Knowledge Management: Creating Competitive Intelligence for the Future

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Abstract

In this knowledge era, the value of corporations, academic organizations and individuals is directly related to their knowledge and intellectual capital(IC). A newand potentially paradigm shift focus in the intersection between knowledge and intelligence is the recognition of the importance of understanding the intellectual capital of organizations. This paper explains how Cochin University of Science and Technology (CUSAT) is identifying and managing its intellectual capital for creating competitive advantage for the future. This paper also explores the different cost effective knowledge management strategies applied at CUSAT for managing its intellectual capital.

Keyword: Knowledge Management, Intelligence, Competitive Intelligence, Organizational Culture, Cochin University of Science and Technology (CUSAT)

1. Introduction

It is a universally accepted truth and well-recognized fact that knowledge is the supreme power on earth and act as a very useful and an indispensable tool in the hands of mankind, whether it is for personal life, professional life, social life or corporate life. Knowledge plays a key role in shaping all facets of life. The word knowledge carries many meaning and connotations such as data, facts, information or state that passes through various stages of learning. Development of knowledge passes through a series of transformative evolution processes such as collection of data, information, facts etc. Understanding data, interpretation of data, repetitive learning and derivation of intellectual component creates new knowledge.

In this knowledge economy era, the management refers to effectively identify, acquire, process, resolve, use, store and share knowledge to create an approach to transforming and sharing of tacit and explicit knowledge for the advancement of intellectual capital and competency. Knowledge has become the key source of wealth not only at an organizational but also on a national level. And enterprises, particularly those in the public sector are dangerouslyundermining their knowledge assets by focusing exclusively on financial assets in accounting procedures.

Knowledge of an organisation does not reside in a structured form of information and data. The discovery of such knowledge is a difficult task as the characteristic is dynamic, scattered, massive and multiplying at high speed. Conventional methods of managing scattered information are too resource demanding and time consuming to cope with the rapid information growth. Knowledge management is a fast growing process in any academic or industrial organisation. It is one of the key components of an organisation's objectives such as improved performance, competitive advantage, innovation, the sharing of lessons learned, integration of the national and global level for its continuous improvement.

2. Knowledge

Knowledge can be defined as the facts, information and skills acquired through experience or education; the theoretical or practical understanding of the subject (Oxford dictionary) knowledge is of two types: Explicit knowledge (can be written down, transferred and sharedcan be protected by the legal system). Tacit knowledge (knowhow and is by nature difficult to describe).

Explicit knowledge, which can be expressed in words and numbers, can be easily communicated and shared in hard form, as scientific formulas, codified procedures, or universal principles. Tacit or unarticulated knowledge is more personal, experiential, context specific, and hard to formalize. This kind of knowledge is difficult to communicate or share with others, and is generally known only to individual or a team. It can be demonstrated but rarely codified, and resides with its holder**.**Since knowledge may be an organization's only sustainable competitive advantage, it is very important to capture tacit knowledge.

3. Knowledge Management

Knowledge management is defined as theprocess of codifying, collecting, and disseminating the organization's knowledge assets. Knowledge assets are intellectual capital of an organization, human capital-knowledge resident in employees regarding their jobs, structural capital is the knowledge regarding organizational system, structures and processes, relational capital is the knowledge regarding managing organization specific relationship with external stakeholders such as customers, collaborators, industry etc and competitive capital is the competitive knowledge resulting from market driven analysis of information internal and external to the organization.

According to Martin (2000), the key to effective management of knowledge is to create an organisational culture that understands what knowledge is important and then to create processes to put that knowledge into action. Knowledge management aims at adding value for customers through the acquisition, creation, sharing and reuse of any aspect of knowledge relevant to the organisation and its environment, internal and external.

Knowledge management is essentially about getting the right knowledge to the right person at the right time.It implies a strong tie to corporate strategy, understanding of where and in what forms knowledge exists, creating processes that span organizational functions, and ensuring that initiatives are accepted and supported by organizational members. Knowledge management may also include new knowledge creation, or it may solely focus on knowledge sharing, storage, and refinement.(Alan Frost 2010)

4. Intelligence

Individuals differ from one another in their ability to understand complex ideas, to adapt effectively to the environment, to learn from experience, to engage in various forms of reasoning, to overcome obstacles by taking thought. Although these individual differences can be substantial, they are never entirely consistent: a given person's intellectual performance will vary on different occasions, in different domains, as judged

by different criteria. Concepts of "intelligence" are attempts to clarify and organize this complex set of phenomena. Although considerable clarity has been achieved in some areas, no such conceptualization has yet answered all the important questions, and there is not a universally accepted concept yet.

Intelligence is the aggregate or global capacity of the individual to act purposefully, to think rationally, and to deal effectively with his environment(David "Wex" Wechsler 1986).It is also defined as the knowledge in action; that is the strategic use of knowledge assets, including widespread, purposeful gathering, analysis and use in making strategy.

5. Competitive Intelligence

Competitive intelligence is defined as the field of practice- supports strategic decision- making and assists executives in identifying whether the organization is competitive (Gilad 1994)

A broad definition of competitive intelligence is the action of defining, gathering, analyzing, and distributing intelligence about products, customers, competitors and any aspect of the environment needed to support executives and managers in making strategic decisions for an organization.There is a process involved in gathering information, converting it into intelligence and then utilizing this in business decision making. If the intelligence gathered is not usable (or actionable) then it is not intelligence.(Wikipedia)

6. Organizational Culture

Organizational culture is the collective behavior of humans who are part of an organization and the meanings that the people attach to their actions. Culture includes the organization values, visions, norms, working language, systems, symbols, beliefs and habits. It is also the pattern of such collective behaviors and assumptions that are taught to new organizational members as a way of perceiving, and even thinking and feeling. Organizational culture affects the way people and groups interact with each other, with clients, and with stakeholders (Wikipedia).

Organizational culture is based on shared attitudes, beliefs, customs, and written and unwritten rules that have been developed over time and are considered valid. Also called corporate culture, which affects the organization's productivity and performance, and provides guidelines on customer care and service, product quality and safety, attendance and punctuality and concern for the environment. It also extends to production-methods, marketing and advertising practices, and to new product creation. Organizational culture is unique for every organization and one of the hardest things to change.

7. Why Knowledge Management

Technological developments are fundamentally changing: how we gather, analyze, and disseminate data. As academic institutions shift from authority-based to data-driven decision making, they need to use the sound knowledge management principles that are revolutionizing the private sector industries. Doing so will make them more competitive.

The new thinking about knowledge management is more innovative.Different innovation processes are knowledge production, knowledge processes and knowledge practice. Current trends of KM can be passive in how it uses the knowledge: the gathering, codification, and sharing function is very important.

KM can make substantial contribution to the higher education sector for cognition, critical thinking and collaboration. Competitive knowledge should be one of the core concerns of current KM practice along with the human structure and collaborative capital. The huge volume of information available in the e-network comes from various sources such as academic outcomes, suppliers, enterprisers, R & D sector, consortia, e-resources and social media etc. So proper management of these knowledge assets brings these valuable resources into the sphere of KM system.

The students of this generation are considered to be 'digital natives' or e-natives who are more concerned about technology for interactive learning & research;having knowledge at one's finger tips or within their palm.Knowledge implies that learning and experience have been applied to information.

Organizing scholarly content and free access to all enhances learning experience including face-to-face, self- learning and blended learning. Current mantra of Higher education is learning anytime, anywhere, and on any device.

8. Knowledge Management Strategies

Knowledge management strategy is simply a plan that describes how an organization will manage its knowledge better for the benefit of that organization and its stakeholders. A good knowledge management strategy is closely aligned with the organization's overall strategy and objectives

A good, clear knowledge management strategy can help to:

♦ Increase awareness and understanding of knowledge created in the organization

♦ Articulate the business case and identify potential benefits

♦ Gain senior management commitment

♦ Attract resources for implementation

♦ Communicate good knowledge management practice

9. Knowledge Management Strategies at CUSAT

Cochin University of Science & technology (CUSAT) is a premier institution in India promoting Science & Technology education and research. CUSAT has developed cost effective strategic solutions for managing its intellectual outcomes and sharing it for promoting collaborative research over the globe through its institutional repository, Media repository, Bibliographical information system for Science & technology (BISSAT) and Traditional Knowledge digital Library (TKDL) and Media repository. All these are powered by different open source softwares such as DSpace, BIBAPP, Mediacore, etc.
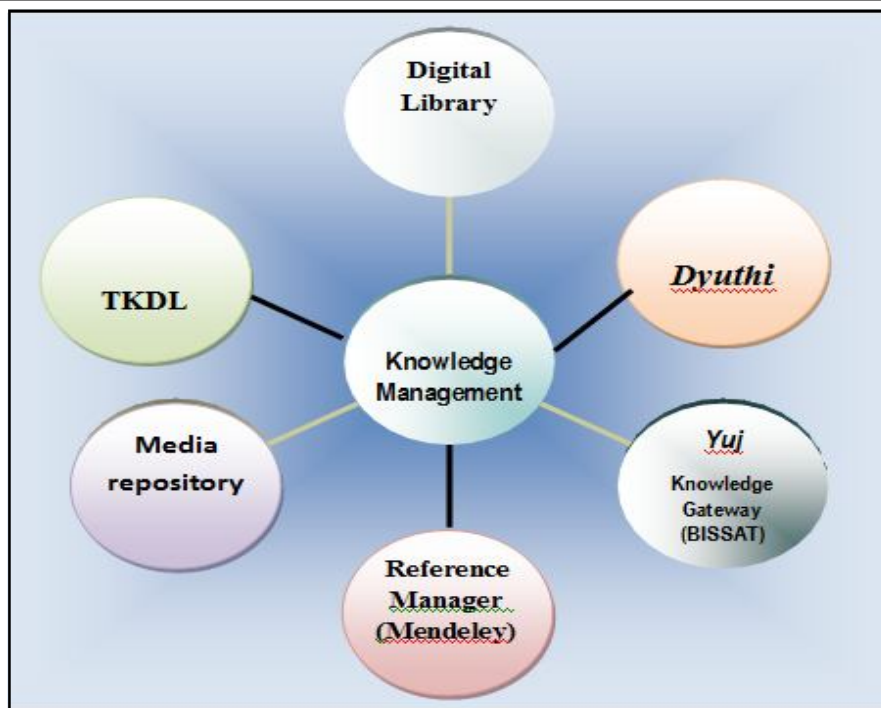
Figure 1 KM strategy at CUSAT.

10. How Different Knowledge Management Strategies Support Competitive Intelligence

This cost effective strategies such as institutional repository, media repository supports the knowledge identification and acquisition of intellectual capital. It supports the proper way of managing, and sharing within the campus and over the globe. Institutional repository of CUSAT called dyuthi (dyuthi.cusat.ac.in) supports to aggregate and integrate scattered information including gray literature in the campus. It is available 7X24X365 and OAI –PMH compatible. So this IR supports the global visibility and sharing of knowledge. Institutional repository of Cochin University of Science & Technology supports the free flow of information within the campus, departments, schools and R & D institutions by integration and aggregation scattered information within the campus. While supporting the free flow of information globally, it also encourages the preservation of organizational intellectual informatics. Facilitating in a holistic way all processes ranging from knowledge capture, knowledge organization, to sharing of knowledge, etc

Bibliographical Information system(yuj.cusat.ac.in) supports to find collaborators and experts within the campus as well as over the globe. Itencourages collaborative learning;find cross references, citation tracking system etc. It promotes research of a department, school, or research group, increase the visibility of campus research and easily reuse publication data.

Figure 2: A Snapshot of Knowledge Gateway

Media Core provides an exceptional experience to any site delivering media to its users. Media Core can be used to organize video and podcasts, engage users and deliver content to both desktop and mobile devices.Media repository aims to archive in house video contents created within the campus, it covers the contents such as events happened in the campus, Featured, Student's Creation, Training, Lectures and invited talks, Conferences/ seminars and TV Shows etc. For organizations with video located on the social web and on its own servers, it can centralize everything onto one common platform.. It is powered by open source software media core.

♦ Provides Visual stimulation for teaching & learning,

♦ Supports critical thinking &Cognition,

♦ Supports different types learning

♦ Available at any time, any where

♦ Supports teaching and training

♦ Peer to peer learning

♦ Social media for sharing

Figure 3: A Snapshot of Media Repository

The main aim of this TKDL is to explore the science behind the traditional knowledge of the fisherman's community in their daily life such as prediction of the availability of fish species, whether forecasting, anticipation of problems, disaster warning, general fish habitat, medical applications of marine species, etc from their experience and knowledge transferred through generations for the improved, sustainable coastal resource management. This grandma's knowledge will be documented and linked with scientific knowledge by developing a Traditional Knowledge digital Library (TKDL) of coastal resources.

Traditional knowledge Digital Library (TKDL) helps to transform explicit knowledge into implicit. It helps to integrate local knowledge with scientific knowledge, promote interdisciplinary research and collaborative learning. It supports a blended learning system

Traditional knowledge digital library of Cochin university of Science & technology supports the preservation of tacit knowledge, creation of new wisdom/knowledge by linking this indigenous knowledge with scientific knowledge. It also enhances the new knowledge economy of the Nation. It supports qualitative assessment of traditional culture; it supports the organizational research and knowledge based cultural change initiatives. Other complimentary factor for ensuring optimal information flow in fisheries sector, its research, economic, social and cultural growth.

Figure 4: A Snapshot of Dry Fish Preparation

11. Conclusion

This paper attempted to cover initiatives and real time experiences of managing the information and knowledge produced by Cochin University of Science and Technology, Cochin. There is a tremendous scope for improving information management using open access tools and techniques; these are some of the methodology for knowledge acquisitions and dissemination in the context of higher education. Open access repository support is for developing a culture of open publishing and archiving. It also supports in developing an environment for collaborative learning, capture and knowledge sharing and research within the campus and all over the globe. This cost effective knowledge management strategy helps to share the knowledge anywhere at any time, also supports to enhance the competitive intelligence

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