

# The Importance Of Erp (Enterprise Resource Planning) Software And Choosing Criterias For Business

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## **Abstract**

With the increase of competition and being used information technologies by business' effectively, the software that organize flow of information and develop the interdivisional integration have increased. While this study is emphasizing the importance of ERP (Enterprise Resource Planning) software for business, reveals choosing criteria. In this study, firstly, for business ERP system's basic features, modules and profits are discussed. In next parts, key considerations when choosing ERP software are emphasized and lastly discussed how to ERP system put out an approach for business. In consequence of the discussion, it is seen that Enterprise Resource Planning software for companies' internal control activities and interdepartmental integration is successful and necessary.

**Keywords:** ERP, Information Technologies, Planning

## **1.INTRODUCTION**

The advances in informatics technologies have diminished the world, thus the trade activities merchandised interstate conveniently can be merchandised all around the world. These advances have changed business' commerce routines and approaches. The increasing competition has led firms seek reliable solutions and ERP software administering the process which passes from provision to manufacturing via management information systems are developed [Klaus et al., 2000].

In this process brought up by competition, business should use their sources effectively and efficiently to be afloat, to stand out among its rivals and come into prominence (Çelik, 2011). Effective and efficient use of sources depends on administering the process good and taking right strategic decisions. In this point, informatics technologies create solutions to business and some data that help the administrators take right decisions.

Being business big or small, producing service or goods are not obstacle to their information technologies usage. In the future, when information technologies are inadequate, business will develop new concepts and technologies and they will have to share their concepts and technologies with other business (İlter, 2007:1-20). The reason for this, in process of produces more and more innovations and strategic specialities will be required and these innovation and specialities will be presented to business usages.

Nowadays, it is seen that business that have classic business administering insight have been disappeared and they leave their places new business that use information technologies and systems the most efficiently (İlter, 2007:1-20). This study presents some information which show the importance,usage areas, advantages and disadvantages of ERP software.

## **2.WHAT IS ENTERPRISING RESOURCE PLANNING?**

Information technologies affect business directly in some areas like electronic trade, ERP and information administering (Arikboğa, Kaya, 2000:127). Enterprise resource planning systems with opportunities in the competitive environment, business will become more advantageous. Being Material requirement planning (MRP) and Manufacturing resource planning (MRPII) systems' developed versions, ERP system is a planning and communicating system containing all functions of business (Kumar, 2002: 511).

Nowadays, the systems called as ERP help to manage modules such as purchase, accounting and finance, quality control, stock management, production planning, logistic, human resources, customer care (CRM), marketing and provision management from central location (Aydoğan, 2008: 2). In brief, ERP can be introduced as a software package that integrates all ongoing flow of information in a company (Çelik, 2011).

ERP softwares are package programs prepared with modular logic. There are a lot of ERP software on the marketing and nearly all of their basic modules are the same. Looking at the overall ERP software modules, it is seen that this modules are gathered under the titles of purchase method, sale and customer care, product design, materials management, production management, accounting and finance, human resources and the basic application modules (Aydoğan, 2008: 113).

Businesses that want to use ERP software, process mapping needs to be acquainted with how things are primarily. ERP software will be removed this way, a road map to follow. Process mapping is located in two different options. The first option is the mapping of the current situation and second option is to use best solution. In ERP software built on mapping the current situation there are built-in performance and software flexibility, the likelihood of various problems (Kul, 2009: 211-212).

### **3.THE DEVELOPMENT PROCESS OF ERP SYSTEMS**

In increasing competitive environment business to make themselves advantageously benefit from the opportunities offered by information technologies. In 1960's business used inventory management that makes manually and control system. In 1970's MRP systems that assumed as the beginning of ERP systems are developed. The MRP systems were rendered computer aided by Joseph Orlicky and this system provided the necessary support for the determination of the amount of material (TMMOB, 2006).

In 1980's the subject of MRP attracted attentions of software companies and package programmes were started to develop. In the same years with increasing competition in business products and production control began to be insufficient. MRPIIs were developed via incorporated rising values such as logistics, finance, sales and accounting planning in the system (TMMOB, 2006).

In 1990's increasing information traffic in business featured units' coordination. Besides, with the distribution resources planning and addition integrated manufacturing to computers, new softwares were needed. The softwares in that all units are integrated with each other and datas collected in single center in business were developed. To this developed package programmes were named Enterprise Resource Planning (ERP).

In 2000's new approaches such as Customer Relationship Management (CRM) and Supply Chain Management (SCM) emerged by this way there were needs for non-business information systems. With the inclusion of this approaches to the system by software companies, the ERP system turned to the ERP II (Bircan, 2009).

At the present time, with the acceleration of internet and business' moving to this environment, some functions such as B2B, B2C, intranet, PAM, LMS, job flow management, Project management are needed. With the combinations of these functions, enterprise information systems began to be called as e- Businnes.

### **4.STRUCTURAL FEATURES OF ERP SYSTEM**

ERP software can be produced according to the desired sector or needs. no matter which the industry or field of activity are produced, these softwares' features are the same basically. Enterprise Resource Planning systems generally have common features (Aydoğan, 2008; BayraktarveEfe, 2006):

- ERP software have a modular structure.
- ERP software can be customized to meet the needs of companies and developed.
- ERP software has hardwired management system that holds both the master data and data for business process.
- With its single interface and integrated structure, ERP software provides flow of information to all departments within the business.

- To manage data accurately and consistently, real time data entry is needed.
- By providing data to be transferred electronically via the Internet and intranets, ERP software is compatible with today's information technology.
- Because it supports many corporate functions, it has a highly functional structure.

ERP software has a modular structure. These functional modules which are contained in the modular structure can be expressed as principal components such as Strategic Planning and Management, Accounting Management, Financial Management, Production Management, Logistics, Product Development and R & D Management, Sales and Marketing Management, Human Resource Management, Supply Chain Management, E-Business Applications, Customer Relationship Management.

## 5. ERP'S BENEFITS AND SELECTION CRITERIA

ERP system uses a wide variety of software and hardware components. For ERP software is high cost investment, selection of software is very important to meet the needs of business. Before choosing the software, firstly business should decide if they will use ERP system or not. Situations where it is needed ERP software can be expressed as follows.

- If your business suffer from unknown costs,
- If problems of only specific persons resolve,
- If your actual financial performance is unknown,
- If follow up and planning take a lot of time,
- If processing errors are increasing,
- If the information requested cannot be accessed easily, takes a week to prepare some reports,
- If there are several contradictions in the reports prepared.
- If your business suffer from customer loss and customer complaints are increasing,
- If existing software restrict the company's growth,(Onar, 2008).

To be successful the ERP that will be installed in business, it is needed to choose the software which creates the most appropriate solutions for the organization structure, technological systems, corporate objectives and strategies to the business. The process is so important that during the software decision even a small mistake made can cause of big amount of financial loss. (<http://www.sumo.com.tr/erpsecimkriter.html>). Therefore, when choosing an ERP, businesses can follow to this 4-stage:

- Identification
- Research
- Recognition
- Analysis and selection of applications.

In identification phase, business should identify its priorities and processes properly. Secondly, the solutions that matches described system should be investigated. Candidates' solution offers appeared in a list that will be obtained from the trail should be analyzed, demos of software should be looked at, references should be reviewed and consequently a score should be given to each studied software according to its suitability for

the process and goals. In the selection process, if an analytical method is used, some criterias should be based on and the selection should be evaluated according to this criterias. Finally, before the analysis and selection process, the selection criterias should be determined. There are 15 criteria most commonly used around the world on this issue. These criterias may be reduced to 5:

- Functionality
- Technology and Expertise (Know-How)
- Flexibility and Scalability of Application
- Cost and Ease of Use
- Implementation and Ease of Use

According to known criterias, during the selection of ERP, the method called as Analytic Hierarchy Process (AHP) is used. In analytic hierarchy process firstly the selection criterias are ordered among each other, and secondly candidate software are ordered among each other. According to this order, the decision makers decide the ERP system that provides optimum benefit (Baltalar, 2008).

ERP systems selected for the purpose of business will provide these contributions in general: (TMMOB, 2006; Kul, 2009; Aydođan, 2008)

- It speeds up the flow of information via provide the achievement of the desired format and detailed.
- Provides inventory optimization.
- Provides an excellent decision support system that increases the competitiveness.
- It helps managers make better and faster decisions.
- Provides in-house performance monitoring and analysis.
- Provides the tools which are needed to sales forecasting, sales channels and dealer management, market and customer assessment.
- Provides increase in manufacturing performance and speed of manufacturing process.
- Provides improvement in preparation of orders and financial information.
- Provides efficient use of resources, and decrease operating costs by providing management.
- Thanks to flexible structures, provides an easy and rapid adaptation according to the market conditions and changes in the needs of business processes.
- Provides development of a common in-house language and increased coordination between units.
- In order to meet customer needs more quickly, giving the necessary support for the management of customer relationships, provides increase in customer satisfaction.
- Provide the right investment decisions and improve business processes.
- Allows customers and suppliers in different regions to share data faster and to integrate information easily.

## **6. CRITICISM ABOUT ERP**

Even though some positive opinions are indicated, in literature and practice there are some negative opinions about ERP systems. Actually they are not negative opinions but they are criticisms. The first one of the criticism aimed at business owners and administrators. Business owners or managers concerned with the overall costs of purchasing the software they need, other elements do not receive much more attention (Gör, ve

Güneri,2008). This approach leads to a higher risk to face with. Here are the criticisms made about ERP (Çelik, 2011).

- ERP systems cost high expenditure.
- ERP system's setup takes long time.
- These systems have difficulty in adapting to existing and complex softwares.
- ERP systems are interested in very large-sized companies.
- Implementation of ERP systems are very expensive and require significant modifications.
- The company needs restructuring process in order to use modification system.
- ERP systems increases the number of information technology and personnel costs.
- Even if ERP systems are installed, additional systems are needed for proper operation.

These criticisms are important for the development of the system. Definitely there are some deficiencies in all systems. The important thing is to complete the missing parts.

## 7. DISCUSSION AND CONCLUSION

Development of technology and changing competitive conditions are promoted many middle-and upper- level business to find different solutions. Integrated software systems, beginning with using the computers in manufacturing sector has turned into giant package programmes which is called as ERP at present time.

Before the business use these package programmes, they definitely need to spend a good software selection process. When literature review and studies associated with this subject are analysed, it is seen that there is some selection methods the business need to use during the software selection process. Gorener (2011) used VIKOR technic and analytic net process (ANP) method during the ERP software selection in his study. There are two important phase in selection process. First one is to determine the criterias; this phase is performed by usage of some methods such as Analitical Hierarchy, Analitical net process. Second one is process of ordering the criterias according to their order of importance. The rating process is performed by some techniques such as Vikor, Topsis, Promethee, Electre, Saw techniques. It is seen that among the sort techniques, Topsis and Vikor give optimum result in the study that Chu and the others carried out.

The most important process about ERP systems is selecting process, thus Professional support must be taken. Business sometimes ignores this process cause of its costs, but it must be remembered that if the software being inexpedient is selected, the subsequent process will lead to greater financial loss.

No matter how they are named, ERP, ERP II or e-Business , a corporate information system should produce solutions not only for business within business process, but also for all employees, suppliers, customers and business partners. In other words, it must manage bothbackoffice and frontoffice resources (Bircan, 2009).

This study presents ERP software development process and its beneficial aspects for business. In addition, it contains the important points that business should give attention and the techniques that are used in this process. Benefiting from ERP systems that have an expensive and complex structure depends on carrying out the process of selecting and setupprocess conspiratorially and the attention the business paid.

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