "function": "export_results",

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    "method_type": "analysis",
    "priority": 28,
    "description": "IndustrialPolicyProcessor.export_results"
  }
],
"patterns": [
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q202-000",
    "match_type": "REGEX",
    "pattern": "Índice de Pobreza Multidimensional para Niñez y Adolescencia|IPM-NNA"
  },
  {
    "category": "INDICADOR",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q202-001",
    "match_type": "REGEX",
    "pattern": "Índice de Desarrollo Juvenil|indicador compuesto de bienestar"
  },
  {
    "category": "INDICADOR",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q202-002",
    "match_type": "REGEX",
    "pattern": "se usará como proxy|indicador aproximado"
  },
  {
    "category": "INDICADOR",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q202-003",
    "match_type": "REGEX",
    "pattern": "la tasa de graduación de educación media como proxy de capital humano"
  },
  {
    "category": "INDICADOR",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q202-004",
    "match_type": "REGEX",
    "pattern": "la tasa de homicidios juvenil como proxy inverso de cohesión social"
  },
  {
    "category": "INDICADOR",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q202-005",
    "match_type": "REGEX",
    "pattern": "este indicador es válido porque es una medición estandarizada"
  }
],
"policy_area_id": "PA06",
"question_global": 202,
"question_id": "Q202",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿Se utilizan 'índices' (ej. Índice de Pobreza Multidimensional para Niñez) o 'proxies' para medir los impactos en el desarrollo juvenil, justificando su validez?",
"validations": {}
},
{
  "base_slot": "D5-Q3",
  "cluster_id": "CL02",
  "dimension_id": "DIM05",
  "expected_elements": [
    {
      "required": true,
      "type": "documenta_validez"
    }
  ]
}

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    },
    {
      "required": true,
      "type": "proxy_para_intangibles"
    },
    {
      "required": true,
      "type": "reconoce_limitaciones"
    }
  ],
  "failure_contract": {
    "abort_if": [
      "missing_required_element",
      "incomplete_text"
    ],
    "emit_code": "ABORT-Q203-REQ"
  },
  "method_sets": [
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      "class": "CausalExtractor",
      "function": "_calculate_semantic_distance",
      "method_type": "scoring",
      "priority": 1,
      "description": "CausalExtractor._calculate_semantic_distance"
    },
    {
      "class": "SemanticAnalyzer",
      "function": "extract_semantic_cube",
      "method_type": "extraction",
      "priority": 2,
      "description": "SemanticAnalyzer.extract_semantic_cube"
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      "function": "_quantify_uncertainty",
      "method_type": "analysis",
      "priority": 3,
      "description": "BayesianMechanismInference._quantify_uncertainty"
    },
    {
      "class": "PDETMunicipalPlanAnalyzer",
      "function": "_find_mediator_mentions",
      "method_type": "analysis",
      "priority": 4,
      "description": "PDETMunicipalPlanAnalyzer._find_mediator_mentions"
    },
    {
      "class": "PolicyAnalysisEmbedder",
      "function": "get_diagnostics",
      "method_type": "analysis",
      "priority": 5,
      "description": "PolicyAnalysisEmbedder.get_diagnostics"
    },
    {
      "class": "AdaptivePriorCalculator",
      "function": "_perturb_evidence",
      "method_type": "analysis",
      "priority": 6,
      "description": "AdaptivePriorCalculator._perturb_evidence"
    }
  ],
  "patterns": [
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q203-000",
      "match_type": "REGEX",
      "pattern": "dado que es difícil medir las habilidades para la vida|para aproximar"
    },
    {
      "category": "GENERAL",

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        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q203-001",
        "match_type": "REGEX",
        "pattern": "se utilizará como proxy|medición indirecta"
    },
    {
        "category": "INDICADOR",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q203-002",
        "match_type": "REGEX",
        "pattern": "la tasa de participación en programas de voluntariado como proxy de
ciudadanía activa"
    },
    {
        "category": "GENERAL",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q203-003",
        "match_type": "REGEX",
        "pattern": "este proxy es validado por estudios de juventud"
    },
    {
        "category": "GENERAL",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q203-004",
        "match_type": "REGEX",
        "pattern": "una limitación es que no captura el desarrollo de habilidades blandas"
    },
    {
        "category": "GENERAL",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q203-005",
        "match_type": "REGEX",
        "pattern": "aunque imperfecto, este proxy nos da una señal de desarrollo de capacidades"
    }
],
"policy_area_id": "PA06",
"question_global": 203,
"question_id": "Q203",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "Cuando un impacto en la juventud es difícil de medir (ej. 'fortalecimiento de
habilidades para la vida'), ¿se recurre a un 'proxy'? Se valora si el texto documenta su 'validez' y
reconoce sus 'limitaciones'.",
"validations": {}
},
{
    "base_slot": "D5-Q4",
    "cluster_id": "CL02",
    "dimension_id": "DIM05",
    "expected_elements": [
        {
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            "type": "alineacion_marcos"
        },
        {
            "required": true,
            "type": "riesgos_sistemicos"
        }
    ],
    "failure_contract": {
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            "missing_required_element",
            "incomplete_text"
        ],
        "emit_code": "ABORT-Q204-REQ"
    },
    "method_sets": [

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  "function": "_audit_systemic_risk",
  "method_type": "validation",
  "priority": 1,
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  "function": "refutation_and_sanity_checks",
  "method_type": "analysis",
  "priority": 2,
  "description": "BayesianCounterfactualAuditor.refutation_and_sanity_checks"
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  "function": "_test_effect_stability",
  "method_type": "analysis",
  "priority": 3,
  "description": "BayesianCounterfactualAuditor._test_effect_stability"
},
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  "function": "_interpret_risk",
  "method_type": "analysis",
  "priority": 4,
  "description": "PDETMunicipalPlanAnalyzer._interpret_risk"
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{
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  "function": "_interpret_sensitivity",
  "method_type": "analysis",
  "priority": 5,
  "description": "PDETMunicipalPlanAnalyzer._interpret_sensitivity"
},
{
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  "function": "_break_cycles",
  "method_type": "analysis",
  "priority": 6,
  "description": "PDETMunicipalPlanAnalyzer._break_cycles"
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{
  "class": "AdaptivePriorCalculator",
  "function": "sensitivity_analysis",
  "method_type": "analysis",
  "priority": 7,
  "description": "AdaptivePriorCalculator.sensitivity_analysis"
}
],
"patterns": [
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q204-000",
    "match_type": "REGEX",
    "pattern": "visión 2050|Agenda 2030 de Desarrollo Sostenible"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q204-001",
    "match_type": "REGEX",
    "pattern": "riesgo sistémico|choque externo|crisis económica|desempleo masivo"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q204-002",

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    "match_type": "REGEX",
    "pattern": "cambios demográficos|transformación del mercado laboral"
  },
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    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q204-003",
    "match_type": "REGEX",
    "pattern": "una crisis de salud mental a gran escala"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q204-004",
    "match_type": "REGEX",
    "pattern": "estos factores podrían revertir los avances en capital humano"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q204-005",
    "match_type": "LITERAL",
    "pattern": "el mecanismo causal es vulnerable a|sensible a la situación macroeconómica"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q204-006",
    "match_type": "REGEX",
    "pattern": "estrategias de resiliencia|redes de apoyo juvenil"
  }
],
"policy_area_id": "PA06",
"question_global": 204,
"question_id": "Q204",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿Los impactos en niñez y juventud se alinean con marcos nacionales/globales y consideran 'riesgos sistémicos' (ej. crisis del mercado laboral) que podrían romper el mecanismo causal?",
"validations": {}
},
{
  "base_slot": "D5-Q5",
  "cluster_id": "CL02",
  "dimension_id": "DIM05",
  "expected_elements": [
    {
      "required": true,
      "type": "analisis_realismo"
    },
    {
      "required": true,
      "type": "efectos_no_deseados"
    },
    {
      "required": true,
      "type": "hipotesis_limite"
    }
  ],
  "failure_contract": {
    "abort_if": [
      "missing_required_element",
      "incomplete_text"
    ],
    "emit_code": "ABORT-Q205-REQ"
  },
  "method_sets": [

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  "function": "posterior_predictive_check",
  "method_type": "analysis",
  "priority": 1,
  "description": "HierarchicalGenerativeModel.posterior_predictive_check"
},
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  "function": "_ablation_analysis",
  "method_type": "analysis",
  "priority": 2,
  "description": "HierarchicalGenerativeModel._ablation_analysis"
},
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  "class": "HierarchicalGenerativeModel",
  "function": "_calculate_waic_difference",
  "method_type": "scoring",
  "priority": 3,
  "description": "HierarchicalGenerativeModel._calculate_waic_difference"
},
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  "function": "_add_ood_noise",
  "method_type": "analysis",
  "priority": 4,
  "description": "AdaptivePriorCalculator._add_ood_noise"
},
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  "class": "AdaptivePriorCalculator",
  "function": "validate_quality_criteria",
  "method_type": "validation",
  "priority": 5,
  "description": "AdaptivePriorCalculator.validate_quality_criteria"
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  "function": "_compute_e_value",
  "method_type": "analysis",
  "priority": 6,
  "description": "PDETMunicipalPlanAnalyzer._compute_e_value"
},
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  "class": "PDETMunicipalPlanAnalyzer",
  "function": "_compute_robustness_value",
  "method_type": "analysis",
  "priority": 7,
  "description": "PDETMunicipalPlanAnalyzer._compute_robustness_value"
},
{
  "class": "BayesianMechanismInference",
  "function": "_calculate_coherence_factor",
  "method_type": "scoring",
  "priority": 8,
  "description": "BayesianMechanismInference._calculate_coherence_factor"
}
],
"patterns": [
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    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q205-000",
    "match_type": "REGEX",
    "pattern": "la ambición del impacto es realista si se mantiene la inversión social"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q205-001",
    "match_type": "REGEX",

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    "pattern": "efecto no deseado|consecuencia imprevista|externalidad negativa"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q205-002",
    "match_type": "REGEX",
    "pattern": "riesgo de generar frustración si no hay oportunidades laborales"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q205-003",
    "match_type": "REGEX",
    "pattern": "posible fuga de talentos si no hay arraigo"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q205-004",
    "match_type": "REGEX",
    "pattern": "trade-off entre diferentes enfoques pedagógicos"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q205-005",
    "match_type": "REGEX",
    "pattern": "hipótesis límite|el modelo funciona si la familia es un entorno protector"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q205-006",
    "match_type": "LITERAL",
    "pattern": "supuesto crítico para el impacto a largo plazo"
  }
],
"policy_area_id": "PA06",
"question_global": 205,
"question_id": "Q205",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿La ambición del impacto (ej. 'pleno desarrollo de todos los jóvenes') es realista?
Se debe buscar si se analizan 'efectos no deseados' o se declaran 'hipótesis límite'.",
"validations": {}
},
{
  "base_slot": "D6-Q1",
  "cluster_id": "CL02",
  "dimension_id": "DIM06",
  "expected_elements": [
    {
      "required": true,
      "type": "diagrama_causal"
    },
    {
      "required": true,
      "type": "supuestos_verificables"
    },
    {
      "required": true,
      "type": "teoria_cambio_explicita"
    }
  ],
  "failure_contract": {
    "abort_if": [

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        "missing_required_element",
        "incomplete_text"
    ],
    "emit_code": "ABORT-Q206-REQ"
},
"method_sets": [
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        "class": "TeoriaCambio",
        "function": "construir_grafo_causal",
        "method_type": "analysis",
        "priority": 1,
        "description": "TeoriaCambio.construir_grafo_causal"
    },
    {
        "class": "TeoriaCambio",
        "function": "validacion_completa",
        "method_type": "analysis",
        "priority": 2,
        "description": "TeoriaCambio.validacion_completa"
    },
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        "class": "TeoriaCambio",
        "function": "export_nodes",
        "method_type": "analysis",
        "priority": 3,
        "description": "TeoriaCambio.export_nodes"
    },
    {
        "class": "ReportingEngine",
        "function": "generate_causal_diagram",
        "method_type": "analysis",
        "priority": 4,
        "description": "ReportingEngine.generate_causal_diagram"
    },
    {
        "class": "ReportingEngine",
        "function": "generate_causal_model_json",
        "method_type": "analysis",
        "priority": 5,
        "description": "ReportingEngine.generate_causal_model_json"
    },
    {
        "class": "AdvancedDAGValidator",
        "function": "export_nodes",
        "method_type": "analysis",
        "priority": 6,
        "description": "AdvancedDAGValidator.export_nodes"
    },
    {
        "class": "PDETMunicipalPlanAnalyzer",
        "function": "export_causal_network",
        "method_type": "analysis",
        "priority": 7,
        "description": "PDETMunicipalPlanAnalyzer.export_causal_network"
    },
    {
        "class": "CausalExtractor",
        "function": "extract_causal_hierarchy",
        "method_type": "extraction",
        "priority": 8,
        "description": "CausalExtractor.extract_causal_hierarchy"
    }
],
"patterns": [
    {
        "category": "GENERAL",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q206-000",
        "match_type": "REGEX",
        "pattern": "teoría de cambio|marco lógico|cadena causal|modelo lógico de desarrollo"
    }
]

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    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q206-001",
      "match_type": "REGEX",
      "pattern": "diagrama causal|gráfico de la teoría|esquema de intervención|figura"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q206-002",
      "match_type": "REGEX",
      "pattern": "causa raíz de la deserción|determinante del embarazo adolescente"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q206-003",
      "match_type": "REGEX",
      "pattern": "mediador|variable intermedia|eslabón|permanencia escolar|proyecto de vida"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q206-004",
      "match_type": "REGEX",
      "pattern": "moderador|factor contextual|apoyo familiar"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q206-005",
      "match_type": "LITERAL",
      "pattern": "supuesto verificable|hipótesis a testear|premisa comprobable"
    }
  ],
  "policy_area_id": "PA06",
  "question_global": 206,
  "question_id": "Q206",
  "scoring_definition_ref": "scoring_modalities.TYPE_A",
  "scoring_modality": "TYPE_A",
  "text": "¿Existe una 'teoría de cambio' explícita para la política de niñez y juventud, preferiblemente en un 'diagrama', que identifique causas, mediadores (ej. permanencia escolar) y 'supuestos verificables'?",
  "validations": {}
},
{
  "base_slot": "D6-Q2",
  "cluster_id": "CL02",
  "dimension_id": "DIM06",
  "expected_elements": [
    {
      "required": true,
      "type": "evita_saltos_logicos"
    },
    {
      "required": true,
      "type": "proporcionalidad_eslabones"
    }
  ]
},
"failure_contract": {
  "abort_if": [
    "missing_required_element",
    "incomplete_text"
  ],
  "emit_code": "ABORT-Q207-REQ"
}

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"method_sets": [
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    "function": "apply_test_logic",
    "method_type": "analysis",
    "priority": 1,
    "description": "BeachEvidentialTest.apply_test_logic"
  },
  {
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    "function": "_test_necessity",
    "method_type": "analysis",
    "priority": 2,
    "description": "BayesianMechanismInference._test_necessity"
  },
  {
    "class": "BayesianMechanismInference",
    "function": "_test_sufficiency",
    "method_type": "analysis",
    "priority": 3,
    "description": "BayesianMechanismInference._test_sufficiency"
  },
  {
    "class": "BayesianMechanismInference",
    "function": "_calculate_coherence_factor",
    "method_type": "scoring",
    "priority": 4,
    "description": "BayesianMechanismInference._calculate_coherence_factor"
  },
  {
    "class": "BayesianCounterfactualAuditor",
    "function": "_test_effect_stability",
    "method_type": "analysis",
    "priority": 5,
    "description": "BayesianCounterfactualAuditor._test_effect_stability"
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    "function": "validate_connection_matrix",
    "method_type": "validation",
    "priority": 6,
    "description": "IndustrialGradeValidator.validate_connection_matrix"
  },
  {
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    "function": "_compute_overall_confidence",
    "method_type": "analysis",
    "priority": 7,
    "description": "PolicyAnalysisEmbedder._compute_overall_confidence"
  }
],
"patterns": [
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q207-000",
    "match_type": "REGEX",
    "pattern": "proporcionalidad entre|magnitud del efecto esperado"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q207-001",
    "match_type": "REGEX",
    "pattern": "salto lógico|brecha en la argumentación|milagro de implementación"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,

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    "flags": "i",
    "id": "PAT-Q207-002",
    "match_type": "LITERAL",
    "pattern": "es realista esperar que|es factible que"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q207-003",
    "match_type": "REGEX",
    "pattern": "la escala de la intervención es coherente con la ambición del resultado"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q207-004",
    "match_type": "REGEX",
    "pattern": "se requieren pasos intermedios para construir un proyecto de vida"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q207-005",
    "match_type": "REGEX",
    "pattern": "el resultado es de mayor alcance que el producto"
  }
],
"policy_area_id": "PA06",
"question_global": 207,
"question_id": "Q207",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿Los saltos en la cadena causal de juventud son proporcionales (ej. un festival de
rock no garantiza por sí solo la 'prevención total del consumo de SPA')?",
"validations": {}
},
{
  "base_slot": "D6-Q3",
  "cluster_id": "CL02",
  "dimension_id": "DIM06",
  "expected_elements": [
    {
      "required": true,
      "type": "propone_pilotos_o_pruebas"
    },
    {
      "required": true,
      "type": "reconoce_inconsistencias"
    }
  ]
},
"failure_contract": {
  "abort_if": [
    "missing_required_element",
    "incomplete_text"
  ],
  "emit_code": "ABORT-Q208-REQ"
},
"method_sets": [
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    "class": "IndustrialGradeValidator",
    "function": "execute_suite",
    "method_type": "analysis",
    "priority": 1,
    "description": "IndustrialGradeValidator.execute_suite"
  },
  {
    "class": "IndustrialGradeValidator",
    "function": "validate_engine_readiness",
    "method_type": "validation",

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    "priority": 2,
    "description": "IndustrialGradeValidator.validate_engine_readiness"
  },
  {
    "class": "IndustrialGradeValidator",
    "function": "_benchmark_operation",
    "method_type": "analysis",
    "priority": 3,
    "description": "IndustrialGradeValidator._benchmark_operation"
  },
  {
    "class": "AdaptivePriorCalculator",
    "function": "validate_quality_criteria",
    "method_type": "validation",
    "priority": 4,
    "description": "AdaptivePriorCalculator.validate_quality_criteria"
  },
  {
    "class": "HierarchicalGenerativeModel",
    "function": "_calculate_r_hat",
    "method_type": "scoring",
    "priority": 5,
    "description": "HierarchicalGenerativeModel._calculate_r_hat"
  },
  {
    "class": "HierarchicalGenerativeModel",
    "function": "_calculate_ess",
    "method_type": "scoring",
    "priority": 6,
    "description": "HierarchicalGenerativeModel._calculate_ess"
  },
  {
    "class": "AdvancedDAGValidator",
    "function": "calculate_acyclicity_pvalue",
    "method_type": "scoring",
    "priority": 7,
    "description": "AdvancedDAGValidator.calculate_acyclicity_pvalue"
  },
  {
    "class": "PerformanceAnalyzer",
    "function": "analyze_performance",
    "method_type": "analysis",
    "priority": 8,
    "description": "PerformanceAnalyzer.analyze_performance"
  }
],
"patterns": [
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q208-000",
    "match_type": "REGEX",
    "pattern": "inconsistencia|debilidad en la teor\u00eda|supuesto d\u00e9bil"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q208-001",
    "match_type": "REGEX",
    "pattern": "se requiere validar si el programa de emprendimiento es pertinente"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q208-002",
    "match_type": "REGEX",
    "pattern": "plan piloto de jornada \u00fanica|fase experimental de un centro de escucha"
  },
  {

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        "category": "GENERAL",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q208-003",
        "match_type": "REGEX",
        "pattern": "testear el supuesto de la participación juvenil"
    },
    {
        "category": "GENERAL",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q208-004",
        "match_type": "REGEX",
        "pattern": "validar la hipótesis sobre la efectividad del programa de prevención"
    },
    {
        "category": "GENERAL",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q208-005",
        "match_type": "REGEX",
        "pattern": "evaluación de mecanismos|monitoreo de la teoría de cambio"
    },
    {
        "category": "GENERAL",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q208-006",
        "match_type": "REGEX",
        "pattern": "aprendizaje adaptativo|gestión adaptativa"
    }
],
"policy_area_id": "PA06",
"question_global": 208,
"question_id": "Q208",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿El plan reconoce 'inconsistencias' en su lógica para la juventud y propone
'pilotos' o 'pruebas' para 'testear los supuestos' de sus intervenciones?",
"validations": {}
},
{
    "base_slot": "D6-Q4",
    "cluster_id": "CL02",
    "dimension_id": "DIM06",
    "expected_elements": [
        {
            "required": true,
            "type": "ciclos_aprendizaje"
        },
        {
            "required": true,
            "type": "mecanismos_correccion"
        },
        {
            "required": true,
            "type": "sistema_monitoreo"
        }
    ],
    "failure_contract": {
        "abort_if": [
            "missing_required_element",
            "incomplete_text"
        ],
        "emit_code": "ABORT-Q209-REQ"
    },
    "method_sets": [
        {
            "class": "ConfigLoader",
            "function": "update_priors_from_feedback",
            "method_type": "analysis",
            "priority": 1,

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    "description": "ConfigLoader.update_priors_from_feedback"
  },
  {
    "class": "ConfigLoader",
    "function": "check_uncertainty_reduction_criterion",
    "method_type": "analysis",
    "priority": 2,
    "description": "ConfigLoader.check_uncertainty_reduction_criterion"
  },
  {
    "class": "ConfigLoader",
    "function": "_save_prior_history",
    "method_type": "analysis",
    "priority": 3,
    "description": "ConfigLoader._save_prior_history"
  },
  {
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    "method_type": "analysis",
    "priority": 4,
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    "method_type": "validation",
    "priority": 5,
    "description": "CDAFFramework._extract_feedback_from_audit"
  },
  {
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    "function": "_calculate_node_importance",
    "method_type": "scoring",
    "priority": 6,
    "description": "AdvancedDAGValidator._calculate_node_importance"
  },
  {
    "class": "BayesFactorTable",
    "function": "get_bayes_factor",
    "method_type": "analysis",
    "priority": 7,
    "description": "BayesFactorTable.get_bayes_factor"
  }
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"patterns": [
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    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q209-000",
    "match_type": "REGEX",
    "pattern": "sistema de seguimiento y evaluación|M&E a la política de infancia"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q209-001",
    "match_type": "LITERAL",
    "pattern": "monitoreo nominal|seguimiento niño a niño"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q209-002",
    "match_type": "REGEX",
    "pattern": "alerta temprana sobre deserción escolar|alerta por vulneración de derechos"
  },
  {
    "category": "GENERAL",

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    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q209-003",
    "match_type": "REGEX",
    "pattern": "mecanismo de ajuste|medida correctiva del PAI (Plan de Atención Integral)"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q209-004",
    "match_type": "REGEX",
    "pattern": "retroalimentación desde las mesas de participación de NNA"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q209-005",
    "match_type": "REGEX",
    "pattern": "ciclos de aprendizaje|reuniones del Consejo de Política Social"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q209-006",
    "match_type": "REGEX",
    "pattern": "lecciones aprendidas en la implementación"
  }
],
"policy_area_id": "PA06",
"question_global": 209,
"question_id": "Q209",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿Se describe un sistema de monitoreo para la política de niñez y juventud que
incluya 'mecanismos de corrección', 'retroalimentación' o 'aprendizaje' para adaptar la
estrategia?",
"validations": {}
},
{
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  "cluster_id": "CL02",
  "dimension_id": "DIM06",
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      "type": "analisis_contextual"
    },
    {
      "required": true,
      "type": "enfoque_diferencial"
    }
  ]
},
"failure_contract": {
  "abort_if": [
    "missing_required_element",
    "incomplete_text"
  ],
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"method_sets": [
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    "function": "_calculate_language_specificity",
    "method_type": "scoring",
    "priority": 1,
    "description": "CausalExtractor._calculate_language_specificity"
  },
  {
    "class": "CausalExtractor",

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    "function": "_assess_temporal_coherence",
    "method_type": "analysis",
    "priority": 2,
    "description": "CausalExtractor._assess_temporal_coherence"
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  {
    "class": "TextMiningEngine",
    "function": "diagnose_critical_links",
    "method_type": "analysis",
    "priority": 3,
    "description": "TextMiningEngine.diagnose_critical_links"
  },
  {
    "class": "CausalInferenceSetup",
    "function": "identify_failure_points",
    "method_type": "analysis",
    "priority": 4,
    "description": "CausalInferenceSetup.identify_failure_points"
  },
  {
    "class": "CausalInferenceSetup",
    "function": "_get_dynamics_pattern",
    "method_type": "analysis",
    "priority": 5,
    "description": "CausalInferenceSetup._get_dynamics_pattern"
  },
  {
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    "function": "chunk_text",
    "method_type": "analysis",
    "priority": 6,
    "description": "SemanticProcessor.chunk_text"
  },
  {
    "class": "SemanticProcessor",
    "function": "_detect_pdm_structure",
    "method_type": "analysis",
    "priority": 7,
    "description": "SemanticProcessor._detect_pdm_structure"
  },
  {
    "class": "SemanticProcessor",
    "function": "_detect_table",
    "method_type": "analysis",
    "priority": 8,
    "description": "SemanticProcessor._detect_table"
  },
  {
    "class": "AdaptivePriorCalculator",
    "function": "generate_traceability_record",
    "method_type": "analysis",
    "priority": 9,
    "description": "AdaptivePriorCalculator.generate_traceability_record"
  }
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"patterns": [
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    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q210-000",
    "match_type": "REGEX",
    "pattern": "enfoque diferencial|enfoque de derechos|curso de vida"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q210-001",
    "match_type": "REGEX",
    "pattern": "jóvenes rurales|jóvenes en condición de discapacidad"
  },

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{
  "category": "GENERAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q210-002",
  "match_type": "REGEX",
  "pattern": "NNA migrantes|NNA víctimas del conflicto|NNA de grupos étnicos"
},
{
  "category": "GENERAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q210-003",
  "match_type": "REGEX",
  "pattern": "restricciones de acceso a la oferta en zonas rurales dispersas"
},
{
  "category": "GENERAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q210-004",
  "match_type": "REGEX",
  "pattern": "contexto cultural|barreras culturales para la salud sexual"
},
{
  "category": "GENERAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q210-005",
  "match_type": "REGEX",
  "pattern": "dinámicas de economías ilegales que afectan a los jóvenes"
},
{
  "category": "TERRITORIAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q210-006",
  "match_type": "REGEX",
  "pattern": "estrategias territorializadas|acciones adaptadas a la comuna/corregimiento"
}
],
"policy_area_id": "PA06",
"question_global": 210,
"question_id": "Q210",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿La lógica causal para niñez y juventud considera el contexto, reconociendo 'grupos afectados' (jóvenes rurales, NNA migrantes) y 'restricciones' territoriales o culturales?",
"validations": {}
},
{
  "base_slot": "D1-Q1",
  "cluster_id": "CL01",
  "dimension_id": "DIM01",
  "expected_elements": [
    {
      "minimum": 2,
      "type": "fuentes_oficiales"
    },
    {
      "minimum": 3,
      "type": "indicadores_cuantitativos"
    },
    {
      "minimum": 2,
      "type": "series_temporales_años"
    }
  ]
},
"failure_contract": {
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    "missing_required_element",
    "incomplete_text"
  ]
}

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"emit_code": "ABORT-Q211-REQ"
},
"method_sets": [
{
"class": "TextMiningEngine",
"function": "diagnose_critical_links",
"method_type": "analysis",
"priority": 1,
"description": "TextMiningEngine.diagnose_critical_links"
},
{
"class": "TextMiningEngine",
"function": "_analyze_link_text",
"method_type": "analysis",
"priority": 2,
"description": "TextMiningEngine._analyze_link_text"
},
{
"class": "IndustrialPolicyProcessor",
"function": "process",
"method_type": "analysis",
"priority": 3,
"description": "IndustrialPolicyProcessor.process"
},
{
"class": "IndustrialPolicyProcessor",
"function": "_match_patterns_in_sentences",
"method_type": "analysis",
"priority": 4,
"description": "IndustrialPolicyProcessor._match_patterns_in_sentences"
},
{
"class": "IndustrialPolicyProcessor",
"function": "_extract_point_evidence",
"method_type": "extraction",
"priority": 5,
"description": "IndustrialPolicyProcessor._extract_point_evidence"
},
{
"class": "CausalExtractor",
"function": "_extract_goals",
"method_type": "extraction",
"priority": 6,
"description": "CausalExtractor._extract_goals"
},
{
"class": "CausalExtractor",
"function": "_parse_goal_context",
"method_type": "extraction",
"priority": 7,
"description": "CausalExtractor._parse_goal_context"
},
{
"class": "FinancialAuditor",
"function": "_parse_amount",
"method_type": "extraction",
"priority": 8,
"description": "FinancialAuditor._parse_amount"
},
{
"class": "PDETMunicipalPlanAnalyzer",
"function": "_extract_financial_amounts",
"method_type": "extraction",
"priority": 9,
"description": "PDETMunicipalPlanAnalyzer._extract_financial_amounts"
},
{
"class": "PDETMunicipalPlanAnalyzer",
"function": "_extract_from_budget_table",
"method_type": "extraction",
"priority": 10,

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    "description": "PDETMunicipalPlanAnalyzer._extract_from_budget_table"
  },
  {
    "class": "PolicyContradictionDetector",
    "function": "_extract_quantitative_claims",
    "method_type": "extraction",
    "priority": 11,
    "description": "PolicyContradictionDetector._extract_quantitative_claims"
  },
  {
    "class": "PolicyContradictionDetector",
    "function": "_parse_number",
    "method_type": "extraction",
    "priority": 12,
    "description": "PolicyContradictionDetector._parse_number"
  },
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    "class": "PolicyContradictionDetector",
    "function": "_statistical_significance_test",
    "method_type": "analysis",
    "priority": 13,
    "description": "PolicyContradictionDetector._statistical_significance_test"
  },
  {
    "class": "BayesianNumericalAnalyzer",
    "function": "evaluate_policy_metric",
    "method_type": "analysis",
    "priority": 14,
    "description": "BayesianNumericalAnalyzer.evaluate_policy_metric"
  },
  {
    "class": "BayesianNumericalAnalyzer",
    "function": "compare_policies",
    "method_type": "analysis",
    "priority": 15,
    "description": "BayesianNumericalAnalyzer.compare_policies"
  },
  {
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    "function": "chunk_text",
    "method_type": "analysis",
    "priority": 16,
    "description": "SemanticProcessor.chunk_text"
  },
  {
    "class": "SemanticProcessor",
    "function": "embed_single",
    "method_type": "analysis",
    "priority": 17,
    "description": "SemanticProcessor.embed_single"
  }
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    "flags": "i",
    "id": "PAT-Q211-000",
    "match_type": "REGEX",
    "pattern": "línea base|diagnóstico rural|caracterización predial|situación actual"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q211-001",
    "match_type": "REGEX",
    "pattern": "fuente:|según|reportado por|con datos de"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,

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    "flags": "i",
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    "match_type": "REGEX",
    "pattern": "IGAC|Instituto Geográfico Agustín Codazzi|Catastro"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q211-003",
    "match_type": "REGEX",
    "pattern": "ANT|Agencia Nacional de Tierras|URT|Unidad de Restitución de Tierras"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q211-004",
    "match_type": "REGEX",
    "pattern": "ADR|Agencia de Desarrollo Rural|UPRA|INVIAS|MinAgricultura"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q211-005",
    "match_type": "REGEX",
    "pattern": "SNR|Superintendencia de Notariado y Registro"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q211-006",
    "match_type": "REGEX",
    "pattern": "Secretaría de Planeación|UMATA|Secretaría de Infraestructura"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q211-007",
    "match_type": "REGEX",
    "pattern": "informalidad predial|predios sin formalizar|tenencia de la tierra"
  },
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    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q211-008",
    "match_type": "REGEX",
    "pattern": "porcentaje de desactualización catastral|catastro multipropósito"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q211-009",
    "match_type": "REGEX",
    "pattern": "kilómetros de vías terciarias en mal estado|estado de la red vial"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q211-010",
    "match_type": "REGEX",
    "pattern": "hectáreas (Ha) en conflicto de uso del suelo|frontera agrícola"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,

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    "flags": "i",
    "id": "PAT-Q211-011",
    "match_type": "REGEX",
    "pattern": "déficit de infraestructura de riego|distritos de riego"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q211-012",
    "match_type": "LITERAL",
    "pattern": "2021|2022|2023|vigencia anterior|serie histórica"
  },
  {
    "category": "INDICADOR",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q211-013",
    "match_type": "REGEX",
    "pattern": "porcentaje|hectáreas|kilómetros|número de predios|familias"
  }
],
"policy_area_id": "PA07",
"question_global": 211,
"question_id": "Q211",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿El diagnóstico presenta datos numéricos (porcentaje de predios sin formalizar, km de vías terciarias en mal estado, avance del catastro multipropósito) sobre el área de Tierras y territorios que sirvan como línea base? Se debe verificar el año y fuentes (ej. IGAC, ANT, INVIAS).",
"validations": {
  "buscar_indicadores_cuantitativos": {
    "minimum_required": 3,
    "patterns": [
      "\\d+%",
      "\\d+\\s*por\\s*\\d+",
      "tasa de",
      "índice de",
      "cobertura de"
    ],
    "specificity": "HIGH"
  },
  "cobertura": {
    "minimum_required": 1,
    "patterns": [
      "departamental",
      "municipal",
      "urbano",
      "rural",
      "territorial",
      "poblacional"
    ],
    "specificity": "HIGH"
  },
  "series_temporales": {
    "minimum_years": 3,
    "patterns": [
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      "año",
      "periodo",
      "histórico",
      "serie"
    ],
    "specificity": "MEDIUM"
  },
  "unidades_medicion": {
    "minimum_required": 2,
    "patterns": [
      "por 100.000",
      "por 1.000",
      "%"
    ]
  }
}

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        "porcentaje",
        "tasa",
        "razón"
    ],
    "specificity": "MEDIUM"
},
"verificar_fuentes": {
    "minimum_required": 2,
    "patterns": [
        "fuente:",
        "según",
        "datos de",
        "DANE",
        "DNP",
        "SISPRO",
        "SIVIGILA",
        "Ministerio"
    ],
    "specificity": "MEDIUM"
}
},
{
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    "cluster_id": "CL01",
    "dimension_id": "DIM01",
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            "required": true,
            "type": "analisis_causal_problema"
        },
        {
            "required": true,
            "type": "cuantificacion_magnitud"
        },
        {
            "required": true,
            "type": "vacios_explicitos"
        }
    ],
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            "incomplete_text"
        ],
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            "method_type": "validation",
            "priority": 1,
            "description": "OperationalizationAuditor._audit_direct_evidence"
        },
        {
            "class": "OperationalizationAuditor",
            "function": "_audit_systemic_risk",
            "method_type": "validation",
            "priority": 2,
            "description": "OperationalizationAuditor._audit_systemic_risk"
        },
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            "class": "FinancialAuditor",
            "function": "_detect_allocation_gaps",
            "method_type": "analysis",
            "priority": 3,
            "description": "FinancialAuditor._detect_allocation_gaps"
        },
        {
            "class": "BayesianMechanismInference",
            "function": "_detect_gaps",

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    "method_type": "analysis",
    "priority": 4,
    "description": "BayesianMechanismInference._detect_gaps"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_generate_optimal_remediations",
    "method_type": "analysis",
    "priority": 5,
    "description": "PDETMunicipalPlanAnalyzer._generate_optimal_remediations"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_simulate_intervention",
    "method_type": "analysis",
    "priority": 6,
    "description": "PDETMunicipalPlanAnalyzer._simulate_intervention"
  },
  {
    "class": "BayesianCounterfactualAuditor",
    "function": "counterfactual_query",
    "method_type": "analysis",
    "priority": 7,
    "description": "BayesianCounterfactualAuditor.counterfactual_query"
  },
  {
    "class": "BayesianCounterfactualAuditor",
    "function": "_test_effect_stability",
    "method_type": "analysis",
    "priority": 8,
    "description": "BayesianCounterfactualAuditor._test_effect_stability"
  },
  {
    "class": "PolicyContradictionDetector",
    "function": "_detect_numerical_inconsistencies",
    "method_type": "analysis",
    "priority": 9,
    "description": "PolicyContradictionDetector._detect_numerical_inconsistencies"
  },
  {
    "class": "PolicyContradictionDetector",
    "function": "_calculate_numerical_divergence",
    "method_type": "scoring",
    "priority": 10,
    "description": "PolicyContradictionDetector._calculate_numerical_divergence"
  },
  {
    "class": "BayesianConfidenceCalculator",
    "function": "calculate_posterior",
    "method_type": "scoring",
    "priority": 11,
    "description": "BayesianConfidenceCalculator.calculate_posterior"
  },
  {
    "class": "PerformanceAnalyzer",
    "function": "analyze_performance",
    "method_type": "analysis",
    "priority": 12,
    "description": "PerformanceAnalyzer.analyze_performance"
  }
],
"patterns": [
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q212-000",
    "match_type": "REGEX",
    "pattern": "déficit de formalización|rezago en la actualización catastral"
  },
  {
    "category": "INDICADOR",

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    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q212-001",
    "match_type": "REGEX",
    "pattern": "el X% de las vías terciarias se encuentra en mal estado"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q212-002",
    "match_type": "REGEX",
    "pattern": "aislamiento de las veredas|costos de transporte elevados"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q212-003",
    "match_type": "REGEX",
    "pattern": "magnitud del conflicto por el uso del suelo"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q212-004",
    "match_type": "REGEX",
    "pattern": "familias campesinas sin tierra|población rural afectada"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q212-005",
    "match_type": "REGEX",
    "pattern": "información catastral desactualizada|vacío de información predial"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q212-006",
    "match_type": "REGEX",
    "pattern": "no se cuenta con un inventario vial actualizado"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q212-007",
    "match_type": "REGEX",
    "pattern": "causas de la informalidad|determinantes de la baja productividad"
  }
],
"policy_area_id": "PA07",
"question_global": 212,
"question_id": "Q212",
"scoring_definition_ref": "scoring_modalities.TYPE_B",
"scoring_modality": "TYPE_B",
"text": "¿El texto dimensiona la magnitud de los problemas de tierras y desarrollo rural, cuantificando el déficit (ej. de formalización, de infraestructura vial) o la población afectada? Se debe buscar si se mencionan 'vacíos de información' (ej. desactualización catastral).",
"validations": {}
},
{
  "base_slot": "D1-Q3",
  "cluster_id": "CL01",
  "dimension_id": "DIM01",
  "expected_elements": [
    {
      "required": true,

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    "type": "asignacion_explicita"
  },
  {
    "required": true,
    "type": "suficiencia_justificada"
  },
  {
    "required": true,
    "type": "trazabilidad_ppi_bpin"
  }
],
"failure_contract": {
  "abort_if": [
    "missing_required_element",
    "incomplete_text"
  ],
  "emit_code": "ABORT-Q213-REQ"
},
"method_sets": [
  {
    "class": "FinancialAuditor",
    "function": "trace_financial_allocation",
    "method_type": "analysis",
    "priority": 1,
    "description": "FinancialAuditor.trace_financial_allocation"
  },
  {
    "class": "FinancialAuditor",
    "function": "_process_financial_table",
    "method_type": "analysis",
    "priority": 2,
    "description": "FinancialAuditor._process_financial_table"
  },
  {
    "class": "FinancialAuditor",
    "function": "_match_program_to_node",
    "method_type": "analysis",
    "priority": 3,
    "description": "FinancialAuditor._match_program_to_node"
  },
  {
    "class": "FinancialAuditor",
    "function": "_match_goal_to_budget",
    "method_type": "analysis",
    "priority": 4,
    "description": "FinancialAuditor._match_goal_to_budget"
  },
  {
    "class": "FinancialAuditor",
    "function": "_perform_counterfactual_budget_check",
    "method_type": "analysis",
    "priority": 5,
    "description": "FinancialAuditor._perform_counterfactual_budget_check"
  },
  {
    "class": "FinancialAuditor",
    "function": "_calculate_sufficiency",
    "method_type": "scoring",
    "priority": 6,
    "description": "FinancialAuditor._calculate_sufficiency"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "analyze_financial_feasibility",
    "method_type": "analysis",
    "priority": 7,
    "description": "PDETMunicipalPlanAnalyzer.analyze_financial_feasibility"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_extract_budget_for_pillar",
    "method_type": "extraction",

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    "priority": 8,
    "description": "PDETMunicipalPlanAnalyzer._extract_budget_for_pillar"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_identify_funding_source",
    "method_type": "analysis",
    "priority": 9,
    "description": "PDETMunicipalPlanAnalyzer._identify_funding_source"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_classify_tables",
    "method_type": "analysis",
    "priority": 10,
    "description": "PDETMunicipalPlanAnalyzer._classify_tables"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_analyze_funding_sources",
    "method_type": "analysis",
    "priority": 11,
    "description": "PDETMunicipalPlanAnalyzer._analyze_funding_sources"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_score_financial_component",
    "method_type": "scoring",
    "priority": 12,
    "description": "PDETMunicipalPlanAnalyzer._score_financial_component"
  },
  {
    "class": "BayesianCounterfactualAuditor",
    "function": "aggregate_risk_and_prioritize",
    "method_type": "analysis",
    "priority": 13,
    "description": "BayesianCounterfactualAuditor.aggregate_risk_and_prioritize"
  }
],
"patterns": [
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q213-000",
    "match_type": "REGEX",
    "pattern": "Plan Plurianual de Inversiones|PPI|Plan Indicativo"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q213-001",
    "match_type": "REGEX",
    "pattern": "BPIN|Banco de Proyectos|proyecto de inversión para desarrollo rural"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q213-002",
    "match_type": "LITERAL",
    "pattern": "recursos para catastro multipropósito|convenio con IGAC"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q213-003",
    "match_type": "REGEX",
    "pattern": "presupuesto para el mejoramiento de vías terciarias"
  },

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{
  "category": "GENERAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q213-004",
  "match_type": "REGEX",
  "pattern": "asignación para formalización de la propiedad rural|convenio con la ANT"
},
{
  "category": "GENERAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q213-005",
  "match_type": "REGEX",
  "pattern": "inversión en distritos de riego|proyectos productivos"
},
{
  "category": "GENERAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q213-006",
  "match_type": "REGEX",
  "pattern": "\\$\\s*\\d+|COP\\s*\\d+|millones de pesos"
},
{
  "category": "GENERAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q213-007",
  "match_type": "LITERAL",
  "pattern": "fuentes: SGP, recursos propios, regalías, cofinanciación INVIAS/ADR"
},
{
  "category": "GENERAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q213-008",
  "match_type": "REGEX",
  "pattern": "el presupuesto es suficiente para la meta de Km/Ha"
}
],
"policy_area_id": "PA07",
"question_global": 213,
"question_id": "Q213",
"scoring_definition_ref": "scoring_modalities.TYPE_B",
"scoring_modality": "TYPE_B",
"text": "¿Se identifican en el PPI recursos monetarios (con cifras en $, COP o millones) explícitamente asignados a programas de formalización, catastro multipropósito, mejora de vías terciarias o distritos de riego?",
"validations": {}
},
{
  "base_slot": "D1-Q4",
  "cluster_id": "CL01",
  "dimension_id": "DIM01",
  "expected_elements": [
    {
      "required": true,
      "type": "cuellos_botella"
    },
    {
      "required": true,
      "type": "gobernanza"
    },
    {
      "required": true,
      "type": "infraestructura_tecnologica"
    },
    {
      "required": true,
      "type": "procesos"
    }
  ]
},

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    {
      "required": true,
      "type": "talento_humano"
    }
  ],
  "failure_contract": {
    "abort_if": [
      "missing_required_element",
      "incomplete_text"
    ],
    "emit_code": "ABORT-Q214-REQ"
  },
  "method_sets": [
    {
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      "function": "identify_responsible_entities",
      "method_type": "analysis",
      "priority": 1,
      "description": "PDETMunicipalPlanAnalyzer.identify_responsible_entities"
    },
    {
      "class": "PDETMunicipalPlanAnalyzer",
      "function": "_extract_entities_ner",
      "method_type": "extraction",
      "priority": 2,
      "description": "PDETMunicipalPlanAnalyzer._extract_entities_ner"
    },
    {
      "class": "PDETMunicipalPlanAnalyzer",
      "function": "_extract_entities_syntax",
      "method_type": "extraction",
      "priority": 3,
      "description": "PDETMunicipalPlanAnalyzer._extract_entities_syntax"
    },
    {
      "class": "PDETMunicipalPlanAnalyzer",
      "function": "_classify_entity_type",
      "method_type": "analysis",
      "priority": 4,
      "description": "PDETMunicipalPlanAnalyzer._classify_entity_type"
    },
    {
      "class": "PDETMunicipalPlanAnalyzer",
      "function": "_score_entity_specificity",
      "method_type": "scoring",
      "priority": 5,
      "description": "PDETMunicipalPlanAnalyzer._score_entity_specificity"
    },
    {
      "class": "PDETMunicipalPlanAnalyzer",
      "function": "_consolidate_entities",
      "method_type": "analysis",
      "priority": 6,
      "description": "PDETMunicipalPlanAnalyzer._consolidate_entities"
    },
    {
      "class": "MechanismPartExtractor",
      "function": "extract_entity_activity",
      "method_type": "extraction",
      "priority": 7,
      "description": "MechanismPartExtractor.extract_entity_activity"
    },
    {
      "class": "MechanismPartExtractor",
      "function": "_normalize_entity",
      "method_type": "analysis",
      "priority": 8,
      "description": "MechanismPartExtractor._normalize_entity"
    },
    {
      "class": "MechanismPartExtractor",
      "function": "_validate_entity_activity",

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    "method_type": "validation",
    "priority": 9,
    "description": "MechanismPartExtractor._validate_entity_activity"
  },
  {
    "class": "MechanismPartExtractor",
    "function": "_calculate_ea_confidence",
    "method_type": "scoring",
    "priority": 10,
    "description": "MechanismPartExtractor._calculate_ea_confidence"
  },
  {
    "class": "OperationalizationAuditor",
    "function": "audit_evidence_traceability",
    "method_type": "validation",
    "priority": 11,
    "description": "OperationalizationAuditor.audit_evidence_traceability"
  }
],
"patterns": [
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q214-000",
    "match_type": "REGEX",
    "pattern": "Secretaría de Planeación|Oficina de Catastro|Gestor Catastral"
  },
  {
    "category": "TERRITORIAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q214-001",
    "match_type": "REGEX",
    "pattern": "UMATA|Unidad Municipal de Asistencia Técnica Agropecuaria"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q214-002",
    "match_type": "REGEX",
    "pattern": "Secretaría de Infraestructura|Banco de Maquinaria"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q214-003",
    "match_type": "REGEX",
    "pattern": "capacidad técnica|topógrafos|abogados de tierras|personal idóneo"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q214-004",
    "match_type": "REGEX",
    "pattern": "procedimiento de formalización|ruta de titulación"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q214-005",
    "match_type": "REGEX",
    "pattern": "sistema de información geográfica|SIG|software catastral"
  },
  {
    "category": "TERRITORIAL",
    "confidence_weight": 0.85,
    "flags": "i",

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      "id": "PAT-Q214-006",
      "match_type": "REGEX",
      "pattern": "Consejo Municipal de Desarrollo Rural|CMDR"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q214-007",
      "match_type": "LITERAL",
      "pattern": "articulación con IGAC, ANT, SNR y CAR"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q214-008",
      "match_type": "REGEX",
      "pattern": "falta de capacidad técnica|necesidad de fortalecer la UMATA"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q214-009",
      "match_type": "REGEX",
      "pattern": "cuello de botella|limitación en maquinaria|barrera jurídica"
    }
  ],
  "policy_area_id": "PA07",
  "question_global": 214,
  "question_id": "Q214",
  "scoring_definition_ref": "scoring_modalities.TYPE_B",
  "scoring_modality": "TYPE_B",
  "text": "¿El PDM describe las capacidades para la gestión de tierras, mencionando entidades (Oficina de Catastro, UMATA) y sus necesidades? Se debe buscar términos como 'gestión predial', 'sistemas de información geográfica' y si se identifican 'limitaciones'.",
  "validations": {}
},
{
  "base_slot": "D1-Q5",
  "cluster_id": "CL01",
  "dimension_id": "DIM01",
  "expected_elements": [
    {
      "required": true,
      "type": "coherencia_demostrada"
    },
    {
      "required": true,
      "type": "restricciones_legales"
    },
    {
      "required": true,
      "type": "restricciones_presupuestales"
    },
    {
      "required": true,
      "type": "restricciones_tecnicas"
    }
  ]
},
"failure_contract": {
  "abort_if": [
    "missing_required_element",
    "incomplete_text"
  ],
  "emit_code": "ABORT-Q215-REQ"
},
"method_sets": [
  {
    "class": "TemporalLogicVerifier",
    "function": "_check_deadline_constraints",

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    "method_type": "analysis",
    "priority": 1,
    "description": "TemporalLogicVerifier._check_deadline_constraints"
  },
  {
    "class": "TemporalLogicVerifier",
    "function": "verify_temporal_consistency",
    "method_type": "analysis",
    "priority": 2,
    "description": "TemporalLogicVerifier.verify_temporal_consistency"
  },
  {
    "class": "CausalInferenceSetup",
    "function": "identify_failure_points",
    "method_type": "analysis",
    "priority": 3,
    "description": "CausalInferenceSetup.identify_failure_points"
  },
  {
    "class": "CausalExtractor",
    "function": "_assess_temporal_coherence",
    "method_type": "analysis",
    "priority": 4,
    "description": "CausalExtractor._assess_temporal_coherence"
  },
  {
    "class": "TextMiningEngine",
    "function": "_analyze_link_text",
    "method_type": "analysis",
    "priority": 5,
    "description": "TextMiningEngine._analyze_link_text"
  },
  {
    "class": "IndustrialPolicyProcessor",
    "function": "_analyze_causal_dimensions",
    "method_type": "analysis",
    "priority": 6,
    "description": "IndustrialPolicyProcessor._analyze_causal_dimensions"
  },
  {
    "class": "IndustrialPolicyProcessor",
    "function": "_extract_metadata",
    "method_type": "extraction",
    "priority": 7,
    "description": "IndustrialPolicyProcessor._extract_metadata"
  }
],
"patterns": [
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q215-000",
    "match_type": "REGEX",
    "pattern": "en el marco de la Ley 160 de 1994|Ley 388 de 1997|Ley 1448 de 2011"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q215-001",
    "match_type": "REGEX",
    "pattern": "Acuerdo de Paz|Reforma Rural Integral|RRI|PDET"
  },
  {
    "category": "TERRITORIAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q215-002",
    "match_type": "REGEX",
    "pattern": "Plan de Ordenamiento Territorial|POT|determinantes ambientales"
  },

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{
  "category": "GENERAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q215-003",
  "match_type": "REGEX",
  "pattern": "competencia del municipio|responsabilidad de la ANT/IGAC"
},
{
  "category": "GENERAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q215-004",
  "match_type": "REGEX",
  "pattern": "límite de recursos propios|dependencia de la cofinanciación nacional"
},
{
  "category": "GENERAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q215-005",
  "match_type": "LITERAL",
  "pattern": "restricción presupuestal para el mantenimiento vial"
},
{
  "category": "GENERAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q215-006",
  "match_type": "REGEX",
  "pattern": "complejidad técnica del barrido predial|falta de cartografía base"
},
{
  "category": "GENERAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q215-007",
  "match_type": "REGEX",
  "pattern": "durante el cuatrienio|plazo para la actualización catastral"
},
{
  "category": "GENERAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q215-008",
  "match_type": "REGEX",
  "pattern": "coherencia entre metas y recursos disponibles|factibilidad financiera y
técnica"
}
],
"policy_area_id": "PA07",
"question_global": 215,
"question_id": "Q215",
"scoring_definition_ref": "scoring_modalities.TYPE_E",
"scoring_modality": "TYPE_E",
"text": "¿El plan justifica su alcance en tierras mencionando el marco legal (ej. Ley 388,
Acuerdo de Paz) o reconociendo restricciones explícitas de tipo presupuestal, técnico o de
competencias?",
"validations": {}
},
{
  "base_slot": "D2-Q1",
  "cluster_id": "CL01",
  "dimension_id": "DIM02",
  "expected_elements": [
    {
      "required": true,
      "type": "columna_costo"
    },
    {
      "required": true,
      "type": "columna_cronograma"
    }
  ]
}

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    },
    {
      "required": true,
      "type": "columna_producto"
    },
    {
      "required": true,
      "type": "columna_responsable"
    },
    {
      "required": true,
      "type": "formato_tabular"
    }
  ],
  "failure_contract": {
    "abort_if": [
      "missing_required_element",
      "incomplete_text"
    ],
    "emit_code": "ABORT-Q216-REQ"
  },
  "method_sets": [
    {
      "class": "PDFProcessor",
      "function": "extract_tables",
      "method_type": "extraction",
      "priority": 1,
      "description": "PDFProcessor.extract_tables"
    },
    {
      "class": "FinancialAuditor",
      "function": "_process_financial_table",
      "method_type": "analysis",
      "priority": 2,
      "description": "FinancialAuditor._process_financial_table"
    },
    {
      "class": "PDETMunicipalPlanAnalyzer",
      "function": "_deduplicate_tables",
      "method_type": "analysis",
      "priority": 3,
      "description": "PDETMunicipalPlanAnalyzer._deduplicate_tables"
    },
    {
      "class": "PDETMunicipalPlanAnalyzer",
      "function": "_classify_tables",
      "method_type": "analysis",
      "priority": 4,
      "description": "PDETMunicipalPlanAnalyzer._classify_tables"
    },
    {
      "class": "PDETMunicipalPlanAnalyzer",
      "function": "_is_likely_header",
      "method_type": "analysis",
      "priority": 5,
      "description": "PDETMunicipalPlanAnalyzer._is_likely_header"
    },
    {
      "class": "PDETMunicipalPlanAnalyzer",
      "function": "_clean_dataframe",
      "method_type": "analysis",
      "priority": 6,
      "description": "PDETMunicipalPlanAnalyzer._clean_dataframe"
    },
    {
      "class": "ReportingEngine",
      "function": "generate_accountability_matrix",
      "method_type": "analysis",
      "priority": 7,
      "description": "ReportingEngine.generate_accountability_matrix"
    }
  ],

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"patterns": [
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q216-000",
    "match_type": "REGEX",
    "pattern": "tabla de actividades|cuadro de seguimiento|matriz del plan de acción"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q216-001",
    "match_type": "REGEX",
    "pattern": "columna responsable|entidad a cargo|ejecutor"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q216-002",
    "match_type": "REGEX",
    "pattern": "columna producto|entregable|output|meta de producto"
  },
  {
    "category": "TEMPORAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q216-003",
    "match_type": "LITERAL",
    "pattern": "columna cronograma|plazo|vigencia|año 1|trimestre"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q216-004",
    "match_type": "LITERAL",
    "pattern": "columna costo|presupuesto|valor|recursos|monto"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q216-005",
    "match_type": "REGEX",
    "pattern": "Secretaría de Planeación|Infraestructura|UMATA"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q216-006",
    "match_type": "REGEX",
    "pattern": "Plan Indicativo|Anexo de metas"
  }
],
"policy_area_id": "PA07",
"question_global": 216,
"question_id": "Q216",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿Las actividades de tierras y territorios se presentan en un formato estructurado (tabla, cuadro) que incluya columnas para 'responsable', 'producto', 'cronograma' y 'presupuesto'?",
"validations": {}
},
{
  "base_slot": "D2-Q2",
  "cluster_id": "CL01",
  "dimension_id": "DIM02",
  "expected_elements": [

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{
  "required": true,
  "type": "instrumento_especificado"
},
{
  "required": true,
  "type": "logica_causal_explicita"
},
{
  "required": true,
  "type": "poblacion_objetivo_definida"
}
],
"failure_contract": {
  "abort_if": [
    "missing_required_element",
    "incomplete_text"
  ],
  "emit_code": "ABORT-Q217-REQ"
},
"method_sets": [
  {
    "class": "BayesianMechanismInference",
    "function": "infer_mechanisms",
    "method_type": "analysis",
    "priority": 1,
    "description": "BayesianMechanismInference.infer_mechanisms"
  },
  {
    "class": "BayesianMechanismInference",
    "function": "_infer_single_mechanism",
    "method_type": "analysis",
    "priority": 2,
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  },
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    "function": "_infer_mechanism_type",
    "method_type": "analysis",
    "priority": 3,
    "description": "BayesianMechanismInference._infer_mechanism_type"
  },
  {
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    "function": "_test_sufficiency",
    "method_type": "analysis",
    "priority": 4,
    "description": "BayesianMechanismInference._test_sufficiency"
  },
  {
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    "function": "_test_necessity",
    "method_type": "analysis",
    "priority": 5,
    "description": "BayesianMechanismInference._test_necessity"
  },
  {
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    "function": "extract_causal_hierarchy",
    "method_type": "extraction",
    "priority": 6,
    "description": "CausalExtractor.extract_causal_hierarchy"
  },
  {
    "class": "TeoriaCambio",
    "function": "construir_grafo_causal",
    "method_type": "analysis",
    "priority": 7,
    "description": "TeoriaCambio.construir_grafo_causal"
  },
  {
    "class": "TeoriaCambio",

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    "function": "_es_conexion_valida",
    "method_type": "analysis",
    "priority": 8,
    "description": "TeoriaCambio._es_conexion_valida"
  },
  {
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    "function": "construct_causal_dag",
    "method_type": "analysis",
    "priority": 9,
    "description": "PDETMunicipalPlanAnalyzer.construct_causal_dag"
  },
  {
    "class": "BeachEvidentialTest",
    "function": "classify_test",
    "method_type": "analysis",
    "priority": 10,
    "description": "BeachEvidentialTest.classify_test"
  },
  {
    "class": "IndustrialPolicyProcessor",
    "function": "_analyze_causal_dimensions",
    "method_type": "analysis",
    "priority": 11,
    "description": "IndustrialPolicyProcessor._analyze_causal_dimensions"
  }
],
"patterns": [
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q217-000",
    "match_type": "REGEX",
    "pattern": "mediante|a través de|con la implementación de"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q217-001",
    "match_type": "REGEX",
    "pattern": "barrido predial masivo|formalización por demanda"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q217-002",
    "match_type": "REGEX",
    "pattern": "construcción de placa huella|mantenimiento rutinario de vías"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q217-003",
    "match_type": "LITERAL",
    "pattern": "asistencia técnica agropecuaria|extensión rural"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q217-004",
    "match_type": "REGEX",
    "pattern": "población objetivo:|dirigido a|beneficiarios serán"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",

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      "pattern": "pequeños y medianos productores|familias campesinas sin tierra"
    },
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      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q217-006",
      "match_type": "REGEX",
      "pattern": "comunidades rurales de las veredas X y Y"
    },
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      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q217-007",
      "match_type": "REGEX",
      "pattern": "con el fin de mejorar la conectividad|para garantizar la seguridad jurídica"
    },
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      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q217-008",
      "match_type": "REGEX",
      "pattern": "lo cual reduce los costos de transporte|porque incentiva la inversión"
    }
  ],
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  "question_global": 217,
  "question_id": "Q217",
  "scoring_definition_ref": "scoring_modalities.TYPE_A",
  "scoring_modality": "TYPE_A",
  "text": "¿La descripción de las actividades de tierras detalla el instrumento ('mediante
barrido predial', 'a través de convenios con INVIAS'), la población objetivo ('pequeños
propietarios', 'comunidades rurales') y la lógica causal?",
  "validations": {}
},
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  "cluster_id": "CL01",
  "dimension_id": "DIM02",
  "expected_elements": [
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    },
    {
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      "type": "vinculo_diagnostico_actividad"
    }
  ],
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      "method_type": "extraction",
      "priority": 1,
      "description": "CausalExtractor._extract_causal_links"
    },
    {
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      "function": "_calculate_composite_likelihood",
      "method_type": "scoring",

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    "priority": 2,
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  },
  {
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    "function": "_initialize_prior",
    "method_type": "analysis",
    "priority": 3,
    "description": "CausalExtractor._initialize_prior"
  },
  {
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    "function": "_calculate_type_transition_prior",
    "method_type": "scoring",
    "priority": 4,
    "description": "CausalExtractor._calculate_type_transition_prior"
  },
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    "function": "_identify_causal_edges",
    "method_type": "analysis",
    "priority": 5,
    "description": "PDETMunicipalPlanAnalyzer._identify_causal_edges"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_refine_edge_probabilities",
    "method_type": "analysis",
    "priority": 6,
    "description": "PDETMunicipalPlanAnalyzer._refine_edge_probabilities"
  },
  {
    "class": "BayesianCounterfactualAuditor",
    "function": "construct_scm",
    "method_type": "analysis",
    "priority": 7,
    "description": "BayesianCounterfactualAuditor.construct_scm"
  },
  {
    "class": "BayesianCounterfactualAuditor",
    "function": "_create_default_equations",
    "method_type": "analysis",
    "priority": 8,
    "description": "BayesianCounterfactualAuditor._create_default_equations"
  },
  {
    "class": "SemanticAnalyzer",
    "function": "extract_semantic_cube",
    "method_type": "extraction",
    "priority": 9,
    "description": "SemanticAnalyzer.extract_semantic_cube"
  }
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"patterns": [
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    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q218-000",
    "match_type": "REGEX",
    "pattern": "para abordar la causa de la informalidad|en respuesta al mal estado vial"
  },
  {
    "category": "TERRITORIAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q218-001",
    "match_type": "REGEX",
    "pattern": "la actualización catastral ataca el problema de la desfinanciación
municipal"
  },
  {

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        "category": "GENERAL",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q218-002",
        "match_type": "REGEX",
        "pattern": "causa estructural|factor determinante|nudo crítico"
    },
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        "category": "GENERAL",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q218-003",
        "match_type": "REGEX",
        "pattern": "desactualización catastral|inseguridad jurídica en la tenencia"
    },
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        "category": "GENERAL",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q218-004",
        "match_type": "REGEX",
        "pattern": "falta de conectividad vial|aislamiento de las zonas rurales"
    },
    {
        "category": "GENERAL",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q218-005",
        "match_type": "REGEX",
        "pattern": "baja productividad agropecuaria|conflictos de uso del suelo"
    },
    {
        "category": "GENERAL",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q218-006",
        "match_type": "REGEX",
        "pattern": "árbol de problemas|diagnóstico causal del sector rural"
    }
],
"policy_area_id": "PA07",
"question_global": 218,
"question_id": "Q218",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿El PDM vincula explícitamente las actividades (ej. actualización catastral) con las 'causas raíz' de los problemas (ej. baja tributación predial, conflictos por linderos) identificadas en el diagnóstico?",
"validations": {}
},
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    "cluster_id": "CL01",
    "dimension_id": "DIM02",
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            "type": "mitigacion_propuesta"
        },
        {
            "required": true,
            "type": "riesgos_identificados"
        }
    ],
    "failure_contract": {
        "abort_if": [
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            "incomplete_text"
        ],
        "emit_code": "ABORT-Q219-REQ"
    },
    "method_sets": [

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  "function": "_bayesian_risk_inference",
  "method_type": "analysis",
  "priority": 1,
  "description": "PDETMunicipalPlanAnalyzer._bayesian_risk_inference"
},
{
  "class": "PDETMunicipalPlanAnalyzer",
  "function": "sensitivity_analysis",
  "method_type": "analysis",
  "priority": 2,
  "description": "PDETMunicipalPlanAnalyzer.sensitivity_analysis"
},
{
  "class": "PDETMunicipalPlanAnalyzer",
  "function": "_interpret_risk",
  "method_type": "analysis",
  "priority": 3,
  "description": "PDETMunicipalPlanAnalyzer._interpret_risk"
},
{
  "class": "PDETMunicipalPlanAnalyzer",
  "function": "_compute_robustness_value",
  "method_type": "analysis",
  "priority": 4,
  "description": "PDETMunicipalPlanAnalyzer._compute_robustness_value"
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  "class": "PDETMunicipalPlanAnalyzer",
  "function": "_compute_e_value",
  "method_type": "analysis",
  "priority": 5,
  "description": "PDETMunicipalPlanAnalyzer._compute_e_value"
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  "function": "_interpret_sensitivity",
  "method_type": "analysis",
  "priority": 6,
  "description": "PDETMunicipalPlanAnalyzer._interpret_sensitivity"
},
{
  "class": "OperationalizationAuditor",
  "function": "_audit_systemic_risk",
  "method_type": "validation",
  "priority": 7,
  "description": "OperationalizationAuditor._audit_systemic_risk"
},
{
  "class": "BayesianCounterfactualAuditor",
  "function": "aggregate_risk_and_prioritize",
  "method_type": "analysis",
  "priority": 8,
  "description": "BayesianCounterfactualAuditor.aggregate_risk_and_prioritize"
},
{
  "class": "BayesianCounterfactualAuditor",
  "function": "refutation_and_sanity_checks",
  "method_type": "analysis",
  "priority": 9,
  "description": "BayesianCounterfactualAuditor.refutation_and_sanity_checks"
},
{
  "class": "AdaptivePriorCalculator",
  "function": "sensitivity_analysis",
  "method_type": "analysis",
  "priority": 10,
  "description": "AdaptivePriorCalculator.sensitivity_analysis"
}
],
"patterns": [

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{
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  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q219-000",
  "match_type": "REGEX",
  "pattern": "riesgos:|posibles dificultades:|barreras a la implementación"
},
{
  "category": "GENERAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q219-001",
  "match_type": "REGEX",
  "pattern": "conflictos por linderos|oposición de ocupantes secundarios"
},
{
  "category": "GENERAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q219-002",
  "match_type": "REGEX",
  "pattern": "demoras en trámites ante la SNR y el IGAC"
},
{
  "category": "GENERAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q219-003",
  "match_type": "REGEX",
  "pattern": "sostenibilidad de las obras viales|falta de mantenimiento"
},
{
  "category": "GENERAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q219-004",
  "match_type": "REGEX",
  "pattern": "condiciones climáticas que afectan las obras"
},
{
  "category": "GENERAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q219-005",
  "match_type": "REGEX",
  "pattern": "baja adopción de la asistencia técnica por parte de los productores"
},
{
  "category": "GENERAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q219-006",
  "match_type": "REGEX",
  "pattern": "medidas de mitigación|plan de contingencia|para mitigar"
},
{
  "category": "GENERAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q219-007",
  "match_type": "REGEX",
  "pattern": "concertación social|mesas de diálogo|gestión interinstitucional"
}
},

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"policy_area_id": "PA07",
"question_global": 219,
"question_id": "Q219",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",

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"text": "¿El plan identifica posibles riesgos en la implementación de la política de tierras (ej. conflictos por la tierra, demoras en trámites registrales) y propone 'medidas de

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mitigación'?",
  "validations": {}
},
{
  "base_slot": "D2-Q5",
  "cluster_id": "CL01",
  "dimension_id": "DIM02",
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      "type": "complementariedad_explicita"
    },
    {
      "required": true,
      "type": "secuenciacion_logica"
    }
  ],
  "failure_contract": {
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      "incomplete_text"
    ],
    "emit_code": "ABORT-Q220-REQ"
  },
  "method_sets": [
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      "function": "_detect_logical_incompatibilities",
      "method_type": "analysis",
      "priority": 1,
      "description": "PolicyContradictionDetector._detect_logical_incompatibilities"
    },
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      "class": "PolicyContradictionDetector",
      "function": "_calculate_coherence_metrics",
      "method_type": "scoring",
      "priority": 2,
      "description": "PolicyContradictionDetector._calculate_coherence_metrics"
    },
    {
      "class": "PolicyContradictionDetector",
      "function": "_calculate_objective_alignment",
      "method_type": "scoring",
      "priority": 3,
      "description": "PolicyContradictionDetector._calculate_objective_alignment"
    },
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      "class": "PolicyContradictionDetector",
      "function": "_calculate_graph_fragmentation",
      "method_type": "scoring",
      "priority": 4,
      "description": "PolicyContradictionDetector._calculate_graph_fragmentation"
    },
    {
      "class": "OperationalizationAuditor",
      "function": "audit_sequence_logic",
      "method_type": "validation",
      "priority": 5,
      "description": "OperationalizationAuditor.audit_sequence_logic"
    },
    {
      "class": "BayesianMechanismInference",
      "function": "_calculate_coherence_factor",
      "method_type": "scoring",
      "priority": 6,
      "description": "BayesianMechanismInference._calculate_coherence_factor"
    },
    {
      "class": "PDETMunicipalPlanAnalyzer",
      "function": "_score_causal_coherence",
      "method_type": "scoring",
      "priority": 7,

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    "description": "PDETMunicipalPlanAnalyzer._score_causal_coherence"
  },
  {
    "class": "AdaptivePriorCalculator",
    "function": "calculate_likelihood_adaptativo",
    "method_type": "scoring",
    "priority": 8,
    "description": "AdaptivePriorCalculator.calculate_likelihood_adaptativo"
  }
],
"patterns": [
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    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q220-000",
    "match_type": "REGEX",
    "pattern": "estrategia integral de desarrollo rural|de manera articulada"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q220-001",
    "match_type": "REGEX",
    "pattern": "la formalización se complementa con el acceso a crédito y asistencia
técnica"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q220-002",
    "match_type": "REGEX",
    "pattern": "sinergia entre la mejora de vías y la comercialización"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q220-003",
    "match_type": "REGEX",
    "pattern": "la actualización catastral es prerequisite para fortalecer el impuesto
predial"
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  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q220-004",
    "match_type": "REGEX",
    "pattern": "en una primera fase se formalizará, luego se entregarán proyectos
productivos"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q220-005",
    "match_type": "REGEX",
    "pattern": "la estrategia combina seguridad jurídica, infraestructura y productividad"
  }
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"question_global": 220,
"question_id": "Q220",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿El conjunto de actividades de tierras demuestra una estrategia coherente? Se debe
buscar evidencia de 'complementariedad' (ej. formalización + asistencia técnica agropecuaria) o una
'secuencia' lógica.",
"validations": {}

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      "type": "linea_base_producto"
    },
    {
      "required": true,
      "type": "meta_cuantitativa"
    }
  ],
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  },
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      "function": "_score_indicators",
      "method_type": "scoring",
      "priority": 1,
      "description": "PDETMunicipalPlanAnalyzer._score_indicators"
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      "class": "OperationalizationAuditor",
      "function": "audit_evidence_traceability",
      "method_type": "validation",
      "priority": 2,
      "description": "OperationalizationAuditor.audit_evidence_traceability"
    },
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      "function": "assign_probative_value",
      "method_type": "analysis",
      "priority": 3,
      "description": "CausalInferenceSetup.assign_probative_value"
    },
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      "class": "BeachEvidentialTest",
      "function": "apply_test_logic",
      "method_type": "analysis",
      "priority": 4,
      "description": "BeachEvidentialTest.apply_test_logic"
    },
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      "function": "diagnose_critical_links",
      "method_type": "analysis",
      "priority": 5,
      "description": "TextMiningEngine.diagnose_critical_links"
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      "class": "IndustrialPolicyProcessor",
      "function": "_extract_metadata",
      "method_type": "extraction",
      "priority": 6,
      "description": "IndustrialPolicyProcessor._extract_metadata"
    },
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      "class": "IndustrialPolicyProcessor",
      "function": "_calculate_quality_score",

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    "method_type": "scoring",
    "priority": 7,
    "description": "IndustrialPolicyProcessor._calculate_quality_score"
  },
  {
    "class": "AdaptivePriorCalculator",
    "function": "generate_traceability_record",
    "method_type": "analysis",
    "priority": 8,
    "description": "AdaptivePriorCalculator.generate_traceability_record"
  }
],
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    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q221-000",
    "match_type": "REGEX",
    "pattern": "indicador de producto|meta de producto"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q221-001",
    "match_type": "REGEX",
    "pattern": "hectáreas (Ha) con catastro actualizado|predios actualizados"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q221-002",
    "match_type": "REGEX",
    "pattern": "títulos de propiedad rural entregados|predios formalizados"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q221-003",
    "match_type": "REGEX",
    "pattern": "kilómetros (Km) de vías terciarias con mantenimiento/mejoramiento"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q221-004",
    "match_type": "REGEX",
    "pattern": "familias beneficiadas con proyectos de riego|productores con asistencia
técnica"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q221-005",
    "match_type": "LITERAL",
    "pattern": "Línea Base:|LB:|Valor inicial:"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q221-006",
    "match_type": "REGEX",
    "pattern": "Meta Cuatrienio:|Meta:|Valor esperado:"
  },
  {
    "category": "GENERAL",

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    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q221-007",
    "match_type": "REGEX",
    "pattern": "Fuente de verificación:|Medio de verificación:|Fuente:"
  },
  {
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    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q221-008",
    "match_type": "REGEX",
    "pattern": "registros de la ANT/SNR|informes de interventoría de obra|actas de entrega"
  }
],
"policy_area_id": "PA07",
"question_global": 221,
"question_id": "Q221",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿Los indicadores de producto para tierras (ej. predios formalizados, km de vía mejorados) incluyen 'línea base', 'meta' cuantitativa y 'fuente de verificación'?",
"validations": {}
},
{
  "base_slot": "D3-Q2",
  "cluster_id": "CL01",
  "dimension_id": "DIM03",
  "expected_elements": [
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      "required": true,
      "type": "proporcionalidad_meta_problema"
    }
  ],
  "failure_contract": {
    "abort_if": [
      "missing_required_element",
      "incomplete_text"
    ],
    "emit_code": "ABORT-Q222-REQ"
  },
  "method_sets": [
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      "function": "_calculate_bayesian_posterior",
      "method_type": "scoring",
      "priority": 1,
      "description": "AdvancedDAGValidator._calculate_bayesian_posterior"
    },
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      "function": "_calculate_confidence_interval",
      "method_type": "scoring",
      "priority": 2,
      "description": "AdvancedDAGValidator._calculate_confidence_interval"
    },
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      "class": "AdaptivePriorCalculator",
      "function": "_adjust_domain_weights",
      "method_type": "analysis",
      "priority": 3,
      "description": "AdaptivePriorCalculator._adjust_domain_weights"
    },
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      "function": "_get_spanish_stopwords",
      "method_type": "analysis",
      "priority": 4,
      "description": "PDETMunicipalPlanAnalyzer._get_spanish_stopwords"
    },
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    "function": "_log_refactored_components",
    "method_type": "analysis",
    "priority": 5,
    "description": "BayesianMechanismInference._log_refactored_components"
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    "method_type": "analysis",
    "priority": 6,
    "description": "PDETMunicipalPlanAnalyzer.analyze_financial_feasibility"
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    "function": "_score_indicators",
    "method_type": "scoring",
    "priority": 7,
    "description": "PDETMunicipalPlanAnalyzer._score_indicators"
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    "function": "_interpret_risk",
    "method_type": "analysis",
    "priority": 8,
    "description": "PDETMunicipalPlanAnalyzer._interpret_risk"
  },
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    "class": "FinancialAuditor",
    "function": "_calculate_sufficiency",
    "method_type": "scoring",
    "priority": 9,
    "description": "FinancialAuditor._calculate_sufficiency"
  },
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    "class": "BayesianMechanismInference",
    "function": "_test_sufficiency",
    "method_type": "analysis",
    "priority": 10,
    "description": "BayesianMechanismInference._test_sufficiency"
  },
  {
    "class": "BayesianMechanismInference",
    "function": "_test_necessity",
    "method_type": "analysis",
    "priority": 11,
    "description": "BayesianMechanismInference._test_necessity"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_assess_financial_sustainability",
    "method_type": "analysis",
    "priority": 12,
    "description": "PDETMunicipalPlanAnalyzer._assess_financial_sustainability"
  },
  {
    "class": "AdaptivePriorCalculator",
    "function": "calculate_likelihood_adaptativo",
    "method_type": "scoring",
    "priority": 13,
    "description": "AdaptivePriorCalculator.calculate_likelihood_adaptativo"
  },
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    "class": "IndustrialPolicyProcessor",
    "function": "_calculate_quality_score",
    "method_type": "scoring",
    "priority": 14,
    "description": "IndustrialPolicyProcessor._calculate_quality_score"
  },
  {
    "class": "TeoriaCambio",
    "function": "_generar_sugerencias_internas",
    "method_type": "analysis",

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    "priority": 15,
    "description": "TeoriaCambio._generar_sugerencias_internas"
  },
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    "function": "_deduplicate_tables",
    "method_type": "analysis",
    "priority": 16,
    "description": "PDETMunicipalPlanAnalyzer._deduplicate_tables"
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    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_indicator_to_dict",
    "method_type": "analysis",
    "priority": 17,
    "description": "PDETMunicipalPlanAnalyzer._indicator_to_dict"
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    "function": "_generate_recommendations",
    "method_type": "analysis",
    "priority": 18,
    "description": "PDETMunicipalPlanAnalyzer._generate_recommendations"
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    "class": "IndustrialPolicyProcessor",
    "function": "_compile_pattern_registry",
    "method_type": "analysis",
    "priority": 19,
    "description": "IndustrialPolicyProcessor._compile_pattern_registry"
  },
  {
    "class": "IndustrialPolicyProcessor",
    "function": "_build_point_patterns",
    "method_type": "analysis",
    "priority": 20,
    "description": "IndustrialPolicyProcessor._build_point_patterns"
  },
  {
    "class": "IndustrialPolicyProcessor",
    "function": "_empty_result",
    "method_type": "analysis",
    "priority": 21,
    "description": "IndustrialPolicyProcessor._empty_result"
  }
],
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  {
    "category": "INDICADOR",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q222-000",
    "match_type": "REGEX",
    "pattern": "la meta de formalización cubre un X% del total de predios informales"
  },
  {
    "category": "INDICADOR",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q222-001",
    "match_type": "REGEX",
    "pattern": "se intervendrá el \\d+% de la red vial terciaria en mal estado"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q222-002",
    "match_type": "REGEX",
    "pattern": "universo de atención|total de predios rurales"
  }
],

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        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q222-003",
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        "pattern": "la meta se establece en función de la capacidad operativa de la ANT y el
municipio"
    },
    {
        "category": "GENERAL",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q222-004",
        "match_type": "REGEX",
        "pattern": "se priorizarán las veredas con mayor informalidad|vías más críticas"
    }
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"policy_area_id": "PA07",
"question_global": 222,
"question_id": "Q222",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿Las metas de los productos de tierras (ej. 'formalizar 500 predios') son
proporcionales a la magnitud del problema diagnosticado (ej. 'existen 5.000 predios informales')?",
"validations": {}
},
{
    "base_slot": "D3-Q3",
    "cluster_id": "CL01",
    "dimension_id": "DIM03",
    "expected_elements": [
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            "type": "trazabilidad_organizacional"
        },
        {
            "required": true,
            "type": "trazabilidad_presupuestal"
        }
    ],
    "failure_contract": {
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            "incomplete_text"
        ],
        "emit_code": "ABORT-Q223-REQ"
    },
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            "function": "_match_program_to_node",
            "method_type": "analysis",
            "priority": 1,
            "description": "FinancialAuditor._match_program_to_node"
        },
        {
            "class": "FinancialAuditor",
            "function": "_match_goal_to_budget",
            "method_type": "analysis",
            "priority": 2,
            "description": "FinancialAuditor._match_goal_to_budget"
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            "function": "_extract_from_responsibility_tables",
            "method_type": "extraction",
            "priority": 3,
            "description": "PDETMunicipalPlanAnalyzer._extract_from_responsibility_tables"
        },
        {
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            "function": "_consolidate_entities",

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    "method_type": "analysis",
    "priority": 4,
    "description": "PDETMunicipalPlanAnalyzer._consolidate_entities"
  },
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    "function": "identify_responsible_entities",
    "method_type": "analysis",
    "priority": 5,
    "description": "PDETMunicipalPlanAnalyzer.identify_responsible_entities"
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    "function": "_score_responsibility_clarity",
    "method_type": "scoring",
    "priority": 6,
    "description": "PDETMunicipalPlanAnalyzer._score_responsibility_clarity"
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    "method_type": "analysis",
    "priority": 7,
    "description": "PolicyAnalysisEmbedder.process_document"
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    "function": "_generate_query_from_pdq",
    "method_type": "analysis",
    "priority": 8,
    "description": "PolicyAnalysisEmbedder._generate_query_from_pdq"
  },
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    "function": "semantic_search",
    "method_type": "analysis",
    "priority": 9,
    "description": "PolicyAnalysisEmbedder.semantic_search"
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    "function": "_apply_mmr",
    "method_type": "analysis",
    "priority": 10,
    "description": "PolicyAnalysisEmbedder._apply_mmr"
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    "function": "_empty_semantic_cube",
    "method_type": "analysis",
    "priority": 11,
    "description": "SemanticAnalyzer._empty_semantic_cube"
  },
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    "function": "_classify_policy_domain",
    "method_type": "analysis",
    "priority": 12,
    "description": "SemanticAnalyzer._classify_policy_domain"
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    "function": "_classify_cross_cutting_themes",
    "method_type": "analysis",
    "priority": 13,
    "description": "SemanticAnalyzer._classify_cross_cutting_themes"
  },
  {
    "class": "SemanticAnalyzer",
    "function": "_classify_value_chain_link",
    "method_type": "analysis",
    "priority": 14,

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    "description": "SemanticAnalyzer._classify_value_chain_link"
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    "function": "_vectorize_segments",
    "method_type": "analysis",
    "priority": 15,
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    "method_type": "analysis",
    "priority": 16,
    "description": "SemanticAnalyzer._process_segment"
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    "function": "_calculate_semantic_complexity",
    "method_type": "scoring",
    "priority": 17,
    "description": "SemanticAnalyzer._calculate_semantic_complexity"
  },
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    "function": "_compute_evidence_confidence",
    "method_type": "analysis",
    "priority": 18,
    "description": "IndustrialPolicyProcessor._compute_evidence_confidence"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_entity_to_dict",
    "method_type": "analysis",
    "priority": 19,
    "description": "PDETMunicipalPlanAnalyzer._entity_to_dict"
  },
  {
    "class": "AdaptivePriorCalculator",
    "function": "generate_traceability_record",
    "method_type": "analysis",
    "priority": 20,
    "description": "AdaptivePriorCalculator.generate_traceability_record"
  },
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    "function": "generate_pdq_report",
    "method_type": "analysis",
    "priority": 21,
    "description": "PolicyAnalysisEmbedder.generate_pdq_report"
  },
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    "class": "ReportingEngine",
    "function": "generate_accountability_matrix",
    "method_type": "analysis",
    "priority": 22,
    "description": "ReportingEngine.generate_accountability_matrix"
  }
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"patterns": [
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    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q223-000",
    "match_type": "REGEX",
    "pattern": "código BPIN|proyecto de inversión para catastro multipropósito"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",

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        "id": "PAT-Q223-001",
        "match_type": "REGEX",
        "pattern": "programa del PPI|línea de inversión en desarrollo rural"
    },
    {
        "category": "GENERAL",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q223-002",
        "match_type": "REGEX",
        "pattern": "recursos del proyecto|presupuesto para la red vial"
    },
    {
        "category": "GENERAL",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q223-003",
        "match_type": "REGEX",
        "pattern": "responsable:|dependencia a cargo:|entidad ejecutora"
    },
    {
        "category": "GENERAL",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q223-004",
        "match_type": "REGEX",
        "pattern": "Secretaría de Planeación|Infraestructura|UMATA"
    },
    {
        "category": "GENERAL",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q223-005",
        "match_type": "REGEX",
        "pattern": "articulado con el IGAC|convenio con INVIAS|operado por"
    }
],
"policy_area_id": "PA07",
"question_global": 223,
"question_id": "Q223",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿Los productos de tierras tienen trazabilidad presupuestal (vinculados a códigos BPIN, PPI) y organizacional (asociados a una 'Secretaría de Planeación' o entidad responsable)?",
"validations": {}
},
{
    "base_slot": "D3-Q4",
    "cluster_id": "CL01",
    "dimension_id": "DIM03",
    "expected_elements": [
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            "type": "coherencia_recursos"
        },
        {
            "required": true,
            "type": "factibilidad_tecnica"
        },
        {
            "required": true,
            "type": "realismo_plazos"
        }
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    "failure_contract": {
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            "incomplete_text"
        ],
        "emit_code": "ABORT-Q224-REQ"
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    "method_sets": [

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{
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  "method_type": "scoring",
  "priority": 1,
  "description": "AdvancedDAGValidator.calculate_acyclicity_pvalue"
},
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  "function": "_is_acyclic",
  "method_type": "analysis",
  "priority": 2,
  "description": "AdvancedDAGValidator._is_acyclic"
},
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  "method_type": "analysis",
  "priority": 3,
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  "method_type": "scoring",
  "priority": 4,
  "description": "AdvancedDAGValidator._calculate_node_importance"
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  "method_type": "analysis",
  "priority": 5,
  "description": "AdvancedDAGValidator._generate_subgraph"
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  "method_type": "analysis",
  "priority": 6,
  "description": "AdvancedDAGValidator.add_node"
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  "function": "add_edge",
  "method_type": "analysis",
  "priority": 7,
  "description": "AdvancedDAGValidator.add_edge"
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  "function": "export_nodes",
  "method_type": "analysis",
  "priority": 8,
  "description": "AdvancedDAGValidator.export_nodes"
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  "method_type": "analysis",
  "priority": 9,
  "description": "AdvancedDAGValidator._initialize_rng"
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  "function": "_calculate_statistical_power",
  "method_type": "scoring",
  "priority": 10,
  "description": "AdvancedDAGValidator._calculate_statistical_power"
},
{
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    "priority": 11,
    "description": "AdvancedDAGValidator._get_node_validator"
  },
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    "function": "_create_empty_result",
    "method_type": "analysis",
    "priority": 12,
    "description": "AdvancedDAGValidator._create_empty_result"
  },
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    "function": "_test_necessity",
    "method_type": "analysis",
    "priority": 13,
    "description": "BayesianMechanismInference._test_necessity"
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    "method_type": "analysis",
    "priority": 14,
    "description": "IndustrialGradeValidator.execute_suite"
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    "method_type": "validation",
    "priority": 15,
    "description": "IndustrialGradeValidator.validate_connection_matrix"
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    "function": "run_performance_benchmarks",
    "method_type": "analysis",
    "priority": 16,
    "description": "IndustrialGradeValidator.run_performance_benchmarks"
  },
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    "class": "IndustrialGradeValidator",
    "function": "_benchmark_operation",
    "method_type": "analysis",
    "priority": 17,
    "description": "IndustrialGradeValidator._benchmark_operation"
  },
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    "class": "IndustrialGradeValidator",
    "function": "_log_metric",
    "method_type": "analysis",
    "priority": 18,
    "description": "IndustrialGradeValidator._log_metric"
  },
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    "function": "validate_engine_readiness",
    "method_type": "validation",
    "priority": 19,
    "description": "IndustrialGradeValidator.validate_engine_readiness"
  },
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    "function": "analyze_performance",
    "method_type": "analysis",
    "priority": 20,
    "description": "PerformanceAnalyzer.analyze_performance"
  },
  {
    "class": "PerformanceAnalyzer",
    "function": "_calculate_loss_functions",
    "method_type": "scoring",

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    "priority": 21,
    "description": "PerformanceAnalyzer._calculate_loss_functions"
  },
  {
    "class": "HierarchicalGenerativeModel",
    "function": "_calculate_likelihood",
    "method_type": "scoring",
    "priority": 22,
    "description": "HierarchicalGenerativeModel._calculate_likelihood"
  },
  {
    "class": "HierarchicalGenerativeModel",
    "function": "_calculate_ess",
    "method_type": "scoring",
    "priority": 23,
    "description": "HierarchicalGenerativeModel._calculate_ess"
  },
  {
    "class": "HierarchicalGenerativeModel",
    "function": "_calculate_r_hat",
    "method_type": "scoring",
    "priority": 24,
    "description": "HierarchicalGenerativeModel._calculate_r_hat"
  },
  {
    "class": "IndustrialGradeValidator",
    "function": "validate_causal_categories",
    "method_type": "validation",
    "priority": 25,
    "description": "IndustrialGradeValidator.validate_causal_categories"
  },
  {
    "class": "TeoriaCambio",
    "function": "_extraer_categorias",
    "method_type": "analysis",
    "priority": 26,
    "description": "TeoriaCambio._extraer_categorias"
  }
],
"patterns": [
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    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q224-000",
    "match_type": "REGEX",
    "pattern": "factibilidad|viabilidad|es realista esperar que"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q224-001",
    "match_type": "REGEX",
    "pattern": "capacidad técnica y jurídica para el barrido predial"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q224-002",
    "match_type": "REGEX",
    "pattern": "plazo de ejecución de las obras viales|tiempo de los trámites registrales"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q224-003",
    "match_type": "REGEX",
    "pattern": "la meta de formalización es ambiciosa y depende de la agilidad de la ANT"
  },

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      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q224-004",
      "match_type": "REGEX",
      "pattern": "contradictorio|poco probable|desproporcionado"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q224-005",
      "match_type": "REGEX",
      "pattern": "con los recursos del banco de maquinaria se puede lograr"
    }
  ],
  "policy_area_id": "PA07",
  "question_global": 224,
  "question_id": "Q224",
  "scoring_definition_ref": "scoring_modalities.TYPE_A",
  "scoring_modality": "TYPE_A",
  "text": "¿Existe una relación factible entre la actividad (ej. 'un convenio con la ANT') y la meta del producto asociado (ej. '2.000 títulos entregados') para el área de tierras? Se debe evaluar si los 'plazos' son realistas.",
  "validations": {}
},
{
  "base_slot": "D3-Q5",
  "cluster_id": "CL01",
  "dimension_id": "DIM03",
  "expected_elements": [
    {
      "required": true,
      "type": "conexion_producto_resultado"
    },
    {
      "required": true,
      "type": "mecanismo_causal_explicito"
    }
  ],
  "failure_contract": {
    "abort_if": [
      "missing_required_element",
      "incomplete_text"
    ],
    "emit_code": "ABORT-Q225-REQ"
  },
  "method_sets": [
    {
      "class": "PDETMunicipalPlanAnalyzer",
      "function": "_identify_confounders",
      "method_type": "analysis",
      "priority": 1,
      "description": "PDETMunicipalPlanAnalyzer._identify_confounders"
    },
    {
      "class": "PDETMunicipalPlanAnalyzer",
      "function": "_effect_to_dict",
      "method_type": "analysis",
      "priority": 2,
      "description": "PDETMunicipalPlanAnalyzer._effect_to_dict"
    },
    {
      "class": "PDETMunicipalPlanAnalyzer",
      "function": "_scenario_to_dict",
      "method_type": "analysis",
      "priority": 3,
      "description": "PDETMunicipalPlanAnalyzer._scenario_to_dict"
    },
    {
      "class": "PDETMunicipalPlanAnalyzer",

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    "function": "_simulate_intervention",
    "method_type": "analysis",
    "priority": 4,
    "description": "PDETMunicipalPlanAnalyzer._simulate_intervention"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_generate_recommendations",
    "method_type": "analysis",
    "priority": 5,
    "description": "PDETMunicipalPlanAnalyzer._generate_recommendations"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_identify_causal_nodes",
    "method_type": "analysis",
    "priority": 6,
    "description": "PDETMunicipalPlanAnalyzer._identify_causal_nodes"
  },
  {
    "class": "BayesianCounterfactualAuditor",
    "function": "_evaluate_factual",
    "method_type": "analysis",
    "priority": 7,
    "description": "BayesianCounterfactualAuditor._evaluate_factual"
  },
  {
    "class": "BayesianCounterfactualAuditor",
    "function": "_evaluate_counterfactual",
    "method_type": "analysis",
    "priority": 8,
    "description": "BayesianCounterfactualAuditor._evaluate_counterfactual"
  },
  {
    "class": "CausalExtractor",
    "function": "_assess_financial_consistency",
    "method_type": "analysis",
    "priority": 9,
    "description": "CausalExtractor._assess_financial_consistency"
  },
  {
    "class": "BayesianMechanismInference",
    "function": "_infer_activity_sequence",
    "method_type": "analysis",
    "priority": 10,
    "description": "BayesianMechanismInference._infer_activity_sequence"
  },
  {
    "class": "BayesianMechanismInference",
    "function": "_generate_necessity_remediation",
    "method_type": "analysis",
    "priority": 11,
    "description": "BayesianMechanismInference._generate_necessity_remediation"
  },
  {
    "class": "BayesianCounterfactualAuditor",
    "function": "refutation_and_sanity_checks",
    "method_type": "analysis",
    "priority": 12,
    "description": "BayesianCounterfactualAuditor.refutation_and_sanity_checks"
  },
  {
    "class": "IndustrialPolicyProcessor",
    "function": "_load_questionnaire",
    "method_type": "analysis",
    "priority": 13,
    "description": "IndustrialPolicyProcessor._load_questionnaire"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "analyze_financial_feasibility",
    "method_type": "analysis",

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    "priority": 14,
    "description": "PDETMunicipalPlanAnalyzer.analyze_financial_feasibility"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "construct_causal_dag",
    "method_type": "analysis",
    "priority": 15,
    "description": "PDETMunicipalPlanAnalyzer.construct_causal_dag"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "estimate_causal_effects",
    "method_type": "analysis",
    "priority": 16,
    "description": "PDETMunicipalPlanAnalyzer.estimate_causal_effects"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "generate_counterfactuals",
    "method_type": "analysis",
    "priority": 17,
    "description": "PDETMunicipalPlanAnalyzer.generate_counterfactuals"
  },
  {
    "class": "CausalExtractor",
    "function": "_build_type_hierarchy",
    "method_type": "analysis",
    "priority": 18,
    "description": "CausalExtractor._build_type_hierarchy"
  },
  {
    "class": "CausalExtractor",
    "function": "_check_structural_violation",
    "method_type": "analysis",
    "priority": 19,
    "description": "CausalExtractor._check_structural_violation"
  },
  {
    "class": "CausalExtractor",
    "function": "_calculate_type_transition_prior",
    "method_type": "scoring",
    "priority": 20,
    "description": "CausalExtractor._calculate_type_transition_prior"
  },
  {
    "class": "CausalExtractor",
    "function": "_calculate_textual_proximity",
    "method_type": "scoring",
    "priority": 21,
    "description": "CausalExtractor._calculate_textual_proximity"
  },
  {
    "class": "TeoriaCambio",
    "function": "_validar_orden_causal",
    "method_type": "analysis",
    "priority": 22,
    "description": "TeoriaCambio._validar_orden_causal"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_refine_edge_probabilities",
    "method_type": "analysis",
    "priority": 23,
    "description": "PDETMunicipalPlanAnalyzer._refine_edge_probabilities"
  },
  {
    "class": "PolicyAnalysisEmbedder",
    "function": "compare_policy_interventions",
    "method_type": "analysis",
    "priority": 24,
    "description": "PolicyAnalysisEmbedder.compare_policy_interventions"
  }

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    },
    {
      "class": "BayesianMechanismInference",
      "function": "infer_mechanisms",
      "method_type": "analysis",
      "priority": 25,
      "description": "BayesianMechanismInference.infer_mechanisms"
    }
  ],
  "patterns": [
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q225-000",
      "match_type": "REGEX",
      "pattern": "esto permitirá que|lo cual contribuirá a|generando una reducción de"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q225-001",
      "match_type": "REGEX",
      "pattern": "el mecanismo es que la formalización da acceso a crédito y mercados"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q225-002",
      "match_type": "REGEX",
      "pattern": "al mejorar las vías, se reducen los costos de transporte de los productos agrícolas"
    },
    {
      "category": "TERRITORIAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q225-003",
      "match_type": "LITERAL",
      "pattern": "la actualización catastral fortalece las finanzas municipales, lo que permite mayor inversión"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q225-004",
      "match_type": "REGEX",
      "pattern": "variable intermedia|mediador|eslabón causal|acceso a mercados|seguridad en la inversión"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q225-005",
      "match_type": "REGEX",
      "pattern": "cadena de valor|ruta de cambio"
    }
  ],
  "policy_area_id": "PA07",
  "question_global": 225,
  "question_id": "Q225",
  "scoring_definition_ref": "scoring_modalities.TYPE_A",
  "scoring_modality": "TYPE_A",
  "text": "¿El PDM explica cómo los productos (ej. 'vías terciarias mejoradas') contribuyen a generar resultados (ej. 'reducción de costos de transporte para campesinos')? Se debe buscar este 'mecanismo'.",
  "validations": {}
},

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{
  "base_slot": "D4-Q1",
  "cluster_id": "CL01",
  "dimension_id": "DIM04",
  "expected_elements": [
    {
      "required": true,
      "type": "horizonte_temporal"
    },
    {
      "required": true,
      "type": "linea_base_resultado"
    },
    {
      "required": true,
      "type": "meta_resultado"
    },
    {
      "required": true,
      "type": "metrica_outcome"
    }
  ],
  "failure_contract": {
    "abort_if": [
      "missing_required_element",
      "incomplete_text"
    ],
    "emit_code": "ABORT-Q226-REQ"
  },
  "method_sets": [
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      "class": "PDETMunicipalPlanAnalyzer",
      "function": "_extract_entities_syntax",
      "method_type": "extraction",
      "priority": 1,
      "description": "PDETMunicipalPlanAnalyzer._extract_entities_syntax"
    },
    {
      "class": "PDETMunicipalPlanAnalyzer",
      "function": "_extract_entities_ner",
      "method_type": "extraction",
      "priority": 2,
      "description": "PDETMunicipalPlanAnalyzer._extract_entities_ner"
    },
    {
      "class": "CausalExtractor",
      "function": "_calculate_language_specificity",
      "method_type": "scoring",
      "priority": 3,
      "description": "CausalExtractor._calculate_language_specificity"
    },
    {
      "class": "CausalExtractor",
      "function": "_calculate_composite_likelihood",
      "method_type": "scoring",
      "priority": 4,
      "description": "CausalExtractor._calculate_composite_likelihood"
    },
    {
      "class": "CausalExtractor",
      "function": "_calculate_semantic_distance",
      "method_type": "scoring",
      "priority": 5,
      "description": "CausalExtractor._calculate_semantic_distance"
    },
    {
      "class": "TemporalLogicVerifier",
      "function": "_classify_temporal_type",
      "method_type": "analysis",
      "priority": 6,
      "description": "TemporalLogicVerifier._classify_temporal_type"
    }
  ],

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{
  "class": "PDETMunicipalPlanAnalyzer",
  "function": "_score_indicators",
  "method_type": "scoring",
  "priority": 7,
  "description": "PDETMunicipalPlanAnalyzer._score_indicators"
},
{
  "class": "PDETMunicipalPlanAnalyzer",
  "function": "_find_outcome_mentions",
  "method_type": "analysis",
  "priority": 8,
  "description": "PDETMunicipalPlanAnalyzer._find_outcome_mentions"
},
{
  "class": "PDETMunicipalPlanAnalyzer",
  "function": "_score_temporal_consistency",
  "method_type": "scoring",
  "priority": 9,
  "description": "PDETMunicipalPlanAnalyzer._score_temporal_consistency"
},
{
  "class": "CausalExtractor",
  "function": "_extract_goals",
  "method_type": "extraction",
  "priority": 10,
  "description": "CausalExtractor._extract_goals"
},
{
  "class": "CausalExtractor",
  "function": "_parse_goal_context",
  "method_type": "extraction",
  "priority": 11,
  "description": "CausalExtractor._parse_goal_context"
},
{
  "class": "CausalExtractor",
  "function": "_classify_goal_type",
  "method_type": "analysis",
  "priority": 12,
  "description": "CausalExtractor._classify_goal_type"
},
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  "class": "TemporalLogicVerifier",
  "function": "_parse_temporal_marker",
  "method_type": "extraction",
  "priority": 13,
  "description": "TemporalLogicVerifier._parse_temporal_marker"
},
{
  "class": "TemporalLogicVerifier",
  "function": "_extract_resources",
  "method_type": "extraction",
  "priority": 14,
  "description": "TemporalLogicVerifier._extract_resources"
},
{
  "class": "PerformanceAnalyzer",
  "function": "analyze_performance",
  "method_type": "analysis",
  "priority": 15,
  "description": "PerformanceAnalyzer.analyze_performance"
},
{
  "class": "PerformanceAnalyzer",
  "function": "_generate_recommendations",
  "method_type": "analysis",
  "priority": 16,
  "description": "PerformanceAnalyzer._generate_recommendations"
}
],
"patterns": [

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{
  "category": "INDICADOR",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q226-000",
  "match_type": "REGEX",
  "pattern": "indicador de resultado|indicador de efecto|outcome"
},
{
  "category": "INDICADOR",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q226-001",
  "match_type": "REGEX",
  "pattern": "porcentaje de actualización del catastro con enfoque multipropósito"
},
{
  "category": "INDICADOR",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q226-002",
  "match_type": "REGEX",
  "pattern": "porcentaje de reducción de la informalidad en la tenencia de la tierra"
},
{
  "category": "GENERAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q226-003",
  "match_type": "REGEX",
  "pattern": "índice de estado de la red vial terciaria"
},
{
  "category": "GENERAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q226-004",
  "match_type": "REGEX",
  "pattern": "reducción en los costos de transporte de productos agropecuarios"
},
{
  "category": "GENERAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q226-005",
  "match_type": "LITERAL",
  "pattern": "Línea Base:|LB:|valor 2023:"
},
{
  "category": "INDICADOR",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q226-006",
  "match_type": "LITERAL",
  "pattern": "Meta Cuatrienio:|Meta 2027:|se espera aumentar a un X%"
},
{
  "category": "GENERAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q226-007",
  "match_type": "REGEX",
  "pattern": "Fuente de verificación:|Medio de verificación:"
},
{
  "category": "INDICADOR",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q226-008",
  "match_type": "REGEX",
  "pattern": "Ficha de Indicador de Resultado (KPT del DNP)"
},

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    {
      "category": "TEMPORAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q226-009",
      "match_type": "REGEX",
      "pattern": "horizonte temporal|ventana de maduración|al final del periodo"
    }
  ],
  "policy_area_id": "PA07",
  "question_global": 226,
  "question_id": "Q226",
  "scoring_definition_ref": "scoring_modalities.TYPE_A",
  "scoring_modality": "TYPE_A",
  "text": "¿Los indicadores de resultado para tierras (ej. 'porcentaje de actualización catastral', 'reducción del tiempo de viaje en zonas rurales') están definidos con línea base, meta y un horizonte temporal?",
  "validations": {}
},
{
  "base_slot": "D4-Q2",
  "cluster_id": "CL01",
  "dimension_id": "DIM04",
  "expected_elements": [
    {
      "required": true,
      "type": "cadena_causal_explicita"
    },
    {
      "required": true,
      "type": "condiciones_habilitantes"
    },
    {
      "required": true,
      "type": "supuestos_identificados"
    }
  ],
  "failure_contract": {
    "abort_if": [
      "missing_required_element",
      "incomplete_text"
    ],
    "emit_code": "ABORT-Q227-REQ"
  },
  "method_sets": [
    {
      "class": "TeoriaCambio",
      "function": "_encontrar_caminos_completos",
      "method_type": "analysis",
      "priority": 1,
      "description": "TeoriaCambio._encontrar_caminos_completos"
    },
    {
      "class": "TeoriaCambio",
      "function": "validacion_completa",
      "method_type": "analysis",
      "priority": 2,
      "description": "TeoriaCambio.validacion_completa"
    },
    {
      "class": "CausalExtractor",
      "function": "extract_causal_hierarchy",
      "method_type": "extraction",
      "priority": 3,
      "description": "CausalExtractor.extract_causal_hierarchy"
    },
    {
      "class": "HierarchicalGenerativeModel",
      "function": "verify_conditional_independence",
      "method_type": "analysis",
      "priority": 4,
      "description": "HierarchicalGenerativeModel.verify_conditional_independence"
    }
  ]
}

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```

    },
    {
      "class": "HierarchicalGenerativeModel",
      "function": "_generate_independence_tests",
      "method_type": "analysis",
      "priority": 5,
      "description": "HierarchicalGenerativeModel._generate_independence_tests"
    },
    {
      "class": "BayesianCounterfactualAuditor",
      "function": "construct_scm",
      "method_type": "analysis",
      "priority": 6,
      "description": "BayesianCounterfactualAuditor.construct_scm"
    },
    {
      "class": "AdvancedDAGValidator",
      "function": "_perform_sensitivity_analysis_internal",
      "method_type": "analysis",
      "priority": 7,
      "description": "AdvancedDAGValidator._perform_sensitivity_analysis_internal"
    },
    {
      "class": "BayesFactorTable",
      "function": "get_bayes_factor",
      "method_type": "analysis",
      "priority": 8,
      "description": "BayesFactorTable.get_bayes_factor"
    }
  ],
  "patterns": [
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q227-000",
      "match_type": "REGEX",
      "pattern": "cadena causal|lógica de intervención|si... entonces..."
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q227-001",
      "match_type": "REGEX",
      "pattern": "el resultado se logrará siempre y cuando|asumiendo que"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q227-002",
      "match_type": "REGEX",
      "pattern": "supuesto clave|premisa fundamental"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q227-003",
      "match_type": "REGEX",
      "pattern": "condición habilitante|factor crítico|requiere de"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q227-004",
      "match_type": "REGEX",
      "pattern": "depende de la capacidad de la Oficina de Registro de Instrumentos Públicos"
    }
  ]
}

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        "category": "GENERAL",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q227-005",
        "match_type": "REGEX",
        "pattern": "un supuesto es que la formalización incentive la inversión en el predio"
    },
    {
        "category": "GENERAL",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q227-006",
        "match_type": "REGEX",
        "pattern": "se requiere que el mercado responda a la mejora de la productividad"
    }
],
"policy_area_id": "PA07",
"question_global": 227,
"question_id": "Q227",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿Se explicita la cadena causal que lleva a la mejora territorial, mencionando
'supuestos' clave (ej. 'si los propietarios registran los títulos') o 'condiciones habilitantes'?",
"validations": {}
},
{
    "base_slot": "D4-Q3",
    "cluster_id": "CL01",
    "dimension_id": "DIM04",
    "expected_elements": [
        {
            "required": true,
            "type": "evidencia_comparada"
        },
        {
            "required": true,
            "type": "justificacion_capacidad"
        },
        {
            "required": true,
            "type": "justificacion_recursos"
        }
    ],
    "failure_contract": {
        "abort_if": [
            "missing_required_element",
            "incomplete_text"
        ],
        "emit_code": "ABORT-Q228-REQ"
    },
    "method_sets": [
        {
            "class": "PDETMunicipalPlanAnalyzer",
            "function": "_get_prior_effect",
            "method_type": "analysis",
            "priority": 1,
            "description": "PDETMunicipalPlanAnalyzer._get_prior_effect"
        },
        {
            "class": "PDETMunicipalPlanAnalyzer",
            "function": "_estimate_effect_bayesian",
            "method_type": "analysis",
            "priority": 2,
            "description": "PDETMunicipalPlanAnalyzer._estimate_effect_bayesian"
        },
        {
            "class": "PDETMunicipalPlanAnalyzer",
            "function": "_compute_robustness_value",
            "method_type": "analysis",
            "priority": 3,
            "description": "PDETMunicipalPlanAnalyzer._compute_robustness_value"
        }
    ],

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{
  "class": "AdaptivePriorCalculator",
  "function": "sensitivity_analysis",
  "method_type": "analysis",
  "priority": 4,
  "description": "AdaptivePriorCalculator.sensitivity_analysis"
},
{
  "class": "HierarchicalGenerativeModel",
  "function": "_calculate_r_hat",
  "method_type": "scoring",
  "priority": 5,
  "description": "HierarchicalGenerativeModel._calculate_r_hat"
},
{
  "class": "HierarchicalGenerativeModel",
  "function": "_calculate_ess",
  "method_type": "scoring",
  "priority": 6,
  "description": "HierarchicalGenerativeModel._calculate_ess"
},
{
  "class": "AdvancedDAGValidator",
  "function": "_calculate_statistical_power",
  "method_type": "scoring",
  "priority": 7,
  "description": "AdvancedDAGValidator._calculate_statistical_power"
},
{
  "class": "BayesianMechanismInference",
  "function": "_aggregate_bayesian_confidence",
  "method_type": "analysis",
  "priority": 8,
  "description": "BayesianMechanismInference._aggregate_bayesian_confidence"
}
],
"patterns": [
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q228-000",
    "match_type": "REGEX",
    "pattern": "meta ambiciosa pero factible|meta realista dado el presupuesto de inversión"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q228-001",
    "match_type": "REGEX",
    "pattern": "la meta se justifica por el convenio interadministrativo con el IGAC"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q228-002",
    "match_type": "REGEX",
    "pattern": "con la inversión de X se espera lograr la actualización de Y hectáreas"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q228-003",
    "match_type": "REGEX",
    "pattern": "la capacidad técnica de la Secretaría de Planeación permite"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,

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    "flags": "i",
    "id": "PAT-Q228-004",
    "match_type": "REGEX",
    "pattern": "en experiencias similares de otros municipios gestores catastrales"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q228-005",
    "match_type": "REGEX",
    "pattern": "benchmark|referente nacional|meta del PND en catastro multipropósito"
  }
],
"policy_area_id": "PA07",
"question_global": 228,
"question_id": "Q228",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿La ambición de las metas de resultado (ej. 'actualizar el 100% del catastro') se justifica en función de los recursos, la capacidad técnica o se compara con 'casos' de otros municipios?",
"validations": {}
},
{
  "base_slot": "D4-Q4",
  "cluster_id": "CL01",
  "dimension_id": "DIM04",
  "expected_elements": [
    {
      "required": true,
      "type": "criterios_exito_definidos"
    },
    {
      "required": true,
      "type": "vinculo_resultado_problema"
    }
  ]
},
"failure_contract": {
  "abort_if": [
    "missing_required_element",
    "incomplete_text"
  ],
  "emit_code": "ABORT-Q229-REQ"
},
"method_sets": [
  {
    "class": "PolicyContradictionDetector",
    "function": "_calculate_objective_alignment",
    "method_type": "scoring",
    "priority": 1,
    "description": "PolicyContradictionDetector._calculate_objective_alignment"
  },
  {
    "class": "PolicyContradictionDetector",
    "function": "_identify_affected_sections",
    "method_type": "analysis",
    "priority": 2,
    "description": "PolicyContradictionDetector._identify_affected_sections"
  },
  {
    "class": "PolicyContradictionDetector",
    "function": "_generate_resolution_recommendations",
    "method_type": "analysis",
    "priority": 3,
    "description": "PolicyContradictionDetector._generate_resolution_recommendations"
  },
  {
    "class": "OperationalizationAuditor",
    "function": "_generate_optimal_remediations",
    "method_type": "analysis",
    "priority": 4,

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    "description": "OperationalizationAuditor._generate_optimal_remediations"
  },
  {
    "class": "OperationalizationAuditor",
    "function": "_get_remediation_text",
    "method_type": "analysis",
    "priority": 5,
    "description": "OperationalizationAuditor._get_remediation_text"
  },
  {
    "class": "BayesianCounterfactualAuditor",
    "function": "aggregate_risk_and_prioritize",
    "method_type": "analysis",
    "priority": 6,
    "description": "BayesianCounterfactualAuditor.aggregate_risk_and_prioritize"
  },
  {
    "class": "FinancialAuditor",
    "function": "_detect_allocation_gaps",
    "method_type": "analysis",
    "priority": 7,
    "description": "FinancialAuditor._detect_allocation_gaps"
  }
],
"patterns": [
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q229-000",
    "match_type": "REGEX",
    "pattern": "este resultado responde al problema de la informalidad predial"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q229-001",
    "match_type": "REGEX",
    "pattern": "para solucionar el aislamiento de las veredas"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q229-002",
    "match_type": "REGEX",
    "pattern": "el resultado atiende directamente el conflicto de uso del suelo"
  },
  {
    "category": "INDICADOR",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q229-003",
    "match_type": "REGEX",
    "pattern": "criterio de éxito|se considerará un logro si la informalidad baja de X%"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q229-004",
    "match_type": "REGEX",
    "pattern": "umbral de cumplimiento|mínimo aceptable"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q229-005",
    "match_type": "REGEX",
    "pattern": "matriz de coherencia|alineación diagnóstico-estrategia"
  }
]

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    }
  ],
  "policy_area_id": "PA07",
  "question_global": 229,
  "question_id": "Q229",
  "scoring_definition_ref": "scoring_modalities.TYPE_A",
  "scoring_modality": "TYPE_A",
  "text": "¿Los resultados propuestos (ej. 'aumento de la seguridad jurídica de la tenencia')
'atienden' o 'abordan' directamente los problemas de informalidad y conflicto por la tierra
priorizados en el diagnóstico?",
  "validations": {}
},
{
  "base_slot": "D4-Q5",
  "cluster_id": "CL01",
  "dimension_id": "DIM04",
  "expected_elements": [
    {
      "required": true,
      "type": "alineacion_acuerdo_paz"
    },
    {
      "required": true,
      "type": "alineacion_ods"
    },
    {
      "required": true,
      "type": "alineacion_pnd"
    }
  ],
  "failure_contract": {
    "abort_if": [
      "missing_required_element",
      "incomplete_text"
    ],
    "emit_code": "ABORT-Q230-REQ"
  },
  "method_sets": [
    {
      "class": "PDETMunicipalPlanAnalyzer",
      "function": "_score_pdet_alignment",
      "method_type": "scoring",
      "priority": 1,
      "description": "PDETMunicipalPlanAnalyzer._score_pdet_alignment"
    },
    {
      "class": "PDETMunicipalPlanAnalyzer",
      "function": "_score_causal_coherence",
      "method_type": "scoring",
      "priority": 2,
      "description": "PDETMunicipalPlanAnalyzer._score_causal_coherence"
    },
    {
      "class": "CDAFFramework",
      "function": "_validate_dnp_compliance",
      "method_type": "validation",
      "priority": 3,
      "description": "CDAFFramework._validate_dnp_compliance"
    },
    {
      "class": "CDAFFramework",
      "function": "_generate_dnp_report",
      "method_type": "analysis",
      "priority": 4,
      "description": "CDAFFramework._generate_dnp_report"
    },
    {
      "class": "IndustrialPolicyProcessor",
      "function": "_analyze_causal_dimensions",
      "method_type": "analysis",
      "priority": 5,
      "description": "IndustrialPolicyProcessor._analyze_causal_dimensions"
    }
  ]
}

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    },
    {
      "class": "AdaptivePriorCalculator",
      "function": "validate_quality_criteria",
      "method_type": "validation",
      "priority": 6,
      "description": "AdaptivePriorCalculator.validate_quality_criteria"
    }
  ],
  "patterns": [
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q230-000",
      "match_type": "REGEX",
      "pattern": "alineado con el Plan Nacional de Desarrollo|PND|transformación 1 y 4"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q230-001",
      "match_type": "REGEX",
      "pattern": "contribuye al Punto 1 del Acuerdo de Paz|Reforma Rural Integral|RRI"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q230-002",
      "match_type": "REGEX",
      "pattern": "implementación de iniciativas PDET|Planes Nacionales Sectoriales"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q230-003",
      "match_type": "REGEX",
      "pattern": "aporta a los ODS 1, 2, 8, 11, 15|Objetivos de Desarrollo Sostenible"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q230-004",
      "match_type": "REGEX",
      "pattern": "en concordancia con la política de Catastro Multipropósito|CONPES 3958"
    }
  ],
  "policy_area_id": "PA07",
  "question_global": 230,
  "question_id": "Q230",
  "scoring_definition_ref": "scoring_modalities.TYPE_A",
  "scoring_modality": "TYPE_A",
  "text": "¿El plan declara la alineación de sus resultados de tierras con marcos superiores como el PND, los ODS o la Reforma Rural Integral?",
  "validations": {}
},
{
  "base_slot": "D5-Q1",
  "cluster_id": "CL01",
  "dimension_id": "DIM05",
  "expected_elements": [
    {
      "required": true,
      "type": "impacto_definido"
    },
    {
      "required": true,
      "type": "rezago_temporal"
    }
  ]
}

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    },
    {
      "required": true,
      "type": "ruta_transmission"
    }
  ],
  "failure_contract": {
    "abort_if": [
      "missing_required_element",
      "incomplete_text"
    ],
    "emit_code": "ABORT-Q231-REQ"
  },
  "method_sets": [
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      "class": "PDETMunicipalPlanAnalyzer",
      "function": "generate_counterfactuals",
      "method_type": "analysis",
      "priority": 1,
      "description": "PDETMunicipalPlanAnalyzer.generate_counterfactuals"
    },
    {
      "class": "PDETMunicipalPlanAnalyzer",
      "function": "_simulate_intervention",
      "method_type": "analysis",
      "priority": 2,
      "description": "PDETMunicipalPlanAnalyzer._simulate_intervention"
    },
    {
      "class": "PDETMunicipalPlanAnalyzer",
      "function": "_generate_scenario_narrative",
      "method_type": "analysis",
      "priority": 3,
      "description": "PDETMunicipalPlanAnalyzer._generate_scenario_narrative"
    },
    {
      "class": "PDETMunicipalPlanAnalyzer",
      "function": "_find_mediator_mentions",
      "method_type": "analysis",
      "priority": 4,
      "description": "PDETMunicipalPlanAnalyzer._find_mediator_mentions"
    },
    {
      "class": "TeoriaCambio",
      "function": "_validar_orden_causal",
      "method_type": "analysis",
      "priority": 5,
      "description": "TeoriaCambio._validar_orden_causal"
    },
    {
      "class": "CausalExtractor",
      "function": "_assess_temporal_coherence",
      "method_type": "analysis",
      "priority": 6,
      "description": "CausalExtractor._assess_temporal_coherence"
    },
    {
      "class": "TextMiningEngine",
      "function": "_generate_interventions",
      "method_type": "analysis",
      "priority": 7,
      "description": "TextMiningEngine._generate_interventions"
    },
    {
      "class": "BayesianCounterfactualAuditor",
      "function": "construct_scm",
      "method_type": "analysis",
      "priority": 8,
      "description": "BayesianCounterfactualAuditor.construct_scm"
    }
  ],
  "patterns": [

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{
  "category": "TERRITORIAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q231-000",
  "match_type": "REGEX",
  "pattern": "impacto esperado|visión de largo plazo|transformación territorial"
},
{
  "category": "TERRITORIAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q231-001",
  "match_type": "REGEX",
  "pattern": "ordenamiento territorial sostenible|desarrollo rural integral y competitivo"
},
{
  "category": "GENERAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q231-002",
  "match_type": "REGEX",
  "pattern": "cierre de brechas rural-urbanas|convergencia regional"
},
{
  "category": "GENERAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q231-003",
  "match_type": "REGEX",
  "pattern": "la suma de los resultados de seguridad jurídica y productividad generará"
},
{
  "category": "GENERAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q231-004",
  "match_type": "REGEX",
  "pattern": "ruta de transmisión|cadena de impacto"
},
{
  "category": "TEMPORAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q231-005",
  "match_type": "REGEX",
  "pattern": "tiempo de maduración|se espera observar en 10-15 años"
},
{
  "category": "GENERAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q231-006",
  "match_type": "LITERAL",
  "pattern": "rezago temporal|efectos estructurales"
}
],
"policy_area_id": "PA07",
"question_global": 231,
"question_id": "Q231",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿El PDM define 'impactos' de largo plazo (ej. 'ordenamiento sostenible del territorio', 'desarrollo rural competitivo')? Se debe verificar si se menciona la ruta desde los resultados y el 'tiempo de maduración' esperado.",
"validations": {}
},
{
  "base_slot": "D5-Q2",
  "cluster_id": "CL01",
  "dimension_id": "DIM05",
  "expected_elements": [

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{
  "required": true,
  "type": "justifica_validez"
},
{
  "required": true,
  "type": "usa_indices_compuestos"
},
{
  "required": true,
  "type": "usa_proxies"
}
],
"failure_contract": {
  "abort_if": [
    "missing_required_element",
    "incomplete_text"
  ],
  "emit_code": "ABORT-Q232-REQ"
},
"method_sets": [
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "calculate_quality_score",
    "method_type": "scoring",
    "priority": 1,
    "description": "PDETMunicipalPlanAnalyzer.calculate_quality_score"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_estimate_score_confidence",
    "method_type": "scoring",
    "priority": 2,
    "description": "PDETMunicipalPlanAnalyzer._estimate_score_confidence"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_compute_e_value",
    "method_type": "analysis",
    "priority": 3,
    "description": "PDETMunicipalPlanAnalyzer._compute_e_value"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_compute_robustness_value",
    "method_type": "analysis",
    "priority": 4,
    "description": "PDETMunicipalPlanAnalyzer._compute_robustness_value"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_interpret_sensitivity",
    "method_type": "analysis",
    "priority": 5,
    "description": "PDETMunicipalPlanAnalyzer._interpret_sensitivity"
  },
  {
    "class": "ReportingEngine",
    "function": "_calculate_quality_score",
    "method_type": "scoring",
    "priority": 6,
    "description": "ReportingEngine._calculate_quality_score"
  },
  {
    "class": "BayesianMechanismInference",
    "function": "_aggregate_bayesian_confidence",
    "method_type": "analysis",
    "priority": 7,
    "description": "BayesianMechanismInference._aggregate_bayesian_confidence"
  },
  {
    "class": "PolicyAnalysisEmbedder",

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    "function": "evaluate_policy_numerical_consistency",
    "method_type": "analysis",
    "priority": 8,
    "description": "PolicyAnalysisEmbedder.evaluate_policy_numerical_consistency"
  },
  {
    "class": "PolicyAnalysisEmbedder",
    "function": "get_diagnostics",
    "method_type": "analysis",
    "priority": 9,
    "description": "PolicyAnalysisEmbedder.get_diagnostics"
  },
  {
    "class": "PolicyAnalysisEmbedder",
    "function": "process_document",
    "method_type": "analysis",
    "priority": 10,
    "description": "PolicyAnalysisEmbedder.process_document"
  },
  {
    "class": "PolicyAnalysisEmbedder",
    "function": "_generate_query_from_pdq",
    "method_type": "analysis",
    "priority": 11,
    "description": "PolicyAnalysisEmbedder._generate_query_from_pdq"
  },
  {
    "class": "PolicyAnalysisEmbedder",
    "function": "_filter_by_pdq",
    "method_type": "analysis",
    "priority": 12,
    "description": "PolicyAnalysisEmbedder._filter_by_pdq"
  },
  {
    "class": "PolicyAnalysisEmbedder",
    "function": "_extract_numerical_values",
    "method_type": "extraction",
    "priority": 13,
    "description": "PolicyAnalysisEmbedder._extract_numerical_values"
  },
  {
    "class": "PolicyAnalysisEmbedder",
    "function": "_embed_texts",
    "method_type": "analysis",
    "priority": 14,
    "description": "PolicyAnalysisEmbedder._embed_texts"
  },
  {
    "class": "PolicyAnalysisEmbedder",
    "function": "_compute_overall_confidence",
    "method_type": "analysis",
    "priority": 15,
    "description": "PolicyAnalysisEmbedder._compute_overall_confidence"
  },
  {
    "class": "FinancialAuditor",
    "function": "_calculate_sufficiency",
    "method_type": "scoring",
    "priority": 16,
    "description": "FinancialAuditor._calculate_sufficiency"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_interpret_overall_quality",
    "method_type": "analysis",
    "priority": 17,
    "description": "PDETMunicipalPlanAnalyzer._interpret_overall_quality"
  },
  {
    "class": "BayesianCounterfactualAuditor",
    "function": "aggregate_risk_and_prioritize",
    "method_type": "analysis",

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    "priority": 18,
    "description": "BayesianCounterfactualAuditor.aggregate_risk_and_prioritize"
  },
  {
    "class": "PolicyTextProcessor",
    "function": "normalize_unicode",
    "method_type": "analysis",
    "priority": 19,
    "description": "PolicyTextProcessor.normalize_unicode"
  },
  {
    "class": "PolicyTextProcessor",
    "function": "segment_into_sentences",
    "method_type": "analysis",
    "priority": 20,
    "description": "PolicyTextProcessor.segment_into_sentences"
  },
  {
    "class": "IndustrialPolicyProcessor",
    "function": "_compute_evidence_confidence",
    "method_type": "analysis",
    "priority": 21,
    "description": "IndustrialPolicyProcessor._compute_evidence_confidence"
  },
  {
    "class": "IndustrialPolicyProcessor",
    "function": "_compute_avg_confidence",
    "method_type": "analysis",
    "priority": 22,
    "description": "IndustrialPolicyProcessor._compute_avg_confidence"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_quality_to_dict",
    "method_type": "analysis",
    "priority": 23,
    "description": "PDETMunicipalPlanAnalyzer._quality_to_dict"
  },
  {
    "class": "IndustrialPolicyProcessor",
    "function": "_construct_evidence_bundle",
    "method_type": "analysis",
    "priority": 24,
    "description": "IndustrialPolicyProcessor._construct_evidence_bundle"
  },
  {
    "class": "PolicyTextProcessor",
    "function": "compile_pattern",
    "method_type": "analysis",
    "priority": 25,
    "description": "PolicyTextProcessor.compile_pattern"
  },
  {
    "class": "PolicyTextProcessor",
    "function": "extract_contextual_window",
    "method_type": "extraction",
    "priority": 26,
    "description": "PolicyTextProcessor.extract_contextual_window"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "generate_executive_report",
    "method_type": "analysis",
    "priority": 27,
    "description": "PDETMunicipalPlanAnalyzer.generate_executive_report"
  },
  {
    "class": "IndustrialPolicyProcessor",
    "function": "export_results",
    "method_type": "analysis",
    "priority": 28,
    "description": "IndustrialPolicyProcessor.export_results"
  }

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    }
  ],
  "patterns": [
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q232-000",
      "match_type": "REGEX",
      "pattern": "Índice de Competitividad|Índice de Pobreza Multidimensional Rural"
    },
    {
      "category": "INDICADOR",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q232-001",
      "match_type": "REGEX",
      "pattern": "indicador compuesto|indicador sintético"
    },
    {
      "category": "INDICADOR",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q232-002",
      "match_type": "REGEX",
      "pattern": "se usará como proxy|indicador aproximado"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q232-003",
      "match_type": "REGEX",
      "pattern": "el valor agregado agropecuario como proxy de la competitividad"
    },
    {
      "category": "INDICADOR",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q232-004",
      "match_type": "REGEX",
      "pattern": "la tasa de migración neta rural como proxy del arraigo territorial"
    },
    {
      "category": "INDICADOR",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q232-005",
      "match_type": "REGEX",
      "pattern": "este indicador es válido porque refleja|captura las dinámicas de desarrollo"
    }
  ],
  "policy_area_id": "PA07",
  "question_global": 232,
  "question_id": "Q232",
  "scoring_definition_ref": "scoring_modalities.TYPE_A",
  "scoring_modality": "TYPE_A",
  "text": "¿Se utilizan 'índices' (ej. Índice de Competitividad Rural) o 'proxies' para medir los impactos en el desarrollo territorial, justificando su validez?",
  "validations": {}
},
{
  "base_slot": "D5-Q3",
  "cluster_id": "CL01",
  "dimension_id": "DIM05",
  "expected_elements": [
    {
      "required": true,
      "type": "documenta_validez"
    },
    {
      "required": true,

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    "type": "proxy_para_intangibles"
  },
  {
    "required": true,
    "type": "reconoce_limitaciones"
  }
],
"failure_contract": {
  "abort_if": [
    "missing_required_element",
    "incomplete_text"
  ],
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    "function": "_calculate_semantic_distance",
    "method_type": "scoring",
    "priority": 1,
    "description": "CausalExtractor._calculate_semantic_distance"
  },
  {
    "class": "SemanticAnalyzer",
    "function": "extract_semantic_cube",
    "method_type": "extraction",
    "priority": 2,
    "description": "SemanticAnalyzer.extract_semantic_cube"
  },
  {
    "class": "BayesianMechanismInference",
    "function": "_quantify_uncertainty",
    "method_type": "analysis",
    "priority": 3,
    "description": "BayesianMechanismInference._quantify_uncertainty"
  },
  {
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    "function": "_find_mediator_mentions",
    "method_type": "analysis",
    "priority": 4,
    "description": "PDETMunicipalPlanAnalyzer._find_mediator_mentions"
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    "function": "get_diagnostics",
    "method_type": "analysis",
    "priority": 5,
    "description": "PolicyAnalysisEmbedder.get_diagnostics"
  },
  {
    "class": "AdaptivePriorCalculator",
    "function": "_perturb_evidence",
    "method_type": "analysis",
    "priority": 6,
    "description": "AdaptivePriorCalculator._perturb_evidence"
  }
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    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q233-000",
    "match_type": "REGEX",
    "pattern": "dado que es difícil medir el arraigo territorial|para aproximar"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q233-001",

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    "match_type": "REGEX",
    "pattern": "se utilizará como proxy|medición indirecta"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q233-002",
    "match_type": "REGEX",
    "pattern": "la inversión en mejoras de la vivienda rural como proxy de arraigo"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q233-003",
    "match_type": "REGEX",
    "pattern": "este proxy es validado por estudios de desarrollo rural"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q233-004",
    "match_type": "LITERAL",
    "pattern": "una limitación es que no captura las motivaciones culturales"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q233-005",
    "match_type": "REGEX",
    "pattern": "aunque imperfecto, este proxy nos da una señal de permanencia"
  }
],
"policy_area_id": "PA07",
"question_global": 233,
"question_id": "Q233",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "Cuando un impacto territorial es difícil de medir (ej. 'arraigo de la población al campo'), ¿se recurre a un 'proxy'? Se valora si el texto documenta su 'validez' y reconoce sus 'limitaciones'.",
"validations": {}
},
{
  "base_slot": "D5-Q4",
  "cluster_id": "CL01",
  "dimension_id": "DIM05",
  "expected_elements": [
    {
      "required": true,
      "type": "alineacion_marcos"
    },
    {
      "required": true,
      "type": "riesgos_sistemicos"
    }
  ]
},
"failure_contract": {
  "abort_if": [
    "missing_required_element",
    "incomplete_text"
  ],
  "emit_code": "ABORT-Q234-REQ"
},
"method_sets": [
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    "class": "OperationalizationAuditor",
    "function": "_audit_systemic_risk",
    "method_type": "validation",

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    "priority": 1,
    "description": "OperationalizationAuditor._audit_systemic_risk"
  },
  {
    "class": "BayesianCounterfactualAuditor",
    "function": "refutation_and_sanity_checks",
    "method_type": "analysis",
    "priority": 2,
    "description": "BayesianCounterfactualAuditor.refutation_and_sanity_checks"
  },
  {
    "class": "BayesianCounterfactualAuditor",
    "function": "_test_effect_stability",
    "method_type": "analysis",
    "priority": 3,
    "description": "BayesianCounterfactualAuditor._test_effect_stability"
  },
  {
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    "function": "_interpret_risk",
    "method_type": "analysis",
    "priority": 4,
    "description": "PDETMunicipalPlanAnalyzer._interpret_risk"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_interpret_sensitivity",
    "method_type": "analysis",
    "priority": 5,
    "description": "PDETMunicipalPlanAnalyzer._interpret_sensitivity"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_break_cycles",
    "method_type": "analysis",
    "priority": 6,
    "description": "PDETMunicipalPlanAnalyzer._break_cycles"
  },
  {
    "class": "AdaptivePriorCalculator",
    "function": "sensitivity_analysis",
    "method_type": "analysis",
    "priority": 7,
    "description": "AdaptivePriorCalculator.sensitivity_analysis"
  }
],
"patterns": [
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q234-000",
    "match_type": "REGEX",
    "pattern": "visión de la Misión para la Transformación del Campo|Agenda 2030"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q234-001",
    "match_type": "LITERAL",
    "pattern": "riesgo sistémico|choque externo|crisis climática"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q234-002",
    "match_type": "REGEX",
    "pattern": "cambios en los precios internacionales de los commodities agrícolas"
  },
  {

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    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q234-003",
    "match_type": "REGEX",
    "pattern": "expansión de economías ilegales o megaproyectos"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q234-004",
    "match_type": "REGEX",
    "pattern": "estos factores podrían revertir los avances en desarrollo rural"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q234-005",
    "match_type": "LITERAL",
    "pattern": "el mecanismo causal es vulnerable a|sensible a las políticas
macroeconómicas"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q234-006",
    "match_type": "REGEX",
    "pattern": "estrategias de diversificación productiva|resiliencia"
  }
],
"policy_area_id": "PA07",
"question_global": 234,
"question_id": "Q234",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿Los impactos territoriales se alinean con marcos nacionales/globales y consideran
'riesgos sistémicos' (ej. cambios en el uso del suelo a gran escala) que podrían romper el mecanismo
causal?",
"validations": {}
},
{
  "base_slot": "D5-Q5",
  "cluster_id": "CL01",
  "dimension_id": "DIM05",
  "expected_elements": [
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      "type": "análisis_realismo"
    },
    {
      "required": true,
      "type": "efectos_no_deseados"
    },
    {
      "required": true,
      "type": "hipotesis_limite"
    }
  ],
  "failure_contract": {
    "abort_if": [
      "missing_required_element",
      "incomplete_text"
    ],
    "emit_code": "ABORT-Q235-REQ"
  },
  "method_sets": [
    {
      "class": "HierarchicalGenerativeModel",
      "function": "posterior_predictive_check",

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    "method_type": "analysis",
    "priority": 1,
    "description": "HierarchicalGenerativeModel.posterior_predictive_check"
  },
  {
    "class": "HierarchicalGenerativeModel",
    "function": "_ablation_analysis",
    "method_type": "analysis",
    "priority": 2,
    "description": "HierarchicalGenerativeModel._ablation_analysis"
  },
  {
    "class": "HierarchicalGenerativeModel",
    "function": "_calculate_waic_difference",
    "method_type": "scoring",
    "priority": 3,
    "description": "HierarchicalGenerativeModel._calculate_waic_difference"
  },
  {
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    "function": "_add_ood_noise",
    "method_type": "analysis",
    "priority": 4,
    "description": "AdaptivePriorCalculator._add_ood_noise"
  },
  {
    "class": "AdaptivePriorCalculator",
    "function": "validate_quality_criteria",
    "method_type": "validation",
    "priority": 5,
    "description": "AdaptivePriorCalculator.validate_quality_criteria"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_compute_e_value",
    "method_type": "analysis",
    "priority": 6,
    "description": "PDETMunicipalPlanAnalyzer._compute_e_value"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_compute_robustness_value",
    "method_type": "analysis",
    "priority": 7,
    "description": "PDETMunicipalPlanAnalyzer._compute_robustness_value"
  },
  {
    "class": "BayesianMechanismInference",
    "function": "_calculate_coherence_factor",
    "method_type": "scoring",
    "priority": 8,
    "description": "BayesianMechanismInference._calculate_coherence_factor"
  }
],
"patterns": [
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q235-000",
    "match_type": "REGEX",
    "pattern": "la ambición del impacto es realista si se mantiene la cofinanciación
nacional"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q235-001",
    "match_type": "REGEX",
    "pattern": "efecto no deseado|consecuencia imprevista|externalidad negativa"
  },

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{
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  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q235-002",
  "match_type": "REGEX",
  "pattern": "riesgo de valorización del suelo y expulsión de campesinos"
},
{
  "category": "GENERAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q235-003",
  "match_type": "REGEX",
  "pattern": "posible intensificación de conflictos por el agua"
},
{
  "category": "GENERAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q235-004",
  "match_type": "REGEX",
  "pattern": "trade-off entre productividad y conservación ambiental"
},
{
  "category": "GENERAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q235-005",
  "match_type": "REGEX",
  "pattern": "hipótesis límite|el modelo funciona si los precios agrícolas son estables"
},
{
  "category": "GENERAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q235-006",
  "match_type": "LITERAL",
  "pattern": "supuesto crítico para el impacto a largo plazo"
}
],
"policy_area_id": "PA07",
"question_global": 235,
"question_id": "Q235",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿La ambición del impacto (ej. 'cierre total de la brecha rural-urbana') es realista? Se debe buscar si se analizan posibles 'efectos no deseados' o se declaran 'hipótesis límite'.",
"validations": {}
},
{
  "base_slot": "D6-Q1",
  "cluster_id": "CL01",
  "dimension_id": "DIM06",
  "expected_elements": [
    {
      "required": true,
      "type": "diagrama_causal"
    },
    {
      "required": true,
      "type": "supuestos_verificables"
    },
    {
      "required": true,
      "type": "teoria_cambio_explicita"
    }
  ],
  "failure_contract": {
    "abort_if": [
      "missing_required_element",

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    "incomplete_text"
  ],
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},
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    "method_type": "analysis",
    "priority": 1,
    "description": "TeoriaCambio.construir_grafo_causal"
  },
  {
    "class": "TeoriaCambio",
    "function": "validacion_completa",
    "method_type": "analysis",
    "priority": 2,
    "description": "TeoriaCambio.validacion_completa"
  },
  {
    "class": "TeoriaCambio",
    "function": "export_nodes",
    "method_type": "analysis",
    "priority": 3,
    "description": "TeoriaCambio.export_nodes"
  },
  {
    "class": "ReportingEngine",
    "function": "generate_causal_diagram",
    "method_type": "analysis",
    "priority": 4,
    "description": "ReportingEngine.generate_causal_diagram"
  },
  {
    "class": "ReportingEngine",
    "function": "generate_causal_model_json",
    "method_type": "analysis",
    "priority": 5,
    "description": "ReportingEngine.generate_causal_model_json"
  },
  {
    "class": "AdvancedDAGValidator",
    "function": "export_nodes",
    "method_type": "analysis",
    "priority": 6,
    "description": "AdvancedDAGValidator.export_nodes"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "export_causal_network",
    "method_type": "analysis",
    "priority": 7,
    "description": "PDETMunicipalPlanAnalyzer.export_causal_network"
  },
  {
    "class": "CausalExtractor",
    "function": "extract_causal_hierarchy",
    "method_type": "extraction",
    "priority": 8,
    "description": "CausalExtractor.extract_causal_hierarchy"
  }
],
"patterns": [
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q236-000",
    "match_type": "REGEX",
    "pattern": "teoría de cambio|marco lógico|cadena causal|modelo lógico de desarrollo"
  }
],

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rural"

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    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q236-001",
      "match_type": "REGEX",
      "pattern": "diagrama causal|gráfico de la teoría|esquema de intervención|figura"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q236-002",
      "match_type": "REGEX",
      "pattern": "causa raíz de la informalidad|determinante estructural del subdesarrollo
rural"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q236-003",
      "match_type": "REGEX",
      "pattern": "mediador|variable intermedia|eslabón|seguridad jurídica|acceso a
crédito|productividad"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q236-004",
      "match_type": "REGEX",
      "pattern": "moderador|factor contextual|calidad del suelo|conflicto armado"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q236-005",
      "match_type": "LITERAL",
      "pattern": "supuesto verificable|hipótesis a testear|premisa comprobable"
    }
  ],
  "policy_area_id": "PA07",
  "question_global": 236,
  "question_id": "Q236",
  "scoring_definition_ref": "scoring_modalities.TYPE_A",
  "scoring_modality": "TYPE_A",
  "text": "¿Existe una 'teoría de cambio' explícita para la política de tierras,
preferiblemente en un 'diagrama', que identifique causas (ej. catastro desactualizado), mediadores y
'supuestos verificables'?",
  "validations": {}
},
{
  "base_slot": "D6-Q2",
  "cluster_id": "CL01",
  "dimension_id": "DIM06",
  "expected_elements": [
    {
      "required": true,
      "type": "evita_saltos_logicos"
    },
    {
      "required": true,
      "type": "proporcionalidad_eslabones"
    }
  ]
},
"failure_contract": {
  "abort_if": [
    "missing_required_element",
    "incomplete_text"
  ]
},

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      "method_type": "analysis",
      "priority": 1,
      "description": "BeachEvidentialTest.apply_test_logic"
    },
    {
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      "function": "_test_necessity",
      "method_type": "analysis",
      "priority": 2,
      "description": "BayesianMechanismInference._test_necessity"
    },
    {
      "class": "BayesianMechanismInference",
      "function": "_test_sufficiency",
      "method_type": "analysis",
      "priority": 3,
      "description": "BayesianMechanismInference._test_sufficiency"
    },
    {
      "class": "BayesianMechanismInference",
      "function": "_calculate_coherence_factor",
      "method_type": "scoring",
      "priority": 4,
      "description": "BayesianMechanismInference._calculate_coherence_factor"
    },
    {
      "class": "BayesianCounterfactualAuditor",
      "function": "_test_effect_stability",
      "method_type": "analysis",
      "priority": 5,
      "description": "BayesianCounterfactualAuditor._test_effect_stability"
    },
    {
      "class": "IndustrialGradeValidator",
      "function": "validate_connection_matrix",
      "method_type": "validation",
      "priority": 6,
      "description": "IndustrialGradeValidator.validate_connection_matrix"
    },
    {
      "class": "PolicyAnalysisEmbedder",
      "function": "_compute_overall_confidence",
      "method_type": "analysis",
      "priority": 7,
      "description": "PolicyAnalysisEmbedder._compute_overall_confidence"
    }
  ],
  "patterns": [
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q237-000",
      "match_type": "REGEX",
      "pattern": "proporcionalidad entre|magnitud del efecto esperado"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q237-001",
      "match_type": "REGEX",
      "pattern": "salto lógico|brecha en la argumentación|milagro de implementación"
    },
    {
      "category": "GENERAL",

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    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q237-002",
    "match_type": "LITERAL",
    "pattern": "es realista esperar que|es factible que"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q237-003",
    "match_type": "REGEX",
    "pattern": "la escala de la intervención es coherente con la ambición del resultado"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q237-004",
    "match_type": "REGEX",
    "pattern": "se requieren pasos intermedios para lograr la competitividad"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q237-005",
    "match_type": "REGEX",
    "pattern": "el resultado es de mayor alcance que el producto"
  }
],
"policy_area_id": "PA07",
"question_global": 237,
"question_id": "Q237",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿Los saltos en la cadena causal de tierras son proporcionales (ej. la formalización
de un predio no genera por sí sola 'desarrollo rural integral')?",
"validations": {}
},
{
  "base_slot": "D6-Q3",
  "cluster_id": "CL01",
  "dimension_id": "DIM06",
  "expected_elements": [
    {
      "required": true,
      "type": "propone_pilotos_o_pruebas"
    },
    {
      "required": true,
      "type": "reconoce_inconsistencias"
    }
  ]
},
"failure_contract": {
  "abort_if": [
    "missing_required_element",
    "incomplete_text"
  ],
  "emit_code": "ABORT-Q238-REQ"
},
"method_sets": [
  {
    "class": "IndustrialGradeValidator",
    "function": "execute_suite",
    "method_type": "analysis",
    "priority": 1,
    "description": "IndustrialGradeValidator.execute_suite"
  },
  {
    "class": "IndustrialGradeValidator",
    "function": "validate_engine_readiness",

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    "method_type": "validation",
    "priority": 2,
    "description": "IndustrialGradeValidator.validate_engine_readiness"
  },
  {
    "class": "IndustrialGradeValidator",
    "function": "_benchmark_operation",
    "method_type": "analysis",
    "priority": 3,
    "description": "IndustrialGradeValidator._benchmark_operation"
  },
  {
    "class": "AdaptivePriorCalculator",
    "function": "validate_quality_criteria",
    "method_type": "validation",
    "priority": 4,
    "description": "AdaptivePriorCalculator.validate_quality_criteria"
  },
  {
    "class": "HierarchicalGenerativeModel",
    "function": "_calculate_r_hat",
    "method_type": "scoring",
    "priority": 5,
    "description": "HierarchicalGenerativeModel._calculate_r_hat"
  },
  {
    "class": "HierarchicalGenerativeModel",
    "function": "_calculate_ess",
    "method_type": "scoring",
    "priority": 6,
    "description": "HierarchicalGenerativeModel._calculate_ess"
  },
  {
    "class": "AdvancedDAGValidator",
    "function": "calculate_acyclicity_pvalue",
    "method_type": "scoring",
    "priority": 7,
    "description": "AdvancedDAGValidator.calculate_acyclicity_pvalue"
  },
  {
    "class": "PerformanceAnalyzer",
    "function": "analyze_performance",
    "method_type": "analysis",
    "priority": 8,
    "description": "PerformanceAnalyzer.analyze_performance"
  }
],
"patterns": [
  {
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    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q238-000",
    "match_type": "REGEX",
    "pattern": "inconsistencia|debilidad en la teor\u00eda|supuesto d\u00e9bil"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q238-001",
    "match_type": "REGEX",
    "pattern": "se requiere validar si la titulaci\u00f3n por s\u00ed sola aumenta la inversi\u00f3n"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q238-002",
    "match_type": "REGEX",
    "pattern": "plan piloto de catastro en una vereda|fase experimental"
  }
],

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{
  "category": "GENERAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q238-003",
  "match_type": "REGEX",
  "pattern": "testear el supuesto de que las vías mejoradas aumentan la comercialización"
},
{
  "category": "GENERAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q238-004",
  "match_type": "REGEX",
  "pattern": "validar la hipótesis sobre la adopción de la asistencia técnica"
},
{
  "category": "GENERAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q238-005",
  "match_type": "REGEX",
  "pattern": "evaluación de mecanismos|monitoreo de la teoría de cambio"
},
{
  "category": "GENERAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q238-006",
  "match_type": "REGEX",
  "pattern": "aprendizaje adaptativo|gestión adaptativa del desarrollo rural"
}
],
"policy_area_id": "PA07",
"question_global": 238,
"question_id": "Q238",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿El plan reconoce 'inconsistencias' en su lógica de tierras y propone 'pilotos' o 'pruebas' para 'testear los supuestos' de sus intervenciones?",
"validations": {}
},
{
  "base_slot": "D6-Q4",
  "cluster_id": "CL01",
  "dimension_id": "DIM06",
  "expected_elements": [
    {
      "required": true,
      "type": "ciclos_aprendizaje"
    },
    {
      "required": true,
      "type": "mecanismos_correccion"
    },
    {
      "required": true,
      "type": "sistema_monitoreo"
    }
  ]
},
"failure_contract": {
  "abort_if": [
    "missing_required_element",
    "incomplete_text"
  ],
  "emit_code": "ABORT-Q239-REQ"
},
"method_sets": [
  {
    "class": "ConfigLoader",
    "function": "update_priors_from_feedback",
    "method_type": "analysis",

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    "priority": 1,
    "description": "ConfigLoader.update_priors_from_feedback"
  },
  {
    "class": "ConfigLoader",
    "function": "check_uncertainty_reduction_criterion",
    "method_type": "analysis",
    "priority": 2,
    "description": "ConfigLoader.check_uncertainty_reduction_criterion"
  },
  {
    "class": "ConfigLoader",
    "function": "_save_prior_history",
    "method_type": "analysis",
    "priority": 3,
    "description": "ConfigLoader._save_prior_history"
  },
  {
    "class": "ConfigLoader",
    "function": "_load_uncertainty_history",
    "method_type": "analysis",
    "priority": 4,
    "description": "ConfigLoader._load_uncertainty_history"
  },
  {
    "class": "CDAFFramework",
    "function": "_extract_feedback_from_audit",
    "method_type": "validation",
    "priority": 5,
    "description": "CDAFFramework._extract_feedback_from_audit"
  },
  {
    "class": "AdvancedDAGValidator",
    "function": "_calculate_node_importance",
    "method_type": "scoring",
    "priority": 6,
    "description": "AdvancedDAGValidator._calculate_node_importance"
  },
  {
    "class": "BayesFactorTable",
    "function": "get_bayes_factor",
    "method_type": "analysis",
    "priority": 7,
    "description": "BayesFactorTable.get_bayes_factor"
  }
],
"patterns": [
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q239-000",
    "match_type": "REGEX",
    "pattern": "sistema de seguimiento y evaluación|M&E del POT/PDET"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q239-001",
    "match_type": "REGEX",
    "pattern": "monitoreo a través de sistemas de información geográfica (SIG)"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q239-002",
    "match_type": "REGEX",
    "pattern": "alerta temprana sobre nuevos focos de informalidad o conflicto"
  }
]

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    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q239-003",
    "match_type": "REGEX",
    "pattern": "mecanismo de ajuste del plan vial|medida correctiva"
  },
  {
    "category": "TERRITORIAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q239-004",
    "match_type": "REGEX",
    "pattern": "retroalimentación desde el Consejo Municipal de Desarrollo Rural (CMDR)"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q239-005",
    "match_type": "REGEX",
    "pattern": "ciclos de aprendizaje|reuniones de revisión de la estrategia rural"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q239-006",
    "match_type": "REGEX",
    "pattern": "lecciones aprendidas en la implementación de proyectos"
  }
],
"policy_area_id": "PA07",
"question_global": 239,
"question_id": "Q239",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿Se describe un sistema de monitoreo para la política de tierras que incluya 'mecanismos de corrección', 'retroalimentación' o 'aprendizaje' para adaptar la estrategia?",
"validations": {}
},
{
  "base_slot": "D6-Q5",
  "cluster_id": "CL01",
  "dimension_id": "DIM06",
  "expected_elements": [
    {
      "required": true,
      "type": "analisis_contextual"
    },
    {
      "required": true,
      "type": "enfoque_diferencial"
    }
  ]
},
"failure_contract": {
  "abort_if": [
    "missing_required_element",
    "incomplete_text"
  ],
  "emit_code": "ABORT-Q240-REQ"
},
"method_sets": [
  {
    "class": "CausalExtractor",
    "function": "_calculate_language_specificity",
    "method_type": "scoring",
    "priority": 1,
    "description": "CausalExtractor._calculate_language_specificity"
  },
  {
    "class": "CausalExtractor",

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    "function": "_assess_temporal_coherence",
    "method_type": "analysis",
    "priority": 2,
    "description": "CausalExtractor._assess_temporal_coherence"
  },
  {
    "class": "TextMiningEngine",
    "function": "diagnose_critical_links",
    "method_type": "analysis",
    "priority": 3,
    "description": "TextMiningEngine.diagnose_critical_links"
  },
  {
    "class": "CausalInferenceSetup",
    "function": "identify_failure_points",
    "method_type": "analysis",
    "priority": 4,
    "description": "CausalInferenceSetup.identify_failure_points"
  },
  {
    "class": "CausalInferenceSetup",
    "function": "_get_dynamics_pattern",
    "method_type": "analysis",
    "priority": 5,
    "description": "CausalInferenceSetup._get_dynamics_pattern"
  },
  {
    "class": "SemanticProcessor",
    "function": "chunk_text",
    "method_type": "analysis",
    "priority": 6,
    "description": "SemanticProcessor.chunk_text"
  },
  {
    "class": "SemanticProcessor",
    "function": "_detect_pdm_structure",
    "method_type": "analysis",
    "priority": 7,
    "description": "SemanticProcessor._detect_pdm_structure"
  },
  {
    "class": "SemanticProcessor",
    "function": "_detect_table",
    "method_type": "analysis",
    "priority": 8,
    "description": "SemanticProcessor._detect_table"
  },
  {
    "class": "AdaptivePriorCalculator",
    "function": "generate_traceability_record",
    "method_type": "analysis",
    "priority": 9,
    "description": "AdaptivePriorCalculator.generate_traceability_record"
  }
],
"patterns": [
  {
    "category": "TERRITORIAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q240-000",
    "match_type": "REGEX",
    "pattern": "enfoque diferencial|enfoque territorial"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q240-001",
    "match_type": "REGEX",
    "pattern": "campesinos sin tierra|pequeños productores|mujeres rurales"
  },

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    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q240-002",
      "match_type": "REGEX",
      "pattern": "comunidades indígenas y sus resguardos|territorios colectivos
afrodescendientes"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q240-003",
      "match_type": "REGEX",
      "pattern": "población víctima de despojo y abandono de tierras"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q240-004",
      "match_type": "REGEX",
      "pattern": "restricciones por zonas de reserva forestal|parques nacionales|determinantes
ambientales"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q240-005",
      "match_type": "REGEX",
      "pattern": "contexto de conflicto armado y presencia de economías ilegales"
    },
    {
      "category": "TERRITORIAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q240-006",
      "match_type": "REGEX",
      "pattern": "estrategias territorializadas|acciones adaptadas a la vocación del suelo"
    }
  ],
  "policy_area_id": "PA07",
  "question_global": 240,
  "question_id": "Q240",
  "scoring_definition_ref": "scoring_modalities.TYPE_A",
  "scoring_modality": "TYPE_A",
  "text": "¿La lógica causal para tierras considera el contexto, reconociendo 'grupos
afectados' (comunidades étnicas, campesinos sin tierra) y 'restricciones' territoriales o
ambientales?",
  "validations": {}
},
{
  "base_slot": "D1-Q1",
  "cluster_id": "CL03",
  "dimension_id": "DIM01",
  "expected_elements": [
    {
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      "type": "fuentes_oficiales"
    },
    {
      "minimum": 3,
      "type": "indicadores_cuantitativos"
    },
    {
      "minimum": 2,
      "type": "series_temporales_años"
    }
  ],
  "failure_contract": {

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"abort_if": [
  "missing_required_element",
  "incomplete_text"
],
"emit_code": "ABORT-Q241-REQ"
},
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  {
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    "function": "diagnose_critical_links",
    "method_type": "analysis",
    "priority": 1,
    "description": "TextMiningEngine.diagnose_critical_links"
  },
  {
    "class": "TextMiningEngine",
    "function": "_analyze_link_text",
    "method_type": "analysis",
    "priority": 2,
    "description": "TextMiningEngine._analyze_link_text"
  },
  {
    "class": "IndustrialPolicyProcessor",
    "function": "process",
    "method_type": "analysis",
    "priority": 3,
    "description": "IndustrialPolicyProcessor.process"
  },
  {
    "class": "IndustrialPolicyProcessor",
    "function": "_match_patterns_in_sentences",
    "method_type": "analysis",
    "priority": 4,
    "description": "IndustrialPolicyProcessor._match_patterns_in_sentences"
  },
  {
    "class": "IndustrialPolicyProcessor",
    "function": "_extract_point_evidence",
    "method_type": "extraction",
    "priority": 5,
    "description": "IndustrialPolicyProcessor._extract_point_evidence"
  },
  {
    "class": "CausalExtractor",
    "function": "_extract_goals",
    "method_type": "extraction",
    "priority": 6,
    "description": "CausalExtractor._extract_goals"
  },
  {
    "class": "CausalExtractor",
    "function": "_parse_goal_context",
    "method_type": "extraction",
    "priority": 7,
    "description": "CausalExtractor._parse_goal_context"
  },
  {
    "class": "FinancialAuditor",
    "function": "_parse_amount",
    "method_type": "extraction",
    "priority": 8,
    "description": "FinancialAuditor._parse_amount"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_extract_financial_amounts",
    "method_type": "extraction",
    "priority": 9,
    "description": "PDETMunicipalPlanAnalyzer._extract_financial_amounts"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",

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    "function": "_extract_from_budget_table",
    "method_type": "extraction",
    "priority": 10,
    "description": "PDETMunicipalPlanAnalyzer._extract_from_budget_table"
  },
  {
    "class": "PolicyContradictionDetector",
    "function": "_extract_quantitative_claims",
    "method_type": "extraction",
    "priority": 11,
    "description": "PolicyContradictionDetector._extract_quantitative_claims"
  },
  {
    "class": "PolicyContradictionDetector",
    "function": "_parse_number",
    "method_type": "extraction",
    "priority": 12,
    "description": "PolicyContradictionDetector._parse_number"
  },
  {
    "class": "PolicyContradictionDetector",
    "function": "_statistical_significance_test",
    "method_type": "analysis",
    "priority": 13,
    "description": "PolicyContradictionDetector._statistical_significance_test"
  },
  {
    "class": "BayesianNumericalAnalyzer",
    "function": "evaluate_policy_metric",
    "method_type": "analysis",
    "priority": 14,
    "description": "BayesianNumericalAnalyzer.evaluate_policy_metric"
  },
  {
    "class": "BayesianNumericalAnalyzer",
    "function": "compare_policies",
    "method_type": "analysis",
    "priority": 15,
    "description": "BayesianNumericalAnalyzer.compare_policies"
  },
  {
    "class": "SemanticProcessor",
    "function": "chunk_text",
    "method_type": "analysis",
    "priority": 16,
    "description": "SemanticProcessor.chunk_text"
  },
  {
    "class": "SemanticProcessor",
    "function": "embed_single",
    "method_type": "analysis",
    "priority": 17,
    "description": "SemanticProcessor.embed_single"
  }
],
"patterns": [
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q241-000",
    "match_type": "REGEX",
    "pattern": "línea base|diagnóstico de riesgo para líderes|situación de personas
defensoras"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q241-001",
    "match_type": "REGEX",
    "pattern": "fuente:|según|reportado por|con datos de"
  }
]

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},
{
  "category": "GENERAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q241-002",
  "match_type": "REGEX",
  "pattern": "Defensoría del Pueblo|Sistema de Alertas Tempranas|SAT"
},
{
  "category": "TERRITORIAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q241-003",
  "match_type": "REGEX",
  "pattern": "Personería Municipal|Procuraduría General de la Nación"
},
{
  "category": "FUENTE_OFICIAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q241-004",
  "match_type": "REGEX",
  "pattern": "UNP|Unidad Nacional de Protección|Fiscalía|Policía Nacional|SIEDCO"
},
{
  "category": "GENERAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q241-005",
  "match_type": "REGEX",
  "pattern": "Somos Defensores|INDEPAZ|Plataformas de DDHH"
},
{
  "category": "GENERAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q241-006",
  "match_type": "REGEX",
  "pattern": "número de amenazas|casos de hostigamiento|atentados|homicidios"
},
{
  "category": "GENERAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q241-007",
  "match_type": "REGEX",
  "pattern": "líderes sociales|lideresas|defensores de derechos humanos"
},
{
  "category": "GENERAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q241-008",
  "match_type": "REGEX",
  "pattern": "líder comunal|ambiental|étnico|firmante del acuerdo"
},
{
  "category": "GENERAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q241-009",
  "match_type": "REGEX",
  "pattern": "solicitudes de protección|medidas de protección implementadas"
},
{
  "category": "GENERAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q241-010",
  "match_type": "REGEX",
  "pattern": "mapa de riesgo|zonas de mayor amenaza"
}

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    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q241-011",
      "match_type": "REGEX",
      "pattern": "2021|2022|2023|vigencia anterior|serie histórica de agresiones"
    },
    {
      "category": "INDICADOR",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q241-012",
      "match_type": "REGEX",
      "pattern": "número de casos|número de líderes|tasa por cada 100.000"
    }
  ],
  "policy_area_id": "PA08",
  "question_global": 241,
  "question_id": "Q241",
  "scoring_definition_ref": "scoring_modalities.TYPE_A",
  "scoring_modality": "TYPE_A",
  "text": "¿El diagnóstico presenta datos numéricos (número de amenazas, homicidios de líderes, medidas de protección activas) sobre la situación de los defensores de DDHH que sirvan como línea base? Se debe verificar el año y fuentes (ej. Defensoría, UNP, Personería).",
  "validations": {
    "buscar_indicadores_cuantitativos": {
      "minimum_required": 3,
      "patterns": [
        "\\d+%",
        "\\d+\\s*por\\s*\\d+",
        "tasa de",
        "índice de",
        "cobertura de"
      ],
      "specificity": "HIGH"
    },
    "cobertura": {
      "minimum_required": 1,
      "patterns": [
        "departamental",
        "municipal",
        "urbano",
        "rural",
        "territorial",
        "poblacional"
      ],
      "specificity": "HIGH"
    },
    "series_temporales": {
      "minimum_years": 3,
      "patterns": [
        "20\\d{2}",
        "año",
        "periodo",
        "histórico",
        "serie"
      ],
      "specificity": "MEDIUM"
    },
    "unidades_medicion": {
      "minimum_required": 2,
      "patterns": [
        "por 100.000",
        "por 1.000",
        "%",
        "porcentaje",
        "tasa",
        "razón"
      ],
      "specificity": "MEDIUM"
    }
  }

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    },
    "verificar_fuentes": {
      "minimum_required": 2,
      "patterns": [
        "fuente:",
        "según",
        "datos de",
        "DANE",
        "DNP",
        "SISPRO",
        "SIVIGILA",
        "Ministerio"
      ],
      "specificity": "MEDIUM"
    }
  },
  {
    "base_slot": "D1-Q2",
    "cluster_id": "CL03",
    "dimension_id": "DIM01",
    "expected_elements": [
      {
        "required": true,
        "type": "analisis_causal_problema"
      },
      {
        "required": true,
        "type": "cuantificacion_magnitud"
      },
      {
        "required": true,
        "type": "vacios_explicitos"
      }
    ],
    "failure_contract": {
      "abort_if": [
        "missing_required_element",
        "incomplete_text"
      ],
      "emit_code": "ABORT-Q242-REQ"
    },
    "method_sets": [
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        "class": "OperationalizationAuditor",
        "function": "_audit_direct_evidence",
        "method_type": "validation",
        "priority": 1,
        "description": "OperationalizationAuditor._audit_direct_evidence"
      },
      {
        "class": "OperationalizationAuditor",
        "function": "_audit_systemic_risk",
        "method_type": "validation",
        "priority": 2,
        "description": "OperationalizationAuditor._audit_systemic_risk"
      },
      {
        "class": "FinancialAuditor",
        "function": "_detect_allocation_gaps",
        "method_type": "analysis",
        "priority": 3,
        "description": "FinancialAuditor._detect_allocation_gaps"
      },
      {
        "class": "BayesianMechanismInference",
        "function": "_detect_gaps",
        "method_type": "analysis",
        "priority": 4,
        "description": "BayesianMechanismInference._detect_gaps"
      }
    ]
  }

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    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_generate_optimal_remediations",
    "method_type": "analysis",
    "priority": 5,
    "description": "PDETMunicipalPlanAnalyzer._generate_optimal_remediations"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_simulate_intervention",
    "method_type": "analysis",
    "priority": 6,
    "description": "PDETMunicipalPlanAnalyzer._simulate_intervention"
  },
  {
    "class": "BayesianCounterfactualAuditor",
    "function": "counterfactual_query",
    "method_type": "analysis",
    "priority": 7,
    "description": "BayesianCounterfactualAuditor.counterfactual_query"
  },
  {
    "class": "BayesianCounterfactualAuditor",
    "function": "_test_effect_stability",
    "method_type": "analysis",
    "priority": 8,
    "description": "BayesianCounterfactualAuditor._test_effect_stability"
  },
  {
    "class": "PolicyContradictionDetector",
    "function": "_detect_numerical_inconsistencies",
    "method_type": "analysis",
    "priority": 9,
    "description": "PolicyContradictionDetector._detect_numerical_inconsistencies"
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  {
    "class": "PolicyContradictionDetector",
    "function": "_calculate_numerical_divergence",
    "method_type": "scoring",
    "priority": 10,
    "description": "PolicyContradictionDetector._calculate_numerical_divergence"
  },
  {
    "class": "BayesianConfidenceCalculator",
    "function": "calculate_posterior",
    "method_type": "scoring",
    "priority": 11,
    "description": "BayesianConfidenceCalculator.calculate_posterior"
  },
  {
    "class": "PerformanceAnalyzer",
    "function": "analyze_performance",
    "method_type": "analysis",
    "priority": 12,
    "description": "PerformanceAnalyzer.analyze_performance"
  }
],
"patterns": [
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q242-000",
    "match_type": "REGEX",
    "pattern": "magnitud del riesgo|nivel de amenaza|aumento de las agresiones"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q242-001",
    "match_type": "REGEX",
    "pattern": "universo de líderes en riesgo|población defensora expuesta"
  }
]

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    },
    {
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      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q242-002",
      "match_type": "REGEX",
      "pattern": "la situación es crítica|alto nivel de vulnerabilidad"
    },
    {
      "category": "INDICADOR",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q242-003",
      "match_type": "REGEX",
      "pattern": "subregistro por miedo a denunciar|cifra negra de amenazas"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q242-004",
      "match_type": "REGEX",
      "pattern": "dificultad para documentar casos en zonas rurales"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q242-005",
      "match_type": "REGEX",
      "pattern": "falta de una caracterización completa del liderazgo social"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q242-006",
      "match_type": "REGEX",
      "pattern": "vacío de información sobre los autores de las amenazas"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q242-007",
      "match_type": "REGEX",
      "pattern": "causas del riesgo|factores de amenaza|estigmatización"
    }
  ],
  "policy_area_id": "PA08",
  "question_global": 242,
  "question_id": "Q242",
  "scoring_definition_ref": "scoring_modalities.TYPE_B",
  "scoring_modality": "TYPE_B",
  "text": "¿El texto dimensiona la magnitud del riesgo para los líderes, cuantificando el número de casos o la población en riesgo? Se debe buscar si se mencionan explícitamente 'vacíos de información' o el 'subregistro por miedo a denunciar'.",
  "validations": {}
},
{
  "base_slot": "D1-Q3",
  "cluster_id": "CL03",
  "dimension_id": "DIM01",
  "expected_elements": [
    {
      "required": true,
      "type": "asignacion_explicita"
    },
    {
      "required": true,
      "type": "suficiencia_justificada"
    }
  ]
}

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    },
    {
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      "type": "trazabilidad_ppi_bpin"
    }
  ],
  "failure_contract": {
    "abort_if": [
      "missing_required_element",
      "incomplete_text"
    ],
    "emit_code": "ABORT-Q243-REQ"
  },
  "method_sets": [
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      "function": "trace_financial_allocation",
      "method_type": "analysis",
      "priority": 1,
      "description": "FinancialAuditor.trace_financial_allocation"
    },
    {
      "class": "FinancialAuditor",
      "function": "_process_financial_table",
      "method_type": "analysis",
      "priority": 2,
      "description": "FinancialAuditor._process_financial_table"
    },
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      "function": "_match_program_to_node",
      "method_type": "analysis",
      "priority": 3,
      "description": "FinancialAuditor._match_program_to_node"
    },
    {
      "class": "FinancialAuditor",
      "function": "_match_goal_to_budget",
      "method_type": "analysis",
      "priority": 4,
      "description": "FinancialAuditor._match_goal_to_budget"
    },
    {
      "class": "FinancialAuditor",
      "function": "_perform_counterfactual_budget_check",
      "method_type": "analysis",
      "priority": 5,
      "description": "FinancialAuditor._perform_counterfactual_budget_check"
    },
    {
      "class": "FinancialAuditor",
      "function": "_calculate_sufficiency",
      "method_type": "scoring",
      "priority": 6,
      "description": "FinancialAuditor._calculate_sufficiency"
    },
    {
      "class": "PDETMunicipalPlanAnalyzer",
      "function": "analyze_financial_feasibility",
      "method_type": "analysis",
      "priority": 7,
      "description": "PDETMunicipalPlanAnalyzer.analyze_financial_feasibility"
    },
    {
      "class": "PDETMunicipalPlanAnalyzer",
      "function": "_extract_budget_for_pillar",
      "method_type": "extraction",
      "priority": 8,
      "description": "PDETMunicipalPlanAnalyzer._extract_budget_for_pillar"
    },
    {
      "class": "PDETMunicipalPlanAnalyzer",

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    "function": "_identify_funding_source",
    "method_type": "analysis",
    "priority": 9,
    "description": "PDETMunicipalPlanAnalyzer._identify_funding_source"
  },
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    "function": "_classify_tables",
    "method_type": "analysis",
    "priority": 10,
    "description": "PDETMunicipalPlanAnalyzer._classify_tables"
  },
  {
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    "function": "_analyze_funding_sources",
    "method_type": "analysis",
    "priority": 11,
    "description": "PDETMunicipalPlanAnalyzer._analyze_funding_sources"
  },
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    "function": "_score_financial_component",
    "method_type": "scoring",
    "priority": 12,
    "description": "PDETMunicipalPlanAnalyzer._score_financial_component"
  },
  {
    "class": "BayesianCounterfactualAuditor",
    "function": "aggregate_risk_and_prioritize",
    "method_type": "analysis",
    "priority": 13,
    "description": "BayesianCounterfactualAuditor.aggregate_risk_and_prioritize"
  }
],
"patterns": [
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q243-000",
    "match_type": "REGEX",
    "pattern": "Plan Plurianual de Inversiones|PPI|Plan Indicativo"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q243-001",
    "match_type": "REGEX",
    "pattern": "BPIN|Banco de Proyectos|proyecto de inversión para garantías y protección"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q243-002",
    "match_type": "REGEX",
    "pattern": "recursos para el Plan de Acción Oportuna|PAO|Mesa de Garantías"
  },
  {
    "category": "TERRITORIAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q243-003",
    "match_type": "REGEX",
    "pattern": "presupuesto para el fortalecimiento de la Personería Municipal"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q243-004",

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    "match_type": "REGEX",
    "pattern": "asignación para campañas de no estigmatización"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q243-005",
    "match_type": "REGEX",
    "pattern": "inversión en medidas de protección blandas complementarias a la UNP"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q243-006",
    "match_type": "REGEX",
    "pattern": "fondos para el observatorio de DDHH"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q243-007",
    "match_type": "REGEX",
    "pattern": "\\$\\s*\\d+|COP\\s*\\d+|millones de pesos"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q243-008",
    "match_type": "LITERAL",
    "pattern": "fuentes: recursos propios, cofinanciación MinInterior"
  }
],
"policy_area_id": "PA08",
"question_global": 243,
"question_id": "Q243",
"scoring_definition_ref": "scoring_modalities.TYPE_B",
"scoring_modality": "TYPE_B",
"text": "¿Se identifican en el PPI recursos monetarios (con cifras en $, COP o millones) explícitamente asignados a programas de protección, prevención de la estigmatización o fortalecimiento de observatorios de DDHH?",
"validations": {}
},
{
  "base_slot": "D1-Q4",
  "cluster_id": "CL03",
  "dimension_id": "DIM01",
  "expected_elements": [
    {
      "required": true,
      "type": "cuellos_botella"
    },
    {
      "required": true,
      "type": "datos_sistemas"
    },
    {
      "required": true,
      "type": "gobernanza"
    },
    {
      "required": true,
      "type": "procesos"
    },
    {
      "required": true,
      "type": "talento_humano"
    }
  ]
},
],

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"failure_contract": {
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    "missing_required_element",
    "incomplete_text"
  ],
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    "function": "identify_responsible_entities",
    "method_type": "analysis",
    "priority": 1,
    "description": "PDETMunicipalPlanAnalyzer.identify_responsible_entities"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_extract_entities_ner",
    "method_type": "extraction",
    "priority": 2,
    "description": "PDETMunicipalPlanAnalyzer._extract_entities_ner"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_extract_entities_syntax",
    "method_type": "extraction",
    "priority": 3,
    "description": "PDETMunicipalPlanAnalyzer._extract_entities_syntax"
  },
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    "function": "_classify_entity_type",
    "method_type": "analysis",
    "priority": 4,
    "description": "PDETMunicipalPlanAnalyzer._classify_entity_type"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_score_entity_specificity",
    "method_type": "scoring",
    "priority": 5,
    "description": "PDETMunicipalPlanAnalyzer._score_entity_specificity"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_consolidate_entities",
    "method_type": "analysis",
    "priority": 6,
    "description": "PDETMunicipalPlanAnalyzer._consolidate_entities"
  },
  {
    "class": "MechanismPartExtractor",
    "function": "extract_entity_activity",
    "method_type": "extraction",
    "priority": 7,
    "description": "MechanismPartExtractor.extract_entity_activity"
  },
  {
    "class": "MechanismPartExtractor",
    "function": "_normalize_entity",
    "method_type": "analysis",
    "priority": 8,
    "description": "MechanismPartExtractor._normalize_entity"
  },
  {
    "class": "MechanismPartExtractor",
    "function": "_validate_entity_activity",
    "method_type": "validation",
    "priority": 9,
    "description": "MechanismPartExtractor._validate_entity_activity"
  },
  {

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    "class": "MechanismPartExtractor",
    "function": "_calculate_ea_confidence",
    "method_type": "scoring",
    "priority": 10,
    "description": "MechanismPartExtractor._calculate_ea_confidence"
  },
  {
    "class": "OperationalizationAuditor",
    "function": "audit_evidence_traceability",
    "method_type": "validation",
    "priority": 11,
    "description": "OperationalizationAuditor.audit_evidence_traceability"
  }
],
"patterns": [
  {
    "category": "TERRITORIAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q244-000",
    "match_type": "REGEX",
    "pattern": "Mesa Territorial de Garantías|Comité de Evaluación de Riesgo y Recomendación
de Medidas|CERREM"
  },
  {
    "category": "TERRITORIAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q244-001",
    "match_type": "REGEX",
    "pattern": "Personería Municipal|Defensoría del Pueblo Regional"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q244-002",
    "match_type": "REGEX",
    "pattern": "Secretaría de Gobierno|Enlace de DDHH"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q244-003",
    "match_type": "REGEX",
    "pattern": "capacidad instalada para la respuesta rápida|personal capacitado"
  },
  {
    "category": "TERRITORIAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q244-004",
    "match_type": "REGEX",
    "pattern": "ruta de protección municipal|protocolo de atención a amenazas"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q244-005",
    "match_type": "REGEX",
    "pattern": "sistema de alertas tempranas local|flujo de información con el SAT"
  },
  {
    "category": "TERRITORIAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q244-006",
    "match_type": "REGEX",
    "pattern": "Observatorio Municipal de DDHH"
  }
],

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{
  "category": "GENERAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q244-007",
  "match_type": "REGEX",
  "pattern": "articulación con la UNP|coordinación con la Fuerza Pública"
},
{
  "category": "GENERAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q244-008",
  "match_type": "REGEX",
  "pattern": "falta de articulación con el nivel nacional|demoras en la respuesta de la
UNP"
},
{
  "category": "GENERAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q244-009",
  "match_type": "REGEX",
  "pattern": "cuello de botella|limitación presupuestal|barrera de confianza"
}
],
"policy_area_id": "PA08",
"question_global": 244,
"question_id": "Q244",
"scoring_definition_ref": "scoring_modalities.TYPE_B",
"scoring_modality": "TYPE_B",
"text": "¿El PDM describe las capacidades para proteger a los líderes, mencionando entidades
(Comité de Garantías, Personería) y sus necesidades? Se debe buscar términos como 'rutas de
protección', 'sistema de alertas' y si se identifican 'limitaciones'.",
"validations": {}
},
{
  "base_slot": "D1-Q5",
  "cluster_id": "CL03",
  "dimension_id": "DIM01",
  "expected_elements": [
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      "required": true,
      "type": "coherencia_demostrada"
    },
    {
      "required": true,
      "type": "restricciones_competencias"
    },
    {
      "required": true,
      "type": "restricciones_legales"
    },
    {
      "required": true,
      "type": "restricciones_presupuestales"
    }
  ],
  "failure_contract": {
    "abort_if": [
      "missing_required_element",
      "incomplete_text"
    ],
    "emit_code": "ABORT-Q245-REQ"
  },
  "method_sets": [
    {
      "class": "TemporalLogicVerifier",
      "function": "_check_deadline_constraints",
      "method_type": "analysis",
      "priority": 1,
      "description": "TemporalLogicVerifier._check_deadline_constraints"
    }
  ]
}

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},
{
  "class": "TemporalLogicVerifier",
  "function": "verify_temporal_consistency",
  "method_type": "analysis",
  "priority": 2,
  "description": "TemporalLogicVerifier.verify_temporal_consistency"
},
{
  "class": "CausalInferenceSetup",
  "function": "identify_failure_points",
  "method_type": "analysis",
  "priority": 3,
  "description": "CausalInferenceSetup.identify_failure_points"
},
{
  "class": "CausalExtractor",
  "function": "_assess_temporal_coherence",
  "method_type": "analysis",
  "priority": 4,
  "description": "CausalExtractor._assess_temporal_coherence"
},
{
  "class": "TextMiningEngine",
  "function": "_analyze_link_text",
  "method_type": "analysis",
  "priority": 5,
  "description": "TextMiningEngine._analyze_link_text"
},
{
  "class": "IndustrialPolicyProcessor",
  "function": "_analyze_causal_dimensions",
  "method_type": "analysis",
  "priority": 6,
  "description": "IndustrialPolicyProcessor._analyze_causal_dimensions"
},
{
  "class": "IndustrialPolicyProcessor",
  "function": "_extract_metadata",
  "method_type": "extraction",
  "priority": 7,
  "description": "IndustrialPolicyProcessor._extract_metadata"
}
],
"patterns": [
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q245-000",
    "match_type": "REGEX",
    "pattern": "en el marco del Decreto 660 de 2018|Decreto 2137 de 2018"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q245-001",
    "match_type": "REGEX",
    "pattern": "Acuerdo de Paz|Punto 2.1 Garantías de seguridad"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q245-002",
    "match_type": "REGEX",
    "pattern": "Plan de Acción Oportuna|PAO|Alertas Tempranas de la Defensoría"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,

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    "flags": "i",
    "id": "PAT-Q245-003",
    "match_type": "REGEX",
    "pattern": "competencia del municipio en prevención|la protección material es de la UNP"
  },
  {
    "category": "FUENTE_OFICIAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q245-004",
    "match_type": "REGEX",
    "pattern": "responsabilidad del alcalde como primera autoridad de policía"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q245-005",
    "match_type": "REGEX",
    "pattern": "límite de recursos propios para medidas complementarias"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q245-006",
    "match_type": "LITERAL",
    "pattern": "restricción presupuestal para fortalecer la Personería"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q245-007",
    "match_type": "REGEX",
    "pattern": "dependencia de la evaluación de riesgo de la UNP"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q245-008",
    "match_type": "REGEX",
    "pattern": "durante el cuatrienio|plazo de implementación"
  }
],
"policy_area_id": "PA08",
"question_global": 245,
"question_id": "Q245",
"scoring_definition_ref": "scoring_modalities.TYPE_E",
"scoring_modality": "TYPE_E",
"text": "¿El plan justifica su alcance en la protección de líderes mencionando el marco legal (ej. Decretos de protección, Acuerdo de Paz) o reconociendo restricciones explícitas de tipo presupuestal o de articulación con la UNP?",
"validations": {}
},
{
  "base_slot": "D2-Q1",
  "cluster_id": "CL03",
  "dimension_id": "DIM02",
  "expected_elements": [
    {
      "required": true,
      "type": "columna_costo"
    },
    {
      "required": true,
      "type": "columna_cronograma"
    },
    {
      "required": true,
      "type": "columna_producto"
    }
  ]
}

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    },
    {
      "required": true,
      "type": "columna_responsable"
    },
    {
      "required": true,
      "type": "formato_tabular"
    }
  ],
  "failure_contract": {
    "abort_if": [
      "missing_required_element",
      "incomplete_text"
    ],
    "emit_code": "ABORT-Q246-REQ"
  },
  "method_sets": [
    {
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      "function": "extract_tables",
      "method_type": "extraction",
      "priority": 1,
      "description": "PDFProcessor.extract_tables"
    },
    {
      "class": "FinancialAuditor",
      "function": "_process_financial_table",
      "method_type": "analysis",
      "priority": 2,
      "description": "FinancialAuditor._process_financial_table"
    },
    {
      "class": "PDETMunicipalPlanAnalyzer",
      "function": "_deduplicate_tables",
      "method_type": "analysis",
      "priority": 3,
      "description": "PDETMunicipalPlanAnalyzer._deduplicate_tables"
    },
    {
      "class": "PDETMunicipalPlanAnalyzer",
      "function": "_classify_tables",
      "method_type": "analysis",
      "priority": 4,
      "description": "PDETMunicipalPlanAnalyzer._classify_tables"
    },
    {
      "class": "PDETMunicipalPlanAnalyzer",
      "function": "_is_likely_header",
      "method_type": "analysis",
      "priority": 5,
      "description": "PDETMunicipalPlanAnalyzer._is_likely_header"
    },
    {
      "class": "PDETMunicipalPlanAnalyzer",
      "function": "_clean_dataframe",
      "method_type": "analysis",
      "priority": 6,
      "description": "PDETMunicipalPlanAnalyzer._clean_dataframe"
    },
    {
      "class": "ReportingEngine",
      "function": "generate_accountability_matrix",
      "method_type": "analysis",
      "priority": 7,
      "description": "ReportingEngine.generate_accountability_matrix"
    }
  ],
  "patterns": [
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,

```

```

      "flags": "i",
      "id": "PAT-Q246-000",
      "match_type": "REGEX",
      "pattern": "tabla de actividades|cuadro de seguimiento|matriz de plan de acción"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q246-001",
      "match_type": "REGEX",
      "pattern": "columna responsable|entidad a cargo|ejecutor"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q246-002",
      "match_type": "REGEX",
      "pattern": "columna producto|entregable|output|meta de producto"
    },
    {
      "category": "TEMPORAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q246-003",
      "match_type": "LITERAL",
      "pattern": "columna cronograma|plazo|vigencia|año 1|trimestre"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q246-004",
      "match_type": "LITERAL",
      "pattern": "columna costo|presupuesto|valor|recursos|monto"
    },
    {
      "category": "FUENTE_OFICIAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q246-005",
      "match_type": "REGEX",
      "pattern": "Secretaría de Gobierno|Personería|Comando de Policía"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q246-006",
      "match_type": "REGEX",
      "pattern": "Plan Indicativo|Anexo de metas"
    }
  ],
  "policy_area_id": "PA08",
  "question_global": 246,
  "question_id": "Q246",
  "scoring_definition_ref": "scoring_modalities.TYPE_A",
  "scoring_modality": "TYPE_A",
  "text": "¿Las actividades para la protección de líderes se presentan en un formato
estructurado (tabla, cuadro) que incluya columnas para 'responsable', 'producto', 'cronograma' y
'presupuesto'?",
  "validations": {}
},
{
  "base_slot": "D2-Q2",
  "cluster_id": "CL03",
  "dimension_id": "DIM02",
  "expected_elements": [
    {
      "required": true,
      "type": "instrumento_especificado"
    }
  ]
}

```

```

    },
    {
      "required": true,
      "type": "logica_causal_explicita"
    },
    {
      "required": true,
      "type": "poblacion_objetivo_definida"
    }
  ],
  "failure_contract": {
    "abort_if": [
      "missing_required_element",
      "incomplete_text"
    ],
    "emit_code": "ABORT-Q247-REQ"
  },
  "method_sets": [
    {
      "class": "BayesianMechanismInference",
      "function": "infer_mechanisms",
      "method_type": "analysis",
      "priority": 1,
      "description": "BayesianMechanismInference.infer_mechanisms"
    },
    {
      "class": "BayesianMechanismInference",
      "function": "_infer_single_mechanism",
      "method_type": "analysis",
      "priority": 2,
      "description": "BayesianMechanismInference._infer_single_mechanism"
    },
    {
      "class": "BayesianMechanismInference",
      "function": "_infer_mechanism_type",
      "method_type": "analysis",
      "priority": 3,
      "description": "BayesianMechanismInference._infer_mechanism_type"
    },
    {
      "class": "BayesianMechanismInference",
      "function": "_test_sufficiency",
      "method_type": "analysis",
      "priority": 4,
      "description": "BayesianMechanismInference._test_sufficiency"
    },
    {
      "class": "BayesianMechanismInference",
      "function": "_test_necessity",
      "method_type": "analysis",
      "priority": 5,
      "description": "BayesianMechanismInference._test_necessity"
    },
    {
      "class": "CausalExtractor",
      "function": "extract_causal_hierarchy",
      "method_type": "extraction",
      "priority": 6,
      "description": "CausalExtractor.extract_causal_hierarchy"
    },
    {
      "class": "TeoriaCambio",
      "function": "construir_grafo_causal",
      "method_type": "analysis",
      "priority": 7,
      "description": "TeoriaCambio.construir_grafo_causal"
    },
    {
      "class": "TeoriaCambio",
      "function": "_es_conexion_valida",
      "method_type": "analysis",
      "priority": 8,

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    "description": "TeoriaCambio._es_conexion_valida"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "construct_causal_dag",
    "method_type": "analysis",
    "priority": 9,
    "description": "PDETMunicipalPlanAnalyzer.construct_causal_dag"
  },
  {
    "class": "BeachEvidentialTest",
    "function": "classify_test",
    "method_type": "analysis",
    "priority": 10,
    "description": "BeachEvidentialTest.classify_test"
  },
  {
    "class": "IndustrialPolicyProcessor",
    "function": "_analyze_causal_dimensions",
    "method_type": "analysis",
    "priority": 11,
    "description": "IndustrialPolicyProcessor._analyze_causal_dimensions"
  }
],
"patterns": [
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q247-000",
    "match_type": "REGEX",
    "pattern": "mediante la activación de|a través de|con la implementación de"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q247-001",
    "match_type": "REGEX",
    "pattern": "medidas de protección blandas|cursos de autoprotección|rondas policiales"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q247-002",
    "match_type": "REGEX",
    "pattern": "gestión de medidas materiales ante la UNP|esquemas de seguridad"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q247-003",
    "match_type": "REGEX",
    "pattern": "campañas de no estigmatización|reconocimiento público"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q247-004",
    "match_type": "REGEX",
    "pattern": "población objetivo:|dirigido a|beneficiarios serán"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q247-005",
    "match_type": "REGEX",
    "pattern": "líderes sociales|defensores ambientales|lideresas"
  }
]

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    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q247-006",
      "match_type": "REGEX",
      "pattern": "firmantes del Acuerdo de Paz|líderes comunales (JAC)"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q247-007",
      "match_type": "REGEX",
      "pattern": "con el fin de disuadir la amenaza|para reducir la vulnerabilidad"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q247-008",
      "match_type": "LITERAL",
      "pattern": "lo cual genera un entorno más seguro|porque cambia la narrativa
estigmatizante"
    }
  ],
  "policy_area_id": "PA08",
  "question_global": 247,
  "question_id": "Q247",
  "scoring_definition_ref": "scoring_modalities.TYPE_A",
  "scoring_modality": "TYPE_A",
  "text": "¿La descripción de las actividades de protección detalla el instrumento ('mediante
esquemas de seguridad', 'a través de campañas de no estigmatización'), la población objetivo
('líderes sociales', 'defensores ambientales') y la lógica causal?",
  "validations": {}
},
{
  "base_slot": "D2-Q3",
  "cluster_id": "CL03",
  "dimension_id": "DIM02",
  "expected_elements": [
    {
      "required": true,
      "type": "aborda_causa_raiz"
    },
    {
      "required": true,
      "type": "vinculo_diagnostico_actividad"
    }
  ],
  "failure_contract": {
    "abort_if": [
      "missing_required_element",
      "incomplete_text"
    ],
    "emit_code": "ABORT-Q248-REQ"
  },
  "method_sets": [
    {
      "class": "CausalExtractor",
      "function": "_extract_causal_links",
      "method_type": "extraction",
      "priority": 1,
      "description": "CausalExtractor._extract_causal_links"
    },
    {
      "class": "CausalExtractor",
      "function": "_calculate_composite_likelihood",
      "method_type": "scoring",
      "priority": 2,
      "description": "CausalExtractor._calculate_composite_likelihood"
    }
  ]
}

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    },
    {
      "class": "CausalExtractor",
      "function": "_initialize_prior",
      "method_type": "analysis",
      "priority": 3,
      "description": "CausalExtractor._initialize_prior"
    },
    {
      "class": "CausalExtractor",
      "function": "_calculate_type_transition_prior",
      "method_type": "scoring",
      "priority": 4,
      "description": "CausalExtractor._calculate_type_transition_prior"
    },
    {
      "class": "PDETMunicipalPlanAnalyzer",
      "function": "_identify_causal_edges",
      "method_type": "analysis",
      "priority": 5,
      "description": "PDETMunicipalPlanAnalyzer._identify_causal_edges"
    },
    {
      "class": "PDETMunicipalPlanAnalyzer",
      "function": "_refine_edge_probabilities",
      "method_type": "analysis",
      "priority": 6,
      "description": "PDETMunicipalPlanAnalyzer._refine_edge_probabilities"
    },
    {
      "class": "BayesianCounterfactualAuditor",
      "function": "construct_scm",
      "method_type": "analysis",
      "priority": 7,
      "description": "BayesianCounterfactualAuditor.construct_scm"
    },
    {
      "class": "BayesianCounterfactualAuditor",
      "function": "_create_default_equations",
      "method_type": "analysis",
      "priority": 8,
      "description": "BayesianCounterfactualAuditor._create_default_equations"
    },
    {
      "class": "SemanticAnalyzer",
      "function": "extract_semantic_cube",
      "method_type": "extraction",
      "priority": 9,
      "description": "SemanticAnalyzer.extract_semantic_cube"
    }
  ],
  "patterns": [
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q248-000",
      "match_type": "REGEX",
      "pattern": "para abordar la causa de la estigmatización|en respuesta a la presencia de"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q248-001",
      "match_type": "REGEX",
      "pattern": "esta actividad ataca el factor de riesgo de"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",

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      "id": "PAT-Q248-002",
      "match_type": "REGEX",
      "pattern": "causa estructural|factor de amenaza|nudo crítico"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q248-003",
      "match_type": "LITERAL",
      "pattern": "estigmatización y señalamientos"
    },
    {
      "category": "TERRITORIAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q248-004",
      "match_type": "REGEX",
      "pattern": "presencia y control territorial de grupos armados"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q248-005",
      "match_type": "LITERAL",
      "pattern": "intereses sobre la tierra o economías ilegales"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q248-006",
      "match_type": "REGEX",
      "pattern": "falta de respuesta estatal|impunidad"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q248-007",
      "match_type": "REGEX",
      "pattern": "árbol de problemas|diagnóstico de riesgo para defensores"
    }
  ],
  "policy_area_id": "PA08",
  "question_global": 248,
  "question_id": "Q248",
  "scoring_definition_ref": "scoring_modalities.TYPE_A",
  "scoring_modality": "TYPE_A",
  "text": "¿El PDM vincula explícitamente las actividades (ej. consejos de seguridad) con las 'causas raíz' del riesgo (ej. estigmatización, presencia de actores armados) identificadas en el diagnóstico?",
  "validations": {}
},
{
  "base_slot": "D2-Q4",
  "cluster_id": "CL03",
  "dimension_id": "DIM02",
  "expected_elements": [
    {
      "required": true,
      "type": "mitigacion_propuesta"
    },
    {
      "required": true,
      "type": "riesgos_identificados"
    }
  ]
},
"failure_contract": {
  "abort_if": [
    "missing_required_element",

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    "incomplete_text"
  ],
  "emit_code": "ABORT-Q249-REQ"
},
"method_sets": [
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_bayesian_risk_inference",
    "method_type": "analysis",
    "priority": 1,
    "description": "PDETMunicipalPlanAnalyzer._bayesian_risk_inference"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "sensitivity_analysis",
    "method_type": "analysis",
    "priority": 2,
    "description": "PDETMunicipalPlanAnalyzer.sensitivity_analysis"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_interpret_risk",
    "method_type": "analysis",
    "priority": 3,
    "description": "PDETMunicipalPlanAnalyzer._interpret_risk"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_compute_robustness_value",
    "method_type": "analysis",
    "priority": 4,
    "description": "PDETMunicipalPlanAnalyzer._compute_robustness_value"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_compute_e_value",
    "method_type": "analysis",
    "priority": 5,
    "description": "PDETMunicipalPlanAnalyzer._compute_e_value"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_interpret_sensitivity",
    "method_type": "analysis",
    "priority": 6,
    "description": "PDETMunicipalPlanAnalyzer._interpret_sensitivity"
  },
  {
    "class": "OperationalizationAuditor",
    "function": "_audit_systemic_risk",
    "method_type": "validation",
    "priority": 7,
    "description": "OperationalizationAuditor._audit_systemic_risk"
  },
  {
    "class": "BayesianCounterfactualAuditor",
    "function": "aggregate_risk_and_prioritize",
    "method_type": "analysis",
    "priority": 8,
    "description": "BayesianCounterfactualAuditor.aggregate_risk_and_prioritize"
  },
  {
    "class": "BayesianCounterfactualAuditor",
    "function": "refutation_and_sanity_checks",
    "method_type": "analysis",
    "priority": 9,
    "description": "BayesianCounterfactualAuditor.refutation_and_sanity_checks"
  },
  {
    "class": "AdaptivePriorCalculator",
    "function": "sensitivity_analysis",
    "method_type": "analysis",

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    "priority": 10,
    "description": "AdaptivePriorCalculator.sensitivity_analysis"
  }
],
"patterns": [
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q249-000",
    "match_type": "REGEX",
    "pattern": "riesgos:|posibles dificultades:|barreras a la implementación"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q249-001",
    "match_type": "REGEX",
    "pattern": "fallas o demoras en los esquemas de protección de la UNP"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q249-002",
    "match_type": "REGEX",
    "pattern": "filtración de información sensible|falta de confianza"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q249-003",
    "match_type": "REGEX",
    "pattern": "estigmatización por tener esquemas de seguridad"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q249-004",
    "match_type": "REGEX",
    "pattern": "inviabilidad de las medidas en zonas rurales dispersas"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q249-005",
    "match_type": "REGEX",
    "pattern": "falta de recursos para medidas complementarias"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q249-006",
    "match_type": "REGEX",
    "pattern": "medidas de mitigación|plan de contingencia|para mitigar"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q249-007",
    "match_type": "REGEX",
    "pattern": "protocolos de confidencialidad|canales de comunicación seguros"
  }
],
"policy_area_id": "PA08",
"question_global": 249,

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"question_id": "Q249",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿El plan identifica posibles riesgos en la implementación de las medidas de
protección (ej. fallas en los esquemas, filtración de información) y propone 'medidas de
mitigación'?",
"validations": {}
},
{
"base_slot": "D2-Q5",
"cluster_id": "CL03",
"dimension_id": "DIM02",
"expected_elements": [
{
"required": true,
"type": "complementariedad_explicita"
},
{
"required": true,
"type": "secuenciacion_logica"
}
],
"failure_contract": {
"abort_if": [
"missing_required_element",
"incomplete_text"
],
"emit_code": "ABORT-Q250-REQ"
},
"method_sets": [
{
"class": "PolicyContradictionDetector",
"function": "_detect_logical_incompatibilities",
"method_type": "analysis",
"priority": 1,
"description": "PolicyContradictionDetector._detect_logical_incompatibilities"
},
{
"class": "PolicyContradictionDetector",
"function": "_calculate_coherence_metrics",
"method_type": "scoring",
"priority": 2,
"description": "PolicyContradictionDetector._calculate_coherence_metrics"
},
{
"class": "PolicyContradictionDetector",
"function": "_calculate_objective_alignment",
"method_type": "scoring",
"priority": 3,
"description": "PolicyContradictionDetector._calculate_objective_alignment"
},
{
"class": "PolicyContradictionDetector",
"function": "_calculate_graph_fragmentation",
"method_type": "scoring",
"priority": 4,
"description": "PolicyContradictionDetector._calculate_graph_fragmentation"
},
{
"class": "OperationalizationAuditor",
"function": "audit_sequence_logic",
"method_type": "validation",
"priority": 5,
"description": "OperationalizationAuditor.audit_sequence_logic"
},
{
"class": "BayesianMechanismInference",
"function": "_calculate_coherence_factor",
"method_type": "scoring",
"priority": 6,
"description": "BayesianMechanismInference._calculate_coherence_factor"
}
],

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{
  "class": "PDETMunicipalPlanAnalyzer",
  "function": "_score_causal_coherence",
  "method_type": "scoring",
  "priority": 7,
  "description": "PDETMunicipalPlanAnalyzer._score_causal_coherence"
},
{
  "class": "AdaptivePriorCalculator",
  "function": "calculate_likelihood_adaptativo",
  "method_type": "scoring",
  "priority": 8,
  "description": "AdaptivePriorCalculator.calculate_likelihood_adaptativo"
}
],
"patterns": [
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q250-000",
    "match_type": "REGEX",
    "pattern": "estrategia integral de garantías|de manera articulada"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q250-001",
    "match_type": "REGEX",
    "pattern": "la protección material se complementa con la protección política (no
estigmatización)"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q250-002",
    "match_type": "REGEX",
    "pattern": "sinergia entre la respuesta individual y las garantías colectivas"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q250-003",
    "match_type": "REGEX",
    "pattern": "la activación de la ruta es el primer paso para la evaluación del riesgo"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q250-004",
    "match_type": "REGEX",
    "pattern": "en una primera fase se prevendrá, luego se protegerá y se investigará"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q250-005",
    "match_type": "LITERAL",
    "pattern": "la estrategia combina prevención, protección e investigación"
  }
],
"policy_area_id": "PA08",
"question_global": 250,
"question_id": "Q250",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿El conjunto de actividades para proteger líderes demuestra una estrategia

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coherente? Se debe buscar evidencia de 'complementariedad' (ej. protección material + protección política) o 'secuencia' lógica.",

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"validations": {}
},
{
  "base_slot": "D3-Q1",
  "cluster_id": "CL03",
  "dimension_id": "DIM03",
  "expected_elements": [
    {
      "required": true,
      "type": "fuente_verificacion"
    },
    {
      "required": true,
      "type": "linea_base_producto"
    },
    {
      "required": true,
      "type": "meta_cuantitativa"
    }
  ],
  "failure_contract": {
    "abort_if": [
      "missing_required_element",
      "incomplete_text"
    ],
    "emit_code": "ABORT-Q251-REQ"
  },
  "method_sets": [
    {
      "class": "PDETMunicipalPlanAnalyzer",
      "function": "_score_indicators",
      "method_type": "scoring",
      "priority": 1,
      "description": "PDETMunicipalPlanAnalyzer._score_indicators"
    },
    {
      "class": "OperationalizationAuditor",
      "function": "audit_evidence_traceability",
      "method_type": "validation",
      "priority": 2,
      "description": "OperationalizationAuditor.audit_evidence_traceability"
    },
    {
      "class": "CausalInferenceSetup",
      "function": "assign_probative_value",
      "method_type": "analysis",
      "priority": 3,
      "description": "CausalInferenceSetup.assign_probative_value"
    },
    {
      "class": "BeachEvidentialTest",
      "function": "apply_test_logic",
      "method_type": "analysis",
      "priority": 4,
      "description": "BeachEvidentialTest.apply_test_logic"
    },
    {
      "class": "TextMiningEngine",
      "function": "diagnose_critical_links",
      "method_type": "analysis",
      "priority": 5,
      "description": "TextMiningEngine.diagnose_critical_links"
    },
    {
      "class": "IndustrialPolicyProcessor",
      "function": "_extract_metadata",
      "method_type": "extraction",
      "priority": 6,
      "description": "IndustrialPolicyProcessor._extract_metadata"
    }
  ],
}
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{
  "class": "IndustrialPolicyProcessor",
  "function": "_calculate_quality_score",
  "method_type": "scoring",
  "priority": 7,
  "description": "IndustrialPolicyProcessor._calculate_quality_score"
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  "class": "AdaptivePriorCalculator",
  "function": "generate_traceability_record",
  "method_type": "analysis",
  "priority": 8,
  "description": "AdaptivePriorCalculator.generate_traceability_record"
}
],
"patterns": [
  {
    "category": "INDICADOR",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q251-000",
    "match_type": "REGEX",
    "pattern": "indicador de producto|meta de producto"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q251-001",
    "match_type": "REGEX",
    "pattern": "líderes con medidas de protección gestionadas ante la UNP"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q251-002",
    "match_type": "REGEX",
    "pattern": "organizaciones de DDHH acompañadas|defensores capacitados en autoprotección"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q251-003",
    "match_type": "REGEX",
    "pattern": "campañas de no estigmatización realizadas"
  },
  {
    "category": "FUENTE_OFICIAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q251-004",
    "match_type": "REGEX",
    "pattern": "casos de amenaza tramitados ante la Personería/Fiscalía"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q251-005",
    "match_type": "LITERAL",
    "pattern": "Línea Base:|LB:|Valor inicial:"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q251-006",
    "match_type": "REGEX",
    "pattern": "Meta Cuatrienio:|Meta:|Valor esperado:"
  },

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{
  "category": "GENERAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q251-007",
  "match_type": "REGEX",
  "pattern": "Fuente de verificación:|Medio de verificación:|Fuente:"
},
{
  "category": "GENERAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q251-008",
  "match_type": "REGEX",
  "pattern": "informes de la Secretaría de Gobierno|actas de la Mesa de Garantías"
},
{
  "category": "TERRITORIAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q251-009",
  "match_type": "REGEX",
  "pattern": "registros de la Personería Municipal"
}
],
"policy_area_id": "PA08",
"question_global": 251,
"question_id": "Q251",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿Los indicadores de producto para protección de líderes (ej. líderes con medidas de
protección, campañas realizadas) incluyen 'línea base', 'meta' cuantitativa y 'fuente de
verificación'?",
"validations": {}
},
{
  "base_slot": "D3-Q2",
  "cluster_id": "CL03",
  "dimension_id": "DIM03",
  "expected_elements": [
    {
      "required": true,
      "type": "proporcionalidad_meta_problema"
    }
  ]
},
"failure_contract": {
  "abort_if": [
    "missing_required_element",
    "incomplete_text"
  ],
  "emit_code": "ABORT-Q252-REQ"
},
"method_sets": [
  {
    "class": "AdvancedDAGValidator",
    "function": "_calculate_bayesian_posterior",
    "method_type": "scoring",
    "priority": 1,
    "description": "AdvancedDAGValidator._calculate_bayesian_posterior"
  },
  {
    "class": "AdvancedDAGValidator",
    "function": "_calculate_confidence_interval",
    "method_type": "scoring",
    "priority": 2,
    "description": "AdvancedDAGValidator._calculate_confidence_interval"
  },
  {
    "class": "AdaptivePriorCalculator",
    "function": "_adjust_domain_weights",
    "method_type": "analysis",
    "priority": 3,

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    "description": "AdaptivePriorCalculator._adjust_domain_weights"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_get_spanish_stopwords",
    "method_type": "analysis",
    "priority": 4,
    "description": "PDETMunicipalPlanAnalyzer._get_spanish_stopwords"
  },
  {
    "class": "BayesianMechanismInference",
    "function": "_log_refactored_components",
    "method_type": "analysis",
    "priority": 5,
    "description": "BayesianMechanismInference._log_refactored_components"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "analyze_financial_feasibility",
    "method_type": "analysis",
    "priority": 6,
    "description": "PDETMunicipalPlanAnalyzer.analyze_financial_feasibility"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_score_indicators",
    "method_type": "scoring",
    "priority": 7,
    "description": "PDETMunicipalPlanAnalyzer._score_indicators"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_interpret_risk",
    "method_type": "analysis",
    "priority": 8,
    "description": "PDETMunicipalPlanAnalyzer._interpret_risk"
  },
  {
    "class": "FinancialAuditor",
    "function": "_calculate_sufficiency",
    "method_type": "scoring",
    "priority": 9,
    "description": "FinancialAuditor._calculate_sufficiency"
  },
  {
    "class": "BayesianMechanismInference",
    "function": "_test_sufficiency",
    "method_type": "analysis",
    "priority": 10,
    "description": "BayesianMechanismInference._test_sufficiency"
  },
  {
    "class": "BayesianMechanismInference",
    "function": "_test_necessity",
    "method_type": "analysis",
    "priority": 11,
    "description": "BayesianMechanismInference._test_necessity"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_assess_financial_sustainability",
    "method_type": "analysis",
    "priority": 12,
    "description": "PDETMunicipalPlanAnalyzer._assess_financial_sustainability"
  },
  {
    "class": "AdaptivePriorCalculator",
    "function": "calculate_likelihood_adaptativo",
    "method_type": "scoring",
    "priority": 13,
    "description": "AdaptivePriorCalculator.calculate_likelihood_adaptativo"
  },

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{
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  "function": "_calculate_quality_score",
  "method_type": "scoring",
  "priority": 14,
  "description": "IndustrialPolicyProcessor._calculate_quality_score"
},
{
  "class": "TeoriaCambio",
  "function": "_generar_sugerencias_internas",
  "method_type": "analysis",
  "priority": 15,
  "description": "TeoriaCambio._generar_sugerencias_internas"
},
{
  "class": "PDETMunicipalPlanAnalyzer",
  "function": "_deduplicate_tables",
  "method_type": "analysis",
  "priority": 16,
  "description": "PDETMunicipalPlanAnalyzer._deduplicate_tables"
},
{
  "class": "PDETMunicipalPlanAnalyzer",
  "function": "_indicator_to_dict",
  "method_type": "analysis",
  "priority": 17,
  "description": "PDETMunicipalPlanAnalyzer._indicator_to_dict"
},
{
  "class": "PDETMunicipalPlanAnalyzer",
  "function": "_generate_recommendations",
  "method_type": "analysis",
  "priority": 18,
  "description": "PDETMunicipalPlanAnalyzer._generate_recommendations"
},
{
  "class": "IndustrialPolicyProcessor",
  "function": "_compile_pattern_registry",
  "method_type": "analysis",
  "priority": 19,
  "description": "IndustrialPolicyProcessor._compile_pattern_registry"
},
{
  "class": "IndustrialPolicyProcessor",
  "function": "_build_point_patterns",
  "method_type": "analysis",
  "priority": 20,
  "description": "IndustrialPolicyProcessor._build_point_patterns"
},
{
  "class": "IndustrialPolicyProcessor",
  "function": "_empty_result",
  "method_type": "analysis",
  "priority": 21,
  "description": "IndustrialPolicyProcessor._empty_result"
}
],
"patterns": [
  {
    "category": "INDICADOR",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q252-000",
    "match_type": "REGEX",
    "pattern": "se cubrirá al 100% de los líderes con riesgo extraordinario"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q252-001",
    "match_type": "REGEX",

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    "pattern": "la meta es atender todas las solicitudes de protección recibidas"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q252-002",
    "match_type": "REGEX",
    "pattern": "universo de atención|total de líderes identificados en el censo de riesgo"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q252-003",
    "match_type": "REGEX",
    "pattern": "la meta se establece en función de la capacidad de respuesta y articulación"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q252-004",
    "match_type": "REGEX",
    "pattern": "se priorizarán los casos con Alerta Temprana de la Defensoría"
  }
],
"policy_area_id": "PA08",
"question_global": 252,
"question_id": "Q252",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿Las metas de los productos (ej. 'otorgar protección al 100% de los casos con nivel de riesgo extraordinario') son proporcionales al universo de líderes en riesgo?",
"validations": {}
},
{
  "base_slot": "D3-Q3",
  "cluster_id": "CL03",
  "dimension_id": "DIM03",
  "expected_elements": [
    {
      "required": true,
      "type": "trazabilidad_organizacional"
    },
    {
      "required": true,
      "type": "trazabilidad_presupuestal"
    }
  ]
},
"failure_contract": {
  "abort_if": [
    "missing_required_element",
    "incomplete_text"
  ],
  "emit_code": "ABORT-Q253-REQ"
},
"method_sets": [
  {
    "class": "FinancialAuditor",
    "function": "_match_program_to_node",
    "method_type": "analysis",
    "priority": 1,
    "description": "FinancialAuditor._match_program_to_node"
  },
  {
    "class": "FinancialAuditor",
    "function": "_match_goal_to_budget",
    "method_type": "analysis",
    "priority": 2,
    "description": "FinancialAuditor._match_goal_to_budget"
  }
],

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{
  "class": "PDETMunicipalPlanAnalyzer",
  "function": "_extract_from_responsibility_tables",
  "method_type": "extraction",
  "priority": 3,
  "description": "PDETMunicipalPlanAnalyzer._extract_from_responsibility_tables"
},
{
  "class": "PDETMunicipalPlanAnalyzer",
  "function": "_consolidate_entities",
  "method_type": "analysis",
  "priority": 4,
  "description": "PDETMunicipalPlanAnalyzer._consolidate_entities"
},
{
  "class": "PDETMunicipalPlanAnalyzer",
  "function": "identify_responsible_entities",
  "method_type": "analysis",
  "priority": 5,
  "description": "PDETMunicipalPlanAnalyzer.identify_responsible_entities"
},
{
  "class": "PDETMunicipalPlanAnalyzer",
  "function": "_score_responsibility_clarity",
  "method_type": "scoring",
  "priority": 6,
  "description": "PDETMunicipalPlanAnalyzer._score_responsibility_clarity"
},
{
  "class": "PolicyAnalysisEmbedder",
  "function": "process_document",
  "method_type": "analysis",
  "priority": 7,
  "description": "PolicyAnalysisEmbedder.process_document"
},
{
  "class": "PolicyAnalysisEmbedder",
  "function": "_generate_query_from_pdq",
  "method_type": "analysis",
  "priority": 8,
  "description": "PolicyAnalysisEmbedder._generate_query_from_pdq"
},
{
  "class": "PolicyAnalysisEmbedder",
  "function": "semantic_search",
  "method_type": "analysis",
  "priority": 9,
  "description": "PolicyAnalysisEmbedder.semantic_search"
},
{
  "class": "PolicyAnalysisEmbedder",
  "function": "_apply_mmr",
  "method_type": "analysis",
  "priority": 10,
  "description": "PolicyAnalysisEmbedder._apply_mmr"
},
{
  "class": "SemanticAnalyzer",
  "function": "_empty_semantic_cube",
  "method_type": "analysis",
  "priority": 11,
  "description": "SemanticAnalyzer._empty_semantic_cube"
},
{
  "class": "SemanticAnalyzer",
  "function": "_classify_policy_domain",
  "method_type": "analysis",
  "priority": 12,
  "description": "SemanticAnalyzer._classify_policy_domain"
},
{
  "class": "SemanticAnalyzer",

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    "function": "_classify_cross_cutting_themes",
    "method_type": "analysis",
    "priority": 13,
    "description": "SemanticAnalyzer._classify_cross_cutting_themes"
  },
  {
    "class": "SemanticAnalyzer",
    "function": "_classify_value_chain_link",
    "method_type": "analysis",
    "priority": 14,
    "description": "SemanticAnalyzer._classify_value_chain_link"
  },
  {
    "class": "SemanticAnalyzer",
    "function": "_vectorize_segments",
    "method_type": "analysis",
    "priority": 15,
    "description": "SemanticAnalyzer._vectorize_segments"
  },
  {
    "class": "SemanticAnalyzer",
    "function": "_process_segment",
    "method_type": "analysis",
    "priority": 16,
    "description": "SemanticAnalyzer._process_segment"
  },
  {
    "class": "SemanticAnalyzer",
    "function": "_calculate_semantic_complexity",
    "method_type": "scoring",
    "priority": 17,
    "description": "SemanticAnalyzer._calculate_semantic_complexity"
  },
  {
    "class": "IndustrialPolicyProcessor",
    "function": "_compute_evidence_confidence",
    "method_type": "analysis",
    "priority": 18,
    "description": "IndustrialPolicyProcessor._compute_evidence_confidence"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_entity_to_dict",
    "method_type": "analysis",
    "priority": 19,
    "description": "PDETMunicipalPlanAnalyzer._entity_to_dict"
  },
  {
    "class": "AdaptivePriorCalculator",
    "function": "generate_traceability_record",
    "method_type": "analysis",
    "priority": 20,
    "description": "AdaptivePriorCalculator.generate_traceability_record"
  },
  {
    "class": "PolicyAnalysisEmbedder",
    "function": "generate_pdq_report",
    "method_type": "analysis",
    "priority": 21,
    "description": "PolicyAnalysisEmbedder.generate_pdq_report"
  },
  {
    "class": "ReportingEngine",
    "function": "generate_accountability_matrix",
    "method_type": "analysis",
    "priority": 22,
    "description": "ReportingEngine.generate_accountability_matrix"
  }
],
"patterns": [
  {
    "category": "GENERAL",

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    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q253-000",
    "match_type": "REGEX",
    "pattern": "código BPIN|proyecto de inversión para garantías y DDHH"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q253-001",
    "match_type": "REGEX",
    "pattern": "programa del PPI|línea de inversión en seguridad y convivencia"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q253-002",
    "match_type": "REGEX",
    "pattern": "recursos del proyecto|presupuesto para la Mesa de Garantías"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q253-003",
    "match_type": "REGEX",
    "pattern": "responsable:|dependencia a cargo:|entidad ejecutora"
  },
  {
    "category": "TERRITORIAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q253-004",
    "match_type": "REGEX",
    "pattern": "Secretaría de Gobierno|Despacho del Alcalde|Personería Municipal"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q253-005",
    "match_type": "REGEX",
    "pattern": "articulado con la UNP|en alianza con plataformas de DDHH"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q253-006",
    "match_type": "REGEX",
    "pattern": "convenio con|operado por"
  }
],
"policy_area_id": "PA08",
"question_global": 253,
"question_id": "Q253",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿Los productos de protección de líderes tienen trazabilidad presupuestal
(vinculados a códigos BPIN, PPI) y organizacional (asociados a una 'Secretaría de Gobierno' o
entidad responsable)?",
"validations": {}
},
{
  "base_slot": "D3-Q4",
  "cluster_id": "CL03",
  "dimension_id": "DIM03",
  "expected_elements": [
    {
      "required": true,

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    "type": "coherencia_recursos"
  },
  {
    "required": true,
    "type": "factibilidad_tecnica"
  },
  {
    "required": true,
    "type": "realismo_plazos"
  }
],
"failure_contract": {
  "abort_if": [
    "missing_required_element",
    "incomplete_text"
  ],
  "emit_code": "ABORT-Q254-REQ"
},
"method_sets": [
  {
    "class": "AdvancedDAGValidator",
    "function": "calculate_acyclicity_pvalue",
    "method_type": "scoring",
    "priority": 1,
    "description": "AdvancedDAGValidator.calculate_acyclicity_pvalue"
  },
  {
    "class": "AdvancedDAGValidator",
    "function": "_is_acyclic",
    "method_type": "analysis",
    "priority": 2,
    "description": "AdvancedDAGValidator._is_acyclic"
  },
  {
    "class": "AdvancedDAGValidator",
    "function": "get_graph_stats",
    "method_type": "analysis",
    "priority": 3,
    "description": "AdvancedDAGValidator.get_graph_stats"
  },
  {
    "class": "AdvancedDAGValidator",
    "function": "_calculate_node_importance",
    "method_type": "scoring",
    "priority": 4,
    "description": "AdvancedDAGValidator._calculate_node_importance"
  },
  {
    "class": "AdvancedDAGValidator",
    "function": "_generate_subgraph",
    "method_type": "analysis",
    "priority": 5,
    "description": "AdvancedDAGValidator._generate_subgraph"
  },
  {
    "class": "AdvancedDAGValidator",
    "function": "add_node",
    "method_type": "analysis",
    "priority": 6,
    "description": "AdvancedDAGValidator.add_node"
  },
  {
    "class": "AdvancedDAGValidator",
    "function": "add_edge",
    "method_type": "analysis",
    "priority": 7,
    "description": "AdvancedDAGValidator.add_edge"
  },
  {
    "class": "AdvancedDAGValidator",
    "function": "export_nodes",
    "method_type": "analysis",

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    "priority": 8,
    "description": "AdvancedDAGValidator.export_nodes"
  },
  {
    "class": "AdvancedDAGValidator",
    "function": "_initialize_rng",
    "method_type": "analysis",
    "priority": 9,
    "description": "AdvancedDAGValidator._initialize_rng"
  },
  {
    "class": "AdvancedDAGValidator",
    "function": "_calculate_statistical_power",
    "method_type": "scoring",
    "priority": 10,
    "description": "AdvancedDAGValidator._calculate_statistical_power"
  },
  {
    "class": "AdvancedDAGValidator",
    "function": "_get_node_validator",
    "method_type": "analysis",
    "priority": 11,
    "description": "AdvancedDAGValidator._get_node_validator"
  },
  {
    "class": "AdvancedDAGValidator",
    "function": "_create_empty_result",
    "method_type": "analysis",
    "priority": 12,
    "description": "AdvancedDAGValidator._create_empty_result"
  },
  {
    "class": "BayesianMechanismInference",
    "function": "_test_necessity",
    "method_type": "analysis",
    "priority": 13,
    "description": "BayesianMechanismInference._test_necessity"
  },
  {
    "class": "IndustrialGradeValidator",
    "function": "execute_suite",
    "method_type": "analysis",
    "priority": 14,
    "description": "IndustrialGradeValidator.execute_suite"
  },
  {
    "class": "IndustrialGradeValidator",
    "function": "validate_connection_matrix",
    "method_type": "validation",
    "priority": 15,
    "description": "IndustrialGradeValidator.validate_connection_matrix"
  },
  {
    "class": "IndustrialGradeValidator",
    "function": "run_performance_benchmarks",
    "method_type": "analysis",
    "priority": 16,
    "description": "IndustrialGradeValidator.run_performance_benchmarks"
  },
  {
    "class": "IndustrialGradeValidator",
    "function": "_benchmark_operation",
    "method_type": "analysis",
    "priority": 17,
    "description": "IndustrialGradeValidator._benchmark_operation"
  },
  {
    "class": "IndustrialGradeValidator",
    "function": "_log_metric",
    "method_type": "analysis",
    "priority": 18,
    "description": "IndustrialGradeValidator._log_metric"
  }

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      "function": "validate_engine_readiness",
      "method_type": "validation",
      "priority": 19,
      "description": "IndustrialGradeValidator.validate_engine_readiness"
    },
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      "function": "analyze_performance",
      "method_type": "analysis",
      "priority": 20,
      "description": "PerformanceAnalyzer.analyze_performance"
    },
    {
      "class": "PerformanceAnalyzer",
      "function": "_calculate_loss_functions",
      "method_type": "scoring",
      "priority": 21,
      "description": "PerformanceAnalyzer._calculate_loss_functions"
    },
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      "class": "HierarchicalGenerativeModel",
      "function": "_calculate_likelihood",
      "method_type": "scoring",
      "priority": 22,
      "description": "HierarchicalGenerativeModel._calculate_likelihood"
    },
    {
      "class": "HierarchicalGenerativeModel",
      "function": "_calculate_ess",
      "method_type": "scoring",
      "priority": 23,
      "description": "HierarchicalGenerativeModel._calculate_ess"
    },
    {
      "class": "HierarchicalGenerativeModel",
      "function": "_calculate_r_hat",
      "method_type": "scoring",
      "priority": 24,
      "description": "HierarchicalGenerativeModel._calculate_r_hat"
    },
    {
      "class": "IndustrialGradeValidator",
      "function": "validate_causal_categories",
      "method_type": "validation",
      "priority": 25,
      "description": "IndustrialGradeValidator.validate_causal_categories"
    },
    {
      "class": "TeoriaCambio",
      "function": "_extraer_categorias",
      "method_type": "analysis",
      "priority": 26,
      "description": "TeoriaCambio._extraer_categorias"
    }
  ],
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      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q254-000",
      "match_type": "REGEX",
      "pattern": "factibilidad|viabilidad|es realista esperar que"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q254-001",

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    "match_type": "REGEX",
    "pattern": "la capacidad de gestión del municipio puede acelerar la respuesta de la UNP"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q254-002",
    "match_type": "REGEX",
    "pattern": "el plazo para implementar una ruta de protección"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q254-003",
    "match_type": "REGEX",
    "pattern": "la meta de respuesta depende de la capacidad y voluntad de la UNP"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q254-004",
    "match_type": "REGEX",
    "pattern": "contradictorio|poco probable|desproporcionado"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q254-005",
    "match_type": "REGEX",
    "pattern": "con el personal asignado se puede lograr el seguimiento de casos"
  }
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"policy_area_id": "PA08",
"question_global": 254,
"question_id": "Q254",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿Existe una relación factible entre la actividad (ej. 'articulación con la UNP') y la meta del producto asociado (ej. 'reducción del tiempo de respuesta a 24 horas') para la protección de líderes? Se debe evaluar si los 'plazos' son realistas.",
"validations": {}
},
{
  "base_slot": "D3-Q5",
  "cluster_id": "CL03",
  "dimension_id": "DIM03",
  "expected_elements": [
    {
      "required": true,
      "type": "conexion_producto_resultado"
    },
    {
      "required": true,
      "type": "mecanismo_causal_explicito"
    }
  ]
},
"failure_contract": {
  "abort_if": [
    "missing_required_element",
    "incomplete_text"
  ],
  "emit_code": "ABORT-Q255-REQ"
},
"method_sets": [
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_identify_confounders",
    "method_type": "analysis",

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    "priority": 1,
    "description": "PDETMunicipalPlanAnalyzer._identify_confounders"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_effect_to_dict",
    "method_type": "analysis",
    "priority": 2,
    "description": "PDETMunicipalPlanAnalyzer._effect_to_dict"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_scenario_to_dict",
    "method_type": "analysis",
    "priority": 3,
    "description": "PDETMunicipalPlanAnalyzer._scenario_to_dict"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_simulate_intervention",
    "method_type": "analysis",
    "priority": 4,
    "description": "PDETMunicipalPlanAnalyzer._simulate_intervention"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_generate_recommendations",
    "method_type": "analysis",
    "priority": 5,
    "description": "PDETMunicipalPlanAnalyzer._generate_recommendations"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_identify_causal_nodes",
    "method_type": "analysis",
    "priority": 6,
    "description": "PDETMunicipalPlanAnalyzer._identify_causal_nodes"
  },
  {
    "class": "BayesianCounterfactualAuditor",
    "function": "_evaluate_factual",
    "method_type": "analysis",
    "priority": 7,
    "description": "BayesianCounterfactualAuditor._evaluate_factual"
  },
  {
    "class": "BayesianCounterfactualAuditor",
    "function": "_evaluate_counterfactual",
    "method_type": "analysis",
    "priority": 8,
    "description": "BayesianCounterfactualAuditor._evaluate_counterfactual"
  },
  {
    "class": "CausalExtractor",
    "function": "_assess_financial_consistency",
    "method_type": "analysis",
    "priority": 9,
    "description": "CausalExtractor._assess_financial_consistency"
  },
  {
    "class": "BayesianMechanismInference",
    "function": "_infer_activity_sequence",
    "method_type": "analysis",
    "priority": 10,
    "description": "BayesianMechanismInference._infer_activity_sequence"
  },
  {
    "class": "BayesianMechanismInference",
    "function": "_generate_necessity_remediation",
    "method_type": "analysis",
    "priority": 11,
    "description": "BayesianMechanismInference._generate_necessity_remediation"
  }

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},
{
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  "function": "refutation_and_sanity_checks",
  "method_type": "analysis",
  "priority": 12,
  "description": "BayesianCounterfactualAuditor.refutation_and_sanity_checks"
},
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  "class": "IndustrialPolicyProcessor",
  "function": "_load_questionnaire",
  "method_type": "analysis",
  "priority": 13,
  "description": "IndustrialPolicyProcessor._load_questionnaire"
},
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  "function": "analyze_financial_feasibility",
  "method_type": "analysis",
  "priority": 14,
  "description": "PDETMunicipalPlanAnalyzer.analyze_financial_feasibility"
},
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  "class": "PDETMunicipalPlanAnalyzer",
  "function": "construct_causal_dag",
  "method_type": "analysis",
  "priority": 15,
  "description": "PDETMunicipalPlanAnalyzer.construct_causal_dag"
},
{
  "class": "PDETMunicipalPlanAnalyzer",
  "function": "estimate_causal_effects",
  "method_type": "analysis",
  "priority": 16,
  "description": "PDETMunicipalPlanAnalyzer.estimate_causal_effects"
},
{
  "class": "PDETMunicipalPlanAnalyzer",
  "function": "generate_counterfactuals",
  "method_type": "analysis",
  "priority": 17,
  "description": "PDETMunicipalPlanAnalyzer.generate_counterfactuals"
},
{
  "class": "CausalExtractor",
  "function": "_build_type_hierarchy",
  "method_type": "analysis",
  "priority": 18,
  "description": "CausalExtractor._build_type_hierarchy"
},
{
  "class": "CausalExtractor",
  "function": "_check_structural_violation",
  "method_type": "analysis",
  "priority": 19,
  "description": "CausalExtractor._check_structural_violation"
},
{
  "class": "CausalExtractor",
  "function": "_calculate_type_transition_prior",
  "method_type": "scoring",
  "priority": 20,
  "description": "CausalExtractor._calculate_type_transition_prior"
},
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  "class": "CausalExtractor",
  "function": "_calculate_textual_proximity",
  "method_type": "scoring",
  "priority": 21,
  "description": "CausalExtractor._calculate_textual_proximity"
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    "class": "TeoriaCambio",
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    "method_type": "analysis",
    "priority": 22,
    "description": "TeoriaCambio._validar_orden_causal"
  },
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    "function": "_refine_edge_probabilities",
    "method_type": "analysis",
    "priority": 23,
    "description": "PDETMunicipalPlanAnalyzer._refine_edge_probabilities"
  },
  {
    "class": "PolicyAnalysisEmbedder",
    "function": "compare_policy_interventions",
    "method_type": "analysis",
    "priority": 24,
    "description": "PolicyAnalysisEmbedder.compare_policy_interventions"
  },
  {
    "class": "BayesianMechanismInference",
    "function": "infer_mechanisms",
    "method_type": "analysis",
    "priority": 25,
    "description": "BayesianMechanismInference.infer_mechanisms"
  }
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"patterns": [
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    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q255-000",
    "match_type": "REGEX",
    "pattern": "esto permitirá que|lo cual contribuirá a|generando una disuasión"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q255-001",
    "match_type": "REGEX",
    "pattern": "el mecanismo es que la protección material disuade a los agresores"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q255-002",
    "match_type": "REGEX",
    "pattern": "a través de las campañas de no estigmatización, se reduce la legitimación de la violencia"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q255-003",
    "match_type": "REGEX",
    "pattern": "la respuesta rápida a las alertas permite prevenir que las amenazas se materialicen"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q255-004",
    "match_type": "REGEX",
    "pattern": "variable intermedia|mediador|eslabón causal|disuasión|prevención"
  }
]

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        "category": "GENERAL",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q255-005",
        "match_type": "REGEX",
        "pattern": "cadena de valor de la protección|ruta de cambio"
    }
],
"policy_area_id": "PA08",
"question_global": 255,
"question_id": "Q255",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿El PDM explica cómo los productos (ej. 'líderes con esquema de protección')
contribuyen a generar resultados (ej. 'reducción del número de agresiones')? Se debe buscar este
'mecanismo'.",
    "validations": {}
},
{
    "base_slot": "D4-Q1",
    "cluster_id": "CL03",
    "dimension_id": "DIM04",
    "expected_elements": [
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            "type": "horizonte_temporal"
        },
        {
            "required": true,
            "type": "linea_base_resultado"
        },
        {
            "required": true,
            "type": "meta_resultado"
        },
        {
            "required": true,
            "type": "metrica_outcome"
        }
    ],
    "failure_contract": {
        "abort_if": [
            "missing_required_element",
            "incomplete_text"
        ],
        "emit_code": "ABORT-Q256-REQ"
    },
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            "function": "_extract_entities_syntax",
            "method_type": "extraction",
            "priority": 1,
            "description": "PDETMunicipalPlanAnalyzer._extract_entities_syntax"
        },
        {
            "class": "PDETMunicipalPlanAnalyzer",
            "function": "_extract_entities_ner",
            "method_type": "extraction",
            "priority": 2,
            "description": "PDETMunicipalPlanAnalyzer._extract_entities_ner"
        },
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            "class": "CausalExtractor",
            "function": "_calculate_language_specificity",
            "method_type": "scoring",
            "priority": 3,
            "description": "CausalExtractor._calculate_language_specificity"
        },
        {
            "class": "CausalExtractor",
            "function": "_calculate_composite_likelihood",

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    "method_type": "scoring",
    "priority": 4,
    "description": "CausalExtractor._calculate_composite_likelihood"
  },
  {
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    "function": "_calculate_semantic_distance",
    "method_type": "scoring",
    "priority": 5,
    "description": "CausalExtractor._calculate_semantic_distance"
  },
  {
    "class": "TemporalLogicVerifier",
    "function": "_classify_temporal_type",
    "method_type": "analysis",
    "priority": 6,
    "description": "TemporalLogicVerifier._classify_temporal_type"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_score_indicators",
    "method_type": "scoring",
    "priority": 7,
    "description": "PDETMunicipalPlanAnalyzer._score_indicators"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_find_outcome_mentions",
    "method_type": "analysis",
    "priority": 8,
    "description": "PDETMunicipalPlanAnalyzer._find_outcome_mentions"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_score_temporal_consistency",
    "method_type": "scoring",
    "priority": 9,
    "description": "PDETMunicipalPlanAnalyzer._score_temporal_consistency"
  },
  {
    "class": "CausalExtractor",
    "function": "_extract_goals",
    "method_type": "extraction",
    "priority": 10,
    "description": "CausalExtractor._extract_goals"
  },
  {
    "class": "CausalExtractor",
    "function": "_parse_goal_context",
    "method_type": "extraction",
    "priority": 11,
    "description": "CausalExtractor._parse_goal_context"
  },
  {
    "class": "CausalExtractor",
    "function": "_classify_goal_type",
    "method_type": "analysis",
    "priority": 12,
    "description": "CausalExtractor._classify_goal_type"
  },
  {
    "class": "TemporalLogicVerifier",
    "function": "_parse_temporal_marker",
    "method_type": "extraction",
    "priority": 13,
    "description": "TemporalLogicVerifier._parse_temporal_marker"
  },
  {
    "class": "TemporalLogicVerifier",
    "function": "_extract_resources",
    "method_type": "extraction",
    "priority": 14,

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    "description": "TemporalLogicVerifier._extract_resources"
  },
  {
    "class": "PerformanceAnalyzer",
    "function": "analyze_performance",
    "method_type": "analysis",
    "priority": 15,
    "description": "PerformanceAnalyzer.analyze_performance"
  },
  {
    "class": "PerformanceAnalyzer",
    "function": "_generate_recommendations",
    "method_type": "analysis",
    "priority": 16,
    "description": "PerformanceAnalyzer._generate_recommendations"
  }
],
"patterns": [
  {
    "category": "INDICADOR",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q256-000",
    "match_type": "REGEX",
    "pattern": "indicador de resultado|indicador de efecto|outcome"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q256-001",
    "match_type": "REGEX",
    "pattern": "número de agresiones (amenazas, atentados, homicidios) contra defensores"
  },
  {
    "category": "INDICADOR",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q256-002",
    "match_type": "REGEX",
    "pattern": "tasa de homicidios de líderes sociales"
  },
  {
    "category": "INDICADOR",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q256-003",
    "match_type": "REGEX",
    "pattern": "porcentaje de casos de amenaza que no se materializan"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q256-004",
    "match_type": "REGEX",
    "pattern": "Índice de Riesgo para Defensores"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q256-005",
    "match_type": "LITERAL",
    "pattern": "Línea Base:|LB:|valor 2023:"
  },
  {
    "category": "INDICADOR",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q256-006",
    "match_type": "REGEX",

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    "pattern": "Meta Cuatrienio:|Meta 2027:|se espera reducir a cero|reducir en X%"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q256-007",
    "match_type": "REGEX",
    "pattern": "Fuente de verificación:|Medio de verificación:"
  },
  {
    "category": "INDICADOR",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q256-008",
    "match_type": "REGEX",
    "pattern": "Ficha de Indicador de Resultado (KPT del DNP)"
  }
],
"policy_area_id": "PA08",
"question_global": 256,
"question_id": "Q256",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿Los indicadores de resultado para la protección de líderes (ej. 'reducción del número de amenazas', 'tasa de homicidios de defensores') están definidos con línea base, meta y un horizonte temporal?",
"validations": {}
},
{
  "base_slot": "D4-Q2",
  "cluster_id": "CL03",
  "dimension_id": "DIM04",
  "expected_elements": [
    {
      "required": true,
      "type": "cadena_causal_explicita"
    },
    {
      "required": true,
      "type": "condiciones_habilitantes"
    },
    {
      "required": true,
      "type": "supuestos_identificados"
    }
  ],
"failure_contract": {
  "abort_if": [
    "missing_required_element",
    "incomplete_text"
  ],
  "emit_code": "ABORT-Q257-REQ"
},
"method_sets": [
  {
    "class": "TeoriaCambio",
    "function": "_encontrar_caminos_completos",
    "method_type": "analysis",
    "priority": 1,
    "description": "TeoriaCambio._encontrar_caminos_completos"
  },
  {
    "class": "TeoriaCambio",
    "function": "validacion_completa",
    "method_type": "analysis",
    "priority": 2,
    "description": "TeoriaCambio.validacion_completa"
  },
  {
    "class": "CausalExtractor",
    "function": "extract_causal_hierarchy",

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    "method_type": "extraction",
    "priority": 3,
    "description": "CausalExtractor.extract_causal_hierarchy"
  },
  {
    "class": "HierarchicalGenerativeModel",
    "function": "verify_conditional_independence",
    "method_type": "analysis",
    "priority": 4,
    "description": "HierarchicalGenerativeModel.verify_conditional_independence"
  },
  {
    "class": "HierarchicalGenerativeModel",
    "function": "_generate_independence_tests",
    "method_type": "analysis",
    "priority": 5,
    "description": "HierarchicalGenerativeModel._generate_independence_tests"
  },
  {
    "class": "BayesianCounterfactualAuditor",
    "function": "construct_scm",
    "method_type": "analysis",
    "priority": 6,
    "description": "BayesianCounterfactualAuditor.construct_scm"
  },
  {
    "class": "AdvancedDAGValidator",
    "function": "_perform_sensitivity_analysis_internal",
    "method_type": "analysis",
    "priority": 7,
    "description": "AdvancedDAGValidator._perform_sensitivity_analysis_internal"
  },
  {
    "class": "BayesFactorTable",
    "function": "get_bayes_factor",
    "method_type": "analysis",
    "priority": 8,
    "description": "BayesFactorTable.get_bayes_factor"
  }
],
"patterns": [
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q257-000",
    "match_type": "REGEX",
    "pattern": "cadena causal|lógica de intervención|si... entonces..."
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q257-001",
    "match_type": "REGEX",
    "pattern": "el resultado se logrará siempre y cuando|asumiendo que"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q257-002",
    "match_type": "REGEX",
    "pattern": "supuesto clave|premisa fundamental"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q257-003",
    "match_type": "REGEX",
    "pattern": "condición habilitante|factor crítico|requiere de"
  }
]

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    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q257-004",
      "match_type": "REGEX",
      "pattern": "depende de la efectividad de los esquemas de la UNP"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q257-005",
      "match_type": "REGEX",
      "pattern": "un supuesto es que la comunidad rechace la estigmatización"
    },
    {
      "category": "FUENTE_OFICIAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q257-006",
      "match_type": "REGEX",
      "pattern": "se requiere una acción efectiva de la Fiscalía para que haya impunidad cero"
    }
  ],
  "policy_area_id": "PA08",
  "question_global": 257,
  "question_id": "Q257",
  "scoring_definition_ref": "scoring_modalities.TYPE_A",
  "scoring_modality": "TYPE_A",
  "text": "¿Se explicita la cadena causal que lleva a la mejora de la seguridad de los líderes, mencionando 'supuestos' clave (ej. 'si los esquemas de la UNP son efectivos') o 'condiciones habilitantes'?",
  "validations": {}
},
{
  "base_slot": "D4-Q3",
  "cluster_id": "CL03",
  "dimension_id": "DIM04",
  "expected_elements": [
    {
      "required": true,
      "type": "evidencia_comparada"
    },
    {
      "required": true,
      "type": "justificacion_capacidad"
    },
    {
      "required": true,
      "type": "justificacion_recursos"
    }
  ],
  "failure_contract": {
    "abort_if": [
      "missing_required_element",
      "incomplete_text"
    ],
    "emit_code": "ABORT-Q258-REQ"
  },
  "method_sets": [
    {
      "class": "PDETMunicipalPlanAnalyzer",
      "function": "_get_prior_effect",
      "method_type": "analysis",
      "priority": 1,
      "description": "PDETMunicipalPlanAnalyzer._get_prior_effect"
    },
    {
      "class": "PDETMunicipalPlanAnalyzer",
      "function": "_estimate_effect_bayesian",

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    "method_type": "analysis",
    "priority": 2,
    "description": "PDETMunicipalPlanAnalyzer._estimate_effect_bayesian"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_compute_robustness_value",
    "method_type": "analysis",
    "priority": 3,
    "description": "PDETMunicipalPlanAnalyzer._compute_robustness_value"
  },
  {
    "class": "AdaptivePriorCalculator",
    "function": "sensitivity_analysis",
    "method_type": "analysis",
    "priority": 4,
    "description": "AdaptivePriorCalculator.sensitivity_analysis"
  },
  {
    "class": "HierarchicalGenerativeModel",
    "function": "_calculate_r_hat",
    "method_type": "scoring",
    "priority": 5,
    "description": "HierarchicalGenerativeModel._calculate_r_hat"
  },
  {
    "class": "HierarchicalGenerativeModel",
    "function": "_calculate_ess",
    "method_type": "scoring",
    "priority": 6,
    "description": "HierarchicalGenerativeModel._calculate_ess"
  },
  {
    "class": "AdvancedDAGValidator",
    "function": "_calculate_statistical_power",
    "method_type": "scoring",
    "priority": 7,
    "description": "AdvancedDAGValidator._calculate_statistical_power"
  },
  {
    "class": "BayesianMechanismInference",
    "function": "_aggregate_bayesian_confidence",
    "method_type": "analysis",
    "priority": 8,
    "description": "BayesianMechanismInference._aggregate_bayesian_confidence"
  }
],

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"patterns": [

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  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q258-000",
    "match_type": "REGEX",
    "pattern": "la meta de 'cero homicidios' es un imperativo ético y legal, aunque

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ambicioso"

```

  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q258-001",
    "match_type": "REGEX",
    "pattern": "la meta se justifica por el fortalecimiento de la Mesa de Garantías"
  },

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  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q258-002",
    "match_type": "REGEX",
    "pattern": "con la inversión en prevención se espera reducir las amenazas"
  }
]

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```

    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q258-003",
      "match_type": "REGEX",
      "pattern": "la capacidad de articulación con la Fuerza Pública permite aspirar a esta
meta"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q258-004",
      "match_type": "REGEX",
      "pattern": "en experiencias de otros municipios con planes de protección efectivos"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q258-005",
      "match_type": "REGEX",
      "pattern": "benchmark|referente internacional|meta del PND en protección"
    }
  ],
  "policy_area_id": "PA08",
  "question_global": 258,
  "question_id": "Q258",
  "scoring_definition_ref": "scoring_modalities.TYPE_A",
  "scoring_modality": "TYPE_A",
  "text": "¿La ambición de las metas de resultado (ej. 'cero homicidios de líderes') se
justifica en función de la inversión, la capacidad de respuesta del Estado o se compara con 'casos'
similares?",
  "validations": {}
},
{
  "base_slot": "D4-Q4",
  "cluster_id": "CL03",
  "dimension_id": "DIM04",
  "expected_elements": [
    {
      "required": true,
      "type": "criterios_exito_definidos"
    },
    {
      "required": true,
      "type": "vinculo_resultado_problema"
    }
  ],
  "failure_contract": {
    "abort_if": [
      "missing_required_element",
      "incomplete_text"
    ],
    "emit_code": "ABORT-Q259-REQ"
  },
  "method_sets": [
    {
      "class": "PolicyContradictionDetector",
      "function": "_calculate_objective_alignment",
      "method_type": "scoring",
      "priority": 1,
      "description": "PolicyContradictionDetector._calculate_objective_alignment"
    },
    {
      "class": "PolicyContradictionDetector",
      "function": "_identify_affected_sections",
      "method_type": "analysis",
      "priority": 2,
      "description": "PolicyContradictionDetector._identify_affected_sections"
    }
  ]
}

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    },
    {
      "class": "PolicyContradictionDetector",
      "function": "_generate_resolution_recommendations",
      "method_type": "analysis",
      "priority": 3,
      "description": "PolicyContradictionDetector._generate_resolution_recommendations"
    },
    {
      "class": "OperationalizationAuditor",
      "function": "_generate_optimal_remediations",
      "method_type": "analysis",
      "priority": 4,
      "description": "OperationalizationAuditor._generate_optimal_remediations"
    },
    {
      "class": "OperationalizationAuditor",
      "function": "_get_remediation_text",
      "method_type": "analysis",
      "priority": 5,
      "description": "OperationalizationAuditor._get_remediation_text"
    },
    {
      "class": "BayesianCounterfactualAuditor",
      "function": "aggregate_risk_and_prioritize",
      "method_type": "analysis",
      "priority": 6,
      "description": "BayesianCounterfactualAuditor.aggregate_risk_and_prioritize"
    },
    {
      "class": "FinancialAuditor",
      "function": "_detect_allocation_gaps",
      "method_type": "analysis",
      "priority": 7,
      "description": "FinancialAuditor._detect_allocation_gaps"
    }
  ],

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  "patterns": [
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q259-000",
      "match_type": "REGEX",
      "pattern": "este resultado responde al problema de las amenazas constantes"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q259-001",
      "match_type": "REGEX",
      "pattern": "para solucionar el ambiente de estigmatización"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q259-002",
      "match_type": "REGEX",
      "pattern": "el resultado atiende directamente el riesgo de homicidio"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q259-003",
      "match_type": "REGEX",
      "pattern": "criterio de éxito|se considerará un logro si disminuyen las solicitudes a la

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UNP"

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    },
    {

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        "category": "GENERAL",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q259-004",
        "match_type": "REGEX",
        "pattern": "umbral de cumplimiento|mínimo aceptable"
    },
    {
        "category": "GENERAL",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q259-005",
        "match_type": "REGEX",
        "pattern": "matriz de coherencia|alineación diagnóstico-estrategia"
    }
],
"policy_area_id": "PA08",
"question_global": 259,
"question_id": "Q259",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿Los resultados propuestos (ej. 'creación de un entorno seguro para la defensa de los DDHH') 'atienden' o 'abordan' directamente los riesgos y amenazas priorizados en el diagnóstico?",
"validations": {}
},
{
    "base_slot": "D4-Q5",
    "cluster_id": "CL03",
    "dimension_id": "DIM04",
    "expected_elements": [
        {
            "required": true,
            "type": "alineacion_acuerdo_paz"
        },
        {
            "required": true,
            "type": "alineacion_jurisprudencia"
        },
        {
            "required": true,
            "type": "alineacion_pnd"
        }
    ],
    "failure_contract": {
        "abort_if": [
            "missing_required_element",
            "incomplete_text"
        ],
        "emit_code": "ABORT-Q260-REQ"
    },
    "method_sets": [
        {
            "class": "PDETMunicipalPlanAnalyzer",
            "function": "_score_pdet_alignment",
            "method_type": "scoring",
            "priority": 1,
            "description": "PDETMunicipalPlanAnalyzer._score_pdet_alignment"
        },
        {
            "class": "PDETMunicipalPlanAnalyzer",
            "function": "_score_causal_coherence",
            "method_type": "scoring",
            "priority": 2,
            "description": "PDETMunicipalPlanAnalyzer._score_causal_coherence"
        },
        {
            "class": "CDAFFramework",
            "function": "_validate_dnp_compliance",
            "method_type": "validation",
            "priority": 3,
            "description": "CDAFFramework._validate_dnp_compliance"
        }
    ]
}

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    },
    {
      "class": "CDAFFramework",
      "function": "_generate_dnp_report",
      "method_type": "analysis",
      "priority": 4,
      "description": "CDAFFramework._generate_dnp_report"
    },
    {
      "class": "IndustrialPolicyProcessor",
      "function": "_analyze_causal_dimensions",
      "method_type": "analysis",
      "priority": 5,
      "description": "IndustrialPolicyProcessor._analyze_causal_dimensions"
    },
    {
      "class": "AdaptivePriorCalculator",
      "function": "validate_quality_criteria",
      "method_type": "validation",
      "priority": 6,
      "description": "AdaptivePriorCalculator.validate_quality_criteria"
    }
  ],
  "patterns": [
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q260-000",
      "match_type": "REGEX",
      "pattern": "alineado con el Plan Nacional de Desarrollo|PND"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q260-001",
      "match_type": "REGEX",
      "pattern": "contribuye al Punto 2.1 del Acuerdo de Paz|Garantías de Seguridad"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q260-002",
      "match_type": "REGEX",
      "pattern": "en cumplimiento de las Alertas Tempranas de la Defensoría"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q260-003",
      "match_type": "REGEX",
      "pattern": "acata las órdenes de la Corte Constitucional en sentencias sobre líderes"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q260-004",
      "match_type": "REGEX",
      "pattern": "implementación del Plan de Acción Oportuna|PAO"
    }
  ],
  "policy_area_id": "PA08",
  "question_global": 260,
  "question_id": "Q260",
  "scoring_definition_ref": "scoring_modalities.TYPE_A",
  "scoring_modality": "TYPE_A",
  "text": "¿El plan declara la alineación de sus resultados de protección de líderes con marcos superiores como el PND, los Acuerdos de Paz o sentencias de la Corte Constitucional?",

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"validations": {}
},
{
  "base_slot": "D5-Q1",
  "cluster_id": "CL03",
  "dimension_id": "DIM05",
  "expected_elements": [
    {
      "required": true,
      "type": "impacto_definido"
    },
    {
      "required": true,
      "type": "rezago_temporal"
    },
    {
      "required": true,
      "type": "ruta_transmision"
    }
  ],
  "failure_contract": {
    "abort_if": [
      "missing_required_element",
      "incomplete_text"
    ],
    "emit_code": "ABORT-Q261-REQ"
  },
  "method_sets": [
    {
      "class": "PDETMunicipalPlanAnalyzer",
      "function": "generate_counterfactuals",
      "method_type": "analysis",
      "priority": 1,
      "description": "PDETMunicipalPlanAnalyzer.generate_counterfactuals"
    },
    {
      "class": "PDETMunicipalPlanAnalyzer",
      "function": "_simulate_intervention",
      "method_type": "analysis",
      "priority": 2,
      "description": "PDETMunicipalPlanAnalyzer._simulate_intervention"
    },
    {
      "class": "PDETMunicipalPlanAnalyzer",
      "function": "_generate_scenario_narrative",
      "method_type": "analysis",
      "priority": 3,
      "description": "PDETMunicipalPlanAnalyzer._generate_scenario_narrative"
    },
    {
      "class": "PDETMunicipalPlanAnalyzer",
      "function": "_find_mediator_mentions",
      "method_type": "analysis",
      "priority": 4,
      "description": "PDETMunicipalPlanAnalyzer._find_mediator_mentions"
    },
    {
      "class": "TeoriaCambio",
      "function": "_validar_orden_causal",
      "method_type": "analysis",
      "priority": 5,
      "description": "TeoriaCambio._validar_orden_causal"
    },
    {
      "class": "CausalExtractor",
      "function": "_assess_temporal_coherence",
      "method_type": "analysis",
      "priority": 6,
      "description": "CausalExtractor._assess_temporal_coherence"
    },
    {
      "class": "TextMiningEngine",

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    "function": "_generate_interventions",
    "method_type": "analysis",
    "priority": 7,
    "description": "TextMiningEngine._generate_interventions"
  },
  {
    "class": "BayesianCounterfactualAuditor",
    "function": "construct_scm",
    "method_type": "analysis",
    "priority": 8,
    "description": "BayesianCounterfactualAuditor.construct_scm"
  }
],
"patterns": [
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q261-000",
    "match_type": "REGEX",
    "pattern": "impacto esperado|visión de largo plazo|transformación"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q261-001",
    "match_type": "REGEX",
    "pattern": "fortalecimiento de la democracia local|gobernanza democrática"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q261-002",
    "match_type": "REGEX",
    "pattern": "un espacio cívico abierto y seguro|pleno ejercicio de la ciudadanía"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q261-003",
    "match_type": "REGEX",
    "pattern": "la suma de los resultados de protección y participación generará el impacto
de"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q261-004",
    "match_type": "REGEX",
    "pattern": "ruta de transmisión|cadena de impacto"
  },
  {
    "category": "TEMPORAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q261-005",
    "match_type": "REGEX",
    "pattern": "tiempo de maduración|efectos en el largo plazo|se espera observar en 8-10
años"
  }
],
"policy_area_id": "PA08",
"question_global": 261,
"question_id": "Q261",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿El PDM define 'impactos' de largo plazo (ej. 'fortalecimiento de la democracia
local', 'espacio cívico abierto y seguro')? Se debe verificar si se menciona la ruta desde los

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resultados y el 'tiempo de maduración' esperado.",
  "validations": {}
},
{
  "base_slot": "D5-Q2",
  "cluster_id": "CL03",
  "dimension_id": "DIM05",
  "expected_elements": [
    {
      "required": true,
      "type": "justifica_validez"
    },
    {
      "required": true,
      "type": "usa_indices_compuestos"
    },
    {
      "required": true,
      "type": "usa_proxies"
    }
  ],
  "failure_contract": {
    "abort_if": [
      "missing_required_element",
      "incomplete_text"
    ],
    "emit_code": "ABORT-Q262-REQ"
  },
  "method_sets": [
    {
      "class": "PDETMunicipalPlanAnalyzer",
      "function": "calculate_quality_score",
      "method_type": "scoring",
      "priority": 1,
      "description": "PDETMunicipalPlanAnalyzer.calculate_quality_score"
    },
    {
      "class": "PDETMunicipalPlanAnalyzer",
      "function": "_estimate_score_confidence",
      "method_type": "scoring",
      "priority": 2,
      "description": "PDETMunicipalPlanAnalyzer._estimate_score_confidence"
    },
    {
      "class": "PDETMunicipalPlanAnalyzer",
      "function": "_compute_e_value",
      "method_type": "analysis",
      "priority": 3,
      "description": "PDETMunicipalPlanAnalyzer._compute_e_value"
    },
    {
      "class": "PDETMunicipalPlanAnalyzer",
      "function": "_compute_robustness_value",
      "method_type": "analysis",
      "priority": 4,
      "description": "PDETMunicipalPlanAnalyzer._compute_robustness_value"
    },
    {
      "class": "PDETMunicipalPlanAnalyzer",
      "function": "_interpret_sensitivity",
      "method_type": "analysis",
      "priority": 5,
      "description": "PDETMunicipalPlanAnalyzer._interpret_sensitivity"
    },
    {
      "class": "ReportingEngine",
      "function": "_calculate_quality_score",
      "method_type": "scoring",
      "priority": 6,
      "description": "ReportingEngine._calculate_quality_score"
    }
  ]
}

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    "class": "BayesianMechanismInference",
    "function": "_aggregate_bayesian_confidence",
    "method_type": "analysis",
    "priority": 7,
    "description": "BayesianMechanismInference._aggregate_bayesian_confidence"
  },
  {
    "class": "PolicyAnalysisEmbedder",
    "function": "evaluate_policy_numerical_consistency",
    "method_type": "analysis",
    "priority": 8,
    "description": "PolicyAnalysisEmbedder.evaluate_policy_numerical_consistency"
  },
  {
    "class": "PolicyAnalysisEmbedder",
    "function": "get_diagnostics",
    "method_type": "analysis",
    "priority": 9,
    "description": "PolicyAnalysisEmbedder.get_diagnostics"
  },
  {
    "class": "PolicyAnalysisEmbedder",
    "function": "process_document",
    "method_type": "analysis",
    "priority": 10,
    "description": "PolicyAnalysisEmbedder.process_document"
  },
  {
    "class": "PolicyAnalysisEmbedder",
    "function": "_generate_query_from_pdq",
    "method_type": "analysis",
    "priority": 11,
    "description": "PolicyAnalysisEmbedder._generate_query_from_pdq"
  },
  {
    "class": "PolicyAnalysisEmbedder",
    "function": "_filter_by_pdq",
    "method_type": "analysis",
    "priority": 12,
    "description": "PolicyAnalysisEmbedder._filter_by_pdq"
  },
  {
    "class": "PolicyAnalysisEmbedder",
    "function": "_extract_numerical_values",
    "method_type": "extraction",
    "priority": 13,
    "description": "PolicyAnalysisEmbedder._extract_numerical_values"
  },
  {
    "class": "PolicyAnalysisEmbedder",
    "function": "_embed_texts",
    "method_type": "analysis",
    "priority": 14,
    "description": "PolicyAnalysisEmbedder._embed_texts"
  },
  {
    "class": "PolicyAnalysisEmbedder",
    "function": "_compute_overall_confidence",
    "method_type": "analysis",
    "priority": 15,
    "description": "PolicyAnalysisEmbedder._compute_overall_confidence"
  },
  {
    "class": "FinancialAuditor",
    "function": "_calculate_sufficiency",
    "method_type": "scoring",
    "priority": 16,
    "description": "FinancialAuditor._calculate_sufficiency"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_interpret_overall_quality",

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    "method_type": "analysis",
    "priority": 17,
    "description": "PDETMunicipalPlanAnalyzer._interpret_overall_quality"
  },
  {
    "class": "BayesianCounterfactualAuditor",
    "function": "aggregate_risk_and_prioritize",
    "method_type": "analysis",
    "priority": 18,
    "description": "BayesianCounterfactualAuditor.aggregate_risk_and_prioritize"
  },
  {
    "class": "PolicyTextProcessor",
    "function": "normalize_unicode",
    "method_type": "analysis",
    "priority": 19,
    "description": "PolicyTextProcessor.normalize_unicode"
  },
  {
    "class": "PolicyTextProcessor",
    "function": "segment_into_sentences",
    "method_type": "analysis",
    "priority": 20,
    "description": "PolicyTextProcessor.segment_into_sentences"
  },
  {
    "class": "IndustrialPolicyProcessor",
    "function": "_compute_evidence_confidence",
    "method_type": "analysis",
    "priority": 21,
    "description": "IndustrialPolicyProcessor._compute_evidence_confidence"
  },
  {
    "class": "IndustrialPolicyProcessor",
    "function": "_compute_avg_confidence",
    "method_type": "analysis",
    "priority": 22,
    "description": "IndustrialPolicyProcessor._compute_avg_confidence"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_quality_to_dict",
    "method_type": "analysis",
    "priority": 23,
    "description": "PDETMunicipalPlanAnalyzer._quality_to_dict"
  },
  {
    "class": "IndustrialPolicyProcessor",
    "function": "_construct_evidence_bundle",
    "method_type": "analysis",
    "priority": 24,
    "description": "IndustrialPolicyProcessor._construct_evidence_bundle"
  },
  {
    "class": "PolicyTextProcessor",
    "function": "compile_pattern",
    "method_type": "analysis",
    "priority": 25,
    "description": "PolicyTextProcessor.compile_pattern"
  },
  {
    "class": "PolicyTextProcessor",
    "function": "extract_contextual_window",
    "method_type": "extraction",
    "priority": 26,
    "description": "PolicyTextProcessor.extract_contextual_window"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "generate_executive_report",
    "method_type": "analysis",
    "priority": 27,

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    "description": "PDETMunicipalPlanAnalyzer.generate_executive_report"
  },
  {
    "class": "IndustrialPolicyProcessor",
    "function": "export_results",
    "method_type": "analysis",
    "priority": 28,
    "description": "IndustrialPolicyProcessor.export_results"
  }
],
"patterns": [
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q262-000",
    "match_type": "REGEX",
    "pattern": "Índice de Participación Ciudadana|Índice de Democracia Local|Índice de
Estado de Derecho"
  },
  {
    "category": "INDICADOR",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q262-001",
    "match_type": "REGEX",
    "pattern": "indicador compuesto|indicador sintético"
  },
  {
    "category": "INDICADOR",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q262-002",
    "match_type": "REGEX",
    "pattern": "se usará como proxy|indicador aproximado"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q262-003",
    "match_type": "REGEX",
    "pattern": "el número de organizaciones sociales activas como proxy de un espacio cívico
vibrante"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q262-004",
    "match_type": "REGEX",
    "pattern": "la participación electoral como proxy de confianza democrática"
  },
  {
    "category": "INDICADOR",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q262-005",
    "match_type": "REGEX",
    "pattern": "este indicador es válido porque refleja|captura la vitalidad de la sociedad
civil"
  }
],
"policy_area_id": "PA08",
"question_global": 262,
"question_id": "Q262",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿Se utilizan 'índices' (ej. Índice de Participación Ciudadana) o 'proxies' para
medir los impactos en el espacio cívico, justificando su validez?",
"validations": {}
},

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{
  "base_slot": "D5-Q3",
  "cluster_id": "CL03",
  "dimension_id": "DIM05",
  "expected_elements": [
    {
      "required": true,
      "type": "documenta_validez"
    },
    {
      "required": true,
      "type": "proxy_para_intangibles"
    },
    {
      "required": true,
      "type": "reconoce_limitaciones"
    }
  ],
  "failure_contract": {
    "abort_if": [
      "missing_required_element",
      "incomplete_text"
    ],
    "emit_code": "ABORT-Q263-REQ"
  },
  "method_sets": [
    {
      "class": "CausalExtractor",
      "function": "_calculate_semantic_distance",
      "method_type": "scoring",
      "priority": 1,
      "description": "CausalExtractor._calculate_semantic_distance"
    },
    {
      "class": "SemanticAnalyzer",
      "function": "extract_semantic_cube",
      "method_type": "extraction",
      "priority": 2,
      "description": "SemanticAnalyzer.extract_semantic_cube"
    },
    {
      "class": "BayesianMechanismInference",
      "function": "_quantify_uncertainty",
      "method_type": "analysis",
      "priority": 3,
      "description": "BayesianMechanismInference._quantify_uncertainty"
    },
    {
      "class": "PDETMunicipalPlanAnalyzer",
      "function": "_find_mediator_mentions",
      "method_type": "analysis",
      "priority": 4,
      "description": "PDETMunicipalPlanAnalyzer._find_mediator_mentions"
    },
    {
      "class": "PolicyAnalysisEmbedder",
      "function": "get_diagnostics",
      "method_type": "analysis",
      "priority": 5,
      "description": "PolicyAnalysisEmbedder.get_diagnostics"
    },
    {
      "class": "AdaptivePriorCalculator",
      "function": "_perturb_evidence",
      "method_type": "analysis",
      "priority": 6,
      "description": "AdaptivePriorCalculator._perturb_evidence"
    }
  ],
  "patterns": [
    {
      "category": "GENERAL",

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        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q263-000",
        "match_type": "REGEX",
        "pattern": "dado que es difícil medir la legitimidad|para aproximar la medición de"
    },
    {
        "category": "GENERAL",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q263-001",
        "match_type": "REGEX",
        "pattern": "se utilizará como proxy|medición indirecta"
    },
    {
        "category": "GENERAL",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q263-002",
        "match_type": "REGEX",
        "pattern": "el nivel de convocatoria de las organizaciones sociales como proxy de
legitimidad"
    },
    {
        "category": "GENERAL",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q263-003",
        "match_type": "REGEX",
        "pattern": "este proxy es validado por estudios de ciencia política"
    },
    {
        "category": "GENERAL",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q263-004",
        "match_type": "REGEX",
        "pattern": "una limitación es que no captura las tensiones internas de los movimientos"
    },
    {
        "category": "GENERAL",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q263-005",
        "match_type": "REGEX",
        "pattern": "aunque imperfecto, este proxy nos da una señal de representatividad"
    }
],
"policy_area_id": "PA08",
"question_global": 263,
"question_id": "Q263",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "Cuando un impacto en el liderazgo social es difícil de medir (ej. 'legitimidad del
liderazgo'), ¿se recurre a un 'proxy'? Se valora si el texto documenta su 'validez' y reconoce sus
'limitaciones'.",
"validations": {}
},
{
    "base_slot": "D5-Q4",
    "cluster_id": "CL03",
    "dimension_id": "DIM05",
    "expected_elements": [
        {
            "required": true,
            "type": "alineacion_marcos"
        },
        {
            "required": true,
            "type": "riesgos_sistemicos"
        }
    ]
},
],

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"failure_contract": {
  "abort_if": [
    "missing_required_element",
    "incomplete_text"
  ],
  "emit_code": "ABORT-Q264-REQ"
},
"method_sets": [
  {
    "class": "OperationalizationAuditor",
    "function": "_audit_systemic_risk",
    "method_type": "validation",
    "priority": 1,
    "description": "OperationalizationAuditor._audit_systemic_risk"
  },
  {
    "class": "BayesianCounterfactualAuditor",
    "function": "refutation_and_sanity_checks",
    "method_type": "analysis",
    "priority": 2,
    "description": "BayesianCounterfactualAuditor.refutation_and_sanity_checks"
  },
  {
    "class": "BayesianCounterfactualAuditor",
    "function": "_test_effect_stability",
    "method_type": "analysis",
    "priority": 3,
    "description": "BayesianCounterfactualAuditor._test_effect_stability"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_interpret_risk",
    "method_type": "analysis",
    "priority": 4,
    "description": "PDETMunicipalPlanAnalyzer._interpret_risk"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_interpret_sensitivity",
    "method_type": "analysis",
    "priority": 5,
    "description": "PDETMunicipalPlanAnalyzer._interpret_sensitivity"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_break_cycles",
    "method_type": "analysis",
    "priority": 6,
    "description": "PDETMunicipalPlanAnalyzer._break_cycles"
  },
  {
    "class": "AdaptivePriorCalculator",
    "function": "sensitivity_analysis",
    "method_type": "analysis",
    "priority": 7,
    "description": "AdaptivePriorCalculator.sensitivity_analysis"
  }
],
"patterns": [
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q264-000",
    "match_type": "REGEX",
    "pattern": "visión de Paz Total|Acuerdo de Paz a largo plazo"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q264-001",

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    "match_type": "LITERAL",
    "pattern": "riesgo sistémico|choque externo"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q264-002",
    "match_type": "REGEX",
    "pattern": "reconfiguración del conflicto armado|cooptación de liderazgos por actores
ilegales"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q264-003",
    "match_type": "REGEX",
    "pattern": "crisis de legitimidad democrática a nivel nacional"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q264-004",
    "match_type": "REGEX",
    "pattern": "estos factores podrían revertir los avances en la apertura del espacio
cívico"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q264-005",
    "match_type": "REGEX",
    "pattern": "el mecanismo causal es vulnerable a|sensible a la voluntad política del
gobierno nacional"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q264-006",
    "match_type": "REGEX",
    "pattern": "estrategias de resiliencia de la sociedad civil"
  }
],
"policy_area_id": "PA08",
"question_global": 264,
"question_id": "Q264",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿Los impactos en el liderazgo social se alinean con marcos nacionales/globales y
consideran 'riesgos sistémicos' (ej. cambios en las dinámicas del conflicto) que podrían romper el
mecanismo causal?",
"validations": {}
},
{
  "base_slot": "D5-Q5",
  "cluster_id": "CL03",
  "dimension_id": "DIM05",
  "expected_elements": [
    {
      "required": true,
      "type": "análisis_realismo"
    },
    {
      "required": true,
      "type": "efectos_no_deseados"
    }
  ],
  {
    "required": true,

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        "type": "hipotesis_limite"
    }
},
"failure_contract": {
    "abort_if": [
        "missing_required_element",
        "incomplete_text"
    ],
    "emit_code": "ABORT-Q265-REQ"
},
"method_sets": [
    {
        "class": "HierarchicalGenerativeModel",
        "function": "posterior_predictive_check",
        "method_type": "analysis",
        "priority": 1,
        "description": "HierarchicalGenerativeModel.posterior_predictive_check"
    },
    {
        "class": "HierarchicalGenerativeModel",
        "function": "_ablation_analysis",
        "method_type": "analysis",
        "priority": 2,
        "description": "HierarchicalGenerativeModel._ablation_analysis"
    },
    {
        "class": "HierarchicalGenerativeModel",
        "function": "_calculate_waic_difference",
        "method_type": "scoring",
        "priority": 3,
        "description": "HierarchicalGenerativeModel._calculate_waic_difference"
    },
    {
        "class": "AdaptivePriorCalculator",
        "function": "_add_ood_noise",
        "method_type": "analysis",
        "priority": 4,
        "description": "AdaptivePriorCalculator._add_ood_noise"
    },
    {
        "class": "AdaptivePriorCalculator",
        "function": "validate_quality_criteria",
        "method_type": "validation",
        "priority": 5,
        "description": "AdaptivePriorCalculator.validate_quality_criteria"
    },
    {
        "class": "PDETMunicipalPlanAnalyzer",
        "function": "_compute_e_value",
        "method_type": "analysis",
        "priority": 6,
        "description": "PDETMunicipalPlanAnalyzer._compute_e_value"
    },
    {
        "class": "PDETMunicipalPlanAnalyzer",
        "function": "_compute_robustness_value",
        "method_type": "analysis",
        "priority": 7,
        "description": "PDETMunicipalPlanAnalyzer._compute_robustness_value"
    },
    {
        "class": "BayesianMechanismInference",
        "function": "_calculate_coherence_factor",
        "method_type": "scoring",
        "priority": 8,
        "description": "BayesianMechanismInference._calculate_coherence_factor"
    }
],
"patterns": [
    {
        "category": "GENERAL",
        "confidence_weight": 0.85,

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    "flags": "i",
    "id": "PAT-Q265-000",
    "match_type": "REGEX",
    "pattern": "la ambición del impacto es realista si se mantiene el compromiso de todos
los actores armados"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q265-001",
    "match_type": "REGEX",
    "pattern": "efecto no deseado|consecuencia imprevista|externalidad negativa"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q265-002",
    "match_type": "REGEX",
    "pattern": "riesgo de crear una dependencia de los líderes hacia el Estado para su
seguridad"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q265-003",
    "match_type": "REGEX",
    "pattern": "posible fragmentación del movimiento social"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q265-004",
    "match_type": "REGEX",
    "pattern": "trade-off entre seguridad y autonomía"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q265-005",
    "match_type": "REGEX",
    "pattern": "hipótesis límite|el modelo funciona mientras exista una voluntad de paz
verificable"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q265-006",
    "match_type": "LITERAL",
    "pattern": "supuesto crítico para el impacto a largo plazo"
  }
],
"policy_area_id": "PA08",
"question_global": 265,
"question_id": "Q265",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿La ambición del impacto de garantizar un espacio cívico seguro es realista? Se
debe buscar si se analizan 'efectos no deseados' o se declaran 'hipótesis límite'.",
"validations": {}
},
{
  "base_slot": "D6-Q1",
  "cluster_id": "CL03",
  "dimension_id": "DIM06",
  "expected_elements": [
    {

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    "required": true,
    "type": "diagrama_causal"
  },
  {
    "required": true,
    "type": "supuestos_verificables"
  },
  {
    "required": true,
    "type": "teoria_cambio_explicita"
  }
],
"failure_contract": {
  "abort_if": [
    "missing_required_element",
    "incomplete_text"
  ],
  "emit_code": "ABORT-Q266-REQ"
},
"method_sets": [
  {
    "class": "TeoriaCambio",
    "function": "construir_grafo_causal",
    "method_type": "analysis",
    "priority": 1,
    "description": "TeoriaCambio.construir_grafo_causal"
  },
  {
    "class": "TeoriaCambio",
    "function": "validacion_completa",
    "method_type": "analysis",
    "priority": 2,
    "description": "TeoriaCambio.validacion_completa"
  },
  {
    "class": "TeoriaCambio",
    "function": "export_nodes",
    "method_type": "analysis",
    "priority": 3,
    "description": "TeoriaCambio.export_nodes"
  },
  {
    "class": "ReportingEngine",
    "function": "generate_causal_diagram",
    "method_type": "analysis",
    "priority": 4,
    "description": "ReportingEngine.generate_causal_diagram"
  },
  {
    "class": "ReportingEngine",
    "function": "generate_causal_model_json",
    "method_type": "analysis",
    "priority": 5,
    "description": "ReportingEngine.generate_causal_model_json"
  },
  {
    "class": "AdvancedDAGValidator",
    "function": "export_nodes",
    "method_type": "analysis",
    "priority": 6,
    "description": "AdvancedDAGValidator.export_nodes"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "export_causal_network",
    "method_type": "analysis",
    "priority": 7,
    "description": "PDETMunicipalPlanAnalyzer.export_causal_network"
  },
  {
    "class": "CausalExtractor",
    "function": "extract_causal_hierarchy",

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    "method_type": "extraction",
    "priority": 8,
    "description": "CausalExtractor.extract_causal_hierarchy"
  }
],
"patterns": [
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q266-000",
    "match_type": "REGEX",
    "pattern": "teoría de cambio|marco lógico|cadena causal|modelo lógico de protección"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q266-001",
    "match_type": "REGEX",
    "pattern": "diagrama causal|gráfico de la teoría|esquema de intervención|figura"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q266-002",
    "match_type": "REGEX",
    "pattern": "causa raíz de la violencia contra líderes|determinante estructural"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q266-003",
    "match_type": "REGEX",
    "pattern": "mediador|variable intermedia|eslabón|disuasión|legitimidad|confianza"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q266-004",
    "match_type": "REGEX",
    "pattern": "moderador|factor contextual|presencia de actores armados"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q266-005",
    "match_type": "LITERAL",
    "pattern": "supuesto verificable|hipótesis a testear|premisa comprobable"
  }
],
"policy_area_id": "PA08",
"question_global": 266,
"question_id": "Q266",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿Existe una 'teoría de cambio' explícita para la protección de líderes, preferiblemente en un 'diagrama', que identifique causas (ej. estigmatización), mediadores (ej. legitimidad) y 'supuestos verificables'?",
"validations": {}
},
{
  "base_slot": "D6-Q2",
  "cluster_id": "CL03",
  "dimension_id": "DIM06",
  "expected_elements": [
    {
      "required": true,

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        "type": "evita_saltos_logicos"
    },
    {
        "required": true,
        "type": "proporcionalidad_eslabones"
    }
],
"failure_contract": {
    "abort_if": [
        "missing_required_element",
        "incomplete_text"
    ],
    "emit_code": "ABORT-Q267-REQ"
},
"method_sets": [
    {
        "class": "BeachEvidentialTest",
        "function": "apply_test_logic",
        "method_type": "analysis",
        "priority": 1,
        "description": "BeachEvidentialTest.apply_test_logic"
    },
    {
        "class": "BayesianMechanismInference",
        "function": "_test_necessity",
        "method_type": "analysis",
        "priority": 2,
        "description": "BayesianMechanismInference._test_necessity"
    },
    {
        "class": "BayesianMechanismInference",
        "function": "_test_sufficiency",
        "method_type": "analysis",
        "priority": 3,
        "description": "BayesianMechanismInference._test_sufficiency"
    },
    {
        "class": "BayesianMechanismInference",
        "function": "_calculate_coherence_factor",
        "method_type": "scoring",
        "priority": 4,
        "description": "BayesianMechanismInference._calculate_coherence_factor"
    },
    {
        "class": "BayesianCounterfactualAuditor",
        "function": "_test_effect_stability",
        "method_type": "analysis",
        "priority": 5,
        "description": "BayesianCounterfactualAuditor._test_effect_stability"
    },
    {
        "class": "IndustrialGradeValidator",
        "function": "validate_connection_matrix",
        "method_type": "validation",
        "priority": 6,
        "description": "IndustrialGradeValidator.validate_connection_matrix"
    },
    {
        "class": "PolicyAnalysisEmbedder",
        "function": "_compute_overall_confidence",
        "method_type": "analysis",
        "priority": 7,
        "description": "PolicyAnalysisEmbedder._compute_overall_confidence"
    }
],
"patterns": [
    {
        "category": "GENERAL",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q267-000",
        "match_type": "REGEX",

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    "pattern": "proporcionalidad entre|magnitud del efecto esperado"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q267-001",
    "match_type": "REGEX",
    "pattern": "salto lógico|brecha en la argumentación|milagro de implementación"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q267-002",
    "match_type": "LITERAL",
    "pattern": "es realista esperar que|es factible que"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q267-003",
    "match_type": "REGEX",
    "pattern": "la escala de la intervención es coherente con la ambición del resultado"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q267-004",
    "match_type": "REGEX",
    "pattern": "se requieren pasos intermedios para generar confianza"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q267-005",
    "match_type": "REGEX",
    "pattern": "el resultado es de mayor alcance que el producto"
  }
],
"policy_area_id": "PA08",
"question_global": 267,
"question_id": "Q267",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿Los saltos en la cadena causal de protección son proporcionales (ej. una campaña de comunicación no elimina por sí sola las amenazas)?",
"validations": {}
},
{
  "base_slot": "D6-Q3",
  "cluster_id": "CL03",
  "dimension_id": "DIM06",
  "expected_elements": [
    {
      "required": true,
      "type": "propone_pilotos_o_pruebas"
    },
    {
      "required": true,
      "type": "reconoce_inconsistencias"
    }
  ]
},
"failure_contract": {
  "abort_if": [
    "missing_required_element",
    "incomplete_text"
  ],
  "emit_code": "ABORT-Q268-REQ"
}

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"method_sets": [
  {
    "class": "IndustrialGradeValidator",
    "function": "execute_suite",
    "method_type": "analysis",
    "priority": 1,
    "description": "IndustrialGradeValidator.execute_suite"
  },
  {
    "class": "IndustrialGradeValidator",
    "function": "validate_engine_readiness",
    "method_type": "validation",
    "priority": 2,
    "description": "IndustrialGradeValidator.validate_engine_readiness"
  },
  {
    "class": "IndustrialGradeValidator",
    "function": "_benchmark_operation",
    "method_type": "analysis",
    "priority": 3,
    "description": "IndustrialGradeValidator._benchmark_operation"
  },
  {
    "class": "AdaptivePriorCalculator",
    "function": "validate_quality_criteria",
    "method_type": "validation",
    "priority": 4,
    "description": "AdaptivePriorCalculator.validate_quality_criteria"
  },
  {
    "class": "HierarchicalGenerativeModel",
    "function": "_calculate_r_hat",
    "method_type": "scoring",
    "priority": 5,
    "description": "HierarchicalGenerativeModel._calculate_r_hat"
  },
  {
    "class": "HierarchicalGenerativeModel",
    "function": "_calculate_ess",
    "method_type": "scoring",
    "priority": 6,
    "description": "HierarchicalGenerativeModel._calculate_ess"
  },
  {
    "class": "AdvancedDAGValidator",
    "function": "calculate_acyclicity_pvalue",
    "method_type": "scoring",
    "priority": 7,
    "description": "AdvancedDAGValidator.calculate_acyclicity_pvalue"
  },
  {
    "class": "PerformanceAnalyzer",
    "function": "analyze_performance",
    "method_type": "analysis",
    "priority": 8,
    "description": "PerformanceAnalyzer.analyze_performance"
  }
],
"patterns": [
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q268-000",
    "match_type": "REGEX",
    "pattern": "inconsistencia|debilidad en la teor\u00eda|supuesto d\u00e9bil"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",

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      "id": "PAT-Q268-001",
      "match_type": "REGEX",
      "pattern": "se requiere validar si las campañas de no estigmatización son efectivas"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q268-002",
      "match_type": "REGEX",
      "pattern": "plan piloto de protección colectiva en una comunidad"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q268-003",
      "match_type": "REGEX",
      "pattern": "testear el supuesto de que la respuesta institucional disuade"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q268-004",
      "match_type": "REGEX",
      "pattern": "validar la hipótesis sobre la efectividad de las medidas blandas"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q268-005",
      "match_type": "REGEX",
      "pattern": "evaluación de mecanismos|monitoreo de la teoría de cambio"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q268-006",
      "match_type": "REGEX",
      "pattern": "aprendizaje adaptativo|gestión adaptativa de la protección"
    }
  ],
  "policy_area_id": "PA08",
  "question_global": 268,
  "question_id": "Q268",
  "scoring_definition_ref": "scoring_modalities.TYPE_A",
  "scoring_modality": "TYPE_A",
  "text": "¿El plan reconoce 'inconsistencias' en su lógica de protección y propone 'pilotos' o 'pruebas' para 'testear los supuestos' de sus intervenciones?",
  "validations": {}
},
{
  "base_slot": "D6-Q4",
  "cluster_id": "CL03",
  "dimension_id": "DIM06",
  "expected_elements": [
    {
      "required": true,
      "type": "ciclos_aprendizaje"
    },
    {
      "required": true,
      "type": "mecanismos_correccion"
    },
    {
      "required": true,
      "type": "sistema_monitoreo"
    }
  ]
},

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"failure_contract": {
  "abort_if": [
    "missing_required_element",
    "incomplete_text"
  ],
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  {
    "class": "ConfigLoader",
    "function": "update_priors_from_feedback",
    "method_type": "analysis",
    "priority": 1,
    "description": "ConfigLoader.update_priors_from_feedback"
  },
  {
    "class": "ConfigLoader",
    "function": "check_uncertainty_reduction_criterion",
    "method_type": "analysis",
    "priority": 2,
    "description": "ConfigLoader.check_uncertainty_reduction_criterion"
  },
  {
    "class": "ConfigLoader",
    "function": "_save_prior_history",
    "method_type": "analysis",
    "priority": 3,
    "description": "ConfigLoader._save_prior_history"
  },
  {
    "class": "ConfigLoader",
    "function": "_load_uncertainty_history",
    "method_type": "analysis",
    "priority": 4,
    "description": "ConfigLoader._load_uncertainty_history"
  },
  {
    "class": "CDAFFramework",
    "function": "_extract_feedback_from_audit",
    "method_type": "validation",
    "priority": 5,
    "description": "CDAFFramework._extract_feedback_from_audit"
  },
  {
    "class": "AdvancedDAGValidator",
    "function": "_calculate_node_importance",
    "method_type": "scoring",
    "priority": 6,
    "description": "AdvancedDAGValidator._calculate_node_importance"
  },
  {
    "class": "BayesFactorTable",
    "function": "get_bayes_factor",
    "method_type": "analysis",
    "priority": 7,
    "description": "BayesFactorTable.get_bayes_factor"
  }
],
"patterns": [
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q269-000",
    "match_type": "REGEX",
    "pattern": "sistema de seguimiento y evaluación|M&E de garantías"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q269-001",

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    "match_type": "REGEX",
    "pattern": "monitoreo en tiempo real de las Alertas Tempranas"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q269-002",
    "match_type": "REGEX",
    "pattern": "semáforo de riesgo|mapa de calor de amenazas"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q269-003",
    "match_type": "REGEX",
    "pattern": "mecanismo de ajuste urgente de las medidas de protección"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q269-004",
    "match_type": "REGEX",
    "pattern": "retroalimentación desde la Mesa de Garantías|diálogo con líderes"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q269-005",
    "match_type": "REGEX",
    "pattern": "ciclos de aprendizaje|reuniones del Consejo de Seguridad para revisar
estrategia"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q269-006",
    "match_type": "REGEX",
    "pattern": "lecciones aprendidas en la implementación de la ruta de protección"
  }
],
"policy_area_id": "PA08",
"question_global": 269,
"question_id": "Q269",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿Se describe un sistema de monitoreo para la protección de líderes que incluya
'mecanismos de corrección', 'retroalimentación' o 'aprendizaje' para adaptar la estrategia de
seguridad?",
"validations": {}
},
{
  "base_slot": "D6-Q5",
  "cluster_id": "CL03",
  "dimension_id": "DIM06",
  "expected_elements": [
    {
      "required": true,
      "type": "análisis_contextual"
    },
    {
      "required": true,
      "type": "enfoque_diferencial"
    }
  ]
},
"failure_contract": {
  "abort_if": [
    "missing_required_element",

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    "incomplete_text"
  ],
  "emit_code": "ABORT-Q270-REQ"
},
"method_sets": [
  {
    "class": "CausalExtractor",
    "function": "_calculate_language_specificity",
    "method_type": "scoring",
    "priority": 1,
    "description": "CausalExtractor._calculate_language_specificity"
  },
  {
    "class": "CausalExtractor",
    "function": "_assess_temporal_coherence",
    "method_type": "analysis",
    "priority": 2,
    "description": "CausalExtractor._assess_temporal_coherence"
  },
  {
    "class": "TextMiningEngine",
    "function": "diagnose_critical_links",
    "method_type": "analysis",
    "priority": 3,
    "description": "TextMiningEngine.diagnose_critical_links"
  },
  {
    "class": "CausalInferenceSetup",
    "function": "identify_failure_points",
    "method_type": "analysis",
    "priority": 4,
    "description": "CausalInferenceSetup.identify_failure_points"
  },
  {
    "class": "CausalInferenceSetup",
    "function": "_get_dynamics_pattern",
    "method_type": "analysis",
    "priority": 5,
    "description": "CausalInferenceSetup._get_dynamics_pattern"
  },
  {
    "class": "SemanticProcessor",
    "function": "chunk_text",
    "method_type": "analysis",
    "priority": 6,
    "description": "SemanticProcessor.chunk_text"
  },
  {
    "class": "SemanticProcessor",
    "function": "_detect_pdm_structure",
    "method_type": "analysis",
    "priority": 7,
    "description": "SemanticProcessor._detect_pdm_structure"
  },
  {
    "class": "SemanticProcessor",
    "function": "_detect_table",
    "method_type": "analysis",
    "priority": 8,
    "description": "SemanticProcessor._detect_table"
  },
  {
    "class": "AdaptivePriorCalculator",
    "function": "generate_traceability_record",
    "method_type": "analysis",
    "priority": 9,
    "description": "AdaptivePriorCalculator.generate_traceability_record"
  }
],
"patterns": [
  {
    "category": "GENERAL",

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    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q270-000",
    "match_type": "REGEX",
    "pattern": "enfoque diferencial|Decreto 660 (mujeres defensoras)"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q270-001",
    "match_type": "REGEX",
    "pattern": "líderes ambientales|líderes comunales (JAC)|líderes de restitución"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q270-002",
    "match_type": "REGEX",
    "pattern": "autoridades étnicas|guardia indígena|consejos comunitarios afro"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q270-003",
    "match_type": "REGEX",
    "pattern": "firmantes del Acuerdo de Paz|población en reincorporación"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q270-004",
    "match_type": "REGEX",
    "pattern": "restricciones de acceso geográfico para la UNP"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q270-005",
    "match_type": "REGEX",
    "pattern": "contexto de economías ilegales|disputas por la tierra"
  },
  {
    "category": "TERRITORIAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q270-006",
    "match_type": "REGEX",
    "pattern": "estrategias territorializadas|medidas de protección colectiva adaptadas"
  }
],
"policy_area_id": "PA08",
"question_global": 270,
"question_id": "Q270",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿La lógica causal para la protección de líderes considera el contexto, reconociendo 'grupos afectados' (líderes ambientales, comunales, étnicos) y 'restricciones' territoriales o de seguridad?",
"validations": {}
},
{
  "base_slot": "D1-Q1",
  "cluster_id": "CL04",
  "dimension_id": "DIM01",
  "expected_elements": [
    {
      "minimum": 2,

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    "type": "fuentes_oficiales"
  },
  {
    "minimum": 3,
    "type": "indicadores_cuantitativos"
  },
  {
    "minimum": 2,
    "type": "series_temporales_años"
  }
],
"failure_contract": {
  "abort_if": [
    "missing_required_element",
    "incomplete_text"
  ],
  "emit_code": "ABORT-Q271-REQ"
},
"method_sets": [
  {
    "class": "TextMiningEngine",
    "function": "diagnose_critical_links",
    "method_type": "analysis",
    "priority": 1,
    "description": "TextMiningEngine.diagnose_critical_links"
  },
  {
    "class": "TextMiningEngine",
    "function": "_analyze_link_text",
    "method_type": "analysis",
    "priority": 2,
    "description": "TextMiningEngine._analyze_link_text"
  },
  {
    "class": "IndustrialPolicyProcessor",
    "function": "process",
    "method_type": "analysis",
    "priority": 3,
    "description": "IndustrialPolicyProcessor.process"
  },
  {
    "class": "IndustrialPolicyProcessor",
    "function": "_match_patterns_in_sentences",
    "method_type": "analysis",
    "priority": 4,
    "description": "IndustrialPolicyProcessor._match_patterns_in_sentences"
  },
  {
    "class": "IndustrialPolicyProcessor",
    "function": "_extract_point_evidence",
    "method_type": "extraction",
    "priority": 5,
    "description": "IndustrialPolicyProcessor._extract_point_evidence"
  },
  {
    "class": "CausalExtractor",
    "function": "_extract_goals",
    "method_type": "extraction",
    "priority": 6,
    "description": "CausalExtractor._extract_goals"
  },
  {
    "class": "CausalExtractor",
    "function": "_parse_goal_context",
    "method_type": "extraction",
    "priority": 7,
    "description": "CausalExtractor._parse_goal_context"
  },
  {
    "class": "FinancialAuditor",
    "function": "_parse_amount",
    "method_type": "extraction",

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    "priority": 8,
    "description": "FinancialAuditor._parse_amount"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_extract_financial_amounts",
    "method_type": "extraction",
    "priority": 9,
    "description": "PDETMunicipalPlanAnalyzer._extract_financial_amounts"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_extract_from_budget_table",
    "method_type": "extraction",
    "priority": 10,
    "description": "PDETMunicipalPlanAnalyzer._extract_from_budget_table"
  },
  {
    "class": "PolicyContradictionDetector",
    "function": "_extract_quantitative_claims",
    "method_type": "extraction",
    "priority": 11,
    "description": "PolicyContradictionDetector._extract_quantitative_claims"
  },
  {
    "class": "PolicyContradictionDetector",
    "function": "_parse_number",
    "method_type": "extraction",
    "priority": 12,
    "description": "PolicyContradictionDetector._parse_number"
  },
  {
    "class": "PolicyContradictionDetector",
    "function": "_statistical_significance_test",
    "method_type": "analysis",
    "priority": 13,
    "description": "PolicyContradictionDetector._statistical_significance_test"
  },
  {
    "class": "BayesianNumericalAnalyzer",
    "function": "evaluate_policy_metric",
    "method_type": "analysis",
    "priority": 14,
    "description": "BayesianNumericalAnalyzer.evaluate_policy_metric"
  },
  {
    "class": "BayesianNumericalAnalyzer",
    "function": "compare_policies",
    "method_type": "analysis",
    "priority": 15,
    "description": "BayesianNumericalAnalyzer.compare_policies"
  },
  {
    "class": "SemanticProcessor",
    "function": "chunk_text",
    "method_type": "analysis",
    "priority": 16,
    "description": "SemanticProcessor.chunk_text"
  },
  {
    "class": "SemanticProcessor",
    "function": "embed_single",
    "method_type": "analysis",
    "priority": 17,
    "description": "SemanticProcessor.embed_single"
  }
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"patterns": [
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",

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    "id": "PAT-Q271-000",
    "match_type": "REGEX",
    "pattern": "línea base|diagnóstico del sistema penitenciario y carcelario|situación de
los derechos de PPL"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q271-001",
    "match_type": "REGEX",
    "pattern": "fuente:|según|reportado por|con datos de"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q271-002",
    "match_type": "LITERAL",
    "pattern": "INPEC|Instituto Nacional Penitenciario y Carcelario|USPEC"
  },
  {
    "category": "TERRITORIAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q271-003",
    "match_type": "REGEX",
    "pattern": "Personería Municipal|Defensoría del Pueblo|Procuraduría"
  },
  {
    "category": "TERRITORIAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q271-004",
    "match_type": "REGEX",
    "pattern": "Secretaría de Gobierno|Secretaría de Salud Municipal|ESE"
  },
  {
    "category": "INDICADOR",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q271-005",
    "match_type": "REGEX",
    "pattern": "tasa de hacinamiento|sobrepoblación carcelaria|déficit de cupos"
  },
  {
    "category": "FUENTE_OFICIAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q271-006",
    "match_type": "REGEX",
    "pattern": "centros de detención transitoria|estaciones de policía|URI"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q271-007",
    "match_type": "REGEX",
    "pattern": "establecimiento de reclusión del orden nacional|ERON"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q271-008",
    "match_type": "REGEX",
    "pattern": "número de personas privadas de la libertad|PPL"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,

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    "flags": "i",
    "id": "PAT-Q271-009",
    "match_type": "REGEX",
    "pattern": "distinción entre sindicados y condenados|población sindicada"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q271-010",
    "match_type": "REGEX",
    "pattern": "prevalencia de enfermedades (VIH, TBC)|salud mental intramural"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q271-011",
    "match_type": "REGEX",
    "pattern": "2021|2022|2023|vigencia anterior|serie histórica de hacinamiento"
  },
  {
    "category": "INDICADOR",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q271-012",
    "match_type": "REGEX",
    "pattern": "porcentaje|tasa|número de PPL|número de cupos"
  }
],
"policy_area_id": "PA09",
"question_global": 271,
"question_id": "Q271",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿El diagnóstico presenta datos numéricos (tasa de hacinamiento en centros de
detención transitoria, número de PPL sindicados, acceso a salud intramural) sobre la crisis
carcelaria que sirvan como línea base? Se debe verificar el año y fuentes (ej. INPEC, Personería,
Secretaría de Salud).",
"validations": {
  "buscar_indicadores_cuantitativos": {
    "minimum_required": 3,
    "patterns": [
      "\\d+%",
      "\\d+\\s*por\\s*\\d+",
      "tasa de",
      "índice de",
      "cobertura de"
    ],
    "specificity": "HIGH"
  },
  "cobertura": {
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    "patterns": [
      "departamental",
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      "urbano",
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      "poblacional"
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    "minimum_years": 3,
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      "periodo",
      "histórico",
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            "%",
            "porcentaje",
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            "razón"
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        "minimum_required": 2,
        "patterns": [
            "fuente:",
            "según",
            "datos de",
            "DANE",
            "DNP",
            "SISPRO",
            "SIVIGILA",
            "Ministerio"
        ],
        "specificity": "MEDIUM"
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    "cluster_id": "CL04",
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    "expected_elements": [
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            "required": true,
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        },
        {
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            "type": "cuantificacion_magnitud"
        },
        {
            "required": true,
            "type": "vacios_explicitos"
        }
    ],
    "failure_contract": {
        "abort_if": [
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            "incomplete_text"
        ],
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            "priority": 1,
            "description": "OperationalizationAuditor._audit_direct_evidence"
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            "function": "_audit_systemic_risk",
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    "priority": 4,
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    "method_type": "analysis",
    "priority": 5,
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    "method_type": "analysis",
    "priority": 6,
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    "function": "counterfactual_query",
    "method_type": "analysis",
    "priority": 7,
    "description": "BayesianCounterfactualAuditor.counterfactual_query"
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    "function": "_test_effect_stability",
    "method_type": "analysis",
    "priority": 8,
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    "method_type": "analysis",
    "priority": 9,
    "description": "PolicyContradictionDetector._detect_numerical_inconsistencies"
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    "function": "_calculate_numerical_divergence",
    "method_type": "scoring",
    "priority": 10,
    "description": "PolicyContradictionDetector._calculate_numerical_divergence"
  },
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    "function": "calculate_posterior",
    "method_type": "scoring",
    "priority": 11,
    "description": "BayesianConfidenceCalculator.calculate_posterior"
  },
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    "function": "analyze_performance",
    "method_type": "analysis",
    "priority": 12,
    "description": "PerformanceAnalyzer.analyze_performance"
  }
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  {
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    "flags": "i",
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    "match_type": "REGEX",
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  },
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    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q272-001",
    "match_type": "REGEX",
    "pattern": "magnitud de la crisis humanitaria|vulneración masiva de derechos"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q272-002",
    "match_type": "REGEX",
    "pattern": "Estado de Cosas Inconstitucional|ECI|sentencia T-388 de 2013|SU-122 de 2022"
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  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q272-003",
    "match_type": "REGEX",
    "pattern": "población sin acceso a servicios de salud|falta de atención médica"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q272-004",
    "match_type": "REGEX",
    "pattern": "problemas con la calidad y oportunidad de la alimentación"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q272-005",
    "match_type": "REGEX",
    "pattern": "información insuficiente sobre las condiciones sanitarias"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q272-006",
    "match_type": "REGEX",
    "pattern": "subregistro de riñas o actos violentos"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q272-007",
    "match_type": "REGEX",
    "pattern": "causas del hacinamiento|abuso de la detención preventiva"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q272-008",
    "match_type": "REGEX",
    "pattern": "falta de infraestructura adecuada"
  }
],
"policy_area_id": "PA09",

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"question_global": 272,
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"scoring_definition_ref": "scoring_modalities.TYPE_B",
"scoring_modality": "TYPE_B",
"text": "¿El texto dimensiona la magnitud de la crisis carcelaria, cuantificando el déficit
de cupos o la población afectada por la vulneración de derechos (salud, alimentación)? Se debe
buscar si se mencionan 'vacíos de información' o se cita el 'Estado de Cosas Inconstitucional'.",
"validations": {}
},
{
"base_slot": "D1-Q3",
"cluster_id": "CL04",
"dimension_id": "DIM01",
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{
"required": true,
"type": "asignacion_explicita"
},
{
"required": true,
"type": "suficiencia_justificada"
},
{
"required": true,
"type": "trazabilidad_ppi_bpin"
}
],
"failure_contract": {
"abort_if": [
"missing_required_element",
"incomplete_text"
],
"emit_code": "ABORT-Q273-REQ"
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"function": "trace_financial_allocation",
"method_type": "analysis",
"priority": 1,
"description": "FinancialAuditor.trace_financial_allocation"
},
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"function": "_process_financial_table",
"method_type": "analysis",
"priority": 2,
"description": "FinancialAuditor._process_financial_table"
},
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"function": "_match_program_to_node",
"method_type": "analysis",
"priority": 3,
"description": "FinancialAuditor._match_program_to_node"
},
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"function": "_match_goal_to_budget",
"method_type": "analysis",
"priority": 4,
"description": "FinancialAuditor._match_goal_to_budget"
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"function": "_perform_counterfactual_budget_check",
"method_type": "analysis",
"priority": 5,
"description": "FinancialAuditor._perform_counterfactual_budget_check"
},
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"class": "FinancialAuditor",

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    "priority": 6,
    "description": "FinancialAuditor._calculate_sufficiency"
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    "method_type": "analysis",
    "priority": 7,
    "description": "PDETMunicipalPlanAnalyzer.analyze_financial_feasibility"
  },
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    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_extract_budget_for_pillar",
    "method_type": "extraction",
    "priority": 8,
    "description": "PDETMunicipalPlanAnalyzer._extract_budget_for_pillar"
  },
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    "function": "_identify_funding_source",
    "method_type": "analysis",
    "priority": 9,
    "description": "PDETMunicipalPlanAnalyzer._identify_funding_source"
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    "function": "_classify_tables",
    "method_type": "analysis",
    "priority": 10,
    "description": "PDETMunicipalPlanAnalyzer._classify_tables"
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    "function": "_analyze_funding_sources",
    "method_type": "analysis",
    "priority": 11,
    "description": "PDETMunicipalPlanAnalyzer._analyze_funding_sources"
  },
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    "function": "_score_financial_component",
    "method_type": "scoring",
    "priority": 12,
    "description": "PDETMunicipalPlanAnalyzer._score_financial_component"
  },
  {
    "class": "BayesianCounterfactualAuditor",
    "function": "aggregate_risk_and_prioritize",
    "method_type": "analysis",
    "priority": 13,
    "description": "BayesianCounterfactualAuditor.aggregate_risk_and_prioritize"
  }
],
"patterns": [
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    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q273-000",
    "match_type": "REGEX",
    "pattern": "Plan Plurianual de Inversiones|PPI|Plan Indicativo"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q273-001",
    "match_type": "REGEX",
    "pattern": "BPIN|Banco de Proyectos|proyecto de infraestructura carcelaria"
  },

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{
  "category": "GENERAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q273-002",
  "match_type": "REGEX",
  "pattern": "recursos para la construcción/adequación de centro de detención transitoria"
},
{
  "category": "GENERAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q273-003",
  "match_type": "REGEX",
  "pattern": "presupuesto para la atención en salud de la población sindicada"
},
{
  "category": "GENERAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q273-004",
  "match_type": "REGEX",
  "pattern": "asignación para programas de resocialización (educación, trabajo)"
},
{
  "category": "FUENTE_OFICIAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q273-005",
  "match_type": "REGEX",
  "pattern": "inversión en alimentación para PPL en estaciones de policía"
},
{
  "category": "GENERAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q273-006",
  "match_type": "REGEX",
  "pattern": "\\$\\s*\\d+|COP\\s*\\d+|millones de pesos"
},
{
  "category": "GENERAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q273-007",
  "match_type": "LITERAL",
  "pattern": "fuentes: recursos propios, cofinanciación USPEC/MinJusticia"
},
{
  "category": "GENERAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q273-008",
  "match_type": "REGEX",
  "pattern": "el presupuesto es suficiente para reducir el hacinamiento"
}
],
"policy_area_id": "PA09",
"question_global": 273,
"question_id": "Q273",
"scoring_definition_ref": "scoring_modalities.TYPE_B",
"scoring_modality": "TYPE_B",
"text": "¿Se identifican en el PPI recursos monetarios (con cifras en $, COP o millones) explícitamente asignados a la construcción o mejora de centros de detención transitoria, o a programas de atención y resocialización para PPL bajo competencia municipal?",
"validations": {}
},
{
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  "cluster_id": "CL04",
  "dimension_id": "DIM01",
  "expected_elements": [

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{
  "required": true,
  "type": "cuellos_botella"
},
{
  "required": true,
  "type": "gobernanza"
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{
  "required": true,
  "type": "infraestructura_fisica"
},
{
  "required": true,
  "type": "procesos"
},
{
  "required": true,
  "type": "talento_humano"
}
],
"failure_contract": {
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    "missing_required_element",
    "incomplete_text"
  ],
  "emit_code": "ABORT-Q274-REQ"
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"method_sets": [
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    "function": "identify_responsible_entities",
    "method_type": "analysis",
    "priority": 1,
    "description": "PDETMunicipalPlanAnalyzer.identify_responsible_entities"
  },
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    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_extract_entities_ner",
    "method_type": "extraction",
    "priority": 2,
    "description": "PDETMunicipalPlanAnalyzer._extract_entities_ner"
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    "function": "_extract_entities_syntax",
    "method_type": "extraction",
    "priority": 3,
    "description": "PDETMunicipalPlanAnalyzer._extract_entities_syntax"
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    "function": "_classify_entity_type",
    "method_type": "analysis",
    "priority": 4,
    "description": "PDETMunicipalPlanAnalyzer._classify_entity_type"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_score_entity_specificity",
    "method_type": "scoring",
    "priority": 5,
    "description": "PDETMunicipalPlanAnalyzer._score_entity_specificity"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_consolidate_entities",
    "method_type": "analysis",
    "priority": 6,
    "description": "PDETMunicipalPlanAnalyzer._consolidate_entities"
  },
  {

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    "class": "MechanismPartExtractor",
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    "method_type": "extraction",
    "priority": 7,
    "description": "MechanismPartExtractor.extract_entity_activity"
  },
  {
    "class": "MechanismPartExtractor",
    "function": "_normalize_entity",
    "method_type": "analysis",
    "priority": 8,
    "description": "MechanismPartExtractor._normalize_entity"
  },
  {
    "class": "MechanismPartExtractor",
    "function": "_validate_entity_activity",
    "method_type": "validation",
    "priority": 9,
    "description": "MechanismPartExtractor._validate_entity_activity"
  },
  {
    "class": "MechanismPartExtractor",
    "function": "_calculate_ea_confidence",
    "method_type": "scoring",
    "priority": 10,
    "description": "MechanismPartExtractor._calculate_ea_confidence"
  },
  {
    "class": "OperationalizationAuditor",
    "function": "audit_evidence_traceability",
    "method_type": "validation",
    "priority": 11,
    "description": "OperationalizationAuditor.audit_evidence_traceability"
  }
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"patterns": [
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    "category": "FUENTE_OFICIAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q274-000",
    "match_type": "REGEX",
    "pattern": "Secretaría de Gobierno|Comando de Policía Municipal"
  },
  {
    "category": "TERRITORIAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q274-001",
    "match_type": "REGEX",
    "pattern": "Personería Municipal|Defensoría del Pueblo Regional"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q274-002",
    "match_type": "REGEX",
    "pattern": "Secretaría de Salud|ESE Hospital"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q274-003",
    "match_type": "REGEX",
    "pattern": "capacidad instalada en centros de detención transitoria|cupos disponibles"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",

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      "id": "PAT-Q274-004",
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      "pattern": "protocolo para el traslado de PPL|ruta de atención en salud"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q274-005",
      "match_type": "REGEX",
      "pattern": "sistema de información de la población reclusa local"
    },
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      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q274-006",
      "match_type": "REGEX",
      "pattern": "Comité de seguimiento al sistema penitenciario y carcelario"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q274-007",
      "match_type": "REGEX",
      "pattern": "articulación con el INPEC|convenio con la USPEC|coordinación con la rama
judicial"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q274-008",
      "match_type": "REGEX",
      "pattern": "falta de infraestructura|insuficiencia de cupos|limitada capacidad de la
Personería"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q274-009",
      "match_type": "REGEX",
      "pattern": "cuello de botella|barrera de acceso a la justicia|limitaciones de
competencia"
    }
  ],
  "policy_area_id": "PA09",
  "question_global": 274,
  "question_id": "Q274",
  "scoring_definition_ref": "scoring_modalities.TYPE_B",
  "scoring_modality": "TYPE_B",
  "text": "¿El PDM describe las capacidades para gestionar la crisis carcelaria municipal,
mencionando entidades (Secretaría de Gobierno, Personería) y sus necesidades? Se debe buscar
términos como 'convenios con INPEC', 'atención en salud intramural' y si se identifican
'limitaciones'.",
  "validations": {}
},
{
  "base_slot": "D1-Q5",
  "cluster_id": "CL04",
  "dimension_id": "DIM01",
  "expected_elements": [
    {
      "required": true,
      "type": "coherencia_demostrada"
    },
    {
      "required": true,
      "type": "restricciones_competencias"
    }
  ],

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    {
      "required": true,
      "type": "restricciones_legales"
    },
    {
      "required": true,
      "type": "restricciones_presupuestales"
    }
  ],
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      "incomplete_text"
    ],
    "emit_code": "ABORT-Q275-REQ"
  },
  "method_sets": [
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      "function": "_check_deadline_constraints",
      "method_type": "analysis",
      "priority": 1,
      "description": "TemporalLogicVerifier._check_deadline_constraints"
    },
    {
      "class": "TemporalLogicVerifier",
      "function": "verify_temporal_consistency",
      "method_type": "analysis",
      "priority": 2,
      "description": "TemporalLogicVerifier.verify_temporal_consistency"
    },
    {
      "class": "CausalInferenceSetup",
      "function": "identify_failure_points",
      "method_type": "analysis",
      "priority": 3,
      "description": "CausalInferenceSetup.identify_failure_points"
    },
    {
      "class": "CausalExtractor",
      "function": "_assess_temporal_coherence",
      "method_type": "analysis",
      "priority": 4,
      "description": "CausalExtractor._assess_temporal_coherence"
    },
    {
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      "function": "_analyze_link_text",
      "method_type": "analysis",
      "priority": 5,
      "description": "TextMiningEngine._analyze_link_text"
    },
    {
      "class": "IndustrialPolicyProcessor",
      "function": "_analyze_causal_dimensions",
      "method_type": "analysis",
      "priority": 6,
      "description": "IndustrialPolicyProcessor._analyze_causal_dimensions"
    },
    {
      "class": "IndustrialPolicyProcessor",
      "function": "_extract_metadata",
      "method_type": "extraction",
      "priority": 7,
      "description": "IndustrialPolicyProcessor._extract_metadata"
    }
  ],
  "patterns": [
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",

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    "id": "PAT-Q275-000",
    "match_type": "REGEX",
    "pattern": "en el marco del Estado de Cosas Inconstitucional|ECI"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q275-001",
    "match_type": "REGEX",
    "pattern": "Ley 65 de 1993|Ley 1709 de 2014|Código Penitenciario y Carcelario"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q275-002",
    "match_type": "REGEX",
    "pattern": "Reglas Nelson Mandela"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q275-003",
    "match_type": "REGEX",
    "pattern": "competencia del municipio sobre la población sindicada"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q275-004",
    "match_type": "REGEX",
    "pattern": "la población condenada es responsabilidad del INPEC/Nación"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q275-005",
    "match_type": "REGEX",
    "pattern": "límite de recursos propios para infraestructura carcelaria"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q275-006",
    "match_type": "LITERAL",
    "pattern": "restricción presupuestal para garantizar la alimentación"
  },
  {
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    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q275-007",
    "match_type": "REGEX",
    "pattern": "complejidad técnica para la construcción de nuevos centros"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q275-008",
    "match_type": "REGEX",
    "pattern": "durante el cuatrienio|plazo de ejecución"
  },
  {
    "category": "TERRITORIAL",
    "confidence_weight": 0.85,
    "flags": "i",

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        "id": "PAT-Q275-009",
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        "pattern": "coherencia entre metas y la competencia municipal"
    }
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"policy_area_id": "PA09",
"question_global": 275,
"question_id": "Q275",
"scoring_definition_ref": "scoring_modalities.TYPE_E",
"scoring_modality": "TYPE_E",
"text": "¿El plan justifica su alcance en la crisis carcelaria mencionando el marco legal
(ej. sentencias sobre ECI, Código Penitenciario) o reconociendo restricciones de competencias
(sindicados vs. condenados), presupuestales o técnicas?",
"validations": {}
},
{
    "base_slot": "D2-Q1",
    "cluster_id": "CL04",
    "dimension_id": "DIM02",
    "expected_elements": [
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            "required": true,
            "type": "columna_costo"
        },
        {
            "required": true,
            "type": "columna_cronograma"
        },
        {
            "required": true,
            "type": "columna_producto"
        },
        {
            "required": true,
            "type": "columna_responsable"
        },
        {
            "required": true,
            "type": "formato_tabular"
        }
    ],
    "failure_contract": {
        "abort_if": [
            "missing_required_element",
            "incomplete_text"
        ],
        "emit_code": "ABORT-Q276-REQ"
    },
    "method_sets": [
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            "class": "PDFProcessor",
            "function": "extract_tables",
            "method_type": "extraction",
            "priority": 1,
            "description": "PDFProcessor.extract_tables"
        },
        {
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            "function": "_process_financial_table",
            "method_type": "analysis",
            "priority": 2,
            "description": "FinancialAuditor._process_financial_table"
        },
        {
            "class": "PDETMunicipalPlanAnalyzer",
            "function": "_deduplicate_tables",
            "method_type": "analysis",
            "priority": 3,
            "description": "PDETMunicipalPlanAnalyzer._deduplicate_tables"
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        {
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    "function": "_classify_tables",
    "method_type": "analysis",
    "priority": 4,
    "description": "PDETMunicipalPlanAnalyzer._classify_tables"
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    "function": "_is_likely_header",
    "method_type": "analysis",
    "priority": 5,
    "description": "PDETMunicipalPlanAnalyzer._is_likely_header"
  },
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    "function": "_clean_dataframe",
    "method_type": "analysis",
    "priority": 6,
    "description": "PDETMunicipalPlanAnalyzer._clean_dataframe"
  },
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    "function": "generate_accountability_matrix",
    "method_type": "analysis",
    "priority": 7,
    "description": "ReportingEngine.generate_accountability_matrix"
  }
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"patterns": [
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    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q276-000",
    "match_type": "REGEX",
    "pattern": "tabla de actividades|cuadro de seguimiento|matriz de plan de acción"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q276-001",
    "match_type": "REGEX",
    "pattern": "columna responsable|entidad a cargo|ejecutor"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q276-002",
    "match_type": "REGEX",
    "pattern": "columna producto|entregable|output|meta de producto"
  },
  {
    "category": "TEMPORAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q276-003",
    "match_type": "LITERAL",
    "pattern": "columna cronograma|plazo|vigencia|año 1|trimestre"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q276-004",
    "match_type": "LITERAL",
    "pattern": "columna costo|presupuesto|valor|recursos|monto"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",

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        "id": "PAT-Q276-005",
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        "pattern": "Secretaría de Gobierno|Personería|Secretaría de Salud"
    },
    {
        "category": "GENERAL",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q276-006",
        "match_type": "REGEX",
        "pattern": "Plan Indicativo|Anexo de metas"
    }
],
"policy_area_id": "PA09",
"question_global": 276,
"question_id": "Q276",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿Las actividades para la población privada de la libertad se presentan en un
formato estructurado (tabla, cuadro) que incluya columnas para 'responsable', 'producto',
'cronograma' y 'presupuesto'?",
"validations": {}
},
{
    "base_slot": "D2-Q2",
    "cluster_id": "CL04",
    "dimension_id": "DIM02",
    "expected_elements": [
        {
            "required": true,
            "type": "instrumento_especificado"
        },
        {
            "required": true,
            "type": "logica_causal_explicita"
        },
        {
            "required": true,
            "type": "poblacion_objetivo_definida"
        }
    ],
    "failure_contract": {
        "abort_if": [
            "missing_required_element",
            "incomplete_text"
        ],
        "emit_code": "ABORT-Q277-REQ"
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            "class": "BayesianMechanismInference",
            "function": "infer_mechanisms",
            "method_type": "analysis",
            "priority": 1,
            "description": "BayesianMechanismInference.infer_mechanisms"
        },
        {
            "class": "BayesianMechanismInference",
            "function": "_infer_single_mechanism",
            "method_type": "analysis",
            "priority": 2,
            "description": "BayesianMechanismInference._infer_single_mechanism"
        },
        {
            "class": "BayesianMechanismInference",
            "function": "_infer_mechanism_type",
            "method_type": "analysis",
            "priority": 3,
            "description": "BayesianMechanismInference._infer_mechanism_type"
        },
        {
            "class": "BayesianMechanismInference",

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    "priority": 4,
    "description": "BayesianMechanismInference._test_sufficiency"
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    "function": "_test_necessity",
    "method_type": "analysis",
    "priority": 5,
    "description": "BayesianMechanismInference._test_necessity"
  },
  {
    "class": "CausalExtractor",
    "function": "extract_causal_hierarchy",
    "method_type": "extraction",
    "priority": 6,
    "description": "CausalExtractor.extract_causal_hierarchy"
  },
  {
    "class": "TeoriaCambio",
    "function": "construir_grafo_causal",
    "method_type": "analysis",
    "priority": 7,
    "description": "TeoriaCambio.construir_grafo_causal"
  },
  {
    "class": "TeoriaCambio",
    "function": "_es_conexion_valida",
    "method_type": "analysis",
    "priority": 8,
    "description": "TeoriaCambio._es_conexion_valida"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "construct_causal_dag",
    "method_type": "analysis",
    "priority": 9,
    "description": "PDETMunicipalPlanAnalyzer.construct_causal_dag"
  },
  {
    "class": "BeachEvidentialTest",
    "function": "classify_test",
    "method_type": "analysis",
    "priority": 10,
    "description": "BeachEvidentialTest.classify_test"
  },
  {
    "class": "IndustrialPolicyProcessor",
    "function": "_analyze_causal_dimensions",
    "method_type": "analysis",
    "priority": 11,
    "description": "IndustrialPolicyProcessor._analyze_causal_dimensions"
  }
],
"patterns": [
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q277-000",
    "match_type": "REGEX",
    "pattern": "mediante|a través de|con la implementación de"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q277-001",
    "match_type": "REGEX",
    "pattern": "brigadas de salud intramural|jornadas de vacunación"
  }
],

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{
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  "flags": "i",
  "id": "PAT-Q277-002",
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  "pattern": "convenios con el SENA|programas de validación del bachillerato"
},
{
  "category": "GENERAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q277-003",
  "match_type": "REGEX",
  "pattern": "talleres productivos|actividades de redención de pena"
},
{
  "category": "GENERAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q277-004",
  "match_type": "REGEX",
  "pattern": "población objetivo:|dirigido a|beneficiarios serán"
},
{
  "category": "GENERAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q277-005",
  "match_type": "REGEX",
  "pattern": "población sindicada en centros transitorios|condenados"
},
{
  "category": "GENERAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q277-006",
  "match_type": "REGEX",
  "pattern": "mujeres privadas de la libertad|PPL con enfoque de género"
},
{
  "category": "GENERAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q277-007",
  "match_type": "REGEX",
  "pattern": "con el fin de garantizar el derecho a la salud|para promover la
resocialización"
},
{
  "category": "GENERAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q277-008",
  "match_type": "REGEX",
  "pattern": "lo cual reduce las tensiones internas|porque ofrece herramientas para la
vida en libertad"
}
],
"policy_area_id": "PA09",
"question_global": 277,
"question_id": "Q277",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿La descripción de las actividades para PPL detalla el instrumento ('mediante
brigadas de salud', 'a través de convenios para formación'), la población objetivo ('sindicados',
'condenados', 'mujeres PPL') y la lógica causal?",
"validations": {}
},
{
  "base_slot": "D2-Q3",
  "cluster_id": "CL04",

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"dimension_id": "DIM02",
"expected_elements": [
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  {
    "required": true,
    "type": "vinculo_diagnostico_actividad"
  }
],
"failure_contract": {
  "abort_if": [
    "missing_required_element",
    "incomplete_text"
  ],
  "emit_code": "ABORT-Q278-REQ"
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"method_sets": [
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    "function": "_extract_causal_links",
    "method_type": "extraction",
    "priority": 1,
    "description": "CausalExtractor._extract_causal_links"
  },
  {
    "class": "CausalExtractor",
    "function": "_calculate_composite_likelihood",
    "method_type": "scoring",
    "priority": 2,
    "description": "CausalExtractor._calculate_composite_likelihood"
  },
  {
    "class": "CausalExtractor",
    "function": "_initialize_prior",
    "method_type": "analysis",
    "priority": 3,
    "description": "CausalExtractor._initialize_prior"
  },
  {
    "class": "CausalExtractor",
    "function": "_calculate_type_transition_prior",
    "method_type": "scoring",
    "priority": 4,
    "description": "CausalExtractor._calculate_type_transition_prior"
  },
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    "function": "_identify_causal_edges",
    "method_type": "analysis",
    "priority": 5,
    "description": "PDETMunicipalPlanAnalyzer._identify_causal_edges"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_refine_edge_probabilities",
    "method_type": "analysis",
    "priority": 6,
    "description": "PDETMunicipalPlanAnalyzer._refine_edge_probabilities"
  },
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    "class": "BayesianCounterfactualAuditor",
    "function": "construct_scm",
    "method_type": "analysis",
    "priority": 7,
    "description": "BayesianCounterfactualAuditor.construct_scm"
  },
  {
    "class": "BayesianCounterfactualAuditor",
    "function": "_create_default_equations",
    "method_type": "analysis",

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    "priority": 8,
    "description": "BayesianCounterfactualAuditor._create_default_equations"
  },
  {
    "class": "SemanticAnalyzer",
    "function": "extract_semantic_cube",
    "method_type": "extraction",
    "priority": 9,
    "description": "SemanticAnalyzer.extract_semantic_cube"
  }
],
"patterns": [
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    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
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    "match_type": "REGEX",
    "pattern": "para abordar la causa del hacinamiento|en respuesta al problema de"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q278-001",
    "match_type": "REGEX",
    "pattern": "la actividad de resocialización ataca el factor de la reincidencia"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q278-002",
    "match_type": "REGEX",
    "pattern": "causa estructural|factor determinante|nudo crítico"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q278-003",
    "match_type": "REGEX",
    "pattern": "falta de oportunidades educativas y laborales intramurales"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q278-004",
    "match_type": "REGEX",
    "pattern": "condiciones de reclusión indignas|violación de DDHH"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q278-005",
    "match_type": "REGEX",
    "pattern": "ocio y falta de actividades de redención"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q278-006",
    "match_type": "REGEX",
    "pattern": "dificultades en el acceso a la justicia"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",

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        "pattern": "árbol de problemas|diagnóstico causal de la crisis carcelaria"
    }
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"policy_area_id": "PA09",
"question_global": 278,
"question_id": "Q278",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿El PDM vincula explícitamente las actividades (ej. programas de resocialización) con las 'causas raíz' del problema (ej. reincidencia, falta de oportunidades) identificadas en el diagnóstico?",
"validations": {}
},
{
    "base_slot": "D2-Q4",
    "cluster_id": "CL04",
    "dimension_id": "DIM02",
    "expected_elements": [
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            "required": true,
            "type": "mitigacion_propuesta"
        },
        {
            "required": true,
            "type": "riesgos_identificados"
        }
    ],
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        "abort_if": [
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            "incomplete_text"
        ],
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            "function": "_bayesian_risk_inference",
            "method_type": "analysis",
            "priority": 1,
            "description": "PDETMunicipalPlanAnalyzer._bayesian_risk_inference"
        },
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            "class": "PDETMunicipalPlanAnalyzer",
            "function": "sensitivity_analysis",
            "method_type": "analysis",
            "priority": 2,
            "description": "PDETMunicipalPlanAnalyzer.sensitivity_analysis"
        },
        {
            "class": "PDETMunicipalPlanAnalyzer",
            "function": "_interpret_risk",
            "method_type": "analysis",
            "priority": 3,
            "description": "PDETMunicipalPlanAnalyzer._interpret_risk"
        },
        {
            "class": "PDETMunicipalPlanAnalyzer",
            "function": "_compute_robustness_value",
            "method_type": "analysis",
            "priority": 4,
            "description": "PDETMunicipalPlanAnalyzer._compute_robustness_value"
        },
        {
            "class": "PDETMunicipalPlanAnalyzer",
            "function": "_compute_e_value",
            "method_type": "analysis",
            "priority": 5,
            "description": "PDETMunicipalPlanAnalyzer._compute_e_value"
        }
    ],

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{
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  "function": "_interpret_sensitivity",
  "method_type": "analysis",
  "priority": 6,
  "description": "PDETMunicipalPlanAnalyzer._interpret_sensitivity"
},
{
  "class": "OperationalizationAuditor",
  "function": "_audit_systemic_risk",
  "method_type": "validation",
  "priority": 7,
  "description": "OperationalizationAuditor._audit_systemic_risk"
},
{
  "class": "BayesianCounterfactualAuditor",
  "function": "aggregate_risk_and_prioritize",
  "method_type": "analysis",
  "priority": 8,
  "description": "BayesianCounterfactualAuditor.aggregate_risk_and_prioritize"
},
{
  "class": "BayesianCounterfactualAuditor",
  "function": "refutation_and_sanity_checks",
  "method_type": "analysis",
  "priority": 9,
  "description": "BayesianCounterfactualAuditor.refutation_and_sanity_checks"
},
{
  "class": "AdaptivePriorCalculator",
  "function": "sensitivity_analysis",
  "method_type": "analysis",
  "priority": 10,
  "description": "AdaptivePriorCalculator.sensitivity_analysis"
}
],
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    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q279-000",
    "match_type": "REGEX",
    "pattern": "riesgos:|posibles dificultades:|barreras a la implementación"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q279-001",
    "match_type": "REGEX",
    "pattern": "riesgos de seguridad|motines|riñas"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q279-002",
    "match_type": "REGEX",
    "pattern": "dificultades en la articulación con el INPEC y la USPEC"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q279-003",
    "match_type": "REGEX",
    "pattern": "sostenibilidad de los programas de resocialización"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,

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        "flags": "i",
        "id": "PAT-Q279-004",
        "match_type": "REGEX",
        "pattern": "baja participación de los PPL en las actividades"
    },
    {
        "category": "GENERAL",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q279-005",
        "match_type": "REGEX",
        "pattern": "problemas de corrupción en la administración de los centros"
    },
    {
        "category": "GENERAL",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q279-006",
        "match_type": "REGEX",
        "pattern": "medidas de mitigación|plan de contingencia|para mitigar"
    },
    {
        "category": "GENERAL",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q279-007",
        "match_type": "REGEX",
        "pattern": "protocolos de seguridad|mesas de trabajo permanentes con INPEC"
    }
],
"policy_area_id": "PA09",
"question_global": 279,
"question_id": "Q279",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿El plan identifica posibles riesgos en la implementación (ej. problemas de seguridad, falta de articulación con INPEC) y propone 'medidas de mitigación'?",
"validations": {}
},
{
    "base_slot": "D2-Q5",
    "cluster_id": "CL04",
    "dimension_id": "DIM02",
    "expected_elements": [
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            "type": "complementariedad_explicita"
        },
        {
            "required": true,
            "type": "secuenciacion_logica"
        }
    ],
    "failure_contract": {
        "abort_if": [
            "missing_required_element",
            "incomplete_text"
        ],
        "emit_code": "ABORT-Q280-REQ"
    },
    "method_sets": [
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            "method_type": "analysis",
            "priority": 1,
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            "function": "_calculate_coherence_metrics",
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    "priority": 3,
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    "function": "_calculate_graph_fragmentation",
    "method_type": "scoring",
    "priority": 4,
    "description": "PolicyContradictionDetector._calculate_graph_fragmentation"
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  {
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    "function": "audit_sequence_logic",
    "method_type": "validation",
    "priority": 5,
    "description": "OperationalizationAuditor.audit_sequence_logic"
  },
  {
    "class": "BayesianMechanismInference",
    "function": "_calculate_coherence_factor",
    "method_type": "scoring",
    "priority": 6,
    "description": "BayesianMechanismInference._calculate_coherence_factor"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_score_causal_coherence",
    "method_type": "scoring",
    "priority": 7,
    "description": "PDETMunicipalPlanAnalyzer._score_causal_coherence"
  },
  {
    "class": "AdaptivePriorCalculator",
    "function": "calculate_likelihood_adaptativo",
    "method_type": "scoring",
    "priority": 8,
    "description": "AdaptivePriorCalculator.calculate_likelihood_adaptativo"
  }
],
"patterns": [
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    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q280-000",
    "match_type": "REGEX",
    "pattern": "estrategia integral de atención al PPL|de manera articulada"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q280-001",
    "match_type": "REGEX",
    "pattern": "la atención en salud se complementa con los programas de resocialización"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q280-002",
    "match_type": "REGEX",
    "pattern": "sinergia entre la oferta educativa y los talleres productivos"
  },
  {

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        "category": "GENERAL",
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        "flags": "i",
        "id": "PAT-Q280-003",
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    },
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        "category": "GENERAL",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q280-004",
        "match_type": "REGEX",
        "pattern": "en una primera fase se garantizarán las condiciones básicas, luego la
resocialización"
    },
    {
        "category": "GENERAL",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q280-005",
        "match_type": "LITERAL",
        "pattern": "la estrategia combina atención básica, acceso a la justicia y
resocialización"
    }
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"policy_area_id": "PA09",
"question_global": 280,
"question_id": "Q280",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿El conjunto de actividades para PPL demuestra una estrategia coherente? Se debe
buscar evidencia de 'complementariedad' (ej. salud + educación intramural) o 'secuencia' lógica.",
"validations": {}
},
{
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    "cluster_id": "CL04",
    "dimension_id": "DIM03",
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            "required": true,
            "type": "fuente_verificacion"
        },
        {
            "required": true,
            "type": "linea_base_producto"
        },
        {
            "required": true,
            "type": "meta_cuantitativa"
        }
    ],
    "failure_contract": {
        "abort_if": [
            "missing_required_element",
            "incomplete_text"
        ],
        "emit_code": "ABORT-Q281-REQ"
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    "method_sets": [
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            "function": "_score_indicators",
            "method_type": "scoring",
            "priority": 1,
            "description": "PDETMunicipalPlanAnalyzer._score_indicators"
        },
        {
            "class": "OperationalizationAuditor",
            "function": "audit_evidence_traceability",
            "method_type": "validation",

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    "priority": 2,
    "description": "OperationalizationAuditor.audit_evidence_traceability"
  },
  {
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    "function": "assign_probative_value",
    "method_type": "analysis",
    "priority": 3,
    "description": "CausalInferenceSetup.assign_probative_value"
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  {
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    "function": "apply_test_logic",
    "method_type": "analysis",
    "priority": 4,
    "description": "BeachEvidentialTest.apply_test_logic"
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    "function": "diagnose_critical_links",
    "method_type": "analysis",
    "priority": 5,
    "description": "TextMiningEngine.diagnose_critical_links"
  },
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    "function": "_extract_metadata",
    "method_type": "extraction",
    "priority": 6,
    "description": "IndustrialPolicyProcessor._extract_metadata"
  },
  {
    "class": "IndustrialPolicyProcessor",
    "function": "_calculate_quality_score",
    "method_type": "scoring",
    "priority": 7,
    "description": "IndustrialPolicyProcessor._calculate_quality_score"
  },
  {
    "class": "AdaptivePriorCalculator",
    "function": "generate_traceability_record",
    "method_type": "analysis",
    "priority": 8,
    "description": "AdaptivePriorCalculator.generate_traceability_record"
  }
],
"patterns": [
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    "category": "INDICADOR",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q281-000",
    "match_type": "REGEX",
    "pattern": "indicador de producto|meta de producto"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q281-001",
    "match_type": "REGEX",
    "pattern": "PPL atendidos en jornadas de salud|PPL con valoración en salud mental"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q281-002",
    "match_type": "REGEX",
    "pattern": "cupos adecuados o creados en centros de detención transitoria"
  }
],

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        "flags": "i",
        "id": "PAT-Q281-003",
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    },
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        "category": "GENERAL",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q281-004",
        "match_type": "LITERAL",
        "pattern": "Línea Base:|LB:|Valor inicial:"
    },
    {
        "category": "GENERAL",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q281-005",
        "match_type": "REGEX",
        "pattern": "Meta Cuatrienio:|Meta:|Valor esperado:"
    },
    {
        "category": "GENERAL",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q281-006",
        "match_type": "REGEX",
        "pattern": "Fuente de verificación:|Medio de verificación:|Fuente:"
    },
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        "confidence_weight": 0.85,
        "flags": "i",
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        "match_type": "REGEX",
        "pattern": "listados de la ESE|informes de la Personería|actas de obra"
    },
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        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q281-008",
        "match_type": "REGEX",
        "pattern": "registros de la Secretaría de Gobierno|informes del INPEC"
    }
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"policy_area_id": "PA09",
"question_global": 281,
"question_id": "Q281",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿Los indicadores de producto para PPL (ej. PPL atendidos en salud, cupos  
carcelarios creados) incluyen 'línea base', 'meta' cuantitativa y 'fuente de verificación'?",
"validations": {}
},
{
    "base_slot": "D3-Q2",
    "cluster_id": "CL04",
    "dimension_id": "DIM03",
    "expected_elements": [
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            "required": true,
            "type": "proporcionalidad_meta_problema"
        }
    ]
},
"failure_contract": {
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        "missing_required_element",
        "incomplete_text"
    ]
},

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      "method_type": "scoring",
      "priority": 1,
      "description": "AdvancedDAGValidator._calculate_bayesian_posterior"
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      "function": "_calculate_confidence_interval",
      "method_type": "scoring",
      "priority": 2,
      "description": "AdvancedDAGValidator._calculate_confidence_interval"
    },
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      "function": "_adjust_domain_weights",
      "method_type": "analysis",
      "priority": 3,
      "description": "AdaptivePriorCalculator._adjust_domain_weights"
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      "function": "_get_spanish_stopwords",
      "method_type": "analysis",
      "priority": 4,
      "description": "PDETMunicipalPlanAnalyzer._get_spanish_stopwords"
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      "function": "_log_refactored_components",
      "method_type": "analysis",
      "priority": 5,
      "description": "BayesianMechanismInference._log_refactored_components"
    },
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      "function": "analyze_financial_feasibility",
      "method_type": "analysis",
      "priority": 6,
      "description": "PDETMunicipalPlanAnalyzer.analyze_financial_feasibility"
    },
    {
      "class": "PDETMunicipalPlanAnalyzer",
      "function": "_score_indicators",
      "method_type": "scoring",
      "priority": 7,
      "description": "PDETMunicipalPlanAnalyzer._score_indicators"
    },
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      "class": "PDETMunicipalPlanAnalyzer",
      "function": "_interpret_risk",
      "method_type": "analysis",
      "priority": 8,
      "description": "PDETMunicipalPlanAnalyzer._interpret_risk"
    },
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      "function": "_calculate_sufficiency",
      "method_type": "scoring",
      "priority": 9,
      "description": "FinancialAuditor._calculate_sufficiency"
    },
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      "class": "BayesianMechanismInference",
      "function": "_test_sufficiency",
      "method_type": "analysis",
      "priority": 10,
      "description": "BayesianMechanismInference._test_sufficiency"
    }
  ]
}

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},
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  "method_type": "analysis",
  "priority": 11,
  "description": "BayesianMechanismInference._test_necessity"
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  "method_type": "analysis",
  "priority": 12,
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  "method_type": "scoring",
  "priority": 13,
  "description": "AdaptivePriorCalculator.calculate_likelihood_adaptativo"
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  "function": "_calculate_quality_score",
  "method_type": "scoring",
  "priority": 14,
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  "function": "_generar_sugerencias_internas",
  "method_type": "analysis",
  "priority": 15,
  "description": "TeoriaCambio._generar_sugerencias_internas"
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  "priority": 16,
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{
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  "function": "_indicator_to_dict",
  "method_type": "analysis",
  "priority": 17,
  "description": "PDETMunicipalPlanAnalyzer._indicator_to_dict"
},
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  "function": "_generate_recommendations",
  "method_type": "analysis",
  "priority": 18,
  "description": "PDETMunicipalPlanAnalyzer._generate_recommendations"
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  "function": "_compile_pattern_registry",
  "method_type": "analysis",
  "priority": 19,
  "description": "IndustrialPolicyProcessor._compile_pattern_registry"
},
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  "class": "IndustrialPolicyProcessor",
  "function": "_build_point_patterns",
  "method_type": "analysis",
  "priority": 20,
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        "method_type": "analysis",
        "priority": 21,
        "description": "IndustrialPolicyProcessor._empty_result"
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],
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        "flags": "i",
        "id": "PAT-Q282-000",
        "match_type": "REGEX",
        "pattern": "la meta de nuevos cupos reduce en un X% el hacinamiento de sindicatos"
    },
    {
        "category": "INDICADOR",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q282-001",
        "match_type": "REGEX",
        "pattern": "se cubrirá al \\d+% de la población PPL con atención en salud"
    },
    {
        "category": "TERRITORIAL",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q282-002",
        "match_type": "REGEX",
        "pattern": "universo de atención|total de PPL bajo responsabilidad municipal"
    },
    {
        "category": "GENERAL",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q282-003",
        "match_type": "REGEX",
        "pattern": "la meta se establece en función de la capacidad presupuestal"
    },
    {
        "category": "GENERAL",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q282-004",
        "match_type": "REGEX",
        "pattern": "se priorizará la atención a PPL con enfermedades crónicas"
    }
],
"policy_area_id": "PA09",
"question_global": 282,
"question_id": "Q282",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿Las metas de los productos (ej. 'crear 100 nuevos cupos') son proporcionales a la magnitud del problema diagnosticado (ej. 'déficit de 200 cupos para sindicatos')?",
"validations": {}
},
{
    "base_slot": "D3-Q3",
    "cluster_id": "CL04",
    "dimension_id": "DIM03",
    "expected_elements": [
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            "required": true,
            "type": "trazabilidad_organizacional"
        },
        {
            "required": true,
            "type": "trazabilidad_presupuestal"
        }
    ]
},
],

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    "method_type": "analysis",
    "priority": 1,
    "description": "FinancialAuditor._match_program_to_node"
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    "function": "_match_goal_to_budget",
    "method_type": "analysis",
    "priority": 2,
    "description": "FinancialAuditor._match_goal_to_budget"
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    "priority": 3,
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    "method_type": "analysis",
    "priority": 4,
    "description": "PDETMunicipalPlanAnalyzer._consolidate_entities"
  },
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    "function": "identify_responsible_entities",
    "method_type": "analysis",
    "priority": 5,
    "description": "PDETMunicipalPlanAnalyzer.identify_responsible_entities"
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    "function": "_score_responsibility_clarity",
    "method_type": "scoring",
    "priority": 6,
    "description": "PDETMunicipalPlanAnalyzer._score_responsibility_clarity"
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    "function": "process_document",
    "method_type": "analysis",
    "priority": 7,
    "description": "PolicyAnalysisEmbedder.process_document"
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  {
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    "function": "_generate_query_from_pdq",
    "method_type": "analysis",
    "priority": 8,
    "description": "PolicyAnalysisEmbedder._generate_query_from_pdq"
  },
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    "function": "semantic_search",
    "method_type": "analysis",
    "priority": 9,
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  },
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    "method_type": "analysis",
    "priority": 10,
    "description": "PolicyAnalysisEmbedder._apply_mmr"
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    "function": "_empty_semantic_cube",
    "method_type": "analysis",
    "priority": 11,
    "description": "SemanticAnalyzer._empty_semantic_cube"
  },
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    "class": "SemanticAnalyzer",
    "function": "_classify_policy_domain",
    "method_type": "analysis",
    "priority": 12,
    "description": "SemanticAnalyzer._classify_policy_domain"
  },
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    "function": "_classify_cross_cutting_themes",
    "method_type": "analysis",
    "priority": 13,
    "description": "SemanticAnalyzer._classify_cross_cutting_themes"
  },
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    "function": "_classify_value_chain_link",
    "method_type": "analysis",
    "priority": 14,
    "description": "SemanticAnalyzer._classify_value_chain_link"
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    "function": "_vectorize_segments",
    "method_type": "analysis",
    "priority": 15,
    "description": "SemanticAnalyzer._vectorize_segments"
  },
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    "function": "_process_segment",
    "method_type": "analysis",
    "priority": 16,
    "description": "SemanticAnalyzer._process_segment"
  },
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    "class": "SemanticAnalyzer",
    "function": "_calculate_semantic_complexity",
    "method_type": "scoring",
    "priority": 17,
    "description": "SemanticAnalyzer._calculate_semantic_complexity"
  },
  {
    "class": "IndustrialPolicyProcessor",
    "function": "_compute_evidence_confidence",
    "method_type": "analysis",
    "priority": 18,
    "description": "IndustrialPolicyProcessor._compute_evidence_confidence"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_entity_to_dict",
    "method_type": "analysis",
    "priority": 19,
    "description": "PDETMunicipalPlanAnalyzer._entity_to_dict"
  },
  {
    "class": "AdaptivePriorCalculator",
    "function": "generate_traceability_record",

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    "method_type": "analysis",
    "priority": 20,
    "description": "AdaptivePriorCalculator.generate_traceability_record"
  },
  {
    "class": "PolicyAnalysisEmbedder",
    "function": "generate_pdq_report",
    "method_type": "analysis",
    "priority": 21,
    "description": "PolicyAnalysisEmbedder.generate_pdq_report"
  },
  {
    "class": "ReportingEngine",
    "function": "generate_accountability_matrix",
    "method_type": "analysis",
    "priority": 22,
    "description": "ReportingEngine.generate_accountability_matrix"
  }
],
"patterns": [
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    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q283-000",
    "match_type": "REGEX",
    "pattern": "código BPIN|proyecto de inversión para infraestructura carcelaria"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q283-001",
    "match_type": "REGEX",
    "pattern": "programa del PPI|línea de inversión en seguridad y justicia"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q283-002",
    "match_type": "REGEX",
    "pattern": "recursos del proyecto|presupuesto para atención a PPL"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q283-003",
    "match_type": "REGEX",
    "pattern": "responsable:|dependencia a cargo:|entidad ejecutora"
  },
  {
    "category": "TERRITORIAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q283-004",
    "match_type": "REGEX",
    "pattern": "Secretaría de Gobierno|Secretaría de Salud|Personería Municipal"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q283-005",
    "match_type": "REGEX",
    "pattern": "articulado con el INPEC|convenio con la ESE del municipio"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",

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        "id": "PAT-Q283-006",
        "match_type": "REGEX",
        "pattern": "contrato de obra No.|contrato de suministro de alimentos"
    }
],
"policy_area_id": "PA09",
"question_global": 283,
"question_id": "Q283",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿Los productos para PPL tienen trazabilidad presupuestal (vinculados a códigos BPIN, PPI) y organizacional (asociados a una 'Secretaría de Gobierno' o entidad responsable)?",
"validations": {}
},
{
    "base_slot": "D3-Q4",
    "cluster_id": "CL04",
    "dimension_id": "DIM03",
    "expected_elements": [
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            "required": true,
            "type": "coherencia_recursos"
        },
        {
            "required": true,
            "type": "factibilidad_tecnica"
        },
        {
            "required": true,
            "type": "realismo_plazos"
        }
    ],
    "failure_contract": {
        "abort_if": [
            "missing_required_element",
            "incomplete_text"
        ],
        "emit_code": "ABORT-Q284-REQ"
    },
    "method_sets": [
        {
            "class": "AdvancedDAGValidator",
            "function": "calculate_acyclicity_pvalue",
            "method_type": "scoring",
            "priority": 1,
            "description": "AdvancedDAGValidator.calculate_acyclicity_pvalue"
        },
        {
            "class": "AdvancedDAGValidator",
            "function": "_is_acyclic",
            "method_type": "analysis",
            "priority": 2,
            "description": "AdvancedDAGValidator._is_acyclic"
        },
        {
            "class": "AdvancedDAGValidator",
            "function": "get_graph_stats",
            "method_type": "analysis",
            "priority": 3,
            "description": "AdvancedDAGValidator.get_graph_stats"
        },
        {
            "class": "AdvancedDAGValidator",
            "function": "_calculate_node_importance",
            "method_type": "scoring",
            "priority": 4,
            "description": "AdvancedDAGValidator._calculate_node_importance"
        },
        {
            "class": "AdvancedDAGValidator",
            "function": "_generate_subgraph",
            "method_type": "analysis",

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    "priority": 5,
    "description": "AdvancedDAGValidator._generate_subgraph"
  },
  {
    "class": "AdvancedDAGValidator",
    "function": "add_node",
    "method_type": "analysis",
    "priority": 6,
    "description": "AdvancedDAGValidator.add_node"
  },
  {
    "class": "AdvancedDAGValidator",
    "function": "add_edge",
    "method_type": "analysis",
    "priority": 7,
    "description": "AdvancedDAGValidator.add_edge"
  },
  {
    "class": "AdvancedDAGValidator",
    "function": "export_nodes",
    "method_type": "analysis",
    "priority": 8,
    "description": "AdvancedDAGValidator.export_nodes"
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    "function": "_initialize_rng",
    "method_type": "analysis",
    "priority": 9,
    "description": "AdvancedDAGValidator._initialize_rng"
  },
  {
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    "function": "_calculate_statistical_power",
    "method_type": "scoring",
    "priority": 10,
    "description": "AdvancedDAGValidator._calculate_statistical_power"
  },
  {
    "class": "AdvancedDAGValidator",
    "function": "_get_node_validator",
    "method_type": "analysis",
    "priority": 11,
    "description": "AdvancedDAGValidator._get_node_validator"
  },
  {
    "class": "AdvancedDAGValidator",
    "function": "_create_empty_result",
    "method_type": "analysis",
    "priority": 12,
    "description": "AdvancedDAGValidator._create_empty_result"
  },
  {
    "class": "BayesianMechanismInference",
    "function": "_test_necessity",
    "method_type": "analysis",
    "priority": 13,
    "description": "BayesianMechanismInference._test_necessity"
  },
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    "class": "IndustrialGradeValidator",
    "function": "execute_suite",
    "method_type": "analysis",
    "priority": 14,
    "description": "IndustrialGradeValidator.execute_suite"
  },
  {
    "class": "IndustrialGradeValidator",
    "function": "validate_connection_matrix",
    "method_type": "validation",
    "priority": 15,
    "description": "IndustrialGradeValidator.validate_connection_matrix"
  }

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{
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  "function": "run_performance_benchmarks",
  "method_type": "analysis",
  "priority": 16,
  "description": "IndustrialGradeValidator.run_performance_benchmarks"
},
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  "class": "IndustrialGradeValidator",
  "function": "_benchmark_operation",
  "method_type": "analysis",
  "priority": 17,
  "description": "IndustrialGradeValidator._benchmark_operation"
},
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  "function": "_log_metric",
  "method_type": "analysis",
  "priority": 18,
  "description": "IndustrialGradeValidator._log_metric"
},
{
  "class": "IndustrialGradeValidator",
  "function": "validate_engine_readiness",
  "method_type": "validation",
  "priority": 19,
  "description": "IndustrialGradeValidator.validate_engine_readiness"
},
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  "class": "PerformanceAnalyzer",
  "function": "analyze_performance",
  "method_type": "analysis",
  "priority": 20,
  "description": "PerformanceAnalyzer.analyze_performance"
},
{
  "class": "PerformanceAnalyzer",
  "function": "_calculate_loss_functions",
  "method_type": "scoring",
  "priority": 21,
  "description": "PerformanceAnalyzer._calculate_loss_functions"
},
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  "class": "HierarchicalGenerativeModel",
  "function": "_calculate_likelihood",
  "method_type": "scoring",
  "priority": 22,
  "description": "HierarchicalGenerativeModel._calculate_likelihood"
},
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  "class": "HierarchicalGenerativeModel",
  "function": "_calculate_ess",
  "method_type": "scoring",
  "priority": 23,
  "description": "HierarchicalGenerativeModel._calculate_ess"
},
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  "class": "HierarchicalGenerativeModel",
  "function": "_calculate_r_hat",
  "method_type": "scoring",
  "priority": 24,
  "description": "HierarchicalGenerativeModel._calculate_r_hat"
},
{
  "class": "IndustrialGradeValidator",
  "function": "validate_causal_categories",
  "method_type": "validation",
  "priority": 25,
  "description": "IndustrialGradeValidator.validate_causal_categories"
},
{

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    "class": "TeoriaCambio",
    "function": "_extraer_categorias",
    "method_type": "analysis",
    "priority": 26,
    "description": "TeoriaCambio._extraer_categorias"
  }
],
"patterns": [
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    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q284-000",
    "match_type": "REGEX",
    "pattern": "factibilidad|viabilidad|es realista esperar que"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q284-001",
    "match_type": "REGEX",
    "pattern": "capacidad del SENA para ofertar programas intramurales"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q284-002",
    "match_type": "REGEX",
    "pattern": "plazo para la construcción del nuevo centro de detención"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q284-003",
    "match_type": "REGEX",
    "pattern": "la meta de PPL formados depende de la disponibilidad de espacios"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q284-004",
    "match_type": "REGEX",
    "pattern": "contradictorio|poco probable|desproporcionado"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q284-005",
    "match_type": "REGEX",
    "pattern": "con los recursos asignados se puede lograr"
  }
],
"policy_area_id": "PA09",
"question_global": 284,
"question_id": "Q284",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿Existe una relación factible entre la actividad (ej. 'un convenio con el SENA') y la meta del producto asociado (ej. '1.000 PPL certificados en un oficio') para la política carcelaria? Se debe evaluar si los 'plazos' son realistas.",
"validations": {}
},
{
  "base_slot": "D3-Q5",
  "cluster_id": "CL04",
  "dimension_id": "DIM03",
  "expected_elements": [

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{
  "required": true,
  "type": "conexion_producto_resultado"
},
{
  "required": true,
  "type": "mecanismo_causal_explicito"
}
],
"failure_contract": {
  "abort_if": [
    "missing_required_element",
    "incomplete_text"
  ],
  "emit_code": "ABORT-Q285-REQ"
},
"method_sets": [
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    "function": "_identify_confounders",
    "method_type": "analysis",
    "priority": 1,
    "description": "PDETMunicipalPlanAnalyzer._identify_confounders"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_effect_to_dict",
    "method_type": "analysis",
    "priority": 2,
    "description": "PDETMunicipalPlanAnalyzer._effect_to_dict"
  },
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    "function": "_scenario_to_dict",
    "method_type": "analysis",
    "priority": 3,
    "description": "PDETMunicipalPlanAnalyzer._scenario_to_dict"
  },
  {
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    "function": "_simulate_intervention",
    "method_type": "analysis",
    "priority": 4,
    "description": "PDETMunicipalPlanAnalyzer._simulate_intervention"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_generate_recommendations",
    "method_type": "analysis",
    "priority": 5,
    "description": "PDETMunicipalPlanAnalyzer._generate_recommendations"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_identify_causal_nodes",
    "method_type": "analysis",
    "priority": 6,
    "description": "PDETMunicipalPlanAnalyzer._identify_causal_nodes"
  },
  {
    "class": "BayesianCounterfactualAuditor",
    "function": "_evaluate_factual",
    "method_type": "analysis",
    "priority": 7,
    "description": "BayesianCounterfactualAuditor._evaluate_factual"
  },
  {
    "class": "BayesianCounterfactualAuditor",
    "function": "_evaluate_counterfactual",
    "method_type": "analysis",
    "priority": 8,
    "description": "BayesianCounterfactualAuditor._evaluate_counterfactual"
  }
]

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},
{
  "class": "CausalExtractor",
  "function": "_assess_financial_consistency",
  "method_type": "analysis",
  "priority": 9,
  "description": "CausalExtractor._assess_financial_consistency"
},
{
  "class": "BayesianMechanismInference",
  "function": "_infer_activity_sequence",
  "method_type": "analysis",
  "priority": 10,
  "description": "BayesianMechanismInference._infer_activity_sequence"
},
{
  "class": "BayesianMechanismInference",
  "function": "_generate_necessity_remediation",
  "method_type": "analysis",
  "priority": 11,
  "description": "BayesianMechanismInference._generate_necessity_remediation"
},
{
  "class": "BayesianCounterfactualAuditor",
  "function": "refutation_and_sanity_checks",
  "method_type": "analysis",
  "priority": 12,
  "description": "BayesianCounterfactualAuditor.refutation_and_sanity_checks"
},
{
  "class": "IndustrialPolicyProcessor",
  "function": "_load_questionnaire",
  "method_type": "analysis",
  "priority": 13,
  "description": "IndustrialPolicyProcessor._load_questionnaire"
},
{
  "class": "PDETMunicipalPlanAnalyzer",
  "function": "analyze_financial_feasibility",
  "method_type": "analysis",
  "priority": 14,
  "description": "PDETMunicipalPlanAnalyzer.analyze_financial_feasibility"
},
{
  "class": "PDETMunicipalPlanAnalyzer",
  "function": "construct_causal_dag",
  "method_type": "analysis",
  "priority": 15,
  "description": "PDETMunicipalPlanAnalyzer.construct_causal_dag"
},
{
  "class": "PDETMunicipalPlanAnalyzer",
  "function": "estimate_causal_effects",
  "method_type": "analysis",
  "priority": 16,
  "description": "PDETMunicipalPlanAnalyzer.estimate_causal_effects"
},
{
  "class": "PDETMunicipalPlanAnalyzer",
  "function": "generate_counterfactuals",
  "method_type": "analysis",
  "priority": 17,
  "description": "PDETMunicipalPlanAnalyzer.generate_counterfactuals"
},
{
  "class": "CausalExtractor",
  "function": "_build_type_hierarchy",
  "method_type": "analysis",
  "priority": 18,
  "description": "CausalExtractor._build_type_hierarchy"
},
{

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    "class": "CausalExtractor",
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    "method_type": "analysis",
    "priority": 19,
    "description": "CausalExtractor._check_structural_violation"
  },
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    "class": "CausalExtractor",
    "function": "_calculate_type_transition_prior",
    "method_type": "scoring",
    "priority": 20,
    "description": "CausalExtractor._calculate_type_transition_prior"
  },
  {
    "class": "CausalExtractor",
    "function": "_calculate_textual_proximity",
    "method_type": "scoring",
    "priority": 21,
    "description": "CausalExtractor._calculate_textual_proximity"
  },
  {
    "class": "TeoriaCambio",
    "function": "_validar_orden_causal",
    "method_type": "analysis",
    "priority": 22,
    "description": "TeoriaCambio._validar_orden_causal"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_refine_edge_probabilities",
    "method_type": "analysis",
    "priority": 23,
    "description": "PDETMunicipalPlanAnalyzer._refine_edge_probabilities"
  },
  {
    "class": "PolicyAnalysisEmbedder",
    "function": "compare_policy_interventions",
    "method_type": "analysis",
    "priority": 24,
    "description": "PolicyAnalysisEmbedder.compare_policy_interventions"
  },
  {
    "class": "BayesianMechanismInference",
    "function": "infer_mechanisms",
    "method_type": "analysis",
    "priority": 25,
    "description": "BayesianMechanismInference.infer_mechanisms"
  }
],
"patterns": [
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q285-000",
    "match_type": "REGEX",
    "pattern": "esto permitirá que|lo cual contribuirá a|generando una reducción de"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q285-001",
    "match_type": "REGEX",
    "pattern": "el mecanismo es que la formación para el trabajo ofrece alternativas a la
delincuencia"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q285-002",

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        "match_type": "REGEX",
        "pattern": "al mejorar las condiciones de salud, se reduce la tensión y la violencia
interna"
    },
    {
        "category": "GENERAL",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q285-003",
        "match_type": "REGEX",
        "pattern": "la construcción de nuevos cupos reduce el hacinamiento, mejorando la
governabilidad"
    },
    {
        "category": "GENERAL",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q285-004",
        "match_type": "REGEX",
        "pattern": "variable intermedia|mediador|eslabón causal|habilidades para la
vida|empleabilidad"
    },
    {
        "category": "GENERAL",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q285-005",
        "match_type": "REGEX",
        "pattern": "cadena de valor|ruta de cambio de la resocialización"
    }
],
"policy_area_id": "PA09",
"question_global": 285,
"question_id": "Q285",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿El PDM explica cómo los productos (ej. 'PPL en programas de trabajo') contribuyen
a generar resultados (ej. 'reducción de la reincidencia')? Se debe buscar este 'mecanismo'.",
"validations": {}
},
{
    "base_slot": "D4-Q1",
    "cluster_id": "CL04",
    "dimension_id": "DIM04",
    "expected_elements": [
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            "required": true,
            "type": "horizonte_temporal"
        },
        {
            "required": true,
            "type": "linea_base_resultado"
        },
        {
            "required": true,
            "type": "meta_resultado"
        },
        {
            "required": true,
            "type": "metrica_outcome"
        }
    ],
    "failure_contract": {
        "abort_if": [
            "missing_required_element",
            "incomplete_text"
        ],
        "emit_code": "ABORT-Q286-REQ"
    },
    "method_sets": [
        {
            "class": "PDETMunicipalPlanAnalyzer",

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    "function": "_extract_entities_syntax",
    "method_type": "extraction",
    "priority": 1,
    "description": "PDETMunicipalPlanAnalyzer._extract_entities_syntax"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_extract_entities_ner",
    "method_type": "extraction",
    "priority": 2,
    "description": "PDETMunicipalPlanAnalyzer._extract_entities_ner"
  },
  {
    "class": "CausalExtractor",
    "function": "_calculate_language_specificity",
    "method_type": "scoring",
    "priority": 3,
    "description": "CausalExtractor._calculate_language_specificity"
  },
  {
    "class": "CausalExtractor",
    "function": "_calculate_composite_likelihood",
    "method_type": "scoring",
    "priority": 4,
    "description": "CausalExtractor._calculate_composite_likelihood"
  },
  {
    "class": "CausalExtractor",
    "function": "_calculate_semantic_distance",
    "method_type": "scoring",
    "priority": 5,
    "description": "CausalExtractor._calculate_semantic_distance"
  },
  {
    "class": "TemporalLogicVerifier",
    "function": "_classify_temporal_type",
    "method_type": "analysis",
    "priority": 6,
    "description": "TemporalLogicVerifier._classify_temporal_type"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_score_indicators",
    "method_type": "scoring",
    "priority": 7,
    "description": "PDETMunicipalPlanAnalyzer._score_indicators"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_find_outcome_mentions",
    "method_type": "analysis",
    "priority": 8,
    "description": "PDETMunicipalPlanAnalyzer._find_outcome_mentions"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_score_temporal_consistency",
    "method_type": "scoring",
    "priority": 9,
    "description": "PDETMunicipalPlanAnalyzer._score_temporal_consistency"
  },
  {
    "class": "CausalExtractor",
    "function": "_extract_goals",
    "method_type": "extraction",
    "priority": 10,
    "description": "CausalExtractor._extract_goals"
  },
  {
    "class": "CausalExtractor",
    "function": "_parse_goal_context",
    "method_type": "extraction",

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    "priority": 11,
    "description": "CausalExtractor._parse_goal_context"
  },
  {
    "class": "CausalExtractor",
    "function": "_classify_goal_type",
    "method_type": "analysis",
    "priority": 12,
    "description": "CausalExtractor._classify_goal_type"
  },
  {
    "class": "TemporalLogicVerifier",
    "function": "_parse_temporal_marker",
    "method_type": "extraction",
    "priority": 13,
    "description": "TemporalLogicVerifier._parse_temporal_marker"
  },
  {
    "class": "TemporalLogicVerifier",
    "function": "_extract_resources",
    "method_type": "extraction",
    "priority": 14,
    "description": "TemporalLogicVerifier._extract_resources"
  },
  {
    "class": "PerformanceAnalyzer",
    "function": "analyze_performance",
    "method_type": "analysis",
    "priority": 15,
    "description": "PerformanceAnalyzer.analyze_performance"
  },
  {
    "class": "PerformanceAnalyzer",
    "function": "_generate_recommendations",
    "method_type": "analysis",
    "priority": 16,
    "description": "PerformanceAnalyzer._generate_recommendations"
  }
],
"patterns": [
  {
    "category": "INDICADOR",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q286-000",
    "match_type": "REGEX",
    "pattern": "indicador de resultado|indicador de efecto|outcome"
  },
  {
    "category": "INDICADOR",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q286-001",
    "match_type": "REGEX",
    "pattern": "tasa de hacinamiento en centros de detención transitoria"
  },
  {
    "category": "INDICADOR",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q286-002",
    "match_type": "REGEX",
    "pattern": "porcentaje de PPL (sindicados) con acceso efectivo a salud"
  },
  {
    "category": "INDICADOR",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q286-003",
    "match_type": "REGEX",
    "pattern": "porcentaje de PPL participando en programas de resocialización"
  },

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{
  "category": "INDICADOR",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q286-004",
  "match_type": "REGEX",
  "pattern": "tasa de reincidencia (si se proyecta)"
},
{
  "category": "GENERAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q286-005",
  "match_type": "LITERAL",
  "pattern": "Línea Base:|LB:|valor 2023:"
},
{
  "category": "INDICADOR",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q286-006",
  "match_type": "REGEX",
  "pattern": "Meta Cuatrienio:|Meta 2027:|se espera reducir a|llegar a un X%"
},
{
  "category": "GENERAL",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q286-007",
  "match_type": "REGEX",
  "pattern": "Fuente de verificación:|Medio de verificación:"
},
{
  "category": "INDICADOR",
  "confidence_weight": 0.85,
  "flags": "i",
  "id": "PAT-Q286-008",
  "match_type": "REGEX",
  "pattern": "Ficha de Indicador de Resultado (KPT del DNP)"
}
],
"policy_area_id": "PA09",
"question_global": 286,
"question_id": "Q286",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿Los indicadores de resultado para la crisis carcelaria (ej. 'tasa de hacinamiento', 'porcentaje de PPL con atención en salud') están definidos con línea base, meta y un horizonte temporal?",
"validations": {}
},
{
  "base_slot": "D4-Q2",
  "cluster_id": "CL04",
  "dimension_id": "DIM04",
  "expected_elements": [
    {
      "required": true,
      "type": "cadena_causal_explicita"
    },
    {
      "required": true,
      "type": "condiciones_habilitantes"
    },
    {
      "required": true,
      "type": "supuestos_identificados"
    }
  ],
  "failure_contract": {
    "abort_if": [
      "missing_required_element",

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    "incomplete_text"
  ],
  "emit_code": "ABORT-Q287-REQ"
},
"method_sets": [
  {
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    "function": "_encontrar_caminos_completos",
    "method_type": "analysis",
    "priority": 1,
    "description": "TeoriaCambio._encontrar_caminos_completos"
  },
  {
    "class": "TeoriaCambio",
    "function": "validacion_completa",
    "method_type": "analysis",
    "priority": 2,
    "description": "TeoriaCambio.validacion_completa"
  },
  {
    "class": "CausalExtractor",
    "function": "extract_causal_hierarchy",
    "method_type": "extraction",
    "priority": 3,
    "description": "CausalExtractor.extract_causal_hierarchy"
  },
  {
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    "function": "verify_conditional_independence",
    "method_type": "analysis",
    "priority": 4,
    "description": "HierarchicalGenerativeModel.verify_conditional_independence"
  },
  {
    "class": "HierarchicalGenerativeModel",
    "function": "_generate_independence_tests",
    "method_type": "analysis",
    "priority": 5,
    "description": "HierarchicalGenerativeModel._generate_independence_tests"
  },
  {
    "class": "BayesianCounterfactualAuditor",
    "function": "construct_scm",
    "method_type": "analysis",
    "priority": 6,
    "description": "BayesianCounterfactualAuditor.construct_scm"
  },
  {
    "class": "AdvancedDAGValidator",
    "function": "_perform_sensitivity_analysis_internal",
    "method_type": "analysis",
    "priority": 7,
    "description": "AdvancedDAGValidator._perform_sensitivity_analysis_internal"
  },
  {
    "class": "BayesFactorTable",
    "function": "get_bayes_factor",
    "method_type": "analysis",
    "priority": 8,
    "description": "BayesFactorTable.get_bayes_factor"
  }
],
"patterns": [
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q287-000",
    "match_type": "REGEX",
    "pattern": "cadena causal|lógica de intervención|si... entonces..."
  },
  {

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        "category": "GENERAL",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q287-001",
        "match_type": "REGEX",
        "pattern": "el resultado se logrará siempre y cuando|asumiendo que"
    },
    {
        "category": "GENERAL",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q287-002",
        "match_type": "REGEX",
        "pattern": "supuesto clave|premisa fundamental"
    },
    {
        "category": "GENERAL",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q287-003",
        "match_type": "REGEX",
        "pattern": "condición habilitante|factor crítico|requiere de"
    },
    {
        "category": "GENERAL",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q287-004",
        "match_type": "REGEX",
        "pattern": "depende de la voluntad de participación de los PPL"
    },
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        "category": "GENERAL",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q287-005",
        "match_type": "REGEX",
        "pattern": "un supuesto es que la formación recibida sea pertinente para el mercado
laboral"
    },
    {
        "category": "GENERAL",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q287-006",
        "match_type": "LITERAL",
        "pattern": "se requiere la articulación con el INPEC para permitir los programas"
    }
],
"policy_area_id": "PA09",
"question_global": 287,
"question_id": "Q287",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿Se explicita la cadena causal que lleva a la mejora de la situación carcelaria,
mencionando 'supuestos' clave (ej. 'si los PPL participan en los programas') o 'condiciones
habilitantes'?",
"validations": {}
},
{
    "base_slot": "D4-Q3",
    "cluster_id": "CL04",
    "dimension_id": "DIM04",
    "expected_elements": [
        {
            "required": true,
            "type": "evidencia_comparada"
        },
        {
            "required": true,
            "type": "justificacion_capacidad"
        }
    ]
},

```



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    {
      "required": true,
      "type": "justificacion_recursos"
    }
  ],
  "failure_contract": {
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      "incomplete_text"
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  "method_sets": [
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      "function": "_get_prior_effect",
      "method_type": "analysis",
      "priority": 1,
      "description": "PDETMunicipalPlanAnalyzer._get_prior_effect"
    },
    {
      "class": "PDETMunicipalPlanAnalyzer",
      "function": "_estimate_effect_bayesian",
      "method_type": "analysis",
      "priority": 2,
      "description": "PDETMunicipalPlanAnalyzer._estimate_effect_bayesian"
    },
    {
      "class": "PDETMunicipalPlanAnalyzer",
      "function": "_compute_robustness_value",
      "method_type": "analysis",
      "priority": 3,
      "description": "PDETMunicipalPlanAnalyzer._compute_robustness_value"
    },
    {
      "class": "AdaptivePriorCalculator",
      "function": "sensitivity_analysis",
      "method_type": "analysis",
      "priority": 4,
      "description": "AdaptivePriorCalculator.sensitivity_analysis"
    },
    {
      "class": "HierarchicalGenerativeModel",
      "function": "_calculate_r_hat",
      "method_type": "scoring",
      "priority": 5,
      "description": "HierarchicalGenerativeModel._calculate_r_hat"
    },
    {
      "class": "HierarchicalGenerativeModel",
      "function": "_calculate_ess",
      "method_type": "scoring",
      "priority": 6,
      "description": "HierarchicalGenerativeModel._calculate_ess"
    },
    {
      "class": "AdvancedDAGValidator",
      "function": "_calculate_statistical_power",
      "method_type": "scoring",
      "priority": 7,
      "description": "AdvancedDAGValidator._calculate_statistical_power"
    },
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      "class": "BayesianMechanismInference",
      "function": "_aggregate_bayesian_confidence",
      "method_type": "analysis",
      "priority": 8,
      "description": "BayesianMechanismInference._aggregate_bayesian_confidence"
    }
  ],
  "patterns": [
    {

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        "category": "GENERAL",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q288-000",
        "match_type": "REGEX",
        "pattern": "meta ambiciosa pero factible|meta realista dado el presupuesto"
    },
    {
        "category": "GENERAL",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q288-001",
        "match_type": "REGEX",
        "pattern": "la meta se justifica por la construcción del nuevo centro de detención"
    },
    {
        "category": "GENERAL",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q288-002",
        "match_type": "REGEX",
        "pattern": "con la inversión de X se espera crear Y cupos"
    },
    {
        "category": "GENERAL",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q288-003",
        "match_type": "REGEX",
        "pattern": "la capacidad de la Secretaría de Salud permite garantizar la atención"
    },
    {
        "category": "GENERAL",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q288-004",
        "match_type": "REGEX",
        "pattern": "en comparación con los estándares de las Reglas Mandela"
    },
    {
        "category": "GENERAL",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q288-005",
        "match_type": "REGEX",
        "pattern": "benchmark|experiencias de otras ciudades en la gestión de sindicatos"
    },
    {
        "category": "GENERAL",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q288-006",
        "match_type": "REGEX",
        "pattern": "análisis de viabilidad de la meta"
    }
],
"policy_area_id": "PA09",
"question_global": 288,
"question_id": "Q288",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿La ambición de las metas de resultado (ej. 'reducir el hacinamiento al 20%') se justifica en función de la inversión, la capacidad de construcción o se compara con estándares o 'casos' de otras ciudades?",
"validations": {}
},
{
    "base_slot": "D4-Q4",
    "cluster_id": "CL04",
    "dimension_id": "DIM04",
    "expected_elements": [
        {

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        "required": true,
        "type": "criterios_exito_definidos"
    },
    {
        "required": true,
        "type": "vinculo_resultado_problema"
    }
],
"failure_contract": {
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        "incomplete_text"
    ],
    "emit_code": "ABORT-Q289-REQ"
},
"method_sets": [
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        "class": "PolicyContradictionDetector",
        "function": "_calculate_objective_alignment",
        "method_type": "scoring",
        "priority": 1,
        "description": "PolicyContradictionDetector._calculate_objective_alignment"
    },
    {
        "class": "PolicyContradictionDetector",
        "function": "_identify_affected_sections",
        "method_type": "analysis",
        "priority": 2,
        "description": "PolicyContradictionDetector._identify_affected_sections"
    },
    {
        "class": "PolicyContradictionDetector",
        "function": "_generate_resolution_recommendations",
        "method_type": "analysis",
        "priority": 3,
        "description": "PolicyContradictionDetector._generate_resolution_recommendations"
    },
    {
        "class": "OperationalizationAuditor",
        "function": "_generate_optimal_remediations",
        "method_type": "analysis",
        "priority": 4,
        "description": "OperationalizationAuditor._generate_optimal_remediations"
    },
    {
        "class": "OperationalizationAuditor",
        "function": "_get_remediation_text",
        "method_type": "analysis",
        "priority": 5,
        "description": "OperationalizationAuditor._get_remediation_text"
    },
    {
        "class": "BayesianCounterfactualAuditor",
        "function": "aggregate_risk_and_prioritize",
        "method_type": "analysis",
        "priority": 6,
        "description": "BayesianCounterfactualAuditor.aggregate_risk_and_prioritize"
    },
    {
        "class": "FinancialAuditor",
        "function": "_detect_allocation_gaps",
        "method_type": "analysis",
        "priority": 7,
        "description": "FinancialAuditor._detect_allocation_gaps"
    }
],
"patterns": [
    {
        "category": "GENERAL",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q289-000",

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      "match_type": "REGEX",
      "pattern": "este resultado responde al problema del hacinamiento"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q289-001",
      "match_type": "REGEX",
      "pattern": "para solucionar la vulneración del derecho a la salud"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q289-002",
      "match_type": "REGEX",
      "pattern": "el resultado atiende directamente las órdenes de la Corte Constitucional"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q289-003",
      "match_type": "REGEX",
      "pattern": "criterio de éxito|se considerará un logro si no hay tutelas por salud"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q289-004",
      "match_type": "REGEX",
      "pattern": "umbral de cumplimiento|mínimo aceptable según las Reglas Mandela"
    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q289-005",
      "match_type": "REGEX",
      "pattern": "matriz de coherencia|alineación diagnóstico-estrategia"
    }
  ],
  "policy_area_id": "PA09",
  "question_global": 289,
  "question_id": "Q289",
  "scoring_definition_ref": "scoring_modalities.TYPE_A",
  "scoring_modality": "TYPE_A",
  "text": "¿Los resultados propuestos (ej. 'mejora de las condiciones de reclusión')
'atienden' o 'abordan' directamente los problemas de derechos humanos de los PPL priorizados en el
diagnóstico?",
  "validations": {}
},
{
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  "cluster_id": "CL04",
  "dimension_id": "DIM04",
  "expected_elements": [
    {
      "required": true,
      "type": "alineacion_jurisprudencia"
    },
    {
      "required": true,
      "type": "alineacion_ods"
    },
    {
      "required": true,
      "type": "alineacion_pnd"
    }
  ]
},
],

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    "missing_required_element",
    "incomplete_text"
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  "emit_code": "ABORT-Q290-REQ"
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"method_sets": [
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    "function": "_score_pdet_alignment",
    "method_type": "scoring",
    "priority": 1,
    "description": "PDETMunicipalPlanAnalyzer._score_pdet_alignment"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_score_causal_coherence",
    "method_type": "scoring",
    "priority": 2,
    "description": "PDETMunicipalPlanAnalyzer._score_causal_coherence"
  },
  {
    "class": "CDAFFramework",
    "function": "_validate_dnp_compliance",
    "method_type": "validation",
    "priority": 3,
    "description": "CDAFFramework._validate_dnp_compliance"
  },
  {
    "class": "CDAFFramework",
    "function": "_generate_dnp_report",
    "method_type": "analysis",
    "priority": 4,
    "description": "CDAFFramework._generate_dnp_report"
  },
  {
    "class": "IndustrialPolicyProcessor",
    "function": "_analyze_causal_dimensions",
    "method_type": "analysis",
    "priority": 5,
    "description": "IndustrialPolicyProcessor._analyze_causal_dimensions"
  },
  {
    "class": "AdaptivePriorCalculator",
    "function": "validate_quality_criteria",
    "method_type": "validation",
    "priority": 6,
    "description": "AdaptivePriorCalculator.validate_quality_criteria"
  }
],
"patterns": [
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q290-000",
    "match_type": "REGEX",
    "pattern": "alineado con el Plan Nacional de Desarrollo|PND|Política de Seguridad
Humana"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q290-001",
    "match_type": "REGEX",
    "pattern": "contribuye al ODS 16|Paz, Justicia e Instituciones Sólidas"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,

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    "flags": "i",
    "id": "PAT-Q290-002",
    "match_type": "REGEX",
    "pattern": "en cumplimiento de las sentencias sobre el Estado de Cosas Inconstitucional"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q290-003",
    "match_type": "REGEX",
    "pattern": "acata las Reglas Mínimas de Tratamiento de Reclusos|Reglas Mandela"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q290-004",
    "match_type": "REGEX",
    "pattern": "en concordancia con la Política Criminal"
  }
],
"policy_area_id": "PA09",
"question_global": 290,
"question_id": "Q290",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿El plan declara la alineación de sus resultados carcelarios con marcos superiores
como el PND, los ODS o las Reglas Mandela?",
"validations": {}
},
{
  "base_slot": "D5-Q1",
  "cluster_id": "CL04",
  "dimension_id": "DIM05",
  "expected_elements": [
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      "required": true,
      "type": "impacto_definido"
    },
    {
      "required": true,
      "type": "rezago_temporal"
    },
    {
      "required": true,
      "type": "ruta_transmision"
    }
  ],
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      "incomplete_text"
    ],
    "emit_code": "ABORT-Q291-REQ"
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      "function": "generate_counterfactuals",
      "method_type": "analysis",
      "priority": 1,
      "description": "PDETMunicipalPlanAnalyzer.generate_counterfactuals"
    },
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      "function": "_simulate_intervention",
      "method_type": "analysis",
      "priority": 2,
      "description": "PDETMunicipalPlanAnalyzer._simulate_intervention"
    }
  ]
}

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    "class": "PDETMunicipalPlanAnalyzer",
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    "method_type": "analysis",
    "priority": 3,
    "description": "PDETMunicipalPlanAnalyzer._generate_scenario_narrative"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_find_mediator_mentions",
    "method_type": "analysis",
    "priority": 4,
    "description": "PDETMunicipalPlanAnalyzer._find_mediator_mentions"
  },
  {
    "class": "TeoriaCambio",
    "function": "_validar_orden_causal",
    "method_type": "analysis",
    "priority": 5,
    "description": "TeoriaCambio._validar_orden_causal"
  },
  {
    "class": "CausalExtractor",
    "function": "_assess_temporal_coherence",
    "method_type": "analysis",
    "priority": 6,
    "description": "CausalExtractor._assess_temporal_coherence"
  },
  {
    "class": "TextMiningEngine",
    "function": "_generate_interventions",
    "method_type": "analysis",
    "priority": 7,
    "description": "TextMiningEngine._generate_interventions"
  },
  {
    "class": "BayesianCounterfactualAuditor",
    "function": "construct_scm",
    "method_type": "analysis",
    "priority": 8,
    "description": "BayesianCounterfactualAuditor.construct_scm"
  }
],
"patterns": [
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q291-000",
    "match_type": "REGEX",
    "pattern": "impacto esperado|visión de largo plazo|transformación del sistema"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q291-001",
    "match_type": "REGEX",
    "pattern": "contribución a la reducción de la criminalidad|mejora de la seguridad
ciudadana"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q291-002",
    "match_type": "REGEX",
    "pattern": "un sistema carcelario enfocado en la resocialización y la dignidad humana"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",

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```

        "id": "PAT-Q291-003",
        "match_type": "REGEX",
        "pattern": "la suma de los resultados de resocialización y mejora de condiciones
generará"
    },
    {
        "category": "GENERAL",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q291-004",
        "match_type": "REGEX",
        "pattern": "ruta de transmisión|cadena de impacto"
    },
    {
        "category": "TEMPORAL",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q291-005",
        "match_type": "REGEX",
        "pattern": "tiempo de maduración|se espera observar en 5-10 años|efectos post-
penitenciarios"
    }
],
"policy_area_id": "PA09",
"question_global": 291,
"question_id": "Q291",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿El PDM define 'impactos' de largo plazo (ej. 'sistema carcelario resocializador',
'reducción de la criminalidad')? Se debe verificar si se menciona la ruta desde los resultados y el
'tiempo de maduración' esperado.",
"validations": {}
},
{
    "base_slot": "D5-Q2",
    "cluster_id": "CL04",
    "dimension_id": "DIM05",
    "expected_elements": [
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            "required": true,
            "type": "justifica_validez"
        },
        {
            "required": true,
            "type": "usa_indices_compuestos"
        },
        {
            "required": true,
            "type": "usa_proxies"
        }
    ],
    "failure_contract": {
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            "missing_required_element",
            "incomplete_text"
        ],
        "emit_code": "ABORT-Q292-REQ"
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    "method_sets": [
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            "class": "PDETMunicipalPlanAnalyzer",
            "function": "calculate_quality_score",
            "method_type": "scoring",
            "priority": 1,
            "description": "PDETMunicipalPlanAnalyzer.calculate_quality_score"
        },
        {
            "class": "PDETMunicipalPlanAnalyzer",
            "function": "_estimate_score_confidence",
            "method_type": "scoring",
            "priority": 2,
            "description": "PDETMunicipalPlanAnalyzer._estimate_score_confidence"
        }
    ]
}

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},
{
  "class": "PDETMunicipalPlanAnalyzer",
  "function": "_compute_e_value",
  "method_type": "analysis",
  "priority": 3,
  "description": "PDETMunicipalPlanAnalyzer._compute_e_value"
},
{
  "class": "PDETMunicipalPlanAnalyzer",
  "function": "_compute_robustness_value",
  "method_type": "analysis",
  "priority": 4,
  "description": "PDETMunicipalPlanAnalyzer._compute_robustness_value"
},
{
  "class": "PDETMunicipalPlanAnalyzer",
  "function": "_interpret_sensitivity",
  "method_type": "analysis",
  "priority": 5,
  "description": "PDETMunicipalPlanAnalyzer._interpret_sensitivity"
},
{
  "class": "ReportingEngine",
  "function": "_calculate_quality_score",
  "method_type": "scoring",
  "priority": 6,
  "description": "ReportingEngine._calculate_quality_score"
},
{
  "class": "BayesianMechanismInference",
  "function": "_aggregate_bayesian_confidence",
  "method_type": "analysis",
  "priority": 7,
  "description": "BayesianMechanismInference._aggregate_bayesian_confidence"
},
{
  "class": "PolicyAnalysisEmbedder",
  "function": "evaluate_policy_numerical_consistency",
  "method_type": "analysis",
  "priority": 8,
  "description": "PolicyAnalysisEmbedder.evaluate_policy_numerical_consistency"
},
{
  "class": "PolicyAnalysisEmbedder",
  "function": "get_diagnostics",
  "method_type": "analysis",
  "priority": 9,
  "description": "PolicyAnalysisEmbedder.get_diagnostics"
},
{
  "class": "PolicyAnalysisEmbedder",
  "function": "process_document",
  "method_type": "analysis",
  "priority": 10,
  "description": "PolicyAnalysisEmbedder.process_document"
},
{
  "class": "PolicyAnalysisEmbedder",
  "function": "_generate_query_from_pdq",
  "method_type": "analysis",
  "priority": 11,
  "description": "PolicyAnalysisEmbedder._generate_query_from_pdq"
},
{
  "class": "PolicyAnalysisEmbedder",
  "function": "_filter_by_pdq",
  "method_type": "analysis",
  "priority": 12,
  "description": "PolicyAnalysisEmbedder._filter_by_pdq"
},
{

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    "class": "PolicyAnalysisEmbedder",
    "function": "_extract_numerical_values",
    "method_type": "extraction",
    "priority": 13,
    "description": "PolicyAnalysisEmbedder._extract_numerical_values"
  },
  {
    "class": "PolicyAnalysisEmbedder",
    "function": "_embed_texts",
    "method_type": "analysis",
    "priority": 14,
    "description": "PolicyAnalysisEmbedder._embed_texts"
  },
  {
    "class": "PolicyAnalysisEmbedder",
    "function": "_compute_overall_confidence",
    "method_type": "analysis",
    "priority": 15,
    "description": "PolicyAnalysisEmbedder._compute_overall_confidence"
  },
  {
    "class": "FinancialAuditor",
    "function": "_calculate_sufficiency",
    "method_type": "scoring",
    "priority": 16,
    "description": "FinancialAuditor._calculate_sufficiency"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_interpret_overall_quality",
    "method_type": "analysis",
    "priority": 17,
    "description": "PDETMunicipalPlanAnalyzer._interpret_overall_quality"
  },
  {
    "class": "BayesianCounterfactualAuditor",
    "function": "aggregate_risk_and_prioritize",
    "method_type": "analysis",
    "priority": 18,
    "description": "BayesianCounterfactualAuditor.aggregate_risk_and_prioritize"
  },
  {
    "class": "PolicyTextProcessor",
    "function": "normalize_unicode",
    "method_type": "analysis",
    "priority": 19,
    "description": "PolicyTextProcessor.normalize_unicode"
  },
  {
    "class": "PolicyTextProcessor",
    "function": "segment_into_sentences",
    "method_type": "analysis",
    "priority": 20,
    "description": "PolicyTextProcessor.segment_into_sentences"
  },
  {
    "class": "IndustrialPolicyProcessor",
    "function": "_compute_evidence_confidence",
    "method_type": "analysis",
    "priority": 21,
    "description": "IndustrialPolicyProcessor._compute_evidence_confidence"
  },
  {
    "class": "IndustrialPolicyProcessor",
    "function": "_compute_avg_confidence",
    "method_type": "analysis",
    "priority": 22,
    "description": "IndustrialPolicyProcessor._compute_avg_confidence"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_quality_to_dict",

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    "method_type": "analysis",
    "priority": 23,
    "description": "PDETMunicipalPlanAnalyzer._quality_to_dict"
  },
  {
    "class": "IndustrialPolicyProcessor",
    "function": "_construct_evidence_bundle",
    "method_type": "analysis",
    "priority": 24,
    "description": "IndustrialPolicyProcessor._construct_evidence_bundle"
  },
  {
    "class": "PolicyTextProcessor",
    "function": "compile_pattern",
    "method_type": "analysis",
    "priority": 25,
    "description": "PolicyTextProcessor.compile_pattern"
  },
  {
    "class": "PolicyTextProcessor",
    "function": "extract_contextual_window",
    "method_type": "extraction",
    "priority": 26,
    "description": "PolicyTextProcessor.extract_contextual_window"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "generate_executive_report",
    "method_type": "analysis",
    "priority": 27,
    "description": "PDETMunicipalPlanAnalyzer.generate_executive_report"
  },
  {
    "class": "IndustrialPolicyProcessor",
    "function": "export_results",
    "method_type": "analysis",
    "priority": 28,
    "description": "IndustrialPolicyProcessor.export_results"
  }
],
"patterns": [
  {
    "category": "INDICADOR",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q292-000",
    "match_type": "REGEX",
    "pattern": "tasa de reincidencia|Índice de Seguridad Ciudadana"
  },
  {
    "category": "INDICADOR",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q292-001",
    "match_type": "REGEX",
    "pattern": "indicador compuesto|indicador sintético"
  },
  {
    "category": "INDICADOR",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q292-002",
    "match_type": "REGEX",
    "pattern": "se usará como proxy|indicador aproximado"
  },
  {
    "category": "INDICADOR",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q292-003",
    "match_type": "REGEX",
    "pattern": "la tasa de empleo de la población pospenada como proxy de resocialización"
  }
]

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    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q292-004",
      "match_type": "REGEX",
      "pattern": "la percepción de seguridad de la ciudadanía como proxy del impacto en la
criminalidad"
    },
    {
      "category": "INDICADOR",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q292-005",
      "match_type": "REGEX",
      "pattern": "este indicador es válido porque refleja|captura los efectos a largo plazo"
    }
  ],
  "policy_area_id": "PA09",
  "question_global": 292,
  "question_id": "Q292",
  "scoring_definition_ref": "scoring_modalities.TYPE_A",
  "scoring_modality": "TYPE_A",
  "text": "¿Se utilizan 'índices' (ej. Tasa de Reincidencia a 5 años) o 'proxies' para medir
los impactos en la resocialización, justificando su validez?",
  "validations": {}
},
{
  "base_slot": "D5-Q3",
  "cluster_id": "CL04",
  "dimension_id": "DIM05",
  "expected_elements": [
    {
      "required": true,
      "type": "documenta_validez"
    },
    {
      "required": true,
      "type": "proxy_para_intangibles"
    },
    {
      "required": true,
      "type": "reconoce_limitaciones"
    }
  ],
  "failure_contract": {
    "abort_if": [
      "missing_required_element",
      "incomplete_text"
    ],
    "emit_code": "ABORT-Q293-REQ"
  },
  "method_sets": [
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      "class": "CausalExtractor",
      "function": "_calculate_semantic_distance",
      "method_type": "scoring",
      "priority": 1,
      "description": "CausalExtractor._calculate_semantic_distance"
    },
    {
      "class": "SemanticAnalyzer",
      "function": "extract_semantic_cube",
      "method_type": "extraction",
      "priority": 2,
      "description": "SemanticAnalyzer.extract_semantic_cube"
    },
    {
      "class": "BayesianMechanismInference",
      "function": "_quantify_uncertainty",
      "method_type": "analysis",

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    "priority": 3,
    "description": "BayesianMechanismInference._quantify_uncertainty"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "_find_mediator_mentions",
    "method_type": "analysis",
    "priority": 4,
    "description": "PDETMunicipalPlanAnalyzer._find_mediator_mentions"
  },
  {
    "class": "PolicyAnalysisEmbedder",
    "function": "get_diagnostics",
    "method_type": "analysis",
    "priority": 5,
    "description": "PolicyAnalysisEmbedder.get_diagnostics"
  },
  {
    "class": "AdaptivePriorCalculator",
    "function": "_perturb_evidence",
    "method_type": "analysis",
    "priority": 6,
    "description": "AdaptivePriorCalculator._perturb_evidence"
  }
],

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"patterns": [

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  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q293-000",
    "match_type": "REGEX",
    "pattern": "dado que es difícil medir la reintegración social|para aproximar la

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medición"

```

  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q293-001",
    "match_type": "REGEX",
    "pattern": "se utilizará como proxy|medición indirecta"
  },

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  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q293-002",
    "match_type": "REGEX",
    "pattern": "el número de PPL que acceden a educación superior o empleo formal post-

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libertad"

```

  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q293-003",
    "match_type": "REGEX",
    "pattern": "este proxy es validado por estudios de criminología"
  },

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  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q293-004",
    "match_type": "REGEX",
    "pattern": "una limitación es que no captura el restablecimiento de lazos familiares"
  },

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  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",

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```

        "id": "PAT-Q293-005",
        "match_type": "REGEX",
        "pattern": "aunque imperfecto, este proxy nos da una señal de inclusión social"
    }
],
"policy_area_id": "PA09",
"question_global": 293,
"question_id": "Q293",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "Cuando un impacto carcelario es difícil de medir (ej. 'reintegración social exitosa'), ¿se recurre a un 'proxy'? Se valora si el texto documenta su 'validez' y reconoce sus 'limitaciones'.",
"validations": {}
},
{
    "base_slot": "D5-Q4",
    "cluster_id": "CL04",
    "dimension_id": "DIM05",
    "expected_elements": [
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            "required": true,
            "type": "alineacion_marcos"
        },
        {
            "required": true,
            "type": "riesgos_sistemicos"
        }
    ],
    "failure_contract": {
        "abort_if": [
            "missing_required_element",
            "incomplete_text"
        ],
        "emit_code": "ABORT-Q294-REQ"
    },
    "method_sets": [
        {
            "class": "OperationalizationAuditor",
            "function": "_audit_systemic_risk",
            "method_type": "validation",
            "priority": 1,
            "description": "OperationalizationAuditor._audit_systemic_risk"
        },
        {
            "class": "BayesianCounterfactualAuditor",
            "function": "refutation_and_sanity_checks",
            "method_type": "analysis",
            "priority": 2,
            "description": "BayesianCounterfactualAuditor.refutation_and_sanity_checks"
        },
        {
            "class": "BayesianCounterfactualAuditor",
            "function": "_test_effect_stability",
            "method_type": "analysis",
            "priority": 3,
            "description": "BayesianCounterfactualAuditor._test_effect_stability"
        },
        {
            "class": "PDETMunicipalPlanAnalyzer",
            "function": "_interpret_risk",
            "method_type": "analysis",
            "priority": 4,
            "description": "PDETMunicipalPlanAnalyzer._interpret_risk"
        },
        {
            "class": "PDETMunicipalPlanAnalyzer",
            "function": "_interpret_sensitivity",
            "method_type": "analysis",
            "priority": 5,
            "description": "PDETMunicipalPlanAnalyzer._interpret_sensitivity"
        }
    ],

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{
  "class": "PDETMunicipalPlanAnalyzer",
  "function": "_break_cycles",
  "method_type": "analysis",
  "priority": 6,
  "description": "PDETMunicipalPlanAnalyzer._break_cycles"
},
{
  "class": "AdaptivePriorCalculator",
  "function": "sensitivity_analysis",
  "method_type": "analysis",
  "priority": 7,
  "description": "AdaptivePriorCalculator.sensitivity_analysis"
}
],
"patterns": [
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q294-000",
    "match_type": "REGEX",
    "pattern": "visión de una política criminal restaurativa|humanización del sistema"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q294-001",
    "match_type": "LITERAL",
    "pattern": "riesgo sistémico|choque externo"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q294-002",
    "match_type": "REGEX",
    "pattern": "cambios en la política criminal|populismo punitivo|endurecimiento de penas"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q294-003",
    "match_type": "REGEX",
    "pattern": "crisis fiscal que impida la inversión en infraestructura carcelaria"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q294-004",
    "match_type": "REGEX",
    "pattern": "estos factores podrían agravar el hacinamiento y anular los esfuerzos"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q294-005",
    "match_type": "REGEX",
    "pattern": "el mecanismo causal es vulnerable a|sensible a las decisiones del Congreso"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q294-006",
    "match_type": "REGEX",
    "pattern": "estrategias de justicia restaurativa|medidas alternativas a la prisión"
  }
]

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],
"policy_area_id": "PA09",
"question_global": 294,
"question_id": "Q294",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿Los impactos en la política carcelaria se alinean con marcos nacionales y consideran 'riesgos sistémicos' (ej. cambios en la política criminal) que podrían romper el mecanismo causal?",
"validations": {}
},
{
"base_slot": "D5-Q5",
"cluster_id": "CL04",
"dimension_id": "DIM05",
"expected_elements": [
{
"required": true,
"type": "analisis_realismo"
},
{
"required": true,
"type": "efectos_no_deseados"
},
{
"required": true,
"type": "hipotesis_limite"
}
],
"failure_contract": {
"abort_if": [
"missing_required_element",
"incomplete_text"
],
"emit_code": "ABORT-Q295-REQ"
},
"method_sets": [
{
"class": "HierarchicalGenerativeModel",
"function": "posterior_predictive_check",
"method_type": "analysis",
"priority": 1,
"description": "HierarchicalGenerativeModel.posterior_predictive_check"
},
{
"class": "HierarchicalGenerativeModel",
"function": "_ablation_analysis",
"method_type": "analysis",
"priority": 2,
"description": "HierarchicalGenerativeModel._ablation_analysis"
},
{
"class": "HierarchicalGenerativeModel",
"function": "_calculate_waic_difference",
"method_type": "scoring",
"priority": 3,
"description": "HierarchicalGenerativeModel._calculate_waic_difference"
},
{
"class": "AdaptivePriorCalculator",
"function": "_add_ood_noise",
"method_type": "analysis",
"priority": 4,
"description": "AdaptivePriorCalculator._add_ood_noise"
},
{
"class": "AdaptivePriorCalculator",
"function": "validate_quality_criteria",
"method_type": "validation",
"priority": 5,
"description": "AdaptivePriorCalculator.validate_quality_criteria"
},

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{
  "class": "PDETMunicipalPlanAnalyzer",
  "function": "_compute_e_value",
  "method_type": "analysis",
  "priority": 6,
  "description": "PDETMunicipalPlanAnalyzer._compute_e_value"
},
{
  "class": "PDETMunicipalPlanAnalyzer",
  "function": "_compute_robustness_value",
  "method_type": "analysis",
  "priority": 7,
  "description": "PDETMunicipalPlanAnalyzer._compute_robustness_value"
},
{
  "class": "BayesianMechanismInference",
  "function": "_calculate_coherence_factor",
  "method_type": "scoring",
  "priority": 8,
  "description": "BayesianMechanismInference._calculate_coherence_factor"
}
],
"patterns": [
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q295-000",
    "match_type": "REGEX",
    "pattern": "la ambición del impacto es realista si se logra la cofinanciación de la
USPEC"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q295-001",
    "match_type": "REGEX",
    "pattern": "efecto no deseado|consecuencia imprevista|externalidad negativa"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q295-002",
    "match_type": "REGEX",
    "pattern": "riesgo de que mejores condiciones carcelarias reduzcan el efecto disuasorio"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q295-003",
    "match_type": "REGEX",
    "pattern": "posible estigmatización de la comunidad hacia los pospenados"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q295-004",
    "match_type": "REGEX",
    "pattern": "trade-off entre seguridad y derechos de los PPL"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q295-005",
    "match_type": "REGEX",
    "pattern": "hipótesis límite|el modelo de resocialización funciona si el sector privado
ofrece empleo"
  }
]

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    },
    {
      "category": "GENERAL",
      "confidence_weight": 0.85,
      "flags": "i",
      "id": "PAT-Q295-006",
      "match_type": "LITERAL",
      "pattern": "supuesto crítico para el impacto a largo plazo"
    }
  ],
  "policy_area_id": "PA09",
  "question_global": 295,
  "question_id": "Q295",
  "scoring_definition_ref": "scoring_modalities.TYPE_A",
  "scoring_modality": "TYPE_A",
  "text": "¿La ambición del impacto (ej. 'cárceles como verdaderos centros de
resocialización') es realista? Se debe buscar si se analizan 'efectos no deseados' o se declaran
'hipótesis límite'.",
  "validations": {}
},
{
  "base_slot": "D6-Q1",
  "cluster_id": "CL04",
  "dimension_id": "DIM06",
  "expected_elements": [
    {
      "required": true,
      "type": "diagrama_causal"
    },
    {
      "required": true,
      "type": "supuestos_verificables"
    },
    {
      "required": true,
      "type": "teoria_cambio_explicita"
    }
  ],
  "failure_contract": {
    "abort_if": [
      "missing_required_element",
      "incomplete_text"
    ],
    "emit_code": "ABORT-Q296-REQ"
  },
  "method_sets": [
    {
      "class": "TeoriaCambio",
      "function": "construir_grafo_causal",
      "method_type": "analysis",
      "priority": 1,
      "description": "TeoriaCambio.construir_grafo_causal"
    },
    {
      "class": "TeoriaCambio",
      "function": "validacion_completa",
      "method_type": "analysis",
      "priority": 2,
      "description": "TeoriaCambio.validacion_completa"
    },
    {
      "class": "TeoriaCambio",
      "function": "export_nodes",
      "method_type": "analysis",
      "priority": 3,
      "description": "TeoriaCambio.export_nodes"
    },
    {
      "class": "ReportingEngine",
      "function": "generate_causal_diagram",
      "method_type": "analysis",
      "priority": 4,

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    "description": "ReportingEngine.generate_causal_diagram"
  },
  {
    "class": "ReportingEngine",
    "function": "generate_causal_model_json",
    "method_type": "analysis",
    "priority": 5,
    "description": "ReportingEngine.generate_causal_model_json"
  },
  {
    "class": "AdvancedDAGValidator",
    "function": "export_nodes",
    "method_type": "analysis",
    "priority": 6,
    "description": "AdvancedDAGValidator.export_nodes"
  },
  {
    "class": "PDETMunicipalPlanAnalyzer",
    "function": "export_causal_network",
    "method_type": "analysis",
    "priority": 7,
    "description": "PDETMunicipalPlanAnalyzer.export_causal_network"
  },
  {
    "class": "CausalExtractor",
    "function": "extract_causal_hierarchy",
    "method_type": "extraction",
    "priority": 8,
    "description": "CausalExtractor.extract_causal_hierarchy"
  }
],
"patterns": [
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q296-000",
    "match_type": "REGEX",
    "pattern": "teoría de cambio|marco lógico|cadena causal|modelo lógico de
resocialización"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q296-001",
    "match_type": "REGEX",
    "pattern": "diagrama causal|gráfico de la teoría|esquema de intervención|figura"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q296-002",
    "match_type": "REGEX",
    "pattern": "causa raíz del hacinamiento|determinante estructural de la reincidencia"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q296-003",
    "match_type": "REGEX",
    "pattern": "mediador|variable intermedia|eslabón|habilidades para el trabajo|vínculos
familiares"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q296-004",
    "match_type": "REGEX",

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    "pattern": "moderador|factor contextual|tipo de delito"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q296-005",
    "match_type": "LITERAL",
    "pattern": "supuesto verificable|hipótesis a testear|premisa comprobable"
  }
],
"policy_area_id": "PA09",
"question_global": 296,
"question_id": "Q296",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿Existe una 'teoría de cambio' explícita para la política carcelaria, preferiblemente en un 'diagrama', que identifique causas (ej. populismo punitivo), mediadores (ej. oportunidades de redención) y 'supuestos verificables'?",
"validations": {}
},
{
  "base_slot": "D6-Q2",
  "cluster_id": "CL04",
  "dimension_id": "DIM06",
  "expected_elements": [
    {
      "required": true,
      "type": "evita_salto_logicos"
    },
    {
      "required": true,
      "type": "proporcionalidad_eslabones"
    }
  ]
},
"failure_contract": {
  "abort_if": [
    "missing_required_element",
    "incomplete_text"
  ],
  "emit_code": "ABORT-Q297-REQ"
},
"method_sets": [
  {
    "class": "BeachEvidentialTest",
    "function": "apply_test_logic",
    "method_type": "analysis",
    "priority": 1,
    "description": "BeachEvidentialTest.apply_test_logic"
  },
  {
    "class": "BayesianMechanismInference",
    "function": "_test_necessity",
    "method_type": "analysis",
    "priority": 2,
    "description": "BayesianMechanismInference._test_necessity"
  },
  {
    "class": "BayesianMechanismInference",
    "function": "_test_sufficiency",
    "method_type": "analysis",
    "priority": 3,
    "description": "BayesianMechanismInference._test_sufficiency"
  },
  {
    "class": "BayesianMechanismInference",
    "function": "_calculate_coherence_factor",
    "method_type": "scoring",
    "priority": 4,
    "description": "BayesianMechanismInference._calculate_coherence_factor"
  }
]

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    "class": "BayesianCounterfactualAuditor",
    "function": "_test_effect_stability",
    "method_type": "analysis",
    "priority": 5,
    "description": "BayesianCounterfactualAuditor._test_effect_stability"
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  {
    "class": "IndustrialGradeValidator",
    "function": "validate_connection_matrix",
    "method_type": "validation",
    "priority": 6,
    "description": "IndustrialGradeValidator.validate_connection_matrix"
  },
  {
    "class": "PolicyAnalysisEmbedder",
    "function": "_compute_overall_confidence",
    "method_type": "analysis",
    "priority": 7,
    "description": "PolicyAnalysisEmbedder._compute_overall_confidence"
  }
],
"patterns": [
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    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q297-000",
    "match_type": "REGEX",
    "pattern": "proporcionalidad entre|magnitud del efecto esperado"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q297-001",
    "match_type": "REGEX",
    "pattern": "salto lógico|brecha en la argumentación|milagro de implementación"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q297-002",
    "match_type": "LITERAL",
    "pattern": "es realista esperar que|es factible que"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q297-003",
    "match_type": "REGEX",
    "pattern": "la escala de la intervención es coherente con la ambición del resultado"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q297-004",
    "match_type": "REGEX",
    "pattern": "se requieren múltiples intervenciones para afectar la reincidencia"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q297-005",
    "match_type": "REGEX",
    "pattern": "el resultado es de mayor alcance que el producto"
  }
],
"policy_area_id": "PA09",

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"question_global": 297,
"question_id": "Q297",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿Los saltos en la cadena causal de la política carcelaria son proporcionales (ej.
un programa de lectura no elimina por sí solo la reincidencia)?",
"validations": {}
},
{
"base_slot": "D6-Q3",
"cluster_id": "CL04",
"dimension_id": "DIM06",
"expected_elements": [
{
"required": true,
"type": "propone_pilotos_o_pruebas"
},
{
"required": true,
"type": "reconoce_inconsistencias"
}
],
"failure_contract": {
"abort_if": [
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"incomplete_text"
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},
"method_sets": [
{
"class": "IndustrialGradeValidator",
"function": "execute_suite",
"method_type": "analysis",
"priority": 1,
"description": "IndustrialGradeValidator.execute_suite"
},
{
"class": "IndustrialGradeValidator",
"function": "validate_engine_readiness",
"method_type": "validation",
"priority": 2,
"description": "IndustrialGradeValidator.validate_engine_readiness"
},
{
"class": "IndustrialGradeValidator",
"function": "_benchmark_operation",
"method_type": "analysis",
"priority": 3,
"description": "IndustrialGradeValidator._benchmark_operation"
},
{
"class": "AdaptivePriorCalculator",
"function": "validate_quality_criteria",
"method_type": "validation",
"priority": 4,
"description": "AdaptivePriorCalculator.validate_quality_criteria"
},
{
"class": "HierarchicalGenerativeModel",
"function": "_calculate_r_hat",
"method_type": "scoring",
"priority": 5,
"description": "HierarchicalGenerativeModel._calculate_r_hat"
},
{
"class": "HierarchicalGenerativeModel",
"function": "_calculate_ess",
"method_type": "scoring",
"priority": 6,
"description": "HierarchicalGenerativeModel._calculate_ess"
}
],

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```

{
  "class": "AdvancedDAGValidator",
  "function": "calculate_acyclicity_pvalue",
  "method_type": "scoring",
  "priority": 7,
  "description": "AdvancedDAGValidator.calculate_acyclicity_pvalue"
},
{
  "class": "PerformanceAnalyzer",
  "function": "analyze_performance",
  "method_type": "analysis",
  "priority": 8,
  "description": "PerformanceAnalyzer.analyze_performance"
}
],
"patterns": [
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q298-000",
    "match_type": "REGEX",
    "pattern": "inconsistencia|debilidad en la teoría|supuesto débil"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q298-001",
    "match_type": "REGEX",
    "pattern": "se requiere validar si los programas de trabajo realmente mejoran la
empleabilidad"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q298-002",
    "match_type": "REGEX",
    "pattern": "plan piloto de justicia restaurativa|fase experimental"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q298-003",
    "match_type": "REGEX",
    "pattern": "testear el supuesto de que la educación reduce la reincidencia"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q298-004",
    "match_type": "REGEX",
    "pattern": "validar la hipótesis sobre la efectividad de la terapia psicosocial"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q298-005",
    "match_type": "REGEX",
    "pattern": "evaluación de impacto|evaluación de mecanismos"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q298-006",
    "match_type": "REGEX",
    "pattern": "aprendizaje adaptativo|gestión adaptativa"
  }
]

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    }
  ],
  "policy_area_id": "PA09",
  "question_global": 298,
  "question_id": "Q298",
  "scoring_definition_ref": "scoring_modalities.TYPE_A",
  "scoring_modality": "TYPE_A",
  "text": "¿El plan reconoce 'inconsistencias' en su lógica de resocialización y propone
'pilotos' o 'pruebas' para 'testear los supuestos' de sus intervenciones?",
  "validations": {}
},
{
  "base_slot": "D6-Q4",
  "cluster_id": "CL04",
  "dimension_id": "DIM06",
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      "required": true,
      "type": "ciclos_aprendizaje"
    },
    {
      "required": true,
      "type": "mecanismos_correccion"
    },
    {
      "required": true,
      "type": "sistema_monitoreo"
    }
  ],
  "failure_contract": {
    "abort_if": [
      "missing_required_element",
      "incomplete_text"
    ],
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  "method_sets": [
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      "class": "ConfigLoader",
      "function": "update_priors_from_feedback",
      "method_type": "analysis",
      "priority": 1,
      "description": "ConfigLoader.update_priors_from_feedback"
    },
    {
      "class": "ConfigLoader",
      "function": "check_uncertainty_reduction_criterion",
      "method_type": "analysis",
      "priority": 2,
      "description": "ConfigLoader.check_uncertainty_reduction_criterion"
    },
    {
      "class": "ConfigLoader",
      "function": "_save_prior_history",
      "method_type": "analysis",
      "priority": 3,
      "description": "ConfigLoader._save_prior_history"
    },
    {
      "class": "ConfigLoader",
      "function": "_load_uncertainty_history",
      "method_type": "analysis",
      "priority": 4,
      "description": "ConfigLoader._load_uncertainty_history"
    },
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      "function": "_extract_feedback_from_audit",
      "method_type": "validation",
      "priority": 5,
      "description": "CDAFFramework._extract_feedback_from_audit"
    }
  ],

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{
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  "method_type": "scoring",
  "priority": 6,
  "description": "AdvancedDAGValidator._calculate_node_importance"
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  "function": "get_bayes_factor",
  "method_type": "analysis",
  "priority": 7,
  "description": "BayesFactorTable.get_bayes_factor"
}
],
"patterns": [
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q299-000",
    "match_type": "REGEX",
    "pattern": "sistema de seguimiento y evaluación|M&E carcelario"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q299-001",
    "match_type": "REGEX",
    "pattern": "monitoreo a través de los reportes del INPEC y la Personería"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q299-002",
    "match_type": "REGEX",
    "pattern": "alerta temprana sobre brotes de enfermedades o motines"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q299-003",
    "match_type": "REGEX",
    "pattern": "mecanismo de ajuste de los programas de resocialización"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q299-004",
    "match_type": "REGEX",
    "pattern": "retroalimentación desde la población PPL|comités de DDHH"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q299-005",
    "match_type": "REGEX",
    "pattern": "ciclos de aprendizaje|reuniones del comité de seguimiento"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q299-006",
    "match_type": "REGEX",
    "pattern": "lecciones aprendidas en la gestión de centros de detención"
  }
]

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],
"policy_area_id": "PA09",
"question_global": 299,
"question_id": "Q299",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿Se describe un sistema de monitoreo para la política carcelaria que incluya
'mecanismos de corrección', 'retroalimentación' o 'aprendizaje' para adaptar la estrategia?",
"validations": {
  "monitoring_keywords": {
    "minimum_required": 1,
    "patterns": [
      "monitoreo",
      "mecanismos de corrección",
      "retroalimentación",
      "aprendizaje"
    ],
    "specificity": "MEDIUM"
  }
},
{
  "base_slot": "D6-Q5",
  "cluster_id": "CL04",
  "dimension_id": "DIM06",
  "expected_elements": [
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      "required": true,
      "type": "analisis_contextual"
    },
    {
      "required": true,
      "type": "enfoque_diferencial"
    }
  ],
  "failure_contract": {
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      "missing_required_element",
      "incomplete_text"
    ],
    "emit_code": "ABORT-Q300-REQ"
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  "method_sets": [
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      "function": "_calculate_language_specificity",
      "method_type": "scoring",
      "priority": 1,
      "description": "CausalExtractor._calculate_language_specificity"
    },
    {
      "class": "CausalExtractor",
      "function": "_assess_temporal_coherence",
      "method_type": "analysis",
      "priority": 2,
      "description": "CausalExtractor._assess_temporal_coherence"
    },
    {
      "class": "TextMiningEngine",
      "function": "diagnose_critical_links",
      "method_type": "analysis",
      "priority": 3,
      "description": "TextMiningEngine.diagnose_critical_links"
    },
    {
      "class": "CausalInferenceSetup",
      "function": "identify_failure_points",
      "method_type": "analysis",
      "priority": 4,
      "description": "CausalInferenceSetup.identify_failure_points"
    }
  ]
}

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    "class": "CausalInferenceSetup",
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    "method_type": "analysis",
    "priority": 5,
    "description": "CausalInferenceSetup._get_dynamics_pattern"
  },
  {
    "class": "SemanticProcessor",
    "function": "chunk_text",
    "method_type": "analysis",
    "priority": 6,
    "description": "SemanticProcessor.chunk_text"
  },
  {
    "class": "SemanticProcessor",
    "function": "_detect_pdm_structure",
    "method_type": "analysis",
    "priority": 7,
    "description": "SemanticProcessor._detect_pdm_structure"
  },
  {
    "class": "SemanticProcessor",
    "function": "_detect_table",
    "method_type": "analysis",
    "priority": 8,
    "description": "SemanticProcessor._detect_table"
  },
  {
    "class": "AdaptivePriorCalculator",
    "function": "generate_traceability_record",
    "method_type": "analysis",
    "priority": 9,
    "description": "AdaptivePriorCalculator.generate_traceability_record"
  }
],
"patterns": [
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    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q300-000",
    "match_type": "REGEX",
    "pattern": "enfoco diferencial|enfoco de género en prisiones"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q300-001",
    "match_type": "REGEX",
    "pattern": "mujeres gestantes o lactantes privadas de la libertad"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q300-002",
    "match_type": "REGEX",
    "pattern": "población LGBTI en riesgo de discriminación"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",
    "id": "PAT-Q300-003",
    "match_type": "REGEX",
    "pattern": "PPL pertenecientes a comunidades indígenas o afrodescendientes"
  },
  {
    "category": "GENERAL",
    "confidence_weight": 0.85,
    "flags": "i",

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        "id": "PAT-Q300-004",
        "match_type": "REGEX",
        "pattern": "adultos mayores o PPL con enfermedades graves"
    },
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        "category": "GENERAL",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q300-005",
        "match_type": "REGEX",
        "pattern": "restricciones normativas del Código Penitenciario"
    },
    {
        "category": "GENERAL",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q300-006",
        "match_type": "REGEX",
        "pattern": "contexto de seguridad y gobernabilidad del centro de reclusión"
    },
    {
        "category": "GENERAL",
        "confidence_weight": 0.85,
        "flags": "i",
        "id": "PAT-Q300-007",
        "match_type": "REGEX",
        "pattern": "estrategias adaptadas para la población sindicada vs. la condenada"
    }
],
"policy_area_id": "PA09",
"question_global": 300,
"question_id": "Q300",
"scoring_definition_ref": "scoring_modalities.TYPE_A",
"scoring_modality": "TYPE_A",
"text": "¿La lógica causal para la crisis carcelaria considera el contexto, reconociendo
'grupos afectados' (mujeres, población LGBTI, indígenas PPL) y 'restricciones' normativas?",
"validations": {}
}
],
"niveles_abstraccion": {
    "clusters": [
        {
            "cluster_id": "CL01",
            "i18n": {
                "default": "es",
                "keys": {
                    "label_en": "Seguridad y Paz",
                    "label_es": "Seguridad y Paz"
                }
            }
        },
        {
            "legacy_policy_area_ids": [
                "P2",
                "P3",
                "P7"
            ],
            "policy_area_ids": [
                "PA02",
                "PA03",
                "PA07"
            ],
            "rationale": "Seguridad humana, protección de la vida y paz territorial"
        },
        {
            "cluster_id": "CL02",
            "i18n": {
                "default": "es",
                "keys": {
                    "label_en": "Grupos Poblacionales",
                    "label_es": "Grupos Poblacionales"
                }
            },
            "legacy_policy_area_ids": [

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        "P1",
        "P5",
        "P6"
    ],
    "policy_area_ids": [
        "PA01",
        "PA05",
        "PA06"
    ],
    "rationale": "Enfoque diferencial y derechos de grupos específicos"
},
{
    "cluster_id": "CL03",
    "il8n": {
        "default": "es",
        "keys": {
            "label_en": "Territorio-Ambiente",
            "label_es": "Territorio-Ambiente"
        }
    },
    "legacy_policy_area_ids": [
        "P4",
        "P8"
    ],
    "policy_area_ids": [
        "PA04",
        "PA08"
    ],
    "rationale": "Sostenibilidad territorial y gestión ambiental"
},
{
    "cluster_id": "CL04",
    "il8n": {
        "default": "es",
        "keys": {
            "label_en": "Derechos Sociales & Crisis",
            "label_es": "Derechos Sociales & Crisis"
        }
    },
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        "P9",
        "P10"
    ],
    "policy_area_ids": [
        "PA09",
        "PA10"
    ],
    "rationale": "DESC y gestión de crisis migratoria"
}
],
"dimensions": [
    {
        "description": "Evalúa la calidad del diagnóstico territorial, líneas base cuantitativas,
identificación de brechas y suficiencia de recursos.",
        "dimension_id": "DIM01",
        "il8n": {
            "default": "es",
            "keys": {
                "label_en": "Insumos (Diagnóstico y Líneas Base)",
                "label_es": "Insumos (Diagnóstico y Líneas Base)"
            }
        },
        "legacy_id": "D1"
    },
    {
        "description": "Evalúa la formalización de actividades con estructura clara, responsables,
cronogramas, costos y mecanismos causales.",
        "dimension_id": "DIM02",
        "il8n": {
            "default": "es",
            "keys": {
                "label_en": "Actividades (Diseño de Intervención)",

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        "label_es": "Actividades (Diseño de Intervención)"
    },
    "legacy_id": "D2"
},
{
    "description": "Evalúa la especificación de productos (bienes y servicios) con indicadores verificables, fórmulas, fuentes y trazabilidad presupuestal.",
    "dimension_id": "DIM03",
    "il8n": {
        "default": "es",
        "keys": {
            "label_en": "Productos (Verificables)",
            "label_es": "Productos (Verificables)"
        }
    },
    "legacy_id": "D3"
},
{
    "description": "Evalúa la definición de resultados (cambios en la población) con métricas, líneas base, metas y encadenamiento causal.",
    "dimension_id": "DIM04",
    "il8n": {
        "default": "es",
        "keys": {
            "label_en": "Resultados (Medibles)",
            "label_es": "Resultados (Medibles)"
        }
    },
    "legacy_id": "D4"
},
{
    "description": "Evalúa la proyección de impactos (transformaciones estructurales) con rutas de transmisión, rezagos temporales y consideración de riesgos sistémicos.",
    "dimension_id": "DIM05",
    "il8n": {
        "default": "es",
        "keys": {
            "label_en": "Impactos (Largo Plazo)",
            "label_es": "Impactos (Largo Plazo)"
        }
    },
    "legacy_id": "D5"
},
{
    "description": "Evalúa la explicitación de teorías de cambio, identificación de causas raíz, mediadores, moderadores y supuestos verificables.",
    "dimension_id": "DIM06",
    "il8n": {
        "default": "es",
        "keys": {
            "label_en": "Causalidad (Teoría de Cambio Explícita)",
            "label_es": "Causalidad (Teoría de Cambio Explícita)"
        }
    },
    "legacy_id": "D6"
}
],
"policy_areas": [
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        "dimension_ids": [
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            "DIM03",
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            "DIM05",
            "DIM06"
        ],
        "il8n": {
            "default": "es",
            "keys": {

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        "label_en": "Derechos de las mujeres e igualdad de género",
        "label_es": "Derechos de las mujeres e igualdad de género"
    }
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"legacy_ids": [
    "p1"
],
"policy_area_id": "PA01",
"required_evidence_keys": [
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    "official_documents",
    "third_party_research"
]
},
{
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    "dimension_ids": [
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        "DIM02",
        "DIM03",
        "DIM04",
        "DIM05",
        "DIM06"
    ],
    "il8n": {
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        "keys": {
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            "label_es": "Prevención de la violencia y protección frente al conflicto"
        }
    },
    "legacy_ids": [
        "p2"
    ],
    "policy_area_id": "PA02",
    "required_evidence_keys": [
        "official_stats",
        "monitoring_tables",
        "official_documents"
    ]
},
{
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    "dimension_ids": [
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        "DIM02",
        "DIM03",
        "DIM04",
        "DIM05",
        "DIM06"
    ],
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        "default": "es",
        "keys": {
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            "label_es": "Ambiente sano, cambio climático, prevención y atención a desastres"
        }
    },
    "legacy_ids": [
        "p3"
    ],
    "policy_area_id": "PA03",
    "required_evidence_keys": [
        "official_stats",
        "official_documents",
        "geo_maps"
    ]
},
{
    "cluster_id": "CL03",
    "dimension_ids": [
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        "DIM02",
        "DIM03",
        "DIM04",
        "DIM05",
        "DIM06"
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        "default": "es",
        "keys": {
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            "label_es": "Derechos económicos, sociales y culturales"
        }
    },
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        "P4"
    ],
    "policy_area_id": "PA04",
    "required_evidence_keys": [
        "official_stats",
        "geo_maps",
        "official_documents"
    ]
},
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    "cluster_id": "CL02",
    "dimension_ids": [
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        "DIM02",
        "DIM03",
        "DIM04",
        "DIM05",
        "DIM06"
    ],
    "i18n": {
        "default": "es",
        "keys": {
            "label_en": "Derechos de las víctimas y construcción de paz",
            "label_es": "Derechos de las víctimas y construcción de paz"
        }
    },
    "legacy_ids": [
        "P5"
    ],
    "policy_area_id": "PA05",
    "required_evidence_keys": [
        "official_stats",
        "monitoring_tables",
        "third_party_research"
    ]
},
{
    "cluster_id": "CL02",
    "dimension_ids": [
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        "DIM02",
        "DIM03",
        "DIM04",
        "DIM05",
        "DIM06"
    ],
    "i18n": {
        "default": "es",
        "keys": {
            "label_en": "Derecho al buen futuro de la niñez, adolescencia, juventud",
            "label_es": "Derecho al buen futuro de la niñez, adolescencia, juventud"
        }
    },
    "legacy_ids": [
        "P6"
    ],
    "policy_area_id": "PA06",
    "required_evidence_keys": [

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        "official_documents",
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        "monitoring_tables"
    ]
},
{
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    "dimension_ids": [
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        "DIM03",
        "DIM04",
        "DIM05",
        "DIM06"
    ],
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        "default": "es",
        "keys": {
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            "label_es": "Tierras y territorios"
        }
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    "policy_area_id": "PA07",
    "required_evidence_keys": [
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        "official_documents",
        "monitoring_tables"
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    "dimension_ids": [
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        "DIM03",
        "DIM04",
        "DIM05",
        "DIM06"
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    "il8n": {
        "default": "es",
        "keys": {
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            "label_es": "Líderes y defensores de derechos humanos"
        }
    },
    "legacy_ids": [
        "p8"
    ],
    "policy_area_id": "PA08",
    "required_evidence_keys": [
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        "official_documents",
        "official_stats"
    ]
},
{
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    "dimension_ids": [
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        "DIM02",
        "DIM03",
        "DIM04",
        "DIM05",
        "DIM06"
    ],
    "il8n": {
        "default": "es",
        "keys": {

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        "label_en": "Crisis de derechos de personas privadas de la libertad",
        "label_es": "Crisis de derechos de personas privadas de la libertad"
    }
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"legacy_ids": [
    "p9"
],
"policy_area_id": "PA09",
"required_evidence_keys": [
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    "monitoring_tables"
]
},
{
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    "dimension_ids": [
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        "DIM02",
        "DIM03",
        "DIM04",
        "DIM05",
        "DIM06"
    ],
    "il8n": {
        "default": "es",
        "keys": {
            "label_en": "Migración transfronteriza",
            "label_es": "Migración transfronteriza"
        }
    },
    "legacy_ids": [
        "p10"
    ],
    "policy_area_id": "PA10",
    "required_evidence_keys": [
        "official_stats",
        "third_party_research",
        "official_documents"
    ]
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],
},
"scoring": {
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            "level": "EXCELENTE",
            "min_score": 0.85
        },
        {
            "color": "blue",
            "level": "BUENO",
            "min_score": 0.7
        },
        {
            "color": "yellow",
            "level": "ACEPTABLE",
            "min_score": 0.55
        },
        {
            "color": "red",
            "level": "INSUFICIENTE",
            "min_score": 0.0
        }
    ],
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            "description": "Count 4 elements and scale to 0-3",
            "levels": [],
            "max_score": 3
        },
    },

```

```

"TYPE_B": {
  "description": "Count up to 3 elements, each worth 1 point",
  "levels": [],
  "max_score": 3
},
"TYPE_C": {
  "description": "Count 2 elements and scale to 0-3",
  "levels": [],
  "max_score": 3
},
"TYPE_D": {
  "description": "Calculate ratio and apply thresholds",
  "levels": [],
  "max_score": 3
},
"TYPE_E": {
  "description": "Apply if-then-else logic",
  "levels": [],
  "max_score": 3
},
"TYPE_F": {
  "description": "Semantic matching with cosine similarity",
  "levels": [],
  "max_score": 3
}
},
"modality_definitions": {
  "TYPE_A": {
    "aggregation": "presence_threshold",
    "description": "Count 4 elements and scale to 0-3",
    "failure_code": "F-A-MIN",
    "threshold": 0.7
  },
  "TYPE_B": {
    "aggregation": "binary_sum",
    "description": "Count up to 3 elements, each worth 1 point",
    "failure_code": "F-B-MIN",
    "max_score": 3
  },
  "TYPE_C": {
    "aggregation": "presence_threshold",
    "description": "Count 2 elements and scale to 0-3",
    "failure_code": "F-C-MIN",
    "threshold": 0.5
  },
  "TYPE_D": {
    "aggregation": "weighted_sum",
    "description": "Count 3 elements, weighted",
    "failure_code": "F-D-MIN",
    "weights": [
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      0.3,
      0.3
    ]
  },
  "TYPE_E": {
    "aggregation": "binary_presence",
    "description": "Boolean presence check",
    "failure_code": "F-E-MIN"
  },
  "TYPE_F": {
    "aggregation": "normalized_continuous",
    "description": "Continuous scale",
    "failure_code": "F-F-MIN",
    "normalization": "minmax"
  }
}
},
"semantic_layers": {
  "disambiguation": {
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    "entity_linker": "spaCy_es_core_news_lg"
  }
}

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    },
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        "bm25": true,
        "fusion": "RRF"
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      "model": "multilingual-e5-base"
    }
  },
  "generated_at": "2025-10-29T02:21:25.777170+00:00",
  "integrity": {
    "monolith_hash": "de52721917492cac3e6c548dc7457d9de68b66183bebdaf825e090e3bbdba6d0",
    "question_count": {
      "macro": 1,
      "meso": 4,
      "micro": 300,
      "total": 305
    },
    "ruleset_hash": "9daaaf91c4c9bc90c3212c196c719f7120fca4c3b2b7875851c3e18e428e600a"
  },
  "observability": {
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        "fields": [
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          "question_id",
          "pattern_id",
          "matched_text",
          "confidence",
          "trace_id",
          "ruleset_hash"
        ],
        "format": "jsonl"
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      "metrics": [
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          "level": "MICRO",
          "name": "pattern_match_count"
        },
        {
          "aggregation": "p95",
          "level": "METHOD_SET",
          "name": "rule_latency_ms"
        },
        {
          "aggregation": "ratio",
          "level": "DIMENSION",
          "name": "validation_failure_rate"
        }
      ],
      "tracing": {
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          "LOAD_RULESET",
          "PARSE_DOCUMENT",
          "EXTRACT_PATTERN",
          "VALIDATE",
          "AGGREGATE",
          "EMIT_SCORE"
        ]
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    },
    "schema_version": "1.1.0",
    "version": "1.0.0"
  }
}

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