



Dr. Vishwanath Karad  
**MIT WORLD PEACE**  
**UNIVERSITY** | PUNE  
TECHNOLOGY, RESEARCH, SOCIAL INNOVATION & PARTNERSHIPS

**School of Management (UG)**

**A REPORT  
ON  
International Immersion Programme**

**BY**

**(PRAJWAL VIJAYKUMAR BAGHELE)**  
**(BBA) (2020-21)**

**IN PARTIAL FULFILLMENT OF REQUIREMENT FOR THE AWARD OF  
Bachelor of Business Administration (BBA)**

**PUNE: 411038**



Dr. Vishwanath Karad  
**MIT WORLD PEACE**  
**UNIVERSITY** | PUNE  
TECHNOLOGY, RESEARCH, SOCIAL INNOVATION & PARTNERSHIPS

### CERTIFICATE

This is to certify that Mr. / Miss PRAJWAL VIJAYKUMAR BAGHELE of BBA (Course) has successfully completed the requirements of the International Immersion Program in partial fulfillment of requirement for the award of **Bachelor of Business Administration** prescribed by the Dr. Vishwanath Karad MIT - World Peace University.

This report is the record of authentic work carried out during the academic year **2020-21**

Head of Department  
Management (UG)

Prof. Gautam Bapat  
HOS, School of

Prof. Dr. Srinivas Subbarao Pasumarti  
Dean, Faculty of Management (UG)

(ii)

**DECLARATION**

I, Mr. / Ms\_\_PRAJWAL VIJAYKUMAR BAGHELE\_\_hereby declare that this project is the record of authentic work carried out by me during the academic year 2020-21 and has not been submitted to any other University or Institute towards the award of any degree.

**Signature of the student**  
**(PRAJWAL VIJAYKUMAR BAGHELE)**

(iii)

**Index**

<b>Sr. No.</b>	<b>Name of Chapter</b>	<b>Page Number</b>
1	Introduction (Knowledge and technology management)	
2	New Advances happened (Knowledge and technology management)	
3	Industry wise relevance of the topic (SPACE, TELECOMMUNICATIONS,HEALTHCARE(IT))	
4	Career Opportunities)	
5	Bibliography	

## **INTRODUCTION TO KNOWLEDGE AND TECHNOLOGY MANAGEMENT**

**Knowledge management (KM)** is the process of creating, sharing, using and managing the knowledge and information of an organization. It refers to a multidisciplinary approach to achieve organisational objectives by making the best use of knowledge.

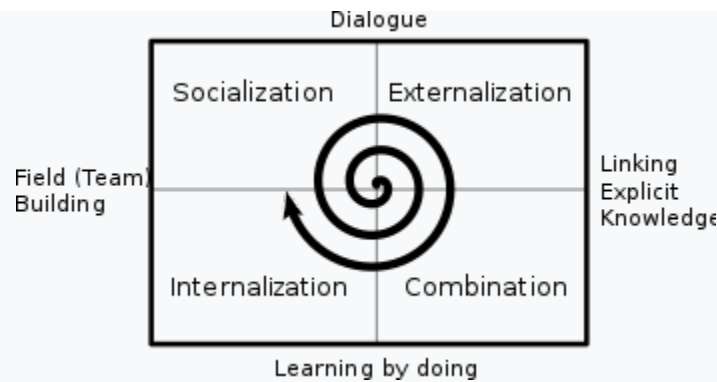
An established discipline since 1991, KM includes courses taught in the fields of business administration, information systems, management, library, and information sciences. Other fields may contribute to KM research, including information and media, computer science, public health and public policy. Several universities offer dedicated master's degrees in knowledge management.

Many large companies, public institutions and non-profit organisations have resources dedicated to internal KM efforts, often as a part of their business strategy, IT, or human resources management departments. Several consulting companies provide advice regarding KM to these organizations.

Knowledge management efforts typically focus on organisational objectives such as improved performance, competitive advantage, innovation, the sharing of lessons learned, integration and continuous improvement of the organisation. These efforts overlap with organisational learning and may be distinguished from that by a greater focus on the management of knowledge as a strategic asset and on encouraging the sharing of knowledge. KM is an enabler of organizational learning.

## **DIMENSIONS OF KNOWLEDGE MANAGEMENT**

Different frameworks for distinguishing between different 'types of' knowledge exist. One proposed framework for categorising the dimensions of knowledge distinguishes tacit knowledge and explicit knowledge. Tacit knowledge represents internalised knowledge that an individual may not be consciously aware of, such as to accomplish particular tasks. At the opposite end of the spectrum, explicit knowledge represents knowledge that the individual holds consciously in mental focus, in a form that can easily be communicated to others.



The Knowledge Spiral as described by Nonaka & Takeuchi.

Ikujiro Nonaka proposed a model (SECI, for Socialisation, Externalisation, Combination, Internalisation) which considers a spiraling interaction between explicit knowledge and tacit knowledge. In this model, knowledge follows a cycle in which implicit knowledge is 'extracted' to become explicit knowledge, and explicit knowledge is 're-internalised' into implicit knowledge.

Hayes and Walsham (2003) describe knowledge and knowledge management as two different perspectives. The content perspective suggests that knowledge is easily stored; because it may be codified, while the relational perspective recognises the contextual and relational aspects of knowledge which can make knowledge difficult to share outside the specific context in which it is developed.

Early research suggested that KM needs to convert internalised tacit knowledge into explicit knowledge to share it, and the same effort must permit individuals to internalise and make personally meaningful any codified knowledge retrieved from the KM effort

**Socialization** is the technique of sharing tacit knowledge through observation, imitation, practice, and participation in formal and informal communities and groups. This process is basically preempted by the creation of a physical or virtual space where a given community can interact on a social level.

**Externalization** is the technique of expressing tacit knowledge into explicit concepts. As tacit knowledge is highly internalized, this process is the key to knowledge sharing and creation.

**Combination** is the technique of integrating concepts into a knowledge system. Some examples or cases would be a synthesis in the form of a review report, a trend analysis, a brief executive summary, or a new database to organize content.

**Internalization** is the technique of embodying explicit knowledge into tacit knowledge.

## KM technologies

---

Knowledge management (KM) technology can be categorised

- **Groupware** —Software that facilitates collaboration and sharing of organisational information. Such applications provide tools for threaded discussions, document sharing, organisation-wide uniform email, and other collaboration-related features.
- **Workflow systems**—Systems that allow the representation of processes associated with the creation, use and maintenance of organisational knowledge, such as the process to create and utilise forms and documents.
- **Content management and document management systems**—Software systems that automate the process of creating web content and/or documents. Roles such as editors, graphic designers, writers and producers can be explicitly modeled along with the tasks in the process and validation criteria. Commercial vendors started either to support documents or to support web content but as the Internet grew these functions merged and vendors now perform both functions.
- **Enterprise portals**—Software that aggregates information across the entire organisation or for groups such as project teams.
- **eLearning**—Software that enables organisations to create customised training and education. This can include lesson plans, monitoring progress and online classes.
- **Planning and scheduling software**—Software that automates schedule creation and maintenance. The planning aspect can integrate with project management software.

- **Telepresence**—Software that enables individuals to have virtual "face-to-face" meetings without assembling at one location. Videoconferencing is the most obvious example.
- **Semantic technology** such as ontologies—Systems that encode meaning alongside data to give machines the ability to extract and infer information.

These categories overlap. Workflow, for example, is a significant aspect of a content or document management systems, most of which have tools for developing enterprise portals.

Proprietary KM technology products such as Lotus Notes defined proprietary formats for email, documents, forms, etc. The Internet drove most vendors to adopt Internet formats. Open-source and freeware tools for the creation of blogs and wikis now enable capabilities that used to require expensive commercial tools.

KM is driving the adoption of tools that enable organisations to work at the semantic level as part of the Semantic Web. Some commentators have argued that after many years the Semantic Web has failed to see widespread adoption, while other commentators have argued that it has been a success.

## **TECHNOLOGY MANAGEMENT**

**Technology management** is a set of management disciplines that allows organizations to manage their technological fundamentals to create customer advantage. Typical concepts used in technology management are:

- Technology strategy (a logic or role of technology in organization)
- Technology forecasting (identification of possible relevant technologies for the organization, possibly through technology scouting)
- Technology roadmap (mapping technologies to business and market needs)
- Technology project portfolio (a set of projects under development) and



technology portfolio (a set of technologies in use).

The role of the technology management function in an organization is to understand the value of certain technology for the organization. Continuous development of technology is valuable as long as there is a value for the customer and therefore the technology management function in an organization should be able to argue when to invest on technology development and when to withdraw.

## DEFINATION

Technology management can also be defined as the integrated planning, design, optimization, operation and control of technological products, processes and services, a better definition would be the management of the use of technology for human advantage.

Technology Management was deemed an emerging field of study by the Department of Education and received a new Classification of Instructional Program (CIP) code in 2020. Technology Management education is defined as a program that prepares individuals to develop science, technical, and business skills required for management of people and systems in technology-based industries, government agencies, and non-profit organizations. Includes instruction in computer applications, general management principles, production and operations management, project management, quality control, safety and health issues, and statistics.

Perhaps the most authoritative input to our understanding of technology is the diffusion of innovations theory developed in the first half of the twentieth century. It suggests that all innovations follow a similar diffusion pattern – best known today in the form of an "s" curve though originally based upon the concept of a standard distribution of adopters. In broad terms the "s" curve suggests four phases of a technology life cycle – *emerging, growth, mature* and *aging*.

## MOBILE DEVICE MANAGEMENT

Mobile device management (MDM) is the administrative area dealing with deploying, securing, monitoring, integrating and managing mobile devices, such as smartphones, tablets and laptops, in the workplace and other areas. The intent of MDM is to optimize the functionality and security of mobile devices within the enterprise, while simultaneously protecting the corporate network. MDM is usually implemented with the use of a third party product that has management features for particular vendors of mobile devices.

Modern Mobile Device Management products supports tablets, Windows 10 and macOS computers. The practice of using MDM to control PC is also known

as unified endpoint management

## **Nature of Technology Management**

- Engineering
- Natural science
- Social science
- Industrial practice
- A business theory

## **Dimension of Technology Management**

- National/government level (Macro Level)
- Firm/organization level (Micro level)
- Individual level

## **Major Area Involve in Technology Management**

- Technology information, monitoring, forecasting, and assessment.
- Technology evaluation, selection and acquisition.
- Intellectual property management.
- Research and Development and innovation.
- Management of manufacturing, standard and quality.
- Technology management for sustainable development.
- Product innovation process for product development and production.

## **NEW ADVANCES HAPPENED IN KNOWLEDGE MANAGEMENT**

### **1. Social is the name of the game.**

It's no surprise that social media is one of the biggest knowledge management trends for 2021. Every industry has altered the way they market, communicate, and work... and the same goes for your intranet.

A human-centered platform facilitates knowledge sharing and collaboration through an organic, free-flow of communication. Notifications, activity streams, comments, votes, and likes are some of the many social elements that get your people talking and working together with just the click of a button. Employee directories are also a great source of knowledge sharing. Newer versions show more than just contact information, but also personal interests, authored internal content, current projects, and spaces they are part of. It's about connecting employees and developing relationships.

Your people are your greatest knowledge base, therefore you want them to find each other, share thoughts with each other, and grow together.

### **2. Advanced search indexing.**

A strong knowledge management tool is nothing without a strong search engine. If users can't find what they're looking for, what good is the information? Developers know this, and as we enter 2021, search capabilities will be front-and-center.

Specifically, internal search indexes will be easier to navigate, quicker, and retrieve the most relevant information with little help. By entering a person, keyword, title, department, or anything relevant to a topic, you'll yield all results related to your search.

### 3. Seamless collaboration tools.

In 2021, flexible and diverse collaboration tools will be part of many intranet packages. You'll notice a move away from Gantt charts to features with easy scheduling, transparency, and trackability.

Task management, spaces, wiki pages, cases, and forums are some of the many collaboration tools to look out for. Between 2005 and 2017, the number of US employees who worked from home "at least half the year" grew by 115%... and it's predicted this number will rise. Therefore, tools that support seamless collaboration, editing, and communication – no matter where users are located – will be a defining knowledge management trend.

### 4. Integrated external communication.

Between communicating, scheduling, managing projects, creating content and other activities, many of today's professionals find themselves juggling numerous instances of software just to stay on track. External processes will always be necessary, but that doesn't mean they can't live in the same place as knowledge management. Intranet software eliminates the need to log into several different applications. Users can work from an integrated suite that allows for all processes to be handled in one convenient space.

### 5. Easy-to-use segmented spaces.

Let's get one thing out of the way: if you're not segmenting your departments or groups, you should be. Your knowledge management system is a social community in which information assets are shared, refined, and organized. However, businesses often suffer from information overload, particularly during periods of rapid growth and success.

Your people are your greatest asset and need their own digital workplace to organize information and have a home within your organization. Digital workspaces, or segmented groups, aren't new, but improved user-friendliness will be a big knowledge management trend for 2021. Create private or open groups, enable as many tools you want members to access within that space, and send immediate notifications to users.

## NEW ADVANCES HAPPENED IN TECHNOLOGY MANAGEMENT

### 1. Artificial Intelligence

Artificial intelligence (AI) is an advancement that is being adopted by many IT professionals. But it also brings up a lot of questions and even fears in some people. If we teach machines to think, will they be smarter than us? What are the repercussions of this innovation? But the truth is that there are many kinds of AI, and we can rest assured that they are safe.

The most basic forms of AI can perform functions, but have no memories. They can play games like chess, but they won't recall what their last move on the board was. They simply analyze the situation in the moment and respond with a well of pre-programmed responses. This makes them great for automated customer service. The next level up has limited memory, and the third can develop an understanding of the world around it. Social media bots can fall into this category. IT professionals can use these two levels of AI to perform functions within the workplace, such as risk management and cybersecurity.

### 2. Cloud Computing

Cloud computing allows IT professionals to store data and access resources via the internet. This solves many storage and security problems, and allows for some monetary savings since you only pay for the "cloud space" you use.

Cloud computing is also bolstering one of the other advancements in information technology – AI. AI systems are currently an expensive investment for some businesses, which means it is almost inaccessible for some. But with cloud computing, a library of machine learning tools is available to the masses, opening up new possibilities for innovation.

### 3. Monitoring and Predicting

Software and computing errors can be seriously detrimental to any business. It could cost the company money, time, and even goodwill.

That's where the next IT advancement comes in. We now have cognitive systems which can predict and detect errors in other programs. This can help companies to respond quickly to – or even completely avoid – catastrophic failures. By implementing and understanding these preventative measures, IT professionals can protect their employer from a very costly situation.

### 4. Zero-Knowledge Proofs

With privacy issues making headlines this year, this IT advancement is more in-demand than ever. It's prominence mostly boomed with the rise of cryptocurrency, which comes with a lot of privacy concerns. The purchase of cryptocurrency is not always a private transaction, which can leave people exposed.

Zero-knowledge proofs are used to protect users in this case and keep transactions anonymous. This can prevent the leaking of private information, which could be a huge problem for a business.

One example of a zero-knowledge proof is called a zk-SNARK (zero-knowledge succinct non-interactive argument of knowledge). Though they can be effective at keeping private information private, there are some complications. They're slow and difficult to set up, and if the cryptographic key was compromised, the entire system falls apart.

But this technology is advancing, at it will become more secure in the future.

## INDUSTRY WISE RELEVANCE

### SPACE INDUSTRY

#### Knowledge management

One of the crucial points of **knowledge management** in a **space** program is to recognize the differences between the real **space** system and research projects and, consequently, implement scale-appropriate strategies to technology transfer.

## Technology management

With so many individuals working from home offices now, keeping tabs on employees has become more complicated than simply peeking over the nearest cubicle wall. Only with the use of technology can management hope to have an accurate barometer with which to measure the output from remote workers or satellite offices. **Time Doctor** is one example of a program used to keep track of what exactly employees are working on and how much time they have spent on those tasks. To increase collaboration, Time Doctor is used to manage attendance and improve productivity of an online workforce to help ensure they become highly efficient.

Another alternative is **Toggl**, an online time tracking tool which is easy to set up and use. It integrates with project management tools such as Basecamp and can be operated from anywhere with internet access. This tool makes it easy to generate reports based on time spent on specific projects or by teams of employees.

Additionally, it is compatible with any operating system and there is an app for iPhone and Android users if they have to be away from their computers.

Sharing tools are also available for employees to be able to share their screen with managers to add a visual aspect when explaining certain tasks. Tools such as **TeamViewer** provide managers the ability to better monitor progress and the efficiency of their satellite staff. Other well-known methods for online collaboration include:

- **Jing Project**: share screen and video captures of desktops that can include voiceovers or annotations to share information, a simple computer application that needs a single install
- **Google Drive**: online spreadsheets in a central location for multiple individuals to retrieve simultaneously, an alternative to Excel or Word documents
- **Dropbox**: a simple way to share and store documents that can be accessed by employees
- **SharePoint by Microsoft**: a secure place to store, organize, share, and access information from almost any device

## Telecommunication Industry

### Knowledge management

Telecommunication industries use knowledge management as a way

to **improve** communication with their customers and staff. ... **Knowledge management** can help save time for client engagements and problem-solving, enhancing staff participation, making the opinions of staff and customers more visible, and better-serving customers.

## Technology management

For today's businesses, global competition is a topic of discussion, and those who intend to compete must be comfortable using communication technology in situations where physically meeting is not a possibility. People can now speak face to face, in real time, with a team of clients on the other side of the world. Services such as **Skype** or other video conference call systems help managers keep in touch with remote workers over the internet. These programs have made it possible for managers to have a more personal relationship with staff, rather than using previous methods such as email or traditional phone calls. Other strategies for maintaining communication between employees include chat rooms, discussion groups and forums, and Google+ hangouts.

Maintaining communication with teams, whether remote or in office, is an essential tool for company leaders. Managers have a responsibility to implement the appropriate technologies to encourage collaboration, maximize efficiency, produce the best company results, and to direct employees in an appropriate way. It's clear that in our modern business world, the only way to steer a company toward success is to understand and manage the technologies that contribute to that success and to locate potential pitfalls within that technology.

## Healthcare and IT industry

### Knowledge management

Effective knowledge management from the perspective of big data analytics capabilities.

Big data analytics is one of the recent advances in technologies that support high-velocity data capture, storage, and analysis.

The definition of big data analytics has been an important focal point for the limited research on the subject.

Scholars have proposed varying but related definitions for big data analytics. Cox



and Ellsworth have been credited as the first to use the term “Big Data.” They defined big data analytics as a “challenge for computer systems:

data sets are generally quite large, taxing the capacities of main memory, local disk, and even remote disk” (p. 4). In their own contribution to the research, Gandomi and Haider described big data analytics in terms of three characteristics—velocity, variety, and volume (3 V’s). Boyd and Crawford considered big data as an interplay between technology, analysis, and mythology.

## Technology management

Data analytics is the process of selecting relevant data with the purpose of researching and making decisions based on the information it provides.

This analysis is done in an effort to prove or disprove current business assumptions and improve decision making in the business environment as well as perform maintenance operations on business functions.

The amount of data a business has the potential to aggregate and leverage for greater efficiency is staggering - market trends, consumer behavior, demographics, retail sales, competitor pricing.

Additionally, the development of online analytical processing systems (OLAP), such as **Oracle’s Express Server**, has allowed easier access to view and select data to compare it with other reports. Oracle software can also store and report payroll files for each staff member, in addition to other HR operations.

An example of a key area where data analysis can be valuable is in enterprise risk management (ERM).

With the right knowledge and expertise, management can eliminate redundant systems and other operational risk factors that can drain the bottom line if left unnoticed.

To provide businesses the ability to access information, risk management information systems are used to manage and process specialized data in the attempt to examine risk control and risk financing.

ERM can also help to identify missing opportunities in a work place or departments where maintenance costs exceed profitability.

## Bibliography

<https://online.stmary.edu/mba/resources/use-of-technology-in-management>

[Big data analytics: a link between knowledge management ...](#)

[Knowledge Management – Towards Data Science](#)

[The role of knowledge management in the space industry ...](#)

[The Use of Technology in Management - USM Online](#)