INTRODUCTION TO ENTERPRISE SYSTEM

ISH1B3 • ENTERPRISE SYSTEM

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TELKOM UNIVERSITY • SCHOOL OF INDUSTRIAL AND SYSTEM ENGINEERING • INFORMATION SYSTEM
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PREVIOUS WEEK REVIEW

1. How do Data differ from Information?
2. What is Information System?
3. Explain the role of information system in organization as well as in business function!
4. Explain what is Functional Silos and the limitation that its brought to the organization!
5. Describe the evolution of information system.
6. Mention both benefit and limitation of system integration.

OBJECTIVES

At the end of the class, you should understand:

- What is Enterprise System
- Evolution of Enterprise System
- Role of Enterprise System in Business
- Benefit and Limitation of Enterprise System
- Enterprise System Vendor
- Enterprise System Module

WHAT IS ENTERPRISE SYSTEM?

Lets check out the video

WHAT IS ENTERPRISE SYSTEM?

- Enterprise System is comprehensive software application (integrated information systems) that support critical organization functions such as accounting, financial, marketing, and production.
- This allows for real-time data flows between the functional applications.
- Enterprise Resource Planning (ERP) systems are the first generation of enterprise systems whose goal was to integrate data across and be comprehensive in supporting all the major functions of the organization.

WHY ERP IS IMPORTANT?

Lets check out the video again

EVOLUTION OF ENTERPRISE SYSTEM

Timeline	*System*	*Platform*	*Description*
1960s	Inventory Management & Control	Mainframe legacy using third generation software (e.g., Cobol, Fortran)	With a focus on efficiency, these systems were designed to manage and track inventory of raw materials and guide plant supervisors on purchase orders, alerts, targets, providing replenishment techniques and options, inventory reconciliation, and inventory reports
1970s	Material Requirement Planning (MRP)	Mainframe legacy using third generation software (e.g., Cobol, Fortran)	With a focus on sales and marketing, these systems were designed for job-shop scheduling processes. MRP generates schedules for production planning, operations control, and inventory management
1980s	Manufacturing Requirements Planning (MRP II)	Mainframe legacy using fourth generation database software and manufacturing applications	With a focus on manufacturing strategy and quality control, these systems were designed for helping production managers in designing production supply chain processes—from product planning, parts purchasing, inventory control, and overhead cost management to product distribution.
1990s	Enterprise Resource Planning (ERP)	Mainframe or client–server using fourth generation database software and package software application to support most organizational functions	With a focus on application integration and customer service, these systems were designed for improving the performance of the internal business processes across the complete value-chain of the organization. They integrate both primary business activities like product planning, purchasing, logistics control, distribution, fulfillment, and sales; additionally, they integrate secondary or support activities like marketing, finance, accounting, and human resources.

EVOLUTION OF ENTERPRISE SYSTEM

Timeline	*System*	*Platform*	*Description*
2000s	Extended ERP or ERP II	Client–server using Web platform, open source and integrated with fifth generation applications like SCM, CRM, SFA. Also available on Software as a Service (SaaS) environments	With a focus on agility and customer-centric global environment, these systems extended the first generation ERP into interorganizational systems ready for e-business operations. They provide anywhere anytime access to resources of the organization and their partners; additionally, they integrate with newer external business modules such as supply chain management, customer relationship management, sales force automation (SFA), advanced planning and scheduling (APS), etc.

ROLE OF ENTERPRISE SYSTEM IN BUSINESS

- to make the information flow dynamic and immediate, therefore increasing the usefulness and value of the information.
- acts as a central repository eliminating data redundancy and adding flexibility.
- increase customer access to products and services
- reduce operating costs
- respond more rapidly to a changing marketplace
- extract business intelligence from the data
- to integrate departments and functions across an organization onto a single infrastructure that serves the needs of each department.
- to better position the organization to change its business processes
- improve efficiency and effectiveness of the organizations' business processes.

BENEFIT AND LIMITATION OF ENTERPRISE SYSTEM

*The **system** benefits and limitations of ERP systems*

Benefits	*Limitations*
Integration of data and applications across functional areas of the organization. This means data can be entered once and used by all applications in the organization, improving accuracy and quality of the data.	Data conversion and transformation from an old to a new system can be extremely tedious and complex process.
Consistency of the user interface across various applications means less employee training, better productivity, and cross-functional job movements.	Consolidation of IT hardware, software, and people resources can be cumbersome and difficult to attain.
Maintenance and support of the system improves as the IT staff is centralized and is trained to support the needs of users across the organization.	Retraining of IT staff and personnel to the new ERP system can produce resistance and reduce productivity over a period of time.
Security of data and applications is enhanced due to better controls and centralization of hardware, software, and network facilities.	Complexity of installing, configuring, and maintaining the system increases, thereby requiring specialized IT staff, hardware, network, and software resources.

BENEFIT AND LIMITATION OF ENTERPRISE SYSTEM

*The **business** benefits and limitations of ERP systems*

Benefits	*Limitations*
Agility of the organization in terms of responding to the changes in the environment for growth and maintaining its market share in the industry.	Change of business roles and department boundaries can create upheaval and resistance to the new system.
Linking and exchanging information in real time with its supply-chain partners can improve efficiency and lower costs of products and services.	Retraining of all employees with the new system can be costly and time consuming.
Efficiency of business processes are enhanced due to business process reengineering of organization functions.	High initial costs of purchasing software, consultant costs, and disrupting the work flow of employees.
Quality of customer service is better and quicker as information flows both up and down the organization hierarchy and across all business units.	To a degree, the company implementing vanilla (as-is) ERP may lose its competitive advantage when all businesses have the same standardized business processes.
Sharing of information across the functional departments means employees can collaborate easily with each other and work in teams.	
Reduction in cycle time in the supply-chain from procurement of raw materials to production, distribution, warehousing, and collection.	

ENTERPRISE SYSTEM VENDOR

SAP

- Founded in 1972, SAP is the recognized leader among ERP vendors
- SAP is headquartered in Walldorf, Germany
- Its solutions are for all types of industries and for every major market
- Its products include mySAP Business Suite, SAP NetWeaver, and solutions for small and midsize companies (e.g., SAP Business One and SAP All-in-One)

ORACLE/PEOPLE SOFT

- Oracle is headquartered in Redwood Shores, California.
- the first software company to develop and deploy 1.00 percent Internet-enabled enterprise software across its entire product line, which includes databases, business applications, and application development and decision support tools.

ENTERPRISE SYSTEM VENDOR

MICROSOFT DYNAMICS

- Formerly Microsoft Business Solutions or Great Plains, Microsoft Dynamics is a comprehensive business-management solution built on the Microsoft platform.
- MD integrates finances, e-commerce, supply chain, manufacturing, project accounting, field service, customer relationships, and human resources.
- The key benefit of MD is that users across your organization can use skills and products that they already know (e.g., a web browser, Microsoft Office System products, and Microsoft SQL Server) to access and communicate information managed within the system.
- MD is easy to deploy and configure.

INFOR

LAWSON

SSA GLOBAL

EPICOR

ENTERPRISE SYSTEM MODULE

- **Production Module**

helps in the planning and optimizing of the manufacturing capacity, parts, components, and material resources using historical production data and sales forecasting.

- **Purchasing Module**

streamlines the procurement process of required raw materials and other supplies. It automates the processes of identifying potential suppliers, negotiating price, awarding purchase orders to the supplier, and billing processes.

- **Inventory Management Module**

facilitates the processes of maintaining the appropriate level of stock in a warehouse. Inventory control identifies inventory requirements, sets targets, provides replenishment techniques and options, monitors item usages, reconciles the inventory balances, and reports inventory status.

ENTERPRISE SYSTEM MODULE

- Sales and Marketing Module

support order placement, order scheduling, shipping, and invoicing. Also support lead generation, direct mailing campaigns

- Finance Module

gather financial data from various functional departments and generate valuable financial reports (e.g., budgets, balance sheet, general ledger, trail balance, and quarterly financial statements)

- Human Resource Module

streamlines the management of human resources and human capitals. Also routinely maintain a complete employee database, including contact information, salary details, attendance, performance evaluation, and promotion.

- Miscellaneous Module

some vendors have started offering such nontraditional modules as business intelligence, self-service, project management, and e-commerce.

ENTERPRISE SYSTEM MODULE

Function	*SAP Modules*	*Oracle/PeopleSoft Enterprise Modules*	*Microsoft Dynamics Modules*
Sales	Sales and Distribution, Sales Opportunity	Marketing and Sales, Supply Chain Management	Retail POS, Field Service Management
Procurement	Purchasing, Supplier Relationship Management	Procurement and Supplier Relationship Management	Supply Chain Management
Production	MRP, Product Life Cycle Management	Manufacturing	Manufacturing
Accounting	Financial Accounting	Financial Management	Financial Management
Distribution	Warehouse Management	Supply Chain Management	Distribution Management
Customer Services	CRM	CRM	CRM
Corporate Performance & Governance	Governance, Risk, and Compliance Management	Corporate Performance Management	Analytics
Human Resources	Human Capital Management,	Human Capital Management	HR Management
Miscellaneous	Banking	Campus Solutions	e-Commerce, Portals

QUIZ_1

- Topic: Basic theory of IS in organization; and Basic Concept of Enterprise System
- Format: Open book quiz
- Duration: 1 hour
- Consist of 3 questions:

  No.1 → 15

  No.2 → 20

  No.3 → 65 (1=20, 2=20, 3=25)