

# Study on the Management Innovation of Enterprises in Knowledge Economy Era

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## Abstract

In the 21st century, with the rapid development of science and technology, the relationship between technology and economy has become more and more close. Business management in the era of knowledge economy has brought new opportunities and challenges. Companies must continue to learn and grasp new ideas, new trends, new features and new ways in order to survive and develop in the fast-changing market development. Enterprise information technology, as a new concept of corporate governance, is respected by entrepreneurs. This paper aims to explore the advanced means of information management. Through building a main framework of information construction, the authors explore the current information management system. Finally some practical information means are introduced.

**Keywords:** Knowledge Economy, Core competence, Enterprise Information, Management Innovation

## 1. Introduction

With the development of information society, economic growth is no longer absolutely dependent on the economic resources, but more dependent on information resources. Information, as a strategic resource, is ranking the fourth resources, after the traditional land resources, capital and labor resources. While the whole society in promoting the importance of economic, political, cultural, social and ecological aspects of the self-evident. With information technology innovation and development of a knowledge-based economy as an economic form of the latest technology and human development combining up and quickly penetrated into all aspects of economic and social construction. Development and expansion of the knowledge economy is the development of the information industry as a precondition for its development is inseparable from the establishment and development of science and technology, which is inseparable from the construction of information.

Enterprises as the main factors in economic and social development, social progress in promoting the whole process plays an important role, so in order to carry out a comprehensive information technology in today's society, enterprise information construction that is bearing the brunt of the most crucial aspect. In the knowledge economy, innovation is the fundamental guarantee for the success of the competition, so we want to build a comprehensive enterprise information system to constantly enrich our innovative ideas.

## 2. Connotation and characteristics of the knowledge economy

Knowledge and technological innovation are playing an important role in economic and social development. Knowledge economy is important, especially in China economic development and social advance. To develop the knowledge economy is conducive to optimizing the economic structure, rational use of resources, protecting the environment and promoting the coordinated development and improve population quality, eliminate poverty, help build a national innovation system in the new century, by creating a favorable environment to promote knowledge innovation, technological innovation and institutional innovation, social innovation and improve the whole national innovation capacity (Xiaoping Dang, 2011).

The improvement of the knowledge economy, which is base on the knowledge, rise the status of social and economic development. Knowledge has become the most important resource, "intellectual capital" has become the most important capital, the knowledge and technological strength has become the most important competitive. Developed countries and personal development of enterprises, all depends on the mastery of knowledge and creativity development and application. Knowledge learn and innovation has become the most important human activities and mainstream the development of the whole society, especially in high-tech information as the main knowledge-based economy, the rapid expansion surprised all the world.

### *2.1 Connotation of knowledge economy era*

Knowledge economy is simply a knowledge-based economy. Organization for Economic Cooperation and Development, the connotation of knowledge economy summarized as: the knowledge economy is based on knowledge and information production, distribution and use of the economy. And the knowledge economy is a new economy after agricultural economy, industrial economy. Knowledge-based society is taken as a different pattern to the traditional material-based economy. Agricultural economy and industrial economy, although it is inseparable from knowledge, but overall economic growth depends mainly on energy, raw materials and labor, which is mainly based on material information. Development of the knowledge economy is directly dependent on knowledge generation, innovation, dissemination and application. Constantly enriched and improved human-driven knowledge system, especially with the continuous development of science and technology brought about by information technology. Innovation is the soul of the knowledge economy (Jing Chu, 2001).

### *2.2 Characteristics of the knowledge economy era*

The knowledge economy will be based on information and knowledge-based and directly drive the force of the economy. Era of knowledge economy characterized mainly in the following aspects:

- (1) Knowledge of the economic development will become the most important and most critical resource;
- (2) Knowledge economy has been attached great importance to the development of technology and technological development brought about by the contribution ratio of GNP rising;
- (3) Service industries, especially information services industry has been to develop;
- (4) The great wealth of products and services, and the knowledge content of products and services increased significantly; Attach great importance to building an innovative system.
- (5) At the country level, especially in technological innovation continue to be widely used, penetrated into all aspects of society;
- (6) Whether individuals, businesses, organizations or countries, knowledge learning has an important significance (ADNER R, 2006).

## **3. The necessity of enterprise information management**

IT constantly innovates, showing strong vitality, is a subtle change in people's lifestyles, modes of production. Especially in the rapid development of computer and network technology, as the representative of modern information technology to promote survival and competitive environment has undergone a fundamental change, companies succeed in the highly competitive market based on this. We must attach importance from a strategic height enterprise information construction.

### *3.1 enterprise information Connotation, content*

#### *3.1.1 Connotation of enterprise information*

Enterprise information technology is enterprise widely use of modern information technology, the full development of information resources, the advanced technology and management concepts and methods into the management process to achieve management automation, improve management efficiency and level, so as to promote the modernization of management, operational mechanism establish a modern enterprise system, reduce costs, speed up technological progress and enhance market competitiveness. Mainly the following aspects:

- (1) Enterprise information is the foundation of modern information technology. Such as engineering design CAD, CAM, management MRP II, ERP, etc., computer integrated manufacturing system manufacturing applications CIMS, EDI circulation, internal Intranet, Internet and the information highway;
- (2) Enterprise information regard the information as a strategic resource. Information as a prerequisite for correct decision;
- (3) To promote business enterprise information management modernization and enhance core competitiveness as the goal. You can say no enterprise information no business modernization;
- (4) Enterprise information is a continuous process of innovation and development. There is no fixed standard, there is no fixed pattern, of course, no hard and fast goals, the real meaning of constant innovation and development is the enterprise information (Xiaopeng Zhang, 2011).

#### *3.1.2 Enterprise information content*

Enterprise information technology is a complicated systems engineering, dynamic, layered, complex, information content at different stages in the development of construction companies is different. In the process of building the information people should input huge human, financial and material resources, but also the original organization,

management system, workflow and other comprehensive change. Includes the following aspects:

- (1) The decision-making information. Mainly in product design and development, information technology, production processes information;
- (2) The flow of information. Mainly refers to the buying and selling process using advanced information technology;
- (3) Management information. Mainly in information technology management tools, such as DBMS, SCM, CRM, ERP and other advanced application management system, management structure consists of a flat network structure alternative to traditional static stepped management;
- (4) Data information. Mainly in information technology, information resources and the management of content in electronic form is most efficient.

Enterprise information system mainly has six key factors: ① Information resources is the key information construction; ② Information Network, is to build enterprise information hardware, material basis; ③ IT industry, enterprise information technology is the main front, its continuous innovation and development in order to truly promote the information construction speed and quality; ④ Information technology talent, talent is the success of the enterprise information, no information what talents are empty; ⑤ IT application of information technology, enterprise information construction the guarantee is also where the purpose; ⑥ Information technology policies and standards, and the supervisor is to support the successful implementation of enterprise information. The following six elements of enterprise information system diagram:

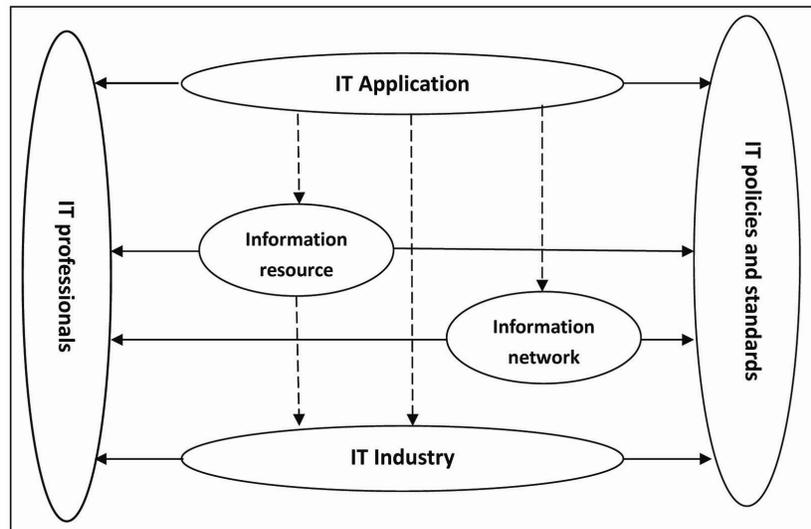


Figure 1. Six elements of Enterprise Information System Diagram

Information technology to achieve the enterprise's production and operation mode profound changes, rapid response capability of information is an important symbol of corporate efficiency and inspection work in the community of competitive enterprises and departments to establish information networks, and information technology is both a social demand, but also business to adapt to market and promote their own development needs. With the deepening of the continuous development of China's information technology and enterprise reform, innovation and enterprise management is to manage change. In order to meet changes in the new era of enterprise management, enterprises must strengthen the construction and management of information technology innovation (Xiaorui Hu & Wenxin Jin, 2010).

### 3.2 Significance of Enterprise Information Management

- (1) Promote the transformation of enterprise information construction, and improve the core competitiveness of enterprises.

The essence of enterprise information is to achieve a comprehensive business process digitization, networking and intelligent, enterprise production and management fundamental change. Accelerate enterprise business process reengineering, can effectively optimize the organizational structure of the enterprise, thus effectively reduce costs and expand business scope for competition, which is more conducive to business innovation and technology. To explore and promote the smooth development of R&D projects in order to improve business efficiency. Thereby improve the competitive advantages and finally promote the healthy and rapid development of the enterprise.

- (2) Construction of enterprise information is to adapt to the requirements of international business, and promote the

construction of modern enterprise management system.

Since joining the WTO, enterprises compete more directly with the challenges, and are faced by the international aspects of information technology by the help of international standards. In the comprehensive development of economic globalization today, the degree of information to some extent, determines the level of success or failure in international competition. With the continuous development of information technology, China currently proposed "property rights, clear responsibilities, separating scientific management" of such modern enterprise management system, and the state of property rights in the first place. Visible information construction speeds up the information technology innovators property rights protection, more conducive to promoting the process of information.

(3) Construction of enterprise information to achieve enterprise-wide business process reengineering to improve the modern enterprise management level.

By using MRP, MRP II, ERP and other enterprise management software for timely management of dynamic and capture the market opportunities. Achieve internal resources and external resources, information integration for the overall management of the enterprise managers to provide technical support. Once these are mastered management software manager accepted, I believe so efficient management software will surely be loved by modern managers, and it certainly will in turn facilitate the process of enterprise information.

(4) Construction of enterprise information to achieve the production and operation of enterprises of all business automation, network management, decision-making intelligence.

According to statistics companies use MRP II / ERP system makes inventory decreased by 30 % -50 & reduce delay in delivery of 80% , 50% reduction in procurement lead time , downtime should be reduced by 60 % , the production cost is reduced by 12% , the management level has been significantly improved (Hui Ding, 2005).

#### 4. Enterprise Information Management Innovation Strategies

Enterprise information management innovation should be based on business use of advanced information technology and management techniques, and constantly promote the overall innovation of enterprise management. Achieved through technological change EC enterprise business model, iERP to achieve timely and dynamic enterprise management, EIP interact internal and external resources, PDM achieve the enterprise information integration and process integration, CRM from marketing system can greatly facilitate the business of the relevant United customer Management, SCM market-oriented, to achieve the customer, research centers, suppliers, marketers, service providers and other systematic, DBMS to achieve a large number of data management, DSS assist decision makers quickly and accurately, KM to achieve knowledge effective sharing within the enterprise. These series of use of information technology can greatly facilitate enterprise information management innovation, laying the foundation for enterprises to obtain competitive advantage in this fierce market. Here's enterprise information management innovation machine produced the following figure, the image of hope can be more specific understanding of enterprise information management innovation mechanism (Yun Zhan, 2010).

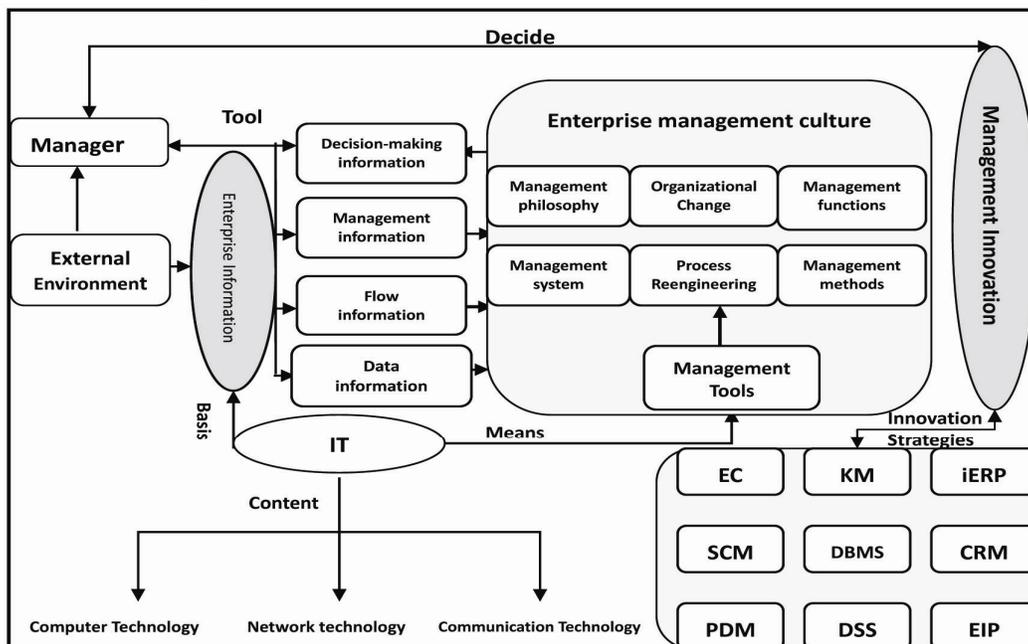


Figure 2. Enterprise Information Management Innovation System

By showing these innovative mechanisms of enterprise information, and now several management innovation strategies to make a detailed description:

#### *4.1 E-commerce*

As a new business model, are the social, economic, and especially enterprise management philosophy to produce a huge impact, Which is changing the way of corporate business activities, the management of the business, the structure and function of the organization, people's consumption patterns. And has a huge impact on the modern economy, specifically in the following five aspects:

- ① Shorten the distance between production and supply chain vendors and end users, while changing the traditional market structure, reducing transaction costs;
- ② Internet-based e-commerce is changing the internal structure of the company and the sector;
- ③ Changing the past market access conditions and thresholds, internet affects the degree of concentration of the market, especially easy for new competitors to enter the competitive market, especially the small and medium enterprises;
- ④ E-commerce transaction costs fall to stimulate demand for online commerce, but also stimulate consumer demand for the network;
- ⑤ E-commerce activities will lead to new forms of competition in the domestic and international markets, while information services and other service activities to further diversify (Cai Shen, Qing Tao, Yubo Chen, 2000).

#### *4.2 Extended enterprise resource planning*

iERP system by supporting and optimizing operational and financial processes within the enterprise and between enterprises in order to create a business strategy for customer and shareholder value, and a set of industry-specific areas of applications. Having the following characteristics: ① companies are highly integrated by the longitudinal, large and focus on internal management optimization model to a more flexible, more focused on core competencies entity mode conversion, so companies can optimize their entire supply chain and value network economic and organizational structure; ② business on the Internet B2B and B2C e-commerce applications, is by a single sales, purchasing behaviors shift from consumers to producers throughout, from suppliers to producers of collaborative business processes in collaborative commerce collaborative world, competition among enterprises depends not only on their management level and competitiveness, more collaborative enterprise information and collaboration between the partners made high demands.

#### *4.3 Supply Chain Management*

Supply chain is a broader corporate structure model, which to market demand-oriented, customer demand as the center core business, customers, R&D centers, suppliers, manufacturers, distributors, marketers, service providers collaborative organic whole operation. Through the information flow, logistics, capital flow, business flow and value stream analysis and control, to customer demand, product development, raw material procurement, product sales and service all aspects of the product and supply chain resources, effective planning and control. Companies need to understand their core competencies, through corporate restructuring, corporate form strategic alliances to achieve "horizontal integration." And have reason to believe that the 21st century is no longer a competitive competition between enterprises, but the supply chain and supply chain competitive advantage depends on the value of collaboration and innovation capacity of the supply chain (Xiaozhuo Lin, 2009).

#### *4.4 Product Data Management*

Product Data Management is a new management methods and management tools to achieve enterprise information integration and process integration of important enabling technology. PDM engineering data management, document management, product information management, data management, information technology management, image management and integrated management framework and other product definition information technology systems, which is a product used to manage all the relevant information and all product-related process technologies. The core is to enable all product development projects related to people throughout the information lifecycle freely shared heterogeneous data associated with the product. And are the processes, applications, and information integration and management in one of the management software.

#### *4.5 Enterprise Information Portal*

Outside of an enterprise information portal which is an organization website, internal management and query is the daily affairs of a common platform. Employees can access organization production information, sales information,

inventory and customer information, at the lowest cost sharing and use of all information companies; companies can provide to our customers timely and accurate information through the portal, and with the online business continuous development, enterprise information portal can also expand the scope of business enterprises to create new business opportunities for promoting the process of enterprise information a powerful tool (Lichun Yang, 2005).

#### 4.6 Knowledge Management in Enterprises

Knowledge management is the use of intelligence and innovation to improve the resilience of the collective, is for enterprises to achieve explicit knowledge and tacit knowledge sharing in new ways. How to identify, acquire, develop, decomposition, storage, transfer of knowledge, so that the maximum contribution of each employee in the knowledge, but also be able to enjoy the knowledge of others, is the ultimate goal of knowledge management.

### 5. Conclusion

In the era of knowledge economy, to carry out the significance of enterprise information is self-evident, companies must continue to take advantage of the rapid development of information technology to transform the enterprise, continue to promote the management of ideas, concepts, methods, and other innovations. Therefore, at this stage, how to integrate information technology with the new generation of commercial activity is very important, which I think the current company structure should match to the enterprise information management construction. And in the future, there will be more and more information management methods produce and apply.

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