# Chapter 9

# Achieving Operational Excellence and Customer Intimacy: Enterprise Applications

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**Management Information Systems**
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LEARNING OBJECTIVES

- **Evaluate how enterprise systems help businesses achieve operational excellence.**

- **Describe how supply chain management systems coordinate planning, production, and logistics with suppliers.**

- **Explain how customers relationship management systems help firms achieve customer intimacy.**

- **Identify the challenges posed by enterprise applications.**

- **Describe how enterprise applications are used in platforms for new cross-functional services.**

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**Enterprise Systems**

- **Enterprise Systems**

  - **Aka enterprise resource planning (ERP) systems**

  - **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**
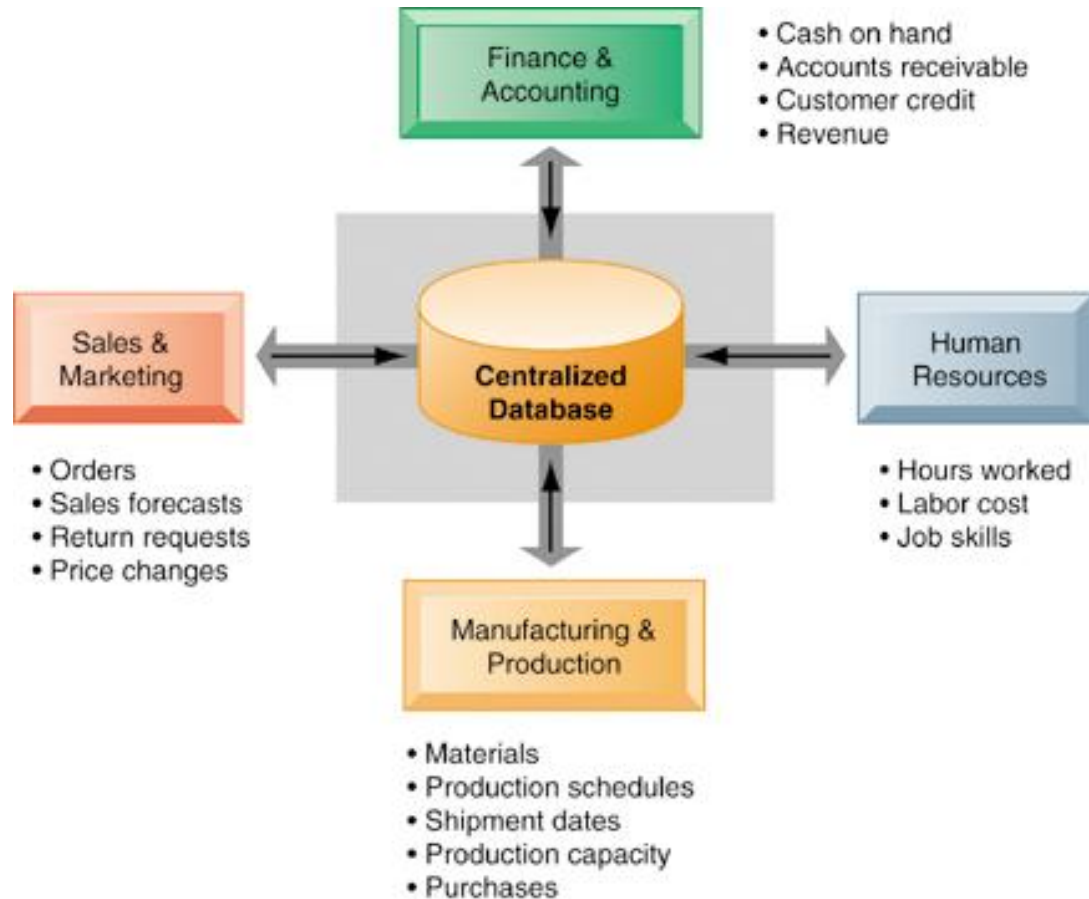
# How Enterprise Systems Work



**Figure 9-1**

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

- **Business Value of Enterprise Systems**

  - **Increase operational efficiency**

  - **Provide firmwide information to support decision making**

  - **Enable rapid responses to customer requests for information or products**

  - **Include analytical tools to evaluate overall organizational performance**

- **The supply chain**

- **Network of organizations and processes for:**

  - Procuring raw materials

  - Transforming them into products

  - Distributing the products

- **Upstream supply chain:**

  - Firm's suppliers, suppliers' suppliers, processes for managing relationships with them

- **Downstream supply chain:**

  - Organizations and processes responsible for delivering products to customers

# Nike ID – www.nikeid.com
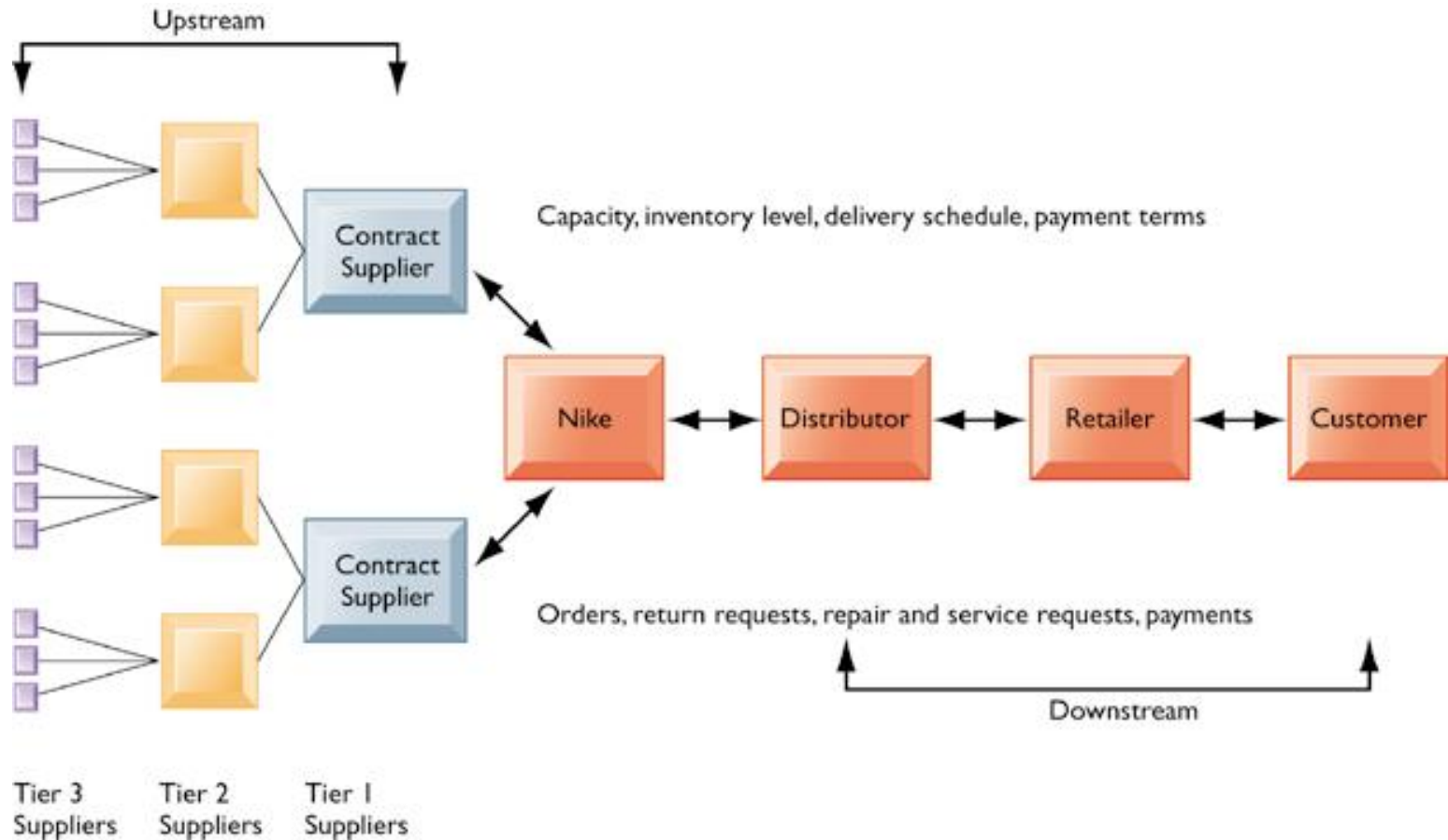
# Nike's Supply Chain



## Figure 9-2

This figure illustrates the major entities in Nike's supply chain and the flow of information upstream and downstream to coordinate the activities involved in buying, making, and moving a product. Shown here is a simplified supply chain, with the upstream portion focusing only on the suppliers for sneakers and sneaker soles.

- **Information and supply chain management**

  - **Inefficiencies cut into a company's operating costs**

    - Can waste up to 25% 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

# The Bullwhip Effect
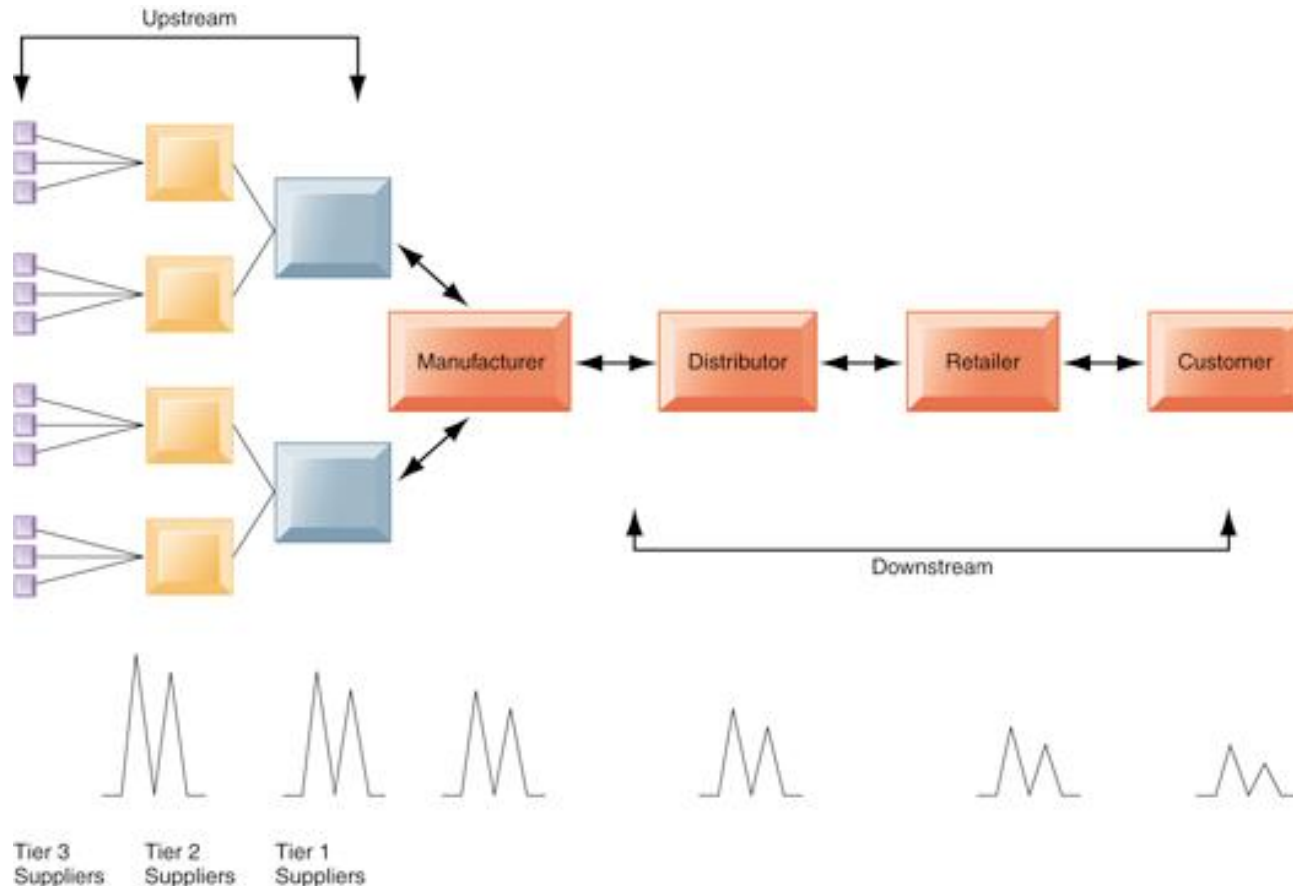


## Figure 9-3

**Inaccurate information can cause minor fluctuations in demand for a product to be amplified as one moves further back in the supply chain. Minor fluctuations in retail sales for a product can create excess inventory for distributors, manufacturers, and suppliers.**

CUSTOMER: _____  GARMENT: _____

APPROXIMATE SIZE: _____  HEIGHT: _____  WEIGHT: _____

For best results, read instructions completely and get the assistance of a second person.

**Neck:** _____

COLLARLESS GARMENTS: measure around the base of the neck where the shoulder meets the neck and add 1" for comfort.
COLLARED GARMENTS: measure around the middle of the neck and add 1" for comfort.

**Chest:** _____

Tailored Style: Measure around the fullest part of the chest and add at least 2" for comfort.
Full Style: Measure around the fullest part of the chest. If abdomen is fuller than chest, then use waist measurement. Add 4" to either measurement.

**Hip:** _____

Measure around the fullest part of the hips and add at least 1" for comfort. The tape measure should be able to slide over fullest part of the hips and buttocks freely.

**Shoulder:** _____

From the back, measure from the top edge of the left shoulder, across the base of the neck to the top edge of the right shoulder.

**Waist:** _____

Measure around the fullest part of the waist and add at least 1" for comfort.

**Shoulder to Waist:** _____

From the front, measure from the highest point of the top edge of the shoulder down and over the fullest point of the breast down to the navel (belly button).belly button.

**Upper Arm:** _____

SLEEVELESS: With arm extended, measure around the upper arm joint at the shoulder and add at least 2" for comfort.
WITH SLEEVES: Measure around the fullest part of the upper arm and add at least 4" for comfort.

**Sleeve Length:** _____

Measure from the top edge of the shoulder down along the arm to desired length. For sleeves below the elbow, bend the elbow approximately 45 degrees. For long sleeves, measurement should be at least to the wrist

**Edge of Sleeve, No Buttoned Cuff:** _____   **With Buttoned Cuff:** _____

Measure around the wrist and add at least 4".          Measure around the wrist and add 2".

**Edge of Sleeve with 1" Folded Cuff:** _____          Measure around the wrist and add at least 4".

**Shirt/Tunic Length:** _____

For regular length, use measurement for "Shoulder to Waist" and add at least 6".
For long/tunic style, add desired inches to "Shoulder to Waist" measurement.

**Pant Length:** _____

Measure from waist to desired length.

**Inseam:** _____

With legs slightly open, measure from edge of genitals along inside of leg to desired length.

**Crotch:** _____

Measure from the navel down to the genitals, through the opening between the legs add up to the waist back. Divide by 2.

**Thigh:** _____

Measure around the fullest part of the thigh and add at least 2".

**Bar (edge of pant leg):** _____

For full legs, use thigh measurement. For tapered legs, subtract desired inches.

# Alimex

**Baltimore, USA**

## INVOICE

Date: _____  Order #: _____

Name: _____  Customer #: _____

Address: _____  Home #: _____

City: _____ State: _____ ZIP: _____  Cell #: _____

Distributor ID: _____ Manufacturer #: _____

| ITEM/DESCRIPTION | FABRIC (type/color) | SCREEN (design/color) | UNIT PRICE | QTY | TOTAL |
|---|---|---|---|---|---|
| _____ | | | | | |
| | | | | | |
| _____ | | | | | |
| | | | | | |
| _____ | | | | | |
| | | | | | |
| _____ | | | | | |
| | | | | | |

| SPECIAL INSTRUCTION: | | |
|---|---|---|
| | 1. MERCHANDISE SUBTOTAL | |
| | 2. S/H (Line 1) | |
| | 3. TAXES (Line 1) | |
| | 4. TOTAL | |
| | 5. DISCOUNT (Line 1) | |
| | 6. DEPOSIT | |
| | 7. BALANCE | |

## METHOD OF PAYMENT

☐ Check, Cash or Money Order

☐ Visa  ☐ MasterCard  ☐ American Express  ☐ Discover

Card #: _____  Exp Date: ___/___

Signature: _____

## SHIPPING/HANDLING

| Total Price | Please Add |
|---|---|
| Up To 100.00 | 13% of total |
| 100.00 to 250.00 | 14% of total |
| 250.00 and higher | 12% of total |

**DEPOSIT**: A 50% non-refundable deposit is required upon placement of all orders. The balance is due upon delivery of the garment(s).

**RETURNS**: Essante' distributors will do everything possible to provide customers with garments ideally suited to their taste. Customers are individually measured to ensure a tailored fit. If the customer decides not to accept the garment for any reason, other than distributor or company error, a cash refund will not be provided. The deposit and/or purchase will be converted into an *Inventory Fashion Credit* (IFC). See distributor for more details.

- **Global supply chains and the Internet**

    - Before Internet, supply chain coordination hampered by difficulties of using disparate internal supply chain systems

    - Enterprise systems supply some integration of internal supply chain processes but not designed to deal with external supply chain processes

    - **Intranets and Extranets**

        - **Intranets:** To improve coordination among internal supply chain processes

        - **Extranets:** To coordinate supply chain processes shared with their business partners

- **Demand-driven supply chains**

  - **Push-based model (build-to-stock)**

    - Schedules based on best guesses of demand

  - **Pull-based model (demand-driven)**

    - Customer orders trigger events in supply chain

  - **Sequential supply chains**

    - Information and materials flow sequentially from company to company

  - **Concurrent supply chains**

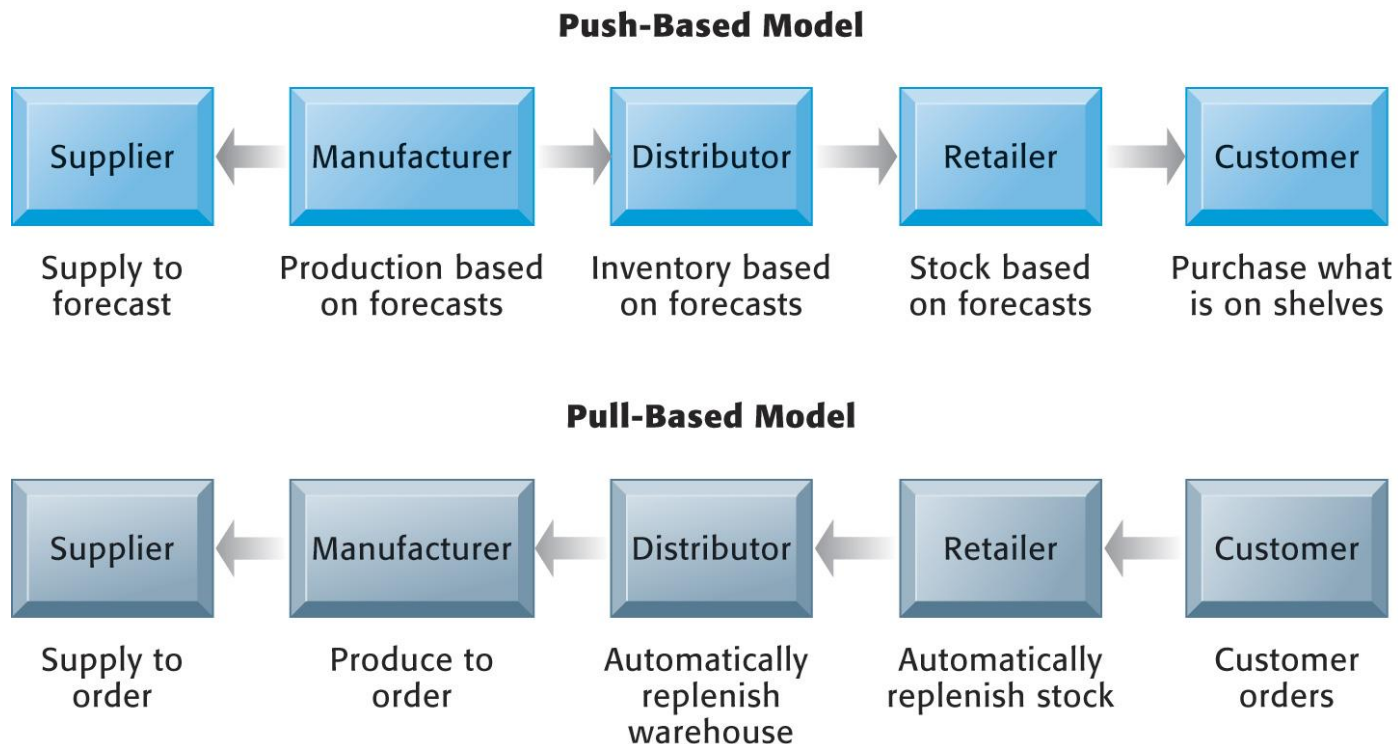    - Information flows in many directions simultaneously among members of a supply chain network

# Push- Versus Pull-Based Supply Chain Models

**Push-Based Model**



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

**Pull-Based Model**

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

The difference between push- and pull-based models is summarized by the slogan "Make what we sell, not sell what we make."

**Figure 9-5**

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**Supply Chain Management Systems**

# 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**
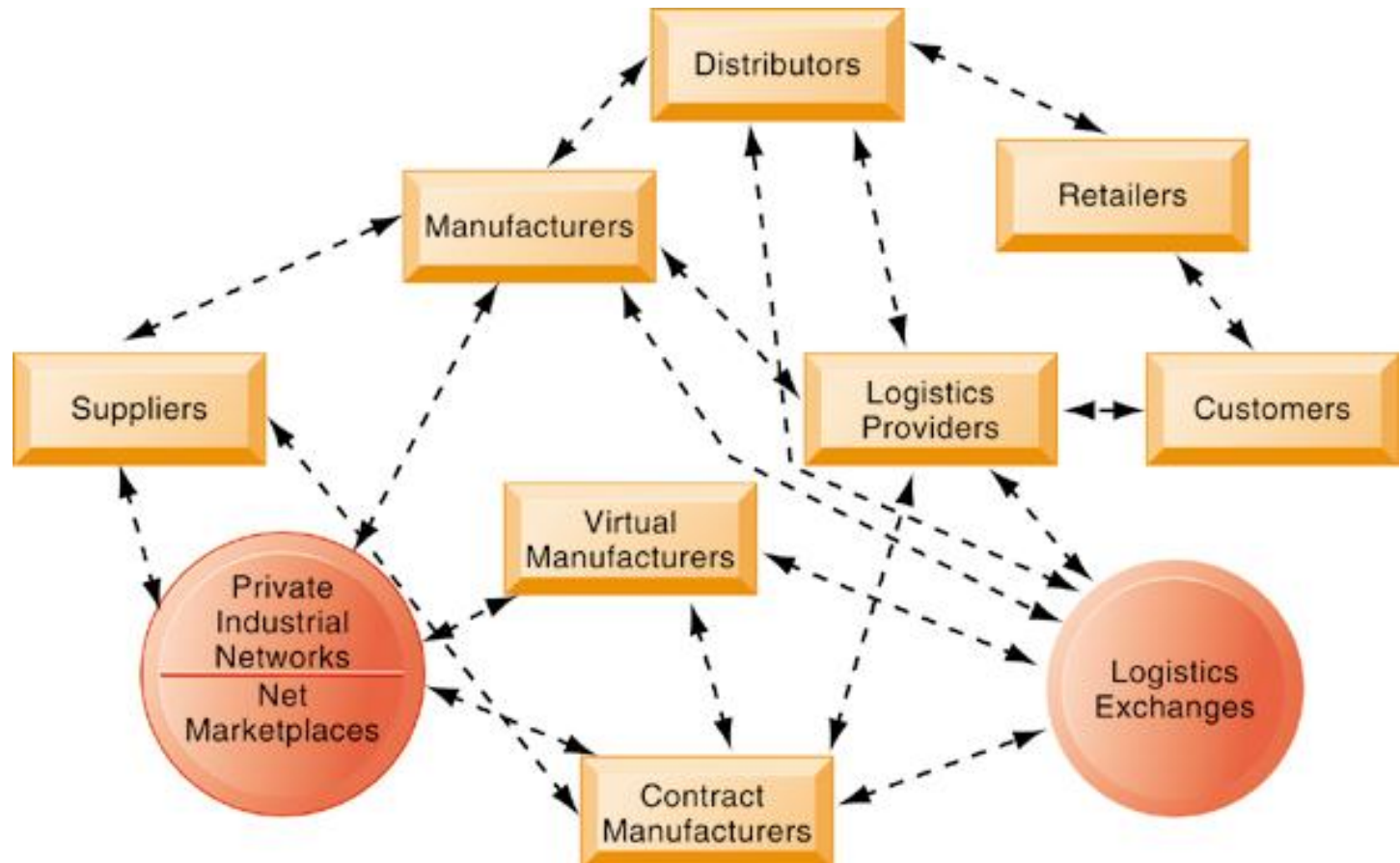
- **Reduced supply chain costs**

- **Increased sales**

# The Future Internet-Drive Supply Chain

**Figure 9-6**

The future Internet-driven supply chain operates like a digital logistics nervous system. It provides multidirectional communication among firms, networks of firms, and e-marketplaces so that entire networks of supply chain partners can immediately adjust inventories, orders, and capacities.

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**Customer Relationship Management Systems**

- **What is customer relationship management?**

  - **Knowing the customer**

    - In large businesses, too many customers and too many ways customers interact with firm

  - **Customer relationship management (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

# Customer Relationship Management (CRM)



**Figure 9-7**

**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.**

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**Customer Relationship Management Systems**

- **CRM software packages**

  - More comprehensive packages have modules for:

    - Partner relationship management (PRM)

    - Employee relationship management (ERM)

  - **Most packages have modules for**

    - **Sales force automation (SFA):** Sales prospect and contact information, and sales quote generation capabilities; etc.

    - **Customer service:** Assigning and managing customer service requests; Web-based self-service capabilities; etc.

    - **Marketing:** Capturing prospect and customer data, scheduling and tracking direct-marketing mailings or e-mail; etc.
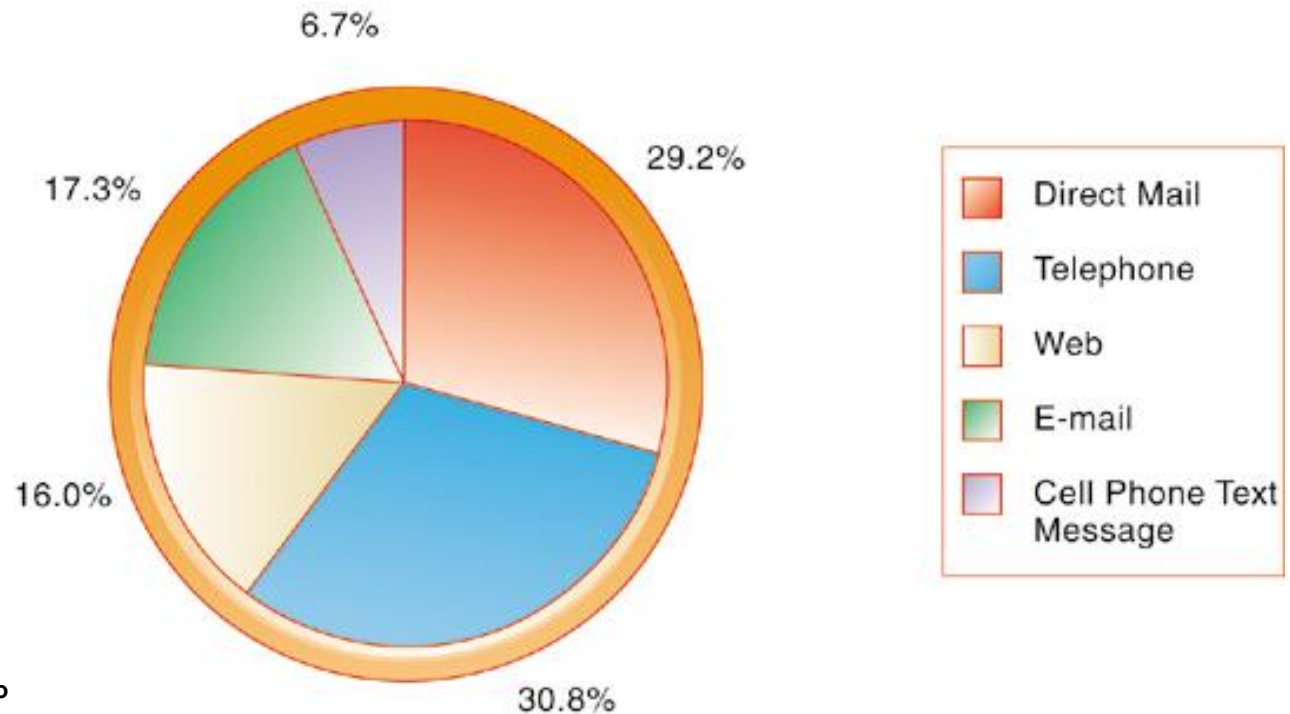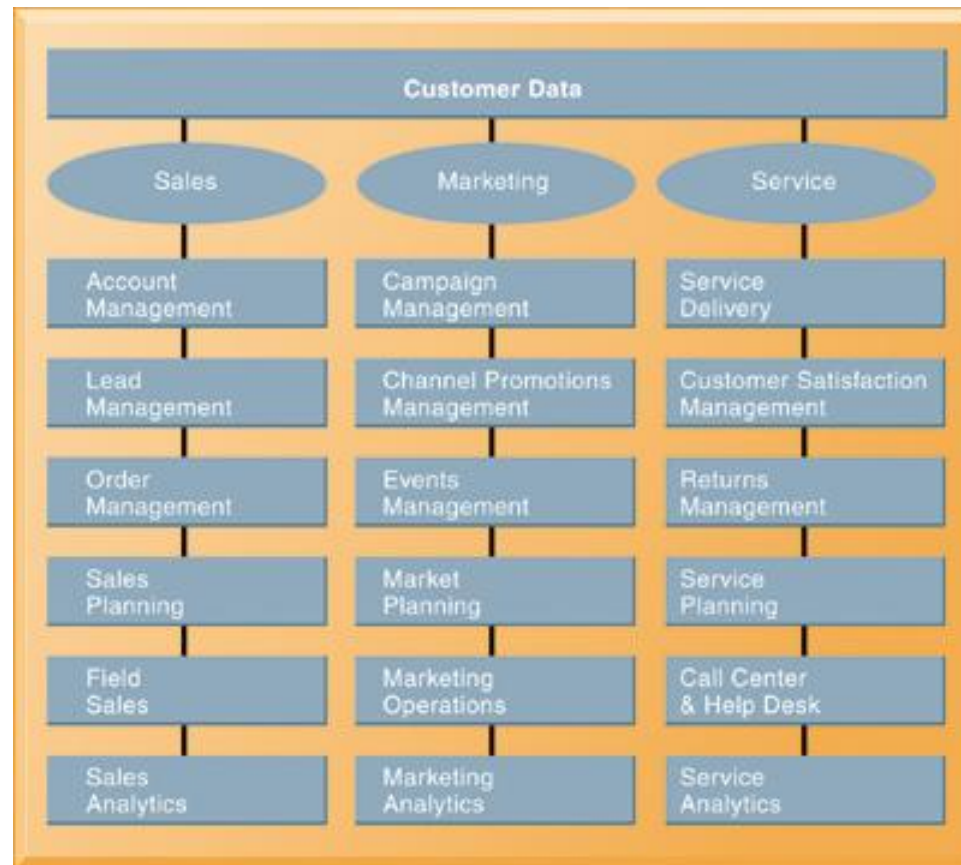
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**Customer Relationship Management Systems**

# How CRM Systems Support Marketing



**Responses by Channel for January 2008 Promotional Campaign**

6.7%

17.3%

29.2%

16.0%

30.8%

Legend:
- Direct Mail
- Telephone
- Web
- E-mail
- Cell Phone Text Message

## Figure 9-8

**Customer relationship management software provides a single point for users to manage and evaluate marketing campaigns across multiple channels, including e-mail, direct mail, telephone, the Web, and wireless messages.**

**9.23**

# CRM Software Capabilities



## Figure 9-9

**The major CRM software products support business processes in sales, service, and marketing, integrating customer information from many different sources. Included are support for both the operational and analytical aspects of CRM.**
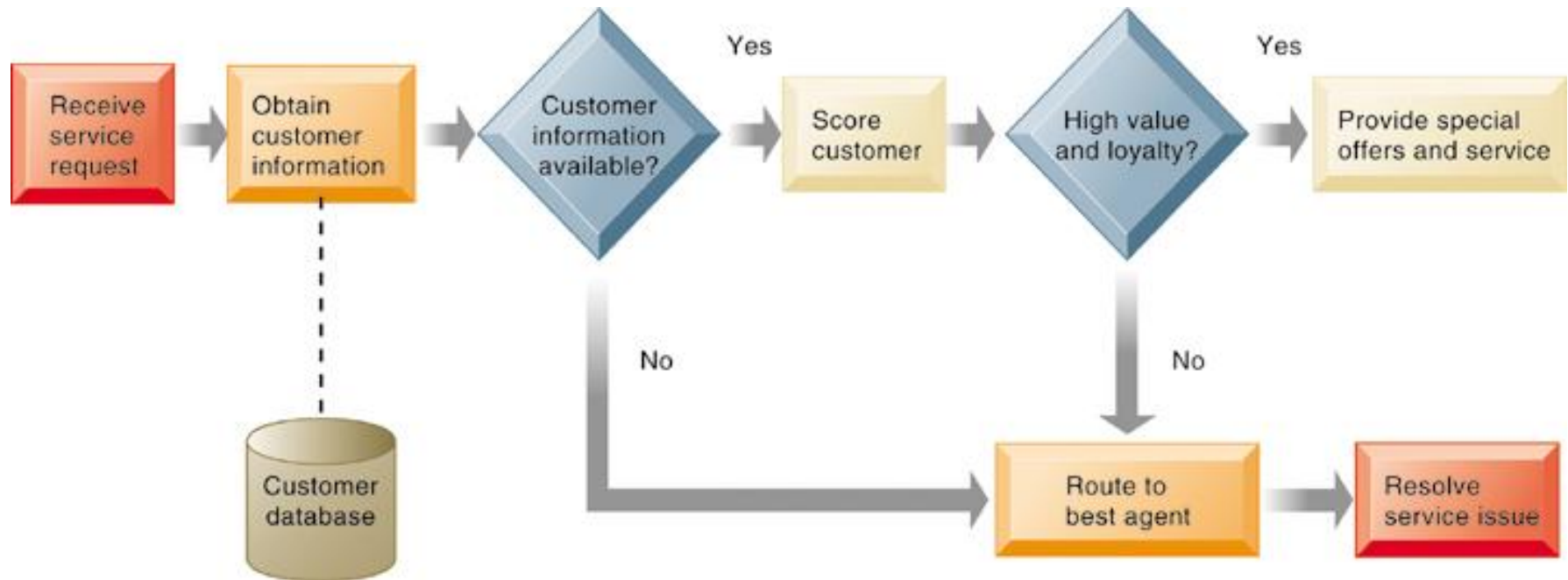
# Customer Loyalty Management Process Map



This process map shows how a best practice for promoting customer loyalty through customer service would be modeled by customer relationship management software. The CRM software helps firms identify high-value customers for preferential treatment.
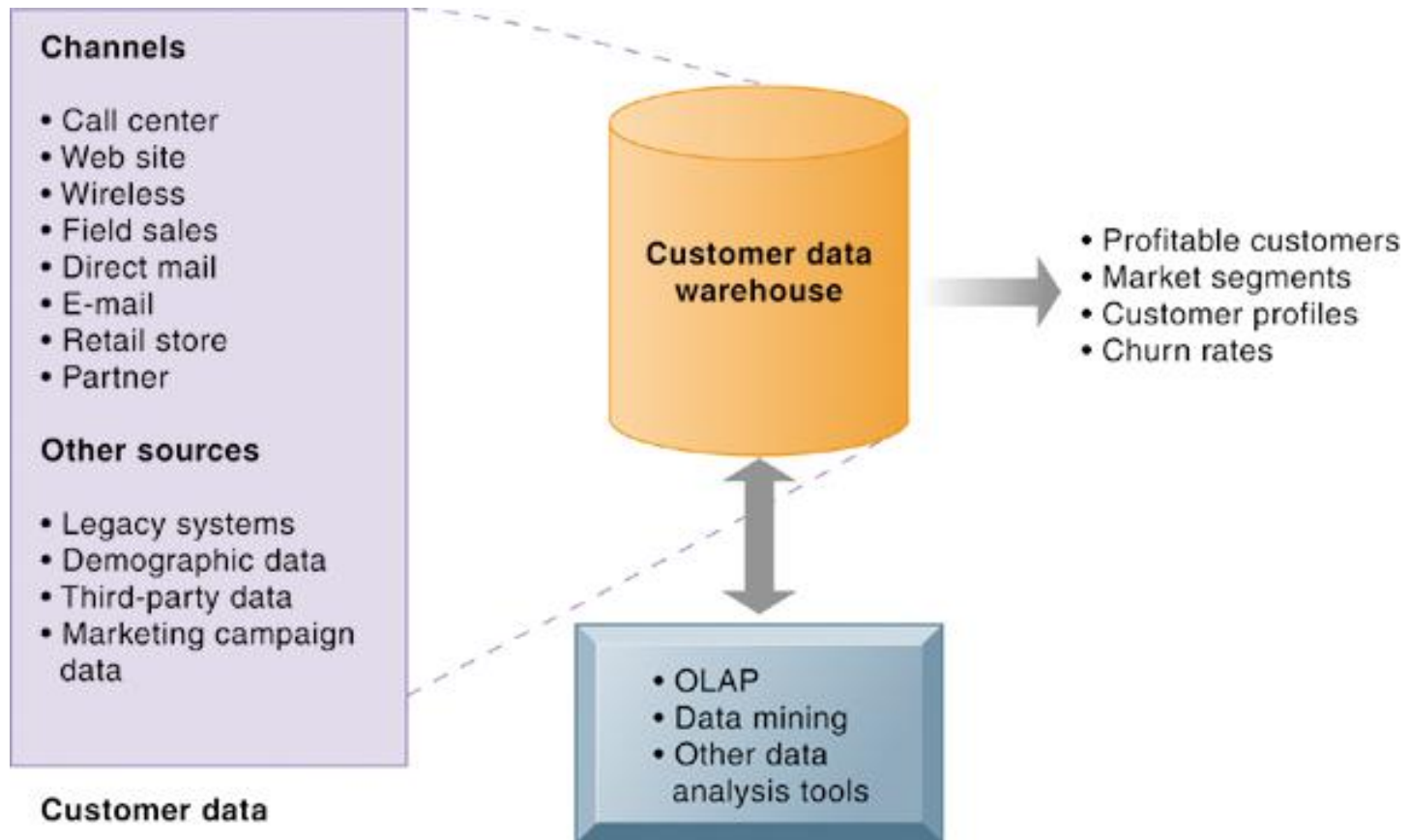
**Figure 9-10**

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**Customer Relationship Management Systems**

- **Operational CRM:**

  - Customer-facing applications such as sales force automation, call center and customer service support, and marketing automation

- **Analytical CRM:**

  - Analyze customer data output from operational CRM applications

  - Based on data warehouses populated by operational CRM systems and customer touch points

  - Customer lifetime value (CLTV)

# Analytical CRM Data Warehouse



**Figure 9-11**

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.

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**Customer Relationship Management Systems**

- **Business value of customer relationship management**

  - Increased customer satisfaction

  - Reduced direct-marketing costs

  - More effective marketing

  - Lower costs for customer acquisition/retention

  - Increased sales revenue

  - Reduced churn rate

    - **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

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**Enterprise Applications: New Opportunities and Challenges**

- **Enterprise application challenges**

  - Highly expensive to purchase and implement enterprise applications – total cost may be 4 to 5 times the price of software

  - Requires fundamental changes

    - Technology changes

    - Business processes changes

    - Organizational changes

  - Incurs switching costs, dependence on software vendors

  - Requires data standardization, management, cleansing