

Ch 7

- **Business process management (BPM):** the systematic process of creating, assessing, and altering business processes for business process that is critical, complex, dynamic in structure, well managed organizations practice.

Four stage: create components → implement process → assess results → model processes.

- Step 1: team build an “as is model” that documents the current situation and then change that model to make adjustments necessary to solve process problems.
- Step 2: create system components. Those components include all five elements of every information system, although some are entirely automated (no people and procedures) and some are entirely manual (no hardware and software).
- Step 3: create policy, procedures, and committees to continually assess business process effectiveness. When a need for change arises, the company models a new, adjusted business process and the cycle repeat.

- **Scope of business process management**

Functional process	Business process resides within a single business function. Ex: accounting, human resources Cons: islands of automation or informational silos
Cross functional	Involve activities among several or even many departments Ex: customer relationship management (CRM) Pros: eliminate or at least drastically reduce isolation Cons: need to resolve conflict via committee and policy
Inter-organizational	Business process crosses into multiple companies Ex: Supply chain management (SCM) Cons: problem resolution via negotiation, contracts, and litigation.

- **Object management group (OMG):** A software industry standards organization that creates a standard set of terms and graphical notations for documentation business process.

Business process modeling (BPMN): the standard set of terms and graphical notations for documentation business process.

Swim-lane Layout: is used to simplify process diagrams and to draw attention to interactions among components of the diagram.

- **Three ways of changing business processes**

- 1. Changing a process by adding or removing resources: one should ass cost to a value china if the change generates value greater than its costs.
- 2. Changing a process by altering process structure
- 3. Combination of adding (reducing) resources and changing the process: need more potential, time, cost, and difficult to implement.

- **What role do information systems play in business processes:** they implement process activities.

- Some of those information systems are entirely manual (they have data procedures and people

components)

- Some are entirely automated (they have hardware, software, and data components).
 - Some are a mixture, having all five components of an information system: hardware, software, data, procedures, and people.
- What is the most common functional application used today? Functional application: a computer program that supports or possibly automates the major activities in a functional process.
 - For sales application: primary purpose for sales is to find prospects and transform them into customers by selling them something, manage customers, and forecast future sales.
 - For marketing application: process exists to manage products and brands.
 - For operation application: concerns the management of finished goods inventory and the movement of goods from that inventory to the customer. Especially useful for non-manufacturers such as retailer, wholesalers, and distributors.
 1. Order entry application: record customer purchases
 2. Order management application: track the order through the fulfillment process, arrange for schedule shipping and process exceptions (out of stock goods).
 3. Finished goods inventory application: for non-manufacturing organization
 - For manufacturing application
 1. Inventory application: support inventory control and inventory management. The ultimate result is to obtain the just in time (JIT) inventory policy.
 2. Manufacturing planning application: help business allocate inventory and equipment to manufacturing process.

A bill of materials (BOM) is a list of the materials that comprise a product.

Materials requirements planning (MRP): an application that plans the need for materials and inventories of materials used in the manufacturing process.

Manufacturing resource planning (MRP II): a follow up to MRP that includes the planning of materials, personnel, and machinery.
 3. Manufacturing scheduling

Master production schedule (MPS): a plan for producing products by using “push manufacturing process”, a process of analyzing past sales levels and makes estimates of future sales.

Or to manufacture in response to signals for customers or downstream production process that products or components are currently needed. This process is called “pull manufacturing process”
 - For customer service application: order tracking account tracking, and customer support and training.
 - For human resource applications: recruitment, compensation, assessment, development, training and planning.
 - For accounting application
 1. Financial reporting application for financial statements
 2. Cost accounting application for marginal cost and relative profitability of products.
 3. Budget applications: allocate and schedule revenue and expense and make comparison.
 4. Account receivable application: recording receivable, payments, account aging and collections managements
 5. Accounts payable applications: reconcile payments and schedule payments.

6. Cash management application: scheduling payments, receivables, usage of cash.
 7. Treasury applications: concern the management and investment, payment of dividends.
- Problems with functional information system: because they operate in isolation from one another, they create islands of automation or information silos
 - Data is duplicated and inconsistent.
 - Disjointed processes
 - Limited information and lack of integrated information
 - Isolated decisions lead to organizational inefficiencies.
 - Increased expense (all of the above creates extra costs)
 - What are the functions and characteristics of customer relationship management (CRM) information system?
 - CRM: cross functional application that track all integrations with the customer from prospect through follow up service and support.
 - CRM application integrates all the primary business activities.
 - Customer life cycle: marketing (attract), customer acquisition (sell), relationship management (support and resell), and loss / churn (categorize).
 - What are the functions and characteristics of enterprise resource planning (ERP) information system?
 - ERP application: provides more integrations than CRM. It integrates the primary value chain activities with human resources and accounting. It is truly enterprise wide. Most successful ERP software (SAP), it defines comprehensive set of inherent processes for all organizational activities as "process blueprint"
 - ERP characteristics
 1. Provides cross functional, process view of organization
 2. Has a formal approach based on formal business models
 3. Maintains data in centralized database
 4. Offers large benefits but is difficult, fraught with challenges, and can be slow to implement.
 5. Often very expensive.
 - Benefits of ERP
 1. Successful business processes, their business blueprint (the built in procedures) is called inherent process are effective and efficient
 2. Inventory reduction
 3. Lead time reduction (decrease transaction, process time)
 4. Improved customer service
 5. Greater, real time insight into organization. With integrated database.
 6. Higher profitability (after implementing all of the above)
 - Service oriented architecture (SOA): a design philosophy in which every activity is modeled as an encapsulated service and exchanges among those services are governed by standards.
 - Key components
 1. Service: repeatable task that a business needs to perform.
 2. Encapsulated: Isolate each process to resolve duplication.
 3. Standards: data, or more generally messages are exchange among services using standardized