

# Enterprise Resource Planning



**Presented by**

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# Enterprise Resource Planning (ERP) System



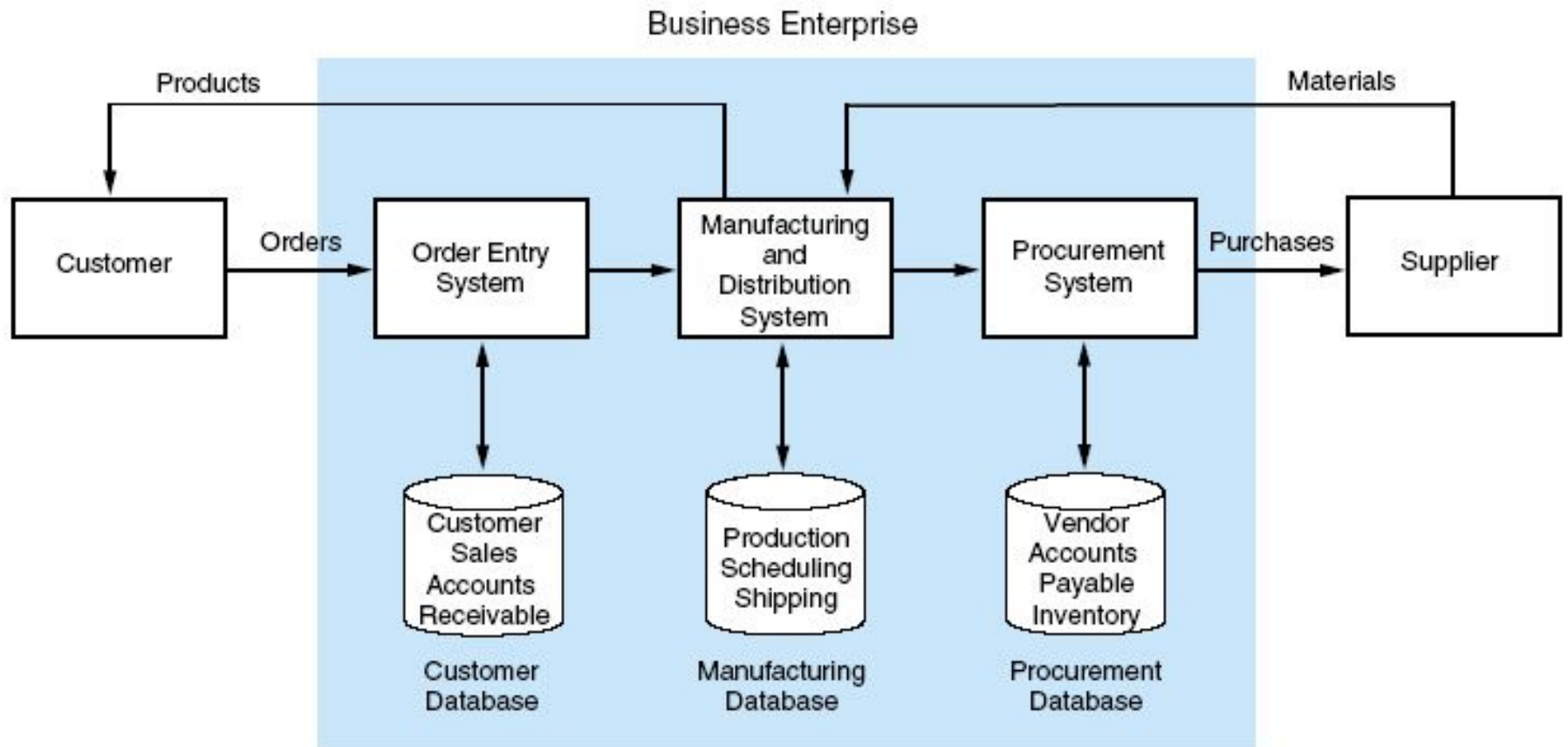
- An ERP system is a commercial software package
- enables a company to integrate the data used throughout the entire organization.
- An ERP system is an attempt to integrate **all functions** to a single computer system that can serve all those functions' specific needs.
- Use of software to create an automated plan company operations
- ERP goal -- enhance communication among all departments and divisions through software automation

# Traditional IS Model: Closed Database Architecture

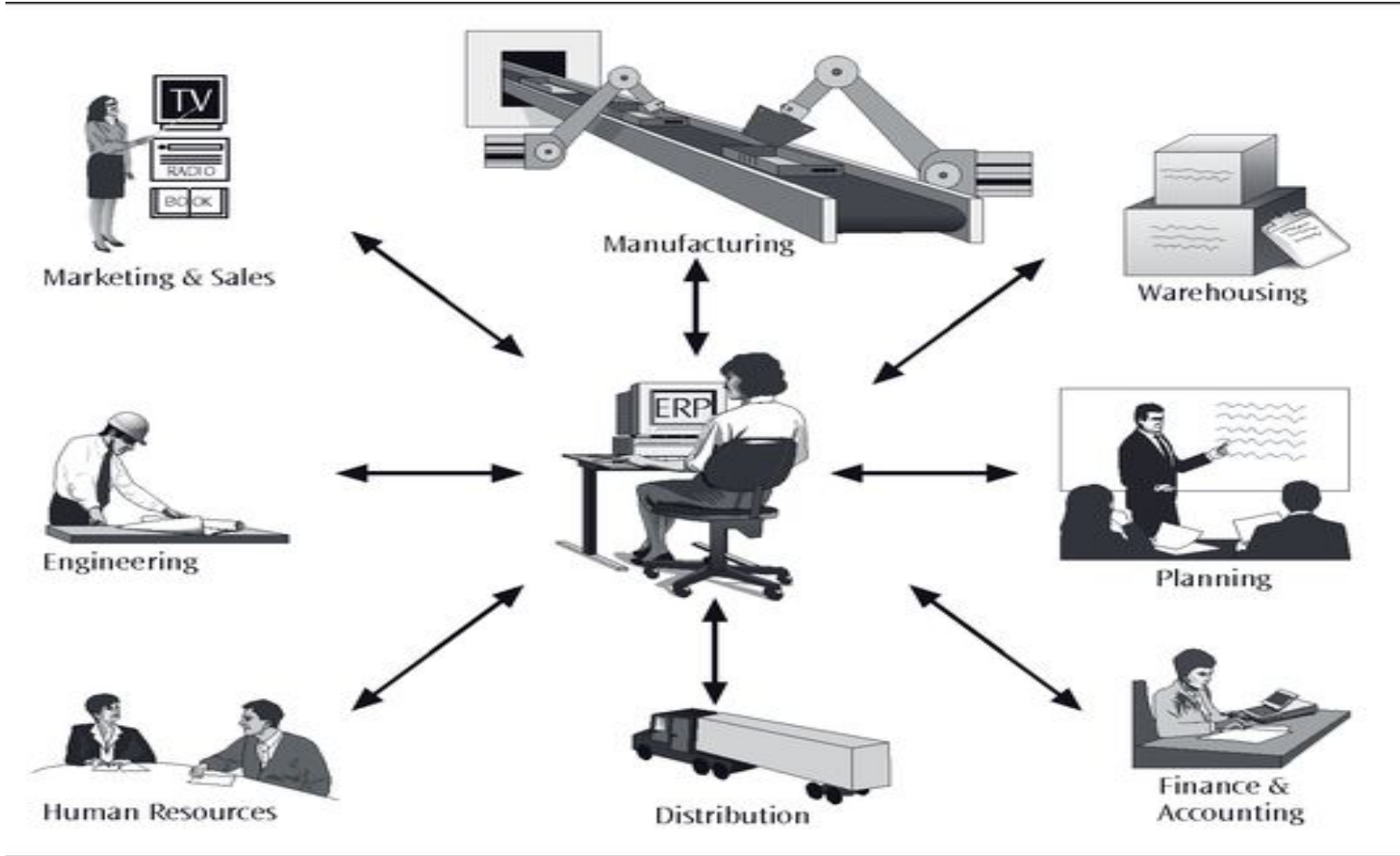


- Similar in concept to flat-file approach
  - data remains the property of the application
  - fragmentation limits communications
- Existence of numerous distinct and independent databases
  - redundancy and anomaly problems
- Paper-based
  - requires multiple entry of data
  - status of information unknown at key points

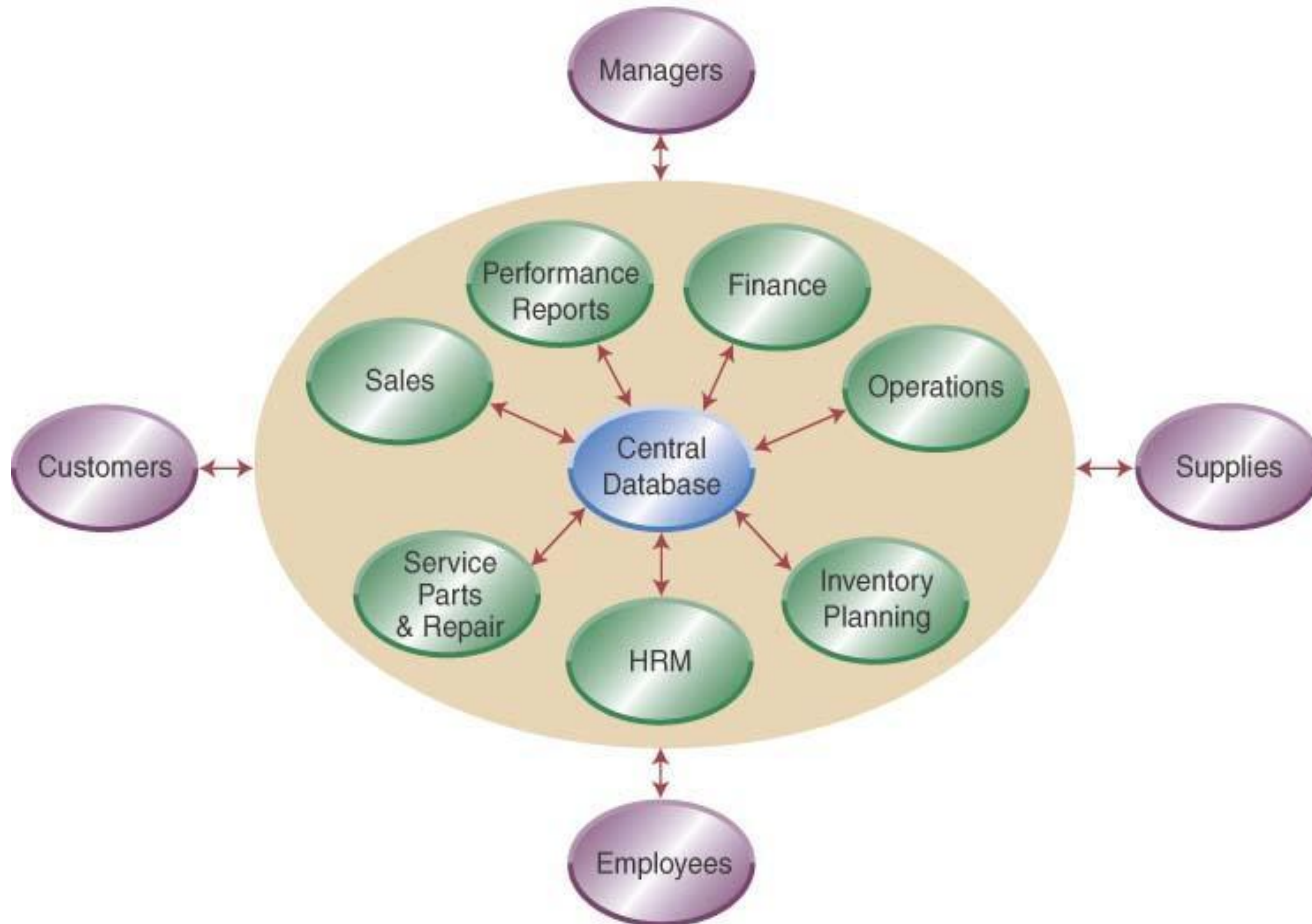
# Traditional IS Model: Closed Database Architecture



# What is an ERP System



# Integration of ERP



# Major Reasons for adopting ERP System



- Integration
  - customers and suppliers
  - database and custom-designed report systems
  - financial information
  - customer order information
- speed up operations processes
- Allows automation and integration of business processes
- Enables data and information sharing
- Overcomes inefficiencies of independent systems
- Integrated data supports multiple business functions

# ERP System





# ERP

Many companies with ERP use e-commerce

E-commerce needs to interface with ERP



# Information Fragmentation



- Information is spread across numerous separate computer systems, each housed in individual function, business unit, region or office.
- results in redundant data, need for reentering or reformatting data, etc.

# Information Integration



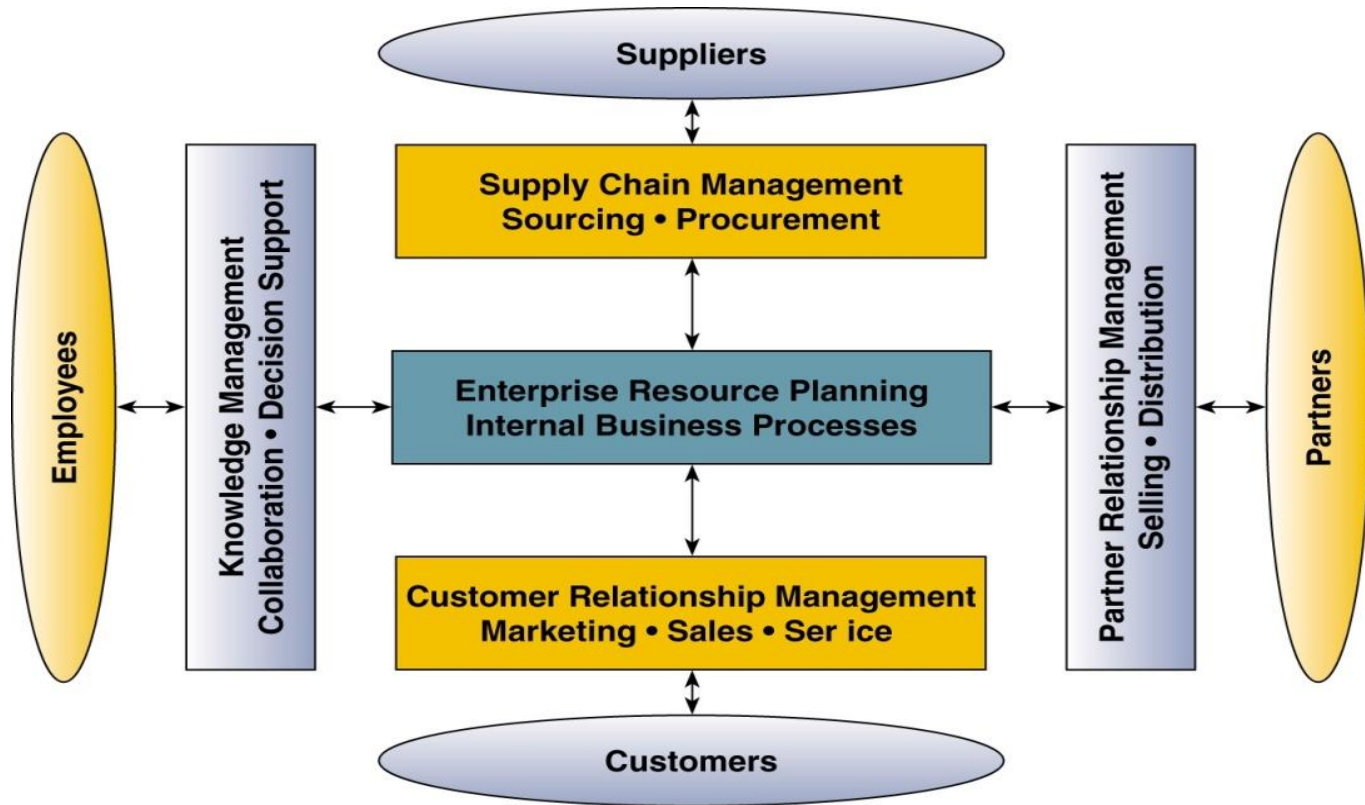
- At the core of an ERP software system - a single comprehensive database - streamlines the flow of information throughout the business.
- The database collects data from and feeds data into modular applications and supports virtually all business activities.

# ERP Software Modules



- Financials
- Human Resources and Pay Roll
- Distribution/Logistics
- Sales & Marketing
- Manufacturing
  - Product Data Management
  - Material Planning
  - Resource Planning
  - Shop Floor Management
  - Quality Management, etc.

# ERP, CRM, SCM



# Examples of ERP Packages



- OneWorld, JD Edwards - [www.jdedwards.com](http://www.jdedwards.com)
  - BaanERP, BAAN - [www.baan.com](http://www.baan.com)
  - Oracle - [www.oracle.com](http://www.oracle.com)
  - PeopleSoft - [www.peoplesoft.com](http://www.peoplesoft.com)
  - SAP's R/3, SAP - [www.sap.com](http://www.sap.com)
- (System, Applications, and Products in data processing)

# Vendors



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# ERP Implementation



## ERP systems

- often require companies to modify some of their processes to accommodate the software
- can take a long time to implement.
- some of these modifications may not be acceptable to the company.



# Benefits of ERP Systems



- Automated update of related information when new information is entered in one module.
- Easy-to-install and relatively inexpensive ERP modules
- Don't force a company to change its operations to suit the software
- Gains in productivity and speed.
- Improves operating performance
  - Maximizes information throughput
  - Provides timely information

# Potential Benefits of ERP



- Internal Benefits
  - Integration of a single source of data
  - Common data definition
  - Increased productivity
  - Reduced operating costs
  - Improved internal communication
  - Foundation for future improvement

● .

# Potential Benefits of ERP

contd..

- External Benefits

Improved customer service and order fulfillment

Improved communication with suppliers and customers

Enhanced competitive position

Increased sales and profits

# History and Evolution of ERP



- 1960s – software packages with inventory control
- 1970s - Material Requirements Planning (MRP)  
(Planning and scheduling of materials)
- 1980s – MRP II systems (adds financial accounting system)
- 1990s – MRP II (Integrated systems for manufacturing execution)
- Late 1990s – ERP (dealing with the entire range of company activities)
- Today – ERP/SCM/e-strategy (Synchronizing supply chain planning)

# ERP Implementation Approaches

- The big bang – install a single ERP system across the entire organization
- Franchising – Independent ERP systems are installed in different units linked by common processes, e.g., bookkeeping.
- Phased – install one or several ERP modules for phased implementation of key business processes.

# Implementation Strategies

contd..

- Big bang
  - Cutover approach
    - Rapid
    - Requires many resources
    - Small firms can employ
- Mini big bang
  - Partial vendor implementation
- Phased by module
  - Module-by-module
  - Good for large projects
- Phased by site
  - Location-based implementation

# ERP – Options



- **OPTION 1 – MAKE [Using Internal resources]**  
Developing a custom-built ERP package, specific to the requirements of the organization, with the help of the in-house IT department
- **OPTION 2 – BUY**  
Going for Tailor-made ERP packages available in the market like SAP, Oracle applications, Baan, PeopleSoft etc.
- **OPTION 3 – MAKE [using External resources]**  
Developing a custom-built ERP package, specific to the requirements of the organization, with the help of a software solution provider

# Major Challenges to ERP Implementation



- Inconsistency with existing business processes
- Costs - implementation (hardware, software, training, consulting) and maintenance
- Impact on organizational structure (front office vs. back office, product lines, etc.)
- Changes in employee responsibilities
- Flexibility of software system upgrades
- Limited technical support



# Major Challenges to ERP Implementation contd..



- Implementation timelines
- Implementation strategy and execution
- Availability of internal technical knowledge and resources
- Education and training
- **Resistance to change**
- Company may implement only certain modules of entire ERP system
- need an outside consultant

# New Developments In ERP



- Availability of web-based and wireless ERP systems
- Adoption of easy-to-install ERP systems
- Linkage to other software systems, e.g., supply chain management system, e-commerce, customer relationship management system

## How is ERP different from MIS?



### MIS:

- Provides information about the performance of an organization.
- Provides management with feedback.

## How is ERP different from MIS?

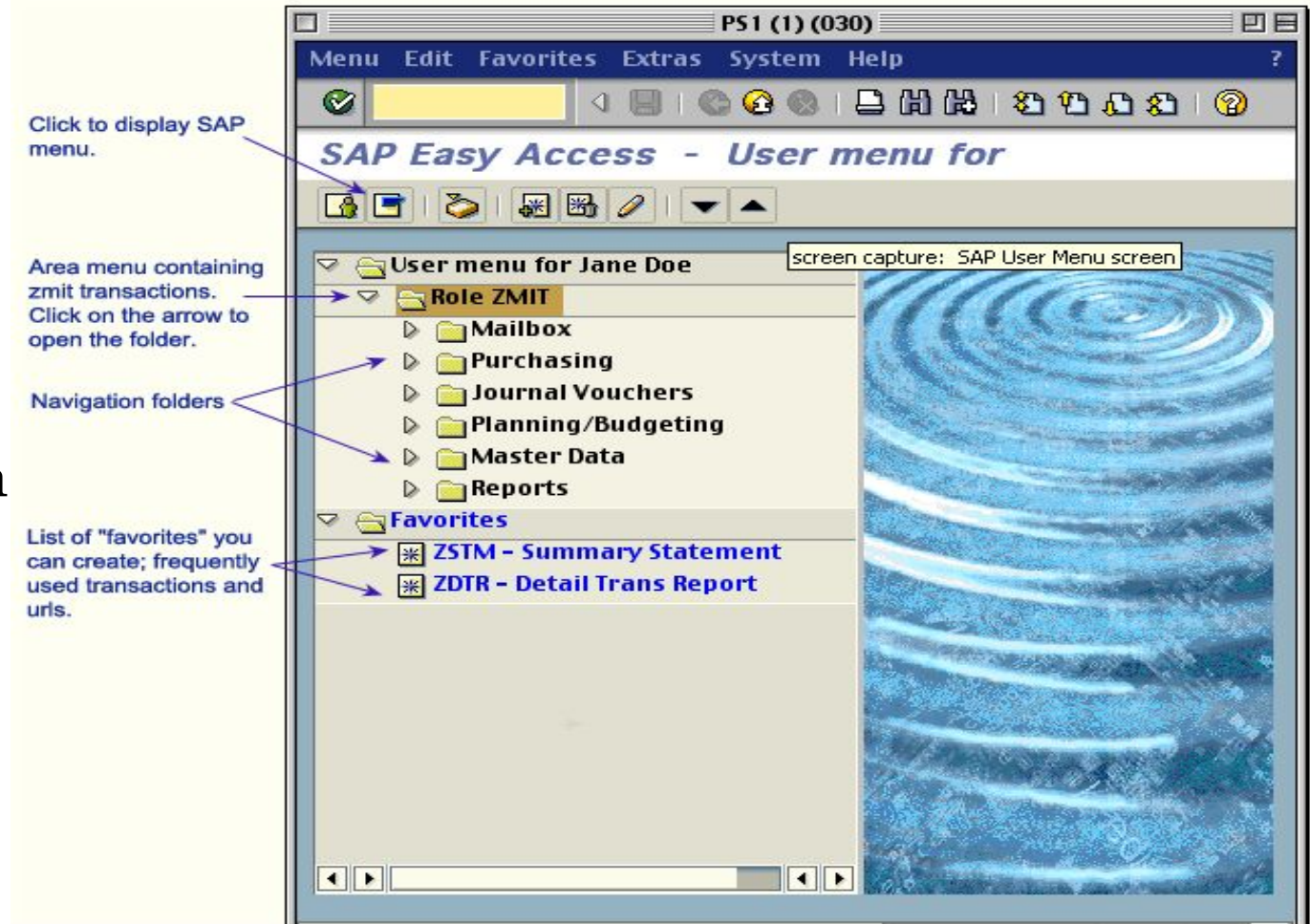


### ERP:

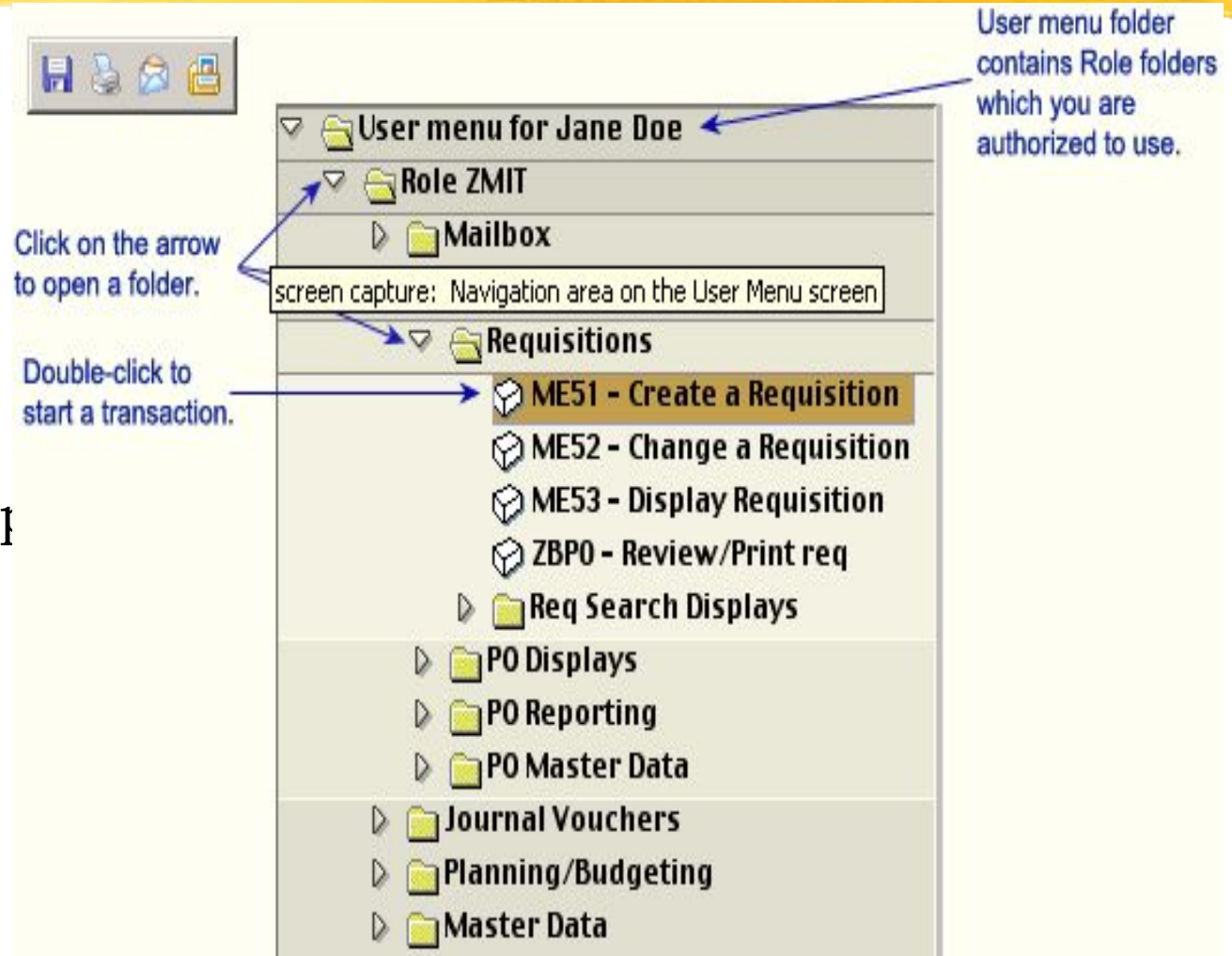
- Integrates ALL functions of a business into a unified system including information from a MIS.
- MIS is a part of the ERP system as a whole.

# The user view of an ERP:

- Login screen



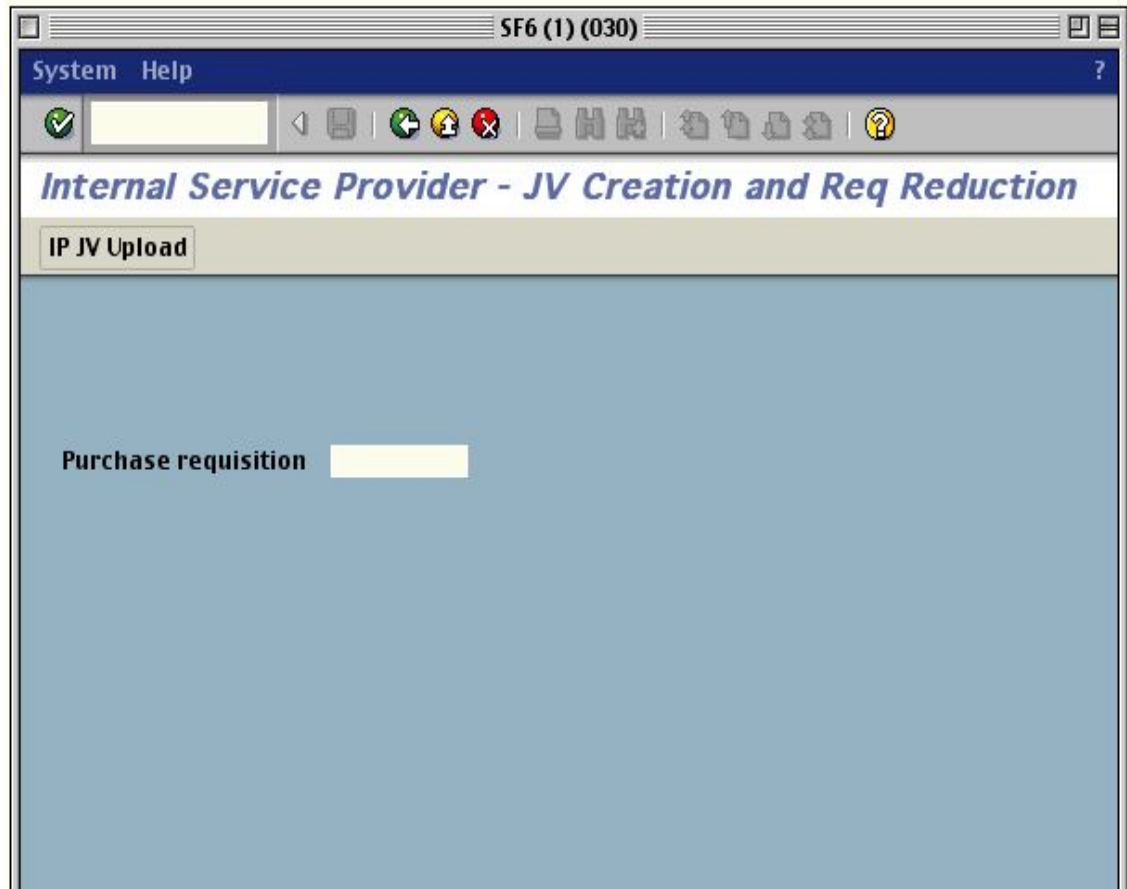
# The user view of an ERP:



- Choose your option

# The user view of an ERP:

- Create a requisition



# Summary



- ERP systems can improve the effectiveness of organizations through automation and integration of business processes
- ERP systems allow data and information sharing across the organization
- Departmental benefits include increased efficiency, faster design and production, and accuracy
- Implementing an ERP system helps the organization obtain and maintain a competitive advantage
- ERP Systems are not an IT solution but a system that would transform the company into a more efficient and effective organization.





*Thank  
You*