KNOWLEDGE MANAGEMENT AND ORGANIZATIONAL PERFORMANCE - A KM IMPLEMENTATION FRAMEWORK IN INDIAN CONTEXT

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Abstract: Knowledge Management (KM) is much more than just dissemination of knowledge. The real challenge organizations and decision makers face is conceptualizing the right approach to implement KM and developing strategies to manage the entire knowledge value chain. The purpose of this paper is to determine the state of KM implementation in Indian organizations. Literature survey, focus group discussion (FGD) and personal interviews are used for data collection. This paper reviews the existing KM frameworks and attempts to identify key dimensions. The sample comprised of Indian organizations which have either implemented KM or initiated the process of KM in their organizations. Convenience sampling is used to select the respondents. Transcripts prepared from FGD and personal interviews are subjected to content analysis. The paper reports the perceptions, views and experiences of senior executives. An attempt has been made to integrate the data collected into a framework to facilitate KM implementation. Although a number of empirical studies have been conducted in the past to study KM impact on performance, not many qualitative studies exist. The findings can help organizations to leverage knowledge in a structured manner to improve performance.

1 INTRODUCTION

The 21st century knowledge economy is characterized by profound changes and transformation related to nature of work, employment, skill sets and the way business is conducted. Developing trends like pervasive computing, mass customization, continuous learning, globalized competition, collaborating partnering and virtual enterprise define the nature of knowledge driven economy (Holsapple and Jones, 2004). Further rising expectations of customers, suppliers and investors; emergence of global workforce; availability of opportunities and attrition rate also contribute to changes in the marketplace. To ensure consistent differentiation and competitive advantage, there is a greater emphasis being given to exploitation of knowledge resource.

Knowledge and its importance to economy is nothing new, however, the degree of reliance on knowledge driven strategies to generate value in the economic system is increasing. The last two decades have witnessed a growth in computing power along with reduction in cost of computing and communications. This IT revolution in the form of digital technologies and open system standards have made it possible to store, process, manipulate and transmit large quantities of information at low costs.

In India, knowledge driven economy is considered to include primarily high-technology or information and communication technology (ICT) industries. But the time is opportune for it to use the concept more broadly to include all stakeholders and industries which use existing and new knowledge to improve their productivity and overall performance. India with its large consumer base, English speaking knowledge workforce, active private sector, developed financial sector and robust science & technology infrastructure makes it best suited to harness its strengths to enhance its economic performance along with boosting social welfare.

Successful KM implementations are those that rely on sharing of knowledge for competitiveness and growth. A number of empirical studies exist which investigate and explain the relationship between management of knowledge and competitiveness. Competiveness is a broad theme

defined by the ability of an individual or an organization to mobilize and manage its resources for enhancing performance. A study conducted by KPMG on 423 organizations from UK, Europe and US, reports that organizations surveyed had an understanding of the potential role KM could play and expected significant benefits in the form of improving competitive advantage, marketing, customer focus, employee development, product innovation and profit growth – providing real benefits like improved decision making, faster response rate and better delivery of customer service (Knowledge Management Research Report 2000). Similarly, in a study conducted by Griffith University and BML Consulting in Indian context, respondents expected revenue growth, competitive advantage and overall employee development as long term benefits. Short term benefits perceived were reducing cost, improving marketing and enhanced customer focus (Knowledge Management Research Report, 2002). In another study conducted by The Economist Intelligence Unit (2007), sharing of best practices, better response to customer demands, innovative product development, better usage of intellectual property, better collaboration with external partners, improved decision making, greater visibility across value chain and greater likelihood of developing new intellectual property were cited as the main benefits of KM. Davenport et al. (1998) identified likely success factors leading to KM project success. The major factors are linking to economic performance or industry value, technical and organizational infrastructure, standard flexible knowledge structure, knowledge friendly culture, clear purpose and language, change in motivational practices, multiple channels for knowledge transfer and senior management support. Although, there are a number of empirical studies that substantiate on KM planning and implementation process, key enablers and performance dimensions, little support is found in the literature for a qualitative study based implementation framework in Indian context.

The objective is to conduct an exploratory qualitative study through literature survey and taking to KM experts from Indian organizations to gather evidences on the process of KM implementation and its impact on performance. To achieve that, various KM implementation frameworks have been discussed and a comparison of its dimensions carried out. Finally, the paper presents a practical framework for organizations to facilitate the KM journey.

In order to systematically derive value of knowledge, it's essential to formalize and structure the initiative. A good way of doing this is in the form of a conceptual framework which guides and facilitates the planning and implementation of initiatives. According to Wong and Aspinwall (2004), developing a KM implementation framework should be the first stage of any KM initiative as it guides the implementation process and improve the chances of successfully incorporating the same in an organization.

The paper is organized as follows: review of literature is discussed next. This is followed by methodology used in the research study. The fourth section presents the analysis of data followed by results. The final section discusses the conclusion, limitations and directions for future research.

2 LITERATURE REVIEW

According to Wong and Aspinwall (2004), an important reason why many organizations are still struggling with KM and failing to realize its full potential is that they lack the support of a strong theoretical foundation to guide them in its implementation. Managing knowledge in organizations requires managing several processes of knowledge such as initiation, implementation, ramp-up and integration (Szulanski, 1996); generation (acquisition; dedicating resources; fusion; adaptation; and building knowledge networks), codification and transfer (Davenport and Prusak, 1998); acquisition, conversion, application and protection (Gold et al., 2001); acquisition, selection, generalization, assimilation and emission (Holsapple and Jones, 2004); creation, transfer, integration and leverage (Tanriverdi, 2005), creation, storage, sharing and evaluation (Gumus, 2007); generation, codification, transfer and application (Singh and Soltani, 2010).

Holsapple and Jones (2004) have defined knowledge chain model to understand the linkage between KM and organizational performance. The model presents nine distinct, generic classes of activities, five primary and four secondary (measurement, control, coordination and leadership) that an organization performs in the course of managing its knowledge resources. Tanriverdi (2005) identified four interrelated processes which form a part of three KM capabilities defined as product KM capability, customer KM capability and managerial KM capability.

According to O'Dell et al. (2004), APQC has studied KM implementation in organizations they have worked with and developed APQC roadmap to

KM. It includes five stages common to successful KM implementations, viz. getting started, explore & experiment, pilot and KM initiatives, expand & support and institutionalize KM. Apart from that, culture, buy-in, measurement and creating a business case for KM are themes that transcend the stages. Gold et al. (2001) suggest that a knowledge infrastructure consisting of technology, structure and culture along with a knowledge process consisting of are essential preconditions for effective KM.

Some of the earlier research studies, for e.g. Nonaka and Takeuchi (1995) emphasized on the importance of knowledge-creation and have tried to explain the interplay between tacit and explicit knowledge in the form of a generic model to demonstrate knowledge-creation. Further Soo et al. (2002) look at knowledge-creation process comprising of sourcing of information, internalizing, integrating and applying it. The source of information can either be from formal/informal networking and internal/external acquisition. Next, organizations must have absorptive capacity to internalize and integrate it. Finally, it must be applied to improve quality of problem solving/decision making resulting in knowledge based outcomes, i.e., innovation and better business performance.

Wiig (1993) has proposed a KM framework which comprises of three pillars (survey, analyze and categorize knowledge; appraise and evaluate knowledge; and synthesize knowledge) to explain the process of knowledge creation, manifestations, use and transfer. Similarly, Arthur Anderson and APQC have proposed a KM process comprising of seven activities (share, create, identify, collect, adapt, organize and apply) and four enablers (leadership, culture, technology and measurement) that facilitate the development of organizational knowledge through the KM process (Jager, 1999). Leonard-Barton (1995) has proposed a framework which revolves around the concept of core capability comprising of managerial activities and systems which offer competitive advantage. These core competencies can be created if the focus is on knowledge-building activities – shared problem solving, importing and absorbing technological and market knowledge, experimenting and prototyping, and implementing and integrating new methodologies and tools. Demarest (1997) has attempted to model knowledge economies within the firm by focusing along four processes, viz., construction, embodiment, dissemination and use. Construction is the process of discovering or structuring knowledge, embodiment is selecting a

container for created knowledge; dissemination refers to human processes and technical infrastructure required for make it available within the firm; and use is the application of knowledge to generate customer value.

Bukowitz and Williams (1999) have developed Knowledge Management Diagnostic (KMD) based on a model known as Knowledge Management Process Framework, which consist of seven KM activities (get, use, learn, contribute, access, build/sustain, divest). They distinguish two processes in KM, i.e., tactical (triggered by market-driven opportunities) and strategic (triggered by macro-environment factors) with focus on the use of knowledge based assets to respond to these triggers. Maier and Moseley (2003) have looked at KM implementation involving five dimensions: identification and creation; collection and capture; storage and organization; sharing and distribution; and application and use.

The starting point of any KM initiative is instilling a belief that there are certain business problems which can be addressed by effective management of knowledge. Holsapple and Joshi (2004) believe that organizations are places for episodes which are triggered by knowledge need (opportunity) and culminates with the satisfaction of that need (or abandonment). These knowledge management episodes (KME) create value for the organization in the form of learning and projection which in turn form the basis for innovation.

An examination of the various frameworks and approaches to KM implementation reveals that past efforts have focused on implementing KM with inadequate reference to how it's going to impact the performance. It is only recently, however, that organizations have started discussing linking KM activities with measurable business results. Any model or framework is of little use without an understanding of how the activities can be operationalized to be geared for enhancing business performance. Therefore, there is a need to systematically examine the elusive link between KM and its impact on business performance.

2.1 KM and Performance

Some evidences of improved performance through KM can be seen in organizations which have a formal KM initiative in place. But, linking KM practices to business results and competeiveness is not easy and there are disparate views among researchers. Hiebler (1996) believes that organizations that are able to create and use a set of

measures tied to financial results seem to come out ahead in the long run. According to Wolford and Kwiecien (2004), the frequently asked question is, how can you put a value to knowledge? KM initiatives must show a return otherwise the effort goes waste. Soo et al. (2002) feel that although knowledge is difficult to measure, it does have a clear impact on outcome. There are a good number of proxies that can be used to measure KM, e.g., measuring certain firm processes (i.e., problem solving and decision making) or outcomes (i.e., innovative outputs).

A number of organizations have developed indicators to measure and evaluate the impact of KM initiative on business performance. Saunders (2007) believes that it's important to define KM value proposition in the very beginning. Most KM efforts are primarily aimed at increasing customer intimacy, faster time to market or operational excellence. Holsapple and Singh (2004) have provided evidences on how KM practices can manifest itself from the following standpoints: improving productivity (e.g. lower cost, greater speed), enhance reputation (e.g. better quality, dependability, brand differentiation), enhancing organizational agility (e.g. greater flexibility, rapid responsiveness, change proficiency), and fostering innovation (e.g. new knowledge products, services, processes).

Tanriverdi (2005) used Tobin's Q and Return on Assets (ROA) to measure market-based firm performance. Tobin's Q is the ratio of the market value of a firm's assets to the replacement cost of the firm's assets. Zack et al. (2009) found KM practices to be directly related to organizational performance which, in turn, was directly related to financial performance. However, no direct relationship was found between KM practices and financial performance. Similarly, Gold et al. (2001) have associated KM capabilities with organizational effectiveness as a key aspect of performance. They feel that capturing the contribution of knowledge capabilities in terms of bottom line (Return of investment (ROI), ROE etc.) may be confounded by other uncontrollable business, economic and environmental factors. They have measured effectiveness through various non-financial items like ability to innovate, coordination of efforts, commercialization of new products, ability to anticipate surprises, responsiveness to market change, reduced redundancy to information or knowledge. According to Lee and Choi (2003), in order to achieve a better understanding of KM performance, companies should attempt to link KM processes with intermediate outcomes. They have

identified organizational creativity as an important intermediate outcome to organizational effectiveness and survival. It is this creativity that transforms knowledge into business value. However, Hariharan (2002) feels that to keep KM implementation oriented and business focused, its important to have a combination of lagging (actual business outcomes) and leading (performance drivers that would lead to business outcomes) measures should be used.

3 METHODOLOGY

The method used to conduct the study involved four steps. To start with, an extensive literature review was carried out to understand the KM implementation models and frameworks developed by researchers. This was followed by a focus group discussion (FGD) and personal interview. FGD is a qualitative research technique best suited to get the true representation of participant's feelings and beliefs. The questions used were open-ended, designed to gather perception, beliefs and ideas around experiences from KM implementation. Personal interviews were used to get an in-depth understanding about participant's experiences around KM. Finally, a comprehensive list of KM planning and implementation activities was identified from the data collected.

The sample comprised of KM practitioners, mainly senior executives (CEO, Vice President, General Managers – IT, Directors, etc.) who have experienced KM implementation in their current or in previous organizations. One aspect of homogeneity in the sample was the fact that respondents had either led or been involved with KM implementation in their organizations. Respondent diversity was maintained by recruiting them from various private sector industries, age group and work experience. This was done in order to get all possible insights into the attitude, perception and beliefs held by KM practitioners. The age of the respondents ranged from 32-60 years. On an average the working experience of the participants was around 15 years. Respondents were primary from Manufacturing, IT/ IT enabled services, consumer durables, insurance, telecommunications and publishing industry. Convenience sampling scheme was used.

For FGD, 30 emails were sent to prospective participants and subsequent follow-ups over email and phone resulted in 10 agreeing to participate but 2 dropped out due to some urgent work commitments. A discussion guide was prepared

before the FGD to ensure that the sequencing of questions and issues discussed facilitate conducting the session in a logical manner. Similarly, 20 respondents operating in Delhi and surrounding areas were contacted, out of which 10 agreed for a personal interview. The interviews were conducted in an unstructured, open and discussion oriented manner to encourage interviewees to share their experiences, opinions and insights on the KM journey.

The questions included in the discussion guide and interview template covered various aspects related to KM planning and implementation like the need for KM, its objectives, alignment with business strategy, resource requirements, execution, business impact and measurement. The proceedings of the FGD and interviews were audio/video recorded and transcribed into documents which was subjected to content analysis. The analysis is discussed in the next section.

4 ANALYSIS OF DATA

As mentioned earlier, each respondent shared their views on how KM was being implemented in their organization. Majority of respondents felt that KM is important, although divergent views emerged on the approach to be used for KM implementation. Based on the content analysis, five dimensions were identified which form a part of the KM implementation process being used by organizations. They are plan, design, implement, evaluate and accelerate. These five dimensions have been selected because they were considered salient by respondents. Further, they also appeared in approaches and frameworks discussed by previous researchers.

Plan: Respondents felt that exhaustive planning is crucial to determine the value derived out of KM initiatives. Since most of the initiatives are unstructured or informal, planning an approach to KM implementation is the first step. But, the unstructured approach is leaving too much to chance because a lot of information is shared through the grapevine. The real issue is "Is it important to structure or formalize it, so that it becomes part of strategy?" Therefore, if KM is made a part of overall vision, it has a chance of influencing strategic decision. Respondents also felt that putting it as part of the vision statement makes implementation simpler. It's important to specify the goals and objectives of KM system in the beginning. According to Saroch and Barmash (2007), a key

success factor for a KM system is to plan it around a specific, critical issue in the company.

Planning involves conceptualizing a systematic representation of various KM stages, processes, activities within each stage, resource requirements and output derived. It entails first figuring out what knowledge a company possesses and devising strategies to share it with other people who can use it to create new products and services or improve existing processes. It's important to ask yourself relevant questions during the planning stage itself to get clarity on KM implementation strategy. Some key questions which may be important during planning stage are summarized in table 1 below:

Table 1: KM Planning Activities.

Plan	Issues	Literature Support
KM Objectives	Need for KM; identification of business problems; anything we already do which could be related to KM; relevant resources (human, technological, financial); who will be involved	Szulanski (1996); Maier and Moseley (2003); Holsapple and Jones (2004); O'Dell et al. (2004); Saroch and Barmash (2007)
Business Objectives	Define KM; How KM fits into the overall vision	
Top Management Buy-In	100% commitment	

Design: It's important to identify a process to deploy KM. A big-bang approach may kill the initiative in the initial stages itself. Top management buy-in at this stage is crucial to secure additional funding for full scale development and deployment. If possible identify an organization which has implemented KM. Talking to people from other companies who have already achieved KM maturity is must to benefit from their experience and to avoid early pitfalls. Respondents were of the view that organizations should establish a set of key performance indicators (KPIs) to assess organizational performance in implementing KM. Minonne and Turner (2009) believe that choosing the right KPIs is critical to success. Every KPI, whether it is used to clarify the current position, guide the implementation of KM strategy or track changes in the image of the future, will affect actions and decisions. According to Hanley and Malafsky (2009), the measurement process is composed of several steps to clearly identify what should be measured, how to measure it and how to

use the measures.

Table 2: KM Design Activities.

Plan	Issues	Literature Support
Business Case	Select a process; learn from KM implementers; Define team composition, structure and accountability; KM technology; KM budget; duration of the pilot	Leonard-Barton (1995); O'Dell et al. (2004); Minonne and Turner (2009); Hanley and Malafsky (2009)
Define Measures	Identify KPIs; how to measure; how to analyze	

Implement: The adoption of KM best practices becomes easier if benefits associated with it can be demonstrated early. A case study is good approach to initiate a pilot. Involvement of KM practitioners in the team to plan for right kind of pilot is crucial. Respondents were of the view that the biggest issue faced by KM practitioners is capturing tacit knowledge for organizational benefit. Nonaka (1991) suggests socialization as a way through which our mental models, belief systems, value systems and the way we do things gets transferred. Respondents felt that it's important to make arrangements for socialization so as to make personal knowledge organizational knowledge. It could be in simple ways like coffee table talk, recess breaks etc. Socialization can also happen when a person in a domain works with peers or people from different department come together as part of Cross Functional Team (CFT).

Table 3: KM Implementation Activities.

Plan	Issues	Literature Support
KM Pilot	Build Communities of Practice; Use IT tools	Nonaka and Takeuchi (1995); Leonard-Barton (1995); O'Dell et al. (2004)
KM Strategy	Mandatory Replication (Push); reward & recognition (pull)	
Success Stories	Documentation of improvements; sharing best practices; build evidence by showing leadership small gains	

A lot has been talked about KM strategy. Initially it's important to pull people towards the initiative by creating awareness about the overall objective and benefits. Push would mean making

people follow formal documented written down processes. The push strategy works well to ensure compliance to integrate the best practices in all workflows. "Simply follow the process as given in the KM platform", would help in ensuring consistency and minimize deviations.

Evaluate: A number of organizations have developed indicators to measure and evaluate the impact of KM initiative on business performance. Evolve KM metrics along the journey. It's important to plan for measurements in the very beginning to track progress and take corrective measures. Organization should develop ways to determine how KM initiative is impacting human behaviours and bottom line. Hanley and Malafsky (2009) believe that KM initiative measurement should include both quantitative and qualitative measures as latter augments the former with additional context and meaning. Quantitative measures provide hard data to evaluate performance between points or to spot trends whereas, qualitative measures use the situation's context to provide a sense of value (stories, anecdotes and future scenarios).

Table 4: KM Evaluation Activities.

Evaluate	Issues	Literature Support
Formal Measure-ment	Behavioral, Quantitative, Financial/ Non-financial	Wiig (1993); Arthur Anderson and APQC (1996); Bukowitz and Williams (1999); Hariharan (2002); Lee and Choi (2003); Holsapple and Jones (2004); Tanriverdi (2005); Gumus (2007); Zack et al. (2009); Hanley and Malafsky(2009)

Accelerate: To ensure the sustainability of KM initiative, it's important to identify business processes within and outside the organizations where the best practices can be replicated. It is important that key people are identified across locations who could own the initiative. According to O'Dell (2004), there are two approaches to expansion. One is to apply criteria for pilot selection of other units or to develop an all-at-once strategy. To augment capabilities globally, it's important to leverage internal skills, hire people from outside, refine existing roles and create new roles.

Table 5: KM Acceleration Activities.

Accelerate	Issues	Literature Support
Cultivate and Expand	Identify new processes where KM will work; identify support teams; make KM integral to people KRA's and performance appraisal	Szulanski (1996), Bukowitz and Williams (1999), O'Dell et al. (2004), Holsapple and Jones (2004), Tanriverdi (2005)
Communicate	Business results and success stories	

4.1 KM Enablers

The following dimensions have been discussed in the literature and also considered extremely important by respondents during the FGD and personal interviews. Arthur Anderson and APQC propose that four enablers (leadership, culture, technology and measurement) can be used to foster the development of organisational knowledge through the knowledge management process (Jager, 1999). Lee and Choi (2003) consider organizational culture, structure, people and IT as most important to successful KM.

Leadership: The commitment for the top management is a must. Leadership influences the organizational ability to deal with knowledge related issues. Chawla and Joshi (2010) believe that leadership plays a crucial role in creating, developing, and managing the organizational capabilities by creating effective teams within a diverse workforce; tap talent throughout the organization by recruiting, retaining, and developing people at all levels; build and integrate cultures as mergers and acquisitions become common; use IT to enable and integrate KM processes; and develop rewards and recognition systems.

Technology: The success of KM initiatives depends on the appropriateness of technological tools used. However, KM is broader concept with technology as a process enabler. Always adopt IT tools which are relevant to your KM initiative.

Culture: For KM people should be empowered to take and own up decisions and not always follow a hierarchy. It's important to celebrate success of others. KM brings about a change in the culture of the organization.

Structure: In all probability KM mandates a loose structure. Creating a KM office with a leader having some 10-15 odd people under him doing KM may not work. All people should be engaged in hearts and mind by constantly showing benefits of the programme and addressing the question "What is it in for me".

4.2 Business Impact and Performance

Majority of respondents felt that KM relationship with time and cost could explain its impact. Other factors could be ROI, customer, supplier and employee satisfaction index etc. Most respondents were of the view that if tangible benefit measures could be developed around KM, the justification for implementation becomes simpler. To put it simply, what gets measured gets accepted and implemented.

The results are integrated in the form of a KM framework (see Figure 1) which is discussed next.

5 RESULTS

Based on analysis of data collected from review of literature and insights derived from FGD and personal interviews, we propose a framework for KM planning and implementation. The idea is to demonstrate how the various stages, activities and resources contribute to achieving KM objectives and business benefits.

In addition to the KM activities, a number of KM enablers have been incorporated into the KM framework. Organizational leadership, culture, structure and technology have been researched in detail and advocated by many researchers. Lee and Choi (2003) believe that KM enablers may be structured based upon a socio-technical theory. It is important to provide a balanced view between a technological and social approach to KM. Therefore, KM should always be viewed as a system that comprises of a technological subsystem as well as a social one (Wong and Aspinwall, 2004). Just taking it as an IT initiative can be problematic as most technologically oriented initiatives have failed to meet expected business results. Saroch and Barmash (2007) learnt that the biggest challenge to KM is getting support, commitment, and a separate budget from top management. Chong (2006) found in Malaysian ICT companies that if nature of the business is knowledge-intensive which involves employees working in teams; and therefore leadership plays an important role in empowering employees to take decisions. Singh and Soltani (2010) found that in Indian IT organizations the involvement of top management in allocating the

necessary resource towards sustaining KM initiatives require attention. Similarly, Anantatmula and Kanungo (2010) found top management support is most crucial to build a successful KM initiative as it ensures strategic focus. KM is a people driven initiative and therefore utmost care is needed to promote social enablers. In our framework organizational leadership, culture and structure are social enablers, while IT is a technical enabler.
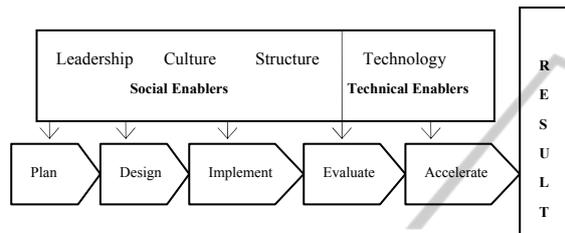

Figure 1: KM Planning and Implementation (KMPI) Framework.

This framework will help organizations to gauge the organizational position in the KM journey, develop an understanding of the various challenges, techniques to overcome the same and making it an enterprise level initiative. The above results are elaborated through a case study. We believe that this evidence will offer decision makers an opportunity to evaluate real world situations and get an appreciation for successful KM initiative.

5.1 Case Study: Managing Knowledge at Bharti Airtel

Bharti Airtel Limited is a leading telecommunication services provider with operations in 18 countries across Asia and Africa. With increasing employee and customer base, the company witnessed challenges associated with keeping consistent business practices across locations. KM initiative at Bharti started in 2003, and since then it has come a long way. The initiative started with Delhi circle and slowly expanded into other circles. Roll out of services all over India posed newer challenges for decision makers. Each circle was using different practices, process and policies related to business operations. The real challenge was to bring in consistency across locations and this was the starting point for KM at Bharti. The broader KM objectives were standardization of business processes; minimize variation; use of available knowledge to improve decision making; faster time to market and generation of fresh ideas and innovation.

As Head, Operational Excellence and Quality

noted, "We picked some important key performance indicators (KPIs) and started looking at variations across locations. The variations were found to be large. Next, we picked up locations which were doing well on the KPIs and tried to identify the best practices adopted. These best practices were shared across locations to be replicated. The variations started coming down."

Recognizing that an organization the size of Bharti could not achieve this without the power of information technology (IT), efforts were made to develop a system to share best practices. The portal Insights@Airtel was to be used for sharing knowledge and experiences. To encourage people to share, the company also initiated an incentive scheme where knowledge dollars (K$) were given to people for sharing as well as replication of best practices.

But technological platform and monetary benefits were not enough to make KM happen. To ensure and sustain quality of best practices, an improvement was planned. For practices that were found deemed fit for replication by subject matter experts (SMEs) were considered for mandatory replication. To facilitate this sharing and replication, the company also started knowledge sharing session.

KM Process – The KM process at Bharti primarily involves four stages, viz., identifying the knowledge and source; creating a culture of knowledge sharing and replication; using information technology and tools to disseminate knowledge and creating processes to leverage that knowledge.

Push versus Pull – The key to KM success is execution. For KM implementation, business performance indices were linked with extent of best practice sharing and replication. Through K$, employees were encouraged to share and replicate knowledge. Significant contributors are also invited in various forums to share their experiences and recognized and rewarded for their efforts. Apart from K$, each location is given certain business targets in terms of reducing variation across business KPIs. Each employee in the organization has these KPIs as part of key result areas (KRAs). A best practice is for a particular KPI and therefore, savings from best practice implementation is calculated. This financial impact was approved by a finance officer.

Business Impact – KM initiative has helped Bharti to retain employee knowledge in form of best practices collected over the last seven eight years. It has enabled the company in bringing new businesses spread across geographies, to the KM platform. Users who are new to the system can now search for

existing best practices and standardize the processes according to them. So entire knowledge retained over the last seven to eight years is extended and replicated in turnaround time of 2 months. The key to the success of this initiative has been in terms of preventing reinventing the wheel, process variation reduction across location and reduction in time taken to align process as per best practices. Another reason is rigorous documentation of practices. This has resulted in consistent customer experience and increased savings from best practice creation and replication across locations.

6 CONCLUSIONS

A review of literature also reveals that since there are many approaches and frameworks to KM implementation, discretion of the implementer to develop a common ground for KM implementation is critical. The authors feel that although the proposed KMPI model features most of the relevant KM activities, there could be other environmental and resource related dimensions that would ultimately influence the conduct of KM initiative. The authors suggest that the framework could be extended to include other dimensions, which inhibit or enable KM initiative. This may be required during testing the applicability of the framework in different business, industry and national contexts. Our future research direction is to test the applicability of the framework in various industries, sectors, hierarchy levels etc. through survey data.

A limitation of the study is that analysis and reporting of findings are based on the interpretation of the researchers. Secondly, the framework is proposed based on the inputs from Indian organizations only, although attempt has been made to incorporate findings from the existing body of knowledge in the domain of KM. Hence, there is a need to empirically investigate if any dimensions have been incorrectly categorized or missed out.

The authors believe that a sound implementation framework can help organizations with directions and support to embark the KM journey. Rather than simply saying that KM enhances performance, the KMPI framework presents KM practitioners a structured approach to realize the potential of KM. However, developing such a framework may pose challenges initially as they might not be aware of the dimensions and its elements and their fitment within the entire framework. Therefore, as KM implementation is resource intensive involving high

stakes, it's better to have a formal KM in place rather than trying different things.

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