LITERATURE REVIEW

Defense Industry ERP Application (Process Management and Enterprise Resource Planning)

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1. *Abstract*

Information technologies are very important for businesses in terms of competition and speed[1]. Information technology is developing rapidly. One of the information technologies is the ERP system. ERP provides competitive advantage by covering all functional areas. Our project is an ERP system, but there is also a system for performance evaluation for company employees and cost calculation for the company. The aim of this project; reducing business time, providing faster information communication, better financial management, effective stock management, quality and traceability.

Öz

Bilgi teknolojileri, rekabet ve hız açısından işletmeler için çok önemlidir[1]. Günümüzde bilgi teknolojileri hızla gelişiyor. İş yükümüzü azaltan bilgi teknolojilerinden biri de ERP sistemidir. ERP sistemi, tüm fonksiyonel alanları kapsayarak rekabet avantajı sağlar. Projemiz bir ERP sistemidir ancak sistemimizin içerisinde şirket çalışanları için performans değerlendirme ve şirket için maliyet hesaplama sistemi de bulunmaktadır. Bu projenin amacı; firma için iş süresini azaltmak, daha hızlı bilgi iletişimi sağlamak, daha iyi finansal yönetim, etkin stok yönetimi, kalite ve izlenebilirlik sağlamaktır.

2. *<u>Introduction</u>*

ERP Application (Process Management and Enterprise Resource Planning) system is an enterprise information system It is designed to integrate and optimize business processes, employees' performance, costs and processes of work in a company. The ERP Application (Process Management and Enterprise Resource Planning) is an industry-oriented concept and system and is universally accepted by the industry as a practical solution to achieve an integrated business. ERP Application (Process Management and Enterprise Resource Planning) system handles a wide range of planning, operation and accounting functions such as accounting, finance, logistics, production planning, stock management, production, quality management, human resources in an integrated manner[2]. The purpose of this system is to facilitate and improve the cooperation and interaction between all these functions. This purpose is to examine the ERP Application (Process Management and Enterprise Resource Planning) system, which is one of the important information technology systems of today, to design this system according to the company we will work with, to create a portal and make it ready for use. ERP Application (Process Management and Enterprise Resource Planning) system can help a corporation become more self-aware by linking information about the production, finance, distribution, and human resources together[3]. The ERP Application (Process Management and Enterprise Resource Planning) system is a system that allows the company to track and record each process (now and retrospectively) from the arrival of each product to the shipment.

3. ERP Application (Process Management and Enterprise Resource Planning) System

3.1. Description

ERP Application (Process Management and Enterprise Resource Planning) system is a software system that includes the functions of planning, coordinating and controlling the supply, production and distribution resources in different geographical regions in the most effective and efficient way in order to meet customer demands in the most appropriate way in line with the strategic goals and objectives of the enterprise. Companies implement ERP Application (Process Management and Enterprise Resource Planning) system packages to integrate business processes into various functions. The ERP Application (Process Management and Enterprise Resource Planning) system helps businesses to automate all business processes, employee performance, and financial calculations in the organization as a whole, rather than just some functional units.

3.2. Working Mechanism

We will start our project by setting up our design. While doing this design, we must consider the stages that each product in the company goes through. Figure 1 shows the stages the products go through from their entrance to the company to delivery to the customer.
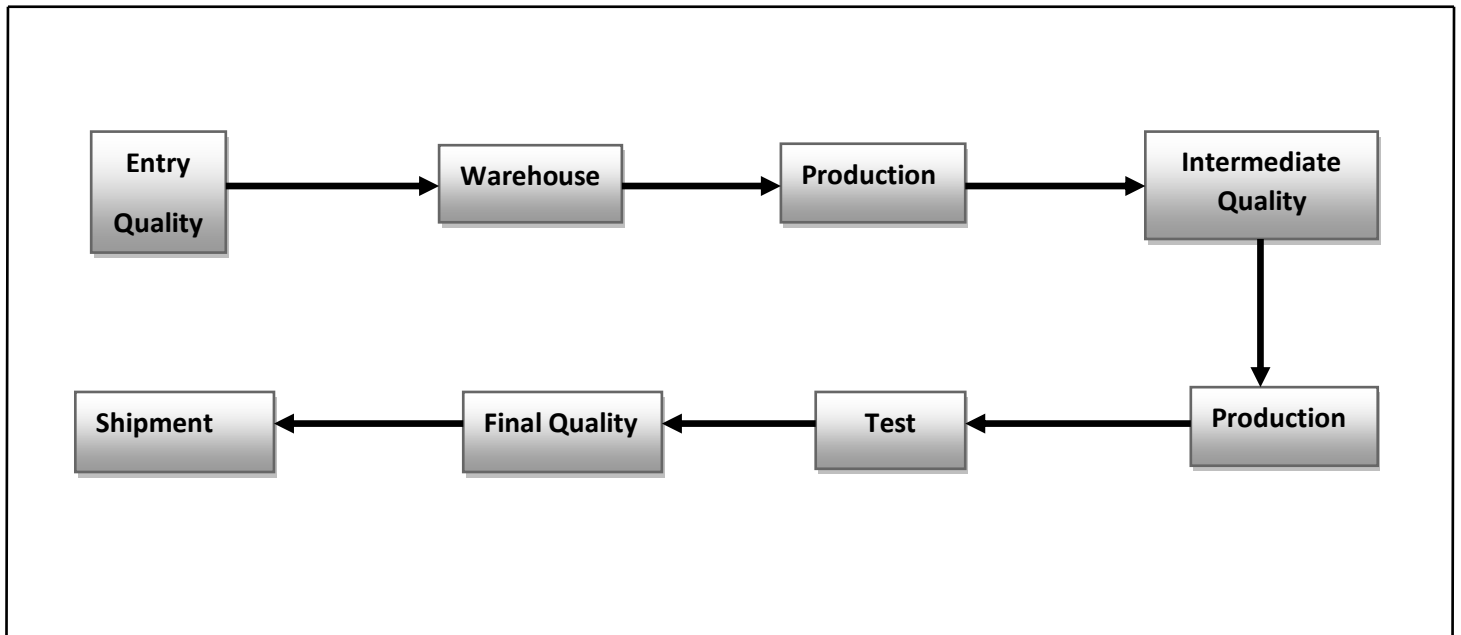
Figure 1 : Working Mechanism

Purchased products go into entry quality first. Here, the amount of each product and the necessary documents are checked. The products that pass the control are kept in the warehouse until they are taken to the production plan. Each product taken into production is checked at intermediate quality after a certain stage. The products that pass the control are returned to production. After the production is completely completed, it goes to the test phase. Every product that passes the test is checked in the final quality. As the last step, the products whose control has been completed are prepared and shipped. We will design your project according to this working mechanism. Following these steps on the virtual path is very important for the company. The ERP Application (Process Management and Enterprise Resource Planning) System will enable us to follow the steps in a virtual environment and make the data more accessible and storable for each product.

3.3 *Working Mechanism in ERP*

Our project will work like a portal. Authorities will be given a username and password through the web page, and each user will be able to edit the pages within their authority. However, every user will be able to view every page on the system. A user who logs into the ERP system according to the degree of authority can check the conditions suitable for user business model, the stage of the products, and the business plan and regulations. The user, who logs into the ERP system with a different authority within the institution, can instantly follow the work orders, project cost and performance reports depending on the degree of authorization, and can directly download and restore the documents requested by the state institutions serving in the defense industry through the ERP system. Finally, the user who logs into the ERP system can follow the performance reports of the employees of the institution, the entire financial status and accounting details of the institution, the performance of each individual and team separately, and can view this process instantly, according to the level of authority.

Although ERP systems are available in the market for ready-made and general institutions and, contrary to this generalization, are very costly systems, we have taken as a basis to fulfill the requirements of the companies serving the defense industry, an ERP program that has a large market and importance in our country and is suitable for their business and product creation processes. . Along with these, we plan to provide access to cost and specific performance criteria through the system. This program, which will save the workload of people in the sector and in the institution, will save the document crowd, and we aim to share the data that companies working simultaneously and in the sector want to share with each other instantly by opening simple authorized accounts.

4. Conclusion

In addition to the steps we explained in the Working Mechanism section in our system, we will also make employee performance evaluation and cost calculation. The ERP Application (Process Management and Enterprise Resource Planning) system enables the tracking of products, planning the products, and storing the records of the products' data for the past and for today. In addition, we will ensure that the performance evaluation of each employee working in our ERP Application (Process Management and Enterprise Resource Planning) system and the cost calculations of each product made can be made.

5. References

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