

THE RESEARCH ON KNOWLEDGE MANAGEMENT OF CONSTRUCTION ENTERPRISE

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Abstract: The enterprise's knowledge management has gradually become a key factor in development of the company. Researching on knowledge management of construction enterprise mainly supporting industry of national economy is particularly needed. By analyzing the questions and necessity of knowledge management in construction enterprises, this paper gives the thought of knowledge management from several aspects, such as enterprise culture, organization structure, incentive mechanism, Information Construction, etc.

1 INTRODUCTION

With the coming of economic globalization and knowledge-based economy era, the modern economy has been transferring into knowledge-based assets from natural resources, which forces business leaders to re-examine the corporate knowledge base and utilization of it (Hariharan, A., Cellular, B., 2005). Management guru Peter Drucker said: "The organization of the 21st century, the most valuable asset is knowledge worker within the organization and their productivity."

In China knowledge management has made rapid development in recent years, the emergence of knowledge management richly practices. More and More governments, enterprises, research institutes, intermediary organizations, NGOs began to explore the implementation of knowledge management activities. In the field of knowledge management, more experts and scholars began to explore more suitable concepts, methods for China's knowledge management. What's more, at the aspect of IT knowledge management tools, different from content management, document management software and other traditional features software, new features software is emerging. Therefore knowledge management software steps into the shuffling phase. At present, in the beginning of the twelfth Five-Year Plan, knowledge management is included in the the blueprint of many excellence institutions (Foray, D., Gault, F., 2003).

Knowledge management in China has made

Great progress, but there are still problems and errors. Mainly in the following three aspects:

- Experiences and lessons learned which could not be conveyed effectively and learn from;
- The knowledge management team could not master the knowledge management methods and tools;
- Knowledge management industry is extremely uneven distribution, unlike IT, telecommunications, medical and health fields, construction and other enterprises is lagging behind the level of knowledge management.

At present, knowledge management in China's construction enterprises have not risen to the level of theory and that also do not implement from the perspective of organizations and business cultural. There for knowledge management in China is still a long way to go.

2 NECESSITY OF KNOWLEDGE MANAGEMENT IN CONSTRUCTION

2.1 Construction Project Management's Features are Require of Knowledge Management

Construction project management is an extremely

complex regulatory process which is targeting construction projects with the way of system management and a temporary, special flexible organization highly efficiently to plan, organize, direct and control the project and at last to achieve the whole process's dynamic management and project goal's comprehensive coordination and optimization. Therefore, it can be said that the construction project management is the process of with a possible effective way to achieve the desired results.

It is the characteristics that are one-time construction projects determined, one-time construction projects management and temporary. After implementation of the project, the original project organizations tend to dissolve themselves. The accumulated experiences in project management process and each of the management of knowledge as the project management organizations have the mobility of dissolved. That lead to valuable experience and tacit knowledge of individuals is not accumulated. Thus specialized knowledge and experience of the project is difficult to re-use, resulting in a huge waste of knowledge. Therefore, it's very necessary to construct project knowledge management and establish an effective mechanism for knowledge accumulation and sharing, to make sure the specific project management knowledge can be preserved and improved with the sharing process. Ultimately it can improve the overall level of the project management individuals and make the organization avoid repeating the same mistakes, thereby increasing the level of construction project management and investment benefits.

2.2 From External to Internal Factors Explain why Construction Enterprises Need Knowledge Management

First, in a highly competitive market environment, the requirements of construction enterprises enhance their core competitiveness with the increasing the status of knowledge capital in the enterprise which need a comprehensive variety of resources to improve their innovation capability meet the increasingly changing market condition. However, innovation capability in large part of depending on the acquisition, transfer, storage, knowledge share and some other knowledge management activities. So knowledge management is the key to construct enterprises survival.

Second, it is the requirement of industrial division of labour system on knowledge. For example, survey and design units is becoming more knowledge-based; Real estate development companies, the house owners tending to higher and higher product quality requiring; All kinds of information fast drive the construction enterprises to grasp the trend of the market. So the best way to collect and store the various types of knowledge is sounding knowledge management mechanism.

3 THE PROBLEMS EXIST IN KNOWLEDGE MANAGEMENT OF CONSTRUCTION ENTERPRISES IN CHINA

First, knowledge management of construction enterprise is without a clear purpose, and no knowledge management professionals.

Most construction enterprises believe that knowledge management itself is for the purpose. Many construction enterprises can't be true to link knowledge management to practical issues of the enterprises. The purpose of knowledge management is not the birth of knowledge management, but in dealing with construction issues most pressing business, which is where knowledge management can play a place. In addition, most knowledge management of construction enterprises are not in charged by full-time person, who in an emergency or when companies need will put aside the work of knowledge management to deal with more important matters they think, it considers that the starting point in the wrong. Large construction companies need more persons responsible for the knowledge management. The current "no purpose, no leadership" management state is not conducive to knowledge management to play a real role in the enterprises.

Second, at present the majority of construction enterprises in China adopt the management organization forms are not easy to implement knowledge management.

At present, construction enterprises in China adopt the management organization form usually as following:

- Group Company-Branch or Subsidiary-Project Management Department;
- Group Company-Project Management Department.

It is such as the three-tier or two-tier system of management in the form. Group consists of several functional departments and branches, which have separate functions under the department and project department, so in various management levels there is such phenomenon with overlap in the crossover, and that makes prone to long command, resulting in the disorder of internal management (Wang Congying, Liu Qing, Wang Jianping, 2010).

Finally, information management platform of the Knowledge management has not been perfect.

Construction industry has always been traditional extensive industry with relatively low level of information, and even some small and medium enterprises do not have their own independent knowledge management information platform. In many cases they transfer knowledge by the master train an apprentice or Informal document. For some large-scale construction enterprises that already have independent knowledge management platform for, their systems are omissions abound. Such as Professional software developers out of touch with the relevant technical staff and poor communication are leading to its ease of use, mobility, scalability and flexibility disappointments. Coupled with the construction industry staff general relatively weak sense of information and their knowledge structure with a bias make that more difficult for knowledge information access and network sharing.

4 THE METHODS OF IMPLEMENTING KNOWLEDGE MANAGEMENT IN CONSTRUCTION ENTERPRISE

4.1 Create a Corporate Culture which Conducive to Knowledge Management

The so-called corporate culture, also known as organizational culture or management culture, it is the group consciousness and behavioural criteria which evolving in the enterprise's long-term development process with the characteristics of the enterprise, and the corresponding regulations and organizations combined. Corporate culture has oriented, constraint, cohesion, motivation and radiation and other functions for the behaviour and values of the enterprise. By creating a knowledge-friendly corporate culture, integrating different

cultural backgrounds, encouraging staffs to participate in enterprise's knowledge-building, stimulating the workers' thirst for knowledge, encouraging to explore new knowledge and willing to share knowledge, experience, and promoting the construction of knowledge management, made the knowledge become the most important asset.

4.2 Set up Full-time Knowledge Management Department

At the beginning of the knowledge management, with human and material resources in place as while workload is small, the enterprise can on the basis of the original functions to add the knowledge management work. With the management system consummated and workload increase, the enterprise can re-creation of specialized functions for knowledge management. The main functions include the collection and mining knowledge information with edited and organized to promote the formation of knowledge networks. Its also include to establish a basis platform of knowledge management to promote the implementation of the strategic objectives of knowledge management.

4.3 Establish an Incentive Mechanism for Knowledge Management

One of the key works for knowledge management is to establish an incentive mechanism. In order to have good results, construction enterprise knowledge management as a new enterprise management mode must be co-ordinated with the appropriate incentives. In the early stages of knowledge management, knowledge sharing has not yet become a natural behaviour and habits, companies need to introduce appropriate material incentives, spiritual motivation and emotional incentives to help the companies create knowledge-sharing environment, so that employees can enjoy a good working atmosphere that benefit for learning technology and dissemination of knowledge. A good work atmosphere also can enhance their overall technical strength, creative capacity and ability for application of knowledge, especially the creative capacity and ability to apply of the enterprise.

4.4 Construct an Organizations with Conducive to Knowledge Management

It is necessary requirement the organizational structure match the requirements of the knowledge

activities for achieving effective management of corporate knowledge resources, so the knowledge management must start to organizational innovation. This innovation is an organizational restructuring triggered by the information technology revolution, it is usually following business process reengineering. The organizational innovation caused by Knowledge Economy is represented by organization's network and the development of network organization. Networking organization emphasizes the flow of information at all levels and each specialized domain, the organizational structure must be open, flat, fewer reporting levels, fully empowered, democratic management.

In addition, learning organization should be gradually set up in the process of implementing knowledge management for the construction projects. The construction of technique system is often realized by the act of purchasing necessary devices and software, and the setup of various systems is achieved by regulations and laws in written form which are designed by relevant managers in systems. Learning organization is characterized by the following aspects:

- In learning organization, learning becomes an indispensable part for the project managers.
- In learning organization, every project manager can enhance his ability to achieve the expected results and common goals with his full effort. Every manager in such organization learns together with each other.
- Learning organization is characterized by its own culture and has its own programs to deal with the complicity and uncertainty in light of project management.

4.5 Establish Strengthening Information Construction, Founding Technique Platform for Knowledge Management

Managers of enterprises can start from the following aspects:

- Enterprise should improve the ATM and speedy Ethernet Switch in intranet, and set up the WAN with sub-branches and other enterprises.
- Enterprise should update the office automation system including public letters flow, email, documentation management, electronic notification, discussion group, and remote office.
- Enterprise should make full use of Lotus Notes to set up enterprise knowledge database. The

knowledge can be categorized as obvious (encoded) knowledge and hidden (uncoded) knowledge. Knowledge management first involves the protection on the obvious knowledge so as to fully share it with members in the enterprise and make full use of it. This can convert the knowledge advantages to profitable advantages.

5 CONCLUSIONS

This paper talks about the development background for knowledge management and architecture construction enterprises, analyzes the necessity of implementing knowledge management for architecture construction enterprises and the problems arisen in the process of implementing knowledge management, and puts forwards the strategy and solutions for implementing knowledge management. In knowledge and economy driving times, knowledge management has witnessed achievements in certain fields and enterprises and it has become an indispensable part in the architecture construction enterprises characterize by masses of construction projects, long term of circle time, and high cost. As a kind of advanced management methods, knowledge management employing a variety of methods and strategies to be applied to enterprise management is conducive for the knowledge in organization to function and connect the materials flow, working flow, business flow, capital flow, resource flow, which will improve the management efficiency and level for enterprises. Therefore, architecture construction enterprises should employ all kinds of suitable methods and strategies to set up effective management system.

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