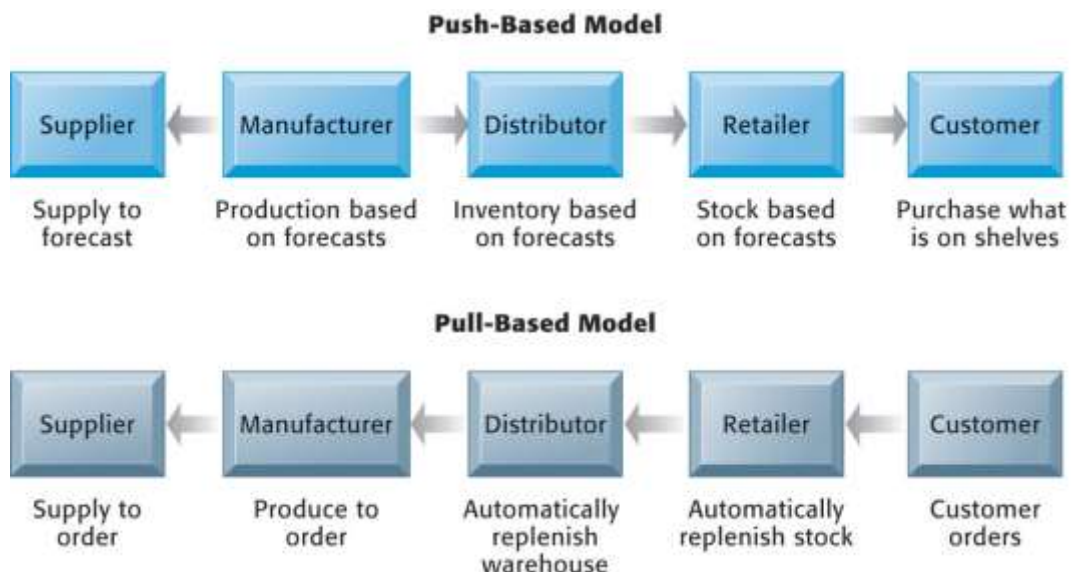# Enterprise Applications

Note: In addition to the following main points, the students should refer to the detailed study material which has already been e-mailed to them.

- **Enterprise Systems**
    - Earlier known as enterprise resource planning (ERP) systems
    - Suite of integrated software modules and a common central database
    - Collects data from many divisions of firm for use in nearly all of firm's internal business activities
    - Information entered in one process is immediately available for other processes
    - Built around thousands of predefined business processes that reflect best practices e.g.
        - **Finance/accounting:** General ledger, accounts payable, etc.
        - **Human resources:** Personnel administration, payroll, etc.
        - **Manufacturing/production:** Purchasing, shipping, etc.
        - **Sales/marketing**: Order processing, billing, sales planning, etc.
    - **To implement, firms:**
        - Select functions of system they wish to use
        - Map business processes to software processes
            - Use software's configuration tables for customizing
- **Business Value of Enterprise Systems**
    - Increase operational efficiency
    - Provide firmwide information to support decision making
    - Enable rapid responses to customer requests for information or products
    - Include analytical tools to evaluate overall organizational performance

- **The supply chain**
  - **Network of organizations and processes for:**
    - Procuring raw materials
    - Transforming them into products
    - Distributing the products
  - **Upstream supply chain:**
    - Firm's suppliers, suppliers' suppliers, processes for managing relationships with them
  - **Downstream supply chain:**
    - Organizations and processes responsible for delivering products to customers

- **Information and supply chain management**
  - **Inefficiencies cut into a company's operating costs**
    - Can waste up to 25% of operating expenses
  - **Just-in-time strategy:**
    - Components arrive as they are needed
    - Finished goods shipped after leaving assembly line
  - **Safety stock**
    - Buffer for lack of flexibility in supply chain
  - **Bullwhip effect**
    - Information about product demand gets distorted as it passes from one entity to next across supply chain
  - **Supply chain planning systems**
    - Model existing supply chain
    - Demand planning
    - Optimize sourcing, manufacturing plans
    - Establish inventory levels
    - Identifying transportation modes
  - **Supply chain execution systems**
    - Manage flow of products through distribution centers and warehouses

- **Global supply chains and the Internet**
  - Before Internet, supply chain coordination hampered by difficulties of using disparate internal supply chain systems
  - Enterprise systems supply some integration of internal supply chain processes but not designed to deal with external supply chain processes
- **Global supply chain issues**
  - Global supply chains typically span greater geographic distances and time differences
  - More complex pricing issues (local taxes, transportation, etc.)
  - Foreign government regulations

- **Demand-driven supply chains**
  - **Push-based model (build-to-stock)**
    - Schedules based on best guesses of demand
  - **Pull-based model (demand-driven)**
    - Customer orders trigger events in supply chain
  - **Sequential supply chains**
    - Information and materials flow sequentially from company to company
  - **Concurrent supply chains**
    - Information flows in many directions simultaneously among members of a supply chain network
- **Push- Versus Pull-Based Supply Chain Models**

Push-Based Model

Supplier	Manufacturer	Distributor	Retailer	Customer
Supply to forecast	Production based on forecasts	Inventory based on forecasts	Stock based on forecasts	Purchase what is on shelves

Pull-Based Model

Supplier	Manufacturer	Distributor	Retailer	Customer
Supply to order	Produce to order	Automatically replenish warehouse	Automatically replenish stock	Customer orders

- **Business Value of Supply Chain Management Systems**
  - Match supply to demand
  - Reduce inventory levels
  - Improve delivery service
  - Speed product time to market
  - Use assets more effectively
  - Reduced supply chain costs
  - Increased sales

- **Customer relationship management**
  - **Knowing the customer**
    - In large businesses, too many customers and too many ways customers interact with firm
  - **Customer relationship management (CRM) systems**
    - Capture and integrate customer data from all over the organization
    - Consolidate and analyze customer data
    - Distribute customer information to various systems and customer touch points across enterprise
    - Provide single enterprise view of customers
- **CRM software packages**
  - More comprehensive packages have modules for:
    - Partner relationship management (PRM)
    - Employee relationship management (ERM)
  - **Most packages have modules for**
    - **Sales force automation (SFA):** Sales prospect and contact information, and sales quote generation capabilities; etc.
    - **Customer service:** Assigning and managing customer service requests; Web-based self-service capabilities; etc.
    - **Marketing:** Capturing prospect and customer data, scheduling and tracking direct-marketing mailings or e-mail; etc.

- **Operational CRM:**
  - Customer-facing applications such as sales force automation, call center and customer service support, and marketing automation

- **Analytical CRM:**
  - Analyze customer data output from operational CRM applications
  - Based on data warehouses populated by operational CRM systems and customer touch points
  - Customer lifetime value (CLTV)

- **Business value of customer relationship management**
  - Increased customer satisfaction
  - Reduced direct-marketing costs
  - More effective marketing
  - Lower costs for customer acquisition/retention
  - Increased sales revenue
  - Reduced churn rate
    - **Churn rate:**
      - Number of customers who stop using or purchasing products or services from a company.
      - Indicator of growth or decline of firm's customer base

- **Challenges of implementing Enterprise application**
  - Highly expensive to purchase and implement enterprise applications – total cost may be 4 to 5 times the price of software
  - Requires fundamental changes
    - Technology changes
    - Business processes changes
    - Organizational changes
  - Incurs switching costs, dependence on software vendors
  - Requires data standardization, management, cleansing
- **Next generation enterprise applications**
  - **Enterprise solutions / suites:**
    - Replacing stand-alone enterprise, CRM, SCM systems
    - Make these applications more flexible, Web-enabled, integrated with other systems
  - **Open-source and on-demand applications**
    - SaaS, Salesforce.com

- **Service platform:** Integrates multiple applications to deliver a seamless experience for all parties
  - Order-to-cash process
- **Portals:**
  - Increasingly, new services delivered through portals