

RESEARCH ON INFORMATION MANAGEMENT OF RAILWAY CONSTRUCTION ENTERPRISES IN CHINA

*Liu Yisheng, Beijing Jiaotong University, No.3 Shang Yuan Cun, Hai Dian District Beijing, China,
100044, 13910616536, bslys@263.net*

*Jiang Shuai, Beijing Jiaotong University, No.3 Shang Yuan Cun, Hai Dian District Beijing, China,
100044, 15811274596, 10120763@bjtu.edu.cn*

ABSTRACT

Railway has a great impact on society and economy, but its building difficulty is huge. The traditional enterprise management has been unable to provide an effective way to meet these great challenges. It is necessary to establish a new management system. The application of information platform could effectively strengthen the integration of projects, promote knowledge management and promote the accuracy of construction. This paper is going to analysis the frame of information platform and how to carry out information management to improve enterprise's competitive ability.

INTRODUCTION

The opening of a high-speed railway between Beijing and Shanghai represents that China has reached the advanced world level in constructing railway. However, the lately high accident frequency has disclosed burning problems. Chinese president Hu Jintao gave the vital instructions of improving constructing railway scientifically. And the Minister of Railway highly emphasized the importance of construction management of railway. And he admonished construction enterprises to allocate the schedule properly and arrange the process orderly to ensure the quality of railway. We could foresee that the process of railway is transferring from leapfrog development into scientific development, while improving information management in railway construction enterprises is one of the bases in the transferring process.

THE DESPERATE DESIRE OF IMPROVING INFORMATION MANAGEMENT IN RAILWAY CONSTRUCTION ENTERPRISES

To Fill the Requirements of the Increasing Scale of Railway Construction

In recent years, the construction of railway has experienced a great development in China. From 2005 to 2010, the scale and investment has increased hugely, as table 1 show. In the coming 5 years, China will invest 2,800 billion Yuan on railway construction, and then, the scale of new railway lines will be 30,000 km, increasing by 87.5% compared with the former 5 years. We are still under the huge scale of construction of railway.

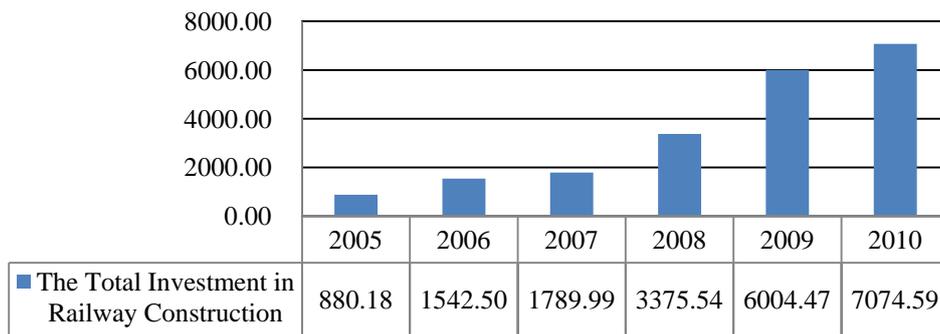


Table 1 the Investment in Railway Construction Each Year between 2005 and 2010

However, railway construction is complicated system engineering, because of its large scale and wide scope. And there will be hundreds of enterprises participating in its construction, which leads to a huge difficult management. What is more, high-speed railway needs every link of work finished perfectly, adding more difficulties to management.

Under such a huge pressure of construction of railway in China, railway construction enterprises should emphasize the rationality of decision and dynamic control of the management aims more than any other times. To meet these new requirements and challenges, railway construction enterprises should improving information management to lay the foundation which could support decision-making better with the combination of database and experts.

To Reform the Way of Railway Construction

In China, so many railway construction enterprises are influenced by planned economy that their business processes are randomly designed, without thinking scientifically. They are still in the period of readjusting industrial structure, and the management for market economy is very poor.

In order to reform the way of railway construction, many enterprises are trying to change the way enterprises operate, adopt a standardized corporate system and improve the corporate governance. Each step is aiming to transfer into a knowledge-intensive enterprise instead of a labor-intensive enterprise.

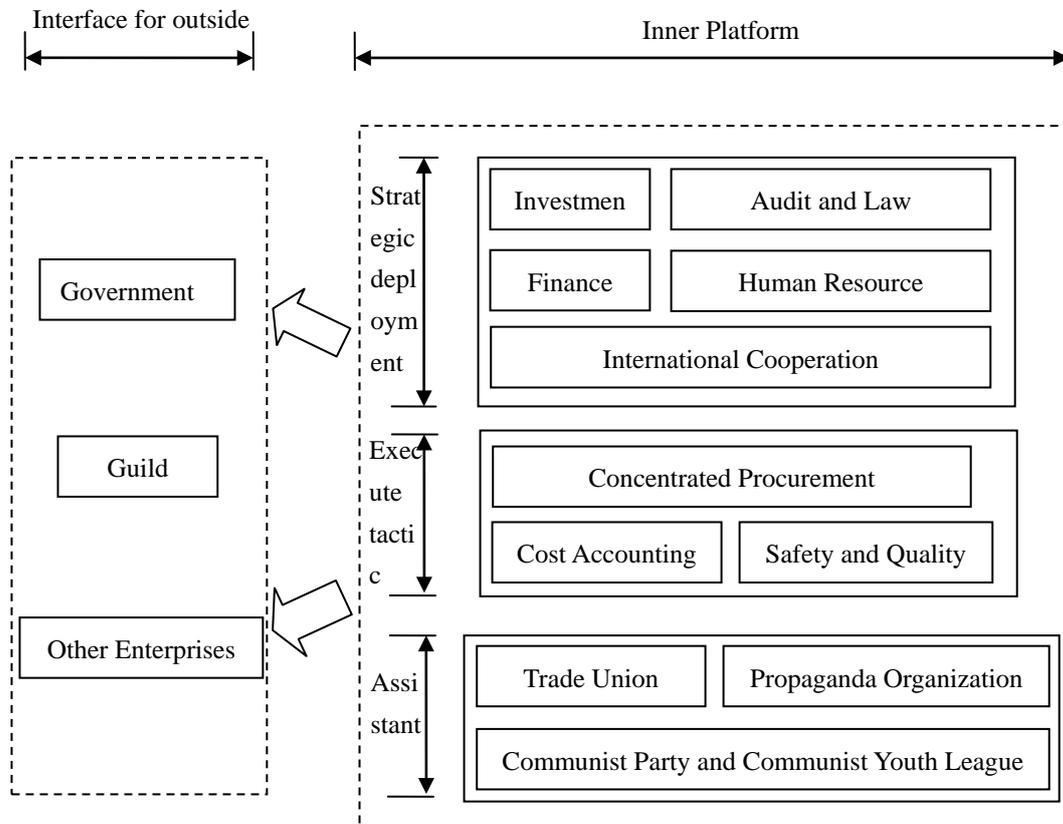
Railway construction enterprises should improve information management system to build a knowledge management system, which could help organizations achieve, share, integrate and innovate information and knowledge. Relying on the information management system, we can accumulate personal and organizational experiences to lay the foundation of enterprise management and reform the way of railway construction. Then we can improve the laggard conditions of Chinese construct industrial.

HOW TO CARRY OUT INFORMATION MANAGEMENT

The Frame of Information Management Platform

Information management platform is the foundation of enterprise information management system. Enterprises should use advanced management concepts and modern information technology to reintegrate business process and improve the production, operation, decision-making and service level, and then to fulfill the functional needs of project management, procurement management and human resource management. Meanwhile, the platform should prepare interface for outside environment, such

as government, guild and other enterprises included in a same project, as table 2 shows.



Recommendations of Implementing Information Management

In order to promote the information management in construction enterprises, firms need to engage the “master plan and step by step implementation” guidance, combine their own development characteristics and then complete building the information platform. To ensure the effectiveness of information management, it also requires the firms to have innovations in business process and management method, to establish an organizational structure in which the responsibility is clearly distributed.

Full participation in the establishment of the overall information management development plan

On the basis of Understanding the business plan and business development strategy, at the same time under the guidance of business development strategy, the overall information management development plan means to diagnosis, analysis, evaluation the business management and technology status, optimize business process, propose the vision and goals of information development, and comprehensively guide the process of enterprise information, in order to Promote enterprise strategic objectives. The development plan will promote to combine information technology with business development strategy, management, business development in construction industry. While avoiding duplication, it will meet the requirement of dynamic business development and complex decision-making management.

As the construction companies’ core business focus in the design and construction area, in which have scattered projects and complex organizational structure, the multi-dimensional analysis must be

used in making the master plan of information technology development. Before making the plan, companies first need to clear the significance to business strategy when implement information management, then make the objectives, question what kind of information platform should be established and carry out steps.

To ensure the successful completion of the overall development plan, the entire membership must understand the information technology will enhance the management level. First, business leaders must pay close attention and publicity to the plan, to change the non-standard, arbitrary and bad habits. At the same time, let all employees actively involved, and then establish a detailed, comprehensive framework for information strategic planning, in order to enhance staffs' confidence.

Promoting information management step by step

Promoting information management in construction enterprise should be proceeded in an orderly way. After establishing enterprise's overall development planning, information should be advanced according to the order of information engineering.

The first stage: tamp the foundation

This stage is the short-term goal to promote information management. The main purpose is to lay a good foundation for the enterprise. During this period, we should transform the enterprise's internal network. And build the enterprise's data platform and information system integration framework, which should be established in line with the overall planning of the enterprise's internal network. Then, we need to accomplish information integration of the basic and overall work, and complete the part of hardware construction and part of the system development and operation, so that the information system can play a certain role in the production and operating activities of the enterprise. All of these above should be carried out under the guidance of information engineering and information theory, combine the optimization and reorganization of business processes.

The second stage: comprehensive construction and extend application

On the basis of the first stage, we should revise the target, make plan in detail, implement project management and coordinate the relationship of sub-systems. Then further improve and develop the corresponding sub-system, in order to realize the comprehensive integration of enterprise OA system and project information management system.

The third stage: further application and constantly improvement

After achieves the goals in the first two stages, which mean the enterprise's information management is gradually into the track. The company should continue to draw long-term planning for the enterprise's information management, to achieve comprehensive implementation of internal and external information integration and sharing, establish the enterprise's e-commerce platform. The information system itself should have the characteristic of economic, practical, advanced, open, excellent performance, profitable, fully integrated, and have the function of internal management and business process management. It can also adapt to the changes of environment both inside and outside of the enterprise, to play an important role in promoting the implementation of the enterprise strategy.

Only through the three stages above, enterprise can guarantee the successfully implementation of one's information management. In the process of implementation, enterprise should not application information system hastily, because any actions which violate operating procedures may lead to failure in enterprises information management.

Rebuild business process to adapt information platform

The essence of information management is change the management model by using information technology. Traditional construction enterprises' business process is formed in natural practice, without deliberation. There is a lot of links that are unnecessary and contradictory. It is necessary to rebuild business process to adapt information platform by assessing and analyzing traditional business process. Enterprises should find out their requirements and own distinctive features, based on which to import information platform.

CONCLUSION

The aim of enterprise's information management is to make profit, and it is not only technological factors but also non-technological factors that affect information management implementation. Information management platform is the foundation of enterprise information management system, and enterprises should also emphasize on the reforming of business process.

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