Chapter - IV

Introduction

Leveraging the Knowledge Potential

Knowledge Strategy and Policy

Knowledge-based Business Processes

The Knowledge Value System

Knowledge Mapping

Findings of the Survey

- Status of KM Initiatives
- Potential Role of KM
- Impediments for Successful Implementation
- Experience-to-date of KM
- Major Issues in the next Five Years
- Threats
- Knowledge Journey

Conclusion

Notes and References
CHAPTER - IV
VALUE ADDING PROCESSES
(Leveraging the Knowledge Potential)

4.1. Introduction

According to Mr. Carol Hildebrand,¹ the individual and organizational knowledge is difficult to value and therefore, difficult to manage. Thus, it is necessary to look at the management of knowledge from the perspective of the individual, the network and the organization using Viable System Models - a powerful descriptive and diagnostic tool to map management capacities and promote viability.

4.2. Leveraging the Knowledge Potential

Knowledge maps are easy-to-use guides that show knowledge workers the straightest path to the pockets of expertise. When we take a process perspective on KM, concentration would be on those activities that add value to the business bottom line. Thomas Stewart² underlined the following action points for the success in the day-to-day practice of managing knowledge.

a. **Strategic Awareness**: Building the links between knowledge processes and business processes, and linking knowledge to the business value proposition.

b. **Making the Implicit, Explicit**: Identifying sources of knowledge, recording them and codifying them for later use; learning more about how knowledge creation and conversion processes can be made effective and articulating them for the transfer of learning.
c. Systematization of Information and Knowledge Processes: Seeking to improve the efficiency and effectiveness of all processes for generating and sharing information and knowledge; facilitating knowledge flows is an important focus.

d. Understanding the Processes at Multiple Levels: Three clear levels are (1) the strategy (enabling) level, (2) the practice (leverage) level where the processes are carried out and (3) the practitioner (skills) level; Integrating all the three levels simultaneously is one of the keys to unlock knowledge potential in an organisation.

e. Striking a Suitable Balance between Opposite Pulls: Systematisation vs Creative chaos; rigorous detail vs big picture;

f. Finding the Little Things that Make a Big Difference: For example, at Standard Life, a simple change in the type of questions asked during information audits significantly improved progress.

Knowledge management is at the juncture of the translation of new concepts into a new discipline. Like any emerging discipline, there is a lack of 'off-the-shelf' methodologies and a wide variety of approaches in use. In most organisations today, many of the processes are performed on an ad hoc basis. Over a period of time, in the words of Sri. I. Nonaka and H. Takeuchi, these informal and implicit processes become articulated and systematised. It is this systematisation that provides the vehicle for their more rapid dissemination and use. This is a vital part of the KM programme where the intellectual capital processes themselves become part of the 'structural capital.'
There are two main foci of knowledge processes. The first and most common is establishing processes that share existing knowledge resulting in identification and mapping of key knowledge areas which is one of the processes most widely practiced and a natural starting point for many KM programmes. In turn, this leads to the development of knowledge databases, using an Intranet or groupware facility. The second main thrust is that of creating new knowledge. Processes here focus on creativity and innovation, the flow of ideas and new knowledge in a way that creates superior products and services more quickly. In addition, a third process focus is on the knowledge dimension in business processes. The benefits of KM will come through when the perspectives of information management, human learning, innovation processes and supporting technologies are fully integrated.

4.3. Knowledge Strategy and Policy

In most organisations, the practice of KM has not yet reached a stage where a KM policy is in force. It is not yet seen by many as a crucial asset, nor for many is it sufficiently tangible enough to come to grips with policy issues.

4.3.1. Information Policies

Thus, one of the prime agenda in this direction is one of getting company boards to develop explicit information policies. Policy areas to be addressed in an information policy, according to Mr. Liz Orna, are:

- Classification of information assets;
- Quality of information provided;
- Proper authorised use of information for its rightful purpose;
- Identification of risks and appropriate protection; information maintenance and exploitation; and
- Development and implementation of information systems strategies.
From a detailed analysis, it was found that many of the companies addressing these issues were not successful, though few did so as an explicit corporate knowledge policy along such lines. Even though it may be several years before knowledge policies become widespread, such policies can be useful targets to aim for. However, in many of our cases, the knowledge leaders and teams had set forward clear visions, missions and policy objectives that had been approved at board level. "If knowledge is the force that enables organisations to act successfully, it needs to be kept, fed and nourished. And information is the food of knowledge - it is external to us; we take it in our minds and we transform it into knowledge, just as we transform the food we consume into energy. In organisations, some of the necessary food for organisational knowledge comes from outside sources, and some from making its own inside knowledge visible for its own purposes." If organisations do not feed their knowledge with the right kind of information, they are in danger of falling into life threatening conditions.

4.3.2. Managing the Knowledge Asset

Today's focus on knowledge has illuminated the importance of viewing intangibles as assets that can be developed and used to create business value. What is important is the active management of such assets. According to the white paper, a few relevant models and practices are emanating from the discipline of Information Resources Management (IRM).

The antecedents of much of today's practice of Information Resources Management (IRM) include charts for recording information resource entities (IREs) and attributing them with details of information sources such as who has them and who uses them. They especially highlight the need to seek out hidden resources. Other attributes that are assigned to IREs include cost, value, price and benefit. Links are made between information needs and organisational
objectives. The organisations should identify their strengths and weaknesses in their information holdings, their information handling and information management processes, including valuation. Mr. Thomas Stewart\(^7\) opines that the Knowledge Base shows that many of these principles and practices have been successfully adapted to KM, even if the rigour and antecedents of IRM have not been explicitly acknowledged.

4.3.3. Adapting to Knowledge Management

The resources perspective of information seems to provide some good methods on which to build and adapt for KM. Thus, the Willard Model\(^8\) clearly identifies five areas that need attention. They are:

a. **Identification**: "Knowing what they know" was an important factor that led to the development of Standard Life's Info Guide.

b. **Ownership**: At Price Waterhouse, even though a central knowledge team co-ordinates and acts as a hub of information and knowledge exchange, it is the practitioners and consultants in the field who 'own' the knowledge.

c. **Cost and Value**: The structured approach and value scheme developed by Skandia is an example of a practical approach to this element.

d. **Development**: The way in which knowledge components are combined at Thomas Miller to create new knowledge embedded in its documents. These documents are a continuous development of many years of organisational knowledge.
### e. Exploitation: Dow Chemicals' motivation for KM was the recognition of unrealised value, locked in their knowledge assets.

### 4.4. Knowledge-based Business Processes

Any KM activity must be embedded within normal business processes, and that's one way to make it easy for people. Graham Robertson and Paul Ayub identified the following attributes for embedding KM with the business processes.

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Selecting Business (the Role of Producer Management)</td>
<td>Knowing which businesses were more profitable, how to manage relationships, select the right products and attract the right customers.</td>
</tr>
<tr>
<td>b. Writing the Business (the Role of Underwriters)</td>
<td>Better identification of risks, accurately pricing them and partnering with customers to reduce claims frequency.</td>
</tr>
<tr>
<td>c. Servicing Customers (the Claims Department)</td>
<td>Reducing excess claim recurrences by managing claims. For this, the quality of underwriting was crucially important. It required a more disciplined and systematic approach.</td>
</tr>
</tbody>
</table>

### 4.5. The Knowledge Value System

The value chain approach of Porter adopted for the knowledge value system, synchronized by Debra M. Amidon, describes it as a well established and a common way of considering high level business processes. The biggest concern in the value chain approach is that such value chains are gross simplifications of how knowledge processes work in practice. Data and
information do not flow easily like a raw material process through a set of stages and become knowledge. Mr. Keith D. Brouthers, et al describe the different stages of interaction with numerous feedback loops to complete the value chain. For example, Price Waterhouse deliberately train their knowledge centre workers to handle several parts of the knowledge value chain simply because their type of knowledge work cuts across several of the value chain activities. However, real value is created at interfaces, such as the customer interface: value flows across pipes, not down a value chain. All modern work on knowledge creation and innovation stress the non-linearity of such processes. Another, equally valid perspective is that of the interaction across the knowledge and information boundary, knowledge being in the human brain and knowledge (strictly, information) held in a knowledge base. Such knowledge processing is taking place individually, in teams and throughout an organisation on a minute-by-minute basis. KM processes are about converting a proportion of this into some more accessible knowledge base, such as a computer database, so that it becomes organisational knowledge that can be easily accessed and shared.

4.6. Knowledge Mapping

As the initial stage in the knowledge value chain, the Knowledge Mapping is often the first step taken in a KM programme. Sometimes, the process of identification is grouped with other processes and is designated as knowledge mapping. The end point of mapping is often an inventory that may itself act as the first phase of building up a more comprehensive knowledge database. Identification is discovering what we know and more importantly, what we ought to know. What goes into a knowledge database is very organisation specific. The various stages of Knowledge Mapping are as follows.
### a. Knowledge Inventories

There are many methods to collect data on the knowledge that existed. Those who had gone about this most systematically were using well-established information management techniques. For a comprehensive picture of the knowledge that an organisation possesses, some form of inventory is needed. The information audit will have the following five essential elements as put forth by Joseph Badarocco.\textsuperscript{13}

- Identifying user requirements and organisation needs;
- Mapping information facilities and resources;
- Mapping communication and information flows;
- Analysing requirements against existing resources; and
- Designing a solution and developing an action plan.

### b. Knowledge Creation

The creation of new knowledge is the second main thrust of many knowledge programmes. There are three aspects, as advanced by Thomas A. Stewart,\textsuperscript{14} which merit special attention:

- The knowledge conversion processes of externalization and socialisation,
- Knowledge created through boundary-crossing activities, such as in joint ventures, but especially at the customer interface.
- Understanding the nature of the innovation process and how it can be improved within an organisational context.

### c. Knowledge Conversion Process

It was found that many practitioners influenced by the work of Nonaka and Takeuchi on The Knowledge Creating Company and in particular the concepts they have developed around tacit and explicit knowledge is very much curious and revealing.
Their proposition is that knowledge is created in the conversion processes from one type of knowledge to another. They define four types of conversion processes as presented below.

- **Tacit-to-Tacit (Socialisation):** Where individuals acquire new knowledge directly from others.

- **Tacit-to-Explicit (Externalisation):** The articulation of knowledge into tangible form through dialogue.

- **Explicit-to-Explicit (Combination):** Combining different forms of explicit knowledge, such as that in documents or on databases.

- **Explicit-to-Tacit (Internalisation):** Such as learning by doing, where individuals internalise knowledge from documents into their own body of experience.

The fundamental processes for creating new business value, as enunciated by Debra M. Amidon, is through developing and sharing knowledge and it is the conversion from one type to the other (i.e., tacit-to-explicit and vice-versa) that give the greatest value adding potential. This seems reasonable in that knowledge, once in explicit form, can be more easily transmitted and multiplied by automation, but that it does need converting and assimilating into another person's tacit knowledge for application to a different situation. The key to knowledge creation lies in the mobilisation and conversion of tacit knowledge. Thus, organisational knowledge creation is a spiral process, starting at the individual level and moving up through the expanding communities of interaction that cross sectional, departmental, divisional and organisational boundaries. As knowledge moves up from individual to organizational level, amplification occurs. Consequently, knowledge is more widely spread and the spiral gets larger.
d. Boundary Interactions: An important way to create new knowledge is to bring in different skills and perspectives. This is why cross-functional and multi-disciplinary teams are seen as a key part of life in many of the knowledge intensive organisations. Three boundaries in particular were mentioned as important by various authors of KM practices. They are:

- Interfaces with external experts;
- Joint ventures; and
- Customers.

e. Gathering: While the first stage of developing a knowledge map or database may seem a straightforward information collecting exercise, it does present some peculiar difficulties. Unlike traditional raw material - which is inspected, warehoused, bar-coded and audited - corporate knowledge is scattered, hard to find, and prone to disappear without trace. It, therefore, takes some work to identify knowledge that is important, and make it easily accessible. It is also difficult to establish 'What don't we know?' and it is the lack of process structure that leads to information gaps not being visible. There is a need to focus on these and create a structure that makes them more explicit. It is too easy to fall into the trap of identifying that which is readily visible, while missing that which is not so obvious, but could be more important.

f. Classification: The aim of a knowledge map accordingly is to provide an easy-to-use guide that shows knowledge workers the straightest path to pockets of expertise. In practice, this means using some common terminologies in describing domains of knowledge. As noted earlier, providers and users of information often describe the same type of knowledge in different ways, an important practice that was observed among lead KM programmes. Mr. H. Takeuchi detailed on the development of a common language. Incidentally, this does not just apply
to knowledge bases, but to developing new knowledge and learning. Most well organised knowledge bases have the active involvement of information professionals to index and categorise data. Knowledge maps should guide users to the knowledge they need and provide a means of tagging how various knowledge base users approached the problem in the past.

g. Refining: Another factor that helps users retrieve knowledge efficiently is that of refining. Much knowledge is contextual, that is transferred in the form of conversations, contributions to discussions, databases and in electronic mails. Much of this is transient, and it is only after a period of dialogue that the main sense of such information exchange emerges. Another aspect of refining is the selection of material. Here, quality metrics of information come into play. There are five broad factors, as pronounced by Gary Hamel, Yves Doz and C.K. Prahaled, each of which can be broken down into a number of sub-attributes. Some highlight the importance of certain attributes of the information itself.

- **Truth**: The degree of confidence which the user places in the information set.

- **Guidance**: The extent to which the information points the way to actions to be taken.

- **Scarcity**: Associated with originality - the extent to which the information is new, or is not freely available to competitors.

- **Accessibility**: Availability of information to its potential users when needed and in a form which they can understand.

- **Weight**: Collection of many additional features of the product which will prompt the recipient to act upon it. These include the perceived relevance of the material to the user's situation, presentational aspects of the product, and the product's credibility. It enables the
vital human to human connection for knowledge exchange, as accessibility, reach, ease of use and ease of access are key sub-attributes. They are achieved through alternative electronic media, through major emphasis on clear, concise screen designs, extensive links to related information resources, and through a variety of views and word search facilities to enable precise search requirements.

h. Knowledge Base: This is an appropriate juncture to review some general findings on all the processes that create an organisational knowledge base and consider knowledge maps. As mentioned by Mr. Tom Stewart, the term “knowledge mapping” will frequently be used as short-hand to describe these, but it also has a more specific connotation, a user view of the knowledge base.

4.7. Findings of the Survey conducted by the Researcher

To find out the current status of KM and KM strategy, the Respondents were asked whether their organizations had a KM initiative in place. Overall, 78% of the Respondents said that their organization had a KM strategy in place. Other relevant findings of the survey are presented below.

4.7.1. Status of KM Initiatives

Respondents were asked to specify the extent of their organization’s KM programme. 12.5% said their organization had KM as an integral part of their business process and the value of organisational knowledge is reported to their stakeholders. 31.3% have integrated the KM strategy with some technical or cultural issues. 37.5% of the respondents are utilizing KM procedures to achieve known benefits and 50% have initiated knowledge in a non-uniform manner with pilot approaches in place. 31.3% of the respondents have no KM strategy in place for achieving overall organisational goals.
4.7.2. Potential Role of KM

Responses were sought about the potential role KM can play in achieving specific organizational objectives on a long-term and/or short-term basis. The response of the Respondents revealed that potential benefits on a long-term basis would be in the context of improving “revenue growth” and further enhancing “competitive advantage”. Another potential long-term benefit identified by them was “employee development” and “product innovation” which are very critical parameters in measuring the success of a KM implementation. Key short-term benefits expected by Respondents would be “reducing costs”, “improving marketing strategies”, “enhancing customer focus” and “facilitating profit growth”. The details are presented below in the table (Table - 4.1) and the chart (Figure - 4.1).

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Organisational Objectives</th>
<th>No. of Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Short Term</td>
</tr>
<tr>
<td>01.</td>
<td>Revenue Growth</td>
<td>25</td>
</tr>
<tr>
<td>02.</td>
<td>Reducing Costs</td>
<td>40</td>
</tr>
<tr>
<td>03.</td>
<td>Employee Development</td>
<td>28</td>
</tr>
<tr>
<td>04.</td>
<td>Product Innovation</td>
<td>25</td>
</tr>
<tr>
<td>05.</td>
<td>Profit Growth</td>
<td>27</td>
</tr>
<tr>
<td>06.</td>
<td>Marketing</td>
<td>40</td>
</tr>
<tr>
<td>07.</td>
<td>Enhancing Customer Focus</td>
<td>27</td>
</tr>
<tr>
<td>08.</td>
<td>Improving Competitive Advantage</td>
<td>28</td>
</tr>
<tr>
<td>09.</td>
<td>Investment</td>
<td>10</td>
</tr>
<tr>
<td>10.</td>
<td>Mergers/Acquisitions</td>
<td>15</td>
</tr>
</tbody>
</table>
It is obvious from the tabular and pictorial presentations that the threats such as, the user being unable to perceive personal benefits, and lack of participation from the senior management towards developing a sound KM strategy were the two important barriers to successful implementation. These continue to remain as the prime areas of concern. The responses confirmed the fundamental flaw, i.e., viewing KM as a technology issue. It is not the technology that is holding organizations back but a failure to build KM into the organization's day-to-day operations and its culture.

4.7.4. Experience-to-date of KM - Current KM Related Issues

Respondents were asked to rate issues relating to implementing KM on a percentage basis as to how critical they are in the current business scenario. Respondents’ views largely indicate knowledge transformation from tacit to explicit as a major issue and related it at 75%. Issues like lack of “sharing knowledge” and “reinventing the wheel” were rated at 70% and 60% respectively indicating a major concern for a successful implementation of KM in the industry. Less critical issues identified by the respondents were information overload and complex systems at 60% and 45% respectively. All these details are presented below (Table - 4.3 and Figure - 4.3).

<table>
<thead>
<tr>
<th>SI No.</th>
<th>Criteria</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>01.</td>
<td>Re-inventing the wheel</td>
<td>60.00</td>
</tr>
<tr>
<td>02.</td>
<td>Lack of knowledge sharing</td>
<td>70.00</td>
</tr>
<tr>
<td>03.</td>
<td>Lack of knowledge transformation</td>
<td>75.00</td>
</tr>
<tr>
<td>04.</td>
<td>Information overload</td>
<td>60.00</td>
</tr>
<tr>
<td>05.</td>
<td>Complex systems</td>
<td>45.00</td>
</tr>
</tbody>
</table>
4.7.5. Major Issues in the Next Five Years

The Respondents were also asked about the future business problems affecting their decision making process in the coming five years and also as to what issues would be best managed by the successful implementation of a KM strategy. The responses are presented below (Table - 4.4 and Figure - 4.4).

Table 4.4 - Major Issues

<table>
<thead>
<tr>
<th>Sl No.</th>
<th>Criteria</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>01.</td>
<td>Adaptability</td>
<td>78.00</td>
</tr>
<tr>
<td>02.</td>
<td>Alliance/Networking</td>
<td>75.00</td>
</tr>
<tr>
<td>03.</td>
<td>Costs/Productivity</td>
<td>90.00</td>
</tr>
<tr>
<td>04.</td>
<td>Outsourcing</td>
<td>70.00</td>
</tr>
<tr>
<td>05.</td>
<td>Quality</td>
<td>80.00</td>
</tr>
<tr>
<td>06.</td>
<td>Responsiveness</td>
<td>89.00</td>
</tr>
</tbody>
</table>
4.7.6. In view of the 1997 recession, which caused a downturn in turnover in majority of the companies, the biggest threat identified by the Respondents was the ability to reduce the time to market and develop a competitive advantage. Cost reduction and improved productivity follow this issue. Quality of the product was one of the major issues but was not identified as an immediate threat to business sustainability. The responses indicated that KM is the next important business strategy on their agenda.

4.7.7. The Knowledge Journey

Respondents were asked where their organization stood in terms of KM. They were provided with the following five descriptions and asked them to specify the most appropriate stand of the organization.

- The organization does not demonstrate a relationship between the importance of KM and the achievement of organizational goals,
• Awareness and implementation of KM actors of the organisation may not be uniform but pilot projects are in place in some areas,

• The organization uses KM procedures and tools, and it is recognized that KM brings some benefits to the business,

• The organization has an integrated framework of KM procedures and tools, but there are some technical and cultural issues still to be overcome, and

• KM procedures are an integral part of organizational and individual processes, and the value of knowledge is reported to the stakeholders.

The responses received are tabulated below followed by their graphical presentation (Table - 4.5 and Figure - 4.5).

Table - 4.5: The Knowledge Journey

<table>
<thead>
<tr>
<th>SI No.</th>
<th>Criteria</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>01.</td>
<td>KM procedure integral, value of KNOWLEDGE reported to stakeholders</td>
<td>12.50</td>
</tr>
<tr>
<td>02.</td>
<td>Integrated KM framework, some technical/cultural issues</td>
<td>31.30</td>
</tr>
<tr>
<td>03.</td>
<td>Utilise KM procedures/recognised benefits</td>
<td>37.50</td>
</tr>
<tr>
<td>04.</td>
<td>KM not uniform/pilot project in place</td>
<td>50.00</td>
</tr>
<tr>
<td>05.</td>
<td>No demonstration of knowledge Vs achievement of goals</td>
<td>31.30</td>
</tr>
</tbody>
</table>
The Knowledge Journey

From the above, it is obvious that the Respondents were optimistic in terms of where they saw their organizations stood in terms of KM development. Most saw their organization falling into states of 3 or 4. There is also a realization that there is still a long way to go for successful implementation of the Knowledge Management Processes.

4.8. Conclusion

There are three main process foci - a focus on how knowledge supports core business processes, processes that identify and share existing organisational knowledge, and processes for knowledge creation. At all times, it must not be overlooked that knowledge processes are there to support business processes and that knowledge must be leveraged to create additional value for the business. A popular view of KM is a set of interdependent processes, sometimes
portrayed as a value chain, but recognising that knowledge processes are more complex than a simple linear model suggests. The key processes are creating, collecting and codifying, storing, sharing and using knowledge. Excelling across the value chain (i.e., through a value system) is seen as the nirvana of good KM, though most companies feel that they are usually poor in one or more of these. Organisations need to develop KM processes at three levels. The top level is a co-ordinating strategic one. The next level is the specific tools and methods that underpin each major process. The third level is the skills and techniques to perform knowledge work. A key function of knowledge processes is to extend support to knowledge workers in their day-to-day activities. The survey supports the view that the main drawback of effective KM systems is due to improper Knowledge Mapping. In so far as role of Management Accountants are concerned, the potential role of KM itself is an indicator that they are closely involved in innovative and employee development as well.

Notes and References


6. Ibid.


