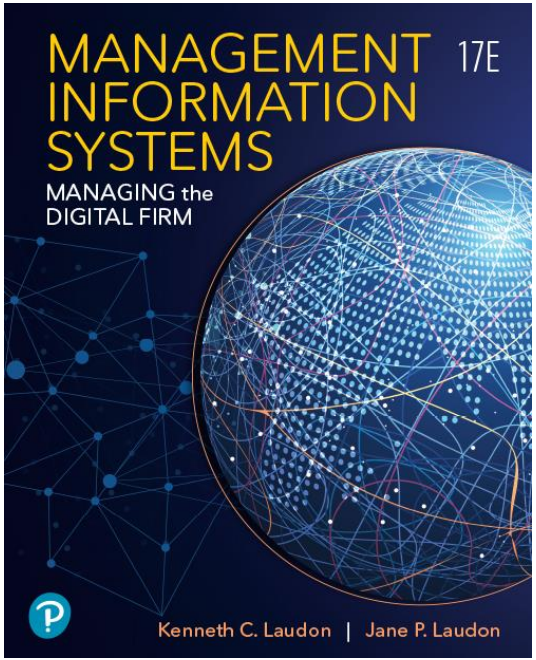
Management Information Systems: Managing the Digital Firm

Seventeenth Edition



Chapter 9

Achieving Operational Excellence and Customer Intimacy: Enterprise Applications

Learning Objectives

9.1 How do enterprise systems help businesses achieve operational excellence?

9.2 How do supply chain management systems coordinate planning, production, and logistics with suppliers?

9.3 How do customer relationship management systems help firms achieve customer intimacy?

9.4 What are the challenges that enterprise applications pose, and how are enterprise applications taking advantage of new technologies?

9.5 How will MIS help my career?

Video Cases

- Case 1: Maersk Develops a Global Shipping Management System

Lenzing Sustainably Balances Supply and Demand (1 of 2)

- Problem
  - High environmental standards
  - Global operations
  - Inefficient supply chain
  - Manual processes
- Solutions
  - Establish sustainability goals
  - Promote innovation
  - Select new technology
  - Revise supply chain processes
  - Deploy JDA Sales & Operations Planning

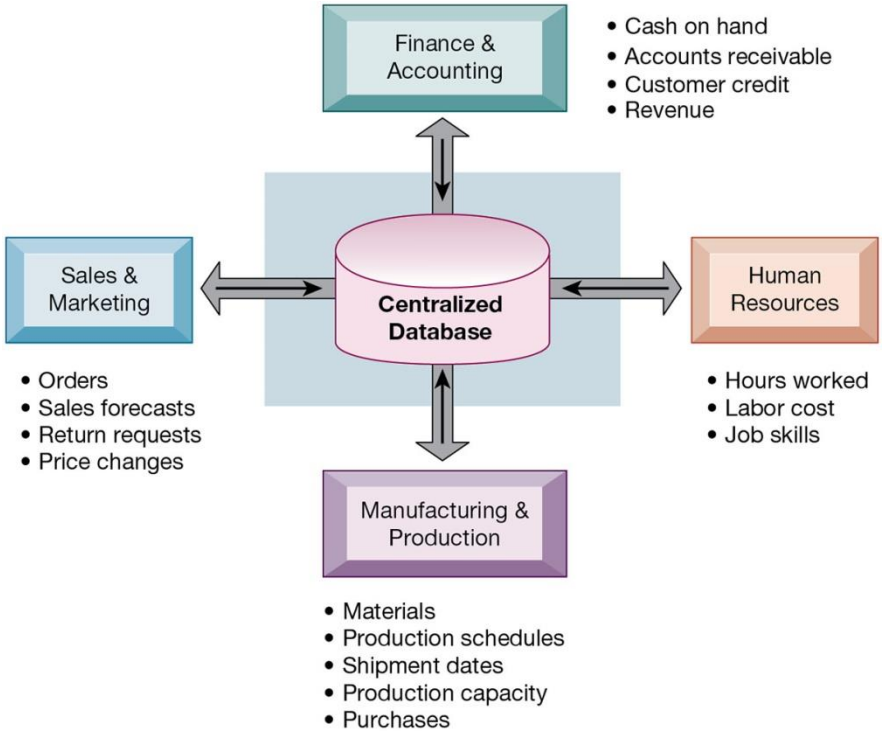
Lenzing Sustainably Balances Supply and Demand (2 of 2)

- Lenzing implemented JDA's Sales & Operations Planning software to gain better visibility into its supply chain, leading to greater forecast accuracy, better decisions, and higher operational efficiency across the global enterprise
- Helped Lenzing minimize waste and made its entire supply chain "leaner"
- Illustrates the critical nature of supply chain management systems in business

What Are Enterprise Systems

- Also known as enterprise resource planning (ERP) systems
- Based on a suite of integrated software modules and a common central database
- Collects data from many divisions of firm for use in nearly all of firm's internal business activities
- Information entered in one process is immediately available for other processes

Figure 9.1 How Enterprise Systems Work



Enterprise Software

- Built around thousands of predefined business processes that reflect best practices
  - Finance and accounting
  - Human resources
  - Manufacturing and production
  - Sales and marketing
- To implement, firms:
  - Select functions of system they wish to use
  - Map business processes to software processes
    - Use software's configuration tables for customizing

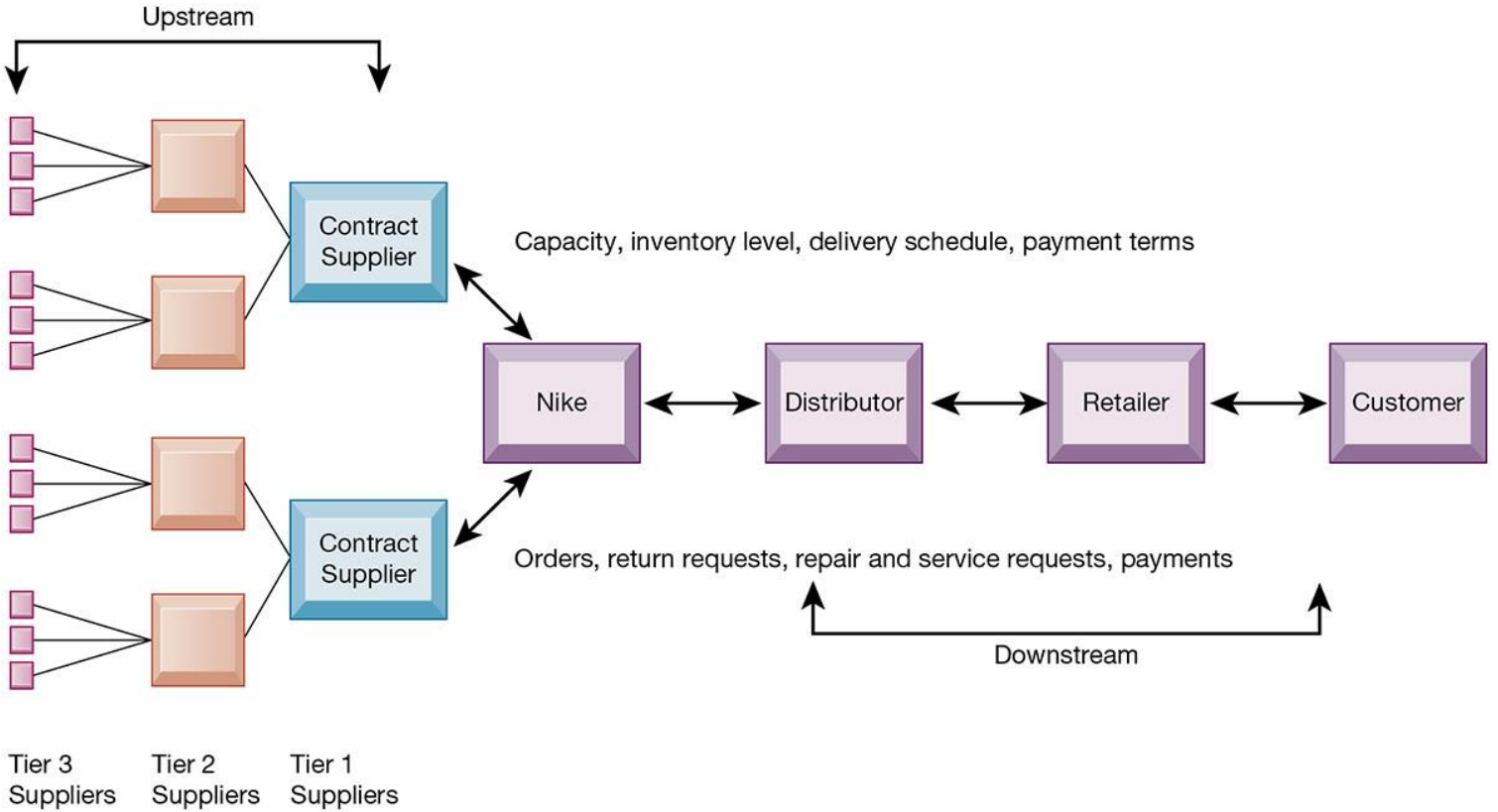
Business Value of Enterprise Systems

- Increase operational efficiency
- Provide firm-wide information to support decision making
- Enable rapid responses to customer requests for information or products
- Include analytical tools to evaluate overall organizational performance and improve decision-making

The Supply Chain

- Network of organizations and processes for:
  - Procuring materials
  - Transforming materials into products
  - Distributing the products
- Upstream supply chain
- Downstream supply chain
- Internal supply chain

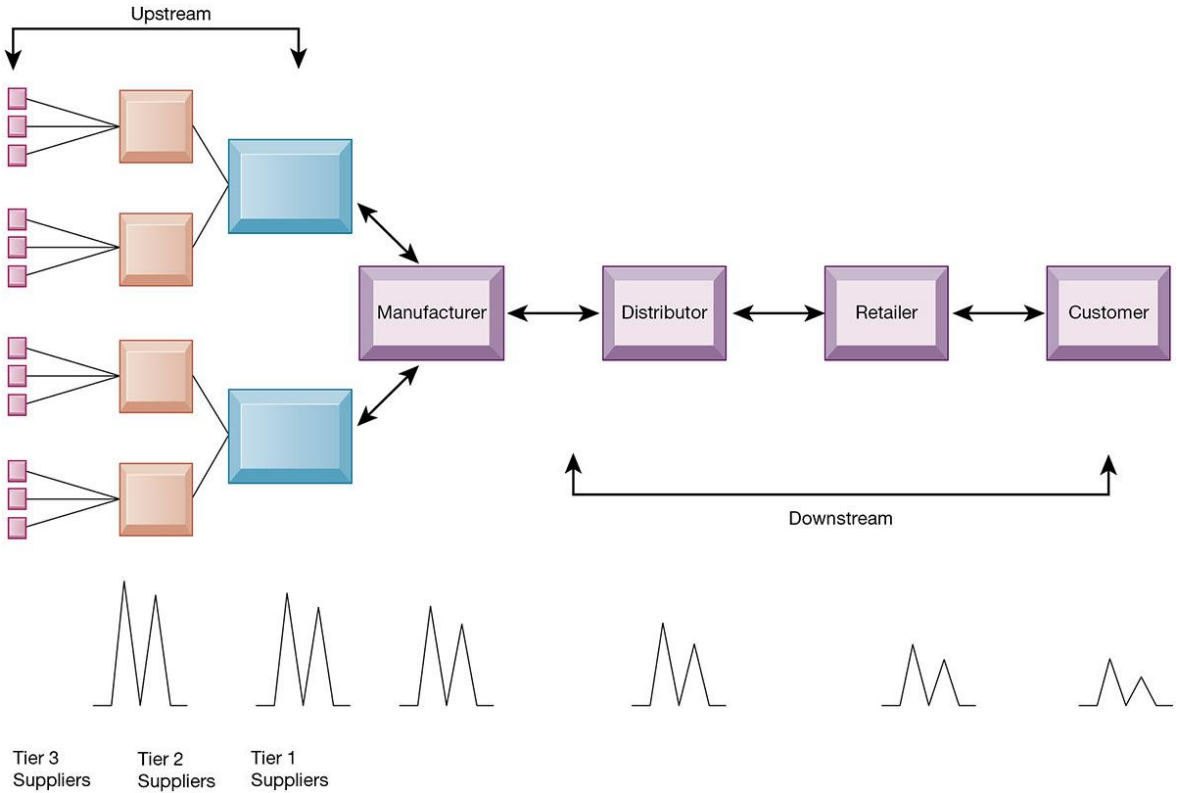
Figure 9.2 Nike's Supply Chain



Supply Chain Management

- Inefficiencies cut into a company's operating costs
  - Can waste up to 25 percent of operating expenses
- Just-in-time strategy
  - Components arrive as they are needed
  - Finished goods shipped after leaving assembly line
- Safety stock: buffer for lack of flexibility in supply chain
- Bullwhip effect
  - Information about product demand gets distorted as it passes from one entity to next across supply chain

Figure 9.3 The Bullwhip Effect



Supply Chain Management Software

- Supply chain planning systems
  - Model existing supply chain
  - Enable demand planning
  - Optimize sourcing, manufacturing plans
  - Establish inventory levels
  - Identify transportation modes
- Supply chain execution systems
  - Manage flow of products through distribution centers and warehouses

Global Supply Chains and the Internet

- Global supply chain issues
  - Greater geographical distances, time differences
  - Participants from different countries
    - Different performance standards
    - Different legal requirements
- Internet helps manage global complexities
  - Warehouse management
  - Transportation management
  - Logistics
  - Outsourcing

Demand-Driven Supply Chains: From Push to Pull Manufacturing and Efficient Customer Response

- Push-based model (build-to-stock)
  - Earlier SCM systems
  - Schedules based on best guesses of demand
- Pull-based model (demand-driven)
  - Web-based
  - Customer orders trigger events in supply chain
- Internet enables move from sequential supply chains to concurrent supply chains
  - Complex networks of suppliers can adjust immediately

Figure 9.4 Push- Versus Pull-Based Supply Chain Models

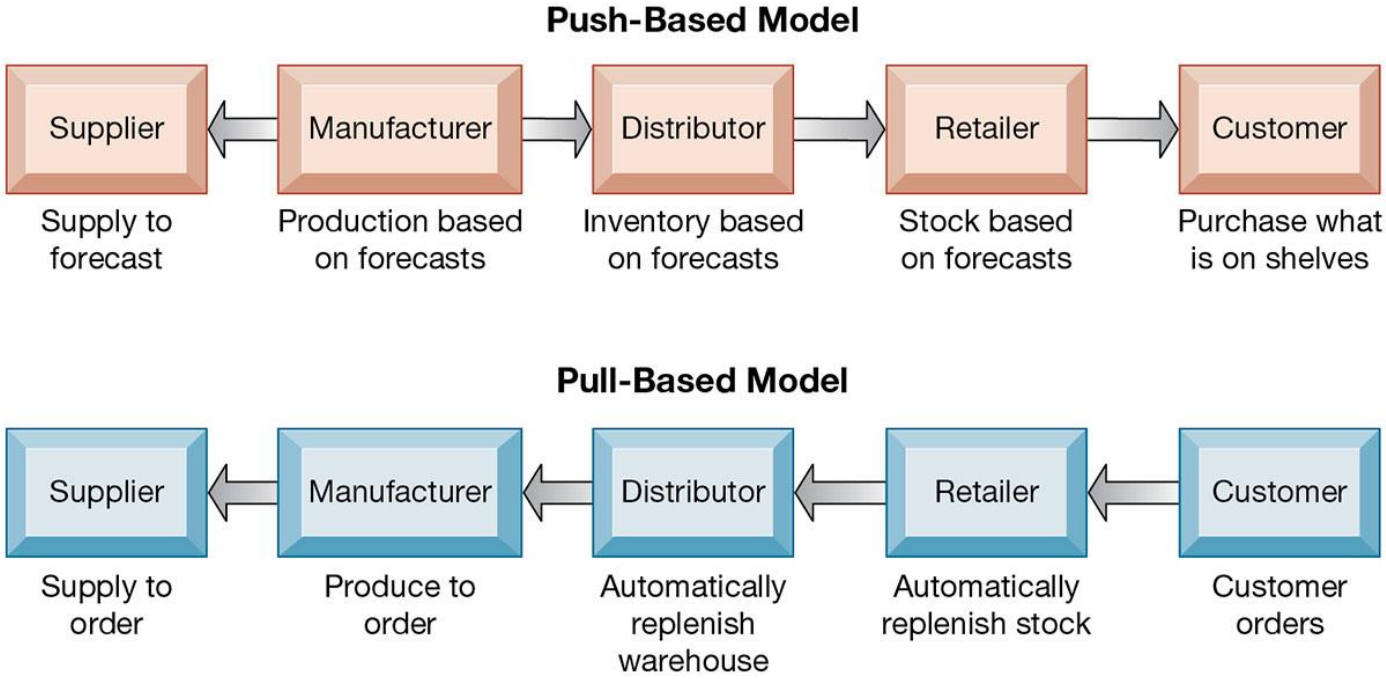
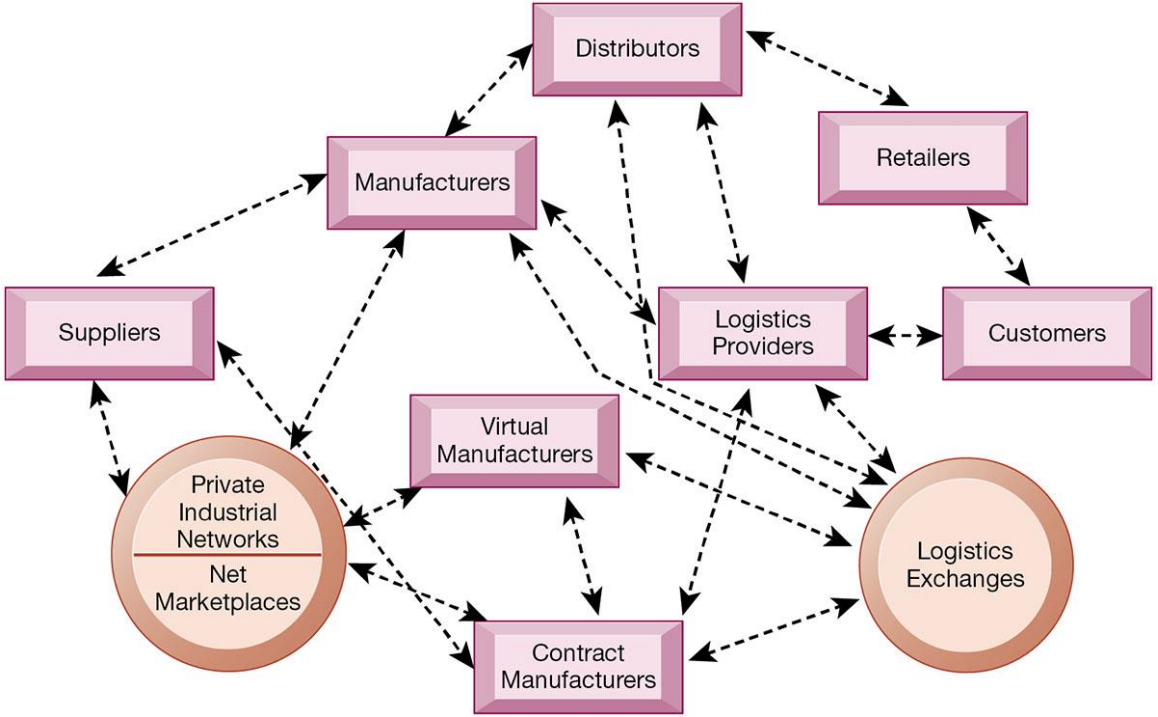


Figure 9.5 The Emerging Internet-Driven Supply Chain



Business Value of Supply Chain Management Systems

- Match supply to demand
- Reduce inventory levels
- Improve delivery service
- Speed product time to market
- Use assets more effectively
  - Total supply chain costs can be 75 percent of operating budget
- Increase sales

Customer Relationship Management

- Knowing the customer
- In large businesses, too many customers and too many ways customers interact with firm
- CRM systems
  - Capture and integrate customer data from all over the organization
  - Consolidate and analyze customer data
  - Distribute customer information to various systems and customer touch points across enterprise
  - Provide single enterprise view of customers

Figure 9.6 Customer Relationship Management (CRM)

Customer Relationship Management Software (1 of 2)

- Packages range from niche tools to large-scale enterprise applications
- More comprehensive packages have modules for:
  - Partner relationship management (PRM)
    - Integrating lead generation, pricing, promotions, order configurations, and availability
    - Tools to assess partners' performances
  - Employee relationship management (ERM)
    - Setting objectives, employee performance management, performance-based compensation, employee training

Customer Relationship Management Software (2 of 2)

- CRM packages typically include tools for:
  - Sales force automation (SFA)
    - Sales prospect and contact information
    - Sales quote generation capabilities
  - Customer service
    - Assigning and managing customer service requests
    - Web-based self-service capabilities
  - Marketing
    - Capturing prospect and customer data, scheduling and tracking direct-marketing mailings or e-mail
    - Cross-selling

Figure 9.7 How CRM Systems Support Marketing

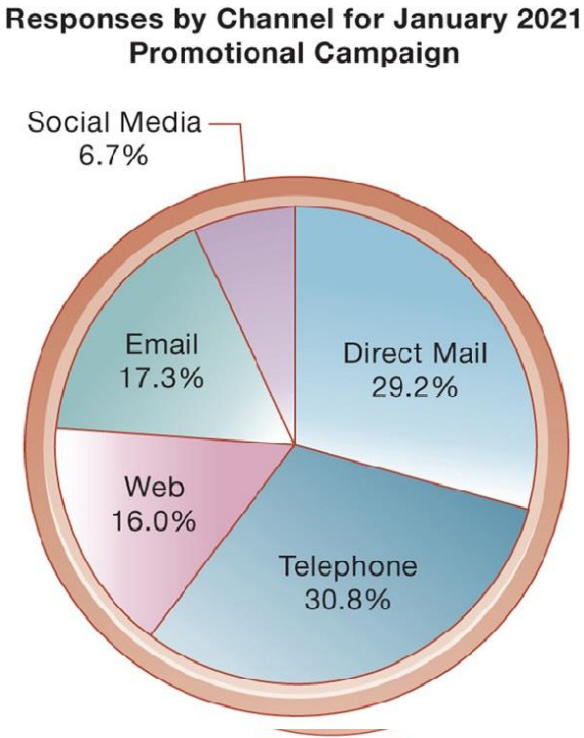


Figure 9.8 CRM Software Capabilities

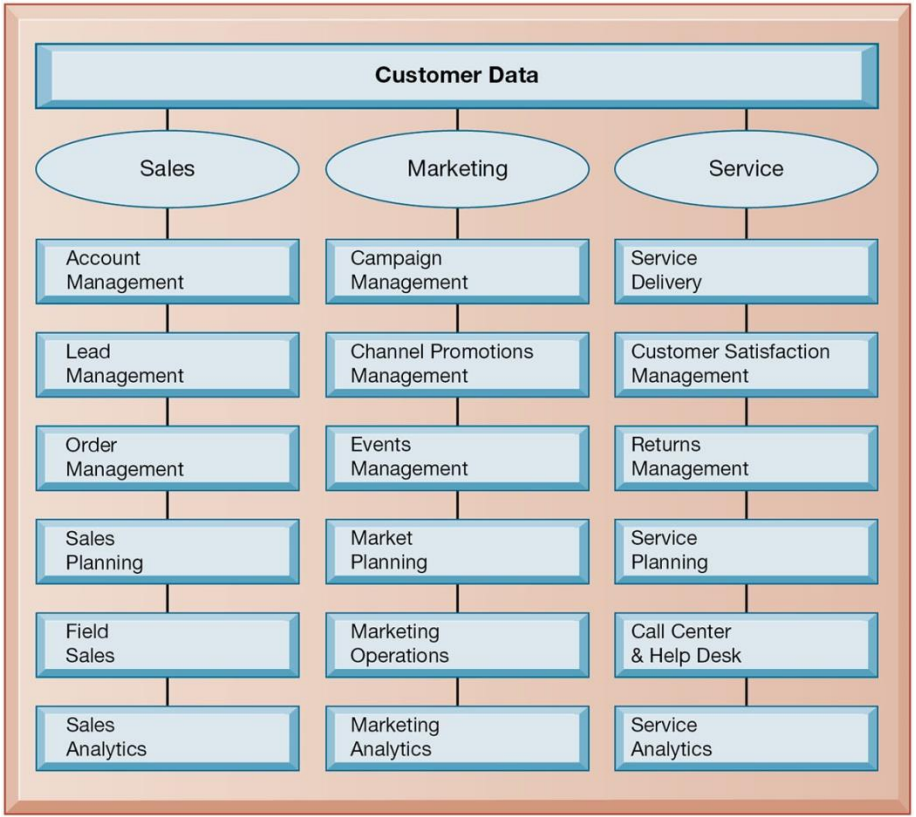
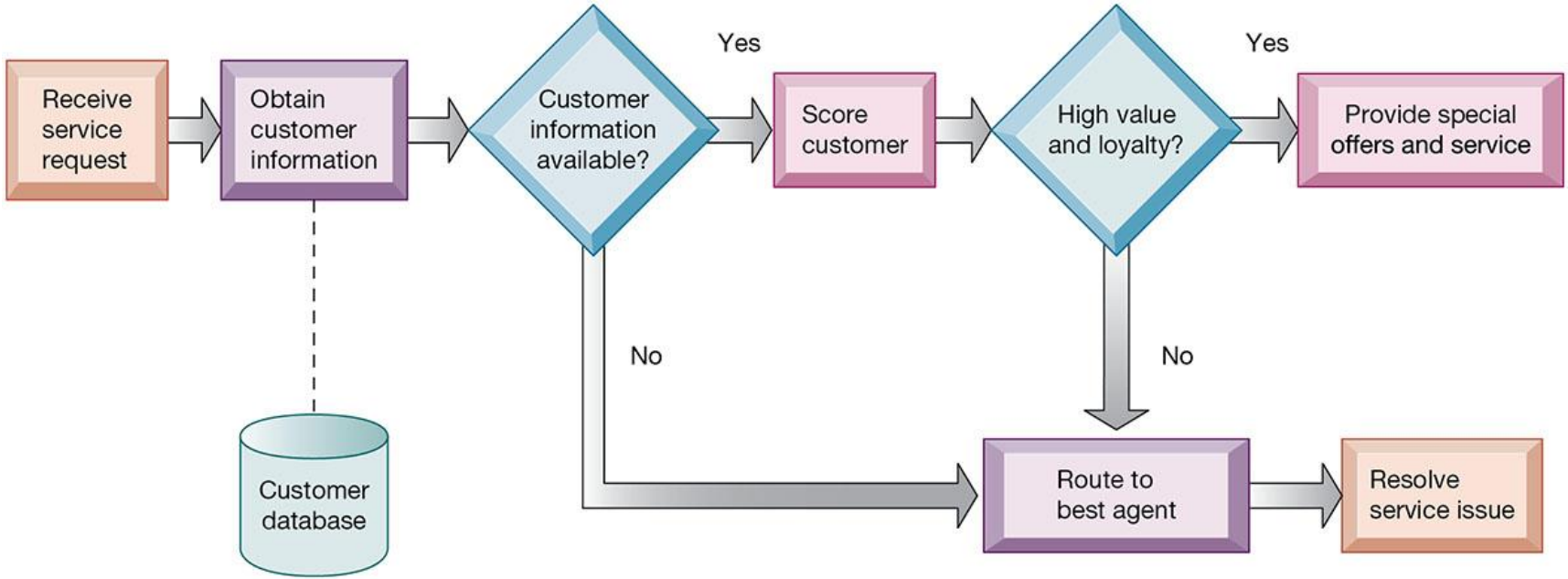


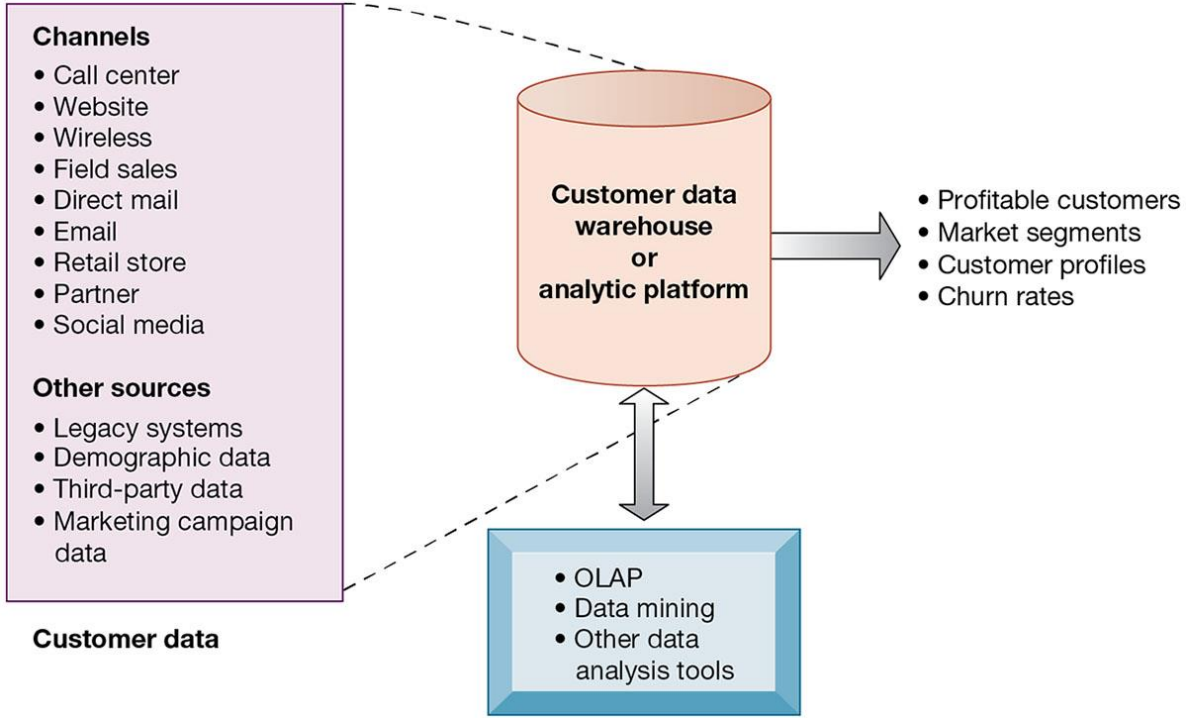
Figure 9.9 Customer Loyalty Management Process Map



Operational and Analytical CRM

- Operational CRM
  - Customer-facing applications
  - Sales force automation call center and customer service support
  - Marketing automation
- Analytical CRM
  - Based on data warehouses populated by operational CRM systems and customer touch points
  - Analyzes customer data (OLAP, data mining, etc.)
    - Customer lifetime value (CLTV)

Figure 9.10 Analytical CRM Data Warehouse



Business Value of Customer Relationship Management Systems

- Business value of CRM systems
  - Increased customer satisfaction
  - Reduced direct-marketing costs
  - More effective marketing
  - Lower costs for customer acquisition/retention
  - Increased sales revenue
- Churn rate
  - Number of customers who stop using or purchasing products or services from a company
  - Indicator of growth or decline of firm's customer base

Interactive Session: Organizations: CRM Helps Adidas Know Its Customers One Shoe Buyer at a Time (1 of 2)

- Class discussion
  - Analyze Adidas using the competitive forces and value chain model.
  - What is Adidas's business strategy? What is the rule of customer relationship management in that strategy?
  - How do information systems support Adidas's strategy?

Interactive Session: Organizations: CRM Helps Adidas Know Its Customers One Shoe Buyer at a Time (2 of 2)

- Class discussion
  - How did using Salesforce.com make Adidas more competitive? How did it change the way the company ran its business?
  - Give an example of two business decisions that were improved by using Salesforce.com

Enterprise Application Challenges

- Expensive to purchase and implement
  - Many projects experience cost overruns
  - Long development times
- Technology changes
- Business process changes
- Organizational learning changes
- Switching costs, dependence on software vendors
- Data standardization, management, cleansing

Next-Generation Enterprise Applications (1 of 2)

- Enterprise solutions/suites
  - Make applications more flexible, web-enabled, integrated with other systems
- Cloud-based versions
- Functionality for mobile platform
- Versions also available for small and medium-sized businesses

Next-Generation Enterprise Applications (2 of 2)

- Social CRM
  - Incorporating social networking technologies
  - Company social networks
  - Monitor social media activity; social media analytics
  - Manage social and web-based campaigns
- Business intelligence
  - Inclusion of BI with enterprise applications
  - Flexible reporting, ad hoc analysis, “what-if” scenarios, digital dashboards, data visualization, AI machine learning

Interactive Session: Technology: Versum's ERP Transformation

- Class discussion
  - Define the problem in this case study. What management, organization, and technology factors contributed to this problem?
  - Was the SAP S/4 HANA SaaS solution a good one for Versum? Explain your answer.
  - What challenges did Versum encounter implementing the new system?
  - How did the new system change the way Versum ran its business?

How Will MIS Help My Career?

- The Company: XYZ Global Industrial Components
- Position Description: Manufacturing management trainee
- Job Requirements
- Interview Questions
- Author Tips

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