ROLE OF KNOWLEDGE MANAGEMENT FOR CORPORATES (A Study on INFOSYS)

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Abstract

This article gives a brief introduction about Knowledge Management (KM), its need, definition, components, KM Matrix KM assets, challenges and processes of KM initiative, Knowledge Abstraction,Knowledge Diffusion at any organization. Knowledge management is deployed to ensure that the corporates delivers better outcomes in the form of operational effectiveness, efficiency and improved company growth. It helps in delivering better customer service and improved Innovation. It also provides a narration on how the KM initiative has been adopted at **INFOSYS**,.Both knowledge sharing as well as reuse needs to be encouraged and recognized at the individual employee level as well as the company level. This is best done by measuring and rewarding knowledgeperformance. Sustained strategic commitment and a corporate culture that is conducive to knowledge-performance are vital for success in Knowledge Management.

INTRODUCTION

Knowledge Management (KM) is the process of gathering, managing and sharing employees' knowledge capital throughout the organization. Knowledge sharing throughout the organisation enhances existing organizational business processes, introduces more efficient and effective business processes and removes redundant processes. It is a discipline that promotes a collaborative and integrated approach to the creation, capture, organisation access and use of an enterprise's knowledge assets. KM has now become a mainstream priority for companies of all sizes. Capturing a company's most valuable Knowledge (asset) and distributing it effectively across the enterprise is a business critical issue for many help desk, customer support and IT departments.

The systematic process of finding, selecting, organizing, distilling and presenting information, improves an employee's comprehension in a specific area of interest. KM, as emphasized by Abdul Kalam (2004), helps an organisation to gain insight and understanding from its own experience. Specific knowledge management activities help focus on organisation on acquiring, storing and utilizing knowledge for problem solving, dynamic leaning, strategic planning and decision making. It also prevents intellectual assets from decay, adds to firm intelligence and provides increased flexibility.

KM is not only about Knowledge Technology. KM must be an enabler to achieve strategic business objectives. The organisational debris from failed attempts to impose new

technical infrastructures that are either inappropriate to their work environments, or where people are not willing to share knowledge is ample evidence. Hence the need of Knowledge Management initiative arises to become solution for such problems, which brings together people, process and technology and helps corporate to achieve its goals and vision.

Knowledge management is an audit of "intellectual assets" that highlights unique sources, critical functions and potential bottlenecks, which hinder knowledge flows to the point of use. It protects intellectual assets from decay, seeks opportunities to enhance decisions, services and products through adding intelligence, increasing value and providing flexibility. KM complements and enhances other organisational initiatives such as total quality management (TQM), business process re-engineering (BPR) and organisational learning, providing a new and urgent focus to sustain competitive position.

The Gartner Group (2005) defines KM as a discipline that promotes an integrated approach to identifying managing and sharing of all of an enterprise's information assets. These information assets may include database documents, policies procedures as well as previously unarticulated expertise and experience resident in individual workers. Knowledge management issues include developing, implementing and maintaining the appropriate technical and organisational infrastructure to enable knowledge sharing.

Broadbent (1997) defines KM as 'a form of expertise management which draws out tacit knowledge, making it accessible for specific purposes to improve the performance of organisation; about how the organization's 'know-how' should be structured, organized, located and utilized to provide the most effective action at that point in time'.

WHY DO WE NEED KM FOR CORPORATES

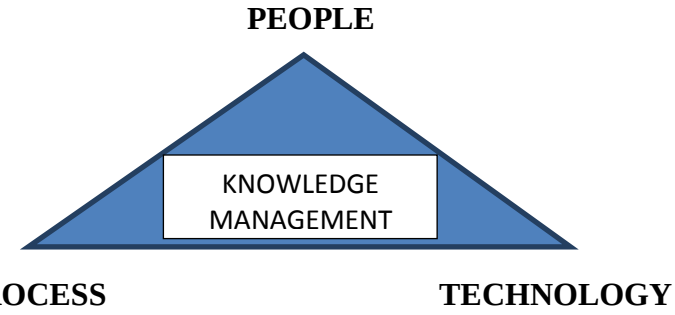
Knowledge management solutions are now the most important strategic technologies for large companies, according to a new report and survey of European executives by the Economist Intelligence Unit (EIU.com, 2003), sponsored by Tata Consultancy Services. In the survey, 67% of companies cite knowledge management/business intelligence solutions as important to achieving their strategic goals over the next three years.

To serve customers well and remain in business companies must: reduce their cycle times, operate with minimum fixed assets and overhead (people, inventory and facilities), shorten product development time, improve customer service, empower employees, innovate and deliver high quality products, enhance flexibility and adoption, capture information, create knowledge, share and learn. None of this is possible without a continual focus on the creation, updating, availability, quality and use of knowledge by all employees and teams, at work and in the marketplace.

Components of Knowledge Management

Based on actual experiences of the leading global KM case studies, the components for KM can be broadly categorized into three classes - People, Processes, and Technology (Figure 1). While all three are critical to build a learning organisation and get business results from KM, a majority of organisations worldwide implementing KM have found it relatively easier to put technology and processes in place, whereas the "people" component has posed greater challenges.

The biggest challenge in KM is to ensure participation by the people or employees in the knowledge sharing, collaboration and re-use to achieve business results. In many organisations, this requires changing traditional mindsets and organisational culture from "knowledge-hoarding" (to keep hidden or private) to "knowledge-sharing" (share among team members) and creating an atmosphere of trust. This is achieved through a combination of motivation / recognition and rewards, re-alignment of performance appraisal systems, and other measurement systems. A key to success in Knowledge Management is to provide people visibility, recognition and credit as "experts" in their respective areas of specialization - while leveraging their expertise for business success.



Components of Knowledge Management

The Process component include standard processes for knowledge-contribution, content management (accepting content, maintaining quality, keeping content current, deleting or archiving content that is obsolete), retrieval, membership on communities of practice, implementation-projects based on knowledge-reuse, methodology and standard formats to document best-practices and case studies, etc. It is important for processes to be as clear and simple as possible and well understood by employees across the organisation.

KM technology solutions provide functionality to support knowledge-sharing, collaboration, workflow, document-management across the enterprise and beyond into the extended enterprise. These tools typically provide a secure central space where employees,

customers, partners and suppliers can exchange information, share knowledge and guide each other and the organisation to better decisions. The most popular form of KM technology enablement is the Knowledge-Portal on the Corporate Intranet (and extranets where customers, partners and/or suppliers are involved). Common technologies used for knowledge portals include standard Microsoft technologies or Lotus Notes databases. A company must choose a technology option that meets its KM objectives and investment plan. While technology is a key enabler to KM, it is important to ensure that the technology solution does not take the focus away from business issues and is user-friendly and simple to use. Many companies have made the mistake of expending a Knowledge Management: Why Do We Need It for Corporates 41 disproportionately high portion of their KM effort and resources on technology - at the cost of people-involvement or strategic commitment - resulting in zero or very limited business results. It is also important to remember that users of the KM system are subject-matter experts in their respective areas of specialization and not necessarily IT experts.

KM ASSETS AND PROCESSES

Typically, there are six knowledge assets in an organisation namely:

- Stakeholder relationships: includes licensing agreements; partnering agreements, contracts and distribution agreements.
- Human resources: skills, competence, commitment, motivation and loyalty of employees.
- Physical infrastructure: office layout and information and communication technology such as databases, e-mail and intranets.
- Culture: organisational values, employee networking and management philosophy.
- Practices and routines: formal or informal process manuals with rules and procedures and tacit rules, often refers to "the way things are done around here".
- Intellectual Property: patents, copyrights, trademarks, brands, registered design and trade secrets.

Knowledge management processes maximize the value of knowledge assets through collaboration, discussions, and knowledge sharing. It also gives value to people's contribution through awards and recognitions. Process includes generation, codification (making tacit knowledge explicit in the form of databases, rules and procedures), application, storing, mapping, sharing and transfer. Together these processes can be used to manage and grow an organization's intellectual capital.

CHALLENGES FOR MANAGING KNOWLEDGE

Most often knowledge lies within an organisation implicitly, out of sight, undervalued and underused. Often, it leaves the building when the employees walk out of the company along with them. Managing the flow of knowledge around an organisation is a

challenge. The Knowledge management process normally face six challenges at each stage of the process flow (Shadbolt& O'Hara, 2003), and failing to meet any of these challenges can derail an organization's ability to use its knowledge assets to its best advantage. The six challenges are as follows:

a) Knowledge acquisition: The challenge here is to get hold of the information that is around, and turn it into knowledge by making it usable. This might involve, for instance, making tacit knowledge explicit, identifying gaps in the knowledge already held, acquiring and integrating knowledge from multiple sources (e.g. different experts, or distributed sources on the WWW), acquiring knowledge from unstructured media (e.g. natural language or diagrams). Knowledge acquisition (KA) is a field which has reached a certain level of maturity. It began as part of the drive to build knowledge-based systems, and was a line of research devoted to developing methods and software tools to provide knowledge content for such systems.

b) Knowledge Modeling:Modeling bridges the gap between the acquisition of knowledge and its use. Knowledge model structures must be able to represent knowledge so that it can be used for problem-solving.

c) Knowledge Retrieval: When a knowledge repository gets very large, finding a particular piece of knowledge can become very difficult. There are two related problems to do with knowledge retrieval. First, there is the issue of finding knowledge again once it has been stored, understanding the structure of your archive in order to navigate through it efficiently. And second, there is the problem of retrieving the subset of content from the repository that is relevant to a particular problem.

d) Knowledge Reuse: One of the most serious impediments to cost-effective use of knowledge is that often knowledge bases or systems are constructed afresh. It is unusual for problem-solving experience or domain content to be acquired and then reused, partly because knowledge tends to require different representations depending on the problem-solving that it is intended to do. Understanding the use and application of knowledge would enable more leverage to be gained from the knowledge already at hand, thereby increasing the returns on the investment in those knowledge assets.

e) Knowledge Publishing: The challenge of publishing or disseminating can be described as getting the right knowledge, in the right form, in the right place, to the right person, at the right time. Different users will require knowledge presented and visualized in different ways, and the quality of such presentation is not merely a matter of preference, but can radically affect the value of the knowledge to the user. Getting presentation right will involve understanding the different perspectives of people with different agendas, while an understanding of knowledge content will help to ensure that important related pieces of knowledge get published at the appropriate time.

f) Maintenance: The last challenge is to keep the knowledge repository functional. This may involve the regular updating of content as content changes (e.g. as price lists are revised). But it may also involve a deeper analysis of the knowledge content. Some content has a considerable longevity, while other knowledge dates very quickly. If a repository of knowledge it to remain active over a period of time, it is essential to know which parts of the knowledge base must be discarded and when. Other problems involved in maintenance include verifying and validating the content, and certifying its safety.

KNOWLEDGE MANAGEMENT AT INFOSYS

The essay would make a decent effort to focus on knowledge management practices at Infosys, a software services and IT consulting company, headquartered in Bangalore, India. It would also spot the current benefits and problems associated with knowledge management and lastly what benefits and problems might be seen in future with respect to knowledge management at Infosys. Infosys Technologies Ltd. (NASDAQ: INFY) defines, designs and delivers technology-enabled business solutions that help Global 2000 companies win in a Flat World. Infosys also provides a complete range of services by leveraging their domain, business expertise and strategic alliances with leading technology providers. Infosys has a global footprint with 63 offices and development centers in India, China, Australia, the Czech Republic, Poland, UK, Canada and Japan. Infosys and its subsidiaries have 122,468employees as on September 30, 2010. (Infosys, 2010)Infosys Technologies won the prestigious Global MAKE (Most Admired Knowledge Enterprises) award, for the year 2005. Infosys won the award for the third time in a row, and remains the only Indian company to have ever been named a Global Most Admired Knowledge Enterprise. It's also the only Indian company to have won the Asian MAKE award for five consecutive years (2006, 2005, 2004, 2003,and 2002). (Infosys, 2010)Infosys undertakes numerous and varied projects at any given point in time in diverse areas such as Banking and Capital Markets; Communication Services, Media and Entertainment; Energy Utilities and Services; Insurance Healthcare & Life Sciences; High Technology & Discrete Manufacturing; New Markets and Services; Transportation; Automotive, Aerospace & Defense; Retail, CPG, Logistics, and so forth. Needless to say, managing knowledge at Infosys is a huge challenge

Implementation of KM at Infosys – Current and Future Benefits

Infosys began its Knowledge Management initiative in late 2000 with a steering committee that had representation from the Board of Directors and senior management. The attempt was to create system that would be capable to facilitate the Infosys KM aim of establishing a 'learn once, use anywhere' paradigm.

In Infosys, the organization-wide knowledge is majorly managed using three centrally operated knowledge repositories: the Knowledge Shop (K-Shop), Process Asset Database (PAD), and People Knowledge Map (PKM).

The K-Shop is primarily the most common amongst the Infoscions or the Infosys employees. It has been built on Microsoft site server technology, and all employees can access it through a web-interface linked through the Infosys intranet – "Sparsh". The employees are encouraged within the company to share and submit papers, project experiences, internal or external literature, innovative ideas, technical solutions, their knowledge on concerned subjects and so forth. In addition, the K-Shop has an excellent search facility that offers a single as well as a multiple parameter search. Thus on click of a button to entered search keywords and content type, a wealth of productive information is made available to all Infosys employees through K-Shop.

The Infosys Process Asset Database is another online system to capture the "as is" project deliverables. This contains project artifacts such as project plans, database design references, high and low level design documents, development and test plans etc. Employees can search the related documents based on project code, project type, unit, customer type, customer name, and so forth. This benefits and helps provide new projects with information on similar, previously executed projects and thus helps set quantitative goals.

The People Knowledge Map or **the PKM** is a knowledge directory of experts in varied fields. The employees are able to search and locate experts through this intranet based system. The usability of this map is enormously seen within the company as it provides multiple nodes and topics. There are various expert technology enabled teams that can be contacted through this portal which help employees working on some specific technology to resolve their issues and thus in a way helps in faster delivery.

Infosys's intranet "Sparsh" serves as the common window for all these systems and acts as the central tool. The Infosys' QSD or the Quality System Documentation is a repository of all process-related guidelines, checklists, templates etc. and serves to standardize all the Infosys project processes and hence the outputs. Infosys also has electronic bulletin boards (commonly known as BBs) for discussing development issues, technical and domain-related topics. In addition, there are news groups and newsletters across various units that discuss the latest technology and business issues.

Knowledge Management is of even more importance and significance at a project level than it is for an organization. The benefits of efficiently managing and sharing knowledge in a project team include the ability to easily react to customer requests, improve productivity through fewer defects and rework, improve teamwork through regular knowledge transfer (KT) sessions amongst the team members so that everyone gets benefitted from every other team

member's knowledge. At Infosys, every project explicitly maintains a project-specific knowledge repository and a detailed training plan with material to deal with project attritions. In addition, effort and cost is subsequently reduced by reusing knowledge in the form of holding weekly knowledge sharing (called as KT-sessions at Infosys) sessions where team members impart knowledge, discuss and document past learning. In a project, knowledge management is everybody's concern and responsibility. The project manager defines the KM activities in the project plan, which then serves as a guide for the team members to undertake. Generally, about 2 to 3 percent of a project's effort is dedicatedly spent in knowledge management activities.

Infosys Technologies' KM vision is to be an organization where every action is fully enabled by the power of knowledge; which truly believes in leveraging knowledge for innovation; where every employee disempowered by the knowledge of every other employee; which is a globally respected knowledge leader.

In future, like in the present as well as in the past, knowledge management would remain one of the key strategic imperative of organizations. Its productive use and management in future would unleash new ideas and creativity, help mitigate project risks and facilitate development and implementation of new and improved business models. Its future benefits would be in the speedy innovation, production and conservation of new values for the organizations such as the Intellectual Property Assets, Web-blogs etc. It would enable sustainable organic growth and development of new markets, hence benefiting theorganisations in future with increased revenue and increased returns on their investments. The future benefits of knowledge management also stretch out in helping to create a more adaptive, flexible, responsive and dynamic organization as well as aid in the smooth progress towards evolution of a more intelligent enterprise, facilitating the production of smart and engaging products.

Knowledge Management continues to improve and accelerate learning and the flow of information in an organization. The enterprises have identified KM as the key for future development of collective wisdom, experience and brain-power of human capital assets. The advantages of KM have shifted employees from balance-sheet expense items to knowledge investors in the enterprise and helped them cope with increased information overload. Knowledge Management, in future would improve the organization's ability to manage change, attract and retain motivated, loyal and committed talent. Effective Knowledge Management in present would lead to better knowledge transfer methods, tools and techniques in future and help to create more knowledge awareness, knowledge friendly culture and community, better suited to the emerging knowledge-based economy context. (KiKM, 2005)

Problems and Challenges of Knowledge Management

Knowledge Management is an organisational approach that is not easily implemented. On one hand, knowledge-sharing activities depend on the voluntary participation

of employees. Therefore, management should be sensitive to the knowledge activities that are already going on within the company and seek mean to support them. On the other hand, management needs to implement some organisational change in order to change the corporate culture. Employees can have all sorts of reasons for not joining in and employees who see benefit in KM have a hard time changing the corporate culture accordingly. Some objectives of workers can seem quite practical like, 'I don't have time for that, I need to meet my deadline'. Others could even be outright selfish, as they shield off their knowledge from potential competitors. A knowledge sharing culture can only found futile ground if top management supports it, showing benefits, incentives and rewards to those who do. Therefore KM cannot be just another project on the side; it requires structural change in the policy of the company.

KM requires a holistic and multidisciplinary approach to management processes and an understanding of the dimensions of knowledge work. KM should be the evolution of good management practices sensibly and purposively applied. KM presents a major shift in focus regarding the development and use of knowledge and information in increasing the effectiveness of any organisation.

It is true that knowledge capture of all tasks is possible, but one has to see the return of investment (ROI) point of view. It is very important to set the objectives for the system that one need to create. Based on the business goals, one can prioritize and identify critical information that can change organisational performance. The priorities might change based on changed business goals over time. The system has to be designed to cater to these changes. Therefore, it is important to think hard and plan for the long term, with short and long term objectives in mind. Instead of going directly to the search engine, one needs to look at the system in a holistic manner. For any KMS, the business objectives need to be set to ensure clarity of direction, else one can get lost in a forest of information.

Knowledge Management, for present as well as for the future, is a challenging issue in companies. To create, capitalize, contribute and share its knowledge capital is a need of any innovative organization.But managing the knowledge capital does not only involve processing of information through novel technologies. Instead, it is a long term programme, starting from a strategic commitment, involving correct analysis of knowledge and know-how in the company, and integrating various and well adapted tools (Ermine, 2000).

Garud and Kumaraswamy (2001) provide a systems perspective on the problems and challenges faced by Infosys in harnessing knowledge with insights related to all of the major problems related to KM. The main challenges pertaining to KM were found to be effective coordination, distribution and reuse of knowledge. Through a longitudinal case study at Infosys Technologies, an organization that is globally acknowledged for its leadership as a knowledge enterprise, they propose that knowledge management at Infosys involves more than just the sponsorship of initiatives at and across different levels. It also involves an active process of steering around and

out of vicious cycles that will inevitably emerge for any specific knowledge management initiative. (Sambamurthy&Subramani, 2003)

The key concerns about knowledge management mostly expressed by managers are primarily the cultural, managerial and information issues. In terms of culture, the challenge is the change management, the ability to convince people to share and contribute their knowledge. In addition to that, the ability to convince different industry business units within the organization to share their knowledge with other units, particularly when there is accountability over the profit generated by each unit and each of them is separately responsible for showing a profit towards the organization. The managerial concerns relate to the business value of knowledge management and the need for metrics upon which to demonstrate the value. Alavi&Leidner (1999) write that there is usually a concern within project about determining who would be responsible for managing knowledge and within an organization as a whole in bringing together many players that would get involved in developing KMS,including technical staff, corporate librarians, documentation staff, archivists, database administrators, and the professionals with the knowledge. Lastly, the information and technological issues in knowledgemanagement primarily relate to determine infrastructure requirements, keeping up with future technologies and security of data over the internet.

Theorganizations usually get into a fix with increasingly large and complex knowledge repositories. They can cleanse the system of old files but that in a way would mean to dilute their own knowledge management initiative. Alternatively, the organizations could place separate teams to check and cleanse only the redundant files and data, thus increasing its costs substantially. The real challenge for organizations apart from these could be to monitor their various departments and ensure that each unit takes responsibility for keeping their databases and repositories clean of redundant files. (Annely, 2006)Knowledge preservation has become a key issue and a major challenge among organizations in this fastpacked technology era. One of the reasons for this might be that the technology that is used currently for storing and managing knowledge may or may not remain compatible with future technologies. Hence, with time, the need is a constant up gradation of knowledge as well as its storage devices and technologies, which is seen to become a challenging task for organizations

SUMMARY/CONCLUSION

In this knowledge explosion era, through continuous learning and knowledge management as some of the key essentials, Infosys has achieved excellence in its information systems management, technology and allied fields. In future, Infosys should and probably would use its present reserves and skills to strive and evolve on its KM aim, objective, mission, goal, strategy and vision, thus setting up a real challenge before its competitors. In fact, it must think beyond

competition(s) and accept the multiple challenges in the world, strive for the best to keep delivering its best. With knowledge comes empowerment and by having a successful knowledge management practice going, a company would be able to empower every employee by the knowledge of every other employee. Putting into action the KM motto of Infosys 'learn once and use anywhere', the Infoscions thus could bring a complete paradigm shift in the world.

Knowledge Management is a new branch of management for achieving breakthrough business performance through the synergy of people, processes, and technology. Its focus is on the management of change, uncertainty, and complexity. (KM Network, 2008)

Knowledge is undoubtedly being considered as currency of the millennium, and knowledge management as a key survival imperative. As knowledge management requires determination, patience and perseverance, KM practitioners should not expect immediate returns on KM investment. It takes several iterations of real input and measurable output and subsequent updates to make KM productive. The prime objective of Knowledge Management within an organization is to support the achievement of business objectives. Therefore, knowledge sharing as well as reuse need to be encouraged and recognized at both individual employee and the company level. This is best done by measuring and rewarding knowledge performance. Sustained strategic commitment and a corporate culture which is conducive to knowledge performance are vital for achieving success in knowledge management.

At a project level, Knowledge Management plays a major role in developing expertise within a team which not only helps in an individual's personal growth but also in increasing the efficiency of an individual, decreasing the defects and rework and ultimately increasing the quality of the project. The concept of KM is to bring competitiveness in the team besides gaining domain and business knowledge. There are many problems and challenges associated with knowledge management but at the same time knowledge management has numerous benefits which are increasingly becoming the key factors towards booming evolution of organizations. The advanced enterprises today have realized the potential of knowledge management and are ready to adopt it and take up any challenge involved in its successful implementation. Others will gradually follow the suit, and still others will lag behind and would be reluctant to adopt KM approaches due to various challenges associated with it until competitive pressures force them to do so. Given the importance of effective knowledge management in today's competitive environment, we can expect to find that emphasis on knowledge creation, development, organization, and leveraging will continue to be of prime focus for generations to come

REFERENCES

Alavi&Leidner (1999) Knowledge Management Systems: Issues, Challenges, and Benefits,Communications of AIS Volume 1, Article 7

Bergeron, B. (2003) Essentials of Knowledge Management, John Wiley, Hoboken, NJDr.V.P.Kochikar (2000)

Ermine J.L (2000)Challenges and Approaches for Knowledge Management, CEA/UTT

Filemon A. Uriarte, Jr. (2008) Introduction to Knowledge Management, NAST-Japan

Garud&Kumaraswamy (2001) Vicious and Virtuous Circles in the Management of Knowledge: The Caseof Infosys Technologies Ltd.

G.B.Shaw (1856-1950) George Bernard Shaw quotes [online]. Available at:http://thinkexist.com/quotation/if_you_have_an_apple_and_i_have_an_apple_and_we/207452.html

Infosys (2010) What We Do | About Us [online]. Available at: http://www.infosys.com/about/what-we-do/pages/index.aspx

Joseph M. Firestone (2001) Estimating Benefits of Knowledge Management Initiatives: Concepts,Methodology, and Tools, Knowledge and Innovation: Journal of KMCI

Karl M.Wiig (1997) Knowledge Management: Where Did It Come From and Where Will It Go? KnowledgeResearch Institute, Arlington

KiKM (2005) Benefits of Knowledge Management [online]. Available at:http://www.kikm.org/KM_Benefits.htm

KM Network (2008) Virtual Library on Knowledge Management [online]. Available at:http://www.brint.com/km/

Sambamurthy&Subramani (2003) Special Issue on Information Technologies and KnowledgeManagement, MIS Quarterly

Thomas H. Davenport (2006) Principles of Knowledge Management, White Paper [online]. Available at:http://www.itmweb.com/essay538.htm#KM expensive

Abdul Kalam, A.P.J. 2004.Digital Library and its multidimensions. President of India's speech at the "Inauguration of International Conference on Digital Libraries (ICDL) – 2004, New Delhi : Feb 24, 2004. Available at: http://www.presidentofindia.nic.in/scripts/sllatest1.jsp?id=282

Broadbent, M (1997): The emerging phenomenon of knowledge management : The Australian Library Journal, Feb 6-24.

Shadbolt, Nigel and O'Hara, Kieron. 2003. AKTuality : An overview of the Aims, Ambitions and Assumptions of the Advanced Knowledge Technologies Interdisciplinary Research Collaboration. Available at: http://www.aktors.org/ publications/selected-papers/01.pdf