Comprehensive Market Research Workflow

Dynamic 360 - Agentic Journey for Dynamics 365 Manufacturing Analysis

workflow_id: "market-research-comprehensive"
version: "1.0.0"
description: "End-to-end market research workflow for identifying D365 manufacturing ISV opportunities"

Workflow Stages

Stage 1: Research Initiation

Agent: research_agent
Objective: Conduct initial market landscape analysis
Inputs:

- research_query: "Manufacturing industry opportunities for D365 ISV solutions"
- focus_area: User-specified (e.g., "supply chain optimization", "predictive maintenance")
- scope: Geographic and temporal parameters
- context: Industry segment, D365 focus areas

Outputs:

- Market landscape overview
- Initial opportunity identification
- Competitive landscape mapping
- Research findings with confidence scores

Success Criteria:

- At least 5 distinct opportunity areas identified
- Competitive analysis covers top 10 existing solutions
- Market size estimation with confidence > 0.7
- Regional analysis for specified geography

Stage 2: Market Research Deep Dive

Agent: market_research_agent
Objective: Detailed market analysis and sizing
Inputs:

- Research findings from Stage 1
- Specific market segments identified
- Customer persona definitions
- Competitive intelligence requirements

Outputs:

- Detailed market sizing and growth projections
- Customer segment analysis and needs assessment
- Competitive positioning and differentiation opportunities
- Market entry strategies and barriers

Success Criteria:

- TAM/SAM/SOM analysis completed
- Customer journey mapping for top 3 segments
- Competitive SWOT analysis for top 5 competitors
- Market entry timeline and investment requirements

Stage 3: Opportunity Prioritization

Agent: evaluator_agent
Objective: Assess and prioritize identified opportunities
Inputs:

- Research findings from Stages 1-2
- Business criteria and constraints
- Technical feasibility assessments
- Resource availability and capabilities

Outputs:

- Prioritized opportunity matrix (impact vs. effort)
- Risk assessment for top opportunities
- Resource requirement analysis
- Go/no-go recommendations

Success Criteria:

- Top 3 opportunities clearly identified and justified
- Risk assessment completed for all high-priority opportunities
- Resource requirements estimated with 20% accuracy
- Clear recommendation with supporting rationale

Stage 4: PRD Generation

Agent: prd_agent
Objective: Generate comprehensive PRD for selected opportunity
Inputs:

- Selected opportunity from Stage 3
- Market research data and customer insights
- Technical constraints and requirements
- Business objectives and success criteria

Outputs:

- Complete Product Requirements Document
- Functional and non-functional requirements
- Stakeholder analysis and engagement plan
- Success metrics and KPIs

Success Criteria:

- PRD contains all mandatory sections
- Requirements are SMART and testable
- Stakeholder analysis covers all relevant groups
- Success metrics align with business objectives

Stage 5: Technical Planning

Agent: technical_planning_agent
Objective: Create technical architecture and implementation plan
Inputs:

- PRD from Stage 4
- Technical requirements and constraints
- Integration requirements with D365
- Performance and scalability requirements

Outputs:

- Technical architecture design
- Technology stack recommendations
- Implementation roadmap and timeline
- Risk assessment and mitigation strategies

Success Criteria:

- Architecture supports all PRD requirements
- Technology stack aligns with Microsoft ecosystem
- Implementation plan is realistic and achievable
- Risk mitigation strategies are comprehensive

Workflow Execution

Prerequisites

- Market research objectives clearly defined
- Geographic scope and target segments specified
- Technical constraints and business requirements documented
- Resource availability and timeline constraints established

Execution Flow

1. **Initialize**: Set up workflow context and parameters
2. **Research**: Execute Stages 1-2 for comprehensive market analysis
3. **Evaluate**: Run Stage 3 for opportunity assessment and prioritization
4. **Document**: Generate Stage 4 PRD for selected opportunity
5. **Plan**: Create Stage 5 technical implementation plan
6. **Review**: Validate outputs and iterate if necessary

Quality Gates

- Each stage output reviewed against success criteria
- Confidence scores meet minimum thresholds
- Technical feasibility validated by subject matter experts
- Business case validated against market research findings

Iteration Policy

- If stage fails quality gate, iterate with refined inputs
- Maximum 3 iterations per stage before escalation
- Lessons learned captured in feedback_map.yaml
- Continuous improvement based on workflow outcomes

Output Artifacts

- Market Research Report (Stages 1-2)
- Opportunity Assessment Matrix (Stage 3)
- Product Requirements Document (Stage 4)
- Technical Architecture Plan (Stage 5)
- Executive Summary and Recommendations

Success Metrics

- Time to complete full workflow: < 5 business days
- Quality score for all outputs: > 8/10
- Stakeholder satisfaction: > 85%
- Implementation plan accuracy: ±20% of actual effort