

## UNIT II TYPICAL BUSINESSS PROCESSES

- Core processes,
- product control,
- sales order processing,
- purchase,
- administrative process,
- human resource,
- finance support processes,
- marketing,
- strategic planning,
- research & development
- Problems in traditional functional view.
- Need for integrated process view,
- information as a resource,
- Motivation for ERP.

### 1. CORE PROCESSES

Core processes are the fundamental activities or group of activities that are so critical to an organization's success that failure to perform them will result in deterioration of the organization. These are typically processes that directly touch the organization's customers, reflect the major cost drivers in the organization, or are on the critical path in the service chain. Core processes are most often found within the customer/consumer life cycle in an organization, from the first interaction a consumer has of an organization to the last interaction in the relationship. This life cycle typically spans from marketing to delivery and support of the completed product or service.

#### 1.1 Identifying Core Processes

It is generally accepted that organizations fulfill their missions and objectives by performing "business processes." Senior managers are told that it is imperative they manage and/or assign owners to "core" processes. What criteria do you use to determine which processes are "core" processes?

- Value-added vs. non-value-added?
- Departmental vs. cross-functional?
- Internal customer vs. external customer?
- Revenue generating vs. non-revenue generating?

Each of these criteria has its merits but none can be used to identify and label your organization's core processes. For instance, in the pharmaceuticals industry the R&D Department may not be cross-functional, revenue-generating or directly serve external customers but R&D is certainly a core process for a company that produces life-saving drugs.

A **business process** or **business method** is a collection of interrelated tasks, which solve a particular issue.

There are three types of business processes:

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

It is important to consider that a business process begins with a customer's need and ends with a customer's need fulfillment. 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.

Business Processes are designed to add value for the customer and should not include unnecessary activities. The outcome of a well designed business process is increased effectiveness (value for the customer) and increased efficiency (less costs for the company).

Business Processes can be modeled through a large number of methods and techniques. For instance, the Business Process Modeling Notation is a Business Process Modeling technique that can be used for drawing business processes in a workflow.

## 1.2 Characteristics for a business process

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.

## 2. PRODUCT CONTROL

**Product Planning** is the ongoing process of identifying and articulating market requirements that define a product's feature set. Product planning is performed by the Product Planner.

### 2.1 The Product Planning Process

The product planning process is one of the most controversial within any company. Everyone wants a hand in new product definition and almost everyone will have contributions that will make a new product successful. With all these interested parties, you are going to need a system to help you through the product planning process and a way to decide which ideas have the most merit. This system also needs to incorporate customer feedback, assure that important new product ideas are approved, and that development of them initiated immediately. What follows is a product planning system that works well for most companies.



**Figure 2.1 Product planning process**

The above diagram outlines the phases in the product planning cycle. In any given company, these steps may be condensed or combined. For example, some companies may use a single document to cover both the Market Requirements Document and the Functional Specification.

The steps are important because they allow you to gather input from all possible resources, evaluate the potential of each idea and gather input from all involved parties about which ideas will work and their ease of implementation.

### 2.1.1 Input

There should be no shortage of new product ideas. If you are doing regular customer councils and customer surveys, you should have a long list. (Please see Chapter 2 for more information on gathering regular input from customers and your sales channels.) You will also have ideas from sales, engineering, technical support, and management. The biggest job is narrowing down the list. A regular poll of sales, tech support, engineering, and customers for product ideas may help you prioritize. Be sure everyone in your company knows to feed product ideas to you. Often times the tech support organization has a unique insight to customer requirements because they are in contact with customers who need help daily, but no one ever bothers to ask them. When you need to narrow the list further, run it by your customer council. You can ask them to vote on the product ideas they think are most valuable.

### 2.1.2 Product Ideas Refined

After narrowing down the list of potential new products or features enhancements for an existing product, you will want to refine some of the more promising ideas. Before a product idea is funded, some basic information needs to be gathered about who is going to buy the product, how much they will buy, and how much it will cost to develop it. This is the information that will eventually be expanded upon in the MRD (Market Requirements Document) but should be gathered and presented in summarized form to seek product approval.

Here is the type of information you will need:

**Product Description** - You need enough information so that the product can be easily described in one or two sentences to customers or other people within the company. Also position the product. Who buys the product? Why is the product of value to the buyer? Why is it better than the competition? One over-used, but effective measurement of your description is the "elevator test". Can you sell the product idea to potential customer in the short time that you would have them as a captive audience on an elevator?

**Market Justification** - Why should the company build this product? Who needs it? How much will they buy? Including market numbers and real sales projections will help you determine the size and the viability of the market. These will initially be very rough estimates until you have time to determine competing products' market share.

**Resource Projection** - Work with the engineering organization to get an initial very rough estimate on what it will take to build the product in terms of people-years. You will probably meet some resistance with this. No engineering manager wants to sign up to a schedule for a product that is not well defined. You will need to assure the engineering manager that no product will be defined until management can be assured of the return on investment and you can't figure out ROI without having an estimation of the investment. Be sure to use these schedule numbers with the caveat that they are rough estimates and real schedules will be defined after the product is specified.

### 2.1.3 Products Approved

Once you have gathered the above information for your product proposals, you need to get the project approved. I recommend using a product planning meeting for this because it allows you to present all the appropriate information to everyone at once. It is also a great forum for discussion of the merits of the product.

### 2.1.4 Market Requirements Refined

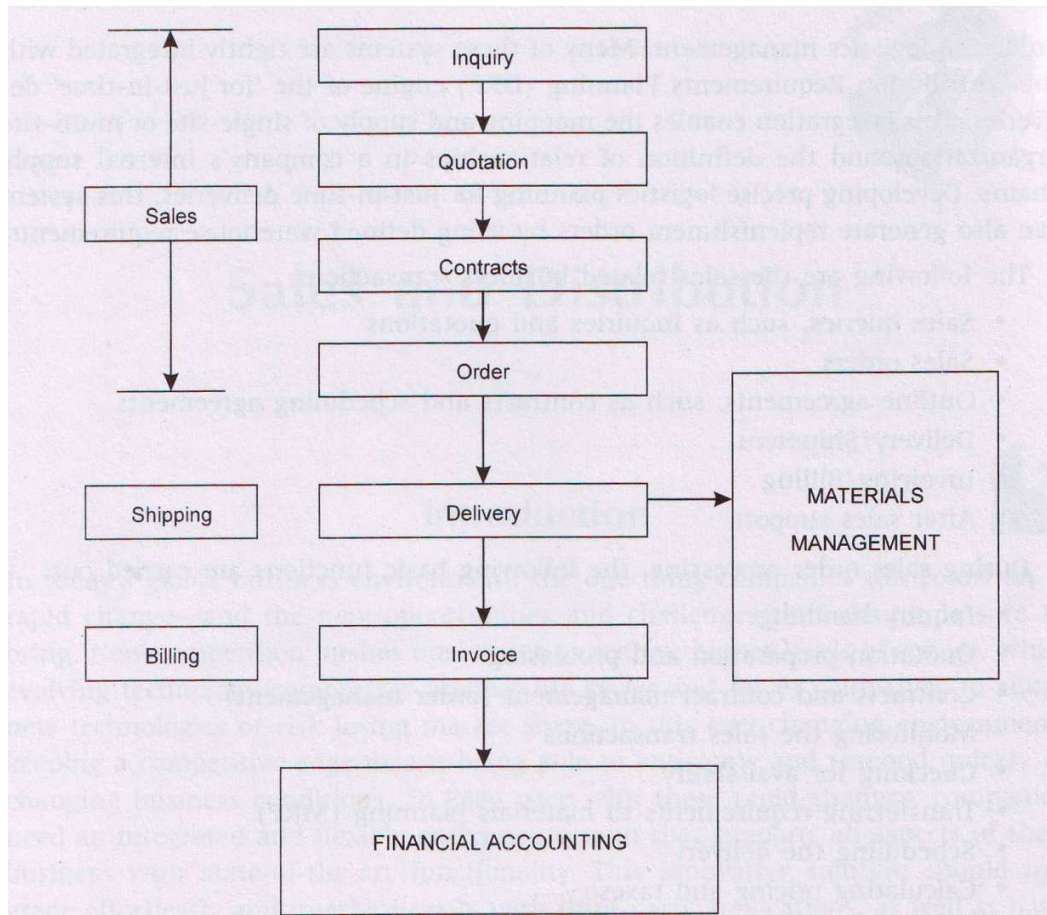
Once the product is approved you can refine the market requirements, adding more detail on the desired features of the product and how the customers will use the product. (See the "Market Requirements Document" section of this chapter for more information.) There will be two types of MRDs, one for new products and a second for new releases of a current product. The new product MRD will require

### 2.1.5 Development Initiated

Once the MRD is complete, the developers can start to work on a functional specification and prototypes. Some companies combine the MRD and Functional Specification into one document to help them decrease time to market. To do this, you must work very closely with engineering to make sure that the functional design of the product will indeed meet customer requirements. (Please see Chapter 4 - The Product Development Cycle for more information on working the Product through the development cycle.

## 3. SALES ORDER PROCESSING

Sales Order Processing is a mission-critical process that all customers manage in one way or another. It includes a whole host of sub-processes and services, including credit limit checking, foreign-trade processing and ATP checking. While we often assume an online sales order management system, inbound orders may take on a variety of forms, such as EDI, Internet, or FAX. In viewing the entire process, keep in mind that some of the sub-process and services are large subjects entirely on their own.



**Figure 2.2 Sales and distribution module**

With today's business environment characterized by growing competition, shrinking cycle times and the accelerating pace of technological innovation, companies are increasingly being forced to streamline business processes. In the race to produce the best product these companies are focusing on core competencies and closer partnerships over the whole supply chain. Here, increased efficiency in sales and distribution is a key factor to ensure that companies retain a competitive edge and improve both profit margins and customer service. In helping business to "beat them on delivery", the sales and distribution modules of many ERP vendors offer a comprehensive set of best-of-breed components for both order and logistics management. Many of these systems are tightly integrated with the Distribution Requirement Planning (DRP) engine of the 'for-just-in-time' deliveries.

Following are the sales related business transactions-

- i. Sales queries, such as inquiries and quotations
- ii. Sales order
- iii. Outline agreements such as contracts and scheduling agreements
- iv. Delivery/shipment
- v. Invoicing /billing
- vi. After sales support

The basic functions carried out during the sales order processing are as follows:

- i. Inquiry handling

- ii. Quotation preparation and processing
- iii. Contracts and contract management
- iv. Monitoring the sales transactions
- v. Checking for availability
- vi. Transferring requirements to materials planning
- vii. Scheduling the delivery
- viii. Calculating pricing and taxes
- ix. Checking credit limits
- x. Invoicing /billing
- xi. Creating printed or electronically transmitted documents

Typically, a sales and distribution module will contain the following subsystems-

- i. Master data management
- ii. Order management
- iii. Warehouse management
- iv. Shipping
- v. Billing
- vi. Pricing
- vii. Sales support
- viii. Transportation
- ix. Foreign trade

- i. **Master Data Management:** the task of the master data management module is to keep information about all entities, so that these can be made available to the decision-makers and also for the automatic generation of reports, contracts, invoices and so on.
- ii. **Order Management:** this module usually includes sales order management and purchase order management and supports the entire sales and purchase processes from start to finish. Order management combines the provision of efficient management solutions with the possibility of anticipating and responding quickly to changes in global business conditions.
- iii. **Sales Order Management:** applications in sales order management represents a company's most important point of contact with the customer. These applications allow a company to manage sales operations quickly and efficiently and provide comprehensive solutions for the management of quotes, orders, contracts, prices and customer discounts. Through the use of templates, the system streamlines order entry procedures to manage products ranging in complexity from standard stocked items to those that are engineered-to-order.
- iv. **Purchase Order Management:** purchase order management includes online requisitioning, centralized contract management, just-in-time schedules and vendor management. Offering access to an approved supplier list, purchase order management enables a purchase quotation to be sent to multiple suppliers. The purchase contract information is made available to the people in the purchasing department.
- v. **Warehouse management:** This module provides real time information about inventory levels across the enterprise and tools to manage the daily operational needs of single-site or multiple-site four-wall warehouses. The warehouse management application should also offer expanded capabilities such as across-docking, rule-based inventory replenishment, picking optimization, multi-level packaging and cosigned goods management.
- vi. **Shipping:** the shipping module supports the following functions-
  - Monitoring dates of orders due for delivery
  - Creating and processing deliveries
  - Planning and monitoring work lists for shipping activities
  - Monitoring materials availability and processing outstanding orders

- Picking
  - Packing deliveries
  - Information support for transportation planning
  - Support for foreign trade requirements
  - Printing and sending shipping output
  - Data update in goods issue.
- vii. **Billing:** a business transaction is completed for sales and distribution once it has been billed. The ERP systems support billing functions like issuing of invoices on the basis of goods and services, issuing of credit and debit memos based on corresponding requests and perform invoices, cancelling billing transactions, giving relates, transferring billing data to Financial Accounting, Purchasing and so on.
- viii. **Pricing:** the term pricing is used broadly to describe the calculation of prices and costs. The pricing module keeps the information about the prices of the various items, the details about the quantity discounts, and the discounts to the different customer categories and so on and enables the organization to generate documents like quotations, delivery notes, invoices and so on.
- ix. **Sales support:** sales support provides an environment where all sales personnel both the field sales people and the staff in the sales office can contribute to and access valuable information about customers, sales prospects, competitors and their products and contact people. The sales support component functions both as a source of information for all other sales and distribution and as an initiating factor for acquiring business.
- x. **Transportation:** the aim of the transportation element of the SD system is to provide basic functions for transportation like transportation planning and processing, freight calculation, freight settlement, customer freight calculation, customer freight invoicing as well as functions for service agent selection. The transportation functionality fulfils the requirements in the areas of transportation planning and processing, for both inbound and outbound shipments.
- xi. **Foreign trade:** the main task in foreign trade processing can be carried out using the foreign trade system. The entire logistics chain, from the import of raw materials, finished and unfinished goods, to the sale of goods and the transfer of data to materials management and financial accounts is significantly influenced by foreign trade activities.

## 4. PURCHASE

Purchasing is a very important component of the materials management module. The materials management module is fully integrated with other modules in the system. It supports all phases of materials management, materials planning and control, purchasing, goods receiving, inventory management and invoice verification. Good communication between all participants in the procurement process is necessary for purchasing to function smoothly. Purchasing communicates with other modules in the system to ensure a constant flow of information. For example, it works side by side with the following modules-

- (i) **Cost Accounting System:** orders for materials and services consumed directly, illustrates the interface to the cost accounting system. This is because they can be assigned to a cost centre directly.
- (ii) **Financial Accounting:** purchasing and accounting both maintain information on vendors. Information on each vendor is stored in a vendor master record, which contains both accounting and purchasing information. The vendor master record represents the vendor account in financial accounting. Through purchase order

account assignment, purchasing can also specify which G/L accounts are to be charged in the financial accounting system.

- (iii) **Sales and Distribution:** within the framework of materials management planning (MRP), customer requirements from sales can be passed on to purchasing. In addition, when creating a requisition, we can assign it to a sales order.

Purchasing system performs tasks like procurement of materials and services, determination of possible sources of supply for a requirement identified by the materials planning and control system or arising directly within a user department, monitoring of deliveries and payments to vendors and so on.

Normally there is several important purchase criteria involved in the buying pattern. In general, these may be categorized as-

- (i) Price-related criteria (e.g. purchase price, discounts, multi-site license price).
- (ii) Performance related (i.e functional) criteria (e.g. scalability, upgradeability, user-friendliness, and service and support facilities).
- (iii) Psychosocial criteria (e.g. acceptability to others, respectability and dependability of vendor).
- (iv) Quantity
- (v) Delivery schedule
- (vi) Multi-site discounts offered
- (vii) Warranty provided
- (viii) After-sales service
- (ix) Credit terms
- (x) Implementation strengths

#### **4.1 Parameters of purchasing**



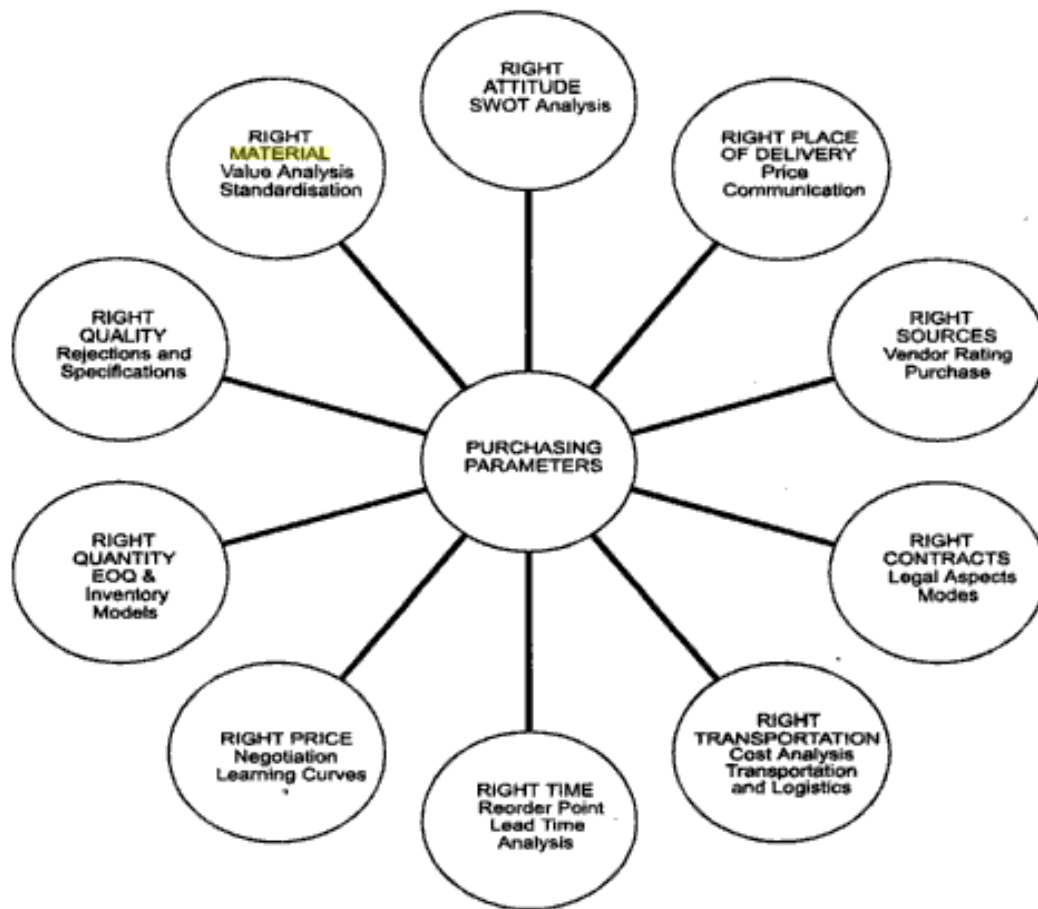


Figure 2.3 Purchase parameters

Parameters of purchasing are:

- (i) RIGHT ATTITUDE (SWOT analysis)
- (ii) RIGHT MATERIAL (value analysis standardization)
- (iii) RIGHT QUALITY (rejections and specifications)
- (iv) RIGHT QUANTITY (EOQ and inventory models)
- (v) RIGHT PRICE (negotiation and learning curves)
- (vi) RIGHT TIME (reorder point, lead time analysis)
- (vii) RIGHT TRANSPORTATION (cost analysis, transportation and logistics)
- (viii) RIGHT CONTRACTS (legal aspects and modes)
- (ix) RIGHT SOURCES (vendor rating and purchase)
- (x) RIGHT PLACE OF DELIVERY (price and communication)

## 4.2 Purchasing procedure

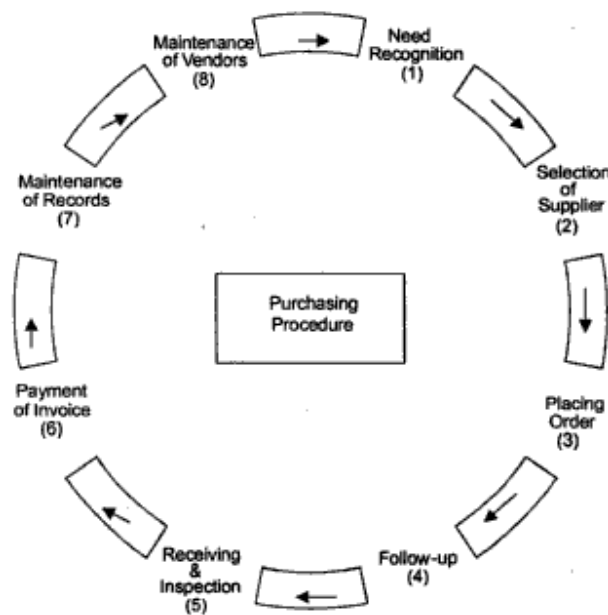


Figure 2.4 Purchasing procedure

**Purchasing procedure includes:**

- (i) Need recognition
- (ii) Selection of supplier
- (iii) Placing orders
- (iv) Follow-up
- (v) Receiving and inspection
- (vi) Payment of invoice
- (vii) Maintenance of records
- (viii) Maintenance of vendors

## 5. ADMINISTRATIVE PROCESS

Administrative process is the act or process of administering, especially the management of a government or large institution.

### 5.1 Admin Module

This module is used for customizing application. It will be having a set of master forms required for business such as county, region, state and city masters. Apart of that it includes forms required to create users and their privileges.

A person, who is having an administration role, will be allowed to use this module. Super admin is responsible for creating new company with single branch (Head office) and creation of Administration account for the newly created company. Administrator will be allowed to customize other things like, currency selection, number format, etc. Administrator is responsible for mapping accounts at the initial stage of the business.

## 6. HUMAN RESOURCE

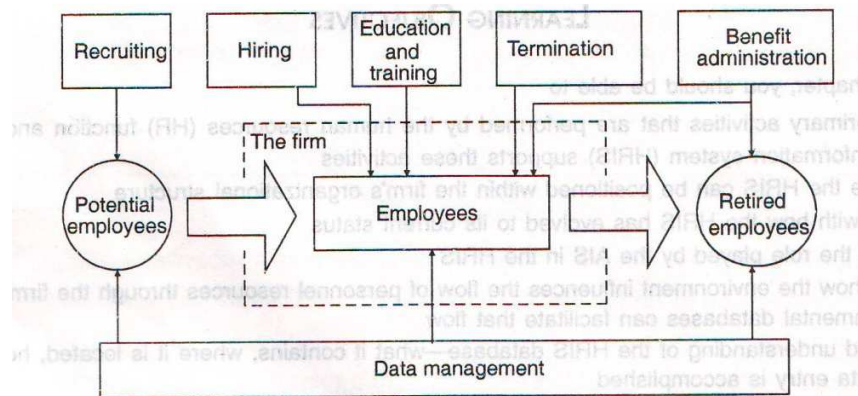
The organization structure of most firms includes a unit that is responsible for many of the activities related to the personnel resource the term personnel was originally given to these units, but the practice today is to use the name human resource(HR). HR can be a department or division within a functional area or it can have functional status equal to marketing, manufacturing, finance and IS. We use the term HR director to describe the person in charge of HR. the HR director can be a member of the executive committee.

The objective of Human Resources is to maximize the return on investment from the organization's human capital and minimize financial risk. It is the responsibility of human resource managers to conduct these activities in an effective, legal, fair, and consistent manner. Human resource management serves these key functions:

1. Recruitment Strategy Planning
2. Hiring Processes(recruitment)
3. Selection
4. Training and Development
5. Performance Evaluation and Management
6. Promotions
7. Redundancy
8. Industrial and Employee Relations
9. Record keeping of all personal data.
10. Compensation, pensions, bonuses etc in liaison with Payroll
11. Confidential advice to internal 'customers' in relation to problems at work.

### 6.1 Human resource function

- (i) **Recruiting and hiring:** HR helps bring new employees into the firm by running help wanted advertisements in newspapers, providing position requests to both government and private employment agencies, holding screening interviews on college campuses and at the firm's facilities, and administering employment tests. HR stays current on government legislation affecting employment practices and counsels management in the proper policies to establish.
- (ii) **Education and training:** during a person's period of employment, HR can administer educational and training programs that are required to cultivate the employees' job-related knowledge and skills.
- (iii) **Data management:** HR maintains a data base of employee-related data, and processes that data to meet user's information needs.
- (iv) **Termination and benefit administration:** during the time that persons are employed by the firm, they receive a package of such benefits as hospitalization, dental insurance, and profit sharing.



**Figure 2.5 The human resource functions**

## 6.2 Human resource information system

Each firm must have a system for gathering and maintaining the data that describes the human resources, transforming the data into information and then reporting the information to users. This system has been named the human resource information system (HRIS). Although it is easy to think of the HRIS as a computer-based system, this view can be misleading for two reasons. First a relatively large number of HRISs are non-computer based and second, the term also applies to the people who work with the computer. The HR organization typically includes an HRIS section that has the responsibility for managing the conceptual system of human resource data and information.

## 7. FINANCE SUPPORT PROCESS

The financial modules provide financial functionality and analysis support to thousands of businesses. The finance modules will have the following subsystem:

- I. **Financial accounting:** the objective of a good financial accounting system is to provide company-wide control and integration of financial information that is essential to strategic decision making.
  - **General ledger:** the General Ledger (GL) is essential both to the financial accounting system and to strategic decision making. The General Ledger supports all the functions needed in a financial accounting system. This includes flexible structuring of the chart of accounts at the group and the company level, distributed application scenarios, real-time simultaneous update of sub-ledgers and the general ledger, elimination of time-consuming reconciliation, and parallel views of data, in both the general ledger and the managerial accounting applications.
  - **Accounts Receivable and Payable:** Accounts Receivable and payable transactions are performed automatically, when related processes take place in other modules. This module uses standard business rules for procedures ranging from data entry and reporting, to processing payments and bank transactions. Accounts Receivable and payable functions include Internet integration, document management, and full support for EDI processing, including automatic integration with cash management and flexible reporting using customer and vendor information systems.

- **Asset Accounting:** asset accounting manages the company's fixed assets. Within the Financial Accounting system, Asset Accounting serves as a sub-ledger to the General Ledger, providing detailed information on asset-related transactions. Asset Accounting also provides integration with Plant Maintenance for management of machinery and equipment, management of leased assets and assets under construction, mass processing with workflow integration, and interactive reporting.
- **Legal Consolidation:** consolidated financial statements need to be integrated effectively with operational data at the individual company level. By using different valuation methods, we can plan balance sheet strategies to suit the company's requirements. The Legal Consolidation sub-system is closely linked to the Financial Accounting system, permitting direct data transfer, from individual statements into the consolidated report.

II. **Investment management:** Investment management is the professional management of various securities (shares, bonds etc) assets (e.g. real estate), to meet specified investment goals for the benefit of the investors. Investors may be institutions (insurance companies, pension funds, corporations etc.) or private investors (both directly via investment contracts and more commonly via collective investment schemes e.g. mutual funds). The term asset management is often used to refer to the investment management of collective investments, whilst the more generic fund management may refer to all forms of institutional investment as well as investment management for private investors. Investment managers who specialize in advisory or discretionary management on behalf of (normally wealthy) private investors may often refer to their services as wealth management or portfolio management often within the context of so-called "private banking".

The provision of investment management services includes elements of financial analysis, asset selection, stock selection, plan implementation and ongoing monitoring of investments. Investment management is a large and important global industry in its own right responsible for caretaking of trillions of dollars, euro, pounds and yen. Coming under the remit of financial services many of the world's largest companies are at least in part investment managers and employ millions of staff and create billions in revenue. It provides extensive support for investment processes right from planning through settlement. Investment management facilitates investment planning and budgeting at a level higher than that needed for specific orders or projects. Investment management provides tools, enabling you to plan and manage your capital spending projects right from the earliest stage.

III. **Controlling:** the controlling system gathers the functions required for effective internal cost accounting. It offers a versatile information system, with standard reports and analysis paths for the most common questions. In addition, there are features for creating custom reports to supplement standard reports.

- **Overhead Cost Controlling:** many organizations experience a significant increase in the percentage of indirect costs, which cannot be directly assigned to either the products manufactured, or to the services rendered. While cost monitoring and optimization may be quite advanced in production areas, transparency is often lacking in overhead cost areas. The overhead cost controlling subsystem focuses on the monitoring and allocation of overheads.
- **Cost Center Accounting:** cost center accounting analyses where overheads occur within the organization. Costs are assigned to the sub-areas of the organization where

they originated. The system offers a wide variety of methods for allocating posted amounts and quantities.

- **Overhead Orders:** overhead Orders sub-system collects and analyses costs, based on individual internal measures. This system can monitor and automatically check budgets assigned to each measure.
- **Activity-Based Costing:** the goals of the entire organization should come before the goals of individual departments, when it comes to business process reengineering. The Activity-Based Costing module is a response to the growing need for monitoring and controlling cross-departmental business processes, in addition to functions and products.
- **Product Cost Controlling:** Product cost controlling module determines, the costs arising from manufacturing a product, or providing a service. Plan and standard values, serve in valuating warehouse stock and for contrasting revenues received with costs. In addition, the values in Product Cost Controlling are crucial for determining the lowest price limit for which a product is profitable.
- **Cost Object Controlling:** Cost Object Controlling helps you monitor manufacturing orders. Integration with the logistics components results in a logistical quantity flow that provides instant information on actual cost object costs, allowing ongoing costing calculations at any time. Follow-up calculations determine and analyze the variances between actual manufacturing costs, and the plan costs resulting from product cost planning.
- **Profitability Analysis:** Profitability analysis subsystem examines the source of returns. As part of sales controlling, profitability analysis is the last step in cost-based settlement, where revenues are assigned to costs according to the market segment. Information from Profitability analysis, frame important decisions in areas such as determining prices, selecting customers, developing conditions and choosing distribution channels.

**IV. Treasury:** A treasury is any place where the currency or items of high monetary value are kept. The head of a Treasury is typically known as a Treasurer. The treasury component provides you with a basis for effective liquidity, portfolio and risk management.

- **Cash Management:** the cash management subsystem, allows you to analyze financial transactions for a given period. Cash management also identified, and records future developments for the purposes of financial budgeting. The company's payment transactions are grouped into cash holdings, cash inflows and cash outflows. Cash management provides information on the sources and uses of funds to secure liquidity in order to meet payment obligations when they become due. Cash management also monitors and controls incoming and outgoing payment flows, and supplies the data required for managing short-term money market investments and borrowing.
- **Treasury Management:** the treasury management component offers functions for managing financial deals and positions, from trading to transferring data to Financial Accounting. Treasury management also supports flexible reporting and evaluation structures for analyzing financial deals, positions and portfolios. For short-term

liquidity and risk management, we can use the money market, or foreign exchange transactions, to smooth out liquidity squeezes and gluts, or to eliminate currency risks. Securities and loans come into play in the medium and long-term.

- **Market Risk Management:** Market risk management plays a vital role within Treasury, in ensuring your company's competitiveness. The process involves a complex feedback loop encompassing data collection, risk management, analysis and simulation as well as active planning of financial instruments. This process dovetails closely with other treasury and corporate functions. Market risk management acts as an integrated, central risk control station with monitoring and management functions.
  - **Funds Management:** Funds management subsystem supports your funds management process from budgeting all the way through to payments, including monitoring expenditures, activities, resources and revenues. Budgets are entered for areas of responsibility that can cover as many management levels.
- V. **Enterprise Controlling:** Enterprise controlling comprises of those functions that will optimize shareholder value, while meeting internal objectives for growth and investment. This module usually includes executive Information system, Business Planning and Budgeting, Consolidation, and Profit Centre Accounting.
- **Executive Information System:** the executive information system provides an overview of the critical information necessary to manage the organization. This component integrates data from other ERP components, and non-ERP data sources both inside and outside the enterprise. Drill-down reporting and report portfolio are available to evaluate and present the data. In drill-down reporting, you can analyze the data interactively. Exception can be defined in order to highlight areas of concern.
  - **Business Planning and Budgeting:** Business planning and budgeting supports the management teams of business units and groups in the calculation of business targets, such as return on investment. This module also supports central investment planning, budget release and tracking. This module automatically transfers data about investment requirements from transaction applications, and provides extensive analysis functions for budget monitoring.
  - **Profit Centre Accounting:** Profit centre accounting analyses the profitability of internal responsibility centre. A company's organizational structure is represented in the form of a profit centre hierarchy, with the profit centre as the smallest unit of responsibility.

## 8. MARKETING

Many people think of marketing in narrow terms, as including only selling and advertising. Marketing “consists of individual and organizational activities that facilitate and expedite satisfying exchange relationships in a dynamic environment through the creation, distribution, promotion and pricing of goods, services and ideas.”

### 8.1 Marketing mix

Marketing strategies consists of a mixture of ingredients that has been named the marketing mix: product, promotion, place and price. Collectively they are known as the four Ps.

- Product: is what the customer buys to satisfy a perceived want or need. A product can be a physical good, some type of services or ideas.
- Promotion: is concerned with all the means of encouraging the sale of the product, including advertising and personal setting.
- Place: deals with the means of physically distributing the product to the customer through a channel of distribution.
- Price: consists of all the elements relating to what the customers pays for the product.

### 8.2 Evolution of the Marketing Information System (MKIS)

- In 1966 professor Philip kotler used the term marketing nerve center to describe a new unit within marketing to gather and process marketing information.
- He identified three types of information that are
  - Internal
  - Intelligence (from environment)
  - Communications (to environment)

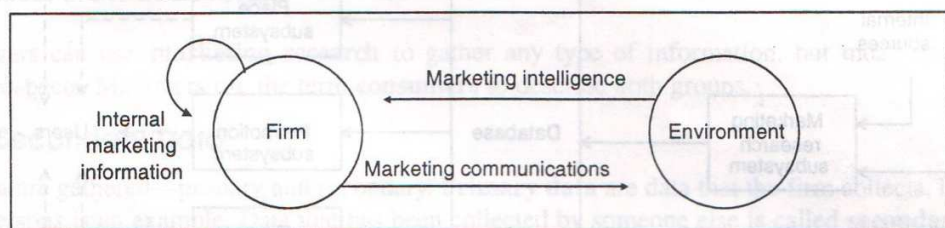


Figure 2.6 Kotler's information flow

### 8.3 Marketing Information System (MKIS) Definition

Marketing information system as a computer based system that works in conjunction with other functional information systems to support the firm's management in solving problems that relate to marketing the firm's products.

### 8.4 An MKIS Model

It consists of



- **Output subsystem:** Each output subsystem provides information about its part of the mix. The **product subsystem** provides information about the firm's products. The **place subsystem** provides information about the firm's distribution network. The **promotion subsystem** provides information about the firm's advertising and personal selling activities. The **price subsystem** helps the manager make pricing decisions. In addition, there is a fifth subsystem, the **integrated-mix subsystem**, which enables the manager to develop strategies that consider the combined effects of the ingredients.
- **Database:** the data that is used by the output subsystems come from the database. Some of the data in the database is unique to the marketing function, but much is shared with other functional areas.
- **Input subsystem:** the accounting information system gathers data describing the firm's marketing transactions. The marketing intelligence subsystem gathers information from the firm's environment that has a bearing on marketing operations. The marketing research subsystem conducts special studies of marketing operations for the purpose of learning customer needs and improving marketing efficiency.

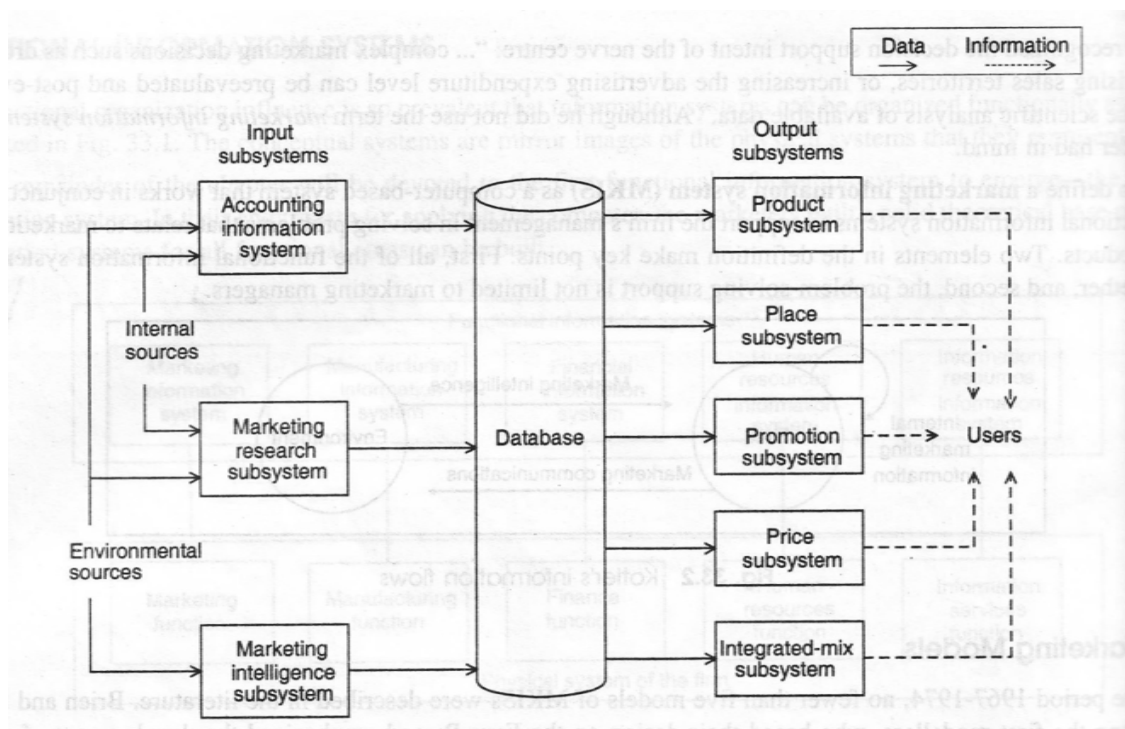


Figure 2.7 A model of marketing information system

## 9. STRATEGIC PLANNING

**Strategic planning** is an organization's process of defining its strategy, or direction, and making decisions on allocating its resources to pursue this strategy, including its capital and people. Various business analysis techniques can be used in strategic planning, including SWOT analysis (Strengths, Weaknesses, Opportunities, and Threats) and PEST analysis (Political, Economic, Social, and Technological analysis).

Strategies are different from tactics in that:

1. They are proactive and not re-active as tactics are.
2. They are internal in source and the business venture has absolute control over its application.
3. Strategy can only be applied once, after that it is process of application with no unique element remaining.
4. The outcome is normally a strategic plan which is used as guidance to define functional and divisional plans, including Technology, Marketing, etc.

Strategic Planning is the formal consideration of an organization's future course. All strategic planning deals with at least one of three key questions:

1. "What do we do?"
2. "For whom do we do it?"
3. "How do we excel?"

In business strategic planning, the third question is better phrased "How can we beat or avoid competition?"

In many organizations, this is viewed as a process for determining where an organization is going over the next year or more -typically 3 to 5 years, although some extend their vision to 20 years.

In order to determine where it is going, the organization needs to know exactly where it stands, then determines where it wants to go and how it will get there. The resulting document is called the "strategic plan".

It is also true that strategic planning may be a tool for effectively plotting the direction of a company; however, strategic planning itself cannot foretell exactly how the market will evolve and what issues will surface in the coming days in order to plan your organizational strategy. Therefore, strategic innovation and tinkering with the 'strategic plan' have to be a cornerstone strategy for an organization to survive the turbulent business climate.

There are many approaches to strategic planning but typically a three-step process may be used:

- **Situation** - evaluate the current situation and how it came about.
- **Target** - define goals and/or objectives (sometimes called ideal state)
- **Path** - map a possible route to the goals/objectives

One alternative approach is called *Draw-See-Think*

- **Draw** - what is the ideal image or the desired end state?
- **See** - what is today's situation? What is the gap from ideal and why?
- **Think** - what specific actions must be taken to close the gap between today's situation and the ideal state?
- **Plan** - what resources are required to execute the activities?

An alternative to the *Draw-See-Think* approach is called *See-Think-Draw*

- **See** - what is today's situation?

- **Think** - define goals/objectives
- **Draw** - map a route to achieving the goals/objectives

## 10. RESEARCH AND DEVELOPMENT

The phrase **research and development** (also **R and D** or, more often, **R&D**), according to the Organization for Economic Co-operation and Development, refers to "creative work undertaken on a systematic basis in order to increase the stock of knowledge, including knowledge of man, culture and society, and the use of this stock of knowledge to devise new applications".

New product design and development is more than often a crucial factor in the survival of a company. In an industry that is fast changing, firms must continually revise their design and range of products. This is necessary due to continuous technology change and development as well as other competitors and the changing preference of customers. A system driven by marketing is one that puts the customer needs first, and only produces goods that are known to sell. Market research is carried out, which establishes what is needed. If the development is technology driven then it is a matter of selling what it is possible to make. The product range is developed so that production processes are as efficient as possible and the products are technically superior, hence possessing a natural advantage in the market place.

R&D has a special economic significance apart from its conventional association with scientific and technological development. R&D investment generally reflects a government's or organization's willingness to forego current operations or profit to improve future performance or returns, and its abilities to conduct research and development.

In 2006, the world's four largest spenders of R&D were the United States (US\$343 billion), the EU (US\$231 billion), Japan (US\$130 billion), and China (US\$115 billion). In terms of percentage of GDP, the order of these spenders for 2006 was China (US\$115 billion of US\$2,668 billion GDP), Japan, United States, EU with approximate percentages of 4.3, 3.2, 2.6, and 1.8 respectively. The top spenders in terms of percentage of GDP were China, Sweden, Finland, Japan, Korea, Switzerland, Iceland, United States, followed by 9 other countries, and then the EU.

In general, **R&D** activities are conducted by specialized units or centers belonging to companies, universities and state agencies. In the context of commerce, "research and development" normally refers to future-oriented, longer-term activities in science or technology, using similar techniques to scientific research without predetermined outcomes and with broad forecasts of commercial yield.

Statistics on organizations devoted to "R&D" may express the state of an industry, the degree of competition or the lure of progress. Some common measures include: budgets, numbers of patents or on rates of peer-reviewed publications.

Bank ratios are one of the best measures, because they are continuously maintained, public and reflect risk.

In the U.S., a typical ratio of research and development for an industrial company is about 3.5% of revenues. A high technology company such as a computer manufacturer might spend 7%. Although Allergan (a biotech company) tops the spending table 43.4% investment, anything over 15% is remarkable and usually gains a reputation for being a high technology company. Companies in this category include pharmaceutical companies such as Merck & Co. (14.1%) or Novartis (15.1%), and engineering companies like Ericsson (24.9%).

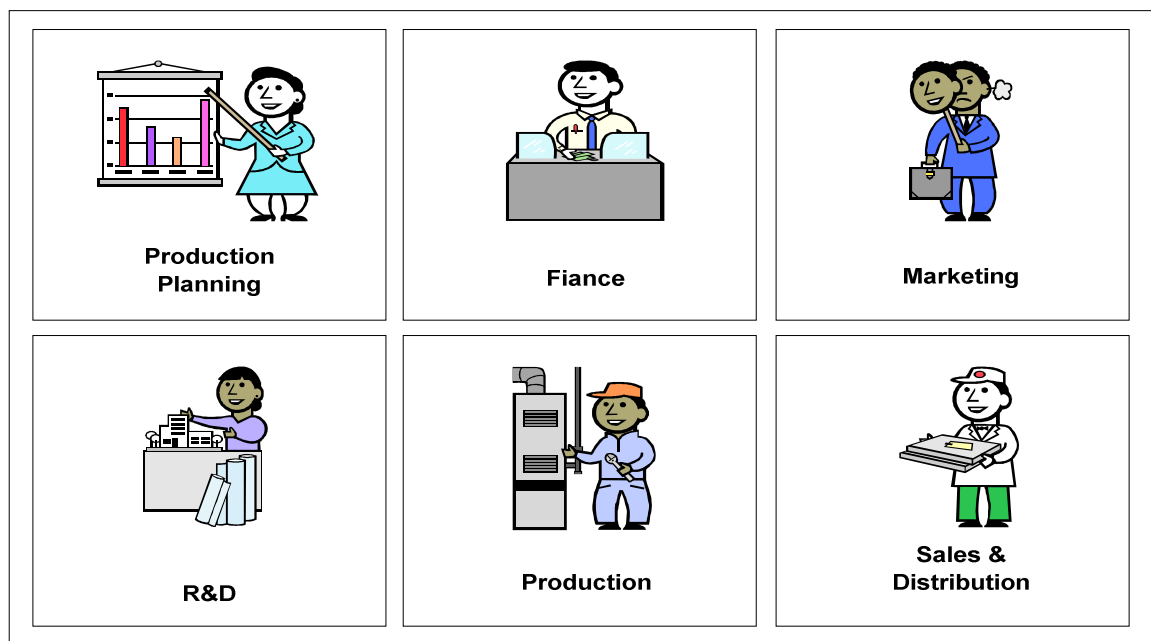
Such companies are often seen as poor credit risks because their spending ratios are so unusual.

Generally such firms prosper only in markets whose customers have extreme needs, such as medicine, scientific instruments, safety-critical mechanisms (aircraft) or high technology military armaments. The extreme needs justify the high risk of failure and consequently high gross margins from 60% to 90% of revenues. That is, gross profits will be as much as 90% of the sales cost, with manufacturing costing only 10% of the product price, because so many individual projects yield no exploitable product. Most industrial companies get only 40% revenues.

On a technical level, high tech organizations explore ways to re-purpose and repackage advanced technologies as a way of amortizing the high overhead. They often reuse advanced manufacturing processes, expensive safety certifications, specialized embedded software, computer-aided design software, electronic designs and mechanical subsystems.

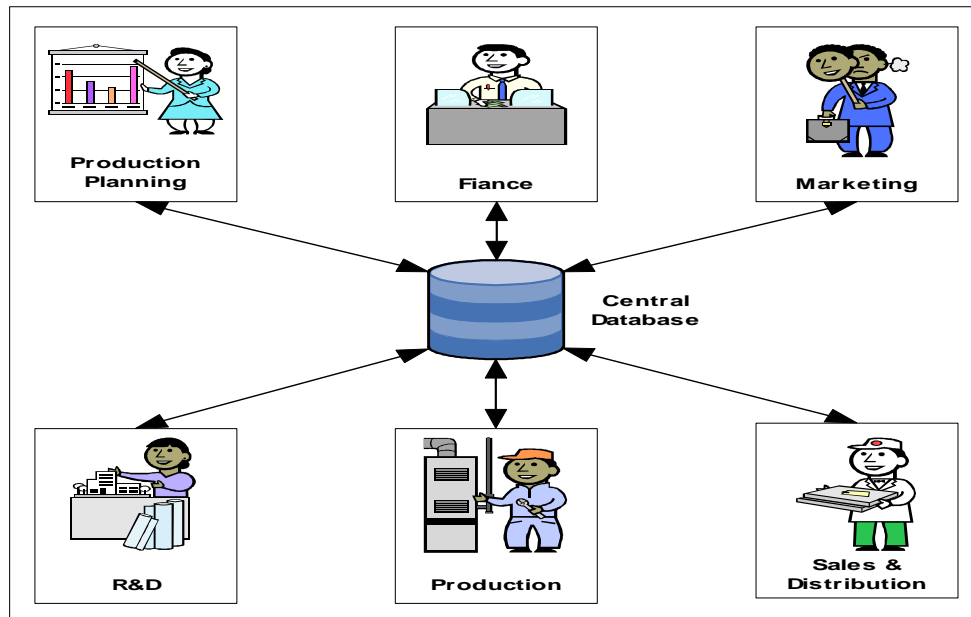
## 11. PROBLEMS IN TRADITIONAL FUNCTIONAL VIEW

In traditional approach the organization is divided into different units based on the functions they perform— finance, manufacturing, production planning, purchasing, sales and distribution, R&D, HR, etc. The various departments have their own goals. The different departments function in isolation and have their own data collection & analysis systems. The result is that, instead of taking the organization towards the common goal the various departments end up pulling it in different directions as one department does not know what the other does and for what purpose. So unless all the departments know what the others are doing and for what purpose, the inter-departmental conflicts will arise thus disrupting the normal functioning of the organization. The solution is to have a centralized information storage and management facility.



**Figure 2.8 Organization where there is no or little Communication between Departments**

In the enterprise way (Figure 2.9), the entire organization is considered as a single system. Information about all the aspects of the organization is stored centrally and is available to all departments, thus avoiding conflicts. ERP systems help to make this task easier by integrating the information systems, enabling smooth and seamless flow of information across departmental barriers, and automating business process and functions. ERP systems help the organization to work and move forward as a single entity.



**Figure 2.9 An Enterprise where all Departments Know what others are Doing**

## 12. NEED FOR INTEGRATED PROCESS VIEW

Integration is an extremely important part to ERP. ERP main goal is to integrate data and processes from all areas of an organization and unify it for easy access and work flow. ERP usually accomplish integration by creating one single database that employs multiple software modules providing different areas of an organization with various business functions.

An information system is an open, purposive system that produces, information using the 'input-process-output' cycle. The information system consists of three elements-people, procedures and data. People follow procedures to manipulate data to produce information. Generally in computer world, an information system is an organized combination of people, hardware, software, communication networks and data resources that collects, collates, transforms and disseminates in an organization.

The problem with the information systems is that they work at departmental level and they only give information that has been predefined. Thus each department has its own database and information systems. These systems will produce different reports of varying detail that were specified when the systems were built.

This method of information collection has two major drawbacks.

- i. People in one department do not have any information about what is happening in the other departments.
- ii. These systems provides only the information that they were designed to produce at the time they were built. For example, a manager wants some information which is no in the reports, then theses systems are of no help.

These systems lack the integrated approach, as all departments work in isolation, collecting and analyzing the data needed for one department's functioning, can be a difficult task. Since getting information, that is dependent on more than one department, is a tedious task. Even if he collates the data from different departments and produces the information that he requires, he would have lost valuable time that could have been better spent in decision making.

In reality, an organization cannot function as islands of different departments. The production planning data is used by the purchasing department. The purchasing details are in turn used by the financial department and so on. Therefore if all the information islands, which were functioning in isolation, were integrated into a single system, then the impact of that would be dramatic.

### **13. INFORMATION AS A RESOURCE**

Traditional economists of the pre-industrial era considered only land, labor and capital as economic resources. With the emergence of the Industrial Revolution and the availability of powered engines, the importance of labor as a resource changed relatively with men and machines added to the land and capital as resources. With increased mechanization in the farm as well as the plant, the relative importance of land and labor was reduced further. Mass manufacture placed a premium on technology that emerged as the major resource in the latter half of this century. In fact, this resource, particularly in the context of changing job mix, as already outlined, completely overshadowed the traditional resources. The recent emergence of Japan as a major force in the comity of nations is a remarkable example of this development.

With the recent information revolution, the prized resource actually is information. This can be better appreciated when one considers the success or failure of products that appeared in the market at the right time or the wrong time. While the technology of two products would be comparable, the vendor who had the right market information and brought the product a few months ahead of the competitor wins substantially more market than the latter. Late introduction of a new technology product in the market may even lead to a collapse of the organization.

Information being a vital corporate resource, it needs to be managed just as any other organizational resource like money, man, materials or markets. Formal methods to plan, monitor, control and evaluate the utilization of this resource are needed along with the provision that this resource, like money, is available to everyone in the organization, with the appropriate authority and accountability. There is also a need for a corporate strategy to manage such a vital resource.

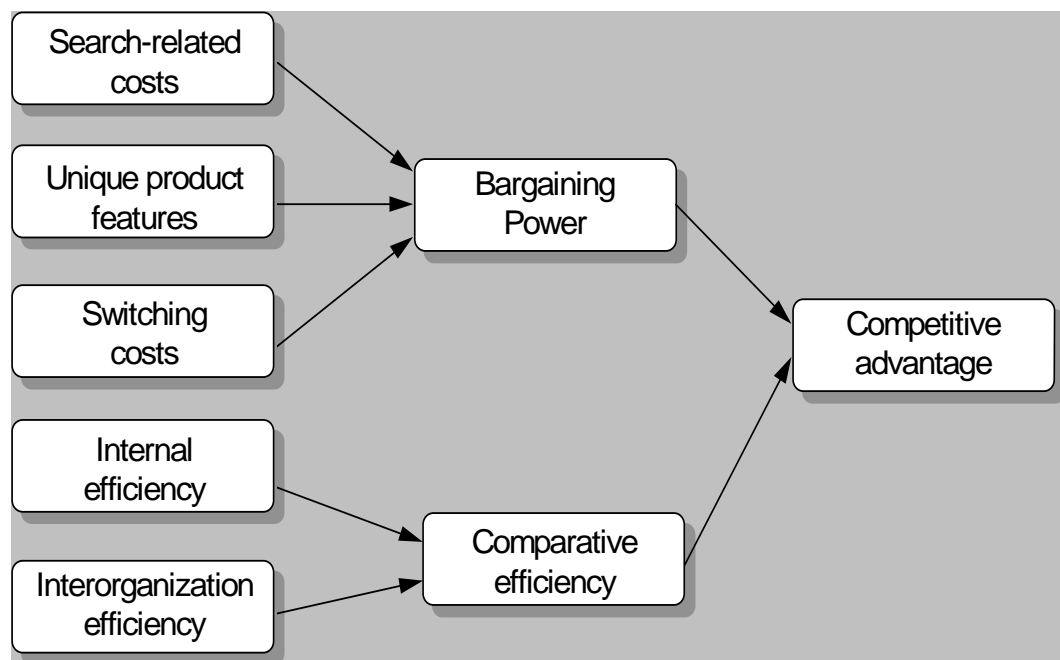
Information systems are precisely such resource management agents. In today's competitive business environment, the key resource of every organization is information. If the organization does not have an efficient and effective procedure that enables it to give the decision makers the right information at the right time, then the chances of that organization succeeding in the next millennium are very rare.

The three fundamental characteristics of information are accuracy, relevancy and timeliness. The information should be accurate, it should be relevant for the decision-maker and it must be available to the decision-maker when he needs it. Any organization that has the mechanism to collect, collate, analyze and present high quality information to its employees, thus enabling them to make better decisions, will always be one step forward. Today for survival of an organization, it must always gather and analyze data – both internally and externally. Thus we conclude that if the information generated is accurate, timely and relevant, then these systems will go a long way in helping the organization in realizing its goal.

## 14. MOTIVATION FOR ERP

i) Achieving and maintaining competitive advantage requires better information management

- Information Quality
- Information Reliability
- Information Access
- Information Sharing



**Figure 2.10 Motivation for ERP**

ii) Firms View ERP as a System:

- To provide better information management
- To transform the competitive space
- To transform relationships between
  - Their customers
  - Their suppliers
  - Their competitors

iii) FIRMS ACHIEVE COMPETITIVE ADVANTAGE BY

- Locking in customer and suppliers
- Locking out the competition
- Attracting away competitors' customers by
  - Product functionality
  - Cost performance



- Service, reliability and flexibility
- Quality and innovation
- Response time/ time-to-market

iv) Better Supply Chain Management

- Inbound Logistics
- Operations
- Outbound Logistics
- Marketing and Sales
- Service

v) Disintermediation and Market Reach

- Online Store Front
- Internet Banking

vi) Allows an organization to reengineer all their processes.