Knowledge Management for Software Companies

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Introduction

Software Companies need to recognize that knowledge is an important asset. Knowledge is gathering over time and will assist the organisation be successful. A survey by Reuters found that 90 per cent of companies that deploy a Knowledge Management (KM) solution benefit from better decision-making, while 81 per cent say they notice increased productivity.

Software Industry and Knowledge Management

The software industry is resource-oriented and it becomes quite important to ensure that knowledge in the minds of resources is safeguarded. It is found that, while 26 per cent of knowledge in the average organisation is stored on paper and 20 per cent digitally, an astonishing 42 per cent is stored in employees' heads. There have been many instances where the learning and knowledge is lost when resources move to newer roles, or leave the organisation.

Knowledge is invisible and is tied up in customer relationships. It is linked to the ratio of experienced to junior employees. KM assists in getting the right knowledge to the right person as fast as possible and assists in retaining customers. The most difficult part in implementing KM is not the technology It is to understand where knowledge resides within the organisation.

Definition of Knowledge Management

Gartner defines Knowledge management as an integrated and collaborative approach to the Creation, Capture, Organization, Access and Use of Information Assets. The Knowledge cycle is as given below.
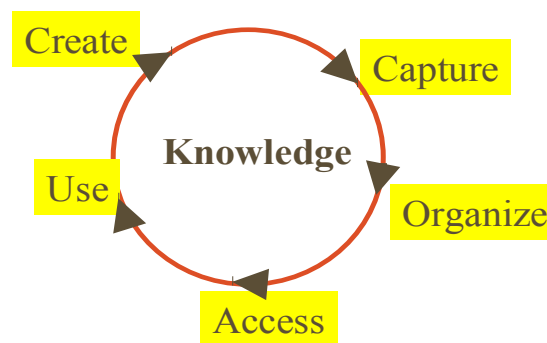
The various steps involved are described as follows:

- Knowledge is **created**. This happens in the heads of people.

- Knowledge is **captured**. It is put on paper in a report, entered into a computer system of some kind, or simply remembered.

- Knowledge is **organised**, where it is classified and modified. The classification can be the addition of keywords which could be indexed. Modification can add context, background or other things that make it easier to reuse later. The test of this step's success is to determine how easily people in the organization will be able to **access** and **use** the knowledge when they need it.

- Knowledge is **shared** and **used**. When knowledge is shared and used, it's modified by the resources that use it. This takes us back to knowledge creation.

Types of Knowledge

It is essential to know about the types of the knowledge before implementing KM in an organisation. The two types of knowledge are Explicit and Tacit knowledge.

Explicit Knowledge

Explicit knowledge is recorded and can be accessible. It can either be structured or unstructured. Some of the examples are Internet, intranet, best practices, emails, newsletters etc.

Tacit Knowledge

Tacit knowledge refers to the knowledge that resides in an individual's mind. It is the "know-how" and experience of the staff member that is vital to the organization. Some of the examples are formal/informal face-to-face or telephonic conversations, videoconferences and presentations, individual knowledge and expertise, mentoring and coaching.

Due to changes in the organisation and relationships/roles changing regularly, there is confusion about who holds what knowledge. This affects organisation's ability to respond quickly to customer and market requirements. These changes put a considerable risk on the organisation of losing its competitive edge.

Facts, Data, Information and Knowledge

Data is obtained from Facts.

Information is obtained from Data

Knowledge is obtained from Information.

For example a sales person's achievement is data. We need to understand and organise data to get information e.g. Region wise Sales data collected for several years.

If this information is analysed for patterns across months, we get knowledge e.g. When the sales data is collected for years and organised month wise and analysed for few years, we get patterns when the sales are high. This gives us knowledge that sales peak just before year-end. One of the reasons could be that several companies need to exhaust their budget during year-end, hence the increase in sales.

Differences between Tacit & Explicit Knowledge

If this knowledge is recorded and accessible, it is explicit knowledge. If this knowledge is in the mind of few people, then it is tacit knowledge. This tacit knowledge needs to be captured and others in the organisation need to know.

Tacit knowledge is about individual's decisions and actions, expertise, experience, values, emotions and beliefs. We need to know what tacit knowledge is important for the organisation. This will determine how the tacit knowledge can be downloaded and used by others. We also need to look into how the tacit knowledge is relevant for business strategy.

There are several ways to harness tacit knowledge. One of the most common ways is through Community of Practice (CoP). Community of Practice acts as conduit for tacit knowledge to flow.

Community of Practice (CoP)

Community of Practice, unlike a task force, involves voluntary contribution by members. There is usually increased involvement in the beginning due to a "curiosity factor" but it reaches a realistic membership level in 3-4 months.

The champions drive the community and needs to have passion to sustain it. Many communities die a natural death if participation reduces. It is quite important that the community adds value to itself and to the organisation. This way there will be top management support and commitment.

Community members need to be open and ensure that they are discussing something useful and critical, which can be of interest to the members. All the members need to contribute for the success of the community. If there is contribution by only a few members then the community is not functioning effectively. It is then a training/mentoring session not a Community of Practice. This will result in interest being reduced and the community will cease to exist. It is important that there is contribution by all members.

Implementation of KM

Implementation of KM varies from company to company, country to country. It has to be localized to suit one's requirement.

Planning is important and the organisation must be willing to take the risk. KM practitioners should have management support and not over-promise. They should take things at a small scale and monitor the progress of the KM initiative. If any problems arise during this stage, they are easier to solve.

Once it is stabilised, we should able to move to the next stage, where KM can be implemented organisation wide. However, the plan will need to be revised continuously. Most importantly, knowledge management requires determination and perseverance.

KM practitioners should not expect immediate returns on KM investment. It may take several iterations of real input and measurable output and subsequent updates before a good KM system is in place.

Conclusion

KM requires lot of collaboration. Collaboration is sharing and using the information regularly. An organisation needs to ensure that tacit knowledge is harnessed and is available to all. Community of Practice (CoP) facilitates in capturing tacit knowledge.

The Author

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Mohan holds a Masters Degree in Industrial Engineering from National Productivity Council, New Delhi. He has around 15 years of experience in the software industry and has been managing projects in the areas of Mainframe, Client server and Web Technologies for clients in US, UK and Asia.

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