Module 03
ACHIEVING OPERATIONAL EXCELLENCE AND CUSTOMER INTIMACY: ENTERPRISE APPLICATIONS

ICT 41013, ICT in Business and Governance
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Learning Objectives

• How do enterprise systems help businesses achieve operational excellence?
• How do supply chain management systems coordinate planning, production, and logistics with suppliers?
• How do customer relationship management systems help firms achieve customer intimacy?
• What are the challenges posed by enterprise applications?
• How are enterprise applications used in platforms for new cross-functional services?
Enterprise Systems
Enterprise Systems

• Enterprise systems (ES) are large-scale application software packages that support business processes, information flows, reporting, and data analytics in complex organizations.

• Disastrous for an organization to have more than one set of data for customers, employees, and suppliers.

• The best idea is to have one database that supplies information where and when necessary across functional lines.

• Everyone from employees to managers, from customers to suppliers, would have the necessary tools to extract the data that they need and present it in the format that fits them best.

• Enterprise Systems
  o Suite of integrated software modules and a common central database
  o Collects data from many divisions of firm for use in nearly all of firm’s internal business activities
  o Information entered in one process is immediately available for other processes
Enterprise systems feature a set of integrated software modules and a central database that enables data to be shared by many different business processes and functional areas throughout the enterprise.
What are Enterprise Systems?

- Enterprise systems aim to correct the problem of firms not having integrated information.
- Also known ERP systems, their main goal is to bridge the communication gap among all departments and all information users within a company.
  - *If production enters information about its processes, the data are available to accounting, sales, and human resources.*
  - *If sales and marketing is planning a new advertising campaign, anyone anywhere within the organization will have access to that information.*
- Enterprise systems truly allow a company to use information as a vital resource and enhance the bottom line.
- Consolidated data from divisions and departments throughout the business, including key business processes, are immediately available to any authorized user.
- The greatest enticement of enterprise systems is the chance to cut costs firm-wide and enhance the ability to pass information throughout the organization.
Many businesses assume that their operations are totally integrated across functional lines

- Manufacturing responds to an order from Sales
- Accounting and Finance sends an invoice for this.
- A Production sends an email to the HR requesting new employees.

But, many times, departments fail to fully communicate with all the other departments about every process that is taking place in a company.

- Sales sends an order to Manufacturing with a shipment date that can’t possibly be met.
- Accounting and Finance pays a bill for supplies that Production never ordered.
- HR holds a training class that interferes with a rush production job.

Enterprise software allows every functional area to share every process and every piece of data.
Enterprise Software

• The software uses predefined processes and requires the company to adapt itself to the software.
• While many companies may hesitate at having to change, the software is designed around the best practices for that particular function.
• The company can benefit from using the most successful solutions in a particular industry to help achieve its objectives.
• The software helps the organization automate many of the steps taken from industry-wide best practices instead of having to do everything manually.
• And best of all, the software will help employees remember all of the necessary steps in a process and provide the data to all who need it.
Most common business processes that are automatically included in a typical enterprise system.

**Financial and accounting processes**, including general ledger, accounts payable, accounts receivable, fixed assets, cash management and forecasting, product-cost accounting, cost-center accounting, asset accounting, tax accounting, credit management, and financial reporting.

**Human resources processes**, including personnel administration, time accounting, payroll, personnel planning and development, benefits accounting, applicant tracking, time management, compensation, workforce planning, performance management, and travel expense reporting.

**Manufacturing and production processes**, including procurement, inventory management, purchasing, shipping, production planning, production scheduling, material requirements planning, quality control, distribution, transportation execution, and plant and equipment maintenance.

**Sales and marketing processes**, including order processing, quotations, contracts, product configuration, pricing, billing, credit checking, incentive and commission management, and sales planning.
The changes in the enterprise will be tremendous:

- Management: Improved management decision making, with a comprehensive view of performance across all functional areas.

- More efficient operations and customer-driven business processes: All functional areas can focus more on the customer and respond to product demand more efficiently.

- A more uniform organization: A more disciplined approach to business throughout the entire firm, regardless of physical location and/or organizational structure.
Bottom Line:

• Enterprise systems force a company to fully integrate all business processes.

• These systems usually require massive changes in the structure and organization of a business and are difficult to implement.

• The changes can make a tremendous improvement in a firm by using the best practices of the industry and requiring all functional areas to focus more on the customer.
Supply Chain Management Systems
The Supply Chain

- A supply chain includes all of the internal functions of an organization, along with suppliers, distributors, retailers, and customers.

- They are all intertwined and rely on information from each other to effectively meet the business’s objectives.

- Exactly what are all the activities involved in getting a product from conception to delivery? There are probably many more than you can easily think of. And there are many more people involved than you might imagine. It may be helpful to break the supply chain into three distinct groups:
  - Upstream: includes the company’s suppliers, the suppliers’ suppliers, and the processes for managing relationships with them.
  - Downstream: Distributors and those that deliver products to customers
  - Internally: The employees that transform materials, components, and services into the actual products
As with other functional areas, information is the glue that holds the supply chain together. Lack of or faulty information can damage the entire chain from getting supplies into the manufacturing process and getting the final product to the customer. In a perfect world, just-in-time strategies for ordering and delivering supplies would be an ordinary process but in practice this is not possible due to unexpected events such as natural disasters, etc. Businesses have to plan as best they can around these kinds of events but they can’t foresee every problem. Supply chain planning systems can provide information up and down the chain and help everyone involved do a better forecasting job.
Supply chain planning systems enable firms to:

- Generate demand forecasts
- Develop sourcing and manufacturing plans
- Share information about changes easier and faster so work can be better coordinated
- Develop better demand planning that matches production closer with customer demands
- Manage the flow of products through distribution centers and warehouses by using supply chain execution systems
- Coordinate activities with supply chain partners
- Allow users to balance the costs of transportation, delivery, and handling
Global Supply Chains and the Internet
Global Supply Chains and the Internet

- The islands of information that we’ve frequently mentioned don’t exist just inside the corporation but also exist all up and down the supply chain.

- Adapting the supply chain software to the Internet and opening up information to suppliers, logistical experts, and distributors can greatly help a company reduce costs and ensure products are delivered when needed to the right location.

- The same type of internal collaboration that organizations can generate through *intranets* can be extended to supply chain partners through *extranets*.
  - Suppliers can log on to a company’s extranet site and review next week’s production schedule.
  - The supplier can ensure enough production supplies are delivered to a manufacturer without over- or under-extending itself.
  - Changes to the production schedule can be communicated easier to suppliers through Internet-enabled applications.
  - Long-term forecasts can be posted to an extranet and schedules adjusted.

- No expensive proprietary systems are necessary since all information is transmitted through ordinary Web-based applications.

- Internal and external users can use online applications to view delivery schedules or determine the optimal logistics for moving products.
Global Supply Chain Issues

• Some of the issues businesses will face if they choose to use global supply chains are:
  o Greater geographic distances and time differences
  o Additional costs for transportation, inventory, and local taxes and fees
  o Varying performance standards
  o Foreign government regulations
  o Cultural differences
Global Supply Chain Issues

• While the Internet helps suppliers, manufacturers, and partners communicate easier through email, faxes, or phone calls, those communication methods open the door to errors or mistakes.

• Using Web-based supply chain management systems gives all the players a way to make data and information more easily available through browsers and portals.

• Using the Internet helps lower some of these issues, but it’s not a panacea for all of them.
  • Companies must still deal with foreign governments and cultural differences for which there are no easy answers or Internet applications.
Traditionally, customers purchase whatever products are available.

- While colors, sizes, and prices may vary somewhat, generally a manufacturer decides what to produce by forecasting what the potential demand might be through a push-based model.

That is quickly changing to a pull-based model in which the customer tells the manufacturer ahead of time what he/she wants to buy.

- One of the best examples of this new pull-based model is Dell Computer’s build-to-order business model.
- Dell doesn’t build a computer until it receives a customer order.
- Then it builds the computer to the customer’s specifications.
- Granted, the customer must choose from a pre-determined list of options, but Dell doesn’t have a huge stock of unsold inventory that no one wants based on faulty demand forecasting.
Differences between the push-based and pull-based supply chain models.

**Push-Based Model**

- Supplier
  - Supply to forecast
- Manufacturer
  - Production based on forecasts
- Distributor
  - Inventory based on forecasts
- Retailer
  - Stock based on forecasts
- Customer
  - Purchase what is on shelves

**Pull-Based Model**

- Supplier
  - Supply to order
- Manufacturer
  - Produce to order
- Distributor
  - Automatically replenish warehouse
- Retailer
  - Automatically replenish stock
- Customer
  - Customer orders

**Push- Versus Pull-based Supply Chain Models**
Differences between the push-based and pull-based supply chain models.

• Automobile manufacturers are also adopting pull-based modeling for their customers.
  • A customer in one country can log onto a Web site and select the color, engine, options and kind of tires for his/her new car.
  • The order is sent to the factory in another country and the manufacturer’s suppliers simultaneously. While the customer must wait for delivery, at least he/she will get exactly the car they wanted.
• The benefits of implementing an integrated, networked supply chain management system include:
  o Match supply to demand
  o Reduce inventory levels
  o Improve delivery service
  o Speed product time to market
  o Use assets more effectively
• In turn a company can:
  o Improve customer service and responsiveness
  o Reduce costs
  o Increase sales
  o Utilize cash better
• These benefits of implementing a supply chain management system point directly to improving the bottom line for the company. By making the supply chain more efficient a company can save millions of rupees, improve its relationships with its customers, and sell more products.
Supply chain management systems integrate all of the processes by supplying information to all entities involved in the chain.

More precise, current information allows organizations to improve demand forecasting and better measure the performance effectiveness of a supply chain.

Better information also allows a firm to move from push-based to pull-based modeling.
Customer Relationship Management Systems
“You've gone to great lengths to identify and nurture the most valuable segments of your customer base. You've closely monitored them through surveys and focus groups, and you know they consistently indicate they are "highly satisfied" with your company and its products. But... are they loyal?

You don't really know. And that's a problem. The notion that loyalty is all about improving customer "satisfaction" is perhaps the most common mistake.

The frustrating truth is that what customers say about being satisfied turns out to be a poor indicator of loyalty.

In fact, a finding from customer research is that 60 percent to 80 percent of lost customers across all industry segments reported on surveys just prior to defecting that they were "very satisfied" or "satisfied."

While many companies strive to be “customer-centric” very few have been able to completely focus every functional area of the organization on the customer.
What Is Customer Relationship Management?

- The goals of CRM systems are to optimize customer satisfaction and customer retention which in turn will maximize revenue and profitability.

- Many companies are overloaded with data about customers but don’t have any useful information that can help them increase customer satisfaction and retention, thereby increasing revenues and profitability.

- The ability to turn raw data into useful information is where CRM systems shine.

- CRM systems gather customer information from all corners of a business, consolidate the information and then provide it to all of the organization’s customer touch points.

- By offering a consolidated viewpoint of the customer to these touch points, a company can cater to the customer that offers the most profitability.

- Financial institutions are a prime example of how effective CRM systems can be to help identify the customers that offer the most “bang for the buck. (value for money)”

- Most of the larger banks offer more than just checking and savings accounts. They provide investment services, insurance policies, and loans.
  - It’s much cheaper for a bank to provide its current customers with all of these financial products, rather than trying to attract new customers for each of the separate product lines. Information obtained from a CRM system provides the bank with information about which customers are more likely to purchase these products and its sales force targets that market better.
CRM Software

• CRM software is a category of enterprise software that covers a broad set of applications and software designed to help businesses manage customer data and customer interaction, access business information, automate sales, marketing and customer support and also manage employee, vendor and partner relationships.

• CRM application software ranges in size and complexity making it possible for an organization to select the type of software it needs the most.
  • Modules focusing on partner relationship management or employee relationship management can also be integrated into the CRM software data.

• Partner relationship management systems are a reflection of internal customer relationship management systems but extend past the immediate borders of a firm to its selling partners.
  • For instance, Levi Jeans doesn’t sell directly to its customers but rather through other retail outlets.
  • How Levi’s partners cater to the customer directly affects its profitability. Therefore, Levi is very interested in sharing information about its customers with its partners to increase sales of its products.
CRM Software

• Employee relationship management modules associated with CRM focus more on how employees perform and interact with customers. These modules help a company manage:
  • Employee objectives
  • Employee performance
  • Performance-based compensation
  • Employee training
Some of the more common capabilities of CRM software are:

- **Sales force automation:**
  - Allows the sales force to focus on the most profitable customer.
  - Reduces the cost per sale for acquiring new customers and retaining old ones.
  - Improves sales forecasting, territory management, and team selling.

- **Customer service:**
  - Gathers information from a variety of sources and makes it available across organizational functions so that data is input only once. Includes Web-based self-service capabilities.

- **Marketing:**
  - Through better analysis of customer data, allows companies to engage in
    - cross-selling (The practice of selling or suggesting related or complimentary products to a prospect or customer)
    - up-selling (technique whereby a seller induces the customer to purchase more expensive items, upgrades or other add-ons in an attempt to make a more profitable sale)
    - bundling (offering several products for sale as one combined product)
Customer Relationship Management Systems

CRM systems examine customers from a multifaceted perspective. These systems use a set of integrated applications to address all aspects of the customer relationship, including customer service, sales, and marketing.

- **Sales**
  - Telephone sales
  - Web sales
  - Retail store sales
  - Field sales

- **Marketing**
  - Campaign data
  - Content
  - Data analysis

- **Service**
  - Call center data
  - Web self-service data
  - Wireless data
Figure below shows how customer data feeds into three functions.

**Customer Data**
- **Sales**
  - Account Management
  - Lead Management
  - Order Management
  - Sales Planning
  - Field Sales
  - Sales Analytics
- **Marketing**
  - Campaign Management
  - Channel Promotions Management
  - Events Management
  - Market Planning
  - Marketing Operations
  - Marketing Analytics
- **Service**
  - Service Delivery
  - Customer Satisfaction Management
  - Returns Management
  - Service Planning
  - Call Center & Help Desk
  - Service Analytics

*CRM Software Capabilities*
Operational and Analytical CRM

- Operational CRM includes everything a company should provide those employees who interface directly or indirectly with the customer: The sales force, call centers, and support activities.

- Managers and decision makers use the analytical CRM to help them improve business performance.

- The analytical CRM uses data from the operational CRM and provides managers with the opportunity to target smaller, specific customer groups or market segmentation. Rather than trying to blanket a huge group of potential customers, many of whom are not interested, managers use the analytical CRM to focus their efforts on those customers who can offer the most profit at the least cost.

- One of the most important benefits of analytical CRM is the ability to determine the customer lifetime value (CLTV, prediction of the net profit attributed to the entire future relationship with a customer).

- It costs six times more to gain a new customer than to keep an old one.

- By measuring the CLTV of customers, organizations can calculate customer profitability and determine which customers they should cater to.
Analytical CRM uses a customer data warehouse and tools to analyze customer data collected from the firm’s customer touch points and from other sources.
Business Value of Customer Relationship Management Systems

- CRM software will help managers better understand their customers thereby helping them make better decisions about product lines and marketing campaigns.
- CRM systems can also help reduce the customer churn rate (‘dropout’ rate) and identify which customers are most profitable.
- Hopefully CRM will help them discover which portion of the ad budget is wasted.
- Once again, the benefits of using CRM systems are worth the challenges you’ll face.
Benefits:

- Increased customer satisfaction
- Reduced marketing costs
- More effective marketing
- Lower costs for customer acquisition and retention
- Increased sales revenue
- Better response to customer needs
CRM systems allow a firm to focus all of their energy and attention to developing profitable customers and earlier unprofitable ones. Useful information produced by CRM systems allow firms to improve business performance while reducing costs associated with gaining and retaining customers. Information can be shared internally and externally.
Before implementing enterprise application systems, organizations need a very clear picture of where they are now and where they want to go.

Organizations must decide which processes provide the most value and which processes need the most improvement.

And, the firm must allocate the organization resources where they are most needed.
Enterprise Application Challenges

• The ROI to companies that implement enterprise systems can be enormous in terms of enhanced information between suppliers, employees, customers, and business partners.

• The better the information is, the better the decisions. The better the information is, the better the products and services are for the customer.

• More customers lead to higher profits for the company.
Hang on for a rough ride:

• Daunting Implementation:
  • Technological and fundamental changes will diffuse every corner of the organization.
  • The organizational structure and culture will change.
  • The most daunting task will be retraining thousands of workers and convincing them the change is good.
  • It will be easier to fail than to succeed.
• High Up-Front Costs and Future Benefits:
  • There is no such thing as an overnight success when implementing an enterprise system.
  • On average, it takes three to five years to fully implement an enterprise system.
  • And, the software is very expensive. Keeping the firm on track and focused on the end result is more difficult than most firms anticipate.
• Data Management:
  • It’s more important than ever before.
  • One database serves the entire organization, if data are mismanaged, it will affect every business function and process.
• Inflexibility:
  • Making changes in one area of the business is much more difficult after implementing an enterprise system. The software is just too complex to easily change.
• Realizing Strategic Value:
  • Businesses that rely on unique or cutting-edge processes to gain a competitive advantage may lose that edge with enterprise system software.
Next-Generation Enterprise Applications

- As companies get more comfortable with SCM and CRM programs they realize the importance of branching out to enterprise solutions, enterprise suites, or e-business suites.
- Software manufacturers are creating these programs and ensuring firms can integrate data and information more easily with customers, suppliers, and business partners.
- Small and medium-size businesses are the ones most likely to follow this path because it’s much cheaper.
- So, a small business can pay-as-it-goes rather than make a huge upfront investment. Web 2.0 services are also becoming integral parts of enterprise software.
Service Platforms

- Businesses are finding that service platforms help provide the integration.
- Service platforms bring all the applications used in all the business functions, units, or partners together and give customers, employees, managers, and external partners a consolidated view of the firm.
- Rather than implementing all new software applications, some businesses choose to use middleware, XML, and Web services to tie systems together.
- Put a portal front on the systems and just about everyone can access the information cheaper, faster, and easier.
Bottom Line:

• All of the challenges of implementing a new enterprise system are directly related to people.

• Many organizations fail to understand this fact and pay more attention to the hardware and software elements of the new system.

• The real emphasis should be placed on the persware (the people aspect of an information system) element of the new system instead.
End of Lesson