Framework for Knowledge Management Strategy System: A Conceptual Study

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Abstract:

Knowledge is a corporate asset similar to any asset of an organization and nationwide, and as other assets, knowledge needs to be managed and used strategically, knowledge management is about finding simple, yet effective ways to develop, access and share the explicit and implicit knowledge that resides within and around us every day.

This paper provides a framework for characterizing the various tools (methods, practices and technologies) available to knowledge management practitioners. It provides a high-level overview of many several key terms and concepts, describes the framework, provides examples of how to use it, and explores a variety of potential application areas.

Key words: Knowledge Management, System Framework

INTRODUCTION: Brief Background

Knowledge Management (KM) is one of those terms comprised of very slippery components. What is knowledge, after all? And what is management? How can we hope to manage something that's fluid and ever-changing? While there is some merit to these important questions, fortunately a lot of researchers are mixing between these terms and

information management. If we think of knowledge as what we can write down *and* what we know in our heads, we can at least visualize what it is we need to start managing. While "what we can write down" has attracted all kinds of funding and attention (e.g. naming conventions, databases), the "what we know in our heads" part has not. And, as the trick to successful knowledge management is in developing ways to knit together both types of knowledge, this paper will focus on a few straightforward and practical KM tools and techniques designed to help us building a framework for KM strategy.

To do that we must ask ourselves basic questions like: do we know where to locate a particular file or output? Do we know whom to contact if we require a specific piece of information? Do we know what our colleagues know? And if not, how can we tap their experience and expertise? Do we have a clear KM strategy leads to value decision? Do we able to use knowledge in right way to achieve an organization's development? Or/and nationwide development? At its core, KM is about creating, identifying, capturing and sharing knowledge. It is about getting "the right knowledge, in the right place, at the right time," particularly in influencing an action or a decision (ABC of KM, 2005). KM is an intrinsic component of knowledge translation: without a good KM strategy in place, we might lose track of crucial knowledge – we might not know what we do know or even need to know – and miss golden opportunities to influence policy decisions. Knowledge is, after all, a society's, an organization's, and an individual's most valuable resource.

When the subject in question is knowledge management, this process is far from simple. Knowledge management (KM) arises from many different areas, concerns multiple disciplines, is ever-changing, and has a most annoying habit of branching off into a myriad of directions.

The origins of knowledge management (KM) explain a great deal about its current condition. Prusak (2001) looks at the multi-disciplinary contributions that gave rise to an increasing interest in knowledge including the fields of economics, sociology, philosophy, and psychology, as well as information science. While an in depth discussion of these contributions is not necessary to understand KM, the realization that the breadth of its beginning encompasses many disciplines is. This is one factor that accounts for the broad range of viewpoints and approaches in this field. Core reasons for the development of a need and desire to manage knowledge are outlined by a number of researchers and writers in the field.

There are several factors that are regularly described. *The first* of these is the shift from an industrial model of business, one where an organization's assets were primarily tangible and financial (e.g. production facilities, machinery, land and ever cheaper labor

costs), to one where assets are primarily intangible and tied up in the knowledge, expertise and capacity for innovation of its people (Blair 2002; Prusak 2001; Lang 2001).

Where once a business valued itself based on what it owned and how it controlled costs, we have moved into an era where competitive advantage is based on the creation of knowledge and its effective use. Over time the ability of a company to differentiate itself from the competition by streamlining production and reducing costs has evaporated. Now, in order to compete in a market where the gains from managing these tangible assets have shrunk, successful competing requires innovation – the creation of new ways to do things through the creation of new knowledge.

A second factor is the dramatic increase in the volume of information, its electronic storage, and increased access to information in general. This has increased the value of knowledge, because it is only by knowledge that this information can be evaluated (Prusak 2001). This increased value of knowledge is exemplified by shifts in the Learning and Information Systems field. Once it was sufficient to help people find information; now, because there is so much more information and such wide access to this huge volume, both good and bad, it has become increasingly important that people know how to *evaluate* what they find. Knowledge is also valued highly because it is closer to action (McInerney, 2002). Information on its own does not make decisions; it is the transfer of information into people's knowledge base that leads to decision-making and thereby to action.

The increase in the value of what people know, especially that which is difficult to capture or express, is a common theme in the literature (Alavi and Tiwana 2002; Wright 2001; McInerney 2002; Blair 2002; Prusak: 2001). A simple example of this would be the "rules of thumb" that are used by executives to make decisions. Often these rules are not only unwritten, but the person may not even be aware of them. They simply know whether or not a given choice of action will work or not. This kind of knowledge is closer to action, in this case making a decision, than the information, such as reports and documents, used to support a decision. Such knowledge is contained within the expertise of that executive, and it is increasingly valuable.

DEFINING THE KNOWLEDGE MANAGEMENT:

There are numerous ways to define knowledge management. In fact, so critical is this aspect to any discussion of the field, that virtually every article or study includes a definition of some kind. Knowledge is now recognized, in many government circles, as

an important commodity that can benefit government departments in their day-to-day operations and the public in the growing efforts to be effective in the modern knowledge economy. The challenge now for organizations is to determine and develop principles and guidelines on how knowledge can be created, harnessed, shared and distributed among government agencies and to the public.

Accordingly, "Knowledge is information that changes something or somebody -- either by becoming grounds for actions, or by making an individual (or an institution) capable of different or more effective action." -Peter F. Drucker in *The New Realities.*
Knowledge is information and thought that aids us in some human purpose—no purpose, no knowledge. If information falls in a forest and there's no one there to hear it, it won't become knowledge. Since 2002, most businesses have realized that semantic arguments arising from classifications such as data, information, knowledge and wisdom.

Knowledge and information – or "data arranged in meaningful patterns" – are not synonymous. While information is a type of knowledge, its value comes from its interpretation within a context. As Davenport and Prusak (1998) explain, transforming information into knowledge involves making comparisons, thinking about consequences and connections, and engaging in conversations with others. Here, knowledge can be divided into two categories: *explicit* or *tacit*. Explicit knowledge is something that we can put our hands on, capture and document – knowledge that can be recorded. This includes research findings, lessons learned, toolkits, and so on. We can easily resort to computers and other information technologies to organize our explicit knowledge. Tacit knowledge cannot be documented as easily; it is subconscious – we are generally not even aware that we possess it. Tacit knowledge is context-specific and includes, among other things, insights, intuitions and experiences. Capturing this is more difficult and involves the key ingredients of time and personal interaction.

From the above concepts, we define Knowledge Management as a "discipline that promotes an integrated approach to creation, capture, organization, access and use of an organization's information assets". These information assets may include databases, documents, policies and procedures, as well as the enraptured, tacit expertise and experience resident in individual workers. However, the Knowledge management (KM) is a process employed by organizations to capture and share people's tacit knowledge. This includes experiences, expertise and insight often shared across multiple or nonspecific domains to promote collaboration among employees. Also, to provide broad access to the organization's information assets without regard to their source or structure (they may be internal or external to the organization and may be textual, data, visual or

another format). The business value of KM is achieved when the sharing of an organization's collective information assets stimulates innovation and reuse, enables formal management and leverage of intellectual capital, drives organizational learning, and, finally, improves the collective performance of knowledge workers. KM system techniques and tools include broad access across information management platforms (intranets, extranets and the Internet, as well as desktop and transaction-processing environments), groupware, sophisticated taxonomy and indexing technologies, and others.

Knowledge Management refers to one or more of these activities:
- Creating and populating a repository of in-house knowledge;
- Measuring the dollar-value of chunks of knowledge;
- Facilitating the transfer of knowledge;
- Creating a knowledge sharing environment; and
- Building a corporate culture focused on innovation and knowledge creation

KNOWLEDGE MANAGEMENT SYSTEM STRATEGY:
The knowledge becomes an essential organizational (or/and national) driver and a key factor in value creation. Increased focus must be placed on expanding the organizational knowledge base, either by learning from others, or by creating new knowledge through innovation. Both processes help secure sustainable competitive advantage. Figure (1) shows the knowledge as basis for competitive advantage.

Thus, knowledge management can be seen as an integrated approach to achieving organizational goals and strategy by placing particular focus on "knowledge", now widely considered as the new factor of operations. Moreover, knowledge management supports and coordinates the creation, transfer and application of individual knowledge in value creation processes. This can only be realized in a corporate culture that promotes knowledge management strategy and actively supports information and documentation processes (e.g. through the systematic application of innovation and quality management tools and methods).

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│   Competitive advantage ensure   │
│       corporate strategy         │
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│  Innovation is driving force behind │
│   long-term competitive advantage   │
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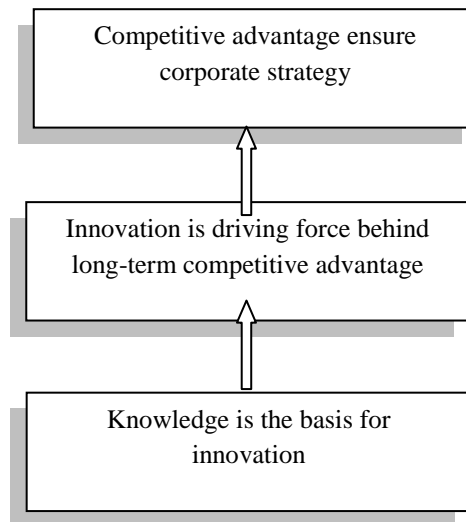
Figure (1) Knowledge as basis for competitive advantage

However, to manage an organizational base, it must be build a strong strategy management system with clear measurable objectives. The inclusion of individual assets in this measurement adds a further dimension to the assessment of traditional factors of operations. In this way, other factors (including traditionally elusive "soft factors") become more readily available for value creation processes. Comprehensive knowledge management system should ensure that "knowledge" is used as effectively and efficiently as traditional factors of operations in achieving organizational goals. Added benefits include an improved capacity for organizational learning and a greater potential for action.

The major benefits of knowledge management system for organizations include:
- Greater transparency of knowledge potential and gaps
- Knowledge – based value creation processes
- Increased innovation through staff involvement
- Increased competitiveness
- Long – term security and survival

What is a KM Strategy?
As with any sound strategy, our KM practices should be closely linked to our own assets, needs, mandate, mission, and goals, taking into account our own values and ways of

working. In fact, understanding these elements must be the starting point for any KM strategy.

In its most reduced form, a KM strategy (like any other strategy) must answer three questions: where are we now, where do we want to be, and how do we get there?

• **Where are we now?** What kinds of knowledge do we produce (or gather or store)? What outputs have we created? How do we currently manage our knowledge? How do our organization's culture and systems either serve or hinder sound KM practices?

• **Where do we want to be?** In five years' time, how will a sound KM strategy change our organization? How will we know when we have a sound KM system? How will we measure the value of our efforts?

• **How do we get there?** We need an action plan outlining the three resources of *people, processes and technology*. What specific tools and practices will we use? How will we motivate people to change their practices?

In a slightly different formulation, Denning advises that our KM strategy should ask: *What* knowledge do we want to share (type and quality)? *With whom* do we want to share it (audience)? *How* will our knowledge actually *be* shared (channels)? And *why* will this knowledge be shared (motivations and objectives)?

A useful way to conceptualize our KM strategy is through *people*, *processes*, and *technology* – memorably visualized as "the legs of a three-legged stool – if one is missing then the stool will collapse." While there is some argument as to which leg is the most important, consensus is emerging in favor of the first – people. After all, it is people – human resources – who are the ones that create, share and use knowledge. Without taking into account the role people play in generating and sharing knowledge, KM strategies are likely to fail.

It follows that a successful KM strategy requires a change in an organization's culture and behavior. At the heart of this change would be recognizing *the centrality of knowledge*, and how the organization must improve its means for creating, capturing, sharing and using it. The corporate culture of the organization includes all the values, traditions, rituals and beliefs that determine how people act in an organization.

Corporate culture can be determined by carrying out periodic reviews of the basic elements of corporate culture illustrated in Figure (2). The resultant "gaps" between the actual culture and a target culture open to knowledge management from the starting point for strategic management intervention. Indeed, management is in a unique position to create, steer and change corporate culture.

A strategic orientation in knowledge management should not only ensure that all related activities are based on general corporate goals; it should also help to continually improve

and institutionalize the knowledge management processes themselves. This requires the following steps:

- Setting knowledge management goals
- Establishing and implementing design measures
- Initiating change processes
- Periodic assessment reviews

All these activities from part of a typical management process. To ensure knowledge management activities are fully integrated into actual working practices, management must continually observe any cause-and-effect relationships. In practice, evaluations based on the business indicators "effectiveness" and "efficiency" has proved highly successful. Figure (3) illustrates the cycle of strategic knowledge management. (Guide to KM; www.wm-forum.org).

The cycle of strategic knowledge management appropriately to any dynamic changes in its internal and external environments, yet at the same time remain true to its knowledge-oriented goals.

Although it is often tempting to see technology as the "knowledge savior," its proper role is more as an *enabler* of KM. Technology is a method, not a strategy. The right technological tools can indeed help us organize, store and access our explicit knowledge as well as helping to connect people and furthering their abilities to share their tacit knowledge. However, technology alone cannot be the beginning and end of a KM strategy. The challenge is finding the right technological tools that will serve our broader KM system. Although it is often tempting to see technology as the "knowledge savior," its proper role is more as an *enabler* of KM. Technology is a method, not a strategy. The right technological tools can indeed help us organize, store and access our explicit knowledge as well as helping to connect people and furthering their abilities to share their tacit knowledge. However, technology alone cannot be the beginning and end of a KM strategy. The challenge is finding the right technological tools that will serve our broader KM system.(The RM Knowledge Translation Toolkit, www.research-matters.net)
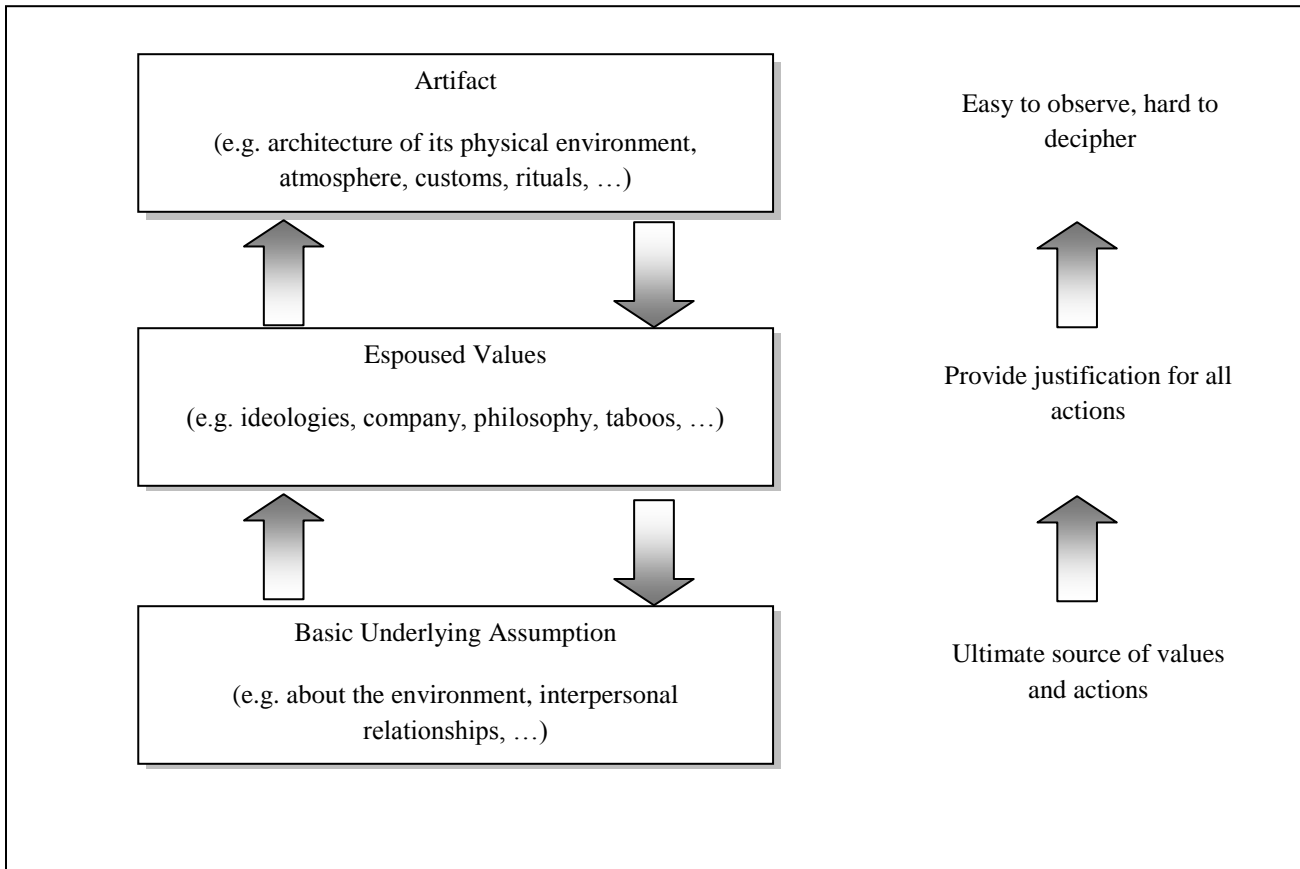
Figure (2) Basic elements of corporate culture

From the above concept, one of the main requirements for effective knowledge management is an organizational framework that supports the optimal acquisition and networking of knowledge. The knowledge-based network organization is one such possibility. Knowledge domains can also encompass members of the organizations. These might include research staff at universities and research institutions, or the employees of customers and suppliers integrated in value creation processes, such as supply chain management systems. However, one better example of this is the innovation process. New, innovative products are often the result of close cooperation work with customers and suppliers. Some innovation activities may even be outsourced to external partners. For example, organizations often finance research projects, dissertations or doctoral thesis.

The network of internal and external knowledge domains is described as a knowledge-based network organization. The responsibility for coordination of the individual knowledge domains lies with management, who need to make two decisions based on the organization's corporate strategy.

- Which knowledge domains to set up and develop internally (core competencies) and which to customers.
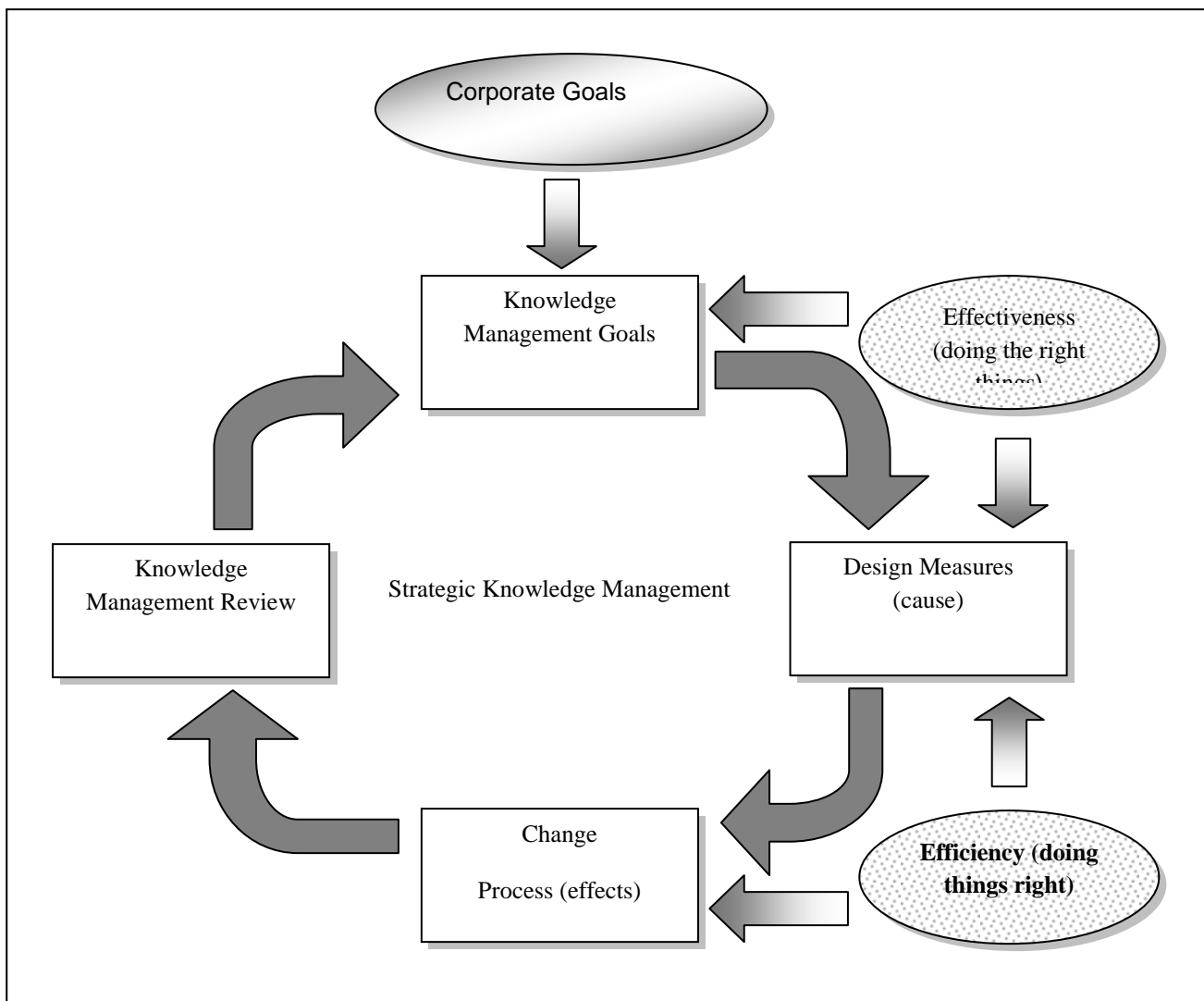- The knowledge goals for the individual knowledge domains.

Figure (3) Cycle of strategic knowledge management

KNOWLEDGE MANAGEMENT SYSTEM FRAMEWORK:
Knowledge management (KM) is an integrated systematic approach to identify, measure, and share all of the organization's information assets, including databases, documents, policies and procedures, as well as previously unarticulated expertise and experience resident in individual officers (Junes, 2003). KM creates a new working environment where knowledge and experience can easily be shared and also enables information and knowledge to emerge and flow to the right people at the right time so they can act more efficiently and effectively.

From the above concepts; The knowledge management (KM) refers to the developing body of methods, tools, techniques and values through which organizations can acquire, develop, measure, distribute and provide a return on their intellectual assets. Knowledge management, as a formal area of management activity, it seems to reflect a constellation of changes in the business environment. These include long run shifts in advanced industrial economies which have led to the increasingly widespread perception of knowledge as an important organization asset, the rise of occupations based on the creation and use of knowledge, the convergence of information and communication technologies and the advent of new tools such as Intranets and Groupware system, and theoretical developments which emphasize the importance of unique and inimitable assets such as tacit knowledge (Morris et al., 2003).

This paper attempts to develop framework for knowledge management system which is the objective being to capture and store the accumulated knowledge of the organization expertise in information storage databases. Also, to build the interfaces between the areas of activities in the organization of using the knowledge for various needs.

The proposed framework consists of seven major areas plus one service area to the organization all over, linking it with internal and external environment. Also, this proposed framework could add another business area depends on the size and status factors of the organization. All these areas and others cover the functions and activities of the organization which appears a knowledge potential of the organizations. Figure (4) illustrates the major framework of knowledge base management system in the organization.

1. The Knowledge-based Network Organization:

One of the main requirements for effective knowledge management is an organizational framework that supports the optimal acquisition and networking of knowledge.

Since knowledge is intrinsically linked to people, location plays an equally important role for knowledge as it does for other factors of operations. In other term, an organization can be described as the sum of its locations and departments (areas) as illustrated in Figure (4). Moreover, the organization appears as a network of individual knowledge domains. This can be seen clearly in Figure (4), which depicts the same organizational structure, but in some different forms.

However, if the focus is placed on "knowledge", the change in perspective yields a totally different picture. The organization new appears as a network of individual and areas knowledge domains. This can be seen clearly in Figure (5), which depicts the same organizational structure, but in different forms.
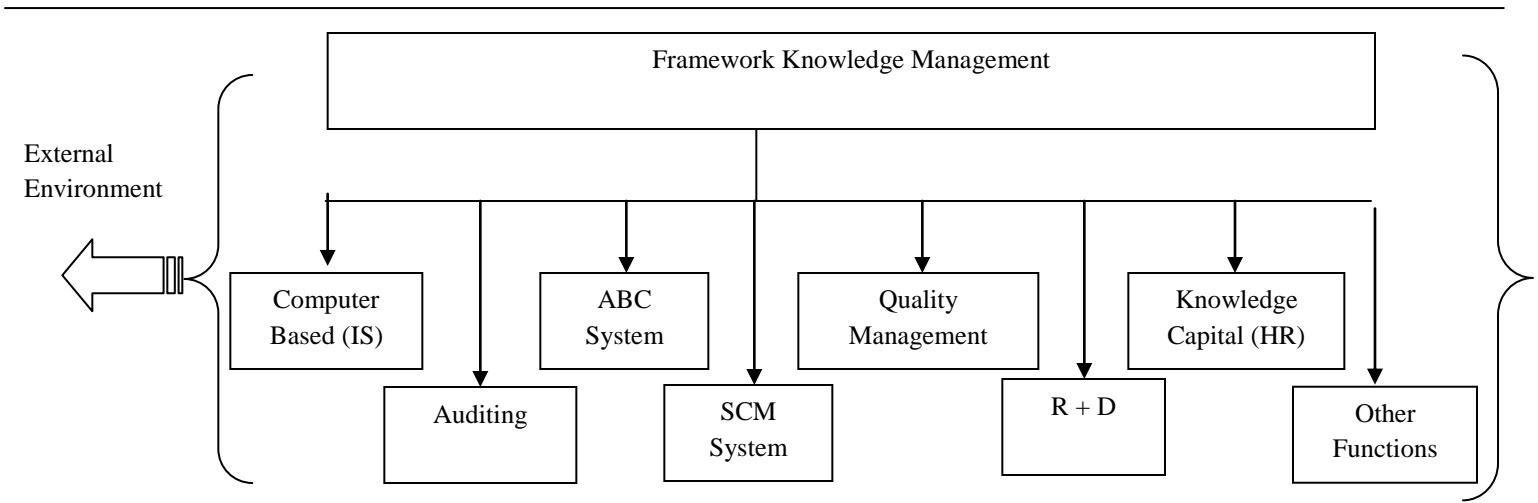

Figure (4) Framework of knowledge base management system

Knowledge domains can also encompass member of other organizations. These might include research staff (knowledge workers or experts) from both organizations and/or

universities, or the employees of customers and suppliers integrated in a value creation processes within the supply chain management system.
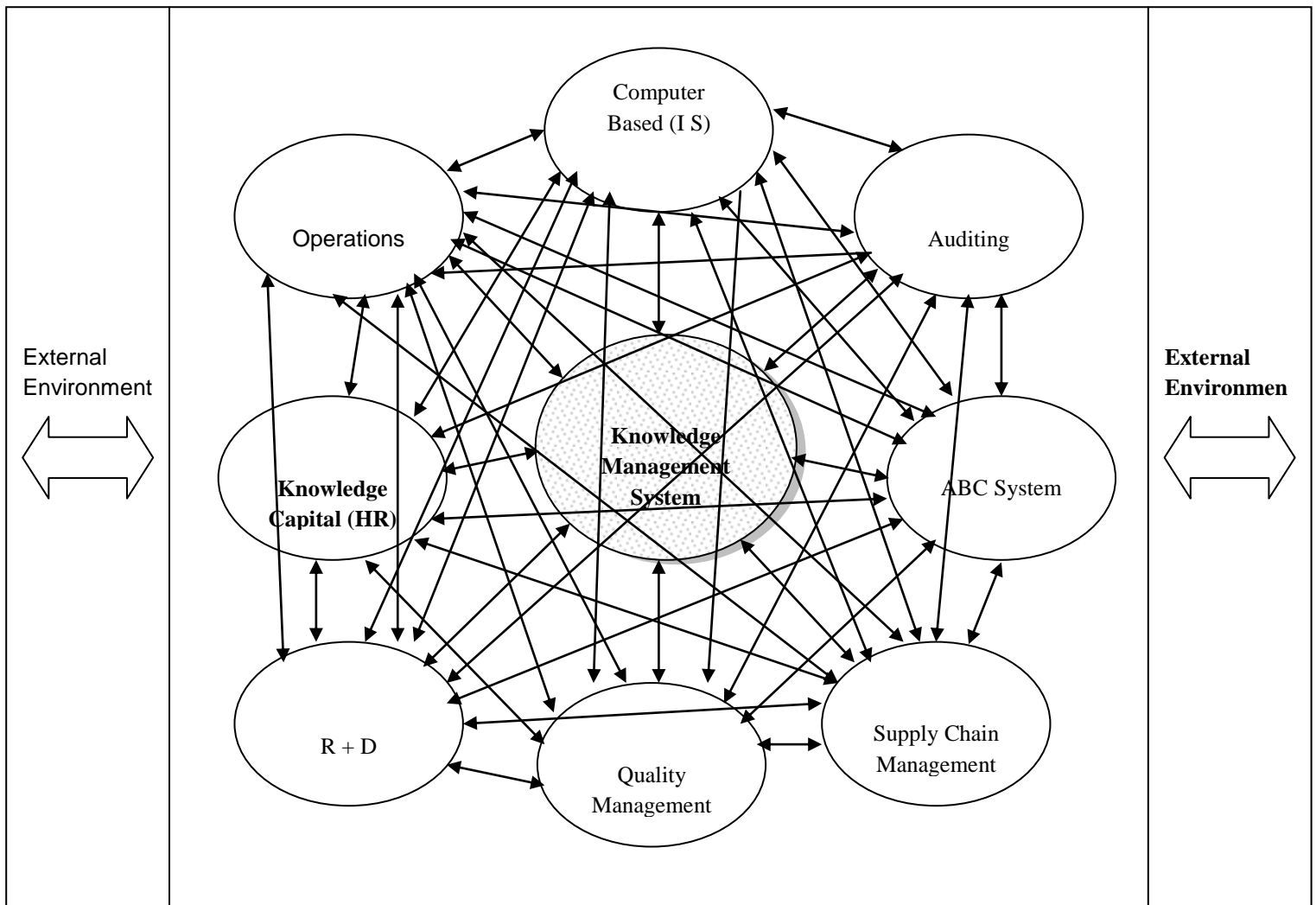

Figure (5) The organization's network of knowledge communications

2. Relevance and Overview of Supporting Technologies:

Information and networking technologies offer a great valuable support for knowledge management activities. Indeed, many tasks in knowledge management (e.g. networking

across geographical boundaries and time zones) only really become feasible through the use of appropriate technologies. However, to ensure that they provide the support required, the decision for any technology-based solution(s) should be driven by knowledge management needs and not by technical considerations. Discussing specific technical solutions before the actual knowledge management goals have been set, or even adjusting goals to suit technical constraints (and without considering people –oriented alternatives) are clear warning signals.

Establishing an overview of the different technologies available and the activities they support can be very useful in the knowledge management implementation process. The example given in Figure (6) considers different technologies with a view to basic knowledge management activities. These are:

(a) Knowledge planning activities include the definition of knowledge management goals and strategies.
(b) Knowledge creating focuses on the development of new knowledge.
(c) Knowledge integration makes existing (internal or external) knowledge available throughout the organization.
(d) Knowledge organization is to bring structure into all this knowledge.
(e) Knowledge transfer includes both planned, institutionalized transfer as well as spontaneous knowledge exchange.
(f) Knowledge maintenance activities ensure obsolete, out-of-date knowledge is identified, updated or even "forgotten".
(g) Assessing knowledge provides an overview of the knowledge available and determines how it has developed over time. It also indicates the extent to which knowledge goals have been reached.

Figure (6) gives an overview of the support that the different technologies available can provide for knowledge management activities. (Guide to KM; www.wm-forum.org).

3. Innovation and Knowledge Management System:

Innovation means renewal and change, but in today's business world it has come in particular to mean the development of new corporate services, products, processes and

structures. The development and application of new knowledge is the basic of innovation, emphasizing the strong links between innovation and knowledge. The core competence of an organization can be divided into several levels. Activities at a knowledge domain level focus on the continued development of the core knowledge domains. In general, this involves a variety of different knowledge holders (individuals or/and organizations) and can include external knowledge domains and expertise from cooperation partners.

The market therefore acts as an external evaluator of innovation and knowledge management. An internal evaluation can be carried out by visualizing the development of the organization's core competences and culture in form of a core competence tree. Ideally, the core competence tree should be constructed in such a way that the same knowledge can be used to realize any number of different customer solutions.

4. Optimizing Problem – Solving Processes:

Despite the appearance of a large number of electronic support tools (Figure 6), there have been relatively few other changes in the way problem-solving processes are carried out. A process – oriented approach to problem – solving can greatly improve efficiency and effectiveness. A focus on the knowledge perspective in the organization of such processes emphasizes the potential synergies between process and knowledge management. Problem – solving processes have to be designed to suit the actual business case and should make use of existing organization knowledge.

Supported Technology	Planning Knowledge	Creating Knowledge	Integrating Knowledge	Organizing Knowledge	Transferring Knowledge	Maintaining Knowledge	Assessing Knowledge

Communication Technology	x	xxx	xx	x	xxx	x	x
Calibration Technology	x	xxx	xx	x	xxx	xx	x
Document Management	x	x	xxx	xxx	xxx	xxx	xx
Adaption & Presentation Technology	x	xx	x	xxx	xxx	xx	xx
E-Learning Environment	x	x	xxx	xx	xxx	x	xx
Content Generation Tools	x	xxx	xxx	xxx	x	xxx	xx
Personal KM Tools	x	xxx	xx	xxx	x	xx	x
Artificial Indigence	x	xx	xx	xxx	xx	xx	x
Networking Technology	x	xx	xx	x	xxx	xx	x
Formats & Standards	x	xx	xxx	xxx	xxx	xxx	xx

Hardware	x	xx	xx	xx	xxx	xx	x
Notes;	• xxx – This technology can make a major contribution to the activity • xx – This technology can often support this activity • x – This technology makes little contribution to the activity						
Figure (6) Extent of supported by technology for knowledge management activities Source: Guide to Knowledge Management, p. 20, www.wm-forum.org,							

According to Guide to Knowledge Management (www.wm-forum.org) the actual staff affected in the design of problem – solving processes can turn acceptance into a success factor and can lead to radical improvements in the way problems are solved. The following list shows some common examples of weaknesses in actual problem – solving processes.

- Knowledge requirements are not identified for the individual phases in the problem-solving process. Staff is allocated to a problem according to availability (and not for their expertise or knowledge).
- No consideration is given to the possibility of integrating external knowledge holders in the problem-solving process.
- Developing the solution is not seen as part of the problem-solving process.
- The development of the solution is not planned in advance, which causes delays in the whole process.

If the organization demonstrates more than two of the above weaknesses, it would be urgently advised to review and improve its problem-solving processes.

5. Knowledge Management Measurement and assessment:

a. Knowledge Measurement:

A closer look at the issues involved in "knowledge measurement" requires a broader definition of knowledge than given at the beginning of this study. There are two main

reasons for this; The problems involved in embedding knowledge in operational processes and complexity of knowledge processes. Consequently, no single measuring method will be suitable for all processes.

Intangible assets can be divided into a number of categories (see Figure 7), with each category posing its own challenges. These include intangible assets protectable by law (e.g. by patents, trademarks, copyrights, etc.) and those for which no legal protection is available. This distinction is particularly relevant for creditor protection.

Although intangible assets are often referred to in controlling or accounting terms as "intellectual capital", "intellectual assets" is in fact a more accurate term. Intellectual capital is made up of three components: Human capital (or knowledge capital), structural capital and customer capital. In the past, these were not included in financial statements, and are therefore often referred to as the "invisible" balance sheet.

However, the most important reason for addressing the issue of measurement is that it will inevitably direct the discussion back to questions of corporate strategy, internal networking, organizational goals, etc. This initiates an organizational development process, which, in turn, promotes increased awareness of the new rules of business. This "detour", which in itself would usually be sufficient grounds to merit a project, will almost always have a positive (soft) effect on overall performance.

Based on the knowledge processes defined in Figure (10), key areas important to each relevant issue (e.g. the effectiveness of knowledge transfer processes) are identified. Barriers to knowledge transfer may also emerge at this stage (e.g. networking problems, organizational peculiarities or privileges). Once the key areas have been determined a detailed discussion of what involve will usually suffice to determine potential bottlenecks or indicators. This discussion leads to the creation of a complete set of indicators of financial metrics, which then need to be made manageable. It is extremely important that the indicators chosen make sense both to the people involved and to management and that a consensus is reached on any definition(s). Although not essential at this stage, it can also be useful to consider their compatibility with external benchmarks. (Guide to KM, www.wm-fourm.org)

There is now a wide range of measurement methods available, although not every method is suitable for every purpose. Basically, there are two approaches to measuring intangible assets:

- Monetary: Using financial indicators such as markets, costs or discounted cash flows.
- Non-Monetary: Using other indicators drawn perhaps from balanced scorecards or strategic planning.

- Measurement Methods: There are a several tools used in assessment of the KM system which make out of this paper goal.

- Intellectual Capital Measurement.

Your organization	Protectable by Law Patents Trademarks Patterns Copyrights Not Protectable by Law Intellectual Capital Core processes Corporate Culture Climate of Innovation	Other organization
Figure (7) Classis of intangible assets		

There is no longer any doubt of the increasing importance played by knowledge in value-creating processes. The challenge now faced is how to make the most effective use of intangible assets. This requires both representation and measurement of the organizational knowledge base, which in this case includes not only human capital, but also other factors such as existing organizational structures and customer relationships. The intellectual capital report has already established its suitability as a representation and measurement tool and is an effective method of communicating corporate goals,

strategy and business activities to both external and internal audiences. However, its more important application lies in its use as a strategic instrument in the steering of key organizational areas and in supporting personnel development.

Figure (8) shows a basic model for producing an intellectual capital report focusing on the following components: General requirements, input, work processes, output and effects. General requirements can be set extremely by stakeholders and market requirements and internally by corporate strategy and goals. They influence the focus of the key areas of corporate activity and also have an effect on any personnel development measures directly related to these activities.

The input indicated in the model represents the intellectual capital available to an organization to carry out its business objectives. Intellectual capital is divided into human, structural and customer capital and each of these three categories are generally described either in terms of quantity (using indicators) or quality. These assets are activity applied in the organization's business processes. If key processes have already been defined (e.g. as part of quality management procedures), they will generally only need to be marginally adapted for use in an intellectual capital report. The results are then allocated as output to the individual processes and are usually described quantitatively using indicators. The input is then compared with the relevant output to draw conclusions on how efficiently the organization's intellectual capital is being put to use.

The effect of this output on society, industry and the environment is represented by impact indicators. These indicators collected, for example, through surveys or by measuring customer and stakeholder satisfaction. This is probably the most difficult and time-consuming factor to assess.

6. Knowledge Management assessment:

The aim of a knowledge management assessment is to measure the benefits to the organization of any knowledge management activities. The basis for this assessment is a selected range of relevant measures derived from the basic model of knowledge management. These measures can be presented in a matrix diagram consisting of four individual levels (the knowledge, process, data and goals levels) and four different

perspectives (human, networking/ integration, organization and organizational environment). (Guide to KM, www.wm-forum.org)

The purpose of this assessment is to evaluate the extent to which an individual measure influences the organization's ability to meet stakeholder goals. In this way, the organization is able to determine the actual contribution a particular knowledge management activity makes to meeting stakeholder expectations and, at the same time, illustrate the real benefits generated by knowledge management. The analysis takes the form of a self-assessment of the organization (or an individual division) by an assessment team.

Intellectual Capital	Work Processes	→	Effects
a. Human Capital :	A. Operations:		Follow on Projects
Internal Staff	Product Quality		Customer Satisfaction
Staff Satisfaction	(Specifications' Standards)	→	
Training Days per Employee	b. Sales:	→	No. of Complaints per Year
b. Structure Capital:	Reliability		
Management System	c. Innovation	→	No. of Patents per Year
Investment per Year	New Products per Year		No. of Multi-company Projects per Year
c. Customer Capital:	d. Network Activity		
Alliance Partner	Multi-company		
	Projects per Year		No. of Orders per Year
	e. Marketing		
	Proposals per Year		No. of Company

			Visits per Year
Inputs	Outputs	→	Impacts
Figure (8) Intellectual (knowledge) capital model showing processes and examples indicators			

According to the Guide to Knowledge Management source, the assessment is carried out in seven steps (www.wm-forum.org):

a. Identify target assessment area: Select the target area for the knowledge management analysis.

b. Establish target criteria: Define the relevant stakeholders for the area to be assessed and establish target criteria to describe their expectations.

c. define the ideal situation: define the desired ideal situation for the goals, knowledge, process and data levels based on stakeholder expectations.

d. Determine factors of influence: Determine the factors that influence the ideal situation from the human, networking/interaction, organization and organizational environment perspective on each of the four levels.

e. Identify drivers: Identify the most important of for each fields of action.

f. Prioritize fields of action: Assess the influence of these drivers on the target criteria and use the results of this assessment to prioritize the fields of action.

g. Set measures: Set specific measures to be taken in each field of action, taking into consideration the main factors of influence for each area.

7. KM Implementation Process:

Knowledge management can be introduced either for historic reasons or to plan for the future, i.e. as a direct consequence of the urgency of a situation, or as a strategic management decision. Whatever, the reason, everyone should be informed of this decision before any definite steps are taken.

Pilot Project:

The first definite step towards knowledge management often takes the form of a pilot project (study). Since pilot projects can have both positive and a negative influence on any subsequent organization-wide roll-outs, they should be carefully planned and include a clear distribution of roles.

A pilot project should ideally be targeted at a particular areas, division or group of employees that are comfortable dealing with change and new challenges. It should also directly involve everyone who will play a part in or might be affected by any measures introduced. In this way, the project "involves the involved" from the start and can take advantage of their experience in determining possible solutions and measures.

In general, the selection of any key areas for knowledge management should concentrate primarily on knowledge-intensive processes critical to organization success.

The next stage is then to set the goals for the pilot project. These might include:

- Improving knowledge transfer in selected areas.
- Improving access to data and knowledge
- Encouraging the use of creative potential

The following questions need to be asked when implementing knowledge management:

- Which business processes are particularly knowledge-intensive and critical to organization success?
- In which processes is it extremely difficult to support knowledge transfer through documentation?
- Are there knowledge-intensive areas that can only be covered by a few members of staff?

- Are there any areas in the organization where knowledge is particularly stable or unstable?
- Which areas will readily accept and are in urgent need of change?

Analysis Phase:

The pilot project begins with decision of steering committee on the meeting, and the following points should be clear:

- The expectations of everyone involved with the project and the project goals.
- The project plan, the required resources and milestones.

In the analysis phase, selected processes are analyzed with a view to the goals set. In this way, the introduction of knowledge management does not simply become the end in itself: It ties in directly with the organization's business activities and processes. This requires a detailed representation and segmentation of the processes involved.

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Biography:

Abdulsattar Al-Ali is a Professor in the Department of Management at The World Islamic University for Sciences & Education (WISE), Amman – Jordan. He earned Higher Diploma in Engineering Management from Moscow Institute of industrial Economics, Russia, M.Sc and Ph.D in Industrial Engineering from The University of Birmingham, U.K. He has published journal and conference papers and more than 15 books. Professor Al-Ali has done supervision works on more than 40 Ph.D studies, and a lot of M.Sc. works at various universities in the Midleast. He has done a lot of consultations works, training programs and workshops in different subjects of industrial engineering and management. He is member of IIE, MCSCMP , ect.