

Enterprise resource Planning ERP

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Abstract: Information technologies are the revelation of this area. Companies should rely on the technologies to get their work done in isolation of the technologies. Enterprise Resource Planning systems are the most important software that every company should have. This paper is exploring the Enterprise Resource Planning definition. Moreover, this paper summarizes the most important advantages that Enterprise Resource Planning systems have to increase firms' productivity. At the end of the paper, there are three examples of the most common Enterprise Resource Planning software in the market with a short description of it.

❖ Introduction

In this era, the information technology is an urgent need to manage any aspect in business. It is the most efficient and economical way for managing business. Information technology provides opportunities to communicate with the customers, efficiency of operations, and security. Many departments in any business need to adopt a software that helps them to demonstrate on the working process and lower the cost. In the operation section of the business which is the most sensitive section to time and information comes the importance of integrating a software that helps production be as efficient as possible.

Enterprise Resource Planning (ERP) is a software solution that gives manufacturers the opportunity to gather the information of the production in order to manage their production process in the most efficient way possible. ERP is an optimal solution for managing the production data in a real time manner in order to help their businesses to grow. The software connects the information between many departments in the plant in every process during manufacturing products such as the marketing department and the operating department. That gives the managers the accurate information in the optimum time in order to make the best decision based on the information.

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The most important element for any decision is the the accuracy of the information that the decision maker gets. In addition, the time of making the decision effects the decision. ERP gives the managers the two most important elements that they need in order to make the suitable decision. Enterprise Resource Planning (ERP) caters to the business tracing order, monitoring the the raw materials, and services. The most popular software for ERP is SAP. SAP is a European software that helps companies manage business operations and customer relations.

Information integration is a key concept in Enterprise Resources Planning. ERP helps a company to break down the information by collecting, managing and distributing information across functional departments in the company. As a result, ERP allows full cooperation between production, materials, planning, engineering, finance and sales. To sum up, Enterprise Resource Planning system combines all the business departments into one component.

❖ History of Enterprise Resource Planning (ERP)

Enterprise Resource Planning evolved from MRP II (Manufacturing Resources Planning II), which was designed to manage a production plans and inventories. The ERP started in the middle of the last century. In the 1990 which was the year of explosion in technology growth. After that ERP became more widely used by many large firms.

❖ Advantages of using an Enterprise Resource Planning (ERP)

Using an Enterprise Resources Planning in a manufacturing company in any size has many advantages over other ways of managing the manufacturing process.

➤ Save Money

ERP system gives a company the ability to link several program into a single system with relevant software. That helps the company to reduce the machines and servers that are necessary for each department to function properly. At the same time, ERP software helps the company reduce the number of workers in each department because of the reduction of the machines and servers. On the other hand, information is a significantly critical tool that helps achieve the company's aim. A company that uses ERP software will have organized information that is important in any stage of the company to support better decisions. Therefore; receiving accurate information not only saves money, but also helps the company generate more money by maximizing the company's investment and controlling other cost

➤ **Enhanced productivity**

Strategy is a way of running a company properly. ERP software assists the company in managing its plant. Moreover; implementing ERP software helps employees to complete the tasks without wasting valuable time. The employees have the ability to track a customer's interaction based on the information that they received from the ERP program. For example, if a company does not implement ERP software, the employee must deal with many programs, such as the inventory program and the customer information file. That consumes the employee's time and effort to serve one customer. At the same time, customer's satisfaction will be lower due to the slow service. In addition, the strategic planning will not be accurate because of the lack of information.

➤ **Real time analysis**

The biggest advantage of using the ERP system in a company is real time analysis. Real time analysis in the ERP system gives a company the ability to see all the activities at once. It becomes more important when the company produces a high volume of products.

➤ **Easy reporting**

The ERP system allows a company to have customized reporting. ERP provides an easy technique for generating reports. At the same time, it gives better access to data that the company can generate and manipulate.

➤ **Increase security**

The Enterprise Resources Planning system improves the data restrictions. By using the ERP system, a company has the ability to give the right employee the right privileges to access

data. Some data is not commonly used by all the employees, and having the ability to see those data puts the company in an unsecure situation. ERP allows the company to keep customer information and company data safe and secure.

❖ **Disadvantages of using an Enterprise Resource Planning (ERP)**

Despite the advantages that companies may gain from using ERP systems, there are many disadvantages which the ERP systems have.

➤ **The cost**

It is expensive to set up and use the Enterprise Planning software. Besides the cost of buying those kinds of software, there may be other costs that companies have to consider, such as planning, customization, and testing. For example, SAP is one of the ERP software that has a high cost. National Grid, which is a New York gas utility service, has been charged about \$390 million in order to replace its oracle system with SAP software.

➤ **The difficulty of use**

The implementation of ERP systems does not succeed until all users have participated. The participation is very important for the successful implementation of any ERP system project. As a result, there is another cost called indirect cost, that a company has to pay. Indirect cost could come from training and education.

To sum up, there are few other disadvantage such as customization, payback, and the transferring of exiting data. At the same time, the advantage of using ERP systems are outnumber the disadvantages. In this era, using ERP software in business is essential step not only for new business to establish themselves, but also for old businesses to convert their works.

❖ **Functional Areas of Enterprise Resource Planning (ERP)**

The ERP system covers many areas in a business. ERP systems support many departments in firms and help managers keep track with the work in each department. The following departments are examples of areas that ERP supports.

1. Marketing and Sales department: ERP systems could deal with many activities with which the marketing department deals on a daily basis such as sales order, customer relationship, customer support, sales forecasting, and advertising.
2. Production and Materials Management department: in this department, ERP could

make a difference in terms of saving and minimizing cost. The activities the ERP system could deal with are purchasing, receiving, transportation, production scheduling, manufacturing, and maintenance schedules.

3. Accounting and Finance department: ERP systems are capable of dealing with many complicated transactions and activities on a daily basis. Those activities could be cost allocation and control, planning and budgeting, cash- flow management, and financial accounting.
4. Human Recourses department: The important activities that are covered by ERP systems in the human recourses department are recruiting, hiring, training, and payroll.

❖ Example of Enterprise Resource Planning (ERP)

There are many choices available for companies can pick the best option. On the other hand, each software in ERP systems has advantages over other ERP software those advantages are worth mentioning when it comes to making a decision to buy one of them.

➤ SAP

It is a German multinational software corporation that makes enterprise software to manage business and customer data.

Large-manufacturing companies use SAP in daily activities. ERP software SAP could help with large manufacturing to increase efficiency and sustainable operations. There are many features of using SAP in large corporations. SAP helps companies that have a large amount of sales or a large number of employees notice mistakes that slow the company progress down. SAP provides tools that can assist large companies that deals with a large number of sales and discover any mistake that could mislead the functions.

SAP has many advantages for large manufacturing companies such as the strong build platform with high efficient helping from the SAP Company (Support). At the same time, SAP has more than 290,000 customers in 190 countries around the world, which mean the SAP software could work in any environment where the financial transactions are different.

On the other hand, there are many limitations that could be obstacles. First, SAP software is difficult to acquire. There are no institutions in developing countries where the software could be taught. Additionally, the cost of programs is high for large manufacturing companies that work in different software and face high cost and long progress when switching to SAP.

➤ Teradata

Teradata is software that helps companies demonstrate the large amount of data and break it down into individual pieces of information that could help the decision makers make the optimal decision.

Retail chains that deal with millions of transactions and customers a day have data that could be used in order to have knowledge about those transactions and customers. Teradata assists the company in measuring the marketing success. Teradata helps companies that deal with consumers' products to develop better understanding of customers' behavior over time. Teradata has many products and services that could help those kinds of companies have the high efficacy and productivity from their sources. Data Warehouses is great software that could help companies gain more details and consistent view of their customers from many sources.

Marketing Applications is another software provided by Teradata. Marketing Applications helps companies that deal with millions of customers to understand the consumers' behavior, and fix the weak spots in their market. There are many advantages to using Teradata over other ERP software. First, the expansion of the database is easy. Any company that uses Teradata could expand the capacity of the database easily. Second, it has many tools that are compatible with Teradata.

➤ SAS

SAS is an American company that specialize in developing analytical software. SAS software helps manage, access, and analyze data in order to help the decision makers.

SAS software has more than 200 components. Also, SAS provides an interface for non-technical users and more advanced options. SAS is also more focused on the statistical field, which is optimal for banking companies. At the same time, SAS

is able to do the following tasks; data management, written and graphed reports, statistical and mathematical analysis, business forecasting and decision support, operations research and project management, and applications development. The SAS website provides books online for those who want to be specialists. The interface is easy, which solves the problem of not finding institutions and schools in developing countries.

➤ **Tableau**

Tableau is an American computer software company located in Seattle. The company produces a family of interactive data visualization products focused on ERP systems

Tableau is a new company in business software that began in 2003. There are many advantaged to using this software. A company that is small and does not want to increase its cost of working by hiring new employee specialists in the software programs can use Tableau. It is easy to use, and anyone can analyze data with Tableau's intuitive drag drops. Another advantage of using Tableau is the lack of equipment needs. Tableau works on the iPad and even on a smartPhone. It could be online, and there is on need to set up programs. Updates are automatically faster due to the live connection to the company data. The most important advantage is the free trial. Any small company can try the program without pay additional money until it is satisfies its needs, and are the managers decide to buy the program, it is relatively cheaper than other business intelligence software programs on the market. Also, the Tableau has an online support that give subscribing companies solutions for their problems with the Tableau software. In addition to that, the Tableau website provides many books for learning and mastering the application.

❖ **The future of the Enterprise Resource Planning**

Since Enterprise Resource Planning lanced, The Enterprise Resource Planning software has helped many firms and companies to take the advantages that the ERP systems provides despite the fact that there are few of disadvantages that the ERP systems have. On the other hand, there are huge spreading of Internet around the world. Now, the majority of today transactions go though the Internet and all the businesses are

changing their status to be online firms. The e-commerce changes everything in the business world. Now, one click can take a customer order to be fulfilled. The Internet opens new world for businesses.

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