

ERP Demystified (Second Edition)

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STUDY GUIDE



01. Enterprise—An Overview

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CHAPTER 01

Enterprise—An Overview

TOPICS COVERED

- ✓ Enterprise
- ✓ Business Functions and Business Processes
- ✓ Integrated Management Information
- ✓ The Role of the Enterprise
- ✓ Business Modeling
- ✓ Integrated Data Model

INTRODUCTION

The truly revolutionary impact of the Information Revolution is just beginning to be felt. But it is not "information" that fuels this impact. It is not "artificial intelligence." It is not the effect of computers and data processing on decision-making, policymaking, or strategy. It is something that practically no one foresaw or, indeed, even talked about ten or fifteen years ago: **e-commerce—that is, the explosive emergence of the Internet as a major, perhaps eventually the major, worldwide distribution channel for goods, for services, and, surprisingly, for managerial and professional jobs. This is profoundly changing economies, markets, and industry structures; products and services and their flow; consumer segmentation, consumer values, and consumer behavior; jobs and labor markets.** But the impact may be even greater on societies and politics and, above all, on the way we see the world and ourselves in it.[1]

Knowledge has become the central resource. But the productivity of knowledge workers is incredibly low. The productivity of service workers is even lower.... Over three-fourths of our workforce are service and knowledge workers. By the end of the century, 90 per cent of total workers will be knowledge and service workers. Productivity of knowledge work and dignity of service work are the two great priorities. [2]

Discussion

1. Discuss the effect of e-commerce and related technologies on the business organizations.
2. Discuss the effect of e-commerce and related technologies on the customers.
3. How can we improve the productivity of knowledge and service workers?

ENTERPRISE

Enterprise is a group of **people** who have a **common goal**, which they try to achieve through the utilization of **resources** (people, money, energy, materials, space, time, etc.).

The resources are considered the inputs, and the attainment of the goals the output of the process. The degree of success of the enterprise is often measured by the ratio between the outputs and inputs. This ratio is called **productivity** and it is a measure of the enterprise's success.

Productivity is a major concern for any organization since it determines the well-being of the organization and its participants. Productivity is also one of the most important issues at the national level. National productivity is the sum of the productivities of all organizations and individuals, and it determines the standard of living, the employment rate, and the economic well-being of the country.

The level of productivity, or the success of the organization, depends on the execution of certain managerial functions such as planning, organizing, directing, and controlling. To carry out these functions, managers engage in a continuous process of making decisions. Therefore, the success and failure of an organization is determined by the capability to make quick and well-informed decisions.

Enterprise resource planning or **ERP systems** help in improving the quality of decision making by providing accurate, relevant, timely, and up-to-the-minute information to the decision makers.

Discussion

1. Take an organization that you know and identify the people, the goals and the resources.
2. Do you think that the enterprise that you have identified is managing its resources well? Discuss.
3. How can we measure the productivity of an organization? Discuss the inputs and the outputs and try to find out the productivity.
4. How will we measure the benefits like customer goodwill, customer satisfaction, organization's reputation, and so on? Discuss.

BUSINESS FUNCTIONS AND BUSINESS PROCESSES

Each organization has a variety of **business functions** depending on its nature. For example, the business functions of a manufacturing organization will be different from that of a service organization. But there will be many functions like finance, accounting, human resources, etc. that are common to all kinds of organizations. Earlier business systems functioned with its various departments or functions in isolation. One functional area was not aware of what was happening in the other areas. This lack of knowledge created conflicts of interests and resuasi if what happens in one functional area is not closely related to what happens in others and one area's information system has no impact on those of the other functional areas. Recently managers and organizations have started to think in terms of business processes rather than business functions.

A **business process** is a set of coordinated tasks and activities, conducted by both people and equipment that will lead to accomplishing a specific organizational goal. **Business process management (BPM)** is a systematic approach to improving those processes. The business process management tries to promote the standardization of common business processes, as a means of furthering e-business and business-to-business (B2B) development.

A **Business Process** is a collection of interrelated tasks, which solve a particular issue. There are three types of business processes—management, operational and supporting.

1. **Management processes** govern the operation of a system. Typical management processes include "Corporate Governance" and "Strategic Management".
2. **Operational processes** create the primary value stream and are part of the core business. Typical operational processes are Purchasing, Manufacturing, Marketing, and Sales.
3. **Supporting processes** support the core processes. Examples include Accounting, Recruitment, IT-support.

A business process can be decomposed into several sub-processes, which have their own attributes, but also contribute to achieving the goal of the super-process. The analysis of business processes typically includes the mapping of processes and sub-processes down to activity level. Activities are parts of the business process that do not include any decision making and thus are not worth decomposing (although decomposition would be possible), such as

"answer the phone", "prepare an invoice", "send the letter", etc.

Definitions

Now we will see some definitions of business process by some of leading management gurus:

1. **Davenport** [3] defines a business process as a structured, measured set of activities designed to produce a specific output for a particular customer or market. It implies a strong emphasis on how work is done within an organization, in contrast to a product focus's emphasis on what. A process is thus a specific ordering of work activities across time and space, with a beginning and an end, and clearly defined inputs and outputs: a structure for action. ... Taking a process approach implies adopting the customer's point of view. Processes are the structure by which an organization does what is necessary to produce value for its customers.
2. **Hammer and Champy** [4] define a business process as a collection of activities that takes one or more kinds of input and creates an output that is of value to the customer.
3. **Rummler and Brache** [5] use a definition that clearly encompasses a focus on the organization's external customers, when stating that a business process is a series of steps designed to produce a product or service. Most processes are cross-functional, spanning the 'white space' between the boxes on the organization chart. Some processes result in a product or service that is received by an organization's external customer. We call these primary processes. Other processes produce products that are invisible to the external customer but essential to the effective management of the business. We call these support processes.
4. **Johansson et al.** [6] define a process as a set of linked activities that take an input and transform it to create an output. Ideally, the transformation that occurs in the process should add value to the input and create an output that is more useful and effective to the recipient either upstream or downstream.

Characteristics

The characteristics for a business process are:

1. **Definability** - It must have clearly defined boundaries, input and output.
2. **Order** - It must consist of activities that are ordered according to their position in time and space.
3. **Customer** - There must be a recipient of the process' outcome, a customer.

4. **Value-adding** – The transformation taking place within the process must add value to the recipient, either upstream or downstream.
5. **Embeddedness** – A process can not exist in itself, it must be embedded in an organizational structure.
6. **Cross-functionality** – A process regularly can, but not necessarily must, span several functions.
7. **Process owner** – A person being responsible for the performance and continuous improvement of the process.

Discussion

1. Discuss the differences between business functions and business processes.
2. Why the business process approach is considered superior? Discuss.
3. Discuss the different definitions of business process and try to relate them with real-world examples.
4. What are the characteristics of business processes? Discuss.

INTEGRATED MANAGEMENT INFORMATION

Integrated means composed of separate parts united together to form a more complete, harmonious, or coordinated entity.

Management is concerned with six functions—planning, organizing, directing, controlling, evaluating, and reporting.

Information, on the other hand, is best defined in context of data and knowledge. Data is the series of facts and figures. Information is refined data. Knowledge is the fact or condition of knowing something with a considerable degree of familiarity gained through experience of or contact or association with the individual or thing so known.

Information activities are find, create, receive, acquire, monitor, classify for records management, classify for index management, safeguard, organize, use, publish, collaborate, disseminate, archive, dispose, transfer, etc.

Information Management is the planning, organizing, directing, controlling, evaluating and reporting of information activities in order to meet client objectives and to enable corporate functions. Information management also deals with processes, systems and environments to the extent they encapsulate any information activity.

Integrated management information is the management information that is collected from the different sources, integrated and then made available to all decision-makers of the organization.

Integrated management information provides the decision makers with accurate, relevant, timely, and up-to-the minute information so that they can make better and informed decisions much faster. This will enable the organization to become more competitive, agile and respond quickly to the changes in the business environment, customer interests and trends.

Discussion

1. Discuss the need for integrated management information.
2. Why integrated management information is important to an organization? Discuss.
3. How integrated management information helps in improving the competitiveness and efficiency of an organization?

ROLE OF THE ENTERPRISE IN ERP IMPLEMENTATION

An enterprise is the group of **people** with a **common goal**, which has certain **resources** at its disposal to achieve this goal. The group has some key functions to perform in order to achieve the goal.

ERP implementation projects consist of a lot of **people** and groups, each playing different roles. There are a group of people, the company employees, the package vendors, the hardware vendors, the communications experts, the implementation consultants, and so on. All of them have a **common goal**—the successful implementation of the project. They have a lot of **resources** at their disposal for achieving the goal. This makes the ERP implementation project an enterprise in its own right.

The enterprise has several duties and responsibilities and has to play a lot of roles in making the ERP implementation a success. Some of them are:

1. The enterprise should perform a detailed, consistent and technically correct job of selecting a software package.
2. It should ensure that all the business's key personnel are involved and committed to the project's implementation.
3. The enterprise has to identify a consulting firm that possesses all the skills necessary to conduct the implementation project successfully—qualified professionals, proven methodology and excellent references.
4. It should own and sponsor the ERP implementation project (usually done by the CEO, CIO, COO, or someone senior)
5. The organization must designate the right people to lead the project.

6. The enterprise should select and assign the right people to the implementation team
7. It should ensure that all the necessary infrastructure requirements should be made available to the implementation team.
8. It should ensure top management support and participation
9. Enterprise should manage package vendors and external consultants
10. The organization must manage and deal with employee resistance
11. It should motivate the employees to change and to learn new technologies
12. The organization should re-train and re-locate the employees and ensure the complete participation by alleviating their fears about the future—the employees should be told what would happen after the ERP system is implemented.
13. The organization should develop necessary guidelines and best practices so that the ERP system is used to its fullest potential and all are aware of the various features and facilities of the system.
14. The enterprise should maintain the system in top condition, by constantly monitoring the system, taking corrective actions and always keeping in touch with the vendor so that the upgrades and updates are applied to the system so that system works at its peak efficiency.

Discussion

1. Why ERP implementation is said to be an enterprise on its own right? Discuss.
2. Discuss the duties, responsibilities and role of the organization in making the ERP implementation a success.

BUSINESS MODELING

The term **business model** describes a broad range of informal and formal models that are used by enterprises to represent various aspects of business, such as operational processes, organizational structures, and financial forecasts.

A business model is a conceptual tool that contains a big set of elements and their relationships and allows expressing the business logic of a specific firm. It is a description of the value a company offers to one or several segments of customers and of the architecture of the firm and its network of partners for creating, marketing, and delivering this value and relationship capital, to generate profitable and sustainable revenue streams.

Business modeling or creating a business model is one of the first activities in any ERP project. ERP systems

should mirror the business processes. A business model is not a mathematical model, but a representation of the business as one large system, showing the interconnections and interdependencies of the various sub-systems and business processes.

The model proposed by Osterwalder [6] synthesizes the different conceptualizations into a single reference model based on the similarities of a large range of models. The author's conceptualization describes a business model as consisting of nine related business model building blocks (see Figure 1.1). Thus, a business model describes a company's business:

- ✓ **Infrastructure**
 - ▶ Core capabilities - The capabilities and competencies necessary to execute a company's business model.
 - ▶ Partner network - The business alliances which complement other aspects of the business model.
 - ▶ Value configuration - The rationale which makes a business mutually beneficial for a business and its customers.
- ✓ **Offering**
 - ▶ Value proposition - The products and services a business offers.
- ✓ **Customers**
 - ▶ Target customer - The target audience for a business' products and services.
 - ▶ Distribution channel - The means by which a company delivers products and services to customers. This includes the company's marketing and distribution strategy.
 - ▶ Customer relationship - The links a company establishes between itself and its different customer segments. The process of managing customer relationships is referred to as customer relationship management.
- ✓ **Finances**
 - ▶ Cost structure - The monetary consequences of the means employed in the business model.
 - ▶ Revenue - The way a company makes money through a variety of revenue flows.

These 9 business model building blocks constitute a business model design template which allows companies to describe their business model.

In business modeling, we model the business as an integrated system making the processes managing its facilities and materials, the resources. Information is a very important resource and is very critical in managing all the other resources.

Thus, the business model is a representation of the actual business, what the various business functions of the organization are, how they are related, what their

interdependencies are, and so on. The business model is usually represented in the graphical form using flowcharts and flow diagrams. From the business model, the data model of the system is created.

Discussion

1. What is a business model and what is business modeling? Discuss.
2. Discuss the nine business model building blocks proposed by Osterwalder.

INTEGRATED DATA MODEL

One of the most critical steps in the ERP implementation is the creation of an integrated data model. One of the advantages of having an ERP system is that all the employees from the different departments get access to the data—the integrated data. The company uses this integrated data for its analysis and decision-making.

With the implementation of ERP systems, there can no longer be isolated databases, which cater to the needs of a particular department. All the data has to be from the integrated database. This approach will reduce data redundancy and give all employees a chance to have updated and up-to-the minute information about the entire organization.

For the integrated database to be effective it should clearly depict the organization; it should reflect the day-to-day transactions and it should be updated continuously.

At any given time, the database should give a snapshot of the organization at that point in time. So if orders are entered, the sales are done and the goods are dispatched, then the database should reflect those changes. The inventory should be reduced and the account receivables should be increased. All these things have to happen instantaneously and

automatically. That is the challenge and the advantage of the integrated database and the integrated data model.

When designing the data model for the ERP system, the most important thing that should be kept in mind is the information integration and the process/procedure automation. The data model should reflect the entire organization and should successfully depict and integrate the data structures of the entire organization.

Discussion

1. What is an integrated data model? Discuss its importance and advantages.
2. Discuss the challenges in the design, creation, operation and maintenance of the integrated database.

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FIGURES

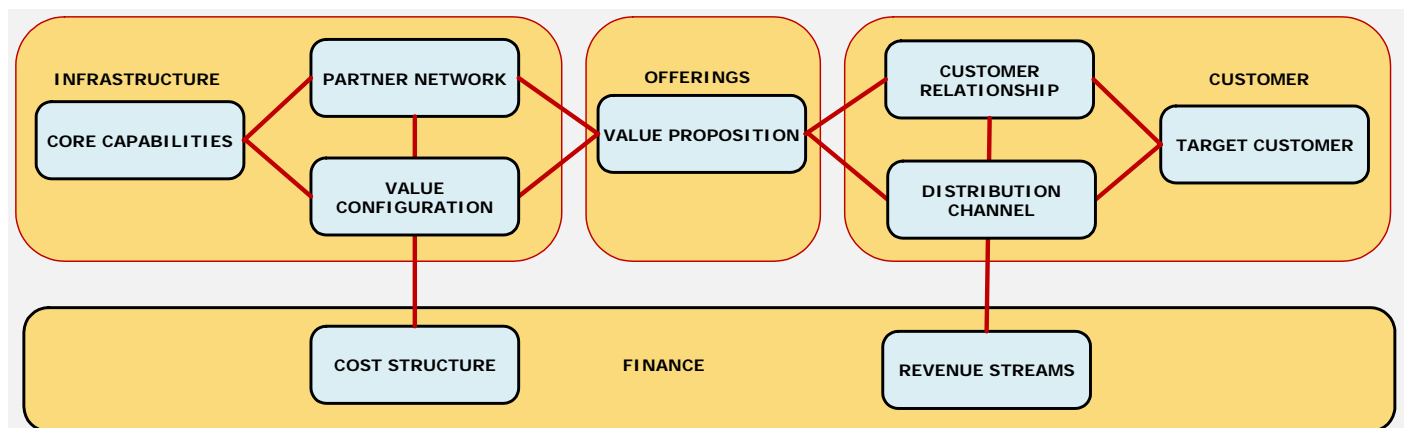


Figure 1.1 Osterwalder's Nine Related Business Model Building Block