## Enterprise Resource Planning - ERP



1-1

## Learning Objectives

- What is an ERP
- Companies before and after ERP Systems
- ERP Software Companies & Marketshares
- Benefits and Challenges of Enterprise Systems
- Extended enterprises and industrial network

1-2

## What Is an ERP?

- An ERP integrates all departments and functions across an organization onto a single computer system
- that aims to serve practically everyone's particular needs.
- It eases the exchange of data and facilitates communication among departments.
- Each module in an ERP works separately, performing specific data-processing functions.

1-3

## What is ERP?

- ERP is an enterprise-wide information system designed to coordinate all the
  - resources,
  - information,
  - activities needed
  to complete business processes such as;
    - order fulfillment
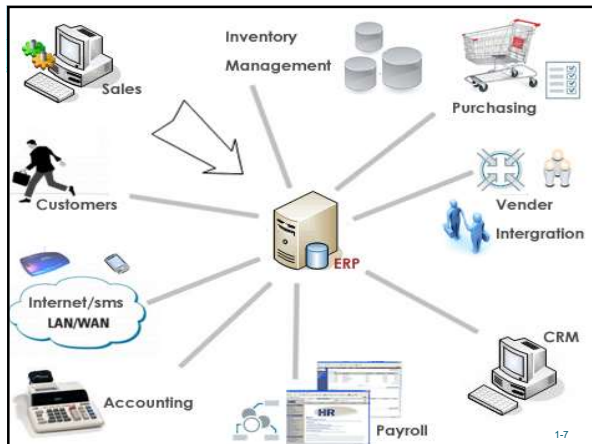    - billing.

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## What Is an ERP?

- A typical ERP system would use multiple component of computer software and hardware to achieve integration
- ERP delivers a **single database** that contains all data for the software module

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## What Is an ERP?

- Examples of ERP modules include the following:
  - Human resource management
  - Financial management
  - Supply chain management
  - Procurement
  - Logistics and materials management
  - Planning and budgeting
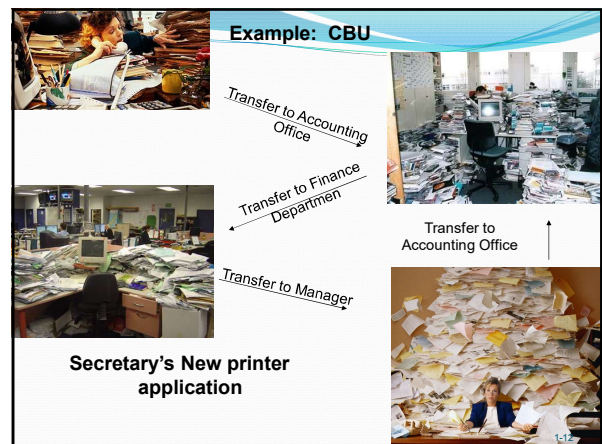  - Sales and distribution

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## Example of CBU

- School of Postgraduate studies wants to buy a new Printer.
- For this reason Secretary gives a purchasing order by filling purchasing order forms.
- Next slide shows how this purchasing request process flow was works

1-9

## New Printer Purchasing Process

1. Purchase order form for a new printer
2. Dean of School Confirmation
3. Purchase order document sent to University Account Office
4. Account Office Secretary sents the purchase order to the Responsibles
5. Purchase order- Responsible personal Confirmation
6. Purchasing department- Manager Confirmation

1-10

7. Transfer to Finance Department Secretary for processing
8. Finance Department Responsible's Confirmation
9. Transfer to Registrar's Office
10. Registrar's Secretary- Confirmation
11. Confirmation Transfer, to Purchase Department Secretary
12. Purchase Responsible personal commends with Purchase:

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**Example: CBU**

Transfer to Accounting Office

Transfer to Finance Departmen

Transfer to Manager

Transfer to Accounting Office

**Secretary's New printer application**
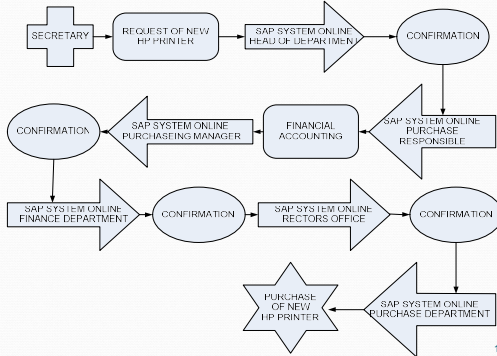
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## Companies after ERP Systems

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## Example with ERP

- SGS wants to buy a new HP Printer.
- For this reason Secretary gives a purchasing order with using CBU. Online SAP (Systems, Applications and Products in Data Processing) ERP system.
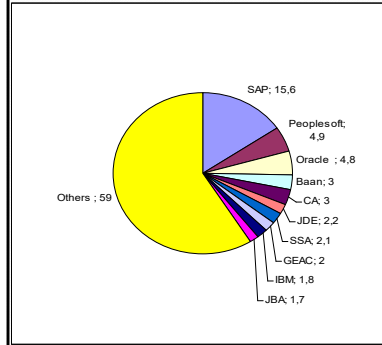- Next slide shows the purchasing order process flow with ERP Systems.

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## CBU After ERP Systems

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## ERP Software Companies & Marketshares



| Software | Market Share |
|----------|--------------|
| SAP | 15.6 |
| Peoplesoft | 4.9 |
| Oracle | 4.8 |
| Baan | 3.0 |
| CA | 3.0 |
| JDE | 2.2 |
| SSA | 2.1 |
| GEAC | 2.0 |
| IBM | 1.8 |
| JBA | 1.7 |
| Others | 59.0 |

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## Benefits and Challenges of Enterprise Systems

- Enterprise systems promise to integrate the diverse business processes of a firm into a single integrated information architecture but they present major challenges.
- **Benefits of Enterprise Systems**
  - Enterprise systems promise to greatly change four dimensions of business:

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## Benefits of Enterprise Systems

- Firm Structure and Organization: One Organization
  - Companies can use enterprise systems to support organizational structures that were not previously possible or to create a more disciplined organizational culture.

## Benefits of Enterprise Systems

- Management
  - Firm wide Knowledge-based Management Process
  - In addition to automating many essential business transactions, such as taking orders, paying suppliers, or changing employee benefit status,
  - enterprise systems can also improve management reporting and decision making.

1-19

## Benefits of Enterprise Systems

- Technology:
  - Unified Platform Enterprise systems promise to provide firms with a single, unified, and all-encompassing information system technology platform and environment.
  - Enterprise systems promise to create a single, integrated repository that gathers data on all the key business processes.

1-20

## Benefits of Enterprise Systems

- Business:
  - More Efficient Operations and Customer-driven Business Process Enterprise systems can help create the foundation for a customer-driven or demand organization.
  - By integrating discrete business processes such as sales, production, finance, and logistics, the entire organization can efficiently respond to customer requests for products or information, forecast new products, and build and deliver them as demand requires.

1-21

## The Challenge of Enterprise Systems

- Although enterprise systems can improve organizational coordination, efficiency, and decision making, they have proven very difficult to build.
- Employees must take on new job functions and responsibilities.
- Enterprise systems require complex pieces of software and large investment of time, money, and expertise.

1-22

## The Challenge of Enterprise Systems

- Daunting Implementation:
  - Enterprise systems bring dramatic changes to business.
  - They require not only deep-seated technological changes but also fundamental changes in the way the business operates.

1-23

## The Challenge of Enterprise Systems

- High Up-front Cost and Future Benefits
  - The costs of enterprise systems are large, up-front, highly visible, and often politically changed.
  - Although the costs to build the system are obvious, the benefits often cannot be precisely quantified at the beginning of an enterprise project.

1-24

4

## The Challenge of Enterprise Systems

- Inflexibility
  - Enterprise system software tends to be complex and difficult to master, with a worldwide shortage in people with the expertise to install and maintain it.
  - The software is deeply intertwined with corporate business.

## The Challenge of Enterprise Systems

- Realizing Strategic Value
  - Companies may also fail to achieve strategic benefits from enterprise systems if integrating business processes using the generic models provided by standard ERP software prevents the firm from using unique business processes that had been sources of advantage over competitors.

## Extended enterprises and industrial network

- In some industries, companies are extending their enterprise systems beyond the boundaries of the firm to share information and coordinate business processes with other firms in their industry.
- Industry networks, which are sometimes called extended enterprises, link together the enterprise systems of firms in an entire industry.

## Extended enterprises and industrial network

- There are two kinds of industrial networks.
- Vertical industrial networks integrate the operations of the firm with its suppliers and can be used for supply chain management.
- Horizontal industrial networks link firms across an entire industry including competitors.