To meet the demands of the global marketplace, it's vital that organizations evolve rapidly. This isn't so easy when your company has a long-established structure and deeply rooted internal processes. Here, Marcus Blosch of DHL, explains how using process maps has encouraged better communication between employees and a faster transfer of knowledge within the organization.

THE NEW KNOWLEDGE MANAGEMENT SUPERMODEL

How process maps trigger knowledge transfer

by Marcus Blosch

Much of the knowledge management debate takes "knowledge" for granted and does not attempt to define what it is. This is, no doubt, an attempt to avoid the confusion over philosophical or scientific definitions. Without being clear about what knowledge is, however, it's difficult to make sense of how it may be manipulated, shared and refined.

Managers often make the mistake of treating knowledge as a tangible asset; one that can be codified and treated as a material thing. It's important to remember that it's data, not knowledge, that can be stored, warehoused, and mined. Often knowledge management is mistaken for information management – so much so that many business leaders still regard knowledge management as just another fad.

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As a result, managers are left to gather a seemingly infinite knowledge base in the hope that it will be of some value. This article seeks to provide a business model for managers to enable them to strategically map business processes that will underpin their knowledge management

initiative. This model is a pragmatic approach to structuring and organizing information that enables employees to locate meaningful knowledge in action. By making such a move, the theory of knowledge stops being a philosophical debate that is unrelated to real life.

A pragmatic theory of knowledge.

Pragmatism has a great deal to offer the debate on knowledge management as it is a philosophy of action – it relates knowledge, truth and meaning to action. In this sense "purposive," skilled action relates to the manipulation of the real world. So I have "knowledge" of the real world if my knowledge can successfully explain the real world, predict scenarios and allow me to take action to achieve specific outcomes.

The ultimate goal of pragmatic knowledge management is to encourage knowledge transfer. There are many ways to increase knowledge transfer: it can be facilitated with maps which act as a real world representation of knowledge; it can be kick-started with communities of practice, in which participants are selected for the sole purpose of collaboration; or it could be as simple encouraging verbal communication between employees – understanding a common language is key to knowledge transfer. Much of the success of communities of practice rests on common language and a shared world view – the "social

KEYPOINTS

- A pragmatic approach to knowledge transfer allows employees to locate meaningful knowledge that relates to the real world.

- Process maps are constantly evolving as tacit knowledge interacts with business processes to create new tacit knowledge.

- It's employees who produce and reproduce collective knowledge. A knowledge map must take into account their learning and experience.

- Process maps are essentially activity maps – they can cover the entire organization's practice or focus on individual roles within departments

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capital" of knowledge-sharing.

The business model for a pragmatic knowledge management initiative is more likely to be a visual map of business processes. The map will be constantly evolving as an individual's tacit knowledge and an organization's explicit business processes are tightly coupled in a generative loop – tacit knowledge "creates" business processes and business processes in practice "create" tacit knowledge. Knowledge is always being created and refined by individuals through learning and experience.

Even in science, where it's tempting to think of knowledge as an absolute, there are constant refinements in knowledge and even complete "paradigm shifts," such as the move from the Newtonian mechanistic view of the universe to one of relativity based on Einstein's theories. This shift in thinking was triggered by Einstein's new learnings and experience. Innovation comes from the evolution of knowledge; learning from new experiences and altering processes to adapt to change.

Learning in context

Since knowledge relates to specific contexts of action, it's always related to the contexts of its use. For example, it may be impossible for a system designer to interpret the value of a business process such as a specific type of internal accounting which is rolled out throughout the organization, as the designer will not have any understanding of the context of its use. A way to solve this problem is is to map the process from the system designer's perspective, using his or her "language" (see Figure One). By providing the designer with this contextual model, his or her knowledge will not only continually evolve, but it will become rooted in context. If employees gain a different perspective on processes they will see more than their own specific "views" of the world. There are no absolute "facts" which have the

same meaning in every context.

It is possible to create these maps using rich pictures, cognitive mapping and influence diagrams. For example, the illustration below uses process mapping to create a knowledge map. This is, of course, a much simplified knowledge map, but it does show the interaction of processes in the real world. This may be used to predict the impact of the internal accounting process: if it's easy to use, it will promote better decision-making, which in turn saves users' time.

It's also possible to use this model to manipulate the real world; for example, using this model we could imagine a computer virus which would throw the figures out, thereby slowing the flow of information to management and decreasing productivity. One advantage of this format is that these models may be made into simulations, allowing the organization to plan for multiple scenarios.

For more on how to construct a knowledge map see

***Mapping Organizational Knowledge* on p 10.**

Figure 1. A process map from the designer's perspective
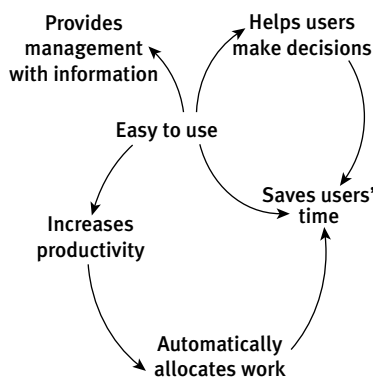
Organizational culture

Each organization will need to develop a modeling approach which suits their organizational culture. Models will need to be stored, communicated to the wider organization and, more importantly, updated regularly as new learning and insights are added. There are a number of different ways to approach these maps – the choice depends on the culture of the organization and the preferences of its employees.

DHL is a process-driven courier company, with very structured business processes in place. The way staff communicate is determined by that culture: the more structured the processes; the more people will adhere to the structure. To encourage active knowledge transfer, DHL uses integrated business models (IBMs) – or process maps – to bridge the contextual gap between business practices and established organizational culture. By using pictures of processes in action, the user can visualize the actions involved and link those pictures to their own practices.

Benchmarking your knowledge map

Mapping knowledge can be as simple as sketching a process on the back of an envelope or as complex as the dynamic knowledge maps discussed in Edmond Vail's article on p. 10. The professors at the Ryerson Polytechnic University in Canada, however, believe it's important to identify the essential characteristics of a knowledge mapping system whatever the level of complexity. Their best practice knowledge model would benefit from the following characteristics:

- *Sustainability* – Self-organizing systems are far more sustainable than systems requiring external monitoring and control. Ideally, the system would contain its own evolving blueprint for growth and adaptation, much like DNA in living organisms.
- *Openness* – It's possible to have a highly explicit, but superficial representation of knowledge. An ideal system would be completely open, within the limits of personal rights to privacy and confidentiality.
- *Accessibility* – An ideally accessible system should make for ease of connection, involve no proprietary hardware, prove inexpensive to any user, and provide unrestricted access to resident knowledge mapping processes.
- *Robustness* – A robust system should enable any user, independent of background, bias or perspective, to engage the system according to their own terms of reference. Technology should not encumber users with adequate entry level knowledge.

For more details on the collaborative research project by the New Media Group of the Rogers Communications Centre at Ryerson Polytechnic University, see **www.acs.ryerson.ca** or read the Bookmarks section on p. 37.

Process maps can form an important part of the knowledge management program. They are essentially activity maps and can be used on varying scales: they can cover the entire organization's practice as a whole, or be as small as individual roles within departments. The maps, once integrated into the organization's knowledge repository, may also be linked to other types of model such as data models and current systems models in order to provide a deeper insight into the implications of organizational actions.

Learning, experience and communication

It's easy to forget that it's the employees who produce and reproduce an organization's collective knowledge – it's their learning, experience and communication that drives the business. If the organization is going to develop a sophisticated knowledge map it must create a culture which concentrates on these three things:

- *Learning*: Individuals should be encouraged to learn about their own discipline and about the experience of others outside the organization. Perhaps the most important part of the learning process is the development of new ideas. This, however, requires that a certain amount of work time be dedicated to "organizational learning."

- *Experience*: The workplace must be a place of study and a laboratory for experimentation, as well as a place to carry out daily tasks. Allocating work time to experiential learning may go against prescribed management wisdom, in practice however, it allows individuals to gain a considerable level of experience, which enables them to build on their existing knowledge. This is more commonly known as "down-time;" in essence, it's giving employees the time to think.

- *Communication*: The organization should encourage communication, both through formal and informal means, and recognize that the richness of knowledge maps often depends on individuals having the opportunity to discuss issues and evolve their understanding. Communication ensures that knowledge is shared across the organization instead of remaining locked inside individuals.

An important aspect of an organization's culture is its openness to change as a result of learning and experience. This must be reflected in the organization's knowledge maps, which in turn

must also feedback into the organization's every day practice. This ability to evolve is crucial to the organization's success and survival.

The importance of people.

An organization's most important asset is its employees. It must therefore invest in them to ensure that they are supported in their efforts and allowed to learn, experience, and perhaps even change the organization.

No doubt information systems are of value in terms of administering knowledge but they cannot in any way replace people. Knowledge is rooted in the reality of daily work, which is done by individuals, not by data warehouses, the Internet or any other electronic device. Getting IT into perspective is essential – technology is the enabler; it cannot replace individuals.

Implications for knowledge management

At DHL, we recognize that knowledge is contingent and evolutionary and changes as individuals learn more about the real world, either by direct experience or through communication with others. It's essential that organizations note the intangible nature of human beings when implementing knowledge management and incorporate these intangibles into the maps and the KM program as a whole. For knowledge management to succeed it must look at people and culture before it institutes process and technology.

Summary

The process maps or "IBMs" used at DHL attempt to define processes in the context of the user, taking into account their culture and language. This ensures that the knowledge transferred from map to user relates to the user's own reality, rather than providing them with quantities of unuseable information. Information cannot be made intelligible without being rooted in the reality of the organization. It's important, therefore, for organizations to attempt to understand their "real world." Indeed, it's maps of the real world which communicate the most effectively as they filter information and help to prevent information overload.

A pragmatic approach to knowledge management will use maps or models to bridge the contextual gap between individuals and organizational processes. The foundation for organizational evolution is built on communication in context. It's of primary importance for the organization to elucidate, communicate and develop knowledge. This

approach to knowledge management highlights the importance of an organization's culture which emphasizes learning, experience and communication. In effect, this view of knowledge encourages a culture which creates the opportunity for, and supports, knowledge transfer.

No doubt information and information systems are an important component of this, but a clear distinction must be drawn between knowledge and information. Access to information in data warehouses or over the Internet takes meaning away from knowledge maps, and it's the quality of these maps which is of importance – not the sheer volume of information available. Taking a pragmatist approach to knowledge management can make a significant contribution to preventing "information anxiety," and mapping organizational processes can provide the catalyst for knowledge transfer.

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