9- 1 How do enterprise systems help businesses achieve operational excellence?
enterprise resource planning (ERP) systems, which are based on a suite of integrated software modules and a common central database. The database collects data from many divisions and departments in a firm and from a large number of key business processes in manufacturing and production, finance and accounting, sales and marketing, and human resources, making the data available for applications that support nearly all an organization's internal business activities. When new information is entered by one process, the information is made immediately available to other business processes.

If a sales representative places an order for tire rims, for example, the system verifies the customer's credit limit, schedules the shipment, identifies the best shipping route, and reserves the necessary items from inventory. If inventory stock is insufficient to fill the order, the system schedules the manufacture of more rims, ordering the needed materials and components from suppliers. Sales and production forecasts are immediately updated. General ledger and corporate cash levels are automatically updated with the revenue and cost information from the order. Users can tap into the system and find out where that particular order is at any minute. Management can obtain information at any point in time about how the business was operating. The system can also generate enterprise-wide data for management analyses of product cost and
Profitability.

9-2 How do supply chain management systems coordinate planning, production, and logistics with
Suppliers?
  ● Define a supply chain and identify each of its components
A firm's supply chain is a network of organizations and business processes for procuring raw materials, transforming these materials into intermediate and finished products, and distributing the finished products to customers. It links suppliers, manufacturing plants, distribution centers, retail outlets, and customers to supply goods and services from source through consumption. Materials, information, and payments flow through the supply chain in both directions.
  ● Explain how supply chain management systems help reduce the bullwhip effect and how they provide value for a business.
bullwhip effect ,in which information about the demand for a product gets distorted as it passes from one entity to the next across the supply chain. A slight rise in demand for an item might cause different members in the supply chain—distributors, manufacturers, suppliers, secondary suppliers (suppliers' suppliers), and tertiary suppliers (suppliers' suppliers' suppliers)—to stockpile inventory so each has enough just in case. These changes ripple throughout the supply chain,
magnifying what started out as a small change from planned orders and creating excess inventory, production, warehousing, and shipping costs.

The bullwhip effect is tamed by reducing uncertainties about demand and supply when all members of the supply chain have accurate and up-to-date information. If all supply chain members share dynamic information about inventory levels, schedules, forecasts, and

shipments, they have more precise knowledge about how to adjust their sourcing, manufacturing, and distribution plans. Supply chain management systems provide the kind of information that
helps members of the supply chain make better purchasing and scheduling decisions.

- Define and compare supply chain planning systems and supply chain execution systems.

Supply chain planning systems-----
1. enable the firm to model its existing supply chain
2. generate demand forecasts for products
3. develop optimal sourcing and manufacturing plans
4. Such systems help companies make better decisions such as determining how much of a specific product to manufacture in a given time period
5. Establishing inventory levels for raw materials
6. intermediate products, and finished goods
7. determining where to store finished goods
8. identifying the transportation mode to use for product delivery.

Supply chain execution systems manage the flow of products through distribution centers and warehouses to ensure that products are delivered to the right locations in the most efficient manner.

Supply Chain Execution system----------
1. track the physical status of goods, the management of materials
2. warehouse and transportation operations,
3. financial information involving all parties.

- Describe the challenges of global supply chains and how Internet technology can help companies manage them better.

More and more companies are entering international markets, outsourcing manufacturing operations, and obtaining supplies from other countries as well as selling abroad. Their supply chains extend across multiple countries and regions. There are additional complexities and challenges to managing a global supply chain.
Global supply chains typically span greater geographic distances and time differences than domestic supply chains and have participants from a number of countries. Performance standards may vary from region to region or from nation to nation. Supply chain management may need to reflect foreign government regulations and cultural differences.

The Internet helps companies manage many aspects of their global supply chains. Including-
1. Sourcing
2. Transportation
3. Communication
4. International Finance
5. Outsourcing warehouse management
6. Transportation management

7. Related operation to third-party logistics provider

- Distinguish between a push-based and a pull-based model of supply chain management and explain how contemporary supply chain management systems facilitate a pull based model.

In a **push-based model** , production master schedules are based on forecasts or best guesses of demand for products, and products are pushed to customers. Also known as **Build-to-stock**

pull-based model , also known as a **demand-driven** or **build-to-order** model, actual customer orders or purchases trigger events in the supply chain.

In contemporary supply chain management systems, the Internet and Internet technology make it possible to move from sequential supply chains, where information and materials flow sequentially from company to company, to concurrent supply chains, where information flows in many directions simultaneously among members of a supply chain network. Members of the network immediately adjust to changes in schedules or orders.

9-3 How do customer relationship management systems help firms achieve customer intimacy?
• Define customer relationship management and explain why customer relationships are so important today.
CRM systems provide information to coordinate all of the business processes that deal with customers in sales, marketing, and service to **optimize revenue, customer satisfaction**, and **customer retention**. This information helps fi rms identify, attract, and retain the most profitable customers provide better service to existing customers; and increase sales.
Customer relationship management (CRM) systems, which we introduced in Chapter 2 , capture and integrate customer data from all over the organization, consolidate the data, analyze the data, and then distribute the results to various systems and customer touch points across the enterprise. A touch point (also known as a contact point) is a method of interaction with the customer, such as telephone, e-mail, customer service desk, conventional mail, Facebook, Twitter, website, wireless device, or retail store. Well-designed CRM systems provide a single enterprise view of customers that is useful for improving both sales and customer service

• Describe how partner relationship management (PRM) and employee relationship management
(ERM) are related to customer relationship management (CRM).

PRM uses many of the same data, tools, and systems as customer relationship management to enhance collaboration between a company and its selling partners.
1. If a company does not sell directly to customers but rather works through distributors or retailers, PRM helps these channels sell to customers directly.

2. It provides a company and its selling partners with the ability to trade information and distribute leads and data about customers, integrating lead generation, pricing, promotions, order configurations, and availability.
3. It also provides a firm with tools to assess its partners' performances so it can make sure its best partners receive the support they need to close more business.

ERM software deals with employee issues that are closely related to CRM, Such as---
1. setting objectives,
2. employee performance management,
3. Performance based compensation,
4. employee training.

- Describe the tools and capabilities of customer relationship management software for sales, marketing, and customer service.

Sales:

- Sales force automation modules in CRM systems help sales staff increase their productivity by focusing sales efforts on the most profitable customers, those who are good candidates for sales and services.

- Provide sales prospect and contact information, product information, product configuration capabilities, and sales quote generation capabilities.

- Enable sales, marketing, and delivery departments to easily share customer and prospect information.

- Increase salespeople's efficiency in reducing the cost per sale as well as the cost of acquiring new customers and retaining old ones.

- Includes capabilities for sales, forecasting, territory management, and team selling.

- Supports direct-marketing campaigns by providing capabilities for capturing prospect and customer data, for providing product and service information, for qualifying leads for targeted marketing, and for scheduling and tracking direct-marketing mailings or e-mail.

Customer Service:

- Provide information and tools to make call centers, help desks, and customer support staff more efficient.

- Includes capabilities for assigning and managing customer service requests.

- May also include Web-based self-Sales force automation (SFA) modules in CRM systems help sales staff
- increase productivity by focusing sales efforts on the most profitable custom-
- ers, those who are good candidates for sales and services.service capabilities.

Marketing:

- Supports direct-marketing campaigns by providing capabilities for capturing prospects and customer data, for providing product and service information for qualifying leads for targeted marketing, and for scheduling and tracking direct-marketing mailings or e-mail.

- Includes tools for analyzing marketing and customer data. Identifies profitable and unprofitable customers, designs products and services to satisfy specific customer needs and interests, and identifies opportunities for cross-selling, up-selling, and bundling.

• Explain how sales force automation modules help increase productivity.

1. Sales force automation (SFA) modules in CRM systems help sales staff increase productivity by focusing sales efforts on the most profitable customers, those who are good candidates for sales and services.
2. SFA modules provide **sales prospect** and **contact information**, **product information, product configuration capabilities,** and **sales quote generation capabilities.**
3. Such software can assemble information about a particular customer's past purchases to help the salesperson make personalized recommendations.
4. SFA modules enable sales, marketing, and shipping departments to share customer and prospect information easily.
5. SFA increases each salesperson's efficiency by reducing the cost per sale as well as the cost of acquiring new customers and retaining old ones.
6. SFA modules also provide capabilities for sales forecasting, territory management, and team selling.

- Distinguish between operational and analytical CRM.

Operational CRM includes customer-facing applications, such as tools for sales force automation, call center and customer service support, and marketing automation.

Analytical CRM includes applications that analyze customer data generated by operational CRM applications to provide information for improving business performance.

Analytical CRM applications are based on data from operational CRM systems, customer touch points, and other sources that have been organized in data warehouses or analytic platforms for use in online analytical processing (OLAP), data mining, and other data analysis techniques

(see Chapter 6) . Customer data collected by the organization might be combined with data from other sources, such as customer lists for direct-marketing campaigns purchased from other companies or demographic data. Such data are analyzed to identify buying patterns, to create segments for targeted marketing, and to pinpoint profitable and unprofitable customers

- Define churn rate and explain its importance.

The churn rate measures the number of customers who stop using or purchasing products or services from a company.

It is an important indicator of the growth or decline of a firm's customer base.

9-4* What are the challenges that enterprise applications pose, and how are enterprise applications taking advantage of new technologies?

• List and describe the challenges enterprise applications pose.

1. Enterprise applications require not only deep-seated technological changes but also fundamental changes in the way the business operates. Companies must make sweeping changes to their business processes to work with the software. Employees must accept new job functions and responsibilities. They must learn how to perform a new set of work activities and understand how the information they enter into the system can affect other parts of the company. This requires new organizational learning and should also be factored into ERP implementation cost*s.
2. Some firms experienced enormous operating problems and losses when they first implemented enterprise applications because they didn't understand how much organizational change was required.
3. Enterprise applications also introduce switching costs. When you adopt an enterprise application from a single vendor, such as SAP, Oracle, or others, it is very costly to switch vendors, and your firm becomes dependent on the vendor to upgrade its product and maintain your installation.
4. Enterprise applications are based on organization-wide definitions of data. You'll need to understand exactly how your business uses its data and how the data would be organized in a CRM, SCM, or ERP system. CRM systems typically require some data cleansing work.

- Explain how these challenges can be addressed.

Enterprise applications create new interconnections among myriad business processes and data flows inside the firm (and in the case of supply chain management systems, between the firm and its external supply chain partners). **Employees require training to prepare for new procedures and roles. Attention to data management is essential. Management must understand the impact that implementing enterprise applications will have on every facet of the business. Executives must**

not underestimate the time and costs of implementation, not just on the organization but also on customers, suppliers, and business partners.

- Describe how enterprise applications are taking advantage of SOA, cloud computing, and open source software.

Today, enterprise application vendors are delivering more value by becoming more flexible, web-enabled, mobile, and capable of integration with other systems. Stand-alone enterprise systems, customer relationship management systems, and SCM systems are becoming a thing of the past. The major enterprise software vendors have created what they call enterprise solutions, enterprise suites , or e-business suites to make their CRM, SCM, and ERP systems work closely with each other and link to systems of customers and suppliers. SAP Business Suite, Oracle E-Business Suite, and Microsoft Dynamics Suite (aimed at midsized companies) are examples, and they now use web services and service-oriented architecture (SOA)

SAP's next-generation enterprise applications incorporate SOA standards and can link SAP's own applications and web services developed by independent software vendors. Oracle also has included SOA and business process management capabilities in its Fusion middleware products. Businesses can use these tools to create platforms for new or improved business processes that integrate

information from multiple applications. Next-generation enterprise applications also include open source and cloud solutions as well as more functionality available on mobile platforms. Open source products such as Compiere, Apache Open for Business (OFBiz), and Openbravo do not offer as many capabilities as large commercial enterprise software but are attractive to companies such as small manufacturers because of their low cost.

For small- and medium-sized businesses, SAP offers cloud-based versions of its Business One and Business ByDesign enterprise software solutions (see the chapter- opening case study). Cloud-based enterprise systems are also offered by smaller vendors such as NetSuite and Plex Systems, but they are not as popular as cloud-based CRM products. The undisputed global market leader in cloud-based CRM systems is Salesforce.com , with more than 100,000 custom- ers. Salesforce.com delivers its service through Internet-connected computers or mobile devices, and it is widely used by small, medium, and large enter- prises. As cloud-based products mature, more companies will be choosing to run all or part of their enterprise applications in the cloud on an as-needed basis. Several Fortune 500 firms are planning to move most of their enterprise software to cloud based platforms in the next five years where they will not incur the costs of maintaining their own hardware, and the software will be charged on a metered basis.

• Define social CRM and explain how customer relationship management systems are using social networking.

CRM software vendors are enhancing their products to take advantage of social networking technologies. These social enhancements help firms identify new ideas more rapidly, improve team productivity, and deepen interactions with customers (see Chapter 10) . Using social CRM

tools, businesses can better engage with their customers by, for example, analyzing their sentiments about their products and services.

Social CRM tools enable a business to connect customer conversations and relationships from social networking sites to CRM processes. The leading CRM vendors now offer such tools to link data from social networks into their CRM software. SAP, Salesforce.com and Oracle CRM products now feature technology to monitor, track, and analyze social media activity in Facebook, LinkedIn, Twitter, YouTube, and other sites. Business intelligence and analytics software vendors such as SAS also have capabilities for social media analytics (with several measures of customer engagement across a variety of social networks) along with campaign management tools for testing and optimizing both social and traditional web-based campaigns.

Salesforce.com connected its system for tracking leads in the sales process with social-listening and social-media marketing tools, enabling users to tailor their social-marketing dollars to core customers and observe the resulting comments. If an ad agency wants to run a targeted Facebook or Twitter ad, these capabilities make it possible to aim the ad specifically at people in the client's lead pipeline who are already being tracked in the CRM system. Users will be able to view tweets as they take place in real time and perhaps uncover new leads. They can also manage multiple campaigns and compare them all to figure out which ones generate the highest click-through rates and cost per click.