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Learning Lessons in ADB

Operations Evaluation Department
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ABBREVIATIONS

ADB	–	Asian Development Bank
DMC	–	developing member country
OED	–	Operations Evaluation Department
TA	–	technical assistance

PREFACE

Information and knowledge are now seen as the principal drivers of value creation, outstripping land, labor, and capital goods. In knowledge-based organizations, intellectual capital comprising human, structural, and relational elements is viewed as central to performance, and the focus of analysis is on comprehending what the organization knows, what it needs to know to be competitive, and how it should align its capabilities to those it requires. It follows that acquisition, integration, and dissemination of knowledge must be understood as a dynamic process that spans and crosses the boundaries of an organization.

In 2001, the Asian Development Bank (ADB) resolved to leverage knowledge management to raise the agenda for poverty reduction in Asia and the Pacific. The reorganization of ADB that year moved it to establish an ADB-wide Knowledge Management Committee in 2002, with a mandate to develop and support implementation of a strategy and plan for knowledge management. Under this committee, a knowledge management framework was approved in June 2004, leading to the creation of the Knowledge Management Center in the Regional and Sustainable Development Department under the Vice-Presidency for Knowledge Management and Sustainable Development.

Since 2004, OED reports to the Board of Directors of ADB rather than to its Management. Behavioral autonomy, avoidance of conflicts of interest, insulation from external influence, and organizational independence will advance its mission to help ADB become a learning organization that continuously improves its development effectiveness and is accountable to its stakeholders. Operations evaluation emphasizes effective feedback on performance to improve the relevance, effectiveness, efficiency, and sustainability of ongoing and future operations, and to enhance their contribution to the development of ADB's developing member countries.

In 2006, concerned about the small number of downloads of its evaluation reports through the Internet, a corollary of user interest in a world driven by information technology, OED developed a work plan to promote knowledge management. The work plan aims to promote client orientation among staff of OED and to initiate steps to improve dissemination of evaluation reports to key audiences. Encouraged by positive feedback from other departments, OED then formulated plans for establishment of a Knowledge Management Unit in 2007 to catalyze and facilitate identification, creation, storage, sharing, and use of lessons. OED was concerned that failure to do so would result in the operational and developmental impacts of findings and recommendations from operations evaluation being minimal.

Knowledge management applied to lesson learning needs to be advanced in ADB. In 2006, improvements were made that hold promise not only in OED but, more importantly, vis-à-vis its interfaces with other departments, developing member countries, and the international evaluation community. In the medium term, OED must continue to improve the organizational culture, management system, business processes, information technology solutions, community of practice, and external relations and networking for lesson learning. It must connect better to ADB's

knowledge management framework. For this, a plan is needed to build on recent achievements and create more value with measurable results against each interface. *Learning Lessons in ADB: Strategic Framework, 2007–2009* sets the stage for regular annual knowledge audits for systematic identification and analysis of knowledge needs, products and services, gaps, flows, uses, and users from the perspective of learning lessons. It also permits formulation of annual business plans to deliver outputs steadily against each interface. As a result, OED will be better placed to accomplish its mission.

Learning Lessons in ADB: Strategic Framework, 2007–2009 was written by Olivier Serrat, Senior Evaluation Specialist (Knowledge Management) under the overall supervision of R. Keith Leonard, Director, Operations Evaluation Division 1.

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INTRODUCTION

The need to know how to survive is as old as time, but the strong links between information technology and daily life are recent. Knowledge management is thus both old and new. However, it has become more important and challenging as a discipline because of the increasing interdependence, integration, and interaction of people on the global scene. The combination of reach and speed is compelling organizations to ask "What do we know? Who knows it? What do we not know that we should know?" Knowledge management provides some answers to these questions; the most common expectations are that it will (i) improve communication, (ii) enhance collaboration, (iii) develop employee skills, (iv) boost productivity, (v) augment product and service quality, and (vi) ameliorate learning and adaptation. Knowledge management initiatives should help to (i) produce better organizational and market performance, (ii) generate competitive advantage, (iii) increase return on investment, and (iv) reduce costs.

The Asian Development Bank (ADB) has committed to become a learning organization. This has sparked innovation to provide staff, clients, and partners with faster and easier access to knowledge. The aim is to improve the quality of ADB's operations and enhance the capacity of developing member countries (DMCs) to achieve development results. However, knowledge management activities have not been linked closely to ADB's core lending and nonlending processes. Doing so would increase their impact and the achievement of development results.

The Operations Evaluation Department (OED) can help ADB to become a learning organization by facilitating lesson learning from operations evaluation. This paper sets the strategic framework for knowledge management in operations evaluation and provides the basis for development of annual business plans in support of lesson learning. A glossary of knowledge management is in Appendix 1. The recent shifts in managerial attitudes vis-à-vis work activities are summarized in Appendix 2. Notions of knowledge management are outlined in Appendix 3. All are deeply relevant to learning lessons in ADB.

KNOWLEDGE MANAGEMENT IN ADB

Transfer of knowledge has always been an essential, catalyzing element of ADB's mandate.[1,2] Recognizing the growing role that knowledge plays in the advancement of DMCs, the *Long-Term Strategic Framework, 2001–2015* committed ADB to become a learning institution and a primary source of development knowledge in Asia and the Pacific.[3] The *Medium-Term Strategy, 2001–2005* provided shorter range guidance.[4] The *Medium-Term Strategy II, 2006–2008* identified important issues for which implementation of the *Medium-Term Strategy, 2001–2005* agenda remained incomplete and urged greater efforts to improve knowledge products and services.[5]

In June 2004, ADB prepared a knowledge management framework to guide the transition to a knowledge-based organization.[6] The framework promotes ADB's Public Communications Policy,[7] which directs external relations and access to information about ADB's operations to enhance ADB's development effectiveness.

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1 ADB. 2006. *Knowledge Management in ADB*. Available http://www.adb.org/knowledge-management/default.asp

2 The Asian Development Bank Institute offers knowledge products and services. It was established in 1997 to identify effective development strategies and to improve the capacity for sound development management of the agencies and organizations in DMCs engaged in development work.

3 ADB. 2001. *Moving the Poverty Reduction Agenda Forward in Asia and the Pacific: The Long-Term Strategic Framework of the ADB, 2001–2015*. Manila. On page 39, the framework states that "ADB must become a knowledge-based learning institution, drawing upon resources, skills and expertise both inside and outside the organization. It must develop the capacity to learn quickly from its own experiences and those of other development partners, and to disseminate such experience in the form of best practices among DMCs, staff of ADB, and the development partners."

4 ADB. 2001. *Medium-Term Strategy, 2001–2005*. Manila. On page 19, the strategy states that "To enhance its effectiveness, ADB must become a more efficient learning organization, drawing upon its own internal expertise, past experiences and practices, and on the experiences of others, particularly the experience of its diverse DMCs." On the same page, the strategy adds that "Internalizing knowledge and becoming a learning organization is essential for development support."

5 ADB. 2006. *Medium-Term Strategy II, 2006–2008*. Manila. On page 20, the strategy observes that, through the delivery of its products and services, including knowledge products, ADB contributes to portfolio performance, development effectiveness, and results. It states that "Enhancing ADB's contribution to country outcomes requires a shift in corporate priorities from an institutional culture that prioritizes loan approval and lending volumes, to a culture where portfolio performance and contribution to country outcomes become predominant."

6 ADB. 2004. *Knowledge Management in ADB*. Manila.

7 ADB. 2005. *The Public Communications Policy of the Asian Development Bank*. Manila.

The framework defines knowledge as understanding the why, what, how, who, when, and where relative to taking action. It reviews practices with reference to formal knowledge products and services and significant but often unrecognized knowledge byproducts. It highlights initiatives to enhance capacity to process knowledge and analyzes challenges and opportunities. It specifies the goal and objectives of knowledge management, guiding principles, expected outputs, associated action plans, and resource implications. Box 1 lists the knowledge products and services that it recognizes. The outputs to monitor are given in Appendix 4.

Box 1: **Knowledge Products and Services of ADB**

Formal Knowledge Products and Services

- Publications and journals on specific development issues such as *Asian Development Outlook*, *Asian Development Review*, and *Key Indicators of Asian and Pacific Countries*
- Economic, sector, and thematic work (country economic, poverty, and thematic assessments, etc.)
- Information posted on ADB's website
- Project, program, and evaluation reports
- Policy and strategy reviews
- Seminar and workshop materials and synopses of brainstorming sessions, regional meetings of stakeholders, etc.
- Statistical data

Knowledge Byproducts

- Analyses of sectoral and institutional issues as part of project preparation
- Problem analysis, alternatives, and solution trees
- Environmental and social assessments and surveys as inputs to projects
- Social action plans associated with projects
- Understandings created through information exchange in external networks, seminars, and conferences
- Other sourced research information that provides insights into policy, processes, and performance
- Project-related knowledge transfers, including innovative designs and introduction of new technologies
- Best practices embodied in loans, grants, and technical assistance activities

Source: ADB. 2004. *Knowledge Management in ADB*. Manila.

As regards operations evaluation, the single output to be accomplished according to the knowledge management framework of 2004 is improved evaluation of knowledge products and services. This would enable ADB to capture lessons, incorporate them into new and ongoing products, and enhance effectiveness. This would entail development of a more systematic approach to, and consistent methodology for, evaluating knowledge products and services, building on earlier work. However, the scope for applying notions of knowledge management to learn lessons is much greater.

LEARNING LESSONS

Value of Evaluations

OED conducts evaluations to find out what results are being achieved, what improvements should be considered, and what is being learned.[8] It does so with systematic and impartial assessment of policies, strategies, programs, and projects, including their design, implementation, and results.[9] Producing credible, timely, and objective data, information, and knowledge that describe ADB's organizational performance promotes development impact if what is learned informs decision making. Sharing lessons also demonstrates good governance and advances understanding of what ADB aims to accomplish, thereby generating support for it.[10,11] Figure 1 illustrates the principal audiences for evaluations.

Typology of Lessons

Lessons are of two types: operational and developmental. Operational lessons have a managerial and administrative component offering ideas for the establishment of an environment enabling identification and ownership of good practices. They relate, among others, to performance measurement, aid coordination, resource requirements, team building and coordination, procurement practices, delivery and reporting systems, and logistics. Developmental lessons pertain to realization of development results, improvement of developmental practice, and delivery on priorities.

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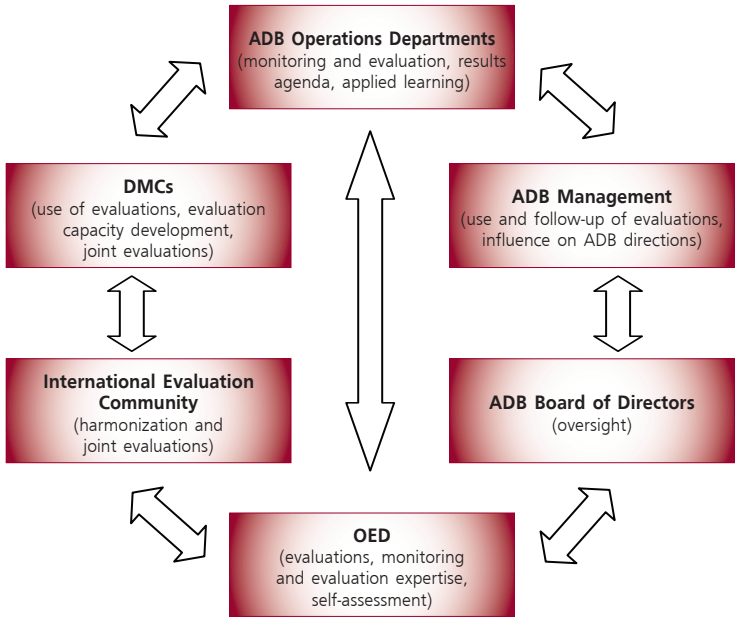
8 The types of evaluation reports include project/program performance evaluation reports, special evaluation studies, sector assistance program evaluations, country assistance program evaluations, annual evaluation reports, and impact evaluation studies.

9 Evaluations can be formative or summative. Formative evaluations are undertaken early to understand what is being achieved and identify how that can be improved. Summative evaluations are conducted during implementation or ex-post to assess effectiveness and determine results and overall value. Evaluations can be categorized by focus or in terms of the stage in the life cycle of the operation being evaluated.

10 2006. *Operations Evaluation Department: Knowledge Management Team—Proposed Work Plan, 2006*. ADB, Manila.

11 2006. *Establishment of a Knowledge Management Unit in OED*. ADB, Manila.

Figure 1: **Audiences for Evaluations**



Source: Adapted from 2006. Independent Evaluation Group—World Bank. *2006 Annual Report on Operations Evaluation*. Washington, DC: World Bank.

Informing Practice

Evaluation reports that are placed on a shelf provide no return on investment. The highest value can be realized only when what is learned from evaluation impacts decision making and improves practice relevantly, effectively, efficiently, and sustainably. Specifically, what key audiences, both inside ADB and outside it, can gain from lessons creates opportunities to (i) identify shortcomings in policies, strategies, programs, projects, and associated processes, methods, and techniques; (ii) set out remedial courses of action to address issues and problems; (iii) increase institutional learning that builds capacity to manage for development results and development effectiveness; and (iv) inform key audiences about how ADB is performing.

Building Value

Each benefit from evaluation is defined by what value the evaluation offers, the strategies developed for sharing results, and the manner in which the results are used. Building value means staying committed and focused. Throughout the evaluation process, it is essential to think about the potential for improving developmental practice. Evaluation is both an opportunity to contribute to the improvement of development activities and a process to forge findings and recommendations. Evaluation results should (i) improve developmental practice, (ii) enhance institutional learning, (iii) validate hypotheses, and (iv) facilitate identification of issues and resolution of problems. To accomplish this, it is necessary to think of the broader

picture, focus on results, maintain flexibility, keep messages clear and simple, and disseminate them in timely fashion and the right format with appropriate dissemination techniques.

Reaching Out

Sharing results provides the chance to improve developmental practice and the organizational performance associated with it. It can also build meaning and understanding, develop support, and generate learning opportunities. However, it is conditioned by a conscious strategy to get the right knowledge to the right people at the right time, and helping them (with incentives) to apply it in ways that strive to improve organizational performance. If results are shared in this manner, credibility is enhanced and pressure is generated to act on the findings and recommendations.

The necessity to reach out is compelling organizations to ask "What are the key audiences?[12] Who needs to know what? How can individual target audiences be reached? What should be emphasized?" Answering these questions requires a deliberate, planned, and sustained approach to (i) articulate a dissemination policy; (ii) elaborate a dissemination plan specifying impact and outcomes, users, information content, medium, execution, roadblocks, and accomplishment; (iii) develop a dissemination strategy specifying users, source, information content, context, and medium; and (iv) utilize dissemination tactics. Box 2 catalogs the attributes of good dissemination.

Examples of dissemination techniques include (i) oral briefings, (ii) the corporate memory system, and (iii) electronic lessons databases. Other examples include (i) bilingual summaries on ADB's website and email (electronic mail) announcements; (ii) articles in internal newsletters and bulletins; (iii) conferences, seminars, and peer review sessions; (iv) press

Box 2: Characteristics of a Successful Dissemination Plan

- The dissemination plan reflects the needs of the target audiences. It relies on appropriate form, language, and information content levels for findings and recommendations from operations evaluation.
- The plan incorporates various dissemination techniques such as written, graphical, electronic, print, broadcast, and verbal media. The methods include summary documents; electronic dissemination within ADB and to key informants outside of ADB; cross postings on web pages; press releases; media coverage; flyers, posters, and brochures; letters of thanks to study participants; newsletters to study participants; events and conferences; and seminars. Each method calls for its own format and means of dissemination and includes both proactive and reactive channels—that is, it includes information content that the target audiences have identified as important and information content that the audiences may not know to request but is likely to be of interest. The dissemination techniques are more likely to succeed when their packaging and information content has been influenced by inputs from the target audiences.
- The dissemination plan draws on existing capabilities, resources, relationships, and networks to the maximum extent possible. It also builds the new capabilities, resources, relationships, and networks that the target audience needs.
- The dissemination plan includes effective quality control mechanisms in ADB and in DMCs to ensure that the information content is accurate, relevant, representative, and timely.
- The plan identifies the resources required for implementation. ■

[12] Audiences for evaluation products and services are both inside and outside ADB. They include the Board of Directors; Management; senior staff; staff in headquarters, resident missions, and representative offices; institutional responsibility centers in developing member countries; local stakeholders; nongovernment organizations; other development agencies; and umbrella organizations such as the Development Cooperation Directorate in the Organisation for Economic Cooperation and Development and the Evaluation Network that it coordinates, the United Nations Evaluation Group, and the Evaluation Cooperation Group.

releases and question-and-answer statements; (v) references in speeches; and (vi) articles in professional journals.

Caveat

Development agencies now place a greater priority on improving practice by sharing results more purposively. Benefits are far from proven, and internal and external result-sharing activities are affected by assessment problems. There is no single best practice and approaches need to be context specific. There is a logic to developing result-sharing activities, and many of these will in the first instance be—inevitably and rightly—internally oriented. Ultimately, however, sharing results in a market crowded with data and information will be seen as a luxury if it does not visibly and genuinely address challenges in DMCs.

Facilitating Lesson Learning

Knowledge must not be seen as something that is supplied from one person to another, or from better-off countries to developing countries, but rather as something that can flow back and forth and be continually improved, adapted, and refreshed using knowledge management tools. Conspicuously, the advent of the Internet has brought information technologies that facilitate this practice. They involve e-learning, web conferencing, collaborative software, content management systems, Yellow Pages, email lists, wikis, and web logs (blogs).[13] There are also organizational enablers including knowledge audits, communities of practice, action reviews, peer assists, information taxonomies, coaching, and mentoring. Each expands the level of inquiry and provides a platform to achieve a specific purpose or action. Box 3 organizes knowledge management tools by category. Knowledge management tools fit in five areas of competence: (i) strategy development, (ii) management techniques, (iii) collaboration mechanisms, (iv) knowledge sharing and learning, and (v) knowledge capture and storage. Some knowledge management tools require expert facilitation.

Learning lessons is contingent on improving organizational performance in the five areas of competence. Appendix 5 provides a framework for assessing organizational competence for knowledge management and the knowledge management risk factors associated with it. Where an organization such as ADB might aim to be in specified time and the priority areas of competence that it might therefore decide to focus on can be investigated by means of such diagnostic tools.

[13] The term Yellow Pages refers to a telephone directory for businesses, categorized according to the product or service provided. Such directories are usually printed on yellow paper. With the advent of the internet, the term Yellow Pages is now also applied to online directories of businesses. A wiki is a website that allows visitors to add, remove, and otherwise edit and change available content, typically without the need for registration. This makes a wiki an effective knowledge management tool for mass collaborative authoring. A blog is a user-generated website where entries are made in journal style and displayed in a reverse chronological order.

Box 3: **Knowledge Management Tools**

STRATEGY DEVELOPMENT	
Knowledge Audit	Knowledge audits serve to identify owners, users, uses, and key attributes of knowledge assets. They examine the policy, structural, operational, and procedural factors that condition identification, creation, storage, sharing, and use of tacit and explicit knowledge. They provide a structure for making recommendations for knowledge management initiatives.
Social Network Analysis	Social network analysis has been called the most systematic way of analyzing relationships and knowledge flows among individuals and groups. Properly undertaken, social network analysis can yield invaluable data about how to tailor and focus knowledge management activities to organizational needs.
Most Significant Change	Most significant change is a narrative-based mechanism for planning programs of change. Much of knowledge management is about change, and change that takes place in a variety of different domains.
Outcome Mapping	Outcome mapping is a participatory planning, monitoring, and evaluation methodology that focuses on the contribution of a program to changes in the actions and behaviors of the boundary partners. It can be applied to knowledge management strategies.
Scenario Testing and Visioning	Scenario testing and visioning focus on the future of an organization. They allow creative thinking to play a central role in developing and rolling out knowledge management strategies.
MANAGEMENT TECHNIQUES	
The SECI Approach[a]	This approach, made popular by Professor Nonaka, is based on systematically managing the conversion of knowledge from tacit to explicit forms based on simple principles of group dynamics.
Blame Versus Gain Behaviors	Managing a learning organization requires a managerial approach to mistakes that encourages staff to take certain risks and to be honest about the consequences of their actions. This simple process enables groups to reflect on their own approach to mistakes and errors and on how they might address these through use of a series of generic "blame" or "gain" behaviors.
Force Field Analysis	Force field analysis enables teams to work out what their goal and objectives are and to identify systematically the forces for and against achieving them. It can be an empowering and energizing tool for teams.
Activity-Based Knowledge Mapping	All activities require different inputs and generate outputs. Increasingly, these inputs and outputs are information based. This tool relates to business process reengineering. It enables the mapping of inputs and outputs for key activities with a view to improving their efficiency. This provides managers with in-depth understanding of the different processes they oversee.
Structured Innovation	Structured innovation occurs by listing the characteristics of a specific problem and brainstorming its possible variations. Effected correctly, this tool enables groups to generate systematically new ideas and assess their potential.
Reframing Matrix	Everyone sees problems differently, and one of the key problems with knowledge management strategies is that knowledge is more often than not in the eye of the beholder. This tool enables different perspectives to be generated and used in management planning processes.

[a] The SECI Approach identifies four key processes through which tacit and explicit knowledge interact, namely, Socialization, Externalization, Combination, and Internalization. Together, these processes provide a set of pointers that can be used by managers to ensure that they are facilitating effective knowledge and learning in their ongoing programs and projects.

Box 3: **Knowledge Management Tools** *(continued)*

COLLABORATION MECHANISMS	
Teams: Virtual and Face-to-Face	This tool enables teams to work through five stages toward a shared responsibility. Either face-to-face or virtually, teams can cross the five stages, assessing where they lie in terms of different areas, including atmosphere and relations, goal and objectives acceptance, information sharing, decision making, reaction to leadership, and attention to the way the group is working.
Communities of Practice	Communities of practice enable similarly minded interacting people to work towards generating and collaborating on knowledge management activities in a variety of ways, through a number of overlapping functions.
Action Learning Sets	Action learning sets are a structured method enabling small groups to address complicated issues by meeting regularly and working collectively. This tool is geared especially to learning and personal development at the professional and managerial levels.
Six Thinking Hats	This tool offers a way out of the habitual thinking style by enabling participants to use different approaches and perspectives to analyzing decision making. This is particularly useful in that it allows a broad and objective view of decisions, and one that covers more options and possibilities.
Mind Maps	Mind maps are a graphic technique to enable participants to implement clearer thinking in their approach to many different tasks. It is useful both for individuals and for groups, and provides as non linear method of organizing information.
Social Technologies	Social technologies cover a broad swath of tools, all of which leverage technology to build collaboration and sharing of tacit knowledge. The tools include the Internet, telecommunications, radio, and face-to-face socializing.
KNOWLEDGE SHARING AND LEARNING	
Stories	Storytelling is an approach that can both allow for expression of tacit knowledge and increase potential for meaningful knowledge sharing, particularly by permitting learning to take place through the presence of a narrative structure.
Peer Assists	This tool encourages participatory learning by asking those with experience in certain activities to assist those wishing to benefit from their knowledge, through a systematic process, towards strengthened mutual learning.
Challenge Sessions	Challenge sessions are geared towards solving problems by allowing participants to supplement their habitual thinking with new methods, centered on working towards dealing with problems that are made up of conflicting requirements or challenges.
After-Action Reviews and Retrospects	The after-action review facilitates continuous assessment of organizational performance, looking at successes and failures, ensuring that learning takes place to support continuous improvement in organizational learning and change.
Intranet Strategies	Intranets can have a great impact on knowledge management, particularly in the fields of information collection, collaboration and communication, and task completion. This tool can substantially increase the likelihood of an effective, useful system within an organization.
Email Guidelines	Email is one of the most commonly used tools in the modern business environment; there is an increased need nowadays to manage email to reduce the risk of overload. This tool helps to control email and therefore increase its effectiveness as a means of communication.

Box 3: **Knowledge Management Tools** *(continued)*

KNOWLEDGE CAPTURE AND STORAGE	
Taxonomies for Documents and Folders	Taxonomies have been in existence for many decades in the form of classification schemes and indexing systems. They can still have a great deal to offer in terms of structuring information for easier management and retrieval.
Exit Interviews	Exit interviews represent a specific learning process, not just a way to leave a company, and one that highlights the importance of capturing and storing know-how. This can minimize the loss of useful knowledge through staff turnover and ease the learning curve of new staff, benefiting both the organization and the departing staff.
How-to Guides	How-to guides enable the capture, documentation, and dissemination of know-how of staff within an organization, to help them make better and wider use of existing knowledge. The objective is to capture an effective sequence or process with enough accuracy so that it can be repeated with the same results.
Staff Profile Pages	Using this tool, an electronic directory storing information about staff in a given organization can facilitate connections among people through systematizing knowledge management activities.
Web Logs	A web log in its various forms enables groups of people to discuss electronically areas of interest in different ways, and to review different opinions and information surrounding such subjects.
Shared Network Drives	Shared network drives work in most organizations to store and categorize information. If used correctly, and under systematized good practices, they can enable better retrieval of knowledge and improved information sharing across an organization.

Source: Adapted from Ramalingam, Ben. 2006. *Tools for Knowledge and Learning: A Guide for Development and Humanitarian Organizations*. Overseas Development Institute.

Options For Lesson Learning

ADB's annual lending volume is typically about $6 billion, with technical assistance (TA) totaling about $180 million a year. Therefore, the return on investment in lesson learning for operational and developmental impact is likely to be high, and maximizing it is a legitimate concern.[14] There is anecdotal evidence that lessons sometimes feed into business processes—most recently it seems principally by means of country assistance program evaluations—but feedback mechanisms can be developed further. In 2006, OED examined what options for lesson learning might exist short of forming a knowledge management unit.[15] The alternatives considered but not recommended were (i) do nothing and prolong the status quo; (ii) formalize a role of knowledge management for all staff, and reduce the number of evaluation products accordingly; and (iii) create a separate division to handle knowledge management, or engage staff to handle knowledge management.

OED opted to establish a small Knowledge Management Unit. It would be operated by one professional staff, two analyst-level national staff, and two consultants for web writing and web development. The expected outcomes of OED's near-term knowledge management initiatives are summarized in Appendix 6. Initiatives are expected to (i) increase client awareness among staff of OED, (ii) increase dissemination of findings and recommendations to key audiences, and (iii) increase learning and exchanges in OED and ADB.

Improvements are being made to OED's website.[16] Invitations to link to it are being sent to organizations that maintain related websites. Evaluation reports are being recycled by compiling summaries. However, knowledge management also requires proficiency in areas of competence other than knowledge sharing and learning.

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[14] Often, organizations do not know how to calculate the value returned from knowledge management and how to link that to performance measures. For ADB, in-house returns would stem for instance from reduced administrative and operational expenses; efficiency gains; increased productivity; better collaboration within the organization; higher quality, usability, scalability, and integration of knowledge products and services; and innovation. In DMCs, these returns would include achieving better development results though higher pro-poor, sustainable economic growth, more inclusive social development, and better governance.

[15] 2006. *Establishment of a Knowledge Management Unit in OED*. ADB, Manila.

[16] Available: http://www.adb.org/evaluation/

Auditing The Lessons Architecture

Knowledge management solutions need to be tied to the core issues of an organization and there are no one-size-fits-all solutions. Knowledge audits provide fact-based assessments of where organizations must cluster knowledge management efforts. They identify areas of strength, weakness, opportunity, and threat, and reveal risks. Knowledge audits are used to (i) identify knowledge needs for policy, strategy, and operational efforts,[17] (ii) draw up an inventory of existing knowledge products and services, (iii) recognize gaps in knowledge products and services, (iv) analyze knowledge flows within the organization and knowledge exchanges with outside agencies, (v) identify blockages to knowledge flows, (vi) create a knowledge map, and (vii) suggest an agenda for organizational change. Where inter- and intra-organizational relationships are complex, knowledge audits should focus on interfaces, permitting thereby monitoring and evaluation of the baseline information gathered. Appendix 7 lists the steps commonly followed in knowledge audits.

[17] OED conducted a first survey of users of evaluation reports in 1997. Work toward a survey of client perception of OED is in progress, for execution in 2007, and will usefully complement the conduct of a knowledge audit. Questions of perception emphasize readership; quality; influence on policies, strategies, programs, and projects; and utilization. The focus of both surveys is on the OED-ADB interface.

Business Planning

Based on knowledge audits, organizations looking to knowledge management develop business plans aligned with their goal and objectives. To raise knowledge vigilance to the point where attitudes are realistic and automatic and tacit knowledge is internalized, such plans identify needs and issues within the organization and be couched against a framework for addressing these. Needs and issues, as well as the business processes associated with them, are determined by (i) the external environment; (ii) the mandate, vision, goal, and objectives of the organization; (iii) the overall strategic direction; (iv) the size and spread of the organization; (v) organizational history and culture; (vi) staff skills and experience; and (vii) available resources.

There are two divergent approaches to knowledge management. The first creates a system whereby all existing knowledge products and services flow to all staff. The second enables staff to find what they want to know. These approaches are labeled organization-centric and employee-centric.[18] They are not mutually exclusive, but the rise of the knowledge-based economy requires that more attention be given to the second. Top-down and bottom-up approaches to evaluation coexist in ADB. Under the first, OED has assumed responsibility for planning evaluations. The approach purports to provide integrity and quality of analysis, impartiality and transparency, and independence of evaluation. The second approach is still in early development. It relates to the conduct of self-evaluation at the completion of a program, project, or TA and to country portfolio reviews.[19]

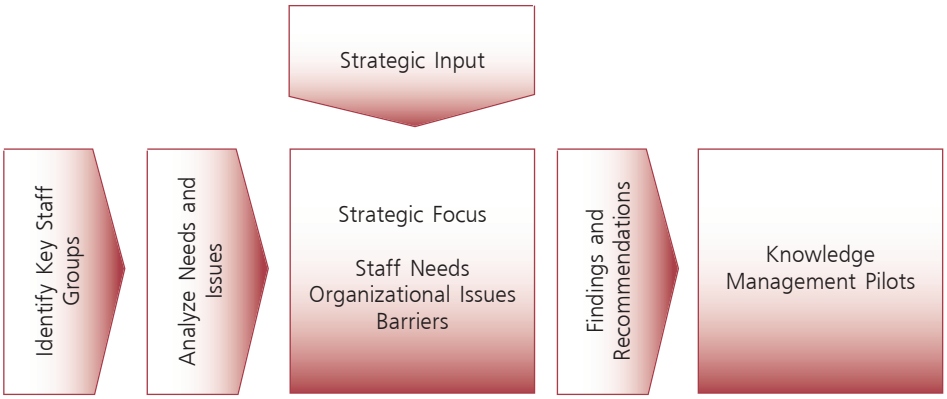
Each of the two approaches to knowledge management has strengths. A business plan for knowledge management must encompass both. The elemental steps of business planning are (i) identify key staff groups within the organization; (ii) conduct comprehensive and holistic analyses with the key staff groups to identify needs and issues and barriers to organizational performance; (iii) supplement the analyses with inputs from managers and organizational strategy documents to determine an overall strategic focus; (iv) develop findings and recommendations to address the needs and issues and to tackle the barriers identified; and (v) implement a series of knowledge management pilots based on the findings and recommendations, leveraged by suitable knowledge management tools, and with concern for

[18] The first approach places emphasis on collection. The second approach prioritizes connection.

[19] Self-evaluation has been expanded to cover country partnership strategies through the preparation of country partnership strategy completion reports.

measuring the effectiveness of outreach. Figure 2 illustrates the process to develop a business plan for knowledge management. Appendix 8 lists the knowledge performance metrics that can verify the use of common knowledge management tools.

Figure 2: **Developing a Knowledge Management Business Plan**



PUTTING IT ALL TOGETHER: THE STRATEGIC FRAMEWORK

Knowledge, Relationships, Context, and External Environment

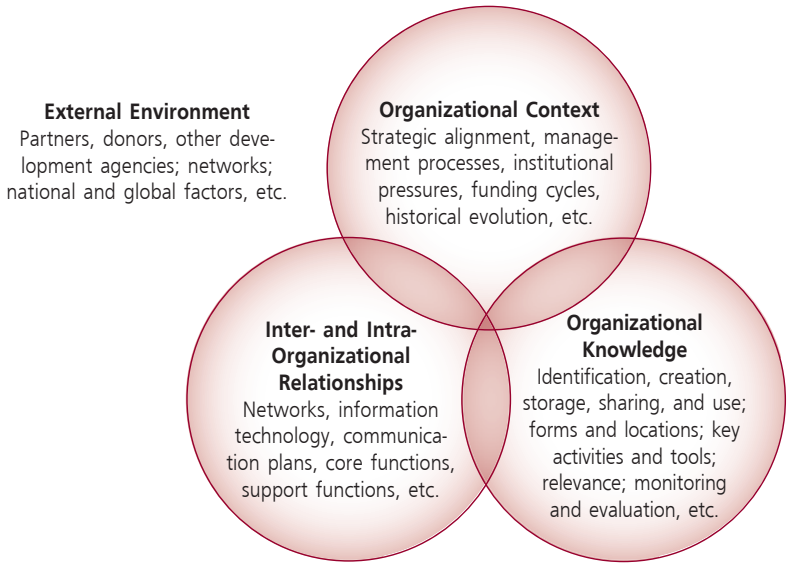
The Overseas Development Institute has found that knowledge management tools are more effective where the specific knowledge, relationships, and context of development agencies such as ADB and the external environment they face are dealt with in an integrated and coherent manner.[20] Key questions relate to (i) how knowledge is understood and applied within an organization; (ii) how knowledge interfaces with the existing structure of the organization; (iii) how knowledge management activities link to existing core functions of the organization; (iv) how do knowledge management activities link with the existing support functions of the organization; (v) how connective physical and electronic infrastructures support knowledge management strategies; (vi) how organizational vision, leadership, and management impact the effectiveness of knowledge management strategies; (vii) what ways there are of measuring the costs and benefits of learning or of not learning; and (viii) how knowledge management activities address external aspects of knowledge work. Figure 3 demonstrates the importance of using knowledge management tools with respect to the specific milieu in which ADB operates.

Based on the framework, a process of gap analysis and priority setting can be set in motion as follows:

- predesign, comprising knowledge management pilots;
- strategic development, in which the specific organizational approach to knowledge management is developed in structured fashion and priorities are established;
- implementation and roll out of knowledge management initiatives; and
- alignment, during which refinements and adjustments to knowledge management initiatives are made in accordance with the strategic vision.

[20] Ramalingam, Ben. 2005. *Implementing Knowledge Strategies: Lessons from International Development Agencies*. Working Paper 244. Overseas Development Institute.

Figure 3: **A Holistic View of Knowledge and Knowledge Management Tools**

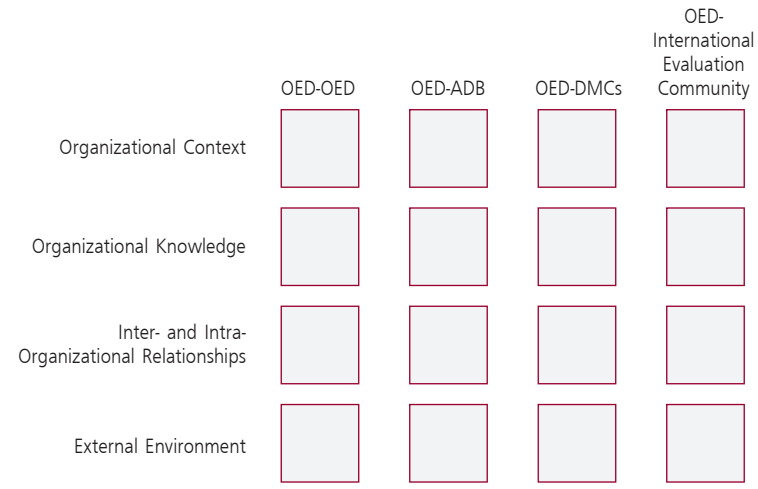


Source: Adapted from Ramalingam, Ben. 2005. *Implementing Knowledge Strategies: Lessons from International Development Agencies*. Working Paper 244. Overseas Development Institute.

Interfaces

Inter- and intra-organizational relationships encompass OED itself, other departments,[21] DMCs, and the international evaluation community. Figure 4 shows these interfaces with the specific knowledge, and the relationships of OED and the external environment it faces to structure entry points for lesson learning.

Figure 4: **Interfaces for Lesson Learning**



[21] Primarily these are operations departments. But OED also interacts with non-operations departments and offices including the Asian Development Bank Institute, the Economics and Research Department, the Regional and Sustainable Development Department, and the Strategy and Policy Department.

Architecture

Knowledge management must be embedded into all of an organization's business processes. It is not an activity delivered by a distinct department or a particular process. An architecture must be built to initiate and implement organization-wide knowledge management initiatives. Four pillars are critical to success: (i) leadership, (ii) organization, (iii) technology, and (iv) learning. All must be addressed. Table 1 outlines the core functions, typical activities, and implementation elements of the architecture for lesson learning.

Table 1: **Architecture for Lesson Learning**

Pillar	Function	Typical Activity	Illustrative Implementation Element
Leadership	Drive values for knowledge management.	▪ Identify knowledge critical to learning lessons in ADB. ▪ Conduct work-centered analysis. ▪ Plan high-level strategic approach. ▪ Establish goal and prioritize objectives. ▪ Define requirements and develop measurement program. ▪ Promote values and norms. ▪ Implement strategy.	▪ Strategic planning ▪ Vision sharing ▪ Definition of goal and objectives ▪ Executive commitment ▪ Knowledge management programs tied to metrics ▪ Formal knowledge management roles in existence ▪ Tangible rewards for use of knowledge management ▪ Encouragement, recognition, and reward for knowledge sharing ▪ Communications
Organization	Organize to support values for knowledge management.	▪ Identify critical knowledge gaps, opportunities, and risks. ▪ Develop business process model. ▪ Engage key audiences with incentives.	▪ Organizational structure ▪ Organizational culture ▪ Business process workflows ▪ Business process reengineering ▪ Management by objectives ▪ Total quality management ▪ Operating procedures for knowledge sharing ▪ Knowledge performance metrics ▪ Communications
Technology	Collect and connect knowledge.	▪ Enhance system integration and access. ▪ Deploy intelligent agents for people. ▪ Exploit semantic technologies. ▪ Reuse existing capabilities in new ways. ▪ Monitor, measure, and report knowledge performance metrics.	▪ Email ▪ Data warehousing ▪ Data management software ▪ Multimedia repositories ▪ Groupware ▪ Decision support systems ▪ Intranet ▪ Search engines ▪ Business modeling systems ▪ Intelligent agents ▪ Neural networks ▪ Lessons learned systems ▪ Video conferencing ▪ Communications

Table 1: **Architecture for Lesson Learning** *(continued)*

Pillar	Function	Typical Activity	Illustrative Implementation Element
Learning	Cultivate and utilize virtual teams and exchange forum for knowledge management.	▪ Enliven collaboration. ▪ Facilitate communities of practice. ▪ Encourage storytelling. ▪ Recognize and reward knowledge sharing.	▪ Tacit and explicit knowledge ▪ Capturing, organizing, and disseminating knowledge ▪ Team learning ▪ Management support for continuous learning ▪ Virtual teams ▪ Exchange forums ▪ Communities of practice ▪ Encouragement, recognition, and reward for innovation ▪ Communications

Operating Framework

Drawing the elements of knowledge, relationships, context, external environment, interfaces, and architecture in a conceptual structure generates the operating framework within which decisions on knowledge management initiatives can be taken and implemented. Figure 5 depicts the operating framework within which knowledge management tools can be leveraged for lesson learning in ADB. The operating framework and the performance regime that will drive it will be reviewed every three years.

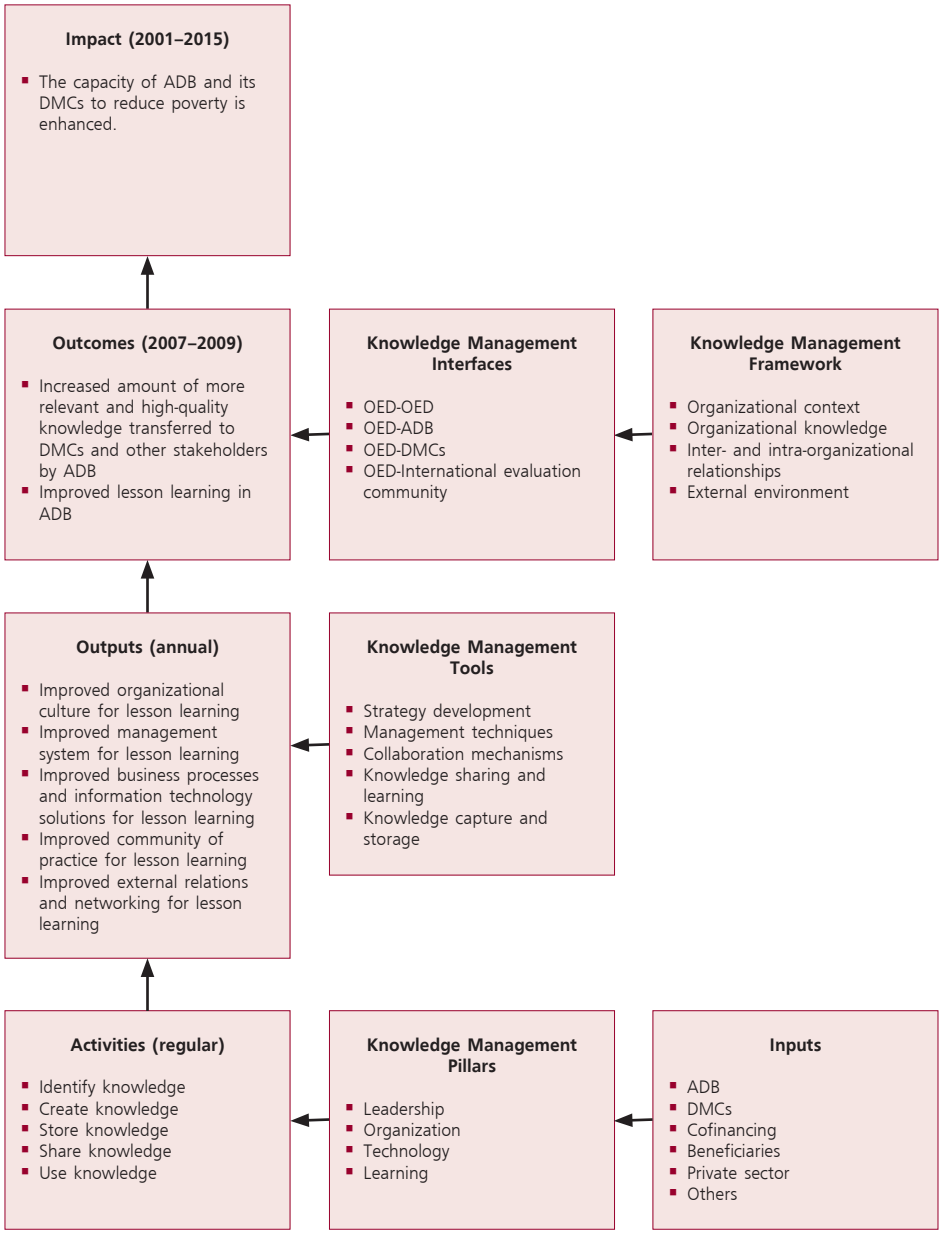
Annual Business Planning

Learning is a process, not an attainment. Hence, OED's knowledge management business plans should be aligned against ADB's to set in train the drive for continuous improvement that is at the heart of strategic frameworks. The strategic priorities of ADB are guided by the *Medium-Term Strategy II, 2006–2008*. Table 2 summarizes the annual business planning process that OED will follow in support

Table 2: **Annual Business Planning Process**

Stage		Purpose	Timing
Step 1	Conduct knowledge audit	To identify and analyze systematically knowledge needs, resources, flows, gaps, uses, and users based on operational needs vis-à-vis operational priorities on interfaces for lesson learning	April-May
Step 2	Develop knowledge management business plan	To couch operational priorities on interfaces for lesson learning against a framework for addressing these	June
Step 3	Implement knowledge management pilots	To build organizational competence for knowledge management with knowledge management tools, with concern for measuring the effectiveness of outreach using knowledge performance metrics	June-December
Step 4	Submit annual budget document	To present OED's administrative budget for knowledge management and allocate resources according to operational priorities	September-November

Figure 5: **Operating Framework for Lesson Learning**



of its work program for 2007–2009. Knowledge management pilots will be congruent with ADB's knowledge management framework and, where information technology is leveraged, with the *Information Technology Strategy and Capital Expenditure Requirements, 2004–2009*.[22] Especially in large organizations, knowledge cannot be managed in isolation. Knowledge management pilots need to be informed by, and in harmony with, knowledge management initiatives launched elsewhere in ADB and to draw broadly on all available resources.

Resources

Learning Lessons in ADB: Strategic Framework, 2007–2009 is ambitious, but it is flexible and adapted to the needs perceived over the period considered. In 2006, OED formulated plans for establishment of a Knowledge Management Unit in 2007. It is operated by one international staff, soon to be assisted by one analyst-level national staff position with plans for a second analyst-level national staff position in 2008. Inputs from national consultants for writing and development of OED's website and the OED Lessons database were provided in OED's 2007 budget. OED international and national staff regularly volunteer help, too. Requirements for more diverse and intensified resources may become apparent as progress is made, notably regarding expert facilitation.

Next Steps

Learning Lessons in ADB: Strategic Framework, 2007–2009 provides a direction for knowledge management in OED over 3 years. To operate the framework, a number of discrete steps need to be taken. The annual business planning process specifies that regular annual knowledge audits linked to annual business plans will deliver outputs steadily against each interface based on operational needs and priorities but also resources, with flexibility and adaptability.

OED has resolved to pilot the annual business planning process in 2007 and to repeat it thereafter, each time building on accomplishments and embedding lessons learned from the previous iteration. In 2007, the annual business planning process will be informed by analyses conducted in 2006. Table 3 outlines the provisional knowledge management work program for 2007. Other knowledge management pilots for 2007 will be confirmed in consequence of the first knowledge audit.

[22] ADB. 2004. *Information Technology Strategy and Capital Expenditure Requirements, 2004–2009*. Manila.

Table 3: **Knowledge Management Work Program, 2007**

Interface	Output
All interfaces	▪ *Learning Lessons in ADB: Strategic Framework, 2007–2009* ▪ *Independent Evaluation at the Asian Development Bank*, a perspective of operations evaluation ▪ OED website ▪ OED Lessons database ▪ OED promotional materials, including OED Newsletters, *Learning Curves*, *Sector Summations*, and *Success Rates* ▪ OED Help Desk
OED-OED	▪ OED Community of Practice ▪ OED Community of Practice platform [a] ▪ OED communication framework with the Office of the Secretary ▪ OED Team Room [b]
OED-ADB	▪ Postings on evaluation reports in ADB Today, AFE-ADB News, etc. ▪ Evaluation references in the ADB Library ▪ Workshops, seminars, and brown bag sessions on knowledge management
OED-DMCs	▪ Regional TA in support of evaluation capacity development
OED-International evaluation community	▪ Administration, maintenance, and enhancement of ECGnet, the Evaluation Cooperation Group Community of Practice platform

[a] This will use QuickPlace, a business-ready, self-service electronic work space expressly designed by IBM Lotus for team collaboration, and adopted in ADB for discussion forum websites.

[b] The OED Team Room is a shared electronic work space for knowledge capture and storage.

Appendix 1 **GLOSSARY OF KNOWLEDGE MANAGEMENT**

Communities of practice. Networks of people who work on similar processes or in similar disciplines and who come together to develop and share their knowledge in that field for the benefit of both themselves and their organization. Communities of practice may be created formally or informally, and members can interact online or in person.

Core knowledge activities. Knowledge activities that have been identified as most widely used by an organization, often also called the knowledge life cycle or the knowledge value chain. They are to identify, create, store, share, and use knowledge, often in a two-way exchange. Two important requirements have to be fulfilled to achieve improvements from these activities: (i) the activities should be aligned or integrated into business processes; and (ii) the activities should be balanced in accordance with the specificities of each process and organization. A knowledge management solution should not focus only on one or two activities in isolation.

Data. Discrete and objective facts, measurements, or observations that can be analyzed to generate information.

Explicit knowledge. Knowledge that can be codified in formal, systematic language and shared in discussion or writing. Examples include a telephone directory, an instruction manual, or a report of research findings.

Information. Data that have been categorized, analyzed, summarized, and placed in context in a form that has structure and meaning.

Information management. The management of an organization's information resources to improve performance. Information management underpins knowledge management, as people derive knowledge from information.

Information technology. A term that encompasses the physical elements of computing including servers, networks, and desktop computing, that enable digital information to be identified, created, stored, shared, and used.

Intellectual capital. The value, or potential value, of an organization's intellectual assets (or knowledge products and services). Attempts to place a financial value on knowledge often define intellectual capital as the combination of human, structural, and technological capital.

Know-how. Skill or capability derived from knowledge and experience.

Knowledge. A combination of data and information, to which is added expert opinion, skills, and experience, resulting in a valuable asset that aids decision making. In organizational terms, knowledge is generally thought of as being know-how, applied information, information with judgment, or the capacity for effective action. Knowledge may be tacit, explicit, individual, and/or collective. It is intrinsically linked to people.

Knowledge assets. The parts of an organization's intangible assets that relate specifically to knowledge such as know-how, good practices, and intellectual property. Knowledge assets (or products and services) are categorized as human (people, teams, networks, and communities), structural (the codified knowledge that can be found in business processes), and technological (the technologies that support knowledge sharing such as databases and intranets). By understanding the knowledge assets it possesses, an organization can use them to better effect and identify what gaps may exist.

Knowledge audit. Systematic identification and analysis of an organization's knowledge needs, resources, flows, gaps, uses, and users. A knowledge audit usually includes a review of people-based knowledge, capability, and skills as well as information. It also examines critically an organization's values, vision, culture, and skills from the perspective of its knowledge needs.

Knowledge base. An organized structure that facilitates the storage of data, information, and knowledge to be retrieved in support of a knowledge management process.

Knowledge economy. An economy in which knowledge plays a dominant part in the creation of wealth. The four pillars of a knowledge economy framework are: (i) an economic incentive and institutional regime that provides good economic policies and institutions that permit efficient mobilization and allocation of resources and stimulate creativity and incentives for the efficient creation, dissemination, and use of existing knowledge, (ii) educated and skilled workers who can continuously upgrade and adapt their skills to efficiently create and use knowledge, (iii) an

Appendix 1 **GLOSSARY OF KNOWLEDGE MANAGEMENT** *(continued)*

effective innovation system of firms, research centers, universities, consultants, and other organizations that can keep up with the knowledge revolution and tap into the growing stock of global knowledge and assimilate and adapt it to local needs, and (iv) a modern and adequate information infrastructure that can facilitate the effective communication, dissemination, and processing of information and knowledge.

Knowledge flows. The ways in which knowledge moves around, and into and out of, an organization.

Knowledge harvesting. A set of methods and techniques for making tacit knowledge more explicit so that it can be shared more easily.

Knowledge management. The explicit and systematic management of processes enabling vital individual and collective knowledge resources to be identified, created, stored, shared, and used for benefit. Its practical expression is the fusion of information management and organizational learning.

Knowledge management tools. The methods and techniques that are used to support or deliver practical knowledge management. These can be either information technology systems, e.g., databases, intranets, extranets, and portals; methodologies; or human networks, e.g., communities of practice.

Knowledge management strategy. A detailed plan that outlines how an organization intends to implement knowledge management principles and practices to achieve organizational objectives.

Knowledge manager. A role with operational and developmental responsibility for implementing and reinforcing knowledge management principles and practices. Often acts as central owner of taxonomies and content standards and knowledge processes. Works to promote access to information, intelligence support, expertise, and good practices.

Knowledge worker. A staff member whose role relies on his or her ability to find, synthesize, communicate, and apply knowledge.

Learning organization. An organization skilled at identifying, creating, storing, sharing, and using knowledge; and then modifying its behavior to reflect new knowledge.

Lessons learned. Concise descriptions of knowledge derived from experience that can be communicated through methods and techniques such as storytelling and debriefing or summarized in databases. These lessons often reflect on what was done right, what one might do differently, and how one might improve processes to be more effective in the future.

Mentoring. A one-to-one learning relationship in which a senior staff member of an organization is assigned to support the development of a newer or more junior staff member by sharing his or her knowledge and wisdom.

Organizational culture. The specific collection of values and norms that are shared by individuals and groups in an organization and control the way they interact with one another and with people outside the organization.

Storytelling. The use of stories as a way of sharing knowledge and helping learning in an organization. Stories can describe complicated issues, explain events, communicate lessons, and/or bring about cultural change.

Tacit knowledge. The personalized knowledge that people carry in their heads. Tacit knowledge is more difficult to formalize and communicate than explicit knowledge. It can be shared through discussion, storytelling, and personal interactions. There are two dimensions to tacit knowledge: (i) a technical dimension, which encompasses the kind of informal personal skills of crafts often referred to as know-how, and (ii) a cognitive dimension, which consists of beliefs, ideals, values, schemata, and mental models that are ingrained in individuals and often taken for granted.

Appendix 2 **THE ROOTS OF AN EMERGING DISCIPLINE**

Knowledge is the result of learning and the process of identifying, creating, storing, sharing, and using it to enhance performance has always occupied man. The pursuit of any human activity leads to the acquisition by those involved of know-how about how that activity may be successfully conducted and, insofar as what is learned can be harnessed, subsequent practitioners—even later generations—can build on experience and avert costly rework. Even so, for much of history, applications of know-how were confined to farming and craftsmanship.

The Industrial Revolution that took place in England in the late 18th century, spread to Western Europe and North America in the 19th century, and eventually affected the rest of the world replaced economies based on manual labor with economies dominated by machine tools. Beginning with the mechanization of textile manufacturing, fast-paced technological progress in other industries from the mid-19th century continued into the early 20th century and sparked unprecedented socioeconomic changes. The First World War spread new technology even wider and shaped the modern world. It also laid the seeds of the Second World War, another high point of technological escalation.

In post-industrial economies—a term associated from the 1970s with a phase when the relative importance of manufacturing decreases and that of services and information grows—those who possess knowledge—not land, labor, or capital goods—own the new means of production. Accepting great variations within and across countries, changes from industrial to knowledge economies have since been quickened by the complex series of economic, social, technological, cultural, and political changes that followed the Second World War. Their practical expression, referred to as globalization, is seen as increasing interdependence, integration, and interaction between people in far-flung locations.

Knowledge has always been transferred in one form or another. In varying forms of complexity, this has been accomplished by imitation; storytelling; written symbols and letters; apprenticeships; primary, secondary, and tertiary schooling; on-the-job discussions with peers; maintenance of corporate libraries; and professional training and mentoring programs, among others. However, from the early 1980s, expanding technologies for distribution of data and information opened opportunities for the development of a fertile environment enabling knowledge to be identified, created, stored, shared, and used for benefit.

In the knowledge-based economies that emerged in the mid to late 1990s, information moves everywhere and its effects are pervasive. Irrespective of their nature, actors must organize themselves around information. There are three reasons why large organizations—a form of social institution involved in business (or more recently nonprofit) activities that developed from the late-1860s and is now prevalent—must become information based. The first is that the knowledge workers, who increasingly make up workforces, are not amenable to the command-and-control methods and techniques of the past. (In a knowledge workforce, the system must serve the worker.) The second, in the face of unremitting competition, is the requirement to systematize innovation and entrepreneurship, this being quintessentially knowledge work. (The implementation of knowledge management processes, systems, and applications has been shown to improve efficiency, forestall knowledge loss, and stimulate knowledge growth and creation.) The third is the imperative to come to terms with information technology: in a knowledge-based economy, an organization must decide what information it needs to conduct its affairs; if not, it will drown in data. (Typically, staff spend about 30% of their time looking for information.)

The forces of technology, globalization, and the emerging knowledge-based economy are sparking yet another revolution that is forcing large numbers of people and their organizations to seek new ways to manage themselves. Those tasked with leading must operate under the principle that the unique knowledge that knowledge workers bring to work is the key competitive differentiator. Still, the transfer of knowledge is inherently difficult even with modern knowledge management tools. Those who possess knowledge are not necessarily aware of all the potential applications of what they know. Knowledge is also "sticky" and tends to remain in people's heads. And so, organizing for knowledge management requires new structures. Box A2 summarizes recent shifts in managerial attitudes vis-à-vis work activities.

Appendix 2 **THE ROOTS OF AN EMERGING DISCIPLINE** *(continued)*

Box A2: **Old and New Knowledge Management Paradigms**

Old Paradigm

- Organizational discipline
- Vicious circles
- Inflexible organizations
- Management administrators
- Distorted communication
- Strategic business units drive product development
- Strategic learning occurs at the apex of the organization
- Assumption that most employees are untrustworthy
- Most employees are disempowered
- Tacit knowledge of most employees must be disciplined by managerial prerogative

New Paradigm

- Organizational learning
- Virtuous circles
- Flexible organizations
- Management leaders
- Open communication
- Core competencies drive product development
- Strategic learning capacities are widespread
- Assumption that most employees are trustworthy
- Most employees are empowered
- Tacit knowledge of employees is the most important factor in success, and creativity creates its own prerogative

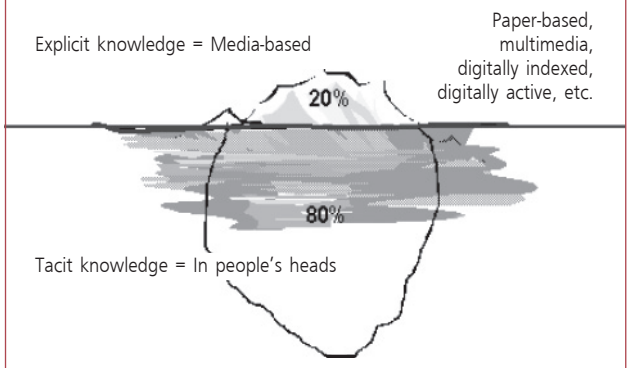
Source: Adapted from Clegg, S. et al. 1996. Management Knowledge for the Future: Innovation, Embryos, and New Paradigms. In Clegg, S. and Palmer, G., eds. *The Politics of Management Knowledge*. Sage: London.

Appendix 3 **NOTIONS OF KNOWLEDGE MANAGEMENT**

What Is Knowledge?

Data are facts, and information is interpreted data. Knowledge is created and organized by flows of information, shaped by their holder. It is tacit or explicit. Tacit knowledge is nonverbalized, intuitive, and unarticulated knowledge that people carry in their heads. It is hard to formalize and communicate because it is rooted in skills, experiences, insight, intuition, and judgment, but it can be shared in discussion, storytelling, and personal interactions. It has a technical dimension, which encompasses skills and capabilities referred to as know-how. It has a cognitive dimension, which consists of beliefs, ideals, values, schemata, or mental models. Explicit knowledge is codified knowledge that can be expressed in writing, drawings, or computer programs, for example, and transmitted in various forms. Tacit knowledge and explicit knowledge are mutually complementary forms of meaning. Figure A3.1 exemplifies the iceberg metaphor used to describe the hidden nature of tacit knowledge.

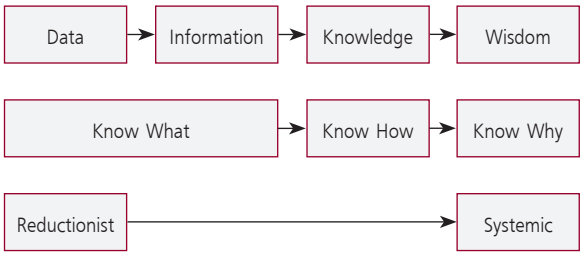
Figure A3.1: **Knowledge Assets**



Model of Learning Progression

Forms of meaning such as data and information are more rudimentary than knowledge. Knowledge is more rudimentary than wisdom. Data and information are associated with forms of knowing that are specific and limited. Knowledge is systemic and integrates reason, values, intellect, and intuition. The typical model of learning progression locates knowledge in relation to other forms of meaning. Figure A3.2 describes stages in human learning.

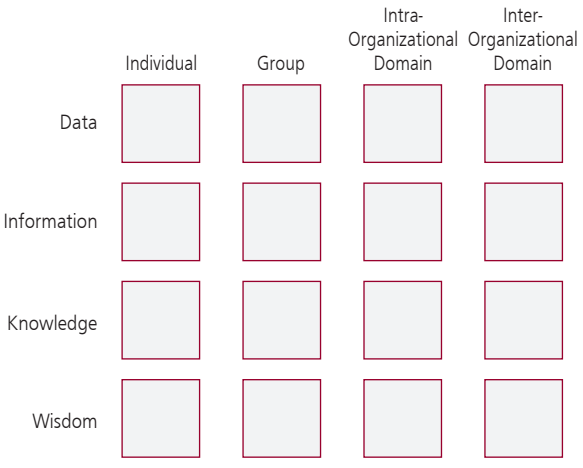
Figure A3.2: **Model of Learning Progression**



Knowledge Agents

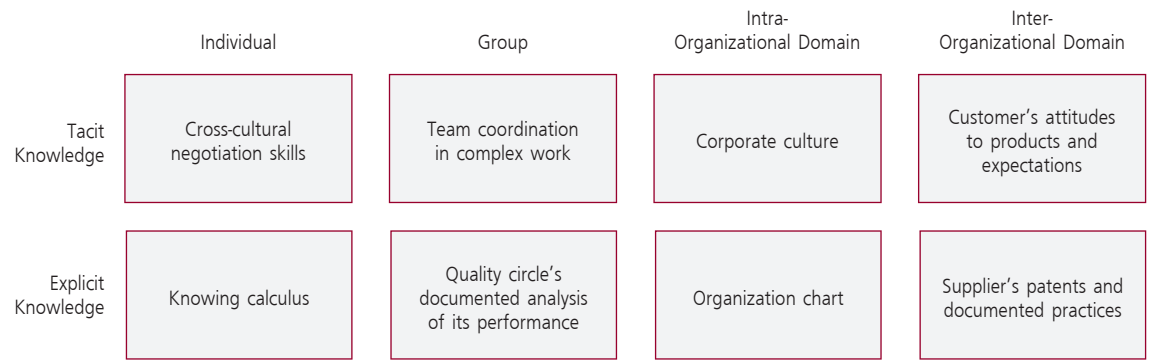
Most models of knowledge management assume four agents of knowledge, namely the individual, the group, the organization, and the inter-organizational domain. They view knowledge and its creation as a spiral process from the individual to the group, the organization, and sometimes the inter-organizational domain. Figure A3.3 shows that each agent holds distinct forms of meaning and performs work that the others cannot. Figure A3.4 reveals how knowledge is generated by interplay.

Figure A3.3: **Knowledge Agents**



Appendix 3 **NOTIONS OF KNOWLEDGE MANAGEMENT** *(continued)*

Figure A3.4: **Knowledge Management Model**



Source: Hedlund, G. and Nonaka, I. 1993. Models of Knowledge Management in the West and Japan. In Lorange, P. et al, eds. *Implementing Strategic Processes: Change, Learning, and Cooperation*. Macmillan: London.

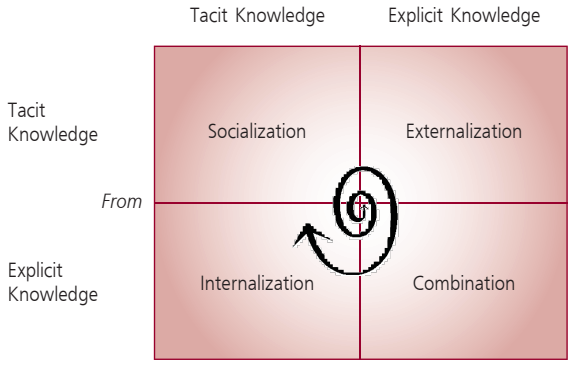
Modes of Knowledge Creation

In large organizations, knowledge is created through continuous dialogue on tacit and explicit knowledge via four patterns of interactions: (i) socialization, (ii) externalization, (iii) combination, and (iv) internalization.

Figure A3.5 frames the process of knowledge creation. Socialization is the process of creating common tacit knowledge through interactions including observation, imitation, or apprenticeships. Externalization is the process of articulating tacit knowledge into explicit knowledge by means of metaphors, analogies, or sketches. Combination is the process of assembling new and existing explicit knowledge into systemic knowledge such as a set of specifications for the prototype of a new product. Combination involves combining explicit knowledge through meetings and conversations or using information systems. Internalization converts explicit knowledge into tacit knowledge. Externalization converts tacit knowledge into explicit knowledge.

There are five conditions to encouraging the process of knowledge creation: (i) intention, (ii) autonomy, (iii) creative chaos, (iv) redundancy, and (v) requisite variety. Managers must be committed to accumulating, exploiting, and renewing the knowledge base within the organization and be able to create management systems that will facilitate the process. New ideas usually develop at the individual level, rather than at the group or organization levels, and the individuals generating it must be given scope to follow their initiatives. This process of exploration can be encouraged by creative chaos, where flux and crisis cause people to reconsider precepts at a fundamental level. Incentives can then be given to exchange knowledge rather than ration or hoard it. The organization should be made to be conducive to this.

Figure A3.5: **Modes of Knowledge Creation**



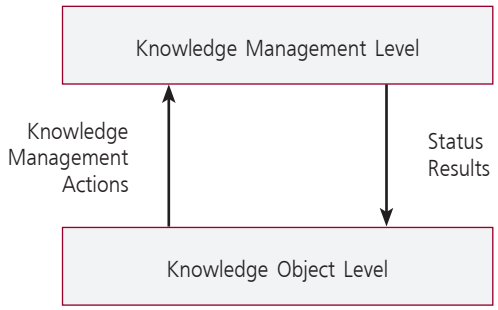
Source: Adapted from Nonaka, Ikujiro. 1994. A Dynamic Theory of Organizational Knowledge Creation. *Organization Science* (5:1), 14–37.

Knowledge Management Levels

Management implies a set of activities directed at an object. Figure A3.6 defines two aspects of knowledge management: a knowledge management level dealing with a knowledge object level.

Appendix 3 **NOTIONS OF KNOWLEDGE MANAGEMENT** *(continued)*

Figure A3.6: **Levels in Knowledge Management**



If knowledge is an organizational asset, as resource-based views of organizations suggest, its management will need to live up to objectives that are common to all resources. Typically, these objectives endeavor to make sure that the resource is (i) delivered at the right time, (ii) available at the right place, (iii) present in the right shape, (iv) obtained at the lowest possible cost, and (v) of the required quality. Apart from the question of how to achieve this, it must be understood that knowledge does have properties that set it apart from other resources. It is intangible and difficult to measure, volatile, and embodied in agents with wills. It is not consumed in a process; conversely, it can increase with use. It cannot always be bought on the market; on the contrary, its development can require lead time. It is nonrival in that it can be used by different processes simultaneously. And, its use can have wide-ranging impacts.

Knowledge Management Architecture

The architecture of knowledge management must be strengthened in support of organization-wide initiatives. Figure A3.7 shows its four pillars to be leadership, organization, technology, and learning. Figure A3.8 exemplifies the need to seek balanced interconnectivity.

Leadership

Leadership develops the strategies necessary to position for success in an environment. Those strategies determine vision and must align knowledge management with business tactics to drive the values of knowledge management throughout the organization. Focus must be placed on building executive support. Successful implementation of a knowledge management strategy requires champions at or near the top of an organization.

Organization

Respect for knowledge must pervade an organization. Introducing knowledge management requires organizational change, and knowledge management inevitably acts as a catalyst to transform the organization's culture. The increasing value placed on capable people, rising job complexity, and the universal availability of information on the Internet are fundamental changes contributing to attempts to leverage knowledge management solutions. To begin to change an organization, knowledge management must be integrated into business processes and connected to changes in organizational culture.

Technology

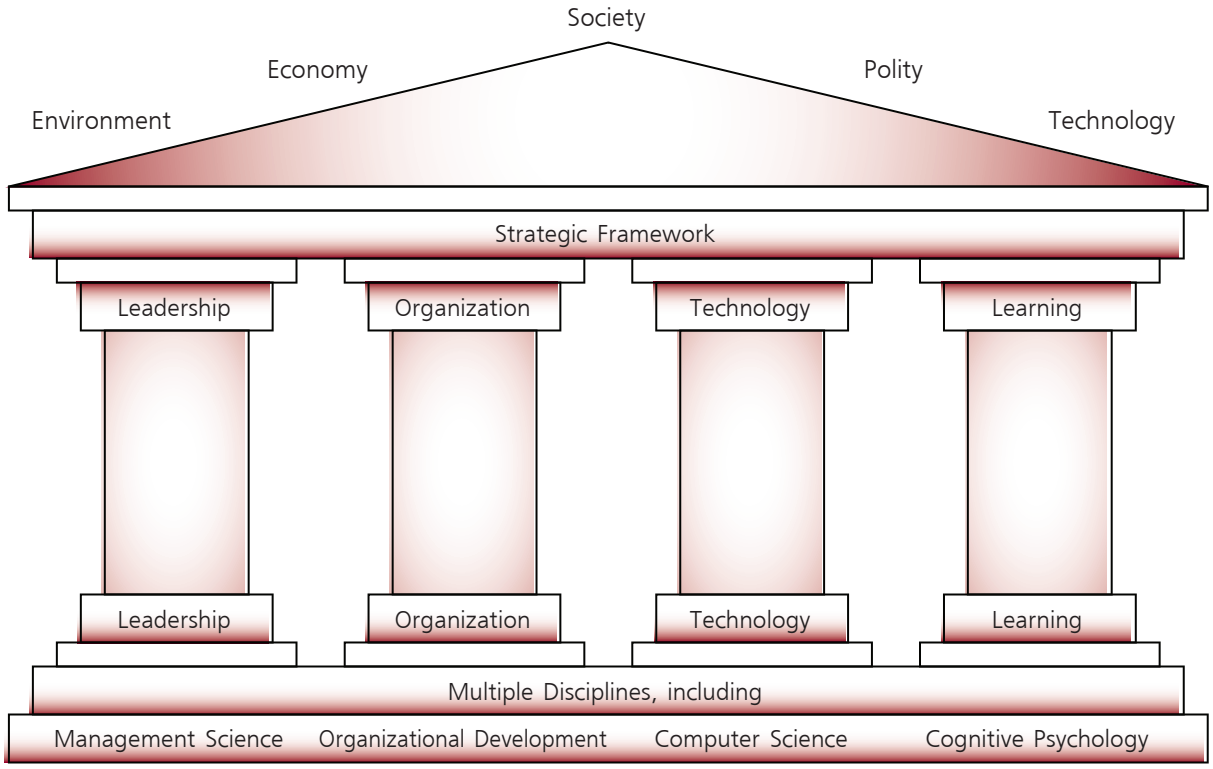
Knowledge management tools are essential to achieving knowledge management strategies. However, any technical solution must add value to the process and achieve measurable improvements. Properly assessing and defining information technology capabilities is essential, as is identifying and deploying best-of-breed knowledge management tools to match and align with the organization's requirements. Ten processes that must be built collectively make up full-function knowledge management: (i) capture and store, (ii) search and retrieve, (iii) send critical information to individuals or groups, (iv) structure and navigate, (v) share and collaborate, (vi) synthesize, (vii) profile and personalize, (viii) olve or recommend, (ix) integrate, and (x) maintain.

Learning

People are responsible for using knowledge management tools in support of organizational performance. Organizational learning must be addressed with approaches such as increasing internal communications, promoting cross-functional teams, and creating a learning community. Learning is an integral part of knowledge management. In this context, learning can be described as the acquisition of knowledge or a skill through study, experience, or instruction. Organizations must recognize that people operate and communicate through learning that includes the social processes of collaborating, sharing knowledge, and building on each

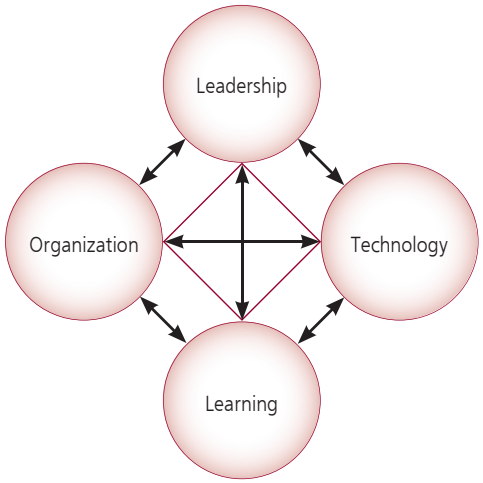
Appendix 3 **NOTIONS OF KNOWLEDGE MANAGEMENT** *(continued)*

Figure A3.7: **Knowledge Management Architecture**



Source: Adapted from Stankosky, Michael 2000. A Theoretical Framework. *KM World*. Special Millennium Issue.

Figure A3.8: **Balanced Knowledge Management**



other's ideas. Managers must recognize that knowledge resides in people and that knowledge creation occurs through the process of social interaction.

Core Knowledge Activities

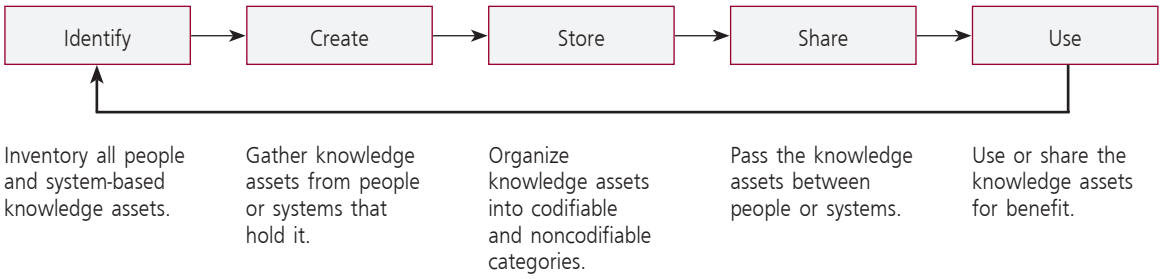
Knowledge management activities can be described in relation to many different disciplines and approaches but almost all focus on five basic activities: (i) identify, (ii) create, (iii) store, (iv) share, and (v) use. Figure A3.9 interprets the routine associated with core knowledge activities.

Knowledge Management Activities

Treating knowledge as a resource opens up promising opportunities for knowledge management activities. These can be split into four categories, each

Appendix 3 **NOTIONS OF KNOWLEDGE MANAGEMENT** *(continued)*

Figure A3.9: **Core Knowledge Activities**



impacting a particular time segment of the knowledge management cycle. They relate to (i) reviewing, (ii) conceptualizing, (iii) reflecting, and (iv) acting.

Reviewing involves checking what has been achieved in the past and what the current state of affairs is. Conceptualizing entails sitting back, trying to grasp the state of knowledge in the organization, and analyzing the strong and weak points of its knowledge architecture. Reflecting calls for directing toward improvements by selecting the optimal plans for correcting bottlenecks and analyzing them for risks that might accompany their implementation. Acting is the actual effectuation of the plans selected. Figure A3.10 delineates the knowledge management cycle and the methods and techniques that drive it.

Most of the time, the actions will be one or a combination of generic operations that involve (i) developing knowledge, i.e., buying knowledge, establishing learning programs; (ii) distributing knowledge, i.e., channeling knowledge to the points of action, preparing manuals, connecting networks; (iii) combining knowledge, i.e., finding synergies, reusing existing knowledge; and (iv) consolidating knowledge, i.e., preventing knowledge from disappearing, instituting tutoring programs, establishing knowledge transfer programs.

Cultural Roadblocks to Knowledge Management Success

Culture has been characterized as the glue that holds organizations together. It can, for instance, be a critical success factor in the execution of strategy. It can play a crucial role in determining the success or failure of operations. At the micro level, there are close relationships between organizational culture, employee satisfaction, and job commitment and turnover. As one might expect, organizational culture plays a pivotal role in knowledge management.

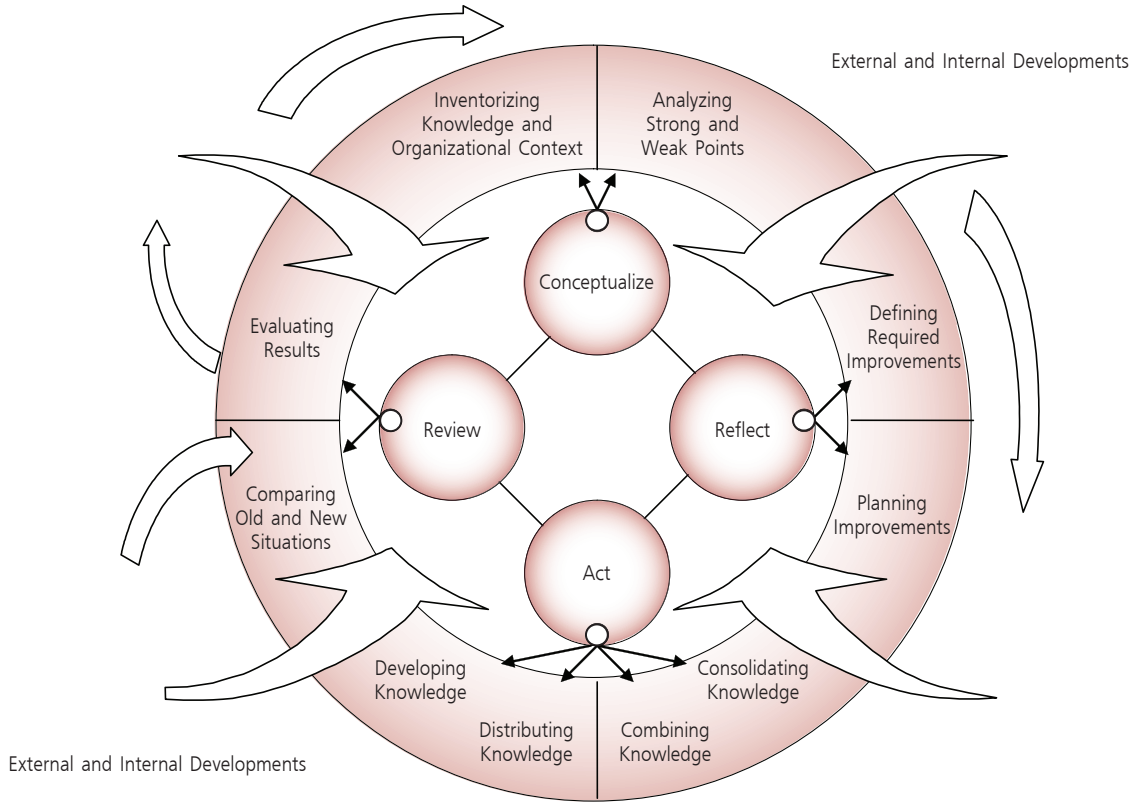
Organizational culture is shaped by many factors, some of which can be changed while others are intractable. Organizations adapt to their external environments by designing responsive structures and systems, adopting relevant technologies, and harvesting appropriate skills and qualities. Though constrained by their external environments, organizations make choices that, collectively, eventually define their cultures. These choices are influenced by the mission, values, and norms of each organization and the assumptions of its leaders. In due course, the choices will also define the success or failure of knowledge management initiatives. Thus, knowledge is inextricably bound to human cognition, and its management will occur within a structured psychological and social context. Figure A3.11 juxtaposes the psychological and social barriers that impact knowledge sharing.

Psychological Factors

Knowledge represents a source of power to people. By sharing valuable knowledge with a colleague, one runs the risk of diminishing one's value in an organization; potentially, one is no longer indispensable. There are three conditions under which, as an employee, one will share knowledge: (i) reciprocity, (ii) repute, and (iii) altruism. One's time and energy are finite and one will more often than not take the time to help a colleague if one is likely to receive valuable knowledge in return, either now or in the future. In addition, it is in one's interest to be viewed as an expert in an organization; if one does not have a reputation for expertise,

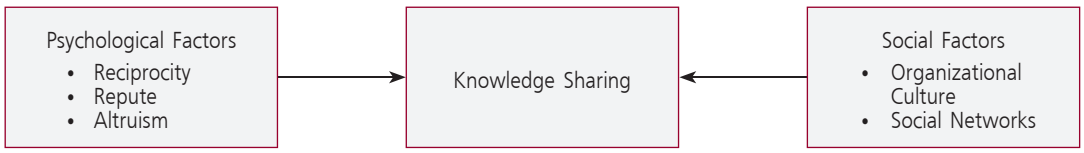
Appendix 3 **NOTIONS OF KNOWLEDGE MANAGEMENT** *(continued)*

Figure A3.10: **Knowledge Management Cycle**



Source: Wiig, K., de Hoog, R., van der Spek, R. 1997. Supporting Knowledge Management: A Selection of Methods and Techniques, *Expert Systems with Applications*, (13:1), 15–27.

Figure A3.11: **Barriers Affecting Knowledge Sharing**



one's knowledge cannot represent a source of power. Likewise, before sharing, one needs to be certain that colleagues will acknowledge the source of knowledge and will not claim credit for it. But, in a process akin to self-gratification, there is also the need to talk to others about subjects that one finds fascinating and important.

Following resource-based views of organizations, which identify knowledge as potentially the primary source of sustainable competitive advantage, one can imagine that there are internal markets for knowledge within organizations. Knowledge is exchanged between buyers and sellers, with reciprocity, repute, and altruism functioning as payment mechanisms. Trust, however, is an essential condition to the smooth functioning of such a market.

Appendix 3 **NOTIONS OF KNOWLEDGE MANAGEMENT** *(continued)*

This trust can exist at an individual level, through close working relationships between colleagues, or at group and organization levels, by the creation of a cultural context that encourages and rewards knowledge sharing and discourages and penalizes knowledge hoarding.

Social Factors

Organizational culture, and the social networks that frame it, is the most frequently cited roadblock to knowledge management success. Based on understanding of psychological factors, the onus is on leadership to drive people-focused knowledge management and move from old to new knowledge management paradigms. People are more likely to understand and energetically support an initiative when they observe leadership behavior that is both credible and supportive. Drawing a parallel with Appendix 2, Box A2: Old and New Knowledge Management Paradigms, Box A3.1 summarizes the differences between what may be termed industrial and knowledge cultures.

Table A3.1 makes observations on organization and culture, and suggests what might lie a little beyond the knowledge culture. Interpreting Table A3.1 with reference to Appendix 2: The Roots of an Emerging Discipline, one may appreciate that (i) cultures are not static (there is movement from left to right); (ii) individuals who are absorbed in a particular culture tend to find the culture to the right a little meaningless and the culture to the left almost valueless; (iii) transition from one culture to another is not smooth; and (iv) the concepts of control, responsibility, and contribution provide interesting analytical links between cultures.

Assessing the Behavior-Performance Continuum

Within any organization there may also be a variety of cultures—shaped by characteristic differences in professional orientation, status, power, visibility, and other factors. Understanding these cultures in terms of their expected behaviors helps to appreciate why organizational units can exhibit behaviors that are opposite to the organization's expressed mission, values, and norms. At a more pressing level, behaviors can also temper what cooperation is displayed in a group. Thus, cultures create behaviors, some of which can result in obstructive (or at least nonconstructive) interactions that limit knowledge sharing and, in the fullness of time, hold back knowledge management. Assessing the behavior-performance continuum of key stakeholders in knowledge management initiatives will spell the difference between success or failure. It transcends the notion of knowledge flows that is fundamental to knowledge management initiatives and has deep implications for fostering ownership among those involved in associated efforts.

Early Pathways to Progress

Figure A3.12 poses simple questions to locate an organization's progress toward knowledge management. Box A3.2 highlights early pathways to progress.

Box A3.1: **Industrial and Knowledge Culture Paradigms**

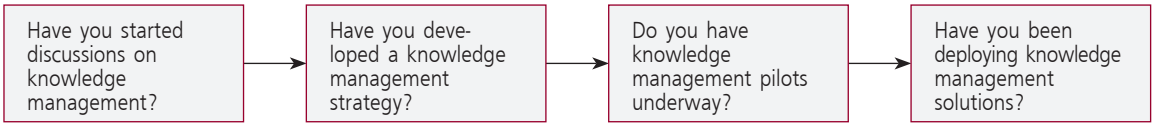
Industrial Culture	Knowledge Culture
▪ Limited information distribution	▪ Wide information distribution
▪ Many management levels	▪ Few management levels
▪ Uneven responsibility	▪ Shared responsibility
▪ Rules based	▪ Principles based
▪ Structured	▪ Unstructured
▪ Risk averse	▪ Able to take some risks
▪ Inward orientation	▪ Outward orientation
▪ Occasional training	▪ Continuous learning
▪ Financial focus	▪ Marketing focus
▪ Political	▪ Open

Appendix 3 **NOTIONS OF KNOWLEDGE MANAGEMENT** *(continued)*

Table A3.1: **Organization and Culture**

	Feudal Culture	Industrial Culture	Knowledge Culture	Creativity Culture
Organization	Territorial	Hierarchies	Networks	Flows
Focus	Land	Profit	Customer	Innovation
Culture	Domination Control	Control Responsibility	Responsibility Contribution	Contribution Creativity
Key Measure	Quantity	Efficiency	Effectiveness	Quality of Life

Figure A3:12: **Where Are You in the Journey?**



Box A3.2: **Early Signposts to Knowledge Management**

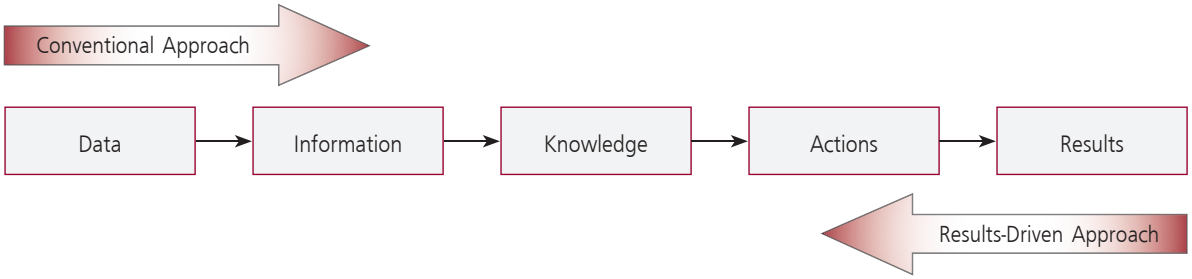
- Knowledge products and services are strategic and must be accounted for and valued accordingly.
- Knowledge management requires integration and balancing of leadership, organization, technology, and learning in an organization-wide setting.
- Knowledge management must both meet the requirements of and conditions for success and the desired benefits and expectations of the organization.
- Organizational culture affects knowledge management, especially at the lower levels.
- Streamlined organizations with strong organizational cultures have a higher chance of success in knowledge management.
- An atmosphere of trust is a precondition to knowledge sharing.
- Proposals for knowledge management should include both soft and hard measures if managers are to support knowledge management initiatives.
- The success factors for knowledge management are dominated by management concerns for people, process, and outcome orientation. They are interspersed throughout the knowledge management architecture of leadership, organization, technology, and learning.

Getting Results from Knowledge Management

First and foremost, knowledge management is about results. Figure A3.2 described the typical model of learning progression under which data are analyzed to generate information, information is placed in context to produce knowledge, and evaluated knowledge begets wisdom (or informed actions). However, there are limits to looking upstream and concentrating on the supply of knowledge. It can result in the creation of unfocused data and information whereby strategy is blindly driven by technology. It is also helpful to examine the desired results and deduce what knowledge will be required to accomplish them. Figure A3.13 demonstrates how awareness of the stages in human learning can be exercised to imbed the relationships between forms of meaning to focus on results. It reinforces the idea that knowledge management is primarily a matter of people, process, and outcome orientation.

Appendix 3 **NOTIONS OF KNOWLEDGE MANAGEMENT** *(continued)*

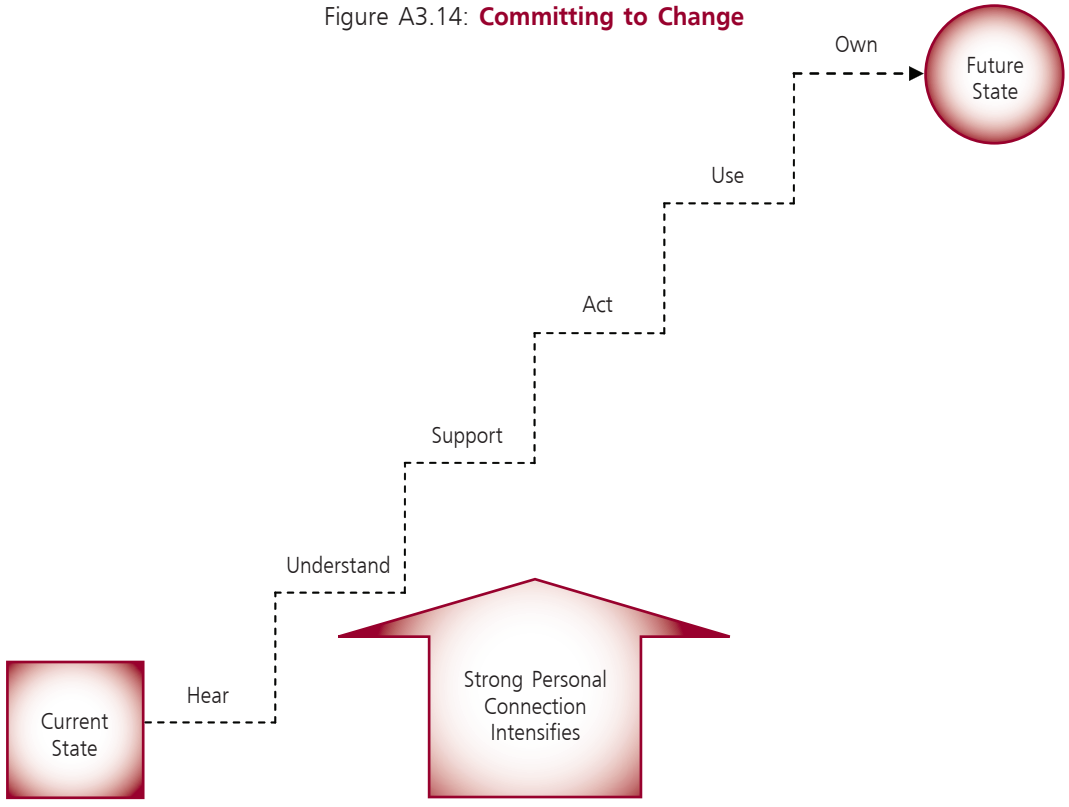
Figure A3.13: **A Results-Driven Knowledge Management Model**



Building Commitment

As part of an approach to managing change programs, it is helpful to observe the stages that people live through before committing to a new way of working. From simple awareness, they must first hear, then understand the change. Based on the actions of leaders and peers, they then opt to support the change and can be seen to act in the desired manner. Commitment is built when they use the new way of working in regular activities and finally own the change in their environment. At every stage, commitment is fragile and invokes active sponsorship from leaders. Figure A3.14 illustrates the process of committing to change.

Figure A3.14: **Committing to Change**



Appendix 4 **MONITORING FRAMEWORK FOR KNOWLEDGE MANAGEMENT IN ADB**

Goal	Enhance the capacity of ADB and its DMCs to reduce poverty.
Outcomes	Increased amount of more relevant and high-quality knowledge being assimilated and transferred to DMCs and other stakeholders by ADB Improved learning—knowledge creation and sharing—capacity of ADB
Outputs	**Improved organizational culture for knowledge sharing** ▪ Integrate contribution to knowledge creation, sharing, storage, and dissemination in performance evaluation and review of staff at all levels. ▪ Enable staff to fully participate in implementing the knowledge management framework. **Improved management system** ▪ Integrate knowledge-related inputs and results in the managing for development results framework. ▪ Institutionalize planning and monitoring of an ADB-wide work program for knowledge products and services. ▪ Develop quality-at-entry criteria for knowledge products and services. ▪ Disband the Knowledge Management Committee. ▪ Improve evaluation of knowledge products and services. **Improved business processes and information technology solutions for knowledge capture, enrichment, storage, and retrieval** ▪ Improve processes for capturing and enriching lessons learned and good practices from operational activities. ▪ Clarify organizational and individual responsibilities. ▪ Design a corporate taxonomy. ▪ Implement information technology solutions for effective knowledge storage and retrieval. ▪ Dev elop and manage an enterprise portal. ▪ Expand and implement knowledge management applications. ▪ Develop a skills and knowledge database of staff and enhance consultant profiles. **Well-functioning communities of practice** ▪ Refine the structure and clarify the roles and responsibilities of sector and thematic committees and networks. ▪ Prepare annual reports on sector and thematic areas. **Expanded knowledge sharing, learning, and dissemination through external relations and networking** ▪ Promote strategic knowledge sharing and learning through external networks and partnerships. ▪ Implement the public communications policy. ▪ Establish the Center for Learning, Information, Communication, and Knowledge at ADB.

Source: ADB. 2004. *Knowledge Management in ADB*. Manila.

Appendix 5 **LEARNING LESSONS IN ADB: FRAMEWORK FOR ASSESSMENT**

Table A5.1: **Organizational Competence for Knowledge Management**

Level	Strategy Development	Management Techniques	Collaboration Mechanisms
Level 5	▪ ADB's knowledge products and services are clearly identified. ▪ Knowledge management is embedded in ADB's business plans. ▪ A set of knowledge management tools is available and well communicated, and the capacity to apply them is strengthened actively.	▪ Managers recognize and reinforce the link between knowledge management and organizational performance. ▪ Managers regularly apply relevant knowledge management tools and act as role models. ▪ Terms of reference for staff contain references to knowledge management.	▪ Collaboration is a defining principle across ADB. ▪ Networks have clearly defined roles and responsibilities and tangible deliverables, and conduct annual meetings.
Level 4	▪ Discussions of ADB's knowledge products and services are frequent. ▪ A knowledge management strategy exists but is not imbedded in ADB's business plans. ▪ A set of knowledge management tools is available and understood by most staff.	▪ Knowledge management is considered to be everyone's responsibility. ▪ A few positions are dedicated to knowledge management. ▪ Managers increasingly display leadership behaviors that encourage knowledge management. ▪ There are incentives for knowledge management.	▪ Networks are organized around business needs and are framed by a governance document. ▪ Relevant management tools for collaboration are in place and well used. External parties are included in some networks.
Level 3	▪ There are ongoing discussions about developing a knowledge management strategy. ▪ A few job descriptions include knowledge capture, sharing, and distillation. ▪ A broad range of knowledge management tools are used across ADB.	▪ Knowledge management is viewed as the responsibility of a specialist working group. ▪ A few managers talk the talk and sometimes walk the walk.	▪ Staff use networks and working groups to achieve results. ▪ Peers help peers across ADB's organizational boundaries. ▪ Formal collaboration mechanisms are created and recognized.
Level 2	▪ Many staff say that sharing knowledge is important to ADB's success. ▪ A few staff use knowledge management tools to learn and share.	▪ A few managers give staff the time to share knowledge and learn, but there is little visible support from the top.	▪ Ad hoc personal networking to achieve objectives is used by individual staff members who know one another. This is increasingly recognized as vital to ADB.
Level 1	▪ Isolated staff with a passion for knowledge management begin to talk about how important—and difficult—it is.	▪ Knowledge management is viewed as a fad. ▪ Many managers still believe that knowledge is power. ▪ Managers think that networking leads to lack of accountability.	▪ Knowledge hoarders seem to be rewarded. ▪ There are few cross-cutting collaborations. ▪ Silos (hierarchical categories) are hard to break down. ▪ Asking for help is considered to be a weakness rather than a strength.

Source: Based on Learning to Fly – Chris Collison and Geoff Parcell. 2006. *KM Self-Assessment*. Available: http://www.chriscollison.com/l2f/index.html
Note: Levels 5–1 suggest, in declining order of accomplishment, performance in five areas of organizational competence for knowledge management.

Appendix 5 **LEARNING LESSONS IN ADB: FRAMEWORK FOR ASSESSMENT** *(continued)*

	Knowledge Sharing and Learning	Knowledge Capture and Storage
	▪ Prompts for learning are built into ADB's business processes. ▪ Staff routinely find out who knows what, inside and outside ADB, and talk to them. ▪ A common language, templates, and guidelines support effective knowledge management.	▪ Networks act as guardians of knowledge products and services. ▪ Knowledge is easy to access and retrieve. ▪ Selected knowledge products and services are sent to potential users in a systematic and coherent manner. ▪ High priority knowledge products and services have multiple managers who are responsibility for updating, summarizing, and synthesizing them. ▪ Exit interviews and handovers are used systematically.
	▪ Learning before, during, and after is the way things are done in ADB. ▪ Beneficiaries and partners participate in review sessions. ▪ External knowledge plays a role in shaping program or project processing and administration.	▪ Key knowledge is kept current and easily accessible. ▪ An individual staff member acts as the guardian of each knowledge asset, and encourages people to contribute. Many do.
	▪ Staff can easily find out what ADB knows. Examples of knowledge sharing and knowledge use are highlighted and recognized. ▪ Peers help peers across ADB's organizational boundaries.	▪ Networks take responsibility for knowledge management and store it in one location in a common format. Some knowledge is summarized for easy access by others. ▪ Searching knowledge products and services before embarking on a program or project is encouraged, as is sharing lessons afterwards. ▪ Exit interviews and handovers become common currency.
	▪ Individual staff members learn before doing and program review sessions. ▪ They sometimes capture what they learn for the purpose of sharing but few colleagues access it in practice.	▪ A few working groups capture lessons learned after a program or project and look for knowledge before starting a program or project. ▪ There is potential access to much knowledge, but it is not well summarized.
	▪ Staff are conscious of the need to learn from what they do but are rarely given time. ▪ Sharing is for the benefit of specific working groups.	▪ Individual staff members take the time to capture lessons but do so in a confusing variety of formats. ▪ Most staff do not contribute to knowledge products and services, and few search them. ▪ No exit interviews and few handovers take place.

Appendix 5 **LEARNING LESSONS IN ADB: FRAMEWORK FOR ASSESSMENT** *(continued)*

Table A5.2: **Knowledge Management Risk Factors**

	Green
Internal Collaboration	ADB drives performance through internal collaboration rather than internal competition. A clear link can be seen between individual reward and collective performance.
Performance Management	There is a clear and visible system of setting clear targets, measuring results, and rewarding performance. Everyone is part of this system.
Team and Project Focus	The work of ADB is largely divided into projects with internal customers, accountable project leaders, project teams, deliverables, and deadlines.
Empowerment	There is full empowerment at all levels. Staff are empowered to make all relevant decisions within clear boundaries.
High-Level Sponsorship	Knowledge management has an active sponsor in the highest executive levels of ADB.
Accountable Team	Delivery of knowledge management in the organization has been given, as an objective, to an accountable individual supported by a dedicated team with a budget. This team can drive change.
Holistic Approach	The approach to knowledge management is taken as a balance of people, process, and technology, with equal weight and budget given to all three elements. "Connect" and "collect" approaches are addressed.
Assessment	A detailed external assessment has been held, giving a clear view of the strengths and weaknesses of current approaches and corrective actions.
Strategy	A knowledge management strategy is in place and fully endorsed by senior management. This sets direction for a knowledge management plan, objectives, and deliverables and aims toward the creation of a sustainable knowledge management system.

Source: Based on Knoco Ltd. 2006. *Knoco KM Risk Calculator*. Available: http://www.knoco.co.uk/

Note: Green final score = On track; Yellow final score = Seek advice; Red final score = Conduct knowledge audit and elaborate knowledge management strategy.

Appendix 5 **LEARNING LESSONS IN ADB: FRAMEWORK FOR ASSESSMENT** *(continued)*

Table A5.2: **Knowledge Management Risk Factors** *(continued)*

	Yellow	Red	
	Although collaboration is encouraged and partially rewarded, there is also a level of reward for internal competition. As a result, people are subjected to conflicting motivational pressures.	ADB drives performance through internal competition. Individuals, teams, and business units are rewarded through competition and there are no incentives to collaborate and share.	Cultural
	Although some elements of a performance management system are in place, this is by no means uniform or rigorously applied.	There are no clear targets, no measurement of performance, and no clear linkage between reward and measurable performance.	
	Some parts of ADB work in projects and on teams but many parts do not.	There is very little project work or team work. Most staff are individual contributors.	
	There is a degree of empowerment but there are still many instances of a command-and-control approach.	The culture is one of command and control. The majority of decisions are escalated to management.	
	Sponsorship rests at the divisional level rather than the highest executive levels. A high-level sponsor may exists but is not providing active championship.	There is no high-level sponsor. Knowledge management is pushed from below, not from above.	Organizational
	A team may exist but may lack resources, budget, or experienced leadership, or may be at the wrong level to effect organizational change.	There is no single accountable person or dedicated team. Knowledge management is delivered as an ad hoc project or through an informal community approach.	
	Although all elements are being addressed, there is a significant bias towards one (viz., technology, or processes, or communities, or knowledge bases, etc.).	The approach to knowledge management is skewed toward introduction of new technology, communities of practice, explicit knowledge capture, etc. to the exclusion of the other elements of knowledge management.	
	Some level of assessment has been conducted, but this was either self-administered, or hurried, or did not lead to a list of actions.	There has been no external assessment. Knowledge management interventions are driven by a subjective internal perception of what is needed.	
	There is a knowledge management strategy, but it is either high-level, incomplete, or does not feed through into a clear implementation plan.	There is no knowledge management strategy. Individual knowledge management interventions are not selected within a strategic framework.	

Appendix 6 **EXPECTED OUTCOMES OF NEAR-TERM OED KNOWLEDGE MANAGEMENT INITIATIVES**

Design Summary	Performance Targets/Indicators	Data Sources/Reporting Mechanisms	Assumptions and Risks
Outcomes			
▪ Increased client awareness among staff of the Operations Evaluation Department (OED)	▪ Increased recognition of client orientation for products and services planned and delivered by OED in 2006–2007	▪ OED proposed evaluation approach papers indicating stakeholder involvement and dissemination strategy (during and after the evaluation) ▪ Client feedback ▪ Knowledge management team assessment and progress reports ▪ Website use statistics ▪ Knowledge management team records of activities	▪ OED Management emphasizes client orientation as a strategic focus. ▪ Strong OED Management support for knowledge management initiatives ▪ Staff time and other resources are allocated for knowledge management and recognized as priorities. ▪ Support from ADB's Department of External Relations and Knowledge Management Center
▪ Increased dissemination of evaluation results and products to internal and external audiences and clients	▪ Increased awareness of staff of OED ▪ Major evaluation findings, lessons, and recommendations disseminated internally and externally	▪ OED proposed evaluation approach papers indicating stakeholder involvement and dissemination strategy (during and after the evaluation) ▪ Client feedback ▪ Knowledge management team assessment and progress reports ▪ Website use statistics ▪ Knowledge management team records of activities	▪ OED Management emphasizes client orientation as a strategic focus. ▪ Strong OED Management support for knowledge management initiatives ▪ Staff time and other resources are allocated for knowledge management and recognized as priorities. ▪ Support from ADB's Department of External Relations and Knowledge Management Center
▪ Increased learning and exchanges in OED and ADB on evaluations, methods, approaches, findings, and lessons	▪ Increased utilization of OED evaluation findings by ADB's operations departments ▪ Increased knowledge of evaluation within OED and ADB ▪ Increased use of OED's website (top 25 most accessed at www.adb.org) ▪ Selected major evaluation reports and publications among ADB's top 100 most downloaded documents	▪ OED proposed evaluation approach papers indicating stakeholder involvement and dissemination strategy (during and after the evaluation) ▪ Client feedback ▪ Knowledge management team assessment and progress reports ▪ Website use statistics ▪ Knowledge management team records of activities	▪ OED Management emphasizes client orientation as a strategic focus. ▪ Strong OED Management support for knowledge management initiatives ▪ Staff time and other resources are allocated for knowledge management and recognized as priorities. ▪ Support from ADB's Department of External Relations and Knowledge Management Center

Source: 2006. *Establishment of a Knowledge Management Unit in OED.* ADB, Manila.

Appendix 7 **KNOWLEDGE AUDITING**

The Uses of Knowledge Auditing

A knowledge audit applies the principles of information resources management to

- identify the knowledge products and services needed to support individual, group, organizational, and inter-organizational activities and move toward the goal and objectives of the organization;
- make out what knowledge products and services exist, demarcate their flows and networks, and reveal examples of good practice and barriers to it;
- determine the gaps that need to be filled; and
- locate areas for improvement.

Identifying Knowledge Needs

The first step involves understanding accurately what knowledge products and services the organization and the individuals and groups within it need. Approaches include questionnaire-based surveys, interviews and facilitated group discussions, or a combination of these. In elucidating needs, it is important to think about the goal and objectives of the organization, concentrate on the knowledge products and services that are vital to their accomplishments, and examine the core processes, activities, and decisions that individuals and groups perform daily. Table A7 structures the knowledge system ingredients associated with identifying knowledge needs.

Drawing up a Knowledge Inventory

A knowledge inventory is a stock-taking to identify and locate knowledge products and services. It involves counting and categorizing an organization's tacit and explicit knowledge. For explicit knowledge, stock-taking will query as follows:

- What knowledge products and services there are, e.g., numbers, types, and categories of documents; databases; libraries; intranet websites; links; and subscriptions to external resources, etc.?
- Where the knowledge products and services are, e.g., locations in the organization and in its various systems?
- Organization and access, e.g., how are knowledge products and services organized and how easy is it for staff to find and access them?
- Purpose, relevance, and quality, e.g., why do these resources exist, how relevant and appropriate are they for that purpose, are they of good quality, e.g., up-to-date, reliable, evidence-based, etc.?
- Usage, e.g., are they actually being used, by whom, how often, and what for?

For tacit knowledge, the inventory will focus on staff and examine

- who there is, e.g., numbers and functions of people;
- where staff are, e.g., locations in teams, departments, and buildings;

Table A7: **Knowledge System Ingredients**

Knowledge Object Characteristic	Form of Knowledge	Form of Meaning
Describe the knowledge object that you want to manage: ▪ What is it? ▪ Where is it? ▪ Who owns it? ▪ Who needs it? ▪ How will it be used?	▪ Tacit knowledge ▪ Explicit knowledge	▪ Data ▪ Information ▪ Knowledge
Knowledge Agent Level	**Knowledge Management Level**	**Pillar Supported**
▪ Individual ▪ Group ▪ Intra-organizational ▪ Inter-organizational	▪ Strategic ▪ Tactical ▪ Operational	▪ Leadership ▪ Organization ▪ Technology ▪ Learning

Appendix 7 **KNOWLEDGE AUDITING** *(continued)*

- what staff do, e.g., job types and levels;
- what staff know, e.g., academic and professional qualifications, core knowledge, and experience; and
- what staff learn, e.g., on-the-job training, learning, and development.

Identifying Knowledge Flows

An analysis of knowledge flows examines how knowledge products and services move around an organization. It covers both tacit and explicit knowledge as well as people, processes, and systems. Regarding staff, the focus will be on attitudes toward and skills in knowledge sharing and use. Eliciting information on these will usually require a combination of questionnaire-based surveys followed up with individual interviews and facilitated group discussions. Regarding processes, it will be important to look at how staff go about their daily work activities and the extent to which knowledge seeking, sharing, and use are part of those activities. It will also be necessary to look at what policies and practices affect flows and invite organizational change. Regarding systems, an assessment will be required of key capabilities in technical infrastructure including information technology systems, content management, accessibility and ease of use, and actual levels of use.

Creating a Knowledge Map

There are two approaches to knowledge mapping. The first charts knowledge products and services, recording in graphic form what exists in an organization and where it is to be found. The second includes knowledge flows, revealing how knowledge product and services move around the organization.

Outputs of Knowledge Audits

Outputs of knowledge audits will typically include

- a core process and knowledge chart;
- a supplier and user matrix;
- a knowledge map or tree;
- an initial set of information standards;
- a sample set of inventory records;
- a detailed report, including charts, diagrams and tables of knowledge products and services; and
- an agenda for organizational change.

Appendix 8 **KNOWLEDGE PERFORMANCE METRICS**

Table A8.1: **Common Knowledge Performance Metrics**

Level	Metric
Outcome	▪ Time, money, or personnel time saved as a result of implementing initiative ▪ Percentage of successful programs compared with those before knowledge management implementation
Output	▪ Usefulness surveys, where users evaluate how knowledge management initiatives have helped to accomplish their objectives ▪ Usage anecdotes, where users describe (in quantitative terms) how the knowledge management initiatives have contributed to the business objectives
System	▪ Latency (response times) ▪ Number of downloads ▪ Number of site accesses ▪ Dwell time per page or section ▪ Usability survey ▪ Frequency of use ▪ Navigation path analysis ▪ Number of help desk calls ▪ Number of users ▪ Frequency of use ▪ Percentage of total employees using system

Source: 2001. U.S. Department of the Navy. *Metrics Guide for Knowledge Management Initiatives*.

Table A8.2: **Knowledge Performance Metrics by Knowledge Management Tool**

Knowledge Management Initiative	System Measure	Output Measure	Outcome Measure
Best Practice Directory	▪ Number of downloads ▪ Dwell time ▪ Usability survey ▪ Number of users ▪ Total number of contributions ▪ Contribution rate over time	▪ Usefulness survey ▪ Anecdotes ▪ User ratings of contribution value	▪ Time, money, or personnel time saved by implementing best practice ▪ Number of groups certified in the use of the best practice ▪ Rate of change in operating costs
Lessons Learned Database	▪ Number of downloads ▪ Dwell time ▪ Usability survey ▪ Number of users ▪ Total number of contributions ▪ Contribution rate over time	▪ Time to solve problems ▪ Usefulness survey ▪ Anecdotes ▪ User ratings of contribution value	▪ Time, money, or personnel time saved by applying lessons learned from others ▪ Rate of change in operating costs
Communities of Practice or Special Interest Groups	▪ Number of contributions ▪ Frequency of update ▪ Number of members ▪ Ratio of the number of members to the number of contributors (conversion rate)	▪ Number of apprentices mentored by colleagues ▪ Number of problems solved	▪ Savings or improvement in organizational quality and efficiency ▪ Captured organizational memory ▪ Attrition rate of community members versus nonmember cohort

Appendix 8 **KNOWLEDGE PERFORMANCE METRICS** *(continued)*

Table A8.2: **Knowledge Performance Metrics by Knowledge Management Tool** *(continued)*

Knowledge Management Initiative	System Measure	Output Measure	Outcome Measure
Expert or Expertise Directory	▪ Number of site accesses ▪ Frequency of use ▪ Number of contributions ▪ Contribution/update rate over time ▪ Navigation path analysis ▪ Number of help desk calls	▪ Time to solve problems ▪ Number of problems solved ▪ Time to find expert	▪ Savings or improvement in organizational quality and efficiency ▪ Time, money, or personnel time saved by leveraging expert knowledge or expertise database
Portal	▪ Searching precision and recall ▪ Dwell time ▪ Latency ▪ Usability survey	▪ Common awareness within teams ▪ Time spent gathering information ▪ Time spent analyzing information	▪ Time, money, or personnel time saved as a result of portal use ▪ Reduced training time or learning curve as a result of single access to multiple information sources ▪ Customer satisfaction (based on the value of self service or improved ability for employees to respond to customer needs)
Lead Tracking System	▪ Number of contributions ▪ Frequency of update ▪ Number of users ▪ Frequency of use ▪ Navigation path analysis	▪ Number of successful leads ▪ Number of new customers and value from these customers ▪ Value of new work from existing customers ▪ Proposal response times ▪ Proposal win rates ▪ Percentage of business developers who report finding value in the use of the system	▪ Revenue and overhead costs ▪ Customer demographics ▪ Cost and time to produce proposals ▪ Alignment of programs with strategic plans
Collaborative Systems	▪ Latency during collaborative process ▪ Number of users ▪ Number of patents/trademarks produced ▪ Number of articles published plus number of conference presentations per employee	▪ Number of programs or projects collaborated on ▪ Time lost due to program delays ▪ Number of new products developed ▪ Value of sales from products created in the last 3–5 years (a measure of innovation) ▪ Average learning curve per employee ▪ Proposal response times ▪ Proposal win rates	▪ Reduced cost of product development, acquisition, or maintenance ▪ Reduction in the number of program delays ▪ Faster response to proposals ▪ Reduced learning curve for new employees

Appendix 8 **KNOWLEDGE PERFORMANCE METRICS** *(continued)*

Table A8.2: **Knowledge Performance Metrics by Knowledge Management Tool** *(continued)*

Knowledge Management Initiative	System Measure	Output Measure	Outcome Measure
Yellow Pages	▪ Number of users ▪ Frequency of use ▪ Latency ▪ Searching precision and recall	▪ Time to find people ▪ Time to solve problems	▪ Time, money, or personnel time saved as a result of the use of Yellow Pages ▪ Savings or improvement in organizational quality and efficiency
e-Learning Systems	▪ Latency ▪ Number of users ▪ Number of courses taken per user	▪ Training costs	▪ Savings or improvement in organizational quality and efficiency ▪ Improved employee satisfaction ▪ Reduced cost of training ▪ Reduced learning curve for new employees

Source: 2001. U.S. Department of the Navy. *Metrics Guide for Knowledge Management Initiatives*.

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