

Knowledge Management Resource Guide

September 2007

Knowledge Management Primer

Introduction

This Knowledge Management (KM) Resource Guide and Primer is intended to serve as an introductory orientation material for CIDA and partner organization's officers and staff. With KM increasingly becoming accepted as a vital element of long term operational excellence and development impact, this Primer aims to help bring CIDA, partners, and stakeholders 'on the same page' about KM with enhanced KM capacity and know-how.

Characteristics of Knowledge

As an important asset of modern organizations in the knowledge economy, knowledge's unique characteristics present unique challenges for managers of KM programs:

- Use of knowledge does not *consume* it; on the contrary...
- Knowledge *increases in value* the more it is used and reused.
- You don't *lose* knowledge when you *transfer or harvest* it.
- Knowledge is *abundant* but the *ability to reuse it is scarce*.
- Much of an organization's valuable *knowledge walks out the door* with their employees.

These characteristics of knowledge necessitate approaches and strategies to preserve, grow, share, and create new knowledge.

Knowledge Management Defined

There are many definitions of Knowledge Management (KM) available from academic literature, business management, and the internet. In simplest terms:

Knowledge management is the systematic coordination and management of an organization's people, technology, and processes, to capture, create, share, and apply knowledge to achieve organizational goals.

Indeed, KM actually involves a range of multiple disciplines, techniques, and practices. Following are some of the disciplines from which KM has and continues to draw from:

- Quality assurance/management
- Change management and Organizational development/science
- HRD and Organizational Learning
- ICT, MIS, document/content management
- Library and information management
- Communications
- Artificial intelligence
- Web 2.0 (open source principles and user-generated content)

Knowledge management is also about **getting the right knowledge to the right people where and when they need it**. This implies a system enabled with technology and tools that allow *complete* knowledge workers to have knowledge at their fingertips as they go about to complete their tasks, whether big (eg, accessing project management toolkits when managing a project) or small (eg, finding online help to fill a survey form).

Finally, KM is also often described as **connecting those who know with those who need to know**. This emphasizes the importance of people as the true creators and source of valuable knowledge and the value of personal and social networks for knowledge sharing.

In some ways, KM is an oxymoron since an organization cannot really manage all knowledge. For one, individuals *know more than they can tell or express* verbally or in writing. Or at least, the richness of knowledge cannot be fully codified and transmitted, and often something is lost in translation. Second, knowledge is only reused within the context of other people's unique situations. Thus, one person's knowledge is another person's information – it still needs to be processed in a different context in order to be useful and relevant.

Benefits of KM

... to organizations in general

Most organizations have simple aspirations for their KM programs:

- Facilitate a smooth transition of knowledge from senior, more knowledgeable and experienced staff
- Minimize loss of institutional memory due to attrition and retirement, and promote organizational learning
- Help the org “to know what it knows and do it well”, be more productive (efficient and effective)

These are all valid and traditional benefits of KM. But KM can also:

- Build individual competency... faster
- Promote organizational learning
- Improve customer and stakeholder relationships
- Promote innovation and create new value-creating products and services

... and to CIDA in particular

CIDA Philippines face a number of realities that can benefit from the practice of knowledge management:

1. No single person or project is made responsible for the tremendous wealth of knowledge in the CIDA Philippines program;
2. Lessons from other projects are not shared widely - many projects encounter similar challenges in areas (creating buy-in with communities, reporting on results, mainstreaming cross-cutting themes, disseminating best practices, and institutionalizing results); but projects tend to face these challenges on their own;

3. Best practices in different areas mostly remain tacit among individuals; there are limited efforts to “harvest” and codify these into explicit forms so these are not widely available to the rest of the organization or network;
4. There is no knowledge transfer policy, resulting in significant loss of learning whenever projects roll-off or staff members resign.

Faced with these challenges, the adoption of organization-wide KM will mean benefits to CIDA in the following areas:

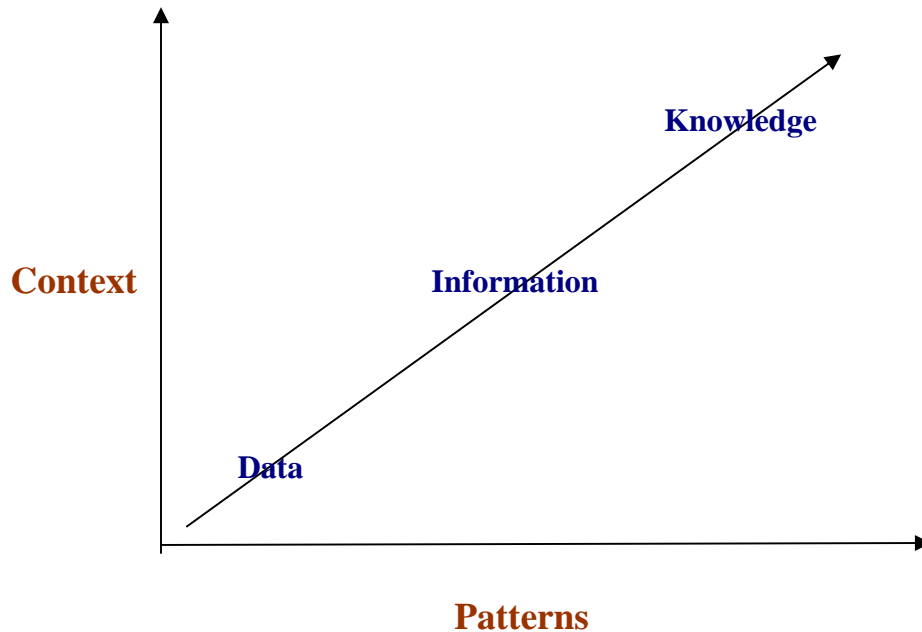
1. **Better development results (through efficient and effective Post operations, program, and projects).** By sharing vital information (eg, strategies, workplans, implementation areas), lessons learned, and best practices, projects can enhance the design of projects, avoid previous mistakes of other projects, promote coordination, collaboration, and complementing initiatives (or at least avoid duplication). This can have significant impact on the quality of results at project level and, cumulatively, at the program level for CIDA.
2. **Better partner and stakeholder relationships.** Having the right information at the right time will help CIDA and partners to make informed decisions, identify and address the right priorities, and invest in the most responsive projects and programs for intended beneficiaries. Likewise, dissemination and sharing of current, accurate, and useful information about CIDA program and projects enhances relationships with beneficiary communities and stakeholders (eg, project profiles and sectoral reports available online).
3. **Decreased time to competency (individual and organizational learning).** Knowledge sharing complements on-the-job training and formal learning strategies like trainings, seminars and workshops. In terms of organizational learning, putting in place knowledge transfer mechanisms will ensure that individual learning is translated to organizational knowledge at the project and program level.
4. **Increased innovation and responsiveness.** By working on challenges together, sharing experiences, and drawing on the strengths of the various CIDA projects, the CIDA-Philippines program can better address the many challenges of development.

Fundamental Knowledge Concepts

This section describes important concepts fundamental to the understanding the true and full scope of KM as well as the challenges posed by those characteristics.

Data vs. Information vs. Knowledge

The concepts of data, information, and knowledge are not highly distinct and exclusive; the boundaries are fuzzy at best. They are best defined as being relative points in a continuum:



Data are directly observable or verifiable attributes of things. As more context and pattern is added to data, it gains the form of **information**, with the ability to transmit meaning or message (indeed, the original meaning of the word information is “to inform”). As data and information is processed and analyzed and contextualized with people's mental models, assumptions, experience, it becomes **knowledge** – information that can be used for effective action.

Knowledge management does not deal with only knowledge per se. It involves all forms – from data (eg, databases), information (eg, document management systems), and knowledge (eg, best practices, lessons learned). At the least, this allows KM managers to not lose sight of the full scope of the data-information-knowledge domain. It is also important to know how these concepts differ, and also how managing them requires different approaches, techniques, tools, and strategies.

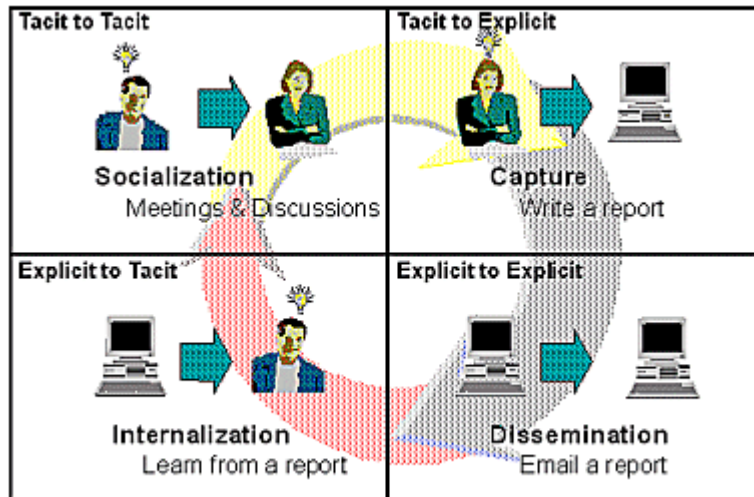
Forms of Knowledge: Tacit vs. Explicit

Knowledge can take two forms: *explicit* and *tacit*.

Explicit refers to knowledge that is formal, codified, represented in tangible form (brochures, books, manuals, among others), and can be easily processed and transmitted through the use of physical (electronic and physical libraries, websites, email, direct mail) and verbal means (meetings, training, workshops).

Tacit knowledge, on the other hand, is informal, intangible (unrecorded or unprinted), and local (ie, personal or organizational). It is held in the minds, gut, and hearts of individuals, groups, and organizations and shared through oral and/or non-verbal means (mentoring, storytelling, interviews, conversations, demos). Examples of tacit knowledge are mental models, technical skills, subject matter expertise, undocumented yet widely-practiced processes, etc.

It is important to understand the difference between the two when formulating appropriate strategies for mapping, collecting, creating, sharing, and using knowledge. The diagram below is an adaptation of the four modes of knowledge *creation* or *conversion* (Source: "The Knowledge Creating Company" by Nonaka & Takeuchi). It illustrates how knowledge can transform and evolve from tacit to explicit knowledge and back as it flows within an organization.



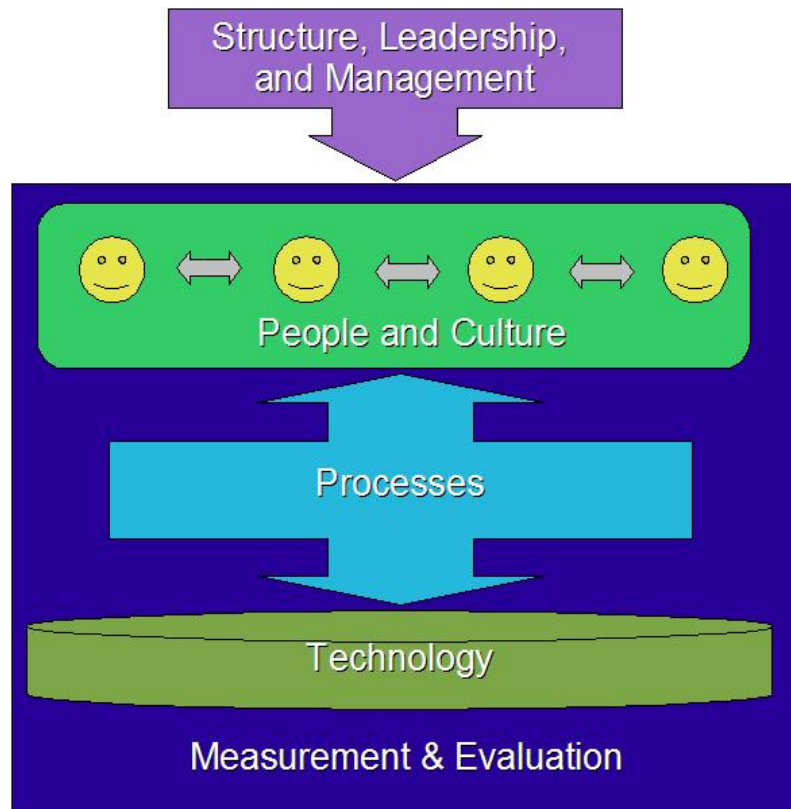
Source: "The Knowledge Creating Company" Ikujiro Nonaka and Hirotaka Takeuchi (OUP, 1996)

Systems Theory of Knowledge Management

It may be useful to see Knowledge Management through the lens of systems theory. Systems theory is an inter-/trans-disciplinary framework by which a complex entity or system (eg, living organisms, machines, organizations, or society) can be analyzed and ultimately 'managed'. Systems theory has many direct correlations with organizations and KM:

- It draws from multiple disciplines and necessitates their integration in order to operate or function.
- Gives primacy to the inter-relationships, not to the elements of the system per se. It is from these dynamic interrelationships that new properties of the system emerge
- A change in one element can affect the others, and thus no one element is 'minor' or should be ignored.
- Open-ness and feedback mechanisms are basic to survival, evolution, and improvement of a system.

A systems approach to KM may include the following sub-systems or components of a KM program (illustrated below): **People & Culture; Processes and their resulting knowledge products; and Technology; Structure, Leadership and Management; and Measurement and Evaluation.** A systems approach to KM involves examination of each of these dimensions to determine individual and organizational capability, attitudes, and behaviour; processes for knowledge; tools and technical infrastructure; the structure, leadership, and management of KM programs; and measuring and evaluating progress of KM in the organization. This approach is useful to organizations planning to institutionalize KM as it helps analyze and identify KM issues and interventions.



In this systems framework, each dimension is important and cannot be underestimated. Successful KM may be seen as the balance of these various dimensions. The elements in each dimension are enumerated below:

People and Culture

- Individual tacit knowledge, competencies, skills
- Individual, team, organization behavior and culture
- Open, direct K sharing vs. K hoarding
- Sharing must be inspired by common vision/goals
- Staff should buy-in to the vision and believe it will work (vs. compliance)... (Staff as volunteers?)
- Rewards and incentives
- Account for actual impact on work patterns (lack of time, degree of change)
- Strategic communication

Processes and Products

- Create, capture, document K, Assess K
- Share, transfer, disseminate, provide access to K, Contextualize K
- Acquire, use/reuse, apply, learn and innovate
- Knowledge Products (Assets)

- Data, statistics, research, studies
- Job aids, Practice aids, Toolkits, Manuals, guides
- Lessons learned, Best practices, Case studies, Replication guides
- Help Desk, Training, Apprenticeship, Coaching, Mentoring,

Examples include:

- Environmental scanning (business intelligence), research, analysis
- Content management and document management (library), IRM
- Subject matter experts
- Knowledge coordinators
- Communities of Practice (CoPs)
- Forums, Task Force, Work Groups
- Training, seminar, workshop
- Brownbags, meetings, “water cooler”/coffee break conversations

Technology

- Organization-wide (single platform) ICT infrastructure and knowledge architecture
- Demand-driven, user-friendly
- Builds on existing ICTs
- Supported by training, coaching, guidance
- Content – relevant, timely, accurate, rich, useful

Examples include:

- Libraries (e-Libraries), databases, repositories, document/content management
- Taxonomies, folksonomies, tagging,
- Internet, intranet, extranet
- Collaborative groupware, workflow
- Portals, personalized spaces (incl. business intelligence syndication)
- Frequently asked questions (FAQ)
- Forums, e-Groups, Blogs
- White Pages/Expert systems locators
- Case-based reasoning and recommender systems
- CRM
- Online help and guides
- GIS

Structure, Leadership, and Management

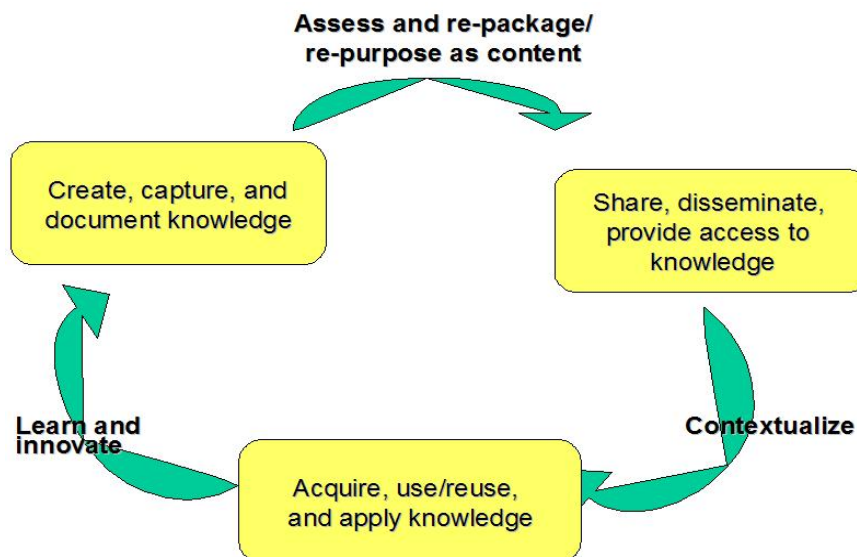
- Assess KM readiness, requirements, goals
- Create business-case
- Sponsorship, buy-in, commitment to KM
- Establish KM Governance program (centralized-decentralized approach)
- Define roles and responsibilities
- Do leaders model desired KM behaviors?
- Develop funding models, budgets
- Align/Re-align KM with organizational goals
- Scoping and planning
- Develop change management approaches

Monitoring and Evaluation

- Not synonymous with ROI! ... not yet anyway...
- Don't claim pure cause-and-effect relationship
- Explore Balanced Scorecards (hard/financial and soft/non-financial indicators)
- Benchmark and track over time
- Don't underestimate the power of anecdotal evidence (eg, success stories)

Knowledge Management Lifecycle

The knowledge management lifecycle can be summarized in as little as three stages – *knowledge creation, knowledge sharing, knowledge utilization*. In between these stages are intervening processes that are often overlooked but are essential to a full and effective analysis and management of a KM program. The relationship between these iterative and interdependent stages is shown below, including said intervening processes:



Knowledge Creation entails identifying and mapping knowledge (both explicit and tacit), gathering, mining, harvesting data/information/knowledge; processing and synthesizing data/information; codifying; building up knowledge capital (ie, overall stock of knowledge); and packaging into reusable and new form of information or knowledge for dissemination or access by other knowledge users.

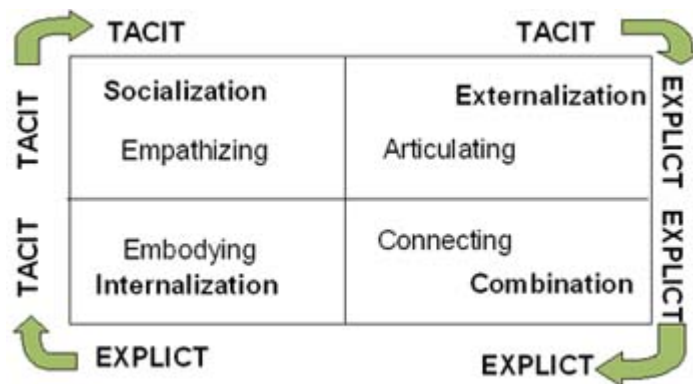
Knowledge Sharing involves establishing venues, channels, tools, and organizing activities for knowledge transfer, dissemination, sharing, and exchange. These include development and use of databases, portals, forums (including E-forums), workshops, symposia, communities of practice, coaching and mentoring, and peer-to-peer replication programs. In all cases, knowledge sharing involves disseminating and promoting knowledge exchange through the effective utilization of appropriate information and communication technologies and approaches.

Knowledge Utilization refers to the actual use and application and fit to the users needs - users receive only what they need where and when they need it. It involves facilitating use of/access to knowledge products that meet the specified needs of users, helping provide supplementary info or context thru subject experts. It includes knowledge equipping, coaching, help desks, and brokering a link between those who know (experts) with those who need to know (users).

KM Spiral (SECI Model)

Although the the KM cycle illustrates what processes take place in a KM-enabled organization, it does not explain why and how knowledge creation and learning happens from individuals to teams and to the organization.

The Knowledge Spiral or SECI (Socialization, Externalization, Combination, and Internalization) Model of knowledge was developed by kujiro Nonaka and Hirotaka Takeuchi. They proposed the model of the knowledge creating process to understand the dynamic nature of knowledge creation, and to manage such a process effectively.



Socialization - the sharing of tacit knowledge between individuals through joint activities, physical proximity.

Externalization - the expression of tacit knowledge in publicly comprehensible forms.

Combination - the conversion of explicit knowledge into more complex sets of explicit knowledge: communication, dissemination, systematization of explicit knowledge.

Internalization - the conversion of externalized knowledge into tacit knowledge on an individual or organizational scale. The embodiment of explicit knowledge into actions, practices, processes and strategic initiatives.

The Knowledge Spiral/SECI Model illustrates the various ways by which knowledge is created, transformed, and flows in an organization, from individuals to other individuals or teams and organizational units, to knowledge artifacts and systems, and back to individuals, and so on and so forth. Organizations should therefore consciously and pro-actively manage these processes and dynamics in order to manage KM effectively.

Stages of KM Maturity for Knowledge Centric Organizations

Organizations that are serious and committed to knowledge management in both public and private sectors can be described as being, at one time or another, at a certain stage of KM maturity toward becoming a truly knowledge-centric organization (KCO).

These stages are adapted from APQC's Road Map to KM Results: Stages of Implementation (APCQ, 2006):

- **Build awareness** on KM with key stakeholders to gather support and resources, develop vision/mission and initial plans
- **Prepare organization** by assessing current situation and identifying KM value proposition, strategies, developing detailed plans, and designating important key roles such as sponsors, champions, KM coordinators
- **Explore, experiment, and build KCO** wherein KM programs, projects, and activities are piloted and implemented
- **Sustain and expand KCO** by enhancing, increasing scope, scaling up initial programs and activities, and initiating new activities
- **Institutionalize and connect communities** that demonstrate that KM is embedded in the policy, processes, tools, and culture of the organization, and that people freely and voluntarily share knowledge with each other, becoming conscious of their own specific knowledge needs and systems as an informal group (i.e, Communities of Practice or Knowledge Communities). Individuals create, share, and use knowledge not out of altruism but because they believe it helps them do their job better. At this stage, the organization may be said to be achieving organizational learning.

