Harvesting Knowledge

Olivier Serrat
Asian Development Bank
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Abstract
{Excerpt} If 80% of knowledge is unwritten and largely unspoken, we first need to elicit that before we can articulate, share, and make wider use of it. Knowledge harvesting is one way to draw out and package tacit knowledge to help others adapt, personalize, and apply it; build organizational capacity; and preserve institutional memory.

The so-called know-do gap is one outcome of poor knowledge translation and organizational forgetting. In decreasing order of incidence, that is commonly attributed to (i) shortage of resources, e.g., skills, time, and finance, (ii) lack of buy in at all levels within and across organizations, and (iii) information overload. Shortage of resources affects policymakers, researchers, and practitioners equally.

In the 21st century, intra-organizational flows of knowledge have become as important as the resource itself. And so, managing both stocks and flows has become an imperative rather than an alternative for most organizations. Knowledge harvesting is a means to draw out, express, and package tacit knowledge to help others adapt, personalize, and apply it; build organizational capacity; and preserve institutional memory. In addition to context and complexity, the concepts that relate to it are tacit knowledge stocks, tacit knowledge flows, and enablers and inhibitors of tacit knowledge work.

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By Olivier Serrat

The Know-Do Gap

The so-called know-do gap is one outcome of poor knowledge translation and organizational forgetting. In decreasing order of incidence, that is commonly attributed to (i) shortage of resources, e.g., skills, time, and finance, (ii) lack of buy-in at all levels within and across organizations, and (iii) information overload. Shortage of resources affects policy makers, researchers, and practitioners equally. Practitioners commonly think insufficient buy-in to be the greatest challenge.

Except when messages are complex, the three most desirable knowledge translation strategies advocated in response are stakeholder engagement, dedicated knowledge brokers, and effective communications (with commensurate recognition, support, and funding in all three cases). Sure enough, the "wisdom of the crowd" element in these responses emphasizes the importance of paying due attention to the "who", "what", and "how" of knowledge translation.

It is indeed vital to get the right knowledge to the right people at the right time, and help them apply it, if we are to do something better every time we do it again. However, if 80% of knowledge resides in the minds of people, both as a thing and as a flow, it is now recognized, we first need to elicit that before we can articulate, share, and make use of it.

(Certainly, in most fields of human endeavor, current levels of explicit knowledge only reveal a fraction of what must be known to produce results.)

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1 Knowledge translation is emerging as a paradigm to learn and act to close the know-do gap. It has been characterized as the synthesis, exchange, and application of knowledge.
2 Little used databases of “lessons learned” from self- and independent evaluations are all-too-familiar artifacts of failed approaches.
3 Michael Polanyi (1891–1976), a Hungarian–British polymath whose work spanned physical chemistry, economics, and philosophy, held that all knowledge is either tacit or rooted in tacit knowledge. Using a mutually agreed language, much (but probably not all) can be communicated between individuals (even though we can never quite know what is implied by what we say because of the tacit nature of meaning.) However, paraphrasing David Snowden, we can probably convey more by storytelling than we can write. (This probably explains why apprenticeship was the dominant form of knowledge transfer until it succumbed to scientific management and other instruments of modernity.) See David Snowden. 2002. Complex Acts of Knowing: Paradox and Descriptive Self-Awareness. Journal of Knowledge Management. Vol. 6, No. 2, pp. 100–111. From there, the following types of knowledge emerge: (i) knowledge that cannot be communicated; (ii) knowledge that can be communicated but cannot be expressed in documents; and (iii) knowledge that can be made explicit and shared through written language, often embedded in documents.
4 Even then, the documents available on servers are not necessarily being exploited to potential. Most of us are merely more knowledgeable about their existence. Technologies remain to be developed and deployed, and much associated work conducted, before we can profit fully from the knowledge contained in such records. For instance, even simple memoranda contain valuable information such as tribal knowledge in a small group, opinions, and decision drivers. Yet, such knowledge is not codified. Where metadata has been inserted—incridibly, a rare occurrence—there are no set standards: it is therefore difficult to satisfy a particular query. Still, XML (Extensible Markup Language) topic maps, intended to convey knowledge of sets of resources, promise much. Three building blocks of topics, associations, and occurrences can be superimposed over the documents to describe them and enable that knowledge to be managed separately from what the documents describe.
In the 21st century, intra-organizational flows of knowledge have become as important as the resource itself.5 And so, managing both stocks and flows has become an imperative rather than an alternative for most organizations. Knowledge harvesting is a means6 to draw out, express, and package tacit knowledge to help others adapt, personalize, and apply it; build organizational capacity; and preserve institutional memory.7 In addition to context and complexity, the concepts that relate to it are tacit knowledge stocks, tacit knowledge flows, and enablers and inhibitors of tacit knowledge work.8

Harvesting Knowledge...

Knowledge harvesting is not a catch-all solution. It hinges on trust and that is engendered by shared context.9 It cannot succeed in adversarial environments, where potential knowledge contributors think they will jeopardize their status or job security if they share their know-how. However, in learning organizations, it can be leveraged judiciously to codify some human expertise in such ways that others can make use of it, for instance during staff induction or through learning and development programs, good practices, and how-to guides.10 Numerous benefits can flow from enabling the movement of knowledge stocks between entities: (i) the knowledge of individuals (but also groups) is made available to who might need it independently of human memory, (ii) a wide range of solutions to organizational issues is produced, (iii) the ability to manage change is increased, (iv) the likelihood of repeated mistakes is reduced, (v) the learning curve of new personnel is shortened, (vi) precious knowledge is not lost when personnel leaves, and (vii) the tangible knowledge assets of the organization can be increased to create organizational value.

With care, knowledge harvesting can be applied to any field of human activity. In organizations, ready opportunities lie in operations, products, services, strategies, and even management. In association with other techniques for knowledge capture and storage, it might one day inform organization-wide Total Quality Management systems that deliberately elicit, organize, package, and share know-how. Several intra-organizational factors drive its design: the principal are (i) tacit knowledge stocks between entities: (i) the knowledge of individuals (but also groups) is made available to who might need it independently of human memory, (ii) a wide range of solutions to organizational issues is produced, (iii) the ability to manage change is increased, (iv) the likelihood of repeated mistakes is reduced, (v) the learning curve of new personnel is shortened, (vi) precious knowledge is not lost when personnel leaves, and (vii) the tangible knowledge assets of the organization can be increased to create organizational value.

Expert systems, that is, software that attempts to provide an answer to a problem or clarify uncertainties where normally one or more human experts would need to be consulted, were quickly proposed as tools with which to harvest knowledge. The experience has not been fully satisfactory. Expert systems require well-bounded, static domains and do not easily incorporate learning: they are most useful in narrow problem domains.

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High-performance organizations harness the intellectual capital of retirees. They enable them to deploy needed skills and experience on specific projects or programs, mentor junior personnel, and participate in storytelling and learning and development activities. In the same spirit, they can also help review and validate harvested knowledge.

Other methods exist, including laddering and concept mapping, process modeling, commenting, observation, constrained tasks, concept sorting, and repertory grids. Like expert systems, however, these are bounded in ways that constrain learning. In addition, transcribing the audio into text will enable tagging, distillation, and conversion to other formats, to name a few possible enhancements that will make the information more visible to and accessible by others. Interviews can be structured, semi-structured, or (preferably) unstructured. They must be well-prepared. The lists of questions or topic and thematic guides developed should be shared in advance, aiming to provoke reflection and draw out details. Effective harvesting persuades participants to speak concretely, shun blame, temper judgment, and anchor assumptions in shared meaning. Some advocate a process under which the knowledge harvester conducts a preliminary interview with knowledge contributors, and then presents the results to representatives of the knowledge seekers. Gaps in what the latter need to know or in their understanding of what has been communicated can then inform a second interview. (Knowledge seekers have a natural, vested interest in the outcome of interviews and, presumably, a clear and practical understanding of what they want to hear but rather what the knowledge contributor thinks is important for others to know.) However, the harvester’s control of the process can be limited, the data produced is qualitative and therefore more difficult to cross-reference, and interviews can take time. There is also potential for interviewer bias.
they want to know.) Cycling between knowledge contributors and seekers can promote a good fit between what is desired and what is imparted, propitious also to later brokering by the knowledge seekers. Of course, effective knowledge harvesters are a key to success: they must have strong communication, interpersonal, and interviewing skills coupled with high emotional intelligence.

- **Organize.** The knowledge elicited must be examined for sense, recurrent patterns, as well as gaps and inconsistencies, and then arranged in coherent and systematic forms for ease of access. By and large, the materials can be ordered and structured into logical groups comprising signals that provide context, guidance that enhances action, and support information that develops understanding.

- **Package.** After they have been organized, insights must be packaged into deliverable knowledge assets and made available through media that are tightly integrated with the original purpose of knowledge harvesting. Again, it is essential to consider knowledge seekers and their needs. What formats will best serve them? For effect, this stage must include individuals from other functions and disciplines, including methodology keepers, learning and development specialists, and marketing experts. The miscellaneous outcomes may include manuals, checklists, guidelines, collections of reminiscences on topics and themes,14 films, etc.

- **Evaluate.** Based on feedback from knowledge seekers, and further enrichment from continual harvesting, the relevance, efficiency, effectiveness, sustainability, and impact of outreach should be monitored and evaluated. Organizations should also consider the value of know-how over time: knowledge that is codified in static documents can quickly date.

- **Adapt.** To adapt means to make fit for, or change to suit, a new purpose. As knowledge assets are shared and applied, new requirements will inevitably emerge. Organizations must facilitate, empower, and document instances of learning so that critical knowledge assets incessantly evolve.

### Further Reading

### For further information
Contact Olivier Serrat, Head of the Knowledge Management Center, Regional and Sustainable Development Department, Asian Development Bank (oserrat@adb.org).

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14 Stories are a good vehicle for capturing and storing tacit knowledge. An organizational story is a detailed narrative of management actions, personnel interactions, and significant intra-organizational events that are communicated informally in an organization. It provides very rich cultural context, so that the story remains in the conscious memory longer and leaves more trace. Organizational stories impart common values and rule sets and boost organizational learning.
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ADB’s vision is an Asia and Pacific region free of poverty. Its mission is to help its developing member countries reduce poverty and improve the quality of life of their people. Despite the region’s many successes, it remains home to two thirds of the world’s poor: 1.8 billion people who live on less than $2 a day, with 903 million struggling on less than $1.25 a day. ADB is committed to reducing poverty through inclusive economic growth, environmentally sustainable growth, and regional integration.

Based in Manila, ADB is owned by 67 members, including 48 from the region. Its main instruments for helping its developing member countries are policy dialogue, loans, equity investments, guarantees, grants, and technical assistance.

Knowledge Solutions are handy, quick reference guides to tools, methods, and approaches that propel development forward and enhance its effects. They are offered as resources to ADB staff. They may also appeal to the development community and people having interest in knowledge and learning.

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Asian Development Bank
6 ADB Avenue, Mandaluyong City
1550 Metro Manila, Philippines
Tel +63 2 632 4444
Fax +63 2 636 2444
knowledge@adb.org
www.adb.org/knowledgesolutions