

Application of ERP information System in Business

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ABSTRACT

This article aims to explore the application of ERP information system in business and its influence on enterprise operation and management, let large and medium enterprises organizations understand the application of ERP information system, and according to the scale of the enterprise organization provide ERP system selection corresponding scheme planning, through case analysis method to collect data to support the view of the paper. This paper first expounds the evolution history from material demand plan (MRP) to enterprise resource plan (ERP), and then introduces the corresponding ERP system according to the four categories of circulation, energy, finance and finance, and briefly introduces the OA system, HR system, CRM system and SCM system applied in enterprises. Finally, it focuses on how to choose ERP system for small and medium-sized enterprises, and concludes that ERP system with flexibility, functionality, integration, high efficiency and sustainability is more suitable for large enterprises, and ERP system with simple and easy to use, modular business and highly integrated characteristics is more suitable for small and medium-sized enterprises.

KEYWORDS

ERP; ERP information system; Business information system.

1. INTRODUCTION

With the continuous development of globalization and the Internet, enterprises are facing increasingly fierce competition and constantly changing market environment. In order to improve the operational efficiency and management level, many enterprises began to introduce ERP information system to optimize the business process and management mode within the enterprise. Through the in-depth analysis and research of ERP information system, [1] can provide important support and guidance for enterprises to improve their competitiveness, optimize resource allocation, improve management efficiency and other aspects. At present, there are many kinds of ERP software on the market, and it is not easy for large and medium enterprises to choose the appropriate ERP system. To solve this problem, this paper will first elaborate on the evolution of ERP information system, and then classify and introduce ERP products. Finally, the research focuses on how large, medium and small enterprises choose ERP system, so that the enterprise organizers can fully understand the development history, product classification and selection method of ERP system.

2. EVOLUTION OF THE ERP MANAGEMENT INFORMATION SYSTEM

The development of ERP information systems dates back to the 1960s, when companies began trying to manage all aspects of their business through computer systems, such as production, sales, and finance. With the development of The Times, ERP information system has been widely used in various enterprises, and has made a great contribution to enterprises [2]. This chapter will describe

the evolution of ERP systems, introduce new features of the systems born at each stage, and detail the MRP, MRP II and ERP systems, and their role in enterprise development.

2.1. The evolution process of the ERP

In the 1960s, the company began introducing computer technology to handle the inventory control and production planning business. At this stage, a material Demand Plan (MRP) system appears, which calculates material requirements based on the product structure list and inventory situation, to help enterprises better manage material requirements and inventory. In the 1970s, MRP (material demand planning) changed to MRP II (Manufacturing resource planning) system, which promoted its further development. The emergence of MRP II (Manufacturing resource planning) system increased the management of the production center, processing hours, production capacity and other aspects of the enterprise, and also included the financial function [3].

2.2. Introduction of the MRP

MRP system is short for material demand planning (Material Requirements Planning), it is a planning system applied in production management, mainly used to plan the demand of materials in the production process. The core idea of MRP system is supply chain management, which jumps out of the traditional enterprise boundary and optimizes the resources of enterprises from the scope of supply chain. By managing the production plan, material demand and production process, it helps the production enterprises to ensure sufficient materials and avoid the impact of material shortage on the production. At the same time, MRP system can also help production enterprises reduce the material storage cost and improve production efficiency. These functions are crucial for the operation and development of enterprises.

2.3. Introduction of the MRP

Manufacturing Resource Planning MRP (Manufacturing Resource Planning) is an information system to comprehensively plan and control enterprise manufacturing resources. Based on the idea of material demand planning (MRP), it expands the function of MRP, integrates the work of various departments such as production, finance, sales and engineering technology of the enterprise, to form a complete and comprehensive manufacturing resource planning system.

2.4. ERP Introduction

ERP (Enterprise Resource Program) was proposed by Gartner Group in the early 1990s to help companies better manage their internal resources, including finance, logistics, procurement, human resources and so on. ERP system is a highly integrated information system, which integrates various departments, business processes and information systems of the enterprise to realize the optimal allocation of resources and the efficient management of [4].

In contrast, the MRPII system (Manufacturing Resource Plan) is designed for manufacturing enterprises and focuses on the management of production planning, inventory management and material requirements. MRPII Systems are designed to improve production efficiency, reduce costs and improve quality in manufacturing enterprises, but usually they can only be implemented within the manufacturing sector.

Therefore, compared with MRPII system, ERP system has a wider range of application and more advanced management concept. ERP system not only covers all the resource management of manufacturing enterprises, but also includes financial management, supply chain management, human resource management and other aspects of management. In addition, the ERP system also adopts a more flexible modular design, which can be customized and expanded according to the actual needs of the enterprise, to better meet the actual needs of the enterprise.

3. ERP PRODUCTS AND THEIR RELATED PRODUCTS

This section classifies ERP products and related ERP products. ERP products will be introduced into four categories: circulation, energy, finance and finance. ERP related products will introduce OA system, HR system, CRM system and SCM system.

3.1. ERP products

ERP products, a variety of products will be divided into four categories: circulation, energy, finance and finance.

In China, the circulation and financial ERP products are mainly represented by the "housekeeper" of our company, the "Speed 7000, and the" gold abacus eERP-B " of the Gold abacus Company. This kind of ERP is cheap and has many agents. Financial ERP takes Yonyou, Kingdee and Inspur as the representative companies, among which "Yonyou ERP" and "Kingdee K / 3" two ERP products occupy more than half of the market share of [5].

Internationally, the representatives of ERP products are SAP, Oracle, Microsoft, etc. These ERP products were listed early, most of which are customized for large enterprises, have the functions needed to manage large enterprises, can operate steadily in various business scenarios, and have a large number of successful cases, which are widely used in large enterprises around the world and are well received. ERP products are widely used in energy and finance, including SAP, Oracle, etc. These ERP products are widely used in energy and financial enterprises, because they have high scalability and flexibility, and can continue to expand and adjust as the development of enterprise business. At the same time, these ERP products also have advanced security and reliability to meet the enterprise data security and business continuity requirements.

Among them, SAP is the world's leading enterprise application software provider, and its ERP product SAP ERP is widely used in energy and financial enterprises. Oracle Is the world's leading enterprise software company, and its ERP product Oracle ERP is also widely used in finance, energy and other industries. Yonyou and Kingdee are a leading enterprise management software manufacturer in China, and their ERP products have also been used in energy and financial enterprises.

In addition, for the specific needs of the energy industry, some ERP products also provide specialized solutions, such as SAP's oil and gas industry solutions, and Oracle's energy and utility solutions. These solutions are optimized and tailored to the specific needs of the energy industry to better meet the management needs of energy companies.

3.2. ERP-related products

In addition to the ERP system, the OA system, HR system, CRM system, and SCM system are also used in enterprises.

Among them, office automation (Office Automation, OA) system is a kind of system based on the enterprise internal personnel to share information conveniently and efficient collaborative work for the purpose. It aims to help enterprises to achieve the advanced stage of online office and improve the efficiency of collaborative office. The OA system has been widely used in all the enterprises engaged in product manufacturing and inventory management.

HR system (human resource management system) is a system that integrates six modules of human resource planning, recruitment and allocation, training and development, performance management, compensation and welfare management, and labor relationship management. It enables enterprise HR to better develop and plan human resources and make full use of the value of employees. HR system is widely used in all kinds of enterprises, [6].

CRM system (Customer Relationship Management System) is a kind of software system that provides enterprises with automatic business management through data statistics and data mining, and the intelligent management of customer management platforms such as call platform. It is suitable for wholesale, trade, sales type and other business contacts and needs of the various enterprises. CRM systems can help enterprises to better manage customer information, improve customer satisfaction and loyalty, and promote business growth. The SCM system (supply chain management system) is a kind of system that manages the process of suppliers from inquiry, quotation, order, delivery, arrival and return of goods. It can help enterprises to optimize the supply chain management, improve the procurement and logistics efficiency, and reduce costs. SCM system is widely used in manufacturing, retail and other enterprises that need a large amount of procurement and logistics.

4. HOW DOES THE ENTERPRISE CHOOSE THE ERP INFORMATION SYSTEM

In order to integrate and standardize the enterprise core business process, improve the core competitiveness of the enterprise as a whole, to meet the needs of enterprise sustained steady business growth, large and medium enterprises when choosing ERP information system, need to consider the demand type, industry characteristics, system integration ability, scalability and cost factors, in order to choose the most suitable for their ERP system [7]. This section will introduce how large enterprises and small and medium-sized enterprises should choose ERP information system, and list related ERP products. Finally, we will summarize and analyze the differences when large and medium-sized enterprises choose ERP system.

4.1. How to choose the ERP information system for large, small and medium-sized enterprises

This section will introduce how large enterprises and small and medium-sized enterprises should choose ERP information systems, and discuss in depth how enterprises should choose appropriate ERP information systems to enhance their industry competitiveness.

4.1.1. How to choose the ERP information system for large enterprises

In China, large enterprises usually refer to enterprises with larger scale, higher assets and operations, a large number of employees and competitiveness in the market. These enterprises are usually considered to have an important position in the national economy and can support the development of the national economy.

Specifically, large enterprises may be involved in different industries and fields, such as manufacturing, finance, real estate, energy, etc. These enterprises may have different organizational forms, such as state-owned enterprises, private enterprises, foreign-funded enterprises, etc.

Therefore, choosing reliable ERP manufacturers is one of the keys to choosing ERP system. Large enterprises need to choose ERP manufacturers with rich experience and professional technical strength, who can provide high-quality ERP system and professional service support. For example, you can choose the system provided by "Kingdee K / 3", "Yonyou ERP" and other large ERP suppliers. These suppliers have been operating in the ERP market for many years, are in a leading position in the industry, have strong software technology and operation and maintenance support, and have an insight into the future trend, and can timely update and upgrade ERP software.

At the same time, we also need to consider the reputation and reputation of ERP manufacturers and other factors. When selecting an ERP system, the selected ERP system needs to be tested and evaluated, including the stability, reliability, ease of use, and integration of the system. Testing and evaluation allow a better understanding of the performance and characteristics of ERP systems to

make more informed decisions. ERP system is not only to choose a management system, but also need to consider the long-term cooperation and support with ERP manufacturers.

4.1.2. How to choose the ERP management information system for small and medium-sized enterprises

In China, small and medium-sized enterprises usually refer to relatively small enterprises with limited business scope. These businesses are usually created by individuals or small teams, with a relatively small size and number of employees. Small and medium-sized enterprises play an important role in China's economic development, and the government has also introduced a series of policies to support the development of small and medium-sized enterprises.

Small and medium-sized companies in both China and elsewhere are relatively small and have a relatively limited number of employees and business scope. Small and medium-sized companies have a relatively wide range of business, covering a variety of different industries and fields. This gives them the flexibility and diversity in meeting the market demands. Small and medium-sized companies are generally highly innovative because they are more flexible and can adapt faster to market changes and technology updates. They are more likely to try out new business models, technologies and products to gain a competitive advantage. Small and medium-sized companies usually lack the resources of large enterprises, such as capital, technology, talent, etc. This makes them more vulnerable to market competition, but it also inspires them to focus more on resource utilization and cost control. Small and medium-sized companies often focus more on the development of regional markets because they are small and difficult to cover global or national markets. They focus more on local market demand and competitors in order to gain a competitive advantage in the local market [7].

Small and medium-sized enterprises can choose SAP ERP, which can help them automate their business processes, improve operational efficiency, reduce costs and other goals. While Oracle is the world's leading enterprise software company, its ERP products cover financial management, supply chain management, human resource management and other fields. Oracle ERP Highly scalable and flexible to meet the changing business needs of small and medium-sized enterprises. Microsoft Dynamics ERP Is the enterprise information solution launched by Microsoft, with the characteristics of friendly interface and simple operation. The product can help small and medium-sized enterprises to automate their business processes, improve operational efficiency, reduce costs and other goals. Sage ERPX3 It is an ERP system suitable for small and medium-sized enterprises, with a wide range of application fields and strong integration performance. This product can help enterprises to automate business processes, improve operational efficiency, reduce costs and other goals [8].

4.2. The large, small and medium-sized enterprises choose ERP and manage the difference of information system

In terms of scale and business scope, large enterprises' scale and business scope is relatively large, so a more complex and comprehensive ERP system is needed to support its huge operation and management work. However, the scale and business scope of small and medium-sized enterprises are relatively small, so the ERP system required is relatively simple, which can meet their daily business needs.

Usually large enterprises usually need a powerful, flexible and scalable ERP system that can meet their complex business processes and diversified business needs. For example, large manufacturing enterprises may need an ERP system that integrates production management, supply chain management, financial management, human resource management and other functions. While small and medium-sized enterprises pay more attention to financial management, sales, sales and customer relationship management and other basic functions, the requirements for some advanced functions may not be particularly high.

In implementation and use, the ERP implementation of large enterprises usually requires longer project cycles, because their business processes are more complex and require more customization and configuration work. In addition, due to the large number of employees in large enterprises, a more comprehensive training work is needed to ensure that employees can use the ERP system smoothly. Small and medium-sized enterprises, on the other hand, often use simpler implementation processes because of their relatively simple business processes, fewer employees, and relatively low training and implementation costs.

From the perspective of cost and return on investment, large enterprises usually need to consider more cost factors when choosing ERP systems, because they need to invest more money to buy and maintain a large ERP system. In addition, because of the large business scale of large enterprises, there is also a higher demand for some advanced features that can deliver long-term returns. Small and medium-sized enterprises often use simpler ERP systems to reduce costs, while they are more focused on short-term returns, so they have a higher demand for features that deliver quick returns [9].

In a word, there are differences between large enterprises and small and medium-sized enterprises in choosing ERP information systems, mainly in the scale and business scope, demand and function, implementation and use, and cost and return on investment. Enterprises need to choose according to their actual situation to ensure that the implementation of ERP system can bring more benefits and value to the enterprise.

5. CONCLUSION

ERP information system has a profound impact on commercial applications. For enterprises, the implementation of ERP system is an important opportunity for digital transformation. Through ERP systems, enterprises can optimize business processes, improve operational efficiency, reduce costs, and gain a competitive advantage. In this paper, we explore the definition, development, importance of ERP information system and its impact on commercial applications. By analyzing the differences between large enterprises and small and medium-sized enterprises in choosing ERP information system, we can conclude that the implementation of ERP information system needs a comprehensive plan, including project cycle, cost input, personnel training and so on. The implementation process of large enterprises will be more complex and require more customization and configuration work, while small and medium-sized enterprises can adopt a simpler implementation process. With the continuous development of globalization and the Internet, ERP information system is moving towards the direction of cloud, mobile, intelligent and so on. ERP information system pays more attention to user experience and service mode innovation, in order to adapt to the changing market demand. In the future, with the continuous progress of information technology, ERP information system will continue to innovate, bringing more opportunities and challenges to [10] for the commercial application of enterprises.

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