



HNDIT1042 Information Management and Information Systems

Week3

Organizations and Management hierarchy Type of information (Strategic, Tactical, Operational)-Continue.....

WEEK 3

ENTERPRISE APPLICATIONS

Enterprise Application

- Because of the organizational growth and acquisition of smaller firms system become collection of systems. Implement enterprise application to getting them as a single system.

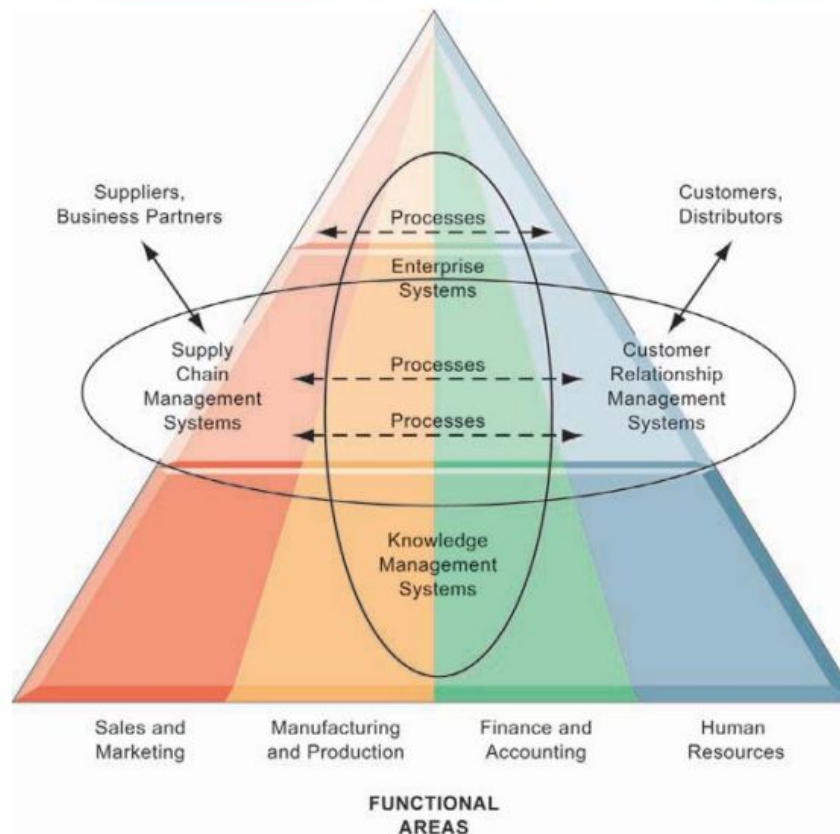
Advantages

- Businesses become more flexible and productive by coordinating their business processes more closely and integrating groups of processes.
- Efficient management of resources and customer service.

Four major enterprise applications

1. Enterprise systems
2. Supply chain management systems
3. Customer relationship management systems
4. Knowledge management systems.

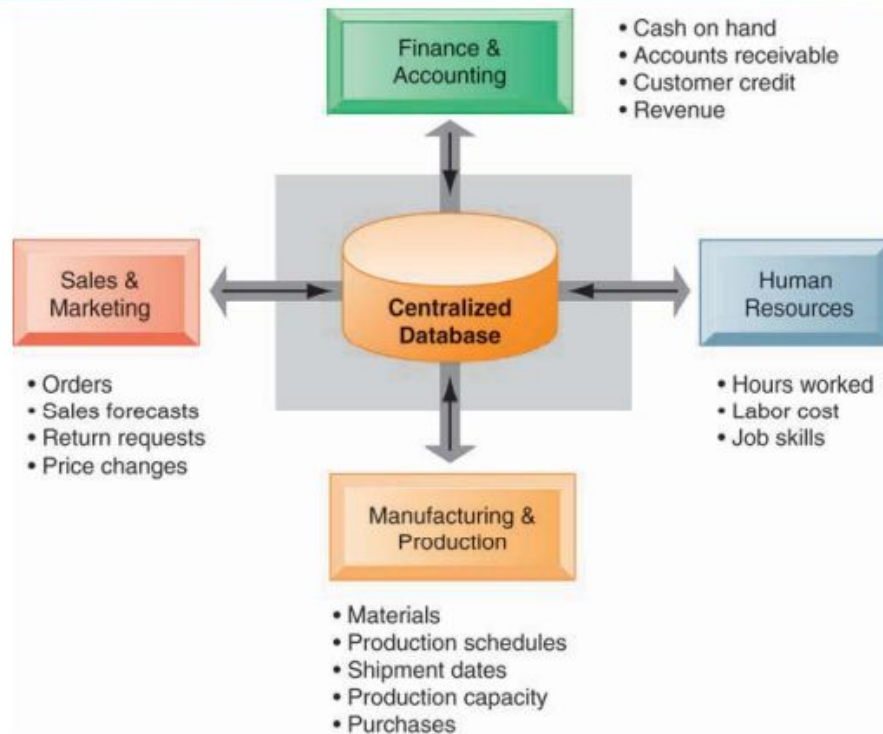
FIGURE 2.6 ENTERPRISE APPLICATION ARCHITECTURE



1. Enterprise Systems

- enterprise systems, also known as enterprise resource planning (ERP) systems, to integrate business processes in manufacturing and production, finance and accounting, sales and marketing, and human resources into a single software system.
- Information that was previously fragmented in many different systems is stored in a single comprehensive data repository where it can be used by many different parts of the business

FIGURE 9.1 HOW ENTERPRISE SYSTEMS WORK



Enterprise systems feature a set of integrated software modules and a central database that enables data to be shared by many different business processes and functional areas throughout the enterprise.

Example for ERP

- when a customer places an order, the order data flow automatically to other parts of the company that are affected by them.
- The order transaction triggers the **warehouse** to pick the ordered products and schedule shipment.
- The warehouse informs the **factory** to replenish whatever has been depleted.
- The **accounting department** is notified to send the customer an invoice.
- **Customer service representatives** track the progress of the order through every step to inform customers about the status of their orders.
- Managers are able to use firmwide information to make more precise and timely decisions about daily operations and longer-term planning.

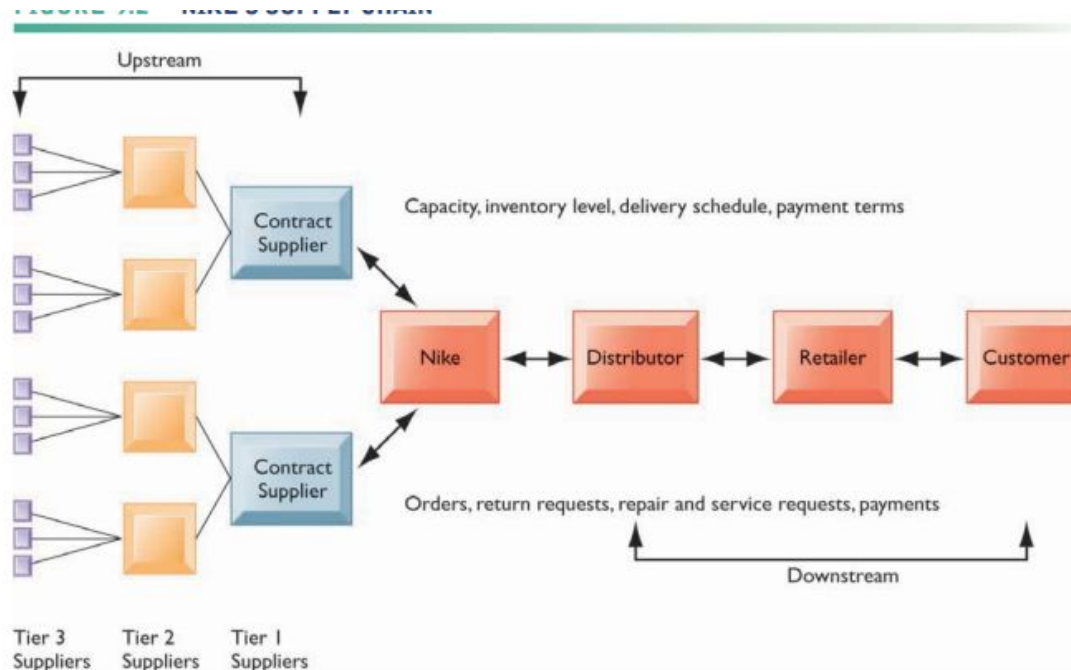
2. Supply chain management systems

- Help manage relationships with their suppliers.
- These systems help suppliers, purchasing firms, distributors, and logistics companies share information about orders, production, inventory levels, and delivery of products and services
- The ultimate objective is to get the right amount of their products from their source to their point of consumption in the least amount of time and at the lowest cost.

Eg: the supply chain for Nike sneakers

- Nike designs, markets, and sells sneakers, socks, athletic clothing, and accessories throughout the world.
- Its primary suppliers are contract manufacturers with factories in China, Thailand, Indonesia, Brazil, and other countries.
- These companies fashion Nike's finished products.
- Nike's contract suppliers do not manufacture sneakers from scratch. They obtain components for the sneakers—the laces, eyelets, uppers, and soles—from other suppliers and then assemble them into finished sneakers.
- These suppliers in turn have their own suppliers. For example, the suppliers of soles have suppliers for synthetic rubber, suppliers for chemicals used to melt the rubber for molding, and suppliers for the molds into which to pour the rubber.
- Suppliers of laces have suppliers for their thread, for dyes, and for the plastic lace tips.

- Chart illustration of Nike's supply chain for sneakers; it shows the flow of information and materials among suppliers, Nike, Nike's distributors, retailers, and customers. Nike's contract manufacturers are



Advantages

- Increase firm profitability by lowering the costs of moving and making products.
- Enabling managers to make better decisions about how to organize and schedule sourcing, production, and distribution.

3. Customer relationship management systems

- (CRM) systems to help manage their relationships with their customers.
- CRM systems provide information to coordinate all of the business processes that deal with customers in sales, marketing, and service to optimize revenue, customer satisfaction, and customer retention.

Advantages

- This information helps firms identify, attract, and retain the most profitable customers;
- provide better service to existing customers;
- increase sales.

CRM..

- CRM capture and integrate customer data from all over the organization, consolidate the data, analyze the data, and then distribute the results to various systems and **customer touch points** across the enterprise.

Touch point

- A touch point (also known as a contact point) is a method of interaction with the customer.

Eg: telephone, e-mail, customer service desk, conventional mail, Facebook, Twitter, Web site, wireless device, or retail store.

FIGURE 9.6 CUSTOMER RELATIONSHIP MANAGEMENT (CRM)



CRM systems examine customers from a multifaceted perspective. These systems use a set of integrated applications to address all aspects of the customer relationship, including customer service, sales, and marketing.

Good CRM systems provide data and analytical tools for answering questions such as these:

- What is the value of a particular customer to the firm over his or her lifetime?
- Who are our most loyal customers?
- It can cost six times more to sell to a new customer than to an existing customer.
- Who are our most profitable customers?
- What do these profitable customers want to buy?

4. Knowledge Management Systems

- Have better knowledge about how to create, produce, and deliver products and services.
- This firm knowledge is unique, difficult to imitate, and can be leveraged into long-term strategic benefits.
- Knowledge management systems (KMS) enable organizations to better manage processes for capturing and applying knowledge and expertise.
- These systems collect all relevant knowledge and experience in the firm, and make it available wherever and whenever it is needed to improve business processes and management decisions.

- Three major types of knowledge management systems:
 1. enterprise-wide knowledge management systems
 2. knowledge work systems
 3. intelligent techniques

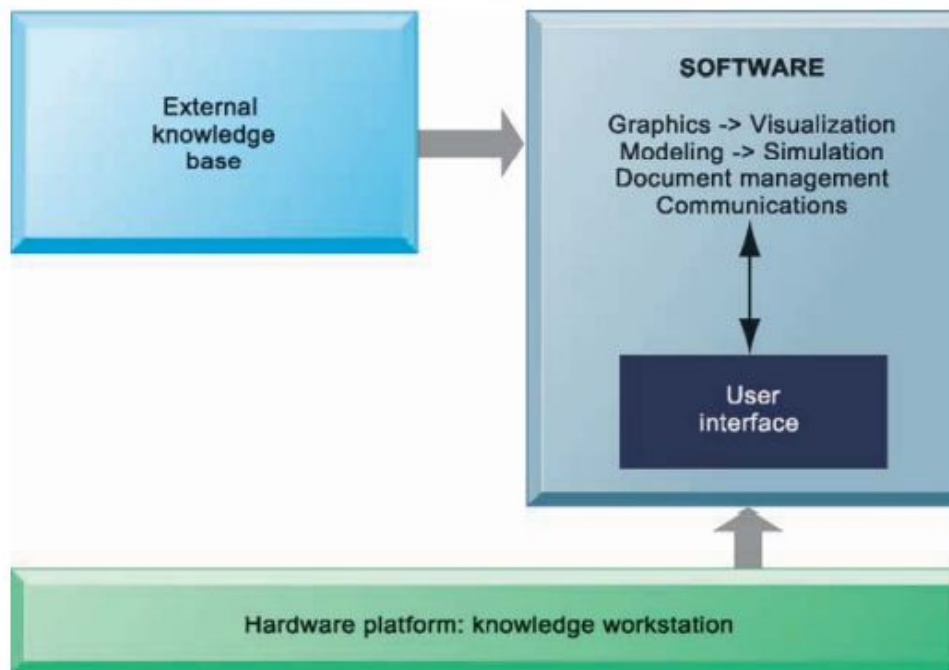
1. enterprise-wide knowledge management systems

- General-purpose firmwide efforts to collect, store, distribute, and apply digital content and knowledge.
- These systems include capabilities for searching for information, storing both structured and unstructured data, and locating employee expertise within the firm.
- supporting technologies are:
 - portal
 - search engines
 - collaboration and social business tools
 - learning management systems.

2. Knowledge work systems (KWS)

- Specialized systems built for engineers, scientists, and other knowledge workers charged with discovering and creating new knowledge for a company

FIGURE 11.4 REQUIREMENTS OF KNOWLEDGE WORK SYSTEMS



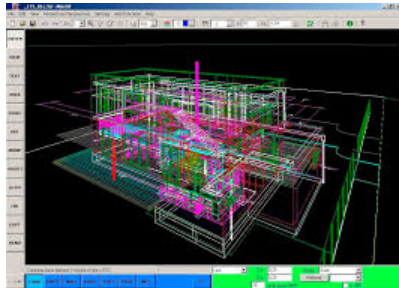
Knowledge work systems require strong links to external knowledge bases in addition to specialized hardware and software.

EXAMPLES OF KNOWLEDGE WORK SYSTEMS

- CAD systems
- virtual reality systems for simulation and modeling
- financial workstations.

CAD

- Computer-aided design (CAD) automates the creation and revision of designs, using computers and sophisticated graphics software.



virtual reality systems for simulation and modeling

- Virtual reality systems have visualization, rendering, and simulation capabilities that go far beyond those of conventional CAD systems.



example

- Ford Motor Company has been using virtual reality to help design its vehicles.
- In one example of Ford's Immersive Virtual Environment, a designer was presented with a car seat, steering wheel, and blank dashboard.
- Wearing virtual reality glasses and gloves with sensors, the designer was able to "sit" in the seat surrounded by the vehicle's 3-D design to experience how a proposed interior would look and feel. The designer would be able to identify blind spots or see if knobs were in an awkward place.
- Ford's designers could also use this technology to see the impact of a design on manufacturing.

Augmented reality

- It is a related technology for enhanced visualization.
- AR provides a live direct or indirect view of a physical real-world environment whose elements are augmented by virtual computer-generated imagery.
- The user is grounded in the real physical world, and the virtual images are merged with the real view to create the augmented display.



Virtual Reality Modeling Language (VRML).

- VRML is a set of specifications for interactive, 3-D modeling on the World Wide Web that can organize multiple media types, including animation, images, and audio to put users in a simulated real-world environment.
- VRML is platform independent, operates over a desktop computer, and bandwidth.



example



- What Is the Difference Between **AR** and **VR**?

financial workstations

- The financial industry is using specialized investment workstations such as Bloomberg Terminals to leverage the knowledge and time of its brokers, traders, and portfolio managers.



The **Bloomberg Terminal** is a computer software system provided by the [financial data vendor Bloomberg L.P.](#) that enables professionals in the financial service sector and other industries to access Bloomberg Professional Services through which users can monitor and analyze real-time financial [market data](#) and place trades on the [electronic trading platform](#)

TABLE 11.2 EXAMPLES OF KNOWLEDGE WORK SYSTEMS

KNOWLEDGE WORK SYSTEM	FUNCTION IN ORGANIZATION
CAD/CAM (computer-aided manufacturing)	Provides engineers, designers, and factory managers with precise control over industrial design and manufacturing
Virtual reality systems	Provide drug designers, architects, engineers, and medical workers with precise, photorealistic simulations of objects
Investment workstations	High-end PCs used in the financial sector to analyze trading situations instantaneously and facilitate portfolio management

3. intelligent techniques

- Artificial intelligence and database technology provide a number of intelligent techniques that organizations can use to capture individual and collective knowledge and to extend their knowledge base.
 - Expert systems, case-based reasoning,
 - fuzzy logic are used for capturing tacit knowledge.
 - Neural networks and data mining are used for knowledge discovery.



END