



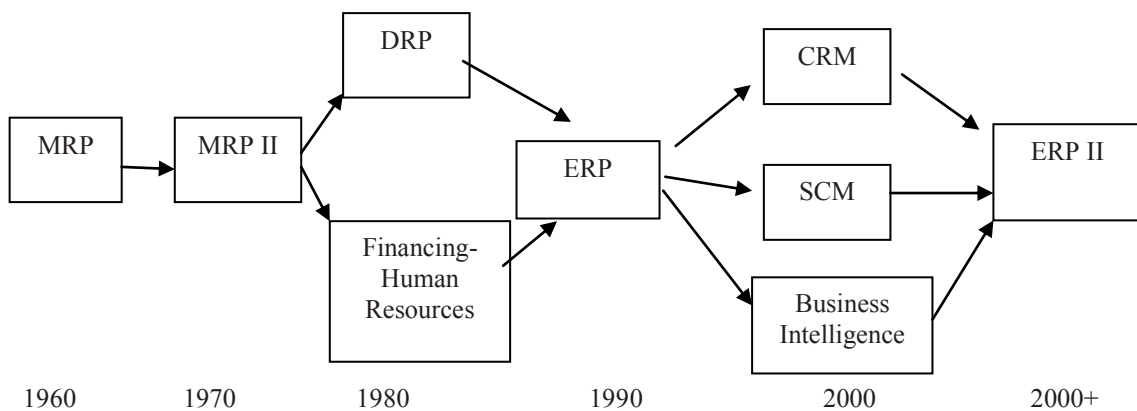


they want. It is necessary to establish an management information system receiving support from electronic communication technologies that will help provide this information. It is of utmost importance to ensure effective use, by the administrator, of Management information system established. (Demirhan, 2002)

Information in management is the collection of data used for decision-making. Management information desired for an organization is all of meaningful data which show the activities and are stored, processed, amended and most importantly, are submitted to the units and managers as report. Today, information has become a strategic resource. In this respect, it is necessary that the knowledge should be managed. Enterprise Resource Planning Systems processes this information to use in decision-making and makes it meaningful for the decision maker / practitioner. At the end of this process which information is the input, the output is also information.

## 2.2 ERP Systems

Advanced information technologies have become an indispensable part of today's business in competitive environment and speed. The emergence of new information technologies takes place promptly. Rapid changes in information technology enabled enterprises focused on to use more complex and information technology-based systems, which institutional resource planning systems is one of them. The development process of ERP until today is presented below. (Postacı, Belgin, Erkan. 2012).

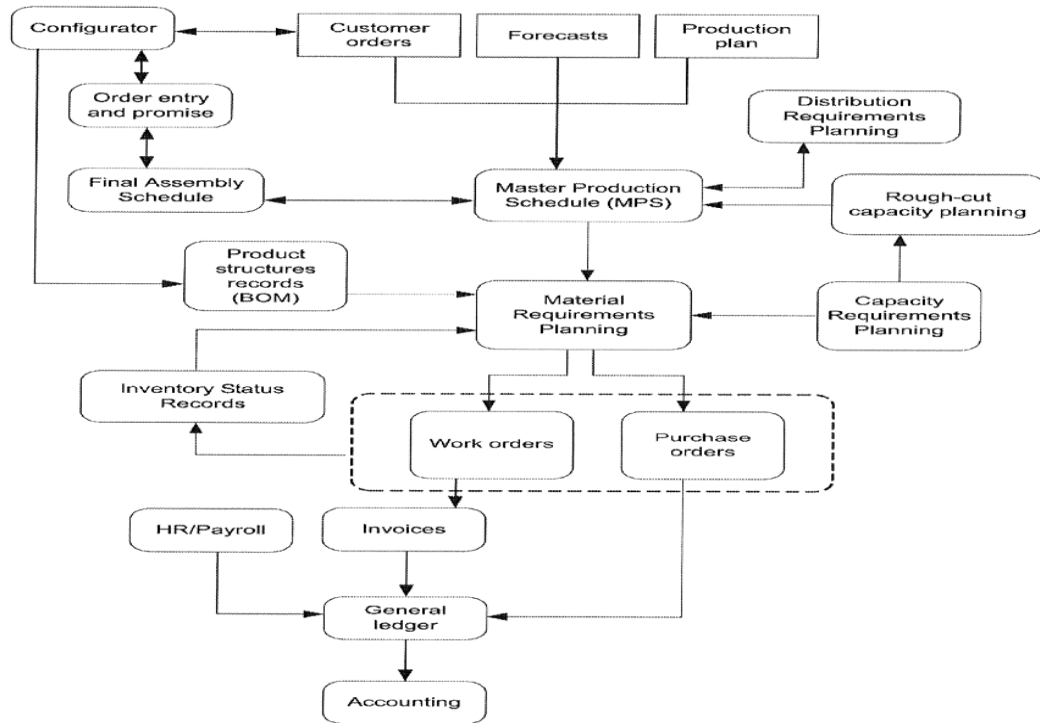


**Figure 1. Development Process of ERP**

**Source: Gülerüz (2007)**

Today, increase in global competitions necessitates efficiency and effectiveness of supply chain of companies and increase in their performance. The way to reach this goal is through the successful implementation of the ERP (Enterprise Resource Planning-Enterprise Resource Planning) software to the system. (Postman, Leader, Erman, 2012). ERP is a business management system that is fully integrated with computer-aided to enable an organization to have competitive advantages by covering every

functional area of that organization with the feature of wide scale integration capability over most of these areas (Gok, 2005). An ERP system is a software solution that contains many sub-systems approaching process-based by designating targets for the enterprise and serving responses for data and information needs by tightly integrating all functions. With this feature, it is a detailed information system for the enterprise. This system consists of package programs that connect the various functions of the enterprise. (Selimoğlu, 2006).



**Figure 2. General Structure of ERP System**

**Source: Helo and Szekely, (2005)**

ERP systems gives dynamism to companies with tactical and strategic decision support based on current knowledge and provides managers in strategic and tactical management level immediate accurate and current access to information with Management Decision Support Systems. There are eight strategic advantages of ERP systems. These advantages are the followings:

1 - Increase in flexibility, 2 - Increase in productivity, 3-Healthy communication, 4-Low operating costs, 5 - Revenue growth, 6- Short cycle time, 7 - Effective co-operation 8-High profit margin. (Postacı, Belgin, Erkan. 2012).

Organizations are required to manage change in order to exist in products, services and capital markets just like living organisms, in order to change, compete and create value added. By accepting ERP systems a living organism, there are many modules help them make decisions consistent with speed and efficiency of market conditions and in line with requirements and expectations of enterprises. Management of change is used synonymously with information management. Due to the management of strategic,

operational and financial information and making the change in light of this information, it is predicted that strategies and practices is constantly compared with competitors and best practices, organizational structure and human resource management strategies are compatible with strategies of management, business processes is integrated into business strategies, infrastructures of management and information systems are integrated into business processes. Solution concepts of ERP systems are focused on ensuring the competitiveness and increase in value in each organization in all business cycle until figuring out competitors and best practices in market conditions. ERP offers users very wide reporting opportunities. In addition, it can provide user support to solve the problems due to high analysis capabilities that it has. Due to the flexibility of structures, It allows reporting and creating a report for a user on any particular problem. Thus, by processing data in information bank of enterprises, hit rates of decisions of managers are very easily increased. In addition to providing automation, ERP system feature of providing accurate and timely information enables to improve decision-making processes of the managers and employees (Hitt, Wu and Zhou, 2002)

The following table includes evaluation of the opinions on the strategic advantages obtained with the use of ERP systems. In this evaluation 5-point Likert scale was used. According to this, the strategic advantage with the largest average value is healthy communication. This is followed by strategic advantages like efficient collaboration, distribution, logistics, shorter cycle times, increase productivity, lower operating costs, supply logistics, increase in flexibility, customer satisfaction, human resources management and strategic advantages and income growth. The strategic advantage with the lowest average value is high profit margin. Overall average value was found to be 3.57. (Postacı, Belgin and Erkan, 2012)

<b>Strategic Advantage</b>	<b>Average</b>
Healthy communication	3.84
Effective collaboration	3.79
Distribution logistics	3.76
Short cycle times	3.73
Increase in Efficiency	3.72
Low operating costs	3.60
Supply logistics,	3.58
Increase in flexibility	3.53
Customer satisfaction	3.52
Human management resource	3.48
Revenue growth	3.39
High profit margin	2.94
The overall average	3.57

**Table 1. Strategic advantages obtained by the use of ERP**  
**Source: Postacı, Belgin and Erkan, (2012)**

In a study using a sample of 50 enterprises establishing ERP systems between 1993 and 1997, the following variables are used as means of measuring financial performance: "Sales Revenue Per Marketing, Sales and Distribution Expenses", "Sales Revenue Per General Administrative Expenses", "Sales Revenue per Sale Cost ", "Sales Revenue Per Employee". According to the results of the study, it is found out that "Sales Revenue Per Employee" and "Sales Revenue per Sale Cost " have decreased for three years for enterprise completed the installation of ERP systems. However, there has not been any improvement detection on "Sales Revenue Per Marketing, Sales and Distribution Expenses" and "Income Revenue Per General and Administrative Expenses. (Poston and Grabski, 2001).

It is obvious that Life of today's enterprises is likely to be persistent through the use of correct decisions taken by ensuring the right information and transforming information to the knowledge. Basic requirement for planning and decision-making is to coordinate among individuals and groups participating groups in decision making with different powers and responsibilities and to ensure to achieve common goals. Service provided by information systems, collecting and processing information via data processing systems and transforming it to knowledge, was emerged by processing this information through MIS in accordance with purpose of preparing reports. (Ülgen, 1980).

Looking at the literature on information systems, two types of strategic information system are generally mentioned (Kini, 1993). 1. In a certain job field, systems developed as a result of a creative idea created from a set of new information technologies, which are specific to this business only and not similar to other businesses. 2. Systems available in a wide range, but their strategic value depends on how they are used.

Information systems and technologies may be used in enterprises, as a strategy, to gain competitive advantage, increase productivity and performance, to develop new methods in management and organization, and to create new business areas (Peppard, 1993). As businesses grow and attain significant proportions at the country level, their activities will be affected by various internal and external conditions and, resolving, in a particular way, strategic and political management activities of such as a business will become difficult and thus the assessment of information related to all these will get hard to without using computer. (Yozgat, 1998)

Organizations implement ERP systems to integrate business processes in various functions. ERP system is capable of converting automation of all business processes as a whole, instead of only the functional units. From Workshop activities to performance monitoring activities of managers, integration for all activities is achieved through ERP applications integrating a variety of computer hardware and software platforms with another (Palaniswamy and Frank, 2000)

### **3. Strategic Knowledge Management and Decision-Making**

In phase of achieving the goals planned, there can be a lot of situations that can occur in and organizations like changes and troubles both inside and outside the organization and so on. An organization in these conditions struggles to get out of this situations with the least lost or maximum earnings. In order to tackle with this struggle, it is necessary to make decision in management level. To make a decision, it is necessary to have the information. A management information system (MIS) provides information to make decision. The decision types are basically divided into two sections. These

are "unprogrammable" and "programmable" decisions. Constant repetition of Programmable decisions let rules and the necessary arrangements to be made easily for these decisions. The advantages of programmable decisions is to be able to exploit from previous rules and decisions, that is, decisions already in execution, before making a decision. However, there is no such a regulation for unprogrammable decisions. These decisions are kind s of the desicions that requires complete exploration. The basis for information flow and transmission in organizations is formed from databases created, decision models, tables, reports and special information systems. Management information systems (MIS) provides a portion of external infromation of the organization by communicating with databases outside the organization. MIS helps managers to make a decision via internal and external information. For example, the planning process is collection of decisions. That is why planning will be so efficient, realistic and reliable as MIS is used in decision-making process. (Anameric, 2005). Programmable decisions in Management can be used mostly in routine control operations of the organization like purchase, storage, inventory and accounting. Nonprogrammable decisions are composed of the decisions on status of the organization to a large extent. MIS is mostly preferred in decision-making process by management. This is because the MIS is responsible to convey the information collected to the management level immediately as soon as problems and situations are encountered. Therefore, MIS is in a place for an important assistant to managers.

MIS can be defined as "the collection, storage, evaluation, and communication and use of human resources and computer-based collection to increase the effectiveness of business plans and management functions" (T. Lucey, 1991). MIS "is a management support system and provides preparation and submission of summary reports by routine tasks that predict the future performance of the business with planning and control of current activities of a company." (KC Laudon and JP Laudon, 1993). It, especially, realizes, as administrative, observation and control of functions and resources in organizations. As seen from this point, it can be also perceived as management monitoring and control system. One of the purposes of MIS is also to realize the observation and control of operations of organizations by the management. Tactical management or middle management composes a wider segment of organizational management. These tier managers usually confront with procedures that are more complex, unexpected and require reasoning, intuition, and personal communications. Middle level management is focused on monthly, quarterly or annual mid-term transactions. These procedures are allocation of resources and organization, structuring business and training and organization of personnel. the Typical mid-level management practices are budget reports, variable analysis and personnel planning. Tasks of middle level managers are planning of production/ service, creation of budget, short-term forecasts, the management of employees (Davis, 1997), (Öğüt, 2003), (Tiwana, 2003).

When processing data quickly and economically, MIS creates an additional step for manager to select and summarize the information used in decision-making. For example, in determining the total amount of overtime pay, while processing payrolls, an extra small computer operation is necessary to analyze the work days of each department. Decision-making becomes complicated with redundant information, and gradually develop into impossible. To avoid this, information flow and data must be well organized. An administrator, when making a decision, needs support information for the decision and at this stage, the system developed for this is referred to as Management Information System. With the help of this system, managers at all levels can only be equipped with the information as needed, and related. From the most general sense, MIS, as an interdisciplinary area of study, copes with providing information for the decision-making process and management of information technology (IT) in organizations and the





