Chapter - 2.2

Categories of
Packaged Enterprise
Application Software [PEAS]

Categories of Application Software Packages

- ❖ Enterprise Resource Planning(ERP): ERP software is a cross-department, enterprise-wide package that provides an integrated set of functionality to user organizations. This is the most commonly used software, used by 70% of survey respondents.
- ❖ Customer Relationship Management(CRM):CRM Software addresses customer management functionality and is primarily used by customer-facing departments. CRM software has grown in popularity and is in use by 40% of the respondents.
- ❖ Supply Chain Management(SCM):SCM software supports the complex supply chain management function and is commonly deployed by manufacturing and other organizations reliant on third-party goods and services. SCM software is in use by 16% of the respondents

What is Enterprise Resource Planning?

- It is the means, techniques and concepts for integrated management of businesses as a whole from the view point of effective use of management resources to improve the efficiency of Enterprise management.
- ERP Packages are integrated (covering all business functions) software packages that support the ERP concepts.
- **ERP Software** is a mirror image of the major business processes of an organization, such as customer order fulfillment and manufacturing.
- **ERP integrates** all business functions into a single, integrated software program that runs on a single database, so that various departments can more easily share & communicate information
- The integrated approach of ERP has tremendous power and potential in improving the efficiency, productivity, and competitiveness of the organization.

Common Myths about ERP

- ERP Means more work and procedures
- ERP will make many employees redundant and jobless
- ERP is the sole responsibility of the management
- ERP is just for the managers / decision makers / ERP implementation team
- **ERP** is just **for manufacturing organizations**
- ERP slows down the organization
- **ERP** is **just to impress the customers**
- ERP package will take care of everything
- ERP is very Expensive
- Organizations can succeed without ERP

History of ERP

- Origins in the manufacturing Industry
- **❖ 1960's** Inventory management and control systems
- **❖ 1970's** Materials Requirements Planning [MRP]
- * 1980's Manufacturing Requirements Planning [MRP II]
- ❖ 1990's Enterprise Resource Planning [ERP]
- **❖ 21**st Century ERP II

Inventory management and control systems

- ❖ It is the combination of Information technology and Business processes of maintaining the appropriate level of stock in a warehouse.
- The activities of inventory management includes inventory requirements, setting targets, providing replenishment techniques and options, monitoring the item usages, reconciling the inventory balances, and reporting the inventory status.

History of ERP

Materials requirements Planning

- Outgrowth of Bill Of Material [BOM] processing
- Uses the Master Production Schedule [MPS] to
- find out what products are going to be manufactured
- Get the details of the materials required to make the products from BOM
- Searches the inventory records to find out what items are in the stock
- Calculates the items that need to be purchased for producing the goods.
- * MRP solves manufacturing and production planning problems and made manufacturing of goods easier.

History of ERP

Enterprise Resource Planning

- **ERP** is an enterprise wide set of forecasting, planning and scheduling tools which links customers and suppliers into complete supply chain.
- The goals of ERP includes high levels of customer service, improved productivity, cost reduction, better inventory turnover (Just-in-time inventory) etc.
- **ERP** is **more powerful** because
 - ti applies a single set of resource planning tools across the entire enterprise
 - Provides real time integration of sales, operating and financial data
 - Connects resource planning approaches to extended supply chain of customers and suppliers

Why ERP?

Why ERP....?

- **ERP** offers solutions to all business functions
- ❖ Packages available for all organizations of all sizes and types
- Global nature [Multi-lingual and Multi-currency support]

Over expectations about ERP. ? [one of the reasons for failure]

- Insufficient pre-implementation preparation
- Lack of awareness in the employees
- Lack of awareness among management about costs
- Wrong concepts about ROI and Payback period

Why ERP?

Successful ERP Implementations?

- Conduct GAP Analysis to find out company requirements and the processes
- Select experienced and professional consultants
- Select the right package
- Select employees with right attitude for implementation team
- Ensure that knowledge transfer happens between consultants and employees as well between vendors and employees

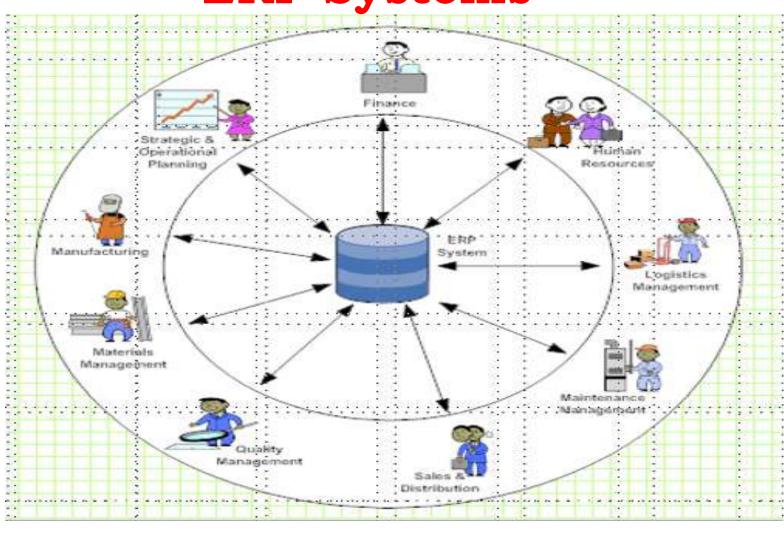
Reasons for the growth of ERP

- ERP improves Business performance, cycle time reduction, inventory reduction, faster response times, streamlined and faster order fulfilment.
- ERP supports business growth requirements like new products, product lines, customers, multiple language and multiple currency support.
- ERP provides flexible, integrated, real-time decision support
- ERP eliminates limitations in the legacy systems
- ERP takes the advantage of the untapped mid market of medium sized organizations

Advantages of ERP

- ❖ Business Integration: ERP packages integrates the information processing and automates data updating [Automatic data exchange between the applications] between related business components.
- Flexibility: Diverse multi national environments such as language, currency, accounting standards etc. are covered in one system, which makes the ERP systems flexible.
- ❖ Better analysis and planning capabilities: ERP systems enables the comprehensive and unified management of related businesses and its data which can be fully utilized by many types of DSS and simulation functions.
- ❖ Use of Latest Technology: ERP Vendors uses the latest developments in the field of IT. This Technology adoption benefits the organizations using the packages as they get better products and with better capabilities

Information Integration through ERP Systems



Tangible Benefits of ERP

- 1. Inventory reduction & Inventory carrying cost reduction
- Reduction of Lead time
- Personnel reduction
- 4. Cycle time reduction
- 5. Productivity improvements / management improvements
- 6. Financial close cycle reduction
- 7. IT cost reduction
- 8. Procurement cost reduction
- 9. Cash management improvements
- 10. Revenue / profit improvements
- 11. Reduced Quality costs
- 12. Improved resource utilization
- 13. Transportation / logistics cost reduction

Intangible Benefits of ERP

- 1. Information visibility
- 2. New and improved business processes
- 3. Customer responsiveness
- 4. Improved supplier performance
- Better customer satisfaction
- 6. Integration of business functions
- 7. Information integration
- 8. Improved information accuracy
- 9. Improved decision making capability
- 10. Standardization of business processes
- 11. Flexibility and business agility
- 12. Globalization of the organization
- 13. Better business performance

Limitations of ERP

- Managers cannot generate custom reports or queries without help from a programmer and this inhibits managers from obtaining information quickly so that they can act on it for competitive advantage
- 2. ERP systems provide current status only, such as open orders. Managers often need to look past status also to find the trends and patterns that aid better in decision making.
- 3. The data in ERP application is **not integrated with other enterprises or division systems and does not include external intelligence**

Enabling Technologies

Some of these technologies which when integrated with ERP system will enable the companies to do business at internet speed. The technologies used are

- 1. Business Process Reengineering
- 2. Data warehousing & Data marts
- 3. Data mining
- 4. OLAP Online Analytical Processing
- 5. PLM Product Life cycle Management
- 6. SCM Supply Chain Management
- 7. CRM Customer relationship management
- 8. GIS -
- 9. Intranets and Extranets
- 10. EDI & EFT

ERP VENDORS

- ❖ Vendors are the people who have developed ERP packages by investing huge amount of time and effort in research and development to create the packaged solutions
- Choosing a right vendor and right ERP package is one of the most critical task in ERP implementation.
- Vendor Selection Factors to be considered:
 - ❖ Track record, Quality of the product
 - Financial stability, longevity,
 - After sales service,
 - Contribution in implementation, training and maintenance
- Vendor should supply the **product** and **documentation** as soon as the contract is signed.
- Vendor should guide the company in using the tool and also responsible for fixing any problems

ERP VENDORS

Over 100 vendors globally

Major vendors

Lawson Healthcare

JDEdwards Internet www.jdedwards.com

OracleDatabase www.oracle.com

PeopleSoft HRM originally www.peoplesoft.com

– SAP German, pioneer of ERP

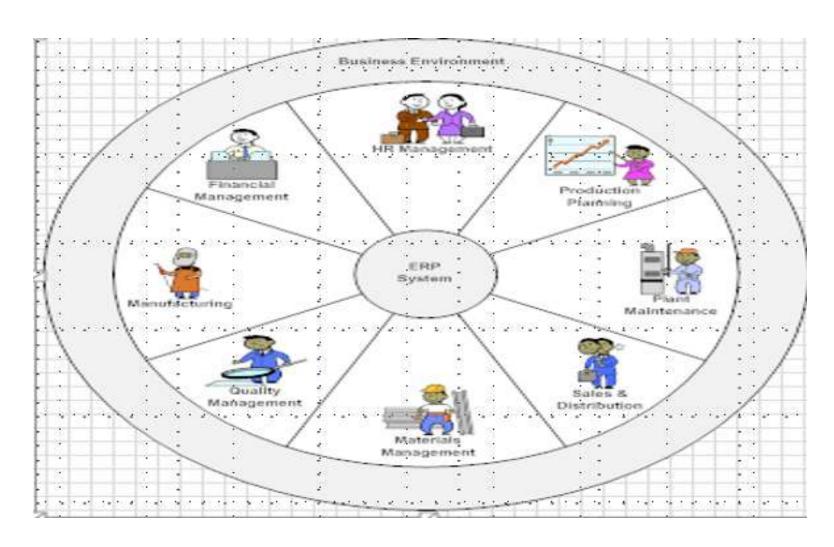
BAAN www.baan.com

Business Modules of ERP Packages

- The ERP systems help the management by making the planning process more productive and efficient
- All ERP packages contain many **modules**. The number and features of the modules varies with the ERP package.
- Some of the most important modules available in almost all packages are
 - 1. Finance module
 - 2. Materials management Module
 - 3. Manufacturing & production planning module
 - 1. Sales and Distribution Module
 - 2. Human resource management mo
 - 3. Quality Management Module



Business Modules of ERP Packages



Financial Management Module

- Provides **Financial functionality analysis** to support thousands of businesses across the globe.
- The Finance modules of most ERP systems have the following sub systems
 - **1. Financial Accounting** (General ledger, Accounts receivable/payable, Fixed Asset Accounting etc.)
 - 2. Investment Management (Investment planning / budgeting / calculation / depreciation forecast etc.)
 - **3. Treasury** (Cash management, market risk management, funds management etc.)
 - **4. Enterprise controlling** (EIS, Business Planning, profit center accounting etc.)

Human Resource Module

- Streamlines the management of human resources and human capitals.
- And Maintains complete employee database and advanced HR module is integrated with KMS to optimally utilize the expertise of all employees.
- The Human resource modules of most ERP systems have the following sub systems
 - **1. Personnel management:** (HR master data, IS, Recruitment, Salary administration etc.)
 - **2. Time management:** (Shift planning, work schedules, time recording, absence determination etc.)
 - **3. Personnel Development:** (Career and Succession planning, Qualification assessments, Additional training determination, event management etc.

Materials Management Module

- Facilitates the process of maintaining the appropriate level of stock in the warehouse.
- Activities of inventory control starts with identifying inventory requirements till reporting the inventory status.
- The main modules of materials management module includes
 - Pre-purchasing activities
 - Purchasing
 - ❖ Vendor Evaluation
 - Inventory management
 - Invoice verification
 - * material inspection etc.

Quality Management Module

- The Quality management module fulfills the following functions.
 - 1. Quality Planning: (management of basic data for quality planning and inspection planning etc.)
 - **2. Quality Inspections** (Trigger inspections, inspection processing, sample calculation, record results and defects, make the usage decision and trigger the actions)
 - **3. Quality Control:** (Application of statistical process control techniques using quality charts, Quality notic=fications, Initiating corrective actions, Quality management information system)

Customer Relationship Management



- CRM also known as Relationship Marketing
- It is an I.T based term for the methodologies, strategies, software and other web based capabilities used to help an enterprise to organize and manage customer relationships.
- It is a popular marketing system that is used to optimize the customer experience and improve marketing efficiency.
- The Goal of CRM is to aid the organizations in better understanding each customer's value to the company, while improving the efficiency and effectiveness of communication.
- It relies on **software tools and cross organizational work teams** for improvements in sales, service, marketing and support.

Goals of CRM

- The idea of CRM Is that it helps businesses to use **technology** and **human resources** to gain insight into the **behavior of customers** and the **value of those customers**.
- If it works as hoped, a business can
 - 1. Provide better customer service
 - 2. Make call centers more efficient
 - 3. Increase sales & helps sales staff close deals faster
 - 4. Discover new customers, increase customer revenues
 - 5. Increase automation of facilities
 - 6. Increase quality of information
 - 7. Improve the response time
 - 8. Improve customer targeting & customer retention

Functions of CRM

- CRM systems are integrated and end-to-end cross marketing, sales and customer service. A CRM system should
- Identify factors important to clients
- Promote a customer oriented philosophy
- Adopt customer based measures
- Develop end to end processes to serve customers
- Provide successful customer support
- Handle customer complaints
- Track all aspects of sales
- Create a holistic view of customer sales and services information

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Components of CRM

- There are three fundamental components of CRM
 - Operational Automation of basic business processes (Marketing, sales and service)
 - 2. Analytical Analysis of customer data and behavior using business intelligence
 - **3. Collaborative** communicating with clients

Components of CRM







Uses of CRM

- A good CRM program / package allows a business to acquire customers, customer services and retain valued customers.
- Customer services can be improved by
 - 1. Providing online access to product information and technical assistance round the clock
 - 2. Identifying customers value and devising appropriate service strategies for each customer
 - 3. Providing mechanisms for managing and scheduling follow up sales calls
 - 4. Identifying potential problems before they occur
 - 5. Providing a mechanism for **handling complaints and correcting service deficiencies**
 - 6. Storing customer interests in order to **target customers selectively**

Customer Relationship Management

Sales

Telephone sales

Web sales

Field sales

Retail sales

Marketing

Campaign data

Content

Data analysis

Customer Service

Call center data

Web self service data

Field service data

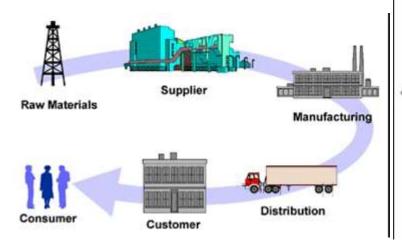
Wireless data

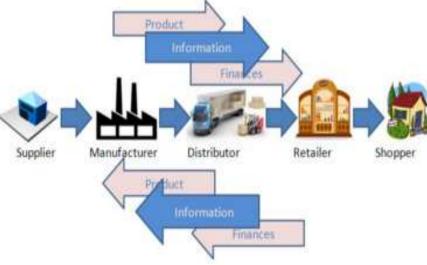
- Unified view of customers
- Consistent message to customers
- End-to-end customer care
- · Long-term customer relationships
- · Identification of best customers

Supply Chain Management [SCM]

- SCM is another 21st century business development that **involves** the collaboration of members of a supply chain to deliver the best value solution to the customer.
- Built on software applications, SCM relies on close partnerships between manufacturers, wholesalers and retailers.
- SCM is the oversight of materials, information and finances as they move in from the supplier to manufacturer to Distributer

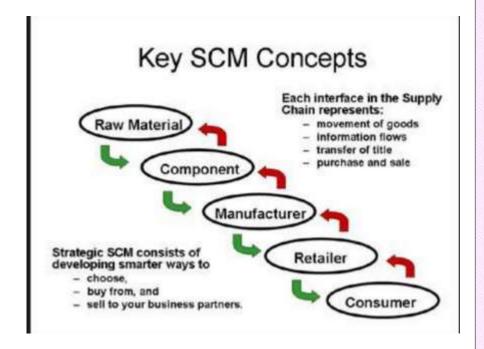
to retailer to customer.





Supply Chain Management [SCM]

- With better synchronization across the entire supply chain, the business partners achieve the following major benefits.
 - Lower inventories therefore lower financing costs
 - Faster response to market changes
 - Greater profitability
 - Optimal use of production resources etc.



Supply Chain Management [SCM] Capacity, inventory level, delivery schedule, payment terms Retail **Supplier** Manufacturer Distributor Customer Outlet Orders, return requests, repair and service requests, payments Suppliers' Suppliers' Suppliers' Suppliers Suppliers

Advantages of SCM

- SCM enables
 - ❖ Supply Chain Planning and collaboration: It enables to maximize return on assets and ensures a profitable match of supply and demand
 - ❖ Supply chain execution: SCM enables to carry out supply chain planning and generate high efficiency at lowest possible cost
 - ❖ Supply chain visibility design and analytics: SCM provides network wide visibility to perform strategic as well as Day-to-day Planning
 - ***** Business Benefits:
 - ❖ Faster response to the changes in supply and demand
 - Improved cash flow & Higher margins
 - Greater synchronization with business priorities