JETIR.ORG ISSN: 2349-5162 | ESTD Year : 2014 | Monthly Issue
JOURNAL OF EMERGING TECHNOLOGIES AND INNOVATIVE RESEARCH (JETIR)
An International Scholarly Open Access, Peer-reviewed, Refereed Journal

A Study on Knowledge Management Practices for Organizational Effectiveness in IT industry in Karnataka

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Abstract

In India, the use of knowledge management approaches has mostly been restricted to service sectors like information technology, consulting, and some sectors of the electronics and Communication-related sectors typically utilize innovation and business process reform to obtain a competitive advantage, develop new service models, maintain key talent, and achieving customer satisfaction are some of the main drivers behind starting a business programme for knowledge management. Gathering, storing, and exchanging ideas are some vital aspects of the idea-handling process, but coming up with fresh company concepts and innovations is essential to overcoming difficult difficulties. The implicit cultural foundation for KM's success includes Organization, a trust-based mindset, and a commitment to providing people with ongoing education opportunities.

Keywords: Knowledge management, IT Companies, Technology, Organization Culture

Introduction:

Knowledge Management (KM)

The process of obtaining, maintaining, and disseminating employee knowledge capital across the organization is known as knowledge management (KM). Sharing knowledge throughout the enterprise improves existing business processes, adds new, more effective business processes, and eliminates unnecessary procedures. It is a discipline that encourages a team-based, integrated approach to the generation, capture, organization, and utilization of knowledge assets within an enterprise. Nowadays,

businesses of all sizes prioritize knowledge management. For many help desk, customer service, and IT departments, capturing a company's most important Knowledge (asset) and successfully distributing it throughout the organization is a business-critical issue.

KM encompasses more than just knowledge technology. To accomplish strategic corporate goals, KM must be a facilitator. The organizational debris is left behind by failed attempts to impose new technical infrastructures on organizations where individuals are unwilling to share expertise or the infrastructures are unsuited for the surroundings in which they function. Thus, the need for knowledge management initiatives to become a solution for such issues develops. These initiatives integrate people, processes, and technology and aid corporations in achieving their objectives and vision. Databases, web-based portals, artificial intelligence, Management Information Systems (MIS), Enterprise Resource Planning (ERP), email, online discussion groups, video conferencing, simulation techniques, case discussion groups, online chat groups, etc. are some of the tools used for knowledge management in an organization.

What is Knowledge Management?

Since the term "knowledge and its management" was first used by Wiig (1990) in a keynote speech for the United Nations International Labor Organization, it has been the subject of numerous writings. Numerous interpretations exist, and the term is becoming progressively elusive. According to a McKinsey survey, more prosperous companies had a better grasp of knowledge management and the necessity for it to be viewed holistically throughout the organization. The definition provided by Kluge, Davenport, and Prusak (1998) is as follows:

Knowledge, which offers a framework for assessing and assimilating new experiences and information, is a fluid mixture of framed experience, values, contextual information, and expert insight. In the eyes of experts, it originates and is used. It frequently infiltrates organizational routines, procedures, practices, and conventions in addition to records or repositories. A knowledge management system (KM system) is an IT-based system intended to support and improves the processes of knowledge creation, storage/retrieval, transmission, and application, according to Alavi and Leidner (2001). Consequently, they viewed IT as a KM enabler (Jennex, 2005).

Thus, knowledge is seen by many other sources as an intangible but highly effective resource for organizational excellence and as an asset that can yield enough returns if it is consistently regenerated and applied effectively. P. Wilson and Allan Cattell (2005) recommended the following definition after consulting several sources.

Knowledge management, which comprises the creation, acquisition, collection, transmission, transfer, and application of knowledge to meet corporate goals, is a systematic process that promotes the ongoing learning of individuals, groups, and organizations.

Concept of Knowledge Management

Knowledge management is a concept where a system consciously and thoroughly gathers, organizes, shares, and analyses its data in terms of resources, documents, and people's abilities. In 1998, it was thought that only a small number of businesses truly operated a sophisticated knowledge management system. That has altered as a result of technological developments and changes in how we access and exchange information; many businesses now have some sort of knowledge management structure in place. Knowledge management refers to a variety of tactics and procedures applied within a company to locate, produce, disseminate, facilitate, and embrace new insights and experiences. These knowledge-containing insights and experiences can either be embodied in people or instilled in organizational procedures or practice. One of the movement's most well-known proponents and likely creators, Karl Wiig is known for his work in the field of knowledge management.

Data acquisition and management have been crucial for corporate growth during the previous few decades. Data might be an unprocessed number, an image, a word, a sound, etc. that is the result of an observation or a measurement. Information is data that has been organized in a meaningful way. Finally, knowledge is the process through which information is analyzed and ideas and beliefs serve as a road map for meaningful action and cognition. Consequently, the process of going from data to information and then from information to knowledge, or the three components of data, information, and knowledge are connected in a hierarchical structure, with data and information serving as the foundation for knowledge. Knowledge has an objectivist nature, according to Donald Hislop (2005), and these show:

(i) Knowledge as a thing that individuals or groups hold

(ii) The positivist ideology that underpins knowledge treats facts as being objective

(iii) Explicit information is given priority over tacit information.

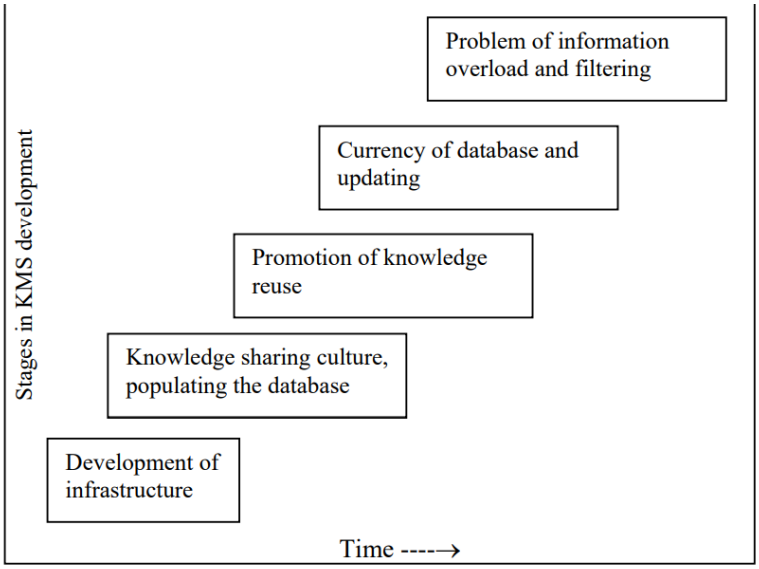
(iv) The acquisition of knowledge results from a mental process.

Scope of the study

Knowledge management is getting evolved in information technology companies in India, as found out in our study. We have observed from the analysis of the survey that almost all information technology' firms have started embracing knowledge management in varying degrees, and are going ahead with additional

focus in this area. It would be of interest to mention here that knowledge management systems in other segments and its comparison with the knowledge management systems in information.

Stages in KMS Development:



Knowledge Management in IT sector

One of the ideas that have been applied almost universally in all sorts of businesses is knowledge management (KM). According to Lawton (2001), KM refers to knowledge obtained from "a deluge of information." The idea became significant in the middle of the 1980s when it was applied to business technology, including the internet, search engines, data warehouses, and artificial intelligence methods. The majority of the time in the IT business, designing software requires doing certain procedures. Each phase includes a variety of choices that may be made, each of which is crucial in its own right since it calls for a methodical approach, certain tools, and techniques, the variables that would be used, how it would be tested, etc. A corporation first decides which items need to be developed. The project manager also chooses a group of individuals who are competent in their respective fields and develops a plan for the project. This includes choosing the necessary procedures and approaches. The software developer chooses the variables and functions to be utilized in the programme, and the tester then tests the programme using a set of test cases. Each step, therefore, involves decision-making, which is grounded in facts rather than intuition. When disparate ideas and information are combined, the organization needs to share and communicate these. Knowledge management suggests doing this. Similar cases and situations need to be shared in a central database that can be viewed by everyone in the organization, regardless of where they are located.

An IT behemoth like Tata Consultancy Services (TCS) constantly investigates "emerging technologies" that could affect consumers and society. They work hard to stay technologically advanced, making major contributions to research and development. TCS always relies on its KM activities to support its ongoing

survival and growth. They implemented a "web of involvement" framework in their company that combined business and service procedures. MAKE was quite pleased with this KM initiative (Most Admired Knowledge Enterprises).

About IT Industry of India

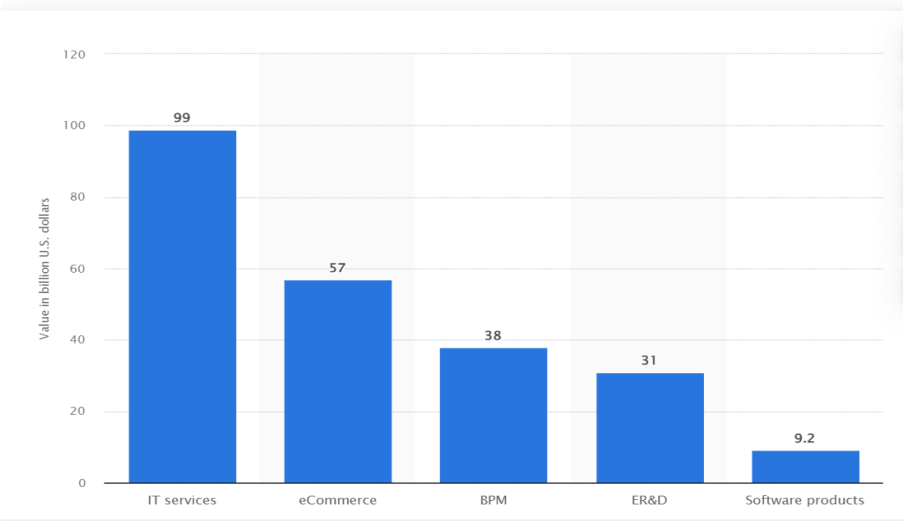
At a time in which few organizations have been able to conduct business as usual, knowledge management solutions have sustained momentum and even accelerated their growth. Increased use of collaboration, cloud technology, AI, language processing solutions, and graph databases have all contributed to a robust environment for knowledge management.

The impetus to adopt these technologies was accelerated by the need to reconfigure the work environment due to COVID-19, but much also resulted from planned evolution or digital transformation initiatives. In either case, the contributions of these enabling technologies went a long way toward providing solutions to a challenging work scenario.

The Indian information technology (IT) sector has been essential in advancing the nation's economic standing and in putting it on the map of the world. India's reputation as a nation of bureaucracy and orthodox beliefs has been transformed into one of creativity and cutting-edge technology that offers the rest of the globe services and solutions.

According to the National Association of Software and Service Companies (Nasscom), the Indian IT industry's revenue touched US$ 227 billion in FY22, a 15.5% YoY growth. According to Gartner estimates, IT spending in India is expected to increase to US$ 101.8 billion in 2022 from an estimated US$ 81.89 billion in 2021. Indian IT spending is expected to maintain robust 7.7 percent growth in 2022 as compared to the 2021 growth rate of 21.2 percent. "Ongoing investment on hyper-scale data centers coupled with average selling price (ASP) increase is forecast to drive 13.6 percent revenue growth for data centers in 2022. IT services with 99 billion U.S. dollars had the largest market size among the various sectors of the Indian IT market in the fiscal year 2021. The total market size of the Indian IT market, including e-Commerce, is 235 billion U.S. dollars.

The market size of the IT industry in India in FY 2021, by sector (in billion U.S. Dollars)



Source: Statista, 2022

The basic competencies and characteristics of Indian IT have positioned it on the global stage and drawn investments from important nations. The computer hardware and software sector in India received the highest share in FDIs amounting to over 1.9 trillion Indian rupees in the fiscal year 2021. The infrastructure sector came sector amounting to over 582 billion rupees.

India is one of the world's major centres for IT businesses. There are a huge number of Indian IT companies that have had a significant impact on the industry as international companies seek to enter the Indian IT market. The top 10 IT companies in India for 2021 are shown below.

(i) Tata Consultancy Services: The company is engaged in the IT sector with various IT services.

(ii) Infosys: This is a popular IT company that provides business consulting, information technology, and outsourcing services.

(iii) HCL Technologies: It is an Indian multinational information technology services and consulting company.

(iv) Wipro Limited: It is an Indian multinational corporation that provides information technology, consulting, and business process services.

(v) MindTree Ltd: It is an Indian multinational information technology services and consulting company.

(vi) Mphasis Limited: It is an Indian multinational information technology services and consulting company.

(vii) Larsen & Toubro Infotech Limited: It is an Indian multinational conglomerate company, with business interests in engineering, construction, manufacturing, technology, information technology, and financial services.

(viii) Quess Corp Limited: It is India's largest private-sector employer and integrated business service provider.

(ix) Tech Mahindra Limited: It is an Indian multinational information technology services and consulting company.

(x) Hexaware Technologies Ltd: It is an IT company leveraging the power of ubiquitous data, insights-driven algorithms, and strategic cloud computing to help customers achieve business transformation.

Tata Consultancy Services was the leading information technology services and consulting company in India based on net sales of about 1.6 trillion Indian rupees as of June 2022. TCS is an Indian multinational information technology company with headquarters in Mumbai. Infosys was the second-leading information technology company in the country in the same year. The revenue of Tata Consultancy Services worldwide increased steadily during the financial years 2006/07 to 2021/22. For the fiscal year ending March 31, 2022, Tata Consultancy Services Limited generated revenue of 1.92 trillion Indian rupees (or approximately 25.3 billion U.S. dollars). In the fiscal year 2022, the global revenue of Infosys Limited amounted to about 16.3 billion U.S. dollars, which was a significant increase in comparison to the 13.6 billion dollars last year. This makes Infosys one of the biggest IT services and consulting companies in India.

Review of Literature

Santwana Chaudhuri (2011) in the study "Knowledge Management in Indian IT Industries" stated that the growth of knowledge management practices in India has been limited mainly in the service industries like IT, Consultancy, and some of the electronics and communication industries where innovation and redesigning of business processes are frequently practiced to gain competitive advantage. Customer satisfaction, retaining crucial talents, and developing new modes of services are some major reasons for launching knowledge management programmer. Collecting, storing, and sharing are some important steps in handling ideas whereas creating and innovating new ideas for doing business are crucial to meet complex challenges. The success of KM is also based on the implicit culture of the organization, the philosophy, and belief of trust, giving people continuous learning opportunities.

Kitimaporn Choochote (2012) in "An Analysis of Knowledge Management Process for SMEs in Developing Countries: A Case Study of SMEs in India and Thailand," noted that knowledge management has grown into a field over the past two decades. Despite much research, large corporations are favoured. In developing countries, Small and Medium Enterprises (SMEs) have been understudied due to this prejudice. It allows firms to objectively analyze their knowledge management process by evaluating relevant attributes. The study gives insights into SME comprehension of the knowledge management process and makes recommendations on how SMEs in developing countries can install a comprehensive knowledge

management system utilizing mostly free and open source software to improve their knowledge management process.

Manish Kumar, Souren Paul et.al (2005) in the study of "Knowledge Management Practices in Indian Software Development Companies: Findings from an Exploratory Study" mentioned that Knowledge management (KM) is becoming an important management responsibility as organizations increasingly invest significant information technology (IT) resources to support the acquisition, storage, sharing, and retrieval of knowledge. Furthermore, KM plays a critical role in organizations that rely primarily on intellectual capital, such as software development companies. In this paper, we report the findings of an exploratory study where we investigate the KM practices of eight leading software consultancy companies in India and compare our findings with results from a similar study by Alavi and Leidner (1999). Finally, we suggest a technical and social infrastructure to help enhance the KM capability of software development companies in India.

Niloy Biswas, and Santwana Chaudhuri (2020) in the study "Knowledge Management Process - Awareness, Adoption, and Implementation in selected organizations under power sector in West Bengal," claimed that a strong knowledge base and good information flow are necessary for every organization's progress. Most businesses have Knowledge Management programmes. Knowledge management is a systematic process for developing, acquiring, synthesizing, sharing, and utilizing knowledge and experience to meet organizational goals through continuous learning. Power companies are no different. Indian power industry organizations are also realizing the need for established knowledge pools to make power sector activities more rewarding and inclusive. Some Indian organizations in this industry have initiated Knowledge Management initiatives out of need. This report explores awareness, adoption, and implementation in select West Bengal electricity firms. Understanding how to promote knowledge management implementation for advantages is the goal. The article examines the breadth of effective adoption and execution of a knowledge management process in Indian power sector enterprises, including awareness and future directions.

Bhojaraju G. (2005) in the study of "knowledge management: why do we need it for corporate" mentioned that the article gives a brief introduction to Knowledge Management (KM), its need, definition, components, KM assets, challenges, and processes of KM initiative at any organization. It also provides a narration on how the KM initiative has been adopted at ICICI OneSource, to support the achievement of its Business Process Outsourcing objectives. Both knowledge sharing, as well as reuse, need to be encouraged and recognized at the individual employee level as well as the company level. This is best done by measuring and rewarding knowledge performance. Sustained strategic commitment and a corporate culture that is conducive to knowledge performance are vital for success in Knowledge Management. The paper concludes with suggestions for the implication for policy and future practices.

In "Knowledge management practices in Indian information technology companies," **Abhilasha Singh and Ebrahim Soltani (2010)** stated that this paper lays the groundwork for best practices in knowledge management and examines the degree of awareness and implementation of KM principles and practices in Indian IT companies. The awareness and execution techniques of knowledge management were examined in a purposive sample of 10 IT organizations in North India. Secondary data from 10 IT organizations underpins this study. Weighted ratings for each parameter at each phase of knowledge management—generation, codification, transfer, and application—were used to interpret data. The Knowledge Management Index informed decisions. According to the pre-defined grading scale, the Knowledge Management Index (KMI) for awareness and dedication is very high, however, senior management must allocate resources to start and sustain knowledge management practice. Though individuals are aware of the necessity of documentation and are preparing it to some level, much work remains in this area. Only vital information is archived, while 30%–40% of everyday job input is not. Since engineers'/programmers' ideas can only help the organization, there should be a way to implement them. The Knowledge Management Index for intellectual property awareness in IT organizations was too low, but it was high for information technology. HR practitioners must realize that people are the key competitive advantage and that optimum HR methods should boost knowledge management.

Pramod Kumar Singh (2005) in the Study of "knowledge management and its use in the library" highlighted that paper describes the different aspects of knowledge Management and its applications. The paper states that the value of knowledge for an organization is described in detail. The importance of LIBRARIANS and Information professionals in managing the knowledge management of organizations is described. Knowledge creation and knowledge sharing are described. The types and scope is mentioned. The paper has profiled knowledge management in libraries.

Ipseeta Satpathy, and Mitali Das Mohapatra, et.al (2020) in the study of "Value Creation through Knowledge Sharing and Innovation in the IT Industry" stated that conceptually understanding knowledge sharing and innovation in the Information technology industry (IT) and its impact on organizational performance of the employees. Management of knowledge focuses on retaining knowledge, innovation, and creation of value. It is a tool used in many organizations to improve the performance of the organization through strategic decision-making. Through the help of a field survey, primary data was collected and descriptive analysis and correlation analysis technique was applied to understand the association of Knowledge Management (KM) techniques with other variables identified from the study like knowledge sharing, storage of knowledge, transfer of updates, organizational learning and organizational culture, etc. The findings suggest that indicators like group meetings, taking courses related to a pertinent area, and activities involving teams are some of the formal channels of knowledge sharing and they need to be implemented in the organization.

R. Srikanth (2019) in the study "A Study on Knowledge Management among It Firms in Chennai" mentioned that Knowledge leads people to the effective usage of information so that they can make more informed and successful decisions in addition to enhanced customer interactions. Some organizations have learned the value of knowledge the hard way when they lost it through manpower reduction or retirement programs. Conversely, some organizations that have managed their knowledge in a professional, proactive, and systematic manner have become more innovative, agile, and successful. A holistic approach to managing the knowledge of an organization is very critical to the value proposition. The holistic vision encompasses the creation of a KM strategy and architecture that synchronizes with any company's mission and strategy. This study attempts to analyze the need for knowledge management in select IT Companies in Chennai, ascertain the type of KM practices adopted by the select IT companies and understand the type of relationship between knowledge management practices and the knowledge management climate prevailing in the select IT companies. It is no doubt that human capital together with financial capital and technology capital, would contribute to the capabilities of IT companies to adjust to the market dynamics.

Scope of the Study

Management is getting evolved in information technology companies in India, as found out from various studies. Analysis of the surveys shows that almost all information technology' firms have started embracing knowledge management to varying degrees, and are going ahead with additional focus in this area. It would be of interest to mention here that knowledge management systems in other segments and their comparison with the knowledge management systems in information technology have not been addressed.

Objective:

The main objective of conducting this study is to understand the basic reason for the introduction, management, and practice of knowledge as a tool for organizational effectiveness. Also, the study focuses on the corporate culture and its importance in such introduction and maintenance. The study has been conducted in IT industries based in major cities of Karnataka. The study mainly focused on getting information from IT Industry in which focus was given to receiving data mainly on status, introduction, growth of KM, and benefit accrued.

Survey Findings:

Reasons for Launching Knowledge Management Programme

The IT companies in Karnataka launched knowledge management practices to obtain a competitive edge in the globalized market. Satisfying and keeping customers works best. The majority of knowledge managers practice it to retain essential people. Retention remains a major issue in most Indian IT organizations.

However, retaining talented workers is the issue. Some quit because they can't handle the strain, while others depart to study overseas or in the nation. These cases are uncontrollable, however, those who hunt for a similar role in a different firm in the same industry are decreased by both monetary and non-monetary motivational methods. Non-monetary forms include perks, benefits, equity options, and salary increases, but organizations value them more. Programmers and software engineers are motivated by teams, advancement opportunities, opportunities to travel, updated skills, and more. Some are motivated by affiliation with an established company. Motivating knowledge employees in the organizational knowledge process is possible, but growing their loyalty to the organization so they stay in the same company looks to be difficult (Hislop2005). Thus, the rich guy seeks another work. The responding organizations also launch the KM programme to develop new and better services, save costs, and improve their image.

Table 1: Reasons for Launching Knowledge Management Programme

Sl. No.	Name of the company	Gaining competitive advantage	Improve customer retention/satisfaction	Retain key talent/expertise	Develop new services	Improved image	Avoid loss of key personnel
1	Tata Consultancy Services	√	√	√	√	√	
2	Wipro	√	√		√		
3	Cognizant Technology		√	√	√		√
4	Accenture	√	√			√	
5	Infosys Technology	√	√	√	√	√	√
6	HCL Technologies	√	√	√	√		√
7	Oracle	√	√	√	√	√	
8	IBM	√	√	√			

Knowledge Acquisition and Sharing –Sources :

In the case of the IT industry, the internal communication system plays a crucial role and primary source of gathering information for all IT companies. These companies have their own internal system called Intranet (JavaSofttech, Anshin Software, HCL Technologies, and Infovision Software, etc) or Knowledge Exchange, (Infosys). Knowledge Exchange is a set of online discussion forums and knowledge management portals (K M Portal) which is a central repository for content and is a good source of organizing, storing, sharing, collecting, and discussion which is in practice in Infosys. Most information is collected through Websites. But websites are used mostly for updating or gaining knowledge which is important for new employees or

any new events occurred. Journals or magazines for updating and gaining knowledge which is a good source of enrichment. 70% i.e.14 organizations depend on past background or the history of the company. R.S.Software mentioned along with all these Sl no Name of the company Gaining competitive advantage Improve customer retention/satisfaction Retain key talent/expertise Develop new services Improved image Avoid loss of key sources they also have regular seminars from eminent personalities and client's visits and such academic discussions help them a lot to get enlightened.

Table 2: Sources of Knowledge Acquisition

Sl no	Name of the company	Websites	Journal	Competitors	Internal communication systems	Past history	Others
1	Tata Consultancy Services	√	√	√	√	√	
2	Wipro				√		
3	Cognizant Technology	√	√	√	√	√	√
4	Accenture	√	√		√	√	√
5	Infosys Technology	√	√		√	√	√
6	HCL Technologies	√			√		√
7	Oracle	√	√	√	√	√	
8	IBM	√	√	√	√	√	

Conclusion:

Knowledge management allows innovation to grow within the organization, customers benefit from increased access to best practices, and employee turnover is reduced. The importance of knowledge management is growing every year. Businesses depend on a reliable knowledge management system for smooth information sharing and internal operations. Simply put, knowledge management deals with the capturing, storage, structuring, and dissemination of information within an organization. Knowledge lies in your business files, documents, guides, databases, and reports and also resides in the minds of your employees. In a rapidly evolving business landscape where taking full advantage of information is key to staying competitive, leaders must allow knowledge to flow dynamically and seamlessly across all functions and departments within the organization. However, the biggest challenge in knowledge management is the amount of unstructured data generated every day that gets locked away in siloed applications. That is where the role of emerging AI technologies, including natural language processing and natural language generation, comes into being. These technologies can tag and organize information across disparate platforms, thus overcoming the significant barriers to harnessing knowledge created within organizations.

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