

6

Strategic Initiatives for Technology

Syllabus

Customer Relationship Management : The evolution of CRM, functional areas of CRM, contemporary trends - SRM, PRM AND ERM, Future Trends of CRM

Enterprise Resource Planning : Core and Extended ERP; components of ERP system; Benefits and Risks of ERP implementation

Supply Chain Management : Meaning, definition, importance, and characteristics of SCM, Elements of SCM, Push & Pull supply chain model, Use of e-business to restructure supply chain, Supply chain management implementation

Procurement : Meaning and advantages of e –procurement, Types& Drivers of e- procurement, Components of e- procurement systems, Implementation of e- procurement Self-learning Topics: SEM and SEO E-CRM.

6.1 Customer Relationship Management (CRM)

- Customer Relationship Management (CRM) refers to the practices, strategic, and technologies that organizations use to manage and analyze customer interactions throughout the customer lifecycle.
- It is the strategy that enables the businesses to understand the customer, retain the customers, attract new customers, and decrease customer management cost.
- CRM is mainly focused on existing customer and potential customers.



6.1.1 The Evolution of CRM

- In this section, we will discuss CRM history and evolution, from its origins rooted in customer satisfaction evaluation, to its current existence as a multi-purpose enterprise tool used worldwide.
- Initially, there were door-to-door sales forces to approach the customers.
- Then, Mass marketing replaced the intimacy of a direct sales force.
- Later, Targeted marketing evolved. Use of direct mail and telemarketing.
- Latest is Customer Relationship Management, the next step in Evolution.
- Old marketing was transaction oriented, market share oriented, where all customers are equal, marketers sell..
- But new marketing is relationship oriented, where all customers are not equal, marketers' mange demand.
- **Database Marketing :** Initially started in the 1980s/90s, with database marketing which gave organizations the ability to organize personalized communications to group of customers based on gathered information about them.
- It used statistical modeling to manipulate data and personalize communications with customers.
- The initial systems were unorganized, not easy to track, and even hard to update.
- **Relationship marketing ;** relationship marketing has been viewed as a paradigm shift that has reshaped the field of marketing.
- Customer relationship marketing - The term "CRM" was first coined in the 1990's.
- Businesses started giving back to customers to help with interaction.
- Now CRM has increased presence in social media. Continues to provide better customer service. Increases customer revenue for businesses. More accessible with mobile technology.
- CRM has evolved from an unorganized system to a beneficial system.

6.1.2 Functional Areas of CRM

- CRM applications are a convergence of functional components, advanced technologies and channels. Functional areas are described as:
- **Sales applications :** Sales applications use software to streamline the sales process. The core of sales is a contact management system for tracking and recording every stage in the sales process for each prospective client, from initial contract to final disposition. Many sales applications also include insights into opportunities, territories, sales forecasts and workflow automation.
- **Marketing applications:** CRM systems for marketing track and measure campaigns over multiple channels, such as email, search, social media, telephone and direct mail. These systems track clicks, responses, leads, deals and revenue.
- **Customer service and support applications:** CRMs can be used to create, assign and manage requests made by customers, such as call center software which help direct customers to agents. CRM software can also be used to identify and reward loyal customers.
- **Small business:** For small businesses a CRM may simply consist of a contact management system which integrates emails, documents, jobs, faxes, and scheduling for individual accounts.
- **Social media:** Some CRMs coordinate with social media sites like Twitter, LinkedIn, Facebook and Google Plus to track and communicate with customers who share opinions and experiences about their company, products and services.

6.1.3 Contemporary Trends : SRM, PRM AND ERM

6.1.3(A) Supplier Relationship Management (SRM)

- In more and more markets it is no longer individual organizations that succeed but the supply chains in which they operate businesses and increasingly public sector and non-profit organizations can't survive in isolation.
- Organizations need to form strong alliances with partners up and down the supply chain and find innovative ways to serve their end customers better, faster, and cheaper.
- This is the reason and basis for supplier relationship management.
- SRM is the practice and process for interacting with suppliers.
- SRM is a way of working with company's critical and strategic suppliers to systematically identify opportunities to reduce cost, improve service and quality and innovate these opportunities are then run as projects with team members from both sides.



Benefits of SRM

- It eliminates waste and barriers to effective service contract set out what has been agreed between the buyer and seller in terms of what will be delivered and for what price in.
- Waste is created by inefficiencies like systems, processes, and ways of working.
- SRM identifies and finds ways to eliminate them.
- Build mutual dependency, the SRM process builds trust.
- SRM encourages investment.
- It increases capacity and capability to live for what the company needs.
- SRM also motivates suppliers to go the extra mile arm's length and adversarial supply relationships. Every problem that seems to belong to the supplier creates dissolution, disillusionment, and disinterest, resulting in a lack of motivation.
- SRM shared responsibility and builds trust and motivation.

6.1.3(B) Partner Relationship Management (PRM)

- PRM and CRM are quite similar in nature, both architecturally and in terms of their functionality. However, there are some fundamental differences between the two types.
- PRM is a discipline that embodies the principles and tactics of managing channel partners.
- PRM is a system of record for managing sales partners, designed to support broader areas required to engage, manage, and develop a network of sales partners.
- PRM is the term that classifies the business methodologies and even strategies used to control the functional relationship between you and your company's channel partners.
- Channel Management Software is the universal term for PRM.
- To manage partner relationships effectively, we need:
 - o Partners programs for recruitment, onboarding, training, incentives, demand generation, sales and more.
 - o Partner management processes so vendor teams know which forms to fill out, which approvals they need to secure, how to escalate processes for special pricing or incentives etc.
 - o Partner policies that clearly defining dos and don'ts in writing.

6.1.3(C) Employee Relationship Management (ERM)

- Like CRM, which uses data to engage a customer, ERM uses data to engage and make decisions on employees.
- It is the foundation of good management between a Manager and their Team.

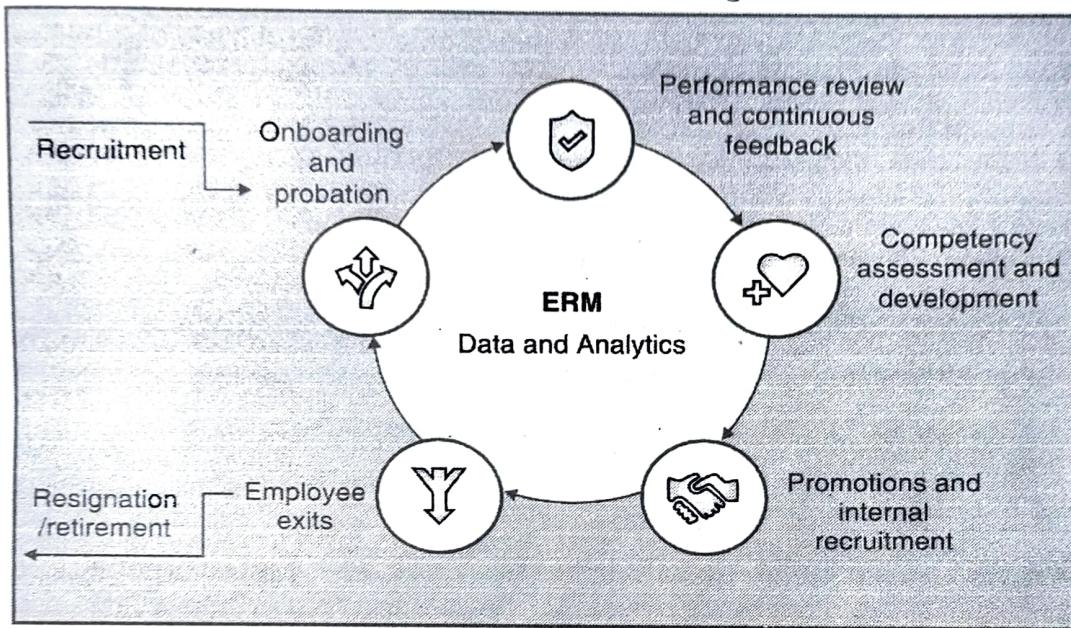


Fig. 6.1.1 : Employee Relationship Management (C/O Corel)

- ERM is not about recruitment and also it is not about exits and resignations. However, there is a case to be made for an alumni or an ongoing experience around maintaining an employer brand that's a little different from what ERM .
- ERM is kind of falls into a few categories number one after the job of recruitment is done. You have got great candidates to come through, you have interviewed those people then they have actually kind of go through a process of onboarding now onboarding else.
- ERM = Real-time Data & Analytics +Two-way Interaction (Manager and Employee) + Continuous Feedback + Manager Focuses on Performance and development.
- ERM and Employee Experience:
 - Digital onboarding : An employee centric digital onboarding. It makes things simple for the company and the new employee. It is not about getting things set-up, but about managing performance in the first few months.
 - Employee Engagement: It is replacing the annual survey, modern employees want continuous feedback.



- o Development, not 'thank you': Digital feedback is not about saying thanks, but being used for real improvement.
- o Culture: ERM shapes the company culture. Will able to find out whether technology giving employees freedom? Or making life harder?
- ERM and Performance Management :
 - o Performance Reviews : Employees own their data. Using ERM, data across performance goals, skills, and achievements is captured every month, quarter or year.
 - o Development Plans : ERM helps to measure and track skills and competencies of employees. This can be used for real development.
 - o Pay Planning : Using ERM, Employers can see all pay levels inside and outside of the company. It creates new level of transparency and benchmarking.
 - o Succession and Internal Recruitment ; Using ERM, the best candidate becomes clear.
- ERM and Data-Driven Appraisals :
 - o ERM uses an algorithm, to measure relationships, skills, role purpose , job suitability, promotion readiness.
 - o It generates reviews performed by the company customers and the team.
 - o It creates monthly reviews and not annual.
 - o ERM makes everything transparent to the company. Company can see employee data, rankings and team data.

6.1.4 Future Trends of CRM

- CRM is no longer used only for sales and support. It has now become a platform for the entire marketing process, right from prospecting, marketing, and lead to invoice cycle as well as the calculation of return on investment for marketing campaigns.
- Every business has unique software requirements, given its unique nature. In today's world of intense competition and a large number of options for the customer, an increasing number of companies are employing personalized CRM.
- Handling big data
- Integrating data from multiple channels

Shifting to cloud-based CRM

- o According to experts, Cloud deployment, SaaS (Software-as-a-service) is expected to dominate in the future.

Mobile CRM

- o To create incredible personalized customer experiences we can use social and mobile CRM to connect with people when and where they prefer. anticipate their wishes, deliver tailor-made content and do more of everything with less think of the time and costs.
- o It is expected that there will be a tremendous increase in the popularity of mobile CRM. DBS bank has launched a mobile-only bank.

Social CRM

- o Currently, most companies are present on social media; however, merely being present is not enough. It is extremely important to evaluate the impact of social media on the businesses.

CRM software systems with wearables

- o Wearable devices could be the next big thing in CRM. Integrating wearable computing devices with CRM systems allows organizations to gain real-time access to customer data and effectively engage with customers. It also enables businesses to identify cross-selling and up-selling opportunities and enhance customer relationships at every encounter.

6.2 Enterprise Resource Planning

- Enterprise Resource Planning ERP is “a process of managing all resources (machine, material, equipment, money) and their use in the entire enterprise in a coordinated manner”.
- It is a centralized control of a system or the organization.
- **A system that automates and integrates all business modules of business is known as an ERP system or simply ERP.**
- An ERP system is used to integrate several data sources and processes, such as manufacturing, control and distribution of goods in an organization.
- Typically, before ERP implementation, each department has its own computer system optimized for the requirements that a department needs.

- As shown in Fig. 6.2.1, each department will maintain separate databases and design applications as per their functionalities.
- These will result in overall poor results across all the departments or within the company.
- ERP combines all the company's business requirements into a single, integrated software program that runs off a single database so that the various departments can more easily share information and communicate with each other. As shown in Fig. 6.2.2, conceptually ERP replaces the old standalone computer system in manufacturing, logistics, etc. with a single software program that facilitates various functional modules.
- Thus ERP is an integrated software solution used to manage a company's resources.**
- This integration is achieved by using various hardware and software components.
- An ERP system is primarily module-based, which implies various modular software applications or modules.
- A software module in an ERP system automates an enterprise's specific business area or modules, such as finance, sales, and distribution. These software modules of an ERP system are linked to each other by a centralized database.
- A centralized database is used to store data related to all the modules of the business areas. ERP combines all databases across departments into a single database that all employees can access, as shown in Fig. 6.2.2. Using a centralized database ensures that the data can be accessed, shared and maintained easily.

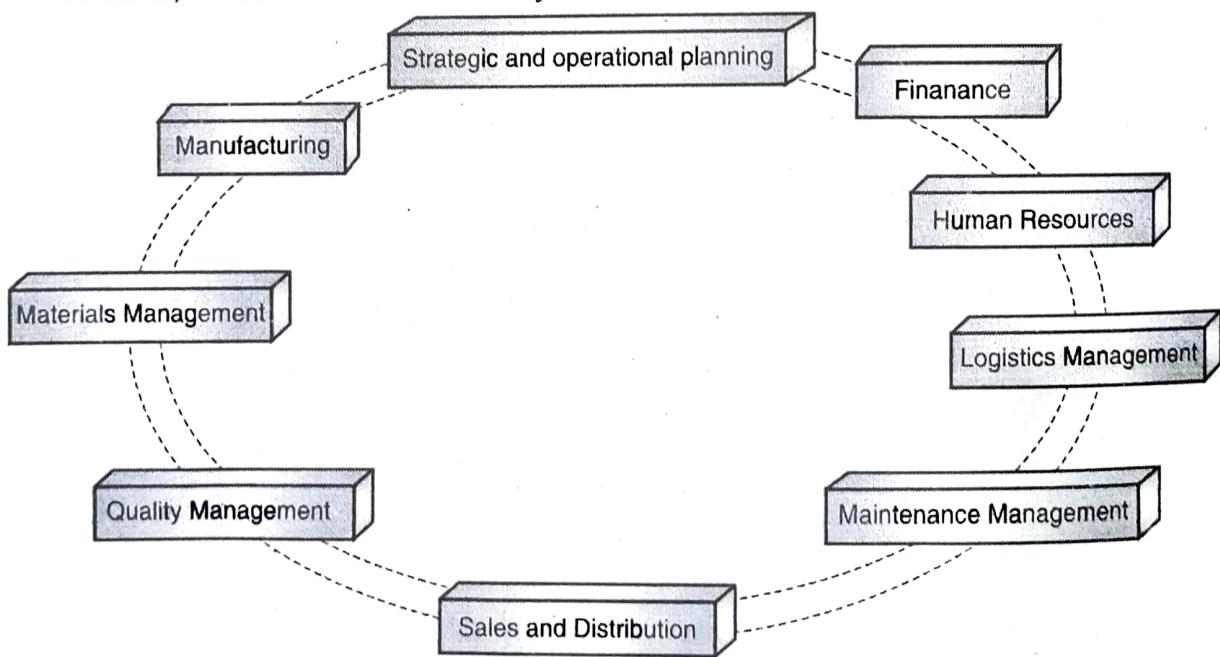


Fig. 6.2.1 : Standalone systems

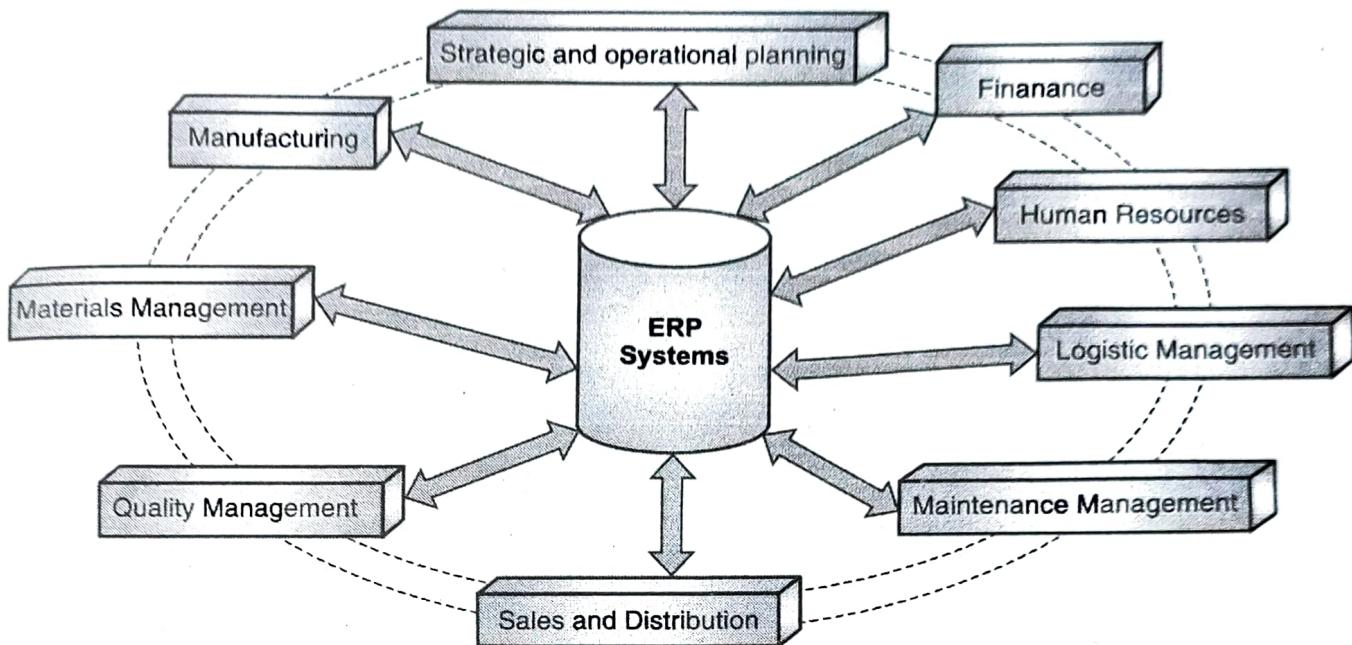


Fig. 6.2.2 : ERP systems

- Before the advent of the ERP system, each department of a company had its own customized automation mechanism. As a result, the business modules were not interconnected or integrated, and updating and sharing data across the business modules was a big problem.
- Let's take an example to understand this concept better. Suppose the finance and sales and distribution modules of an enterprise have their respective customized automation mechanism.
- In such a setup, if a sale is closed, its status would be automatically updated in the sales and distribution module. However, the updated status of an item would not be updated in the finance module automatically. Consequently, the revenue generated from the sale of an item would need to be manually updated in the finance module, resulting in probability of errors and asynchronous business process.
- The problem was fixed with the help of the integration feature built into the ERP system.
- Another benefit of an ERP system is that it helps synchronize data and keep it updated.



6.3 Core and Extended ERP

ERP system consists of two types of components Core components and Extended components.

6.3.1 Core ERP

- Core ERP are the traditional components included in most ERP systems and they primarily focus on internal operations.
- Accounting and finance components: These components manage accounting data and financial processes within the enterprise with functions such as general ledger, accounts payable, accounts receivable, budgeting, and asset management.
- Production and Materials Management Components : These components handle the various aspects of production planning and execution such as demand forecasting, production scheduling, job cost accounting, and quality control.
- Human Resource Components: It tracks employee information including payroll, benefits, compensation, performance assessment, and assumes compliance with the legal requirements of multiple jurisdictions and tax authorities.

6.3.2 Extended ERP (E-ERP)

- Extended enterprise resource planning refers to modules that help support a business's external operations and extend core enterprise resource planning functionality.
- It extends the foundation ERP system's functionalities such as finances, distribution, manufacturing, human resources, and payroll to customer relationship management, supply chain management, sales-force automation, and Internet-enabled integrated e-commerce and e-business.
- Companies use enterprise resource planning (ERP) systems to assist management with decision-making and automate common business processes to save the company time and money.
- While core ERP focuses on internal business operations like finance and human resources, extended ERP focuses on external operations to make it easier to manage relationships with customers, suppliers, transporters and other parties.
- Common extended ERP modules your business might use include those for supply chain management, business intelligence, e-commerce and customer relationship management.

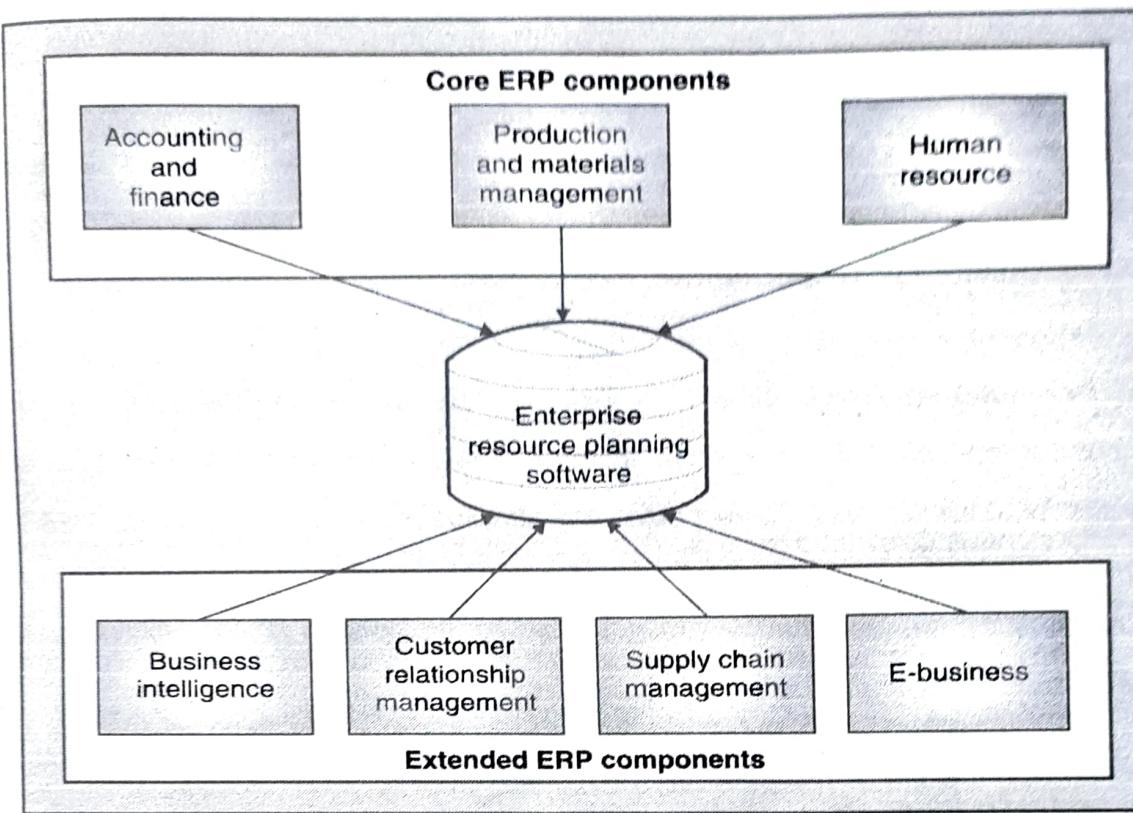


Fig. 6.3.1 : Extended ERP (E-ERP)

6.3.3 Components of ERP System

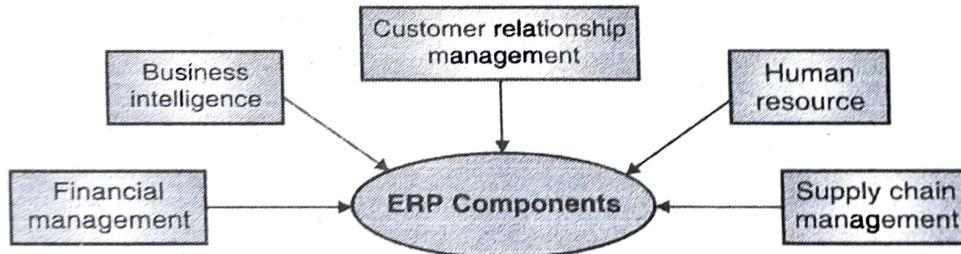


Fig. 6.3.2 : ERP Components

- Human Resource Component (HR): The HR module helps the HR team efficiently manage human resources. HR module helps to manage employee information, track employee records like performance reviews, designations, job descriptions, skill matrix, time, and attendance tracking.



- CRM Component: CRM department is helping to boost sales performance through better customer service and establishing a healthy relationship with customers. All the stored details of the customer are available in the CRM. It helps manage and track the customer's detailed information like communication history, calls, meetings, details of purchases made by the customer, contract duration, etc. CRM component can be integrated with the sales module to enhance sales opportunities.
- SCM Component: Supply chain is the collection of people, tasks, equipment, data and other resources required to produce and move products from a vendor to a customer. Supply Chain Management module refers to the management of supply chain activities in an effective and efficient way to provide a company with a strategic advantage.
- It manages the flow of product items from manufacture to consumer and consumer to manufacturer. Common roles involved are a manufacturer, super stockiest, distributors, retailers etc.
- SCM involves demand & supply management, sales returns and replacing process, shipping & transportation tracking etc.
- **Business Intelligence (BI) Module:** BI is the technology-driven process of analyzing data and presenting actionable information to executives for decision making. It combines various tools, technologies, and methods to drive positive change and boost company performance.
- BI encompasses various analytics processes, including data mining, predictive analysis, text mining, statistical analysis, big data analytics, and reporting processes and tools like data visualization software, key performance indicators, performance benchmarking, and querying.
- By improving access to a company's data, BI can increase overall profitability through effective decision making and optimize internal processes, as well as by helping businesses discover new revenues, identify market trends, and spot business problems.
- **Financial Management :** It is designed for creating, connecting, storing, and reporting many different types of finance transactions.

- But a truly effective financial management system can help us optimize profitability, measure cash flow, determine tax obligations, maintain long term enterprise sustainability ,ensure compliance. So end to end financial management in ERP system including procurement, employee expenses, risk management and compliance.

6.3.4 Benefits and Risks of ERP Implementation

- Benefits of an ERP system :
 - Reduce inventory
 - Integrate financial information
 - Integrate customer order information
 - Standardize Human Resources information
 - Standardize and speed up operations processes.
- Despite the benefits of an ERP system, the system has certain drawbacks.
- Some of the major drawbacks of an ERP system are :
 - Customization of ERP software is restricted because we cannot quickly adapt ERP systems to a company's specific workflow or business process.
 - Once an ERP system is established, switching to another ERP system is very costly.
 - Some large organization may have multiple departments with separate, independent resources, missions, chains-of-commands , etc., and consolidation into a single enterprise may yield limited benefits.
- SAP (System Applications and Products in data processing) was introduced to overcome the drawbacks of the contemporary ERP systems.

6.4 Supply Chain Management

6.4.1 Meaning, Definition of Supply Chain Management

- Enterprise resource planning software plays a vital role in centralizing transaction data. Supply chain management solutions are gaining significance as organizations strive to respond faster to market conditions.

- Supply chain refers to managing the movement of goods and flow of information between an organization and its suppliers and customers to achieve strategic advantages.
- Supply chain covers the processes of materials management, logistics, physical distribution management, and purchase and information management.
- The term logistics management is sometimes synonymously used with supply chain management.
- Supply Chain Management (SCM) is a multi-functional process which involves management of inter-linked business network involved in the crucial purpose of delivering product and service required by the end users or customers. It is associated with planning, designing, executing, monitoring, and controlling the supply chain's activities to create value for the offered product and services.
- According to Cooper and Ellram, "Supply chain management is an integrative philosophy to manage the total flow of distribution channel from the supplier to the ultimate user."

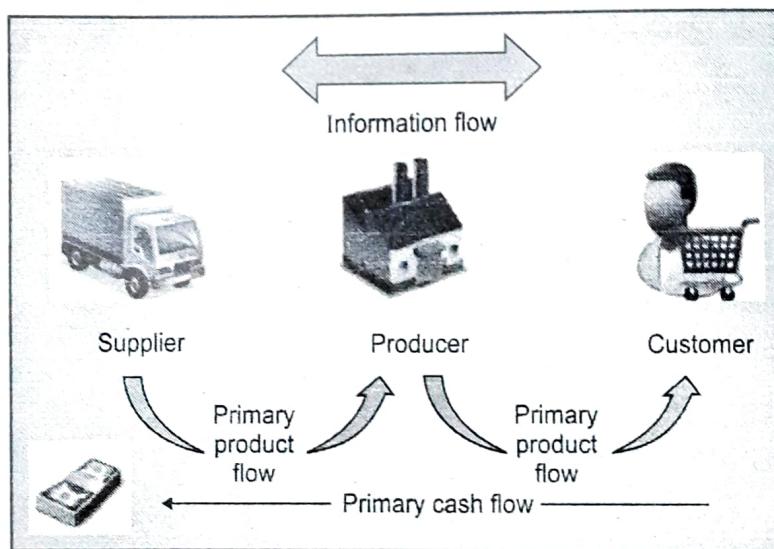


Fig. 6.4.1: Basic supply chain for a product

Supply chain follows the steps mentioned below to carry out an activity of SCM

1. Understanding of the marketplace

In this step, the company should identify the market characteristics of each product and service, such as customer needs, pressure from suppliers, and competitor activity.

2. Analyse business

- Summaries and review the existing core competencies of the organization.
- What business are you in?



- Which operations are core to the process? And
- Which could be outsourced?
- Combine the information on customer needs and strategic priorities to identify key business areas where an integrated supply chain management can benefit?

3. Analyzing the existing supplier base

Produce a list for the suppliers for each product area, evaluate them against a set of performance criteria. These might include price, reliability, responsiveness, delivery arrangements, use of quality systems and product specification.

4. Categories suppliers to reduce the overall total

Use some criteria, such as underperforming, preferred and strategic. Look to working with each category to bring cost reductions to business and to the supply chain.

5. Investigate supply chain partnerships

Partnerships are the natural next level in the evolution of the supply chain. Partnerships allow organizations to work together to take advantage of market opportunities and respond to customer needs more effectively than isolation.

6. Set up a supply chain network

This stage involves broadening these partnerships to include suppliers and customers. A process map of the entire supply chain can help.

7. Monitor the chain

- Setting up a supply chain is only the first step. Ensuring that it operates as planned and delivers the benefits to all parties is a critical ongoing activity.
- Ensure that appropriate measures and indicators are analyzed regularly to ensure that everything is working to plan, so that any shortcomings can be quickly identified and action taken if necessary.

6.4.2 Importance and Characteristics of SCM

- Supply chain management produces benefits such as it creates
 - new efficiencies,
 - raises profits,

- o lower costs and
- o Increased collaboration.
- SCM enables companies to manage demand better, carry the right amount of inventory, deal with disruptions, keep costs to a minimum and meet customer demand in the most effective way possible.
- These SCM benefits are achieved through choosing effective strategies and appropriate software to manage the growing complexity of today's supply chains.

6.4.3 Elements of SCM

Elements can vary based on size and structure of organization. All elements are equally important. Every supply chain begins and ends with the customers.

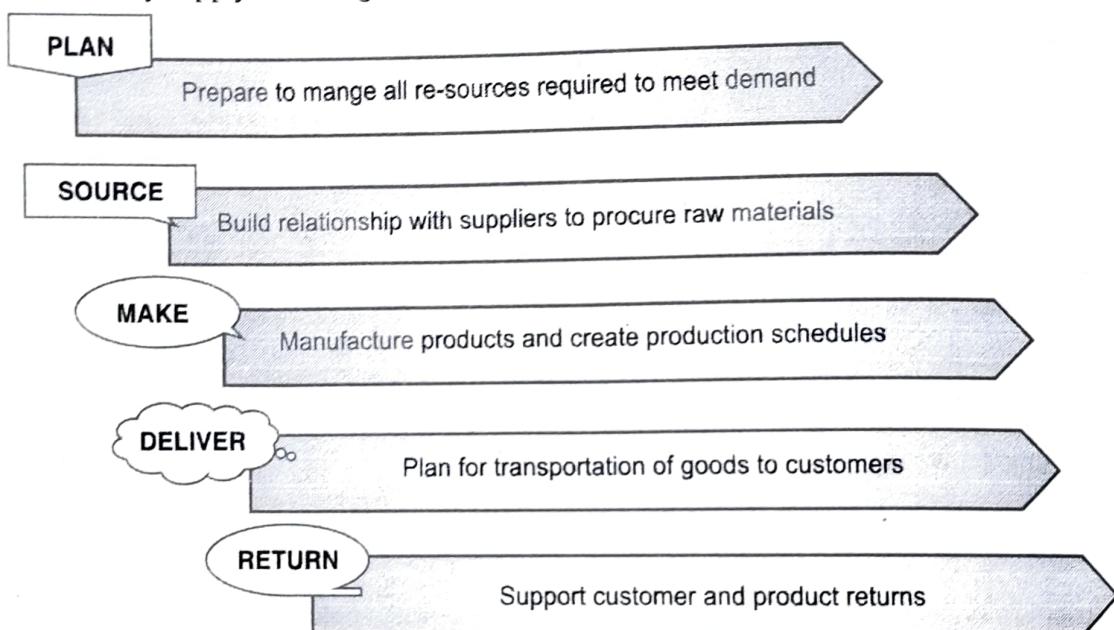


Fig. 6.4.2 : Elements of Supply Chain Management

Five elements of supply Chain Management are :

1. Planning

- Planning is developing set of metrics to monitor supply chain. Once the customer order is received the planning department will create a production plan to fulfill the order. It basically creates a production plan for the manufacturing part.



- The planning creates a need to purchase the raw materials required to make the products.
- Planning includes- forecasting demand, how to meet customers demand? How to improve the efficiency of the supply chain.

2. Sourcing

- After planning, now the company has to purchase the raw material needed to manufacture the product. The purchasing department will receive a list of raw materials and services required from the production department.
- The company decides if it wants to perform all activities internally or if it desires to get it done by any other firm. This is commonly referred to as make or buys decisions. The purchasing department sends an order to a selected supplier to deliver the necessary raw material required date. Sourcing is the process of choosing suppliers that will provide goods and services efficiently.
- Sourcing includes selecting suppliers, selecting raw material, ordering or invoicing payments, and managing inventory.

3. Manufacturing

- Manufacturing includes – raw material inspection, creating a product, quality control, packaging, employee productivity.
- Based on production plan, raw materials are moved to the production area and finished products are manufactured here using this raw material. After the finished products are manufactured and tested, they are stored back in the warehouse before delivery to the customer.
- Steps executed in manufacturing are production, testing, packaging and preparation for delivery.

4. Delivering

- Delivering includes- order taking, shipping of consignments, invoicing or billing, logistics management.
- In the supply chain model, the major task of distribution is the management of demand, i.e. to make available the right product, at the right place, at the right time and at the least cost. For this, a significant decision is to be made, i.e. to choose the mode of transportation.



- So the shipping department arranges the most efficient method to deliver the products to the customers on or before date specified by them.
- It also involves coordinating the receipt of orders from customers.

5. Returning

- Return management includes- customer care, warranty claims, scrapping or defect removal.
- It includes all activities related to handling and dispositioning various types of returns, including reverse logistics, gatekeeping, etc.
- Many supply chain offerings also include post-sale service and add-on modules that support various vital processes such as product life cycle management, contract management, etc.

6.4.4 Push and Pull Supply Chain Model

- There are two Process views of SCM :
 - Cycle view
 - Push/Pull view
- In this section we will discuss in detail about push and pull supply chain type.

6.4.4(A) Push strategy

- A push strategy works to create customer demand for your product or service through promotion.
- When an organization manufactures the product and then moves it down in the supply chain based upon some assumed sales or expected order booking in the period.
- Production and supply volumes are realized based on historical sales and demand expectations.
- Under the push supply chain, the logistics are driven by long-term projections of customer demand. For example, at the end of the summer season, clothing brands start to manufacture more warm clothes.
- This type of planning becomes valuable to companies as it helps plan them for events in the future and be prepared when winter comes. This gives the companies meet their needs in time and also gives them time to figure out other logistics like where to store the inventory.
- This approach can result in high level of inventory and transportation costs which unexpected changes in demand.



- A push promotional strategy makes use of a company's sales force and trade promotion activities to create consumer demand for a product.
- The producer promotes the product to wholesaler, the wholesaler promotes it to retailer, and the retailer promotes it to consumers.
- Push marketing is exactly what it sounds like; you are pushing your products or services onto the customers. You are trying to convince the consumer that this is something they need or want.

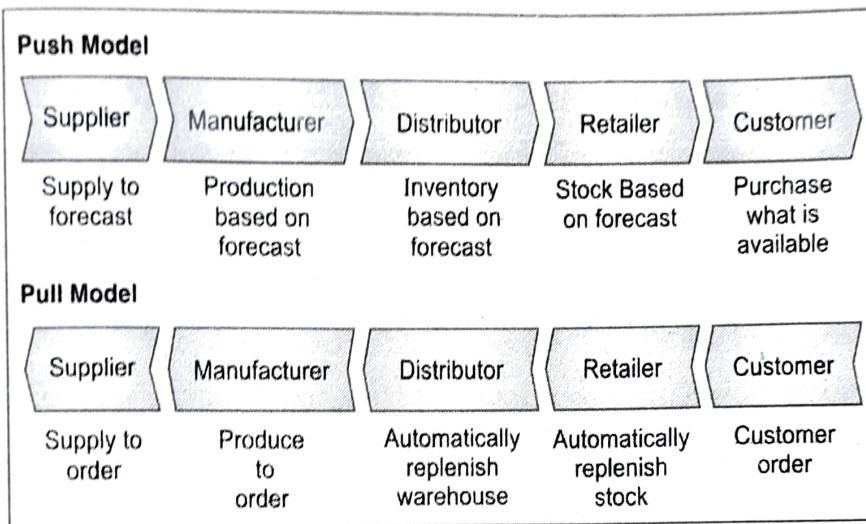


Fig. 6.4.3

6.4.4(B) Pull Strategy

- A pull strategy is where interest for a specific product or service is created within a target audience that then demands the product from channel partners.
- When an organization manufactures the product as per the consumption in the market or based upon the firm orders from the market.
- Supply and Production volumes are identified and realized based on received customer order.
- Under the pull supply chain, the process of manufacturing and supplying is driven by actual customer demand. In this type of supply chain logistics, inventory is acquired on a need – basis. The benefits of this type of planning include less wastage in the case of lower demand.
- The problem, however, is that the company might not have enough inventory to meet rising demands due to unforeseen factors.



- Pull marketing strategy is when you pull your customers to you. You inspire a want or need for your product or service. Pull marketing can come in the form of inbound marketing- creating valuable content that attracts your ideal consumer, word of mouth, referrals, or even an advertisement.
- Companies that focus mainly on pull marketing are typically successful at identifying their customers want or needs, and putting them first. The goal of pull marketing is attracting long term, returning and loyal customers.

6.4.4(C) Fundamental Difference between Push and Pull Supply Chain Models

Basis	Push Strategy	Pull Strategy
What is it?	A strategy in which third party stocks company's product.	A strategy in which customers demand company's product from seller's
Purpose	Product selling	Demand selling
Uses	Sales force, trade promotion , specific magazines, gifts, money etc.	Advertising, promotion and other forms of communication, discount coupons
Primary products	Industrial goods	Consumer goods
Suitability	When the brand loyalty is low, consumer durables	When the brand loyalty is high, consumer goods
Target group	Distributors, wholesalers and retailers	End users

6.5 Use of E-Business to Restructure Supply Chain

- E-commerce can introduce structural changes in the supply chain. For example, the creation of e-markets drastically changes order processing and fulfillment.
- E-commerce is emerging as a superb approach for providing solutions to problems along the supply chain.

- Restructuring process usually improves the resulting company's position on the market by creating or consolidating a competitive advantage takes the form of reducing overall costs by economies of scale access, to new markets access, to new products or technologies.
- Supply chain restructuring focuses on these innovative practices that separate leaders from the also-ran companies.
- The combination of e-business and supply chain management (SCM) depicts how trade channel members are working together to optimize resources and opportunities.
- A major role of e-business is to facilitate buying, selling, and collaborating along the supply chain.
- Benefits of using e-business to restructure supply chain:
 - Reduced complexity of the supply chain
 - Process standardization
 - Increased efficiency of individual processes.
 - Reduced cost through outsourcing
 - Improved data integration between elements of the supply chain.
 - Using most efficient environmental means of production, distribution and logistics.
 - Rapid market penetration.
 - Quick comparison
 - Better Customer service
- Will try to find the answer for the following question.
- Does e-business primarily affect SCM restructuring?
- The option available is virtual integration instead of vertical integration which is used in physical SCM.
- In vertical integration, the extent to which supply chain activities are undertaken and controlled within the organization.
- In vertical integration of SCM, majority of manufactures are in-house. And distinct relationships with suppliers. It is useful in specialized or proprietary production.
- In virtual integration, the majority of supply chain activities are undertaken and controlled outside the organization by third parties.

- In virtual SCM, majority of the manufacturers are third parties and close relationships with suppliers. It is useful in rapid market penetration like dot com approach.

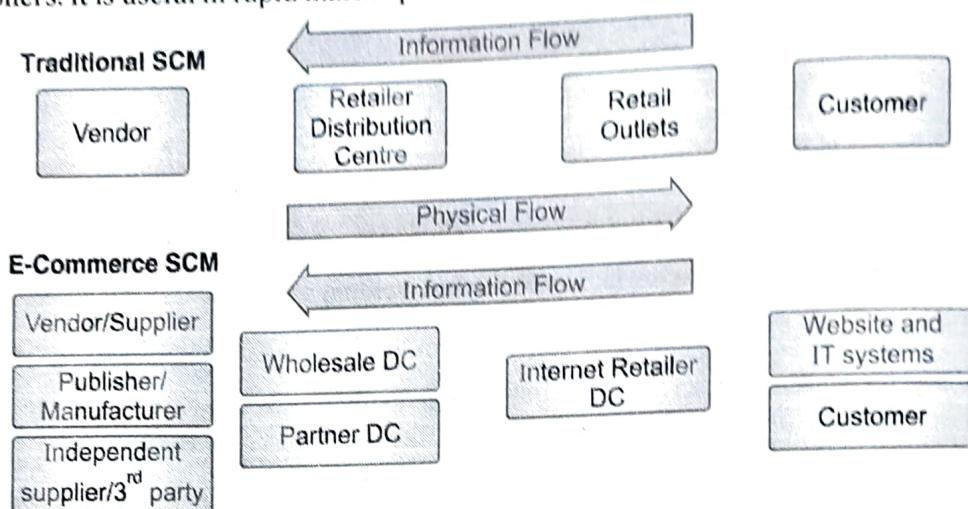


Fig. 6.5.1: Traditional SCM Vs. e-Business SCM

- The supply chain management based on E-commerce can not only make every enterprise in the supply chain to reduce production cost, shorten demand response time and market change time, but also can provide overall service for customers, let customers acquire the best quality of products and services, and at the same time realize the largest value-added.
- It can also provide whole e-commerce transaction service, realize global market and enterprise resource sharing. Supply and deliver order goods to customers in time, reduce operating and purchase cost, improve operating performance.

6.6 Supply Chain Management Implementation

- Supply Chain Management is the design and management of seamless, value-added processes across organizational boundaries to meet the real needs of the end customer.
- The implementation of SCM needs to integrate processes from sourcing to manufacturing and distribution across the supply chain.
- The integration can be accomplished through cross-functional teams, in-plant supplier personnel, and third-party service provider.
- The failure of new application solution implementation includes lack of management support, inadequate training, and not enough thorough testing.



- The most significant factor in the collapse of supply chain management (SCM) implementation is change -- the type of change inflicted on an organization with little regard for how great it will impact the people and processes that serve as the engine of the business.
- The basis for most SCM solution implementations is to provide greater visibility to the supply chain and its integrated parts.

Attributes affecting SCM implementation are

1. Long term orientation
 - (a) Relational exchanges : Long-term relationships with at least one company in the supply chain.
 - (b) Transactional exchanges : Short-term relationship with companies in the supply chain.

2. Enhanced communication across organizations

POS (Point of Sale) information: For example, retail point-of-sale information can be transmitted directly to suppliers and translated into orders to replenish products.

3. Customer Power

The Internet has given consumers power through information. A fast supply chain emphasizes a speed and time component. An agile supply chain focuses on an organization's ability to respond to changes in demand with respect to volume and variety.

4. Computing power and the Internet allow fast, low-cost mathematical solutions to complex supply chain issues.
5. Inter-organizational collaboration- Primary objective of SCM is to optimize the performance of the supply chain as a whole. Supply chain collaboration- cooperative supply chain relationships formal or informal, between manufacturing companies and their suppliers, business partners, or customers, developed to enhance the overall business performance of both sides.

For the implementation of supply chain management, cross-verify the following points

- Before choosing new software, it's essential to work out your business needs, both in the short and long term.



- This might include conducting an audit of existing systems and processes, gathering information from staff and stakeholders, and of course, having a clear vision for the future of your business and your supply chain.
- Implementing a new system is a big undertaking, so it's important to lay out a roadmap and define what success means for your business before getting started. Include objectives, milestones, key activity, timelines, and a map of key stakeholders and what their roles in the process will be.
- There are many products on the market, but you need the right one for your business. While one solution might work for one company, it may be too complex, simple, or bespoke for another.
- Make a shortlist of the products you feel are best and set up meetings with representatives from your top picks to hash out exactly what they can offer. Tap your industry contacts for opinions and recommendations, and check out online reviews.
- This process can take time, but rushing into a decision can cost a business dearly in the long run. Likewise, putting in the time early on to assess your options can make all the difference down the road.
- There will be bumps in the road for any new system, so test it before it goes live and keep testing it throughout the implementation phase. Ensure key staff are involved in the process and open a line of communication for employees to share any issues they encounter along the way.
- Proactively check in with them, speak with staff one-on-one, and/or set up a forum for people to discuss how things are progressing.
- This is an important way for users to work out minor issues between themselves and identify which are more substantial or need escalating.
- The work won't end when the roll-out is finished. It's essential to continually monitor how the system is working, its impact on your supply chain, and how staff on the frontline are finding it.

6.7 E-Procurement

6.7.1 Meaning and Advantages of E - Procurement

- The "e' in e-procurement stands for "E- Electronic" and "procurement" is synonyms with "purchasing".
- **Procurement :** The process of obtaining supplies, especially for an government or organization.
- **Definition :** e-procurement is the business- to-business purchase and sale of supplies and services over the internet.
- The aim of e-procurement is to dematerialize commercial transactions between businesses and their suppliers via digital solutions in order to optimize the procurement process.
- **e-procurement is a way of taking a very complicated purchasing process, and streamlining it through a single digital platform to ensure the business has complete control over their operational expenditure.**
- E-procurement is electronic data transfer to support operational like (purchasing, ordering, delivery, payment) , tactical and strategic procurement.
- **e-procurement is only suitable for business purchases i.e the Business-to-Business (B2B) sector.** It does not include the Business to Customer (B2C) sector which only includes personal and off-purchases.
- e-procurement has been existence for long time in one form or the other. Earlier it was done through electronic data interchange. In today's environment, most of the e-procurement is done through the Internet.
- e-procurement web sites allow qualified and registered users to look for buyers or sellers of goods and services.
- Depending on the approach, buyers or sellers may specify prices or invite bids. Transactions can be initiated and completed.
- Traditionally, procurement of supplies and material was done through paper, which slowly migrated to usage of an electronic medium for order printing and storing.
- With the advent of the Internet e-commerce flourished, and procurement was done through email and websites.

- As the Internet technology evolved e-catalogue came in the forefront thus traditional procurement was getting done through the Internet. In the current market with data security and advanced tools whole process of e-procurement is done through the Internet.

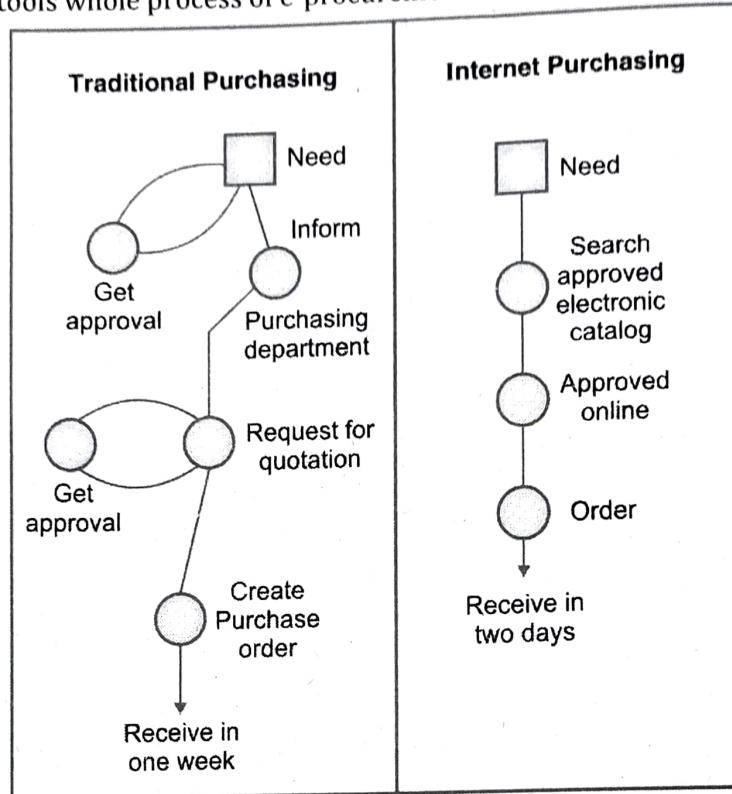


Fig. 6.7.1 : Traditional Procurement Vs e-Procurement

6.7.2 Variants of E-Procurement

- E-tools that replace traditional procurement are :
 - E-sourcing:** supports the specification phase. It identifies suppliers that can be used in the selection phase.
 - E-tendering:** supports the selection phase. It is the process of screening suppliers and sending supplier's requests for information and request for price.
 - E-reverse auctioning:** supports the contract phase. It enables closing a deal with a supplier. It enables the purchasing company to buy goods and services that have the lowest price via internet technology.

- o E-ordering and web-based ERP : is the process of creating and approving procurement requisitions, placing purchase orders ,as well as receiving goods and services ordered, by using a software system based on the internet.
- o E-informing: It doesn't involve transaction, but instead handles information about the supplier's quality financial status or delivery capabilities.
- E-procurement Tools(Software)
 - o E-procurement software may take it possible to automate some buying and selling.
 - o E-procurement is expected to be integrated with the trend toward computerized supply chain management.
 - o In electronic data interchange system, procurement messages are exchange between computers of two separate organizations. Message is exchange in batch and can be easily transmitted and stored. EDI (Electronic Data Interchange) is mostly used for order transmission, order confirmation, logistic information and order invoicing.
- ERP systems
 - o Web enabled EDI
 - o Internet based tools and resources help in the process of procurement. Some of the common applications are email, internet based EDI, XML based data exchange via the internet etc. Internet provides tools for e-sourcing, e-tendering, e-auctioning, e-ordering and e-catalogue.
 - o Electronic mail(e-mail)
 - o Internet tools and platforms that replace traditional procurement.
- Advantages of adopting E-Procurement
 - o Reduced purchasing cycle time and cost.
 - o Improved processes and supplier management
 - o Enhanced budgetary control.
 - o E-procurement allows companies to benefit from a clear and real time view of their expenses through a reporting system.



- o They can therefore have greater control over their expenditure, manage their budget more accurately and improve their strategy by finding areas of improvement.
- o Improved payment process.
- o Elimination of admin errors.
- o Brings about innovative business processes.
- o Reduced transaction cost
- o Cost Effective
- The cost of digital transaction is less than standard transactions. As the process is fully automated, it reduces labour costs. E-procurement eliminates paperwork, rework and errors.
- Transparent spending
 - o Electronically conducting your procurement makes it easier to write and analyze reports on companies' procurement systems, meaning we can ensure that our procurement procedures conform to companies' policies. Centralized tracking of transactions enables full reporting on requisitions, items purchased, orders processes and payments made.
- Increased Transaction speed
 - o E-procurement is fast and efficient. It purposes without having to manually re-enter data. Makes it easier for businesses to obtain tender documentation and to submit online. It enables the purchase the purchase-to-pay process online.
- It is easy to do technical evaluation of received offers from suppliers.
- Increased Productivity
 - o Once we have learned the system, e-procurement is less time-consuming than traditional procurement. As records stored electronically, it is easier to submit reusable tenders. Also as templates are ready, paperwork can be filled out more quickly.
- Improved reporting and tracking



6.7.3 Types E-Procurement

Types of e-procurement are

1. **Web based ERP** : Creating and approving purchase requisitions, placing purchase order, receiving goods and services using a software system based on fully automated internet technology.
2. **e-MRO** : Use only for procuring indirect material e.g maintenance and repairing concern.
3. **e-informing** : gathering and distributing procurement information both from and to internal and external parties through internet.
4. **e-sourcing** : The process and tools that electronically enable any activity in the sourcing process, such as quotation/tender submission and response, e-auctions, online negotiations and spending analyses.
5. **e-Tendering** : Sending requests for information and quotations to suppliers and receiving responses online.
6. **e-reverse auctioning** : Participating in auctioning to buy goods and services through internet.
7. **e-market sites** : a web site where buyers and sellers come together to communicate, exchange ideas, bid in auctions and buying and selling their product and services.

6.7.4 Drivers of E-Procurement

The main drivers towards achieving e-procurement adoption are

1. **Control** : improving compliance, achieving centralization, raising standards, optimizing sourcing strategy, and improved auditing data. Enhanced budgetary control is achieved through rules to limit spending and improved reporting facilities.
2. **Cost** : improved buying leverage through increased supplier competition, monitoring savings targets, and transactional cost reduction.
3. **Process** : rationalizing and standardization of e-procurement process, reducing cycle time, improved visibility of processes for management, and efficient invoice settlement.
4. **Individual performance** : knowledge sharing, value-added productivity and productivity improvements.
5. **Supplier management** : reduced supplier numbers, supplier management, and selection and integration.



6. Effective organization-wide policies to ensure that everyone is aware of the strategy
7. Training and guidance to help all of those involved in procurement to understand sustainable procurement and whole life costing;
8. Regular audits and monitoring to assess where your organization is in the context of sustainable procurement and where you could make further progress in this area
9. Commitment to sustainable development as an organizational policy
10. Supporting and educating suppliers/creating markets
11. Linking up with other organizations to learn from their experience

6.7.5 Components of E-Procurement Systems

As a process, e-procurement hosts multiple components and procedures within itself. These components decide the functioning of the procurement in an effective way. These components are as shown in Fig. 6.7.2.

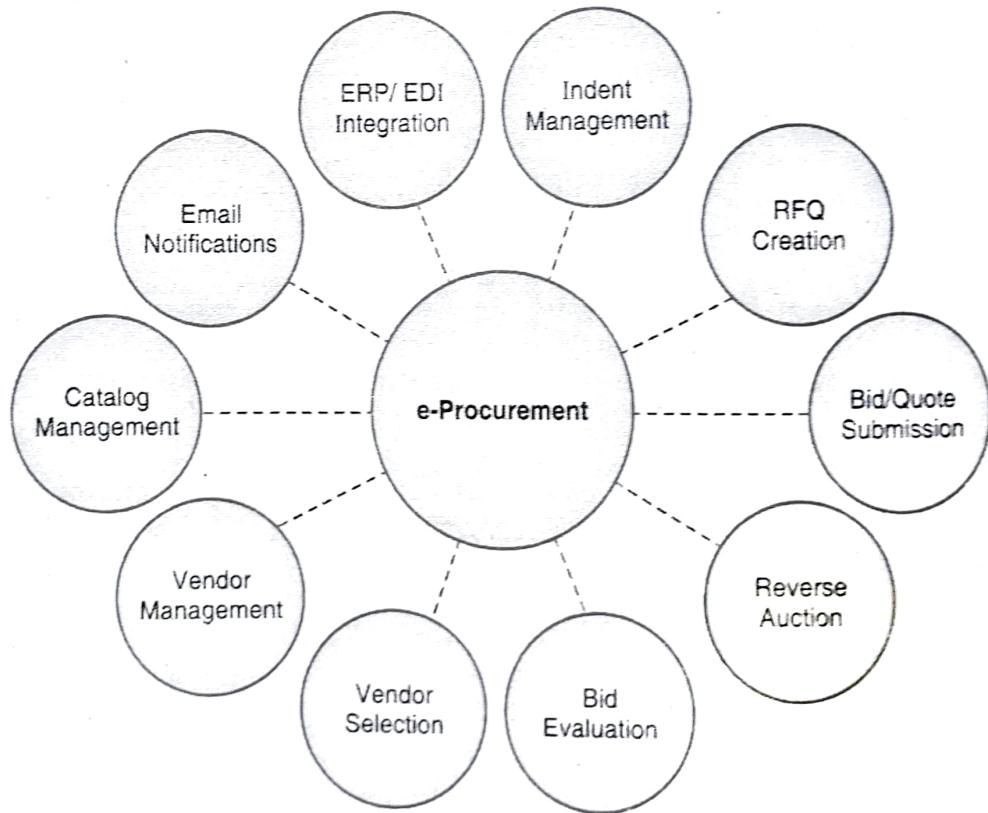


Fig. 6.7.2: Components of e-Procurement Systems

1. **Reverse Auction :** Reverse auction is a type of auction in which the roles of buyer and seller are reversed in an ordinary auction also known as a forward auction. Buyers compete to obtain a good or service by offering increasingly higher prices in a reverse auction.

The sellers compete to obtain business from the buyer and prices will typically decrease as the sellers undercut each other in business.

2. **Indent Management:** Indenting is the process of recording the demand. Insets can be prepared in the e-Procurement system or can be pulled from an ERP or EDI system. Most e-Procurement solutions have indent approval and indent assignment features.
3. **Bid Opening and Evaluation:** The practice of e-Auction happens at this stage where the vendors are scrutinized for their authenticity after their information is submitted in the e-procurement portal. All the submitted details are checked for their authenticity and compatibility.
4. **RFX Creations:** Request for quotation is the process for requesting vendors to submit their bid against demand. RFX document contains procurement requirements details along with terms and condition for supply the goods or services. e-procurement software solution suggests matching vendors based on their registered category.
5. **E-Auction:** An e-auction is carried out purely based on requirements. These auctions are where the goods meant to be procured are considered worthy of procurement.
6. **Vendor Selection and Finalization:** After the e-Auction, one or more vendors are finalized and the Purchase Order issued according to the requirement. This step concludes the procurement process.
7. **Vendor and Contract Management:** Maintaining the vendor contact details as well as prepare a catalog that contains all commercial details on the bidders.

6.7.6 Implementation of E-Procurement

- Organizations should not simply automate existing procurement process and systems but should consider improving ways of working and re-engineering business processes prior to implementation of e-procurement.
- Let's discuss some key steps for planning and implementing a successful e-procurement strategy.
 1. Start with non-critical items.
 2. Bring all internal stakeholders on board with your new procurement process to establish internal customer behavior.
 3. Streamline, map, test, troubleshoot, and improve the process before expanding it to external suppliers. Work with a favored supplier to test the system.



- 4. Leverage your system once it is running. Exploit your full purchasing power by using reverse auctions.
- 5. Aggregate buyers within your organization to increase your purchasing power and gain better pricing.
- 6. Use incremental approach to expand your system.
- 7. Once the bumps have been ironed out of the system, move on to the manufacturing operations.
- When you decide to implement an e-procurement strategy in your business, it's important to know the impact on your business. Therefore, communication is crucial during the entire process. Talk to your team and your superiors. Understand which are the biggest benefits an e-procurement strategy will have for your business. Once you have implemented it, your business will become stronger and more prepared to beat the competition.
- Examples of implementation of e-procurement:
 - o Stock control system
 - o E-mail/workflow system
 - o Order-entry on web site
 - o Accounting systems
 - o ERP systems

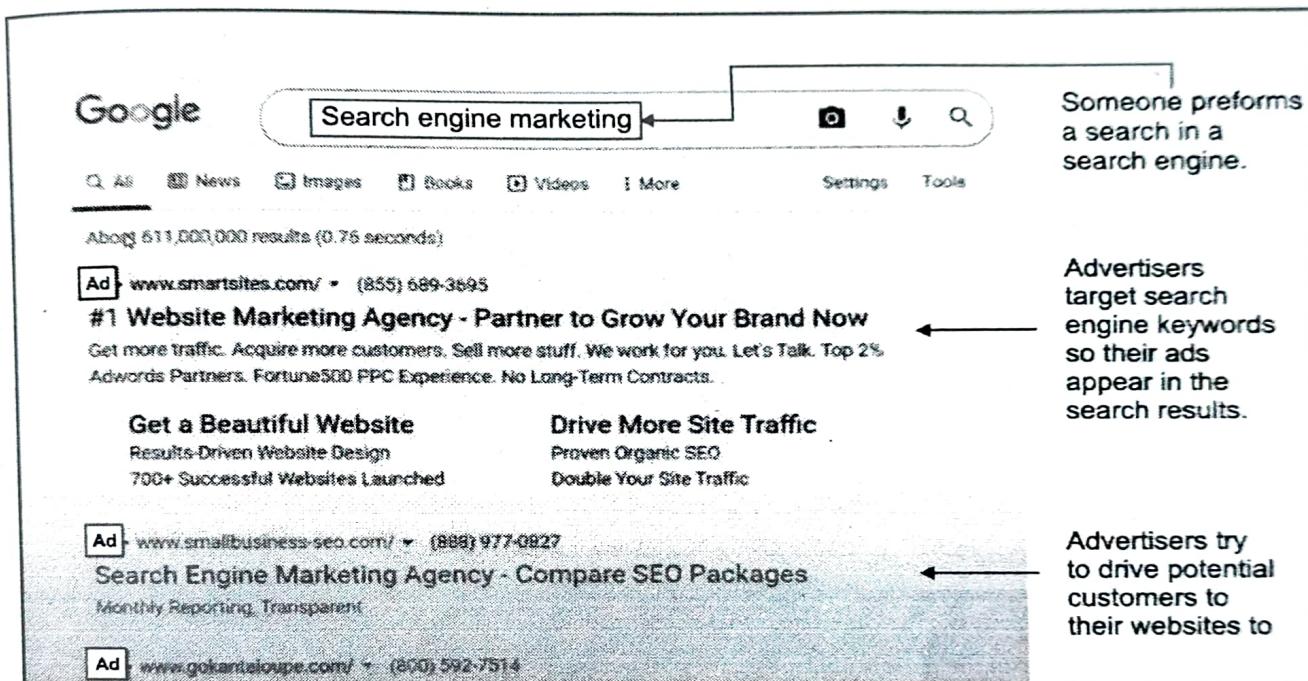
6.8 SEM and SEO E-CRM

- Electronic Customer Relationship Marketing (e-CRM) is a process of maximizing sales of existing customers, encouraging continuous relationships through the use of digital communication technologies.
- All data of customers is computerized, and a data bank is developed. All collected data gives a unified and holistic view of all customers.

6.8.1 Search Engine Marketing (SEM)

- SEM is the process of creating paid advertising campaigns that appear in the search engine results.
- So it doesn't matter what search engine it is, but they are ads that appear in a search engine.
- SEM is the process of gaining website traffic by purchasing ads on search engines like Adwords, Bing Ads, Yahoo: Search Ads

- So advertisers pay to target keywords based on their potential customer's search terms.
- SEM stands for Search Engine Marketing, which basically embodies search engine optimization and pay-per-click marketing. So pay-per-click marketing is another form of search engine marketing that can serve ads inside search engines.
- There are other targeting methods available, but companies are targeting keywords based on their potential customers' search terms to go over an example. Let's say someone goes to google, and they do search engine marketing. They search for that directly into google, so someone performs a search in a search engine, so what you will see here is advertisers are targeting search engine keywords so that their ads will appear in the search results.



- Why use SEM?
 - Advertisers can promote products and or services to people as they search for them.
 - Advertisers can track their success, control their budget, and grow their revenues.

6.8.2 Search Engine Optimization (SEO)

- SEO stands for Search Engine Optimization and what is getting your website ranked inside of a search engine.
- It is the process of optimizing your site to increase its visibility for relevant searches.
- The process of optimizing content to be discovered through a search engine's organic search results.



- SEO is free and organic.
- The website is optimized in line with Google guidelines.

Benefits of SEO

1. Unlike paying for ads, search traffic is free.
2. Organic traffic is typically consistent once you are ranking high. Whereas other mediums like social media and e-mail marketing often result in traffic spikes that usually fade to nothing.

6.8.3 SEM Vs SEO

- SEO is organic, and SEM is paid.
- SEM is when advertisers pay for their website to appear on the search result pages. SEO is when Marketers optimize their website and their content to appear on the search results pages.
- SEO takes time, long-lasting results. SEM gives instant results and lasts till paid.

Review Questions

- Q. 1** Short note on Customer Relationship Management (CRM). (**Refer Section 6.1**)
- Q. 2** Explain various contemporary trends SRM, PRM, ERM. (**Refer Section 6.1.3**)
- Q. 3** Short note on ERP. (**Refer Section 6.2**)
- Q. 4** Explain Core and Extended ERP (**Refer Section 6.3**)
- Q. 5** Write a short note on components of the ERP system (**Refer Section 6.3.3**)
- Q. 6** Explain SCM and elements of SCM (**Refer Sections 6.4 and 6.4.3**)
- Q. 7** Explain the Push and Pull supply chain model. (**Refer Section 6.4.4**)
- Q. 8** Explain how e-business helps to restructure the supply chain. (**Refer Section 6.5**)
- Q. 9** Write a short note on e-procurement. (**Refer Section 6.7**)
- Q. 10** Explain various components of e-Procurement Systems (**Refer Section 6.7.4**)
- Q. 11** Write a short note on SEM and SEO. (**Refer section 6.8**)