A Strategic Framework for a Global Development Cooperation Taxonomy

Section 1: Foundational Strategy: Architecting a Modern Development Taxonomy

1.1 The Strategic Value of a Taxonomy in Development Cooperation

In the complex and interconnected domain of global economic and development cooperation, the effective management of knowledge is not a peripheral administrative task but a core strategic function. A well-architected taxonomy—a systematic classification of concepts—is the foundational infrastructure for this capability. It transcends its role as a simple organizational tool to become a strategic asset that enables enhanced content discovery, supports evidence-based policymaking, facilitates cross-silo collaboration, and allows for sophisticated analysis of development portfolios and knowledge assets.[1]

The costs associated with inadequate knowledge management are substantial, manifesting as duplicated research efforts, the erosion of institutional memory, and inefficient decision-making processes that are not informed by the full breadth of an organization's experience.[2] A thoughtfully constructed taxonomy directly mitigates these risks. It serves as a "strategic framework that unlocks the full ROI of your content" by ensuring that the right information is discoverable by the right people at the right moment.[1] By establishing a shared, controlled vocabulary, a taxonomy ensures that all stakeholders are, quite literally, speaking the same language, which is a prerequisite for effective collaboration and automated workflows.[1]

1.2 The Core Dilemma: Hierarchy vs. Networked Tags

The design of any modern knowledge management system confronts a fundamental structural choice: the ordered, top-down logic of a hierarchy versus the flexible, networked logic of tagging. Understanding the distinct strengths and weaknesses of each approach is critical to designing a system fit for the complexities of international development.

1.2.1 Hierarchical Structures

Hierarchical structures, often visualized as folders and sub-folders, organize information into nested groups with clear parent-child relationships.[3] Their

primary strength lies in providing clear, browsable pathways for users. This structure enables centralized control and supports logical inheritance; for instance, a document classified under "Primary Education" is implicitly understood to also belong to the broader category of "Education".[4] Hierarchies are exceptionally effective for organizing large volumes of information in domains that are relatively stable and predictable, where categories are well-defined and mutually exclusive.[3] They provide the predictable structure necessary for large-scale, slow-moving efforts where tight synchronization is paramount.

1.2.2 Flexible Tagging Systems

Flexible tagging systems, also known as labels or keywords, operate as a network rather than a tree.[3] A single piece of content can be assigned multiple tags, allowing it to exist at the intersection of various concepts simultaneously.[2] This approach excels at accommodating the multi-dimensional nature of contemporary development challenges. For example, a single project report could be tagged with "Climate Adaptation," "Gender Equality," and "Agricultural Productivity"—a feat impossible within a rigid, single-path hierarchy. This flexibility enhances searchability, accommodates synonyms and related terms, and allows for a more dynamic, user-centric organization that can evolve over time.[2] As many practitioners have noted, much of the "real-world data can not be mapped to strict hierarchies".[7]

The landscape of international development is characterized by profound complexity and interconnectedness. The challenges of the 21st century do not respect sectoral boundaries. A "Just Energy Transition," for instance, is simultaneously an energy issue, an economic policy issue, a social inclusion issue, and an environmental imperative.[8] Similarly, the push for "Locally Led Development" is a cross-cutting theme that impacts governance, health, education, and infrastructure projects alike.[8] A purely hierarchical system struggles to represent these crucial interconnections, leading to knowledge silos where valuable insights are isolated and their broader relevance is obscured.[3]

1.3 The Recommended Approach: A Hybrid "Core-and-Flex" Model

Given the limitations of a singular approach, the optimal solution for a development cooperation taxonomy is a hybrid model that strategically combines a stable, curated hierarchy with a dynamic and flexible network of tags. This "Core-and-Flex" model leverages the strengths of both systems to create a knowledge architecture that is at once robust and adaptable.

The "Core" of the system is a formal, multi-level hierarchy of sectors and sub-sectors. This structure provides the stable, predictable "bones" of the taxonomy, organizing the primary domains of development work in a logical, browsable manner. It is designed for longevity and is based on established, globally recognized classifications.

The "Flex" component is a complementary system of networked tags. These tags are used to capture cross-cutting themes (e.g., 'Gender Equality', 'Youth Employment'), emerging concepts ('Digital Public Goods', 'Circular Economy'), specific methodologies ('Impact Investing', 'Results-Based Financing'), and other facets that defy simple categorization. This layer acts as the "nervous system" of the taxonomy, creating connections across the rigid hierarchical structure and allowing for nuance and adaptability.

This hybrid approach is not a mere technical compromise; it is a strategic choice that mirrors the reality of the development field itself. The domain of development cooperation is defined by both stable, long-term objectives, such as those enshrined in the Sustainable Development Goals, and a constantly shifting landscape of new challenges, geopolitical dynamics, and innovative approaches.[10] A knowledge management system that relies exclusively on a rigid hierarchy will be too slow and brittle to adapt, while a system based purely on tags risks descending into an incoherent "tag soup" without a stable organizing principle. The Core-and-Flex model provides the necessary balance, offering the institutional stability of a formal hierarchy while enabling the operational agility required to navigate a complex and evolving world.

Section 2: A Systematic Methodology for Taxonomy Development

The construction of a robust and defensible taxonomy requires a systematic, multi-phased methodology. The following four-phase process is designed to ensure the resulting taxonomy is evidence-based, aligned with global standards, reflective of contemporary policy discourse, and validated by its intended users. This approach synthesizes top-down strategic frameworks with bottom-up operational classifications to create a comprehensive and practical tool.

2.1 Phase 1: Top-Down Strategic Alignment with Global Frameworks

The initial phase involves aligning the highest levels of the taxonomy with the preeminent global agenda for development: the 2030 Agenda for Sustainable Development and its 17 Sustainable Development Goals (SDGs).[13] The user's six proposed sectors—(1) economic policy, (2) social services, (3) digital

innovation, (4) production and trade, (5) infrastructure, and (6) energy and environment—will be systematically mapped to the relevant SDGs.

This strategic alignment serves a critical purpose. The SDGs represent a universal call to action and a shared language for all actors in the development ecosystem, from national governments and multilateral institutions to civil society and the private sector.[14] By anchoring the taxonomy in this framework, the system becomes instantly recognizable, relevant, and interoperable with the strategic planning and reporting mechanisms of partner organizations worldwide. It explicitly connects the organization's knowledge assets to the ultimate "why" of development cooperation, enabling powerful reporting on how specific projects, research, and policies contribute to achieving specific global goals.[14]

2.2 Phase 2: Bottom-Up Foundational Build from Standardized Classifications

Following the high-level strategic alignment, the second phase focuses on building the detailed, granular structure of the taxonomy from the ground up, using an established international standard: the OECD Development Assistance Committee (DAC) Creditor Reporting System (CRS) purpose codes.[17] The CRS provides a comprehensive, five-digit classification system for reporting on aid flows, with 196 unique codes covering virtually every conceivable development activity.[19]

The process involves a meticulous review of the CRS code lists, mapping each relevant code to the appropriate sector and sub-sector within the new taxonomy's hierarchy. For example:

- CRS codes in the 100 series ("Social Infrastructure and Services"), such as 11220 (Primary education) and 12220 (Basic health care), will populate the "Social Services" sector.[18]
- Codes in the 200 series ("Economic Infrastructure and Services"), such as 21020 (Road transport) and 23210 (Solar energy), will form the foundation of the "Infrastructure" and "Energy and Environment" sectors.[20]
- Codes in the 151 series ("Government & Civil Society-general"), such as 15111 (Public finance management), will inform the "Economic Policy" sector.[21]

Leveraging the CRS codes provides several decisive advantages. It grounds the taxonomy in the operational "what" and "how" of development finance, ensuring a high degree of practical relevance. It saves immense time and effort by building upon a standard that has been developed and refined over decades

through international consensus.[19] Most importantly, it ensures a degree of interoperability with global development finance data, allowing for potential future integration and analysis against official development assistance (ODA) flows.[17]

The synthesis of these first two phases is what gives the methodology its unique power. By combining the outcome-oriented SDG framework (the "Why") with the activity-oriented CRS framework (the "What/How"), the taxonomy becomes more than a simple list—it becomes a multi-dimensional analytical matrix. A single document can be tagged with both its operational classification (e.g., the CRS-derived keyword 'Agricultural water resources') and its strategic goals (e.g., the SDG-derived themes 'Zero Hunger (SDG 2)' and 'Clean Water and Sanitation (SDG 6)'). This dual-framework approach enables multi-faceted querying and reporting that is impossible with a uni-dimensional taxonomy, allowing users to analyze the connections between specific interventions and their intended strategic outcomes.

2.3 Phase 3: Thematic Augmentation from Contemporary Policy Discourse

The development landscape is not static; it is shaped by emerging crises, technological disruptions, and evolving intellectual paradigms.[10] The SDG and CRS frameworks, while foundational, are relatively stable and may not fully capture the dynamism of current development debates. Therefore, the third phase is dedicated to augmenting the taxonomy with keywords and concepts drawn from a systematic review of contemporary, high-level policy and research documents.

This involves analyzing recent flagship reports, policy papers, and strategic outlooks from leading institutions such as the OECD, the World Bank, the United Nations, and major development think tanks. The objective is to identify and incorporate emergent, high-salience themes that are shaping the future of development cooperation. Examples of such keywords include:

- 'Just Energy Transition (JET)' [8]
- 'Locally Led Development (LLD)' [8]
- 'Digital Public Goods' and 'Digital Public Infrastructure' [24]
- 'Climate Resilience' and 'Climate Adaptation' [11]
- 'Democratic Backsliding' and 'Strengthening Democratic Institutions' [27]
- 'Mounting Sovereign Debt' and 'Debt Sustainability' [27]
- 'Circular Economy' and 'Resource Efficiency' [29]
- 'South-South and Triangular Cooperation' [31]
- 'Misinformation and Disinformation' [12]
- 'Global Value Chains' and 'Supply Chain Resilience' [29]

This phase is crucial for ensuring the taxonomy's currency and relevance. It prevents the system from becoming a static artifact and instead positions it as a living tool that reflects the cutting edge of development thinking and practice.

2.4 Phase 4: User-Centric Validation and Refinement

A taxonomy's ultimate success is determined not by its theoretical elegance but by its practical usability. The final phase of development is therefore dedicated to a rigorous process of user-centric validation and refinement. A taxonomy must reflect the mental models, linguistic habits, and search behaviors of the people who will use it every day.[1] As leading practitioners advise, the best taxonomies are "built with empathy for the end-user".[1]

This phase should involve direct engagement with a representative sample of the taxonomy's intended audience. Methodologies for this validation can include:

- Workshops and Focus Groups: To present the draft taxonomy and gather qualitative feedback on its structure, clarity, and completeness.
- Card-Sorting Exercises: Where users are given a set of keywords and asked to group them into categories that make sense to them. This helps validate the intuitiveness of the proposed hierarchical structure.
- Test Tagging Sessions: Where users are asked to apply the draft taxonomy to a sample set of documents to identify areas of ambiguity or difficulty.
- Surveys: To gather broader quantitative feedback on specific terminology and structural choices.

The feedback gathered during this phase is invaluable for refining the taxonomy, clarifying definitions, adjusting the hierarchy, and ensuring the final product is not only comprehensive and well-structured but also intuitive and practical for its primary users.

Section 3: A Foundational Taxonomy for Global Development Cooperation

This section presents the core deliverable of this report: a foundational, multi-level keyword taxonomy for global economic and development cooperation. This taxonomy is the direct output of the systematic methodology detailed in Section 2, integrating strategic alignment with the SDGs, a granular build from OECD DAC CRS codes, and thematic augmentation from contemporary policy discourse.

3.1 Structure and Presentation

The taxonomy is organized hierarchically according to the six primary sectors requested by the user. The structure generally follows a four-level hierarchy:

1. Sector: The six main pillars of development cooperation (e.g., (1) Economic Policy).
2. Sub-sector (Level 1): Broad functional areas within each sector (e.g., Macroeconomic Policy & Stability).
3. Sub-sector (Level 2) / Keyword Group: More specific thematic groupings (e.g., Fiscal Policy).
4. Keyword/Concept: The most granular terms used for tagging and classification (e.g., Public Finance Management (PFM)).

The following table provides the foundational taxonomy. A key feature is the "Illustrative Alignment" column. This column is not for tagging itself but serves as a crucial reference, linking the internal taxonomy keywords to the external global frameworks that informed their selection. This demonstrates the evidence base for the taxonomy and facilitates strategic analysis.

- SDG: Links the keyword to one or more relevant UN Sustainable Development Goals, providing strategic context.
- CRS Code: Links the keyword to the corresponding OECD DAC Creditor Reporting System purpose code, providing an operational and financial classification anchor. A dash (-) indicates a contemporary theme not explicitly covered by a single CRS code.

This structure provides a comprehensive yet manageable framework for organizing knowledge in the development cooperation domain.

3.2 The Foundational Taxonomy Table

Table 1: A Foundational Taxonomy for Global Economic and Development Cooperation

Sector	Sub-sector (Level 1)	Sub-sector (Level 2) / Keyword Group	Keyword/Concept	Illustrative Alignment (SDG / CRS Code)
(1) Economic Policy	Macroeconomic Policy & Stability	Fiscal Policy	Public Finance Management (PFM)	SDG 16, 17 / 15111
			Tax Policy & Administration	SDG 17 / 15114
			Public Expenditure Management	SDG 16 / 15111
			Sovereign Debt Management	SDG 17 / 600xx
			Domestic Revenue Mobilization	SDG 17 / 15114
		Monetary & Financial Policy	Financial Sector Development	SDG 8, 9 / 240xx
			Monetary Policy & Central Banking	SDG 8 / 24010
			Financial Stability & Regulation	SDG 8 / 24010
			Financial Inclusion	SDG 1, 5, 8 / 24040

Sector	Sub-sector (Level 1)	Sub-sector (Level 2) / Keyword Group	Keyword/Concept	Illustrative Alignment (SDG / CRS Code)
	Inclusive & Sustainable Growth	Growth Diagnostics & Strategy	Economic Growth Strategy	SDG 8 / –
			Structural Reform	SDG 8 / 15110
			Productivity Analysis	SDG 8 / –
			Green Growth	SDG 8, 13 / –
		Poverty & Inequality	Poverty Reduction Strategy	SDG 1, 10 / 16010
			Inequality Analysis (Income, Wealth)	SDG 10 / –
			Social Protection Systems	SDG 1, 3, 5, 10 / 16010
	Investment & Private Sector Dev.	Investment Climate	Investment Policy & Promotion	SDG 8 / 25010
			Business Environment Reform	SDG 8 / 25010
			Competition Policy	SDG 8 / 33120

Sector	Sub-sector (Level 1)	Sub-sector (Level 2) / Keyword Group	Keyword/Concept	Illustrative Alignment (SDG / CRS Code)
			Corporate Governance	SDG 16 / 15130
		Private Sector Support	Small & Medium Enterprise (SME) Dev.	SDG 8 / 25010
			Foreign Direct Investment (FDI)	SDG 8, 17 / -
			Public-Private Partnerships (PPPs)	SDG 17 / -
			Entrepreneurship	SDG 8 / -
(2) Social Services	Education	Education Policy & Systems	Education Policy & Administration	SDG 4 / 11110
			Education Sector Planning	SDG 4 / 11110
			Teacher Training	SDG 4 / 11130
			Educational Facilities	SDG 4 / 11120
		Levels of Education	Early Childhood Education	SDG 4 / 11240

Sector	Sub-sector (Level 1)	Sub-sector (Level 2) / Keyword Group	Keyword/Concept	Illustrative Alignment (SDG / CRS Code)
			Primary Education	SDG 4 / 11220
			Secondary Education	SDG 4 / 11320
			Higher Education	SDG 4 / 11420
			Vocational Training (TVET)	SDG 4, 8 / 11330
			Adult Education & Lifelong Learning	SDG 4 / 11230
	Health	Health Policy & Systems	Health Policy & Administration	SDG 3 / 12110
			Health Systems Strengthening	SDG 3 / –
			Health Financing & Insurance	SDG 3 / 12110
			Health Workforce Development	SDG 3 / 12281
			Digital Health	SDG 3 / –

Sector	Sub-sector (Level 1)	Sub-sector (Level 2) / Keyword Group	Keyword/Concept	Illustrative Alignment (SDG / CRS Code)
		Health Services & Outcomes	Basic Health Care	SDG 3 / 12220
			Maternal & Child Health	SDG 3 / 12250
			Infectious Disease Control (HIV/AIDS, TB)	SDG 3 / 12262, 12263
			Non-Communicable Diseases (NCDs)	SDG 3 / 123xx
			Mental Health	SDG 3 / 12340
			Pandemic Preparedness & Response	SDG 3 / 12264
	Social Protection & Inclusion	Social Welfare Services	Social/Welfare Services	SDG 1, 10 / 16010
			Child Protection	SDG 16 / -
			Services for the Elderly & Disabled	SDG 10 / 16010

Sector	Sub-sector (Level 1)	Sub-sector (Level 2) / Keyword Group	Keyword/Concept	Illustrative Alignment (SDG / CRS Code)
	Cross-Cutting Social Issues	Gender Equality & Empowerment	Gender Equality	SDG 5 / 15170
			Women's Economic Empowerment	SDG 5, 8 / 15170
			Ending Violence Against Women & Girls	SDG 5, 16 / 15180
			Youth Development & Employment	SDG 8 / –
			Food Security & Nutrition	SDG 2 / 12240
(3) Digital Innovation	Digital Policy & Governance	Digital Strategy & Regulation	National Digital Strategy	SDG 9, 17 / –
			Data Governance & Privacy	SDG 16 / –
			Cybersecurity Policy	SDG 16 / 15230
			AI Governance & Ethics	SDG 9, 16 / –

Sector	Sub-sector (Level 1)	Sub-sector (Level 2) / Keyword Group	Keyword/Concept	Illustrative Alignment (SDG / CRS Code)
			Digital Taxation	SDG 17 / -
	Digital Infrastructure	Connectivity	Universal Connectivity	SDG 9 / 22010
			Broadband Infrastructure	SDG 9 / 22020
			Mobile Networks (5G)	SDG 9 / 22020
		Core Digital Systems	Digital Public Infrastructure (DPI)	SDG 9, 16 / -
			Digital Identity Systems	SDG 16 / -
			Digital Payment Systems	SDG 8, 9 / -
	Digital Transformation	Digital Inclusion & Skills	Digital Literacy & Skills	SDG 4 / -
			Addressing the Digital Divide	SDG 10 / -
			Gender and Digital Inclusion	SDG 5 / -

Sector	Sub-sector (Level 1)	Sub-sector (Level 2) / Keyword Group	Keyword/Concept	Illustrative Alignment (SDG / CRS Code)
		Digital Economy & Services	E-Commerce	SDG 8 / 33110
			Digital Financial Services (FinTech)	SDG 8, 9 / 24040
			E-Government Services	SDG 16 / 15113
			Digital Entrepreneurship	SDG 8, 9 / -
			Platform Economy	SDG 8 / -
	Emerging Technologies	Technology Adoption	Artificial Intelligence (AI)	SDG 9 / -
			Internet of Things (IoT)	SDG 9 / -
			Blockchain	SDG 9 / -
			Big Data Analytics	SDG 9 / -
		Digital Public Goods	Open Source Software & Data	SDG 17 / -

Sector	Sub-sector (Level 1)	Sub-sector (Level 2) / Keyword Group	Keyword/Concept	Illustrative Alignment (SDG / CRS Code)
			Open Standards	SDG 17 / -
(4) Production & Trade	Agriculture, Forestry & Fisheries	Agricultural Development	Agricultural Policy & Administration	SDG 2 / 31110
			Agricultural Research & Extension	SDG 2 / 31181, 31166
			Sustainable Agriculture	SDG 2, 12, 15 / 31120
			Agricultural Value Chains	SDG 2, 8 / 31191
			Smallholder Farmer Support	SDG 2 / -
		Forestry & Fisheries	Forestry Development	SDG 15 / 31210
			Sustainable Forest Management	SDG 15 / 31220
			Fisheries Development	SDG 14 / 31310
			Aquaculture	SDG 14 / 31320

Sector	Sub-sector (Level 1)	Sub-sector (Level 2) / Keyword Group	Keyword/Concept	Illustrative Alignment (SDG / CRS Code)
	Industry & Services	Industrial Development	Industrial Policy	SDG 9 / 32110
			Manufacturing	SDG 9 / 321xx
			Agro-industry	SDG 9 / 32161
			Mineral Resources & Mining	SDG 8, 12 / 322xx
		Services Sector Development	Tourism Development	SDG 8 / 33210
			Business & Other Services	SDG 8 / 25010
	Trade Policy & Facilitation	Trade Policy & Regulation	Trade Policy & Regulations	SDG 8, 17 / 33110
			WTO Accession & Compliance	SDG 17 / 33110
			Regional Trade Agreements	SDG 17 / -
		Trade Facilitation	Customs Modernization	SDG 8 / 33130

Sector	Sub-sector (Level 1)	Sub-sector (Level 2) / Keyword Group	Keyword/Concept	Illustrative Alignment (SDG / CRS Code)
			Border Management	SDG 8 / 33130
			Aid for Trade	SDG 8, 17 / –
			Global Value Chains (GVCs)	SDG 8 / –
(5) Infrastructure	Infrastructure Policy & Finance	Infrastructure Governance	Infrastructure Policy & Planning	SDG 9 / –
			Infrastructure Governance	SDG 9, 16 / –
			Public Investment Management	SDG 9 / 15111
		Infrastructure Finance	Infrastructure Financing	SDG 9, 17 / –
			Private Investment in Infrastructure	SDG 9, 17 / –
			Blended Finance	SDG 17 / –
	Transport	Transport Policy & Planning	Transport Policy & Administration	SDG 9, 11 / 21010
			Urban Transport	SDG 11 / 21020

Sector	Sub-sector (Level 1)	Sub-sector (Level 2) / Keyword Group	Keyword/Concept	Illustrative Alignment (SDG / CRS Code)
			Rural Transport	SDG 9 / 21020
		Transport Modalities	Road Transport	SDG 9, 11 / 21020
			Rail Transport	SDG 9, 11 / 21030
			Water Transport (Ports, Inland)	SDG 9, 14 / 21040
			Air Transport	SDG 9 / 21050
	Water & Sanitation	Water & Sanitation Policy	Water & Sanitation Policy	SDG 6 / 14010
			Integrated Water Resource Management	SDG 6 / 14015
		Water & Sanitation Services	Water Supply Systems	SDG 6 / 14020
			Sanitation & Hygiene (WASH)	SDG 6 / 14030

Sector	Sub-sector (Level 1)	Sub-sector (Level 2) / Keyword Group	Keyword/Concept	Illustrative Alignment (SDG / CRS Code)
			Wastewater Management	SDG 6 / 14050
	Urban & Rural Development	Urban Development	Urban Development & Management	SDG 11 / 16030
			Affordable Housing	SDG 11 / 16040
		Rural Development	Rural Development	SDG 1, 2, 9 / 43040
(6) Energy & Environment	Environmental Policy & Management	Environmental Governance	Environmental Policy & Admin. Management	SDG 13, 15 / 41010
			Biosafety & Biodiversity	SDG 14, 15 / 41030
			Water Resources Protection	SDG 6, 14 / 41040
			Circular Economy	SDG 12 / 41082
	Climate Change	Climate Change Mitigation	Renewable Energy Generation	SDG 7, 13 / 232xx
			Energy Efficiency	SDG 7, 13 / -

Sector	Sub-sector (Level 1)	Sub-sector (Level 2) / Keyword Group	Keyword/Concept	Illustrative Alignment (SDG / CRS Code)
			Greenhouse Gas (GHG) Reduction	SDG 13 / 41020
			Carbon Markets & Pricing	SDG 13 / –
		Climate Change Adaptation	Climate Adaptation Strategies	SDG 13 / 41020
			Disaster Risk Reduction (DRR)	SDG 11, 13 / 43060
			Climate Resilient Infrastructure	SDG 9, 11, 13 / –
			Climate Finance	SDG 13, 17 / –
	Energy	Energy Policy & Access	Energy Policy & Planning	SDG 7 / 23110
			Universal Energy Access	SDG 7 / –
			Just Energy Transition (JET)	SDG 7, 8, 13 / –

Sector	Sub-sector (Level 1)	Sub-sector (Level 2) / Keyword Group	Keyword/Concept	Illustrative Alignment (SDG / CRS Code)
			Energy Sector Reform & Regulation	SDG 7 / 23110
		Energy Generation & Supply	Renewable Energy (Solar, Wind, Hydro)	SDG 7 / 232xx
			Non-Renewable Energy (Fossil Fuels)	SDG 7 / 233xx
			Energy Transmission & Distribution	SDG 7 / 236xx

Section 4: Principles for Managing Taxonomy Scale and Complexity

Directly addressing the question of the "maximum and appropriate number of keywords" requires moving beyond a simplistic numerical target. The optimal scale of a taxonomy is not a fixed number but a dynamic equilibrium determined by the complexity of the content, the needs of the users, and the capacity of the organization to govern the system. Instead of prescribing a number, this section provides a set of guiding principles for managing scale and complexity, ensuring the taxonomy remains both comprehensive and usable. These principles draw from established practices in information science and are analogous to the logic governing effective information retrieval in domains like web search optimization.

4.1 The Principle of Appropriate Granularity

Granularity refers to the level of detail in a taxonomy. The central challenge is to find a balance between a taxonomy that is too broad, leading to imprecise

categorization and poor search results, and one that is too granular, overwhelming users with excessive choices and creating a high maintenance burden.[33]

The ideal depth for most hierarchical taxonomies is between three and four levels, as demonstrated in the foundational table in Section 3. This provides sufficient detail for meaningful classification without becoming overly complex to navigate. The ultimate determinant of granularity, however, must be user-centric. The key question to ask is: "How specific do my users need to be when searching for or categorizing information?".[32] If users frequently struggle to differentiate between two closely related keywords, those keywords might need to be merged. Conversely, if a single keyword is being applied to a vast and diverse set of documents, it may be a candidate for being broken down into more specific sub-categories.

4.2 The Principle of Cohesion and Mutual Exclusivity

To ensure consistency and reduce ambiguity, categories at the same level of the hierarchy should be conceptually distinct and, as much as possible, mutually exclusive. For example, within the "Levels of Education" sub-sector, the keywords "Primary Education," "Secondary Education," and "Higher Education" represent clear, non-overlapping stages. This principle ensures that different users, when faced with the same document, are likely to classify it in the same way.

This is analogous to avoiding "keyword cannibalization" in web SEO, a situation where multiple pages (or in this case, keywords) target the same concept, thereby competing with each other and confusing both users and systems.[34] A well-structured taxonomy provides a single, authoritative home for each core concept within the hierarchy, which is essential for reliable content retrieval and analysis.

4.3 Managing Semantic Richness: The Controlled Vocabulary

A powerful method for enhancing searchability without bloating the primary hierarchy is the implementation of a controlled vocabulary that captures semantic richness.[1] For each primary keyword (the "preferred label" in the taxonomy), the system should also store:

- Alternative Labels (Synonyms): Common synonyms or alternative phrasing for the keyword. For example, the preferred label "Vocational Training (TVET)" could have alternative labels like "Technical and Vocational Education and Training," "Skills Development," and "Workforce Training."

- Scope Notes (Definitions): A brief, clear definition of the keyword, explaining what it includes and, crucially, what it excludes. This helps users apply tags consistently. For instance, a scope note for "Climate Change Adaptation" would clarify its focus on adjusting to actual or expected climate effects, distinguishing it from "Climate Change Mitigation," which focuses on reducing emissions.[4]

This approach dramatically improves the user experience. A user can search for "skills development" and the system, understanding it as a synonym, will retrieve all documents correctly tagged with the preferred label "Vocational Training (TVET)." This allows the visible hierarchy to remain clean and concise while the back-end semantic network provides a powerful and flexible search experience.

4.4 Determining Scope: A User-Centric and Content-Driven Approach

Ultimately, the "appropriate number" of keywords is an outcome of a continuous dialogue between the content being managed and the users who need to access it. There is no magic number. A taxonomy for a highly specialized research institute will naturally be larger and more granular than one for a generalist funding agency.

A practical, data-driven methodology for determining scope involves analyzing the existing corpus of documents and user search behavior:

- Content Analysis: Analyze the organization's existing documents. If 80% of the content falls into just 20% of the taxonomy's categories, it may indicate that some areas of the taxonomy are overly granular ("long-tail keywords") while the high-volume areas may need further subdivision.[35]
- Search Log Analysis: Review what terms users are searching for. If users frequently search for terms that are not in the taxonomy, this signals a gap that needs to be filled. If they rarely use the highly specific terms provided, it may be a sign of excessive granularity.
- User Intent Analysis: Consider the different motivations behind a user's search. Is the user browsing broadly to understand a topic (informational intent), or are they looking for a specific project report (transactional intent)?.[35] The taxonomy must support both modes of inquiry. The upper levels of the hierarchy serve the browser, while the specific keywords and their synonyms serve the focused searcher.

By applying these principles, the question shifts from "How many keywords should we have?" to "Does our taxonomy effectively connect our users to the knowledge they need?" This reframes the problem from one of counting to one of effectiveness, leading to a more strategic and sustainable solution.

Section 5: Governance, Maintenance, and Evolution

A taxonomy is not a static project to be completed and archived; it is a living piece of organizational infrastructure that requires continuous governance, maintenance, and evolution to retain its value. Without a formal management program, even the most well-designed taxonomy will degrade over time, becoming outdated, inconsistent, and ultimately, untrusted by its users. Framing the taxonomy as an ongoing program, rather than a one-off project, is the single most important factor in ensuring its long-term success and return on investment.

5.1 Establishing a Governance Framework

Effective governance begins with clearly defined roles and responsibilities.[1] A central body or individual must be designated as the steward of the taxonomy. This can be structured as:

- A Taxonomy Governance Committee: A cross-functional group of subject matter experts and key stakeholders who meet regularly to review the health of the taxonomy and approve significant changes.
- A Lead Taxonomist or Knowledge Manager: A dedicated role responsible for the day-to-day management, maintenance, and user support related to the taxonomy.

This governing body is responsible for maintaining the integrity of the taxonomy, ensuring consistency in its application, and overseeing the change management process.

5.2 A Protocol for Change Management

To prevent ad-hoc, inconsistent modifications, a formal protocol for managing changes to the taxonomy is essential.[33] This process should be clear, transparent, and accessible to all users. A typical change management workflow includes:

1. Submission: A standardized form or process for any user to propose a change (e.g., adding a new keyword, modifying a definition, or restructuring a category).
2. Review: The Lead Taxonomist or Governance Committee reviews the proposal, assessing its strategic alignment, potential overlap with existing terms, and impact on the overall structure.
3. Approval/Rejection: A formal decision is made and communicated back to the proposer with a clear rationale.

4. Implementation: If approved, the change is implemented in the taxonomy system, and all relevant documentation and training materials are updated.
5. Communication: The change is communicated to all users to ensure awareness and consistent adoption.

5.3 The "Static Core, Dynamic Periphery" Governance Model

The governance model should reflect the hybrid structure of the taxonomy itself. Not all parts of the taxonomy require the same level of control or the same pace of change. This leads to a "Static Core, Dynamic Periphery" governance approach:

- The Static Core: This refers to the main hierarchical structure of the taxonomy (Sectors, Sub-sectors), which is derived from stable, international standards like the CRS codes. Changes to this core structure should be rare and subject to a rigorous, periodic review process, perhaps conducted annually. This ensures the foundational stability of the system.
- The Dynamic Periphery: This refers to the flexible set of tags used for cross-cutting themes and emerging topics. The process for adding new tags to this periphery can be more agile. The Governance Committee could conduct a quarterly review of proposed new tags, allowing the system to quickly adapt to new strategic priorities, research trends, or global events (e.g., the addition of a 'COVID-19 Response' tag in 2020).[18]

This differentiated approach operationalizes the core principle of balancing stability with adaptability, ensuring the taxonomy remains both robust and relevant.

5.4 User Training and Documentation

A taxonomy is only as good as its application. Consistent and accurate tagging requires that all users understand the system and how to use it. This necessitates a commitment to comprehensive user support:

- Clear Documentation: The taxonomy itself should be published in an accessible format, complete with the scope notes (definitions) and alternative labels (synonyms) for each keyword. This documentation should be the single source of truth for all users.[4]
- Tagging Guidelines: A practical guide should be developed that provides clear instructions on how to apply tags. This should address common

questions, such as how many tags to apply to a document and how to choose the most appropriate level of granularity.
- Training Programs: A brief but mandatory training session should be required for all staff members who will be responsible for creating or tagging content. This ensures a baseline level of competency and consistency across the organization.

5.5 Technology and Tooling

The successful implementation of the proposed hybrid taxonomy model is contingent on having the right technological support. The chosen knowledge management system, content management system, or digital asset management platform must have specific capabilities [4]:

- Support for Hierarchical Relationships: The system must be able to represent and manage parent-child relationships between terms, allowing for hierarchical browsing and faceted search.
- Support for Semantic Context: The system should be able to store and utilize alternative labels (synonyms) to power a more intelligent search function. The ability to display scope notes to users during the tagging process is also highly valuable.
- Support for Multi-Tagging: The system must allow for multiple tags (non-hierarchical keywords) to be applied to a single content item, enabling the capture of cross-cutting themes.
- Permissions and Control: The system should allow for permissions to be set, controlling who can add or modify terms within the taxonomy, thereby supporting the governance framework.[1]

Conclusion and Recommendations

The task of creating a keyword system for global economic and development cooperation is a significant undertaking that, if executed strategically, can yield transformative benefits for knowledge discovery, collaboration, and evidence-based decision-making. This report has provided a comprehensive blueprint for this endeavor, moving from high-level strategy to detailed, actionable recommendations.

The analysis leads to a set of core recommendations for building and managing a world-class development cooperation taxonomy:

1. Adopt the Hybrid "Core-and-Flex" Model: Reject the false dichotomy between rigid hierarchies and unstructured tags. A hybrid model, featuring a stable hierarchical core for primary sectors and a flexible

network of tags for cross-cutting themes, offers the optimal balance of structure and adaptability required to map the complex development landscape.

2. **Implement the Four-Phase Development Methodology:** Build the taxonomy systematically. Begin with a **top-down alignment** with the UN Sustainable Development Goals to ensure strategic relevance. Follow with a **bottom-up build** using the OECD DAC CRS purpose codes to ensure operational granularity and interoperability. Augment this foundation with a **thematic review** of contemporary policy discourse to ensure currency, and conclude with rigorous **user-centric validation** to ensure practical usability.
3. **Utilize the Foundational Taxonomy as a Starting Point:** The detailed, multi-level taxonomy provided in Section 3 serves as a robust, evidence-based foundation. It is not intended to be final but should be used as a comprehensive starting point for the user-centric validation and refinement process.
4. **Manage Scale Through Principles, Not Numbers:** The appropriate size of the taxonomy is not a fixed number but an outcome of applying key principles. Focus on achieving **appropriate granularity**, ensuring **cohesion and mutual exclusivity** among categories, and managing **semantic richness** through a controlled vocabulary of synonyms and definitions. Scope should be driven by the content and the user, not an arbitrary target.
5. **Establish a Program of Continuous Governance:** Treat the taxonomy as a living organizational asset, not a one-time project. Establish a formal **governance framework** with clear roles, implement a transparent **change management protocol**, and adopt a **differentiated governance model** for the static core and dynamic periphery. Invest in ongoing **user training and documentation** to ensure consistent, high-quality application of the taxonomy.

By embracing this strategic, systematic, and sustainable approach, an organization can create a knowledge management taxonomy that is more than a finding aid. It can build a powerful analytical tool that illuminates connections, reveals trends, and ultimately enhances the effectiveness and impact of its work in global economic and development cooperation.