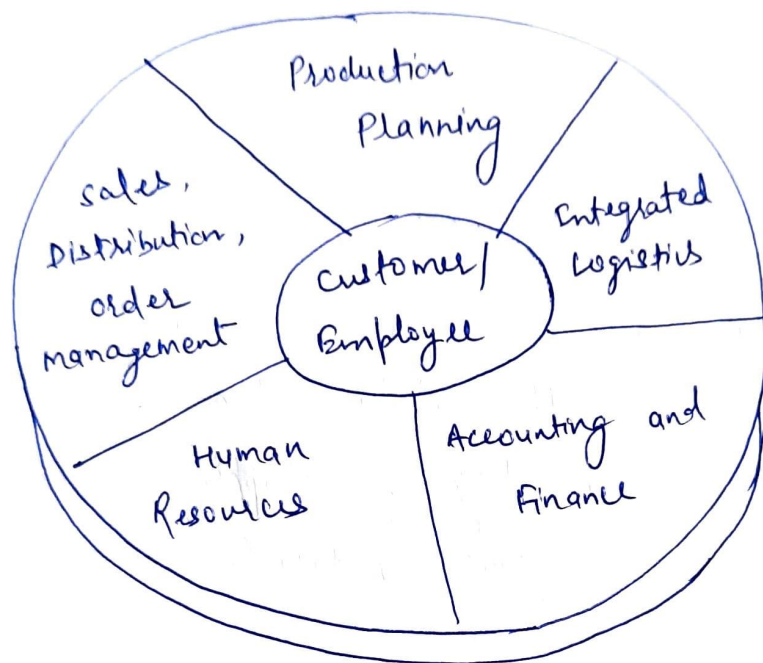


# Enterprise Resource Planning: The Business Backbone

(39)

- ERP is the technological backbone of e-business.
- An enterprisewide transaction framework with links into sales order processing, inventory management and control, production and distribution planning and finance.
- ERP is a cross-functional enterprise system driven by an integrated suite of software modules that supports the basic internal business processes of a company.
- For example, ERP software for a manufacturing company will typically process the data from and track the status of sales, inventory, shipping and invoicing as well as forecast raw material and human resource requirements.
- ERP gives a company an integrated real time view of its core business processes, such as production, order processing, and inventory management, tied together by the ERP application software and a common database maintained by a database management system.

- ERP systems track business resources (such as cash, raw materials, and production capacity) and the status of commitments made by the business (such as customer orders, purchase orders, and employee payroll), no matter which department (manufacturing, purchasing, sales, accounting, etc) has entered the data into the system.

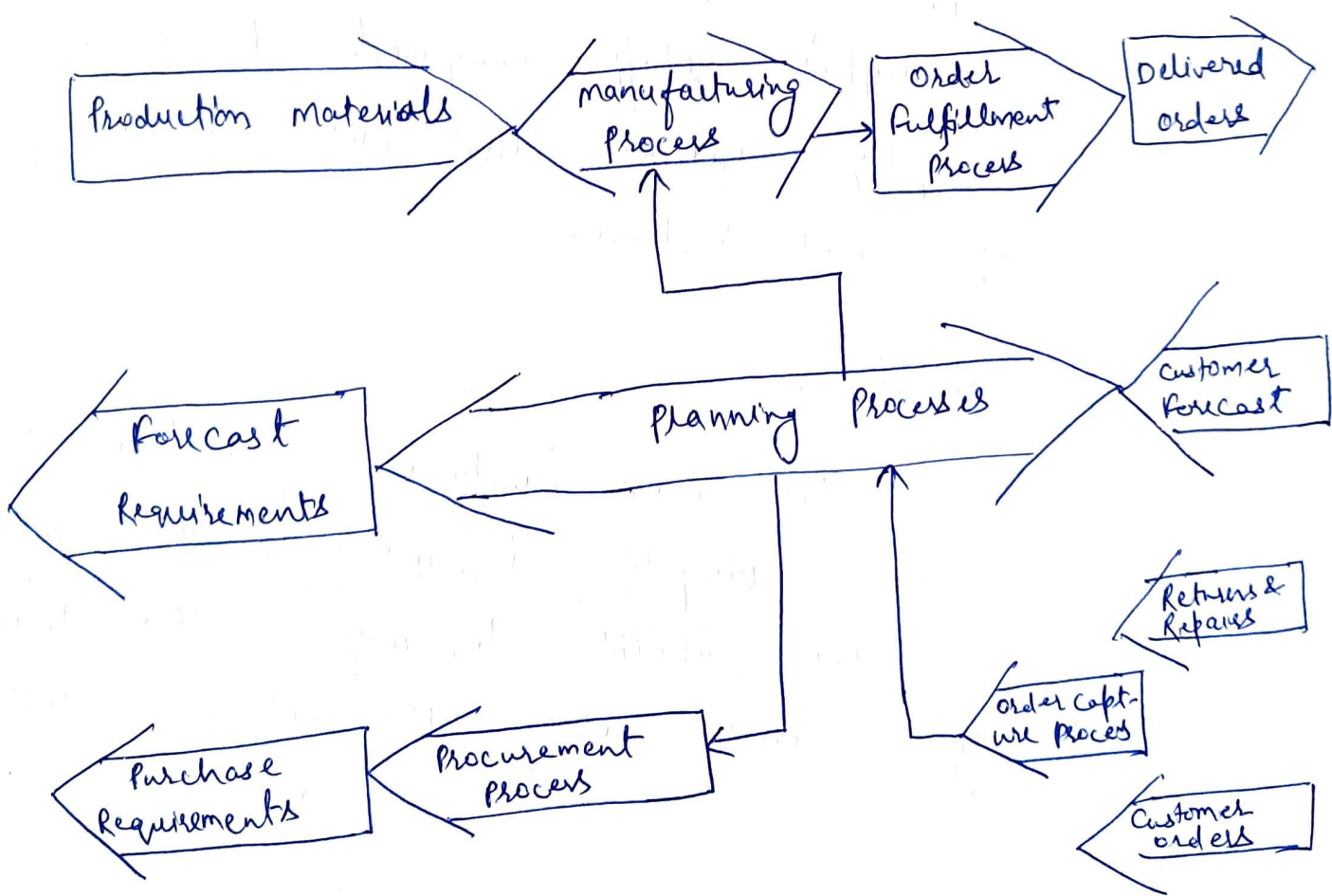


The major application components of enterprise resource planning demonstrate the cross-functional approach of ERP systems.

- ERP software suites typically consist of integrated modules of manufacturing, distribution, sales, accounting and human resource applications.
- Examples of manufacturing processes supported are material requirements planning, production planning and

# Capacity planning.

- some of the sales and marketing processes supported by ERP are sales analysis, sales planning and pricing analysis, while typical distribution applications include order management, purchasing, and logistics planning.
- ERP systems support many vital human resource processes, from personnel requirements planning to salary and benefits administration, and accomplish most required financial record-keeping and managerial accounting applications.



Some of the business process flows and customer and supplier information flows supported by ERP systems.



# Benefits and challenges of ERP

## (i) Quality and Efficiency →

• ERP creates a framework for integrating and improving a company's internal business processes that results in significant improvements in the quality and efficiency of customer service, production and distribution.

## (ii) Decreased costs →

• Many companies report significant reductions in transaction processing costs and hardware, software and IT support staff compared to the non-integrated legacy systems that were replaced by their new ERP systems.

## (iii) Decision support →

• ERP provides vital cross-functional information on business performance quickly to managers to significantly improve their ability to make better decisions in a timely manner across the entire business enterprise.

## (iv) Enterprise Agility →

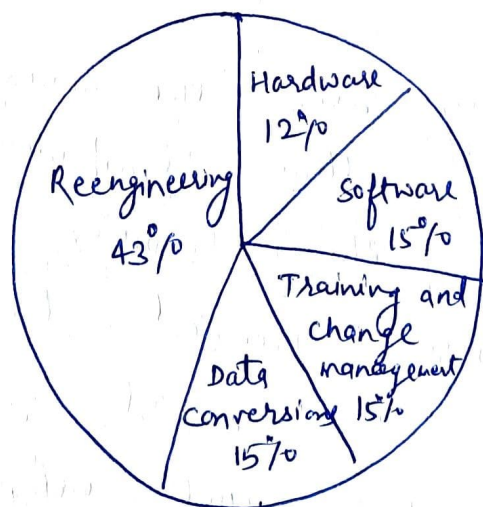
• Implementing ERP systems breaks down many former departmental and functional walls or "silos" of

less processes, information systems, and information sources.

- This results in more flexible organizational structures, managerial ~~responsibilities~~ responsibilities and work roles and therefore a more agile and adaptive organization and workforce that can more easily capitalize on new business opportunities.

## The Cost of ERP

- Hardware and software costs are a small part of total costs and that the costs of developing new business processes (reengineering)
- And preparing employees for the new system (training and change management) make up the bulk of implementing a new ERP system.



Typical Costs of implementing a new ERP system

- The costs and risks of failure in implementing <sup>ERP</sup> a new ERP system are substantial.
- Most companies have had successful ERP implementations, but a sizable minority of firms experienced spectacular and costly failures that heavily damaged their overall business.
- Big losses in revenue, profits and market share resulted when core business processes and information systems failed or did not work properly.
- In many cases, orders and shipments were lost, inventory changes were not recorded correctly and unreliable inventory levels caused major stock-outs to occur for weeks or months.

### Causes of ERP Failures

- In almost every case, the business managers and IT professionals of these companies underestimated the complexity of the planning, development, and training that were needed to prepare for a new ERP system that would radically change their business processes and information systems.



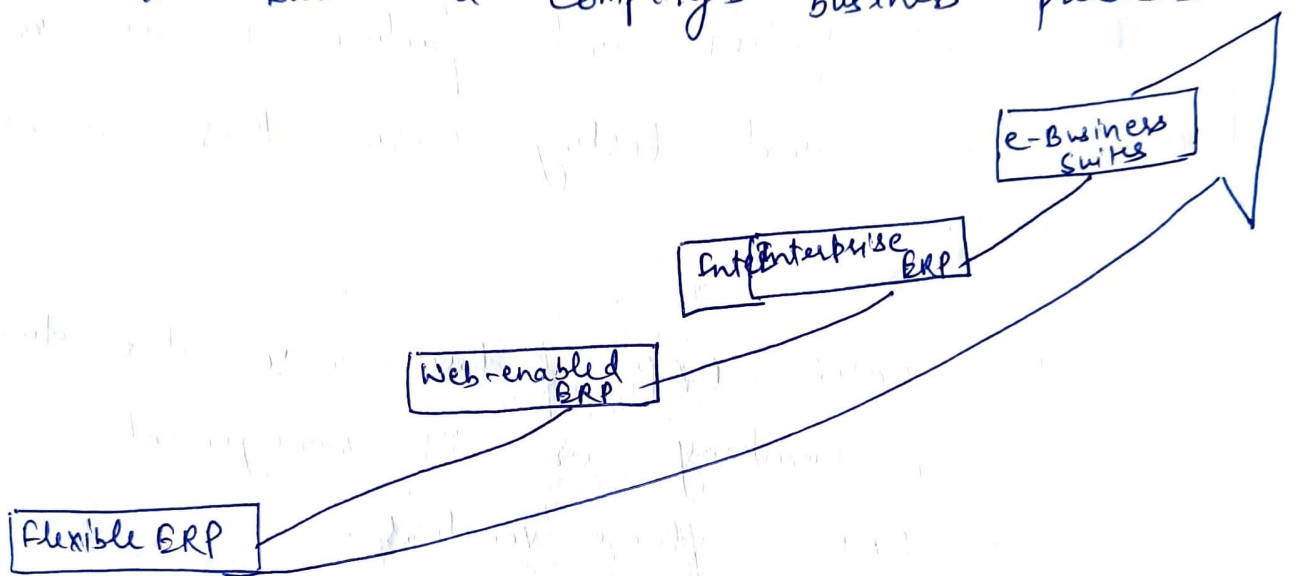
Failure to involve affected employees in the planning and development phases and to change management programs, or trying to do too much too fast in the conversion process were typical causes of failed ERP projects.

- Insufficient training in the new work tasks required by the ERP system and failure to do enough data conversion and testing were other causes of failure.
- In many cases, ERP failures were also due to overreliance by company or IT management on the claims of ERP software vendors.
- Or on the assistance of prestigious consulting firms hired to lead the implementation.

## Trends in ERP

- First - the ERP software packages that were the mainstay of ERP implementations in the 1990s and were often criticized for their inflexibility have gradually been modified into more flexible products.

- Companies who installed ERP systems pressured software vendors to adopt more open, ~~application~~ well flexible, standard-based software architecture.
- This makes the software easier to integrate with other application programs of business users, as well as making it easier to make minor modifications to suit a company's business processes.



Trends in the evolution of ERP applications.

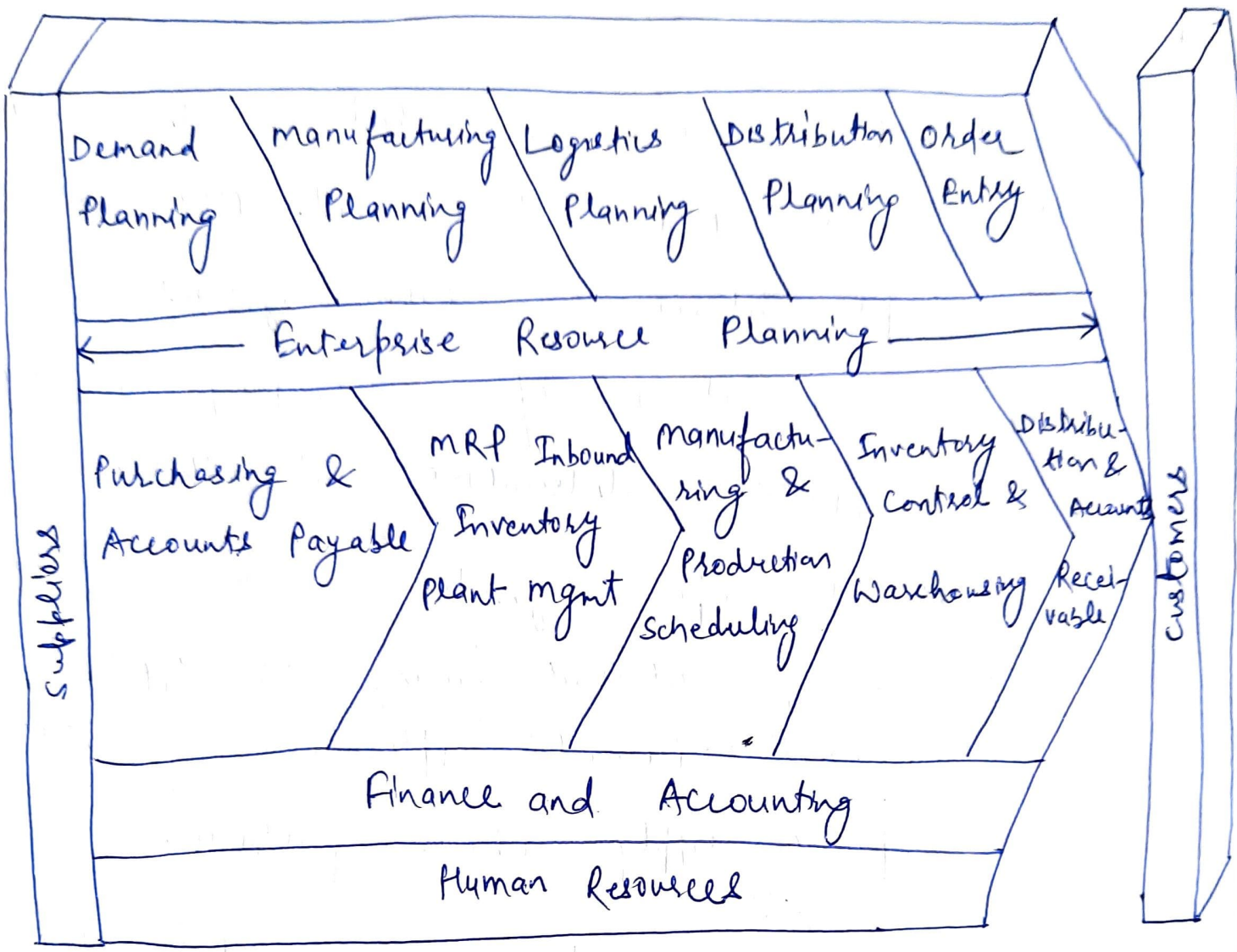
Web-enabled ERP software is a second development in the evolution of ERP.

- The growth of the internet and corporate intranets and extranets prompted software companies to use Internet technologies to build web interfaces and networking capabilities into ERP systems.
- These features make ERP systems easier to use



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can connect to other internal applications as well as to the systems of a company's business partners.

- This internet connectivity has led to the development of inter-enterprise ERP systems that provide web-enabled links between key business systems (such as inventory and production) of a company and its customers, suppliers, distributors and others.
- These external links signaled a move toward the integration of external-facing ERP applications with the external-focused applications of SCM and a company's supply chain partners.
- All of these developments have provided the business and technological momentum for the integration of ERP functions into e-business suites.
- The major ERP software companies have developed modular, web-enabled software suites that integrate ERP, CRM, SCM, procurement, decision support, enterprise portals and other business applications and functions.



The business processes and functions supported by the ERP systems implemented by the Colgate-Palmolive Company