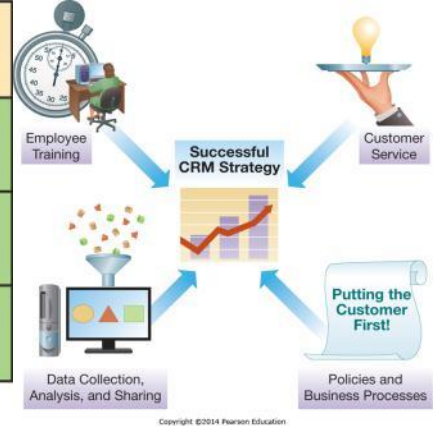


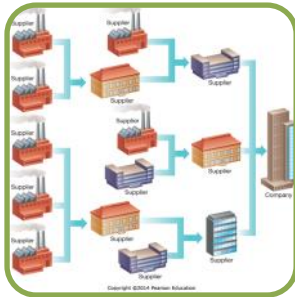
| Supply Chain Execution | Supplier                 | Production           | Distribution      | Consumption |
|------------------------|--------------------------|----------------------|-------------------|-------------|
| Product Flow           | Raw Materials            | Manufactured Product | Product Inventory | Product     |
| Information Flow       | Delivery Status, Updates |                      |                   |             |
| Financial Flow         |                          |                      |                   | Payments    |



# Chapter 8 - Strengthening Business-to-Business Relationships via Supply Chain and Customer Relationship Management

Supply chain management (SCM) systems supporting business-to-business (B2B) transactions, customer relationship management (CRM) systems promote sales and long-term customer relationships

# Chapter 8 Learning Objectives



## Supply Chain Management

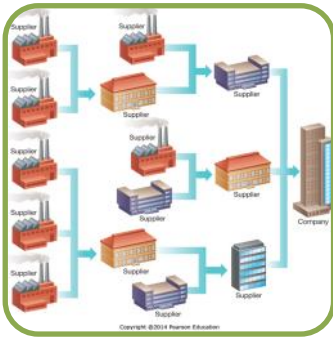
- Describe supply chain management systems and how they help to improve interorganizational business processes.



## Customer Relationship Management

- Describe customer relationship management systems and how they help to improve the activities involved in promoting and selling products to customers as well as providing customer service and nourishing long-term relationships.

# Supply Chain Management



## Supply Chain Management

- Describe supply chain management systems and how they help to improve interorganizational business processes.



## Customer Relationship Management

- Describe customer relationship management systems and how they help to improve the activities involved in promoting and selling products to customers as well as providing customer service and nourishing long-term relationships.

# What Is a Supply Chain?

- A collection of companies and processes involved in moving a product from the suppliers of raw materials to the suppliers of intermediate components, then to final production, and, ultimately, to the customer
- Referred to as a “chain” as one supplier feeds into the next, then the next, then the next
- A “network” is more accurate because businesses have multiple suppliers, who have multiple suppliers

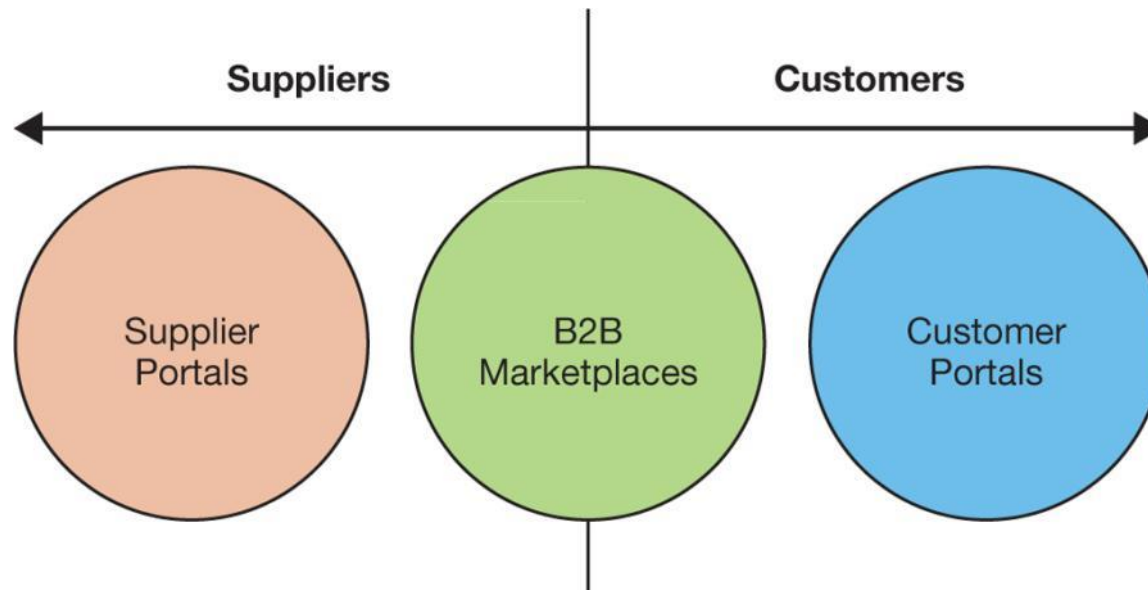


# Business-to-Business Electronic Commerce: Exchanging Data in Supply Networks

- Business-to-Business (B2B) Electronic commerce
  - 90% of all EC in the United States
  - Involve Proprietary Information
  - Originally facilitated using Electronic Data Interchange (EDI) prior to the Internet
  - Now suppliers use Web-based EDI protocols
  - Companies also use Extranets (Chapter 3), Portals and Marketplaces to facilitate B2B EC

# Business-to-Business Electronic Commerce: Exchanging Data in Supply Networks

- Portals
  - Supplier Portals
  - Customer Portals



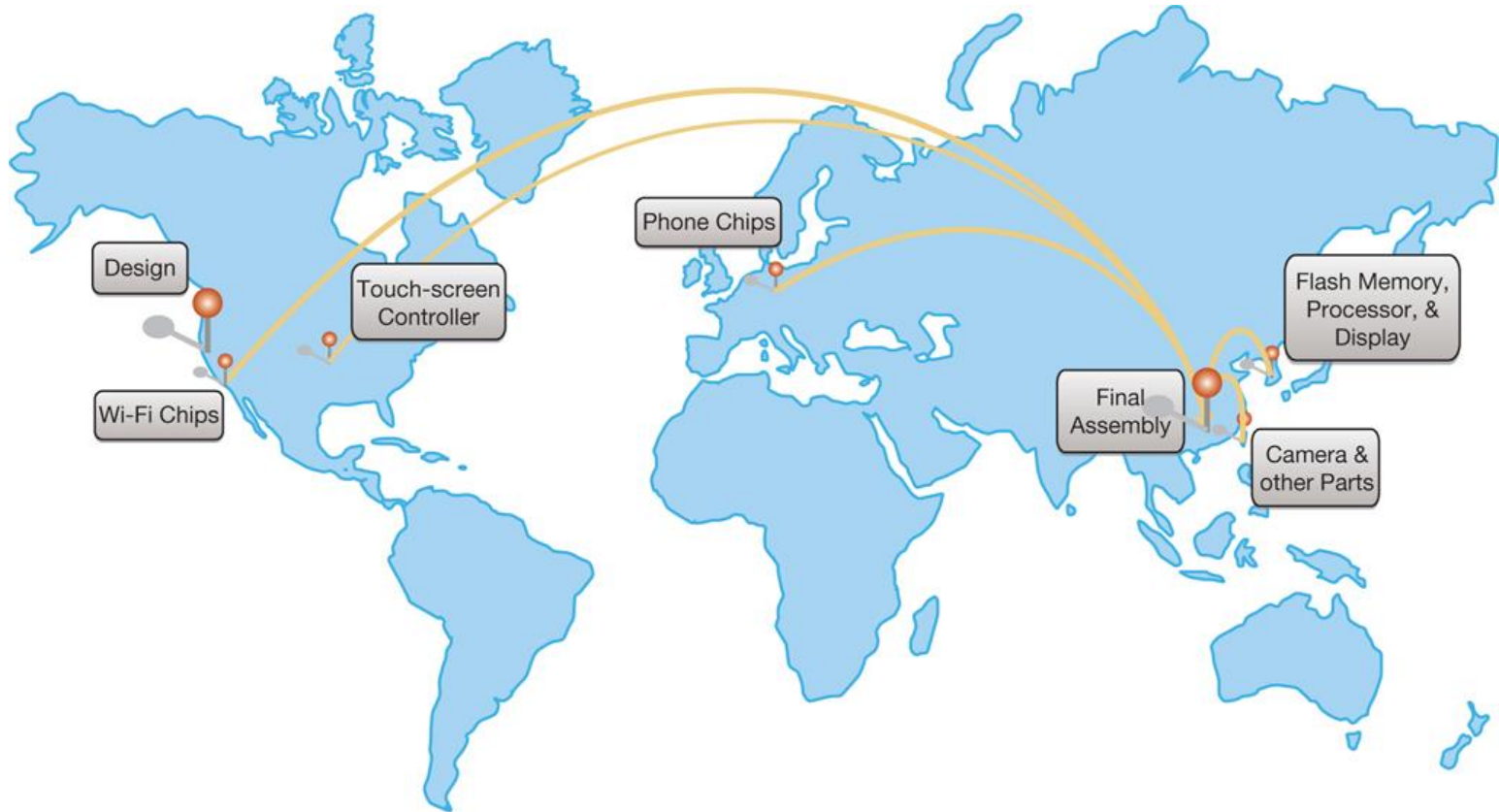
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# B2B Marketplaces

- Link many supplies and customers together
- Allow smaller businesses to participate in the markets
- Many focused on Vertical Markets
  - A Vertical Market is a market within an industry sector
  - Highly efficient
- Some more general – [Alibaba.com](http://Alibaba.com)



# Managing Complex Supply Networks



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# Benefits of Effectively Managing Supply Chains

- **Just-in-Time Production**
  - Inventory delivered just as it is needed
  - Minimizes stock and handling costs
  - Reduces obsolescence charges
- **Vendor-Managed Inventory**
  - Vendors track usage and replenish supplies
  - Reduces procurement and inventory replenishment costs

# Supply Chain Pitfalls & Considerations

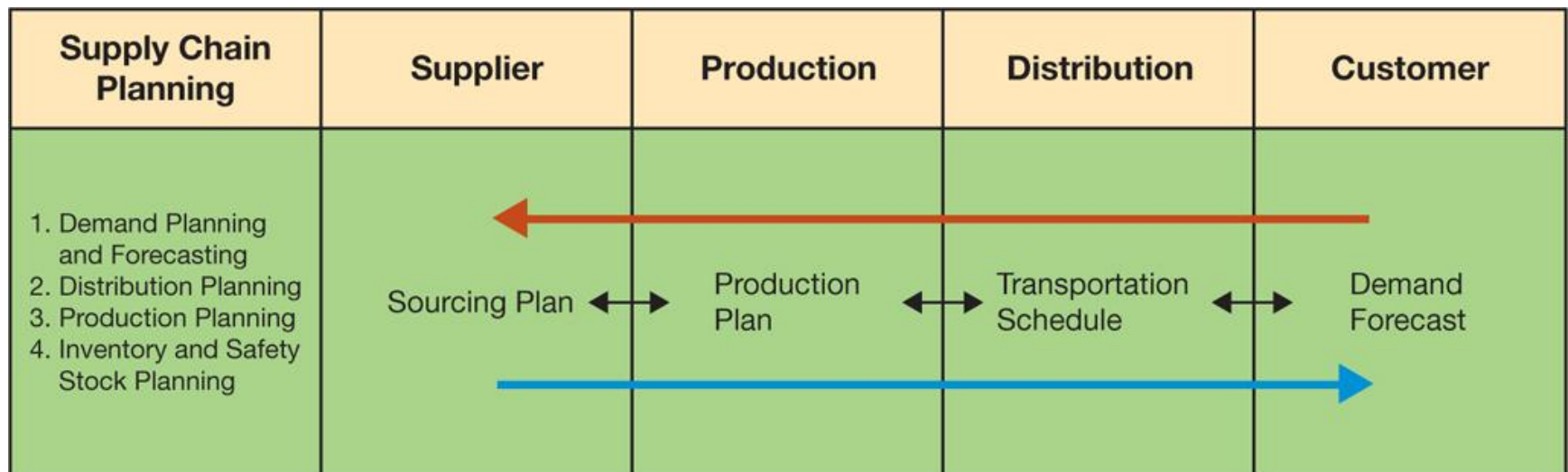
- The Bullwhip Effect
- Corporate Social Responsibility
  - Product Recalls
  - Sustainable Business Practices

# SCM Architecture

- Supply Chain Planning
- Supply Chain Execution
- Supply Chain Visibility and Analytics

# Supply Chain Planning (SCP)

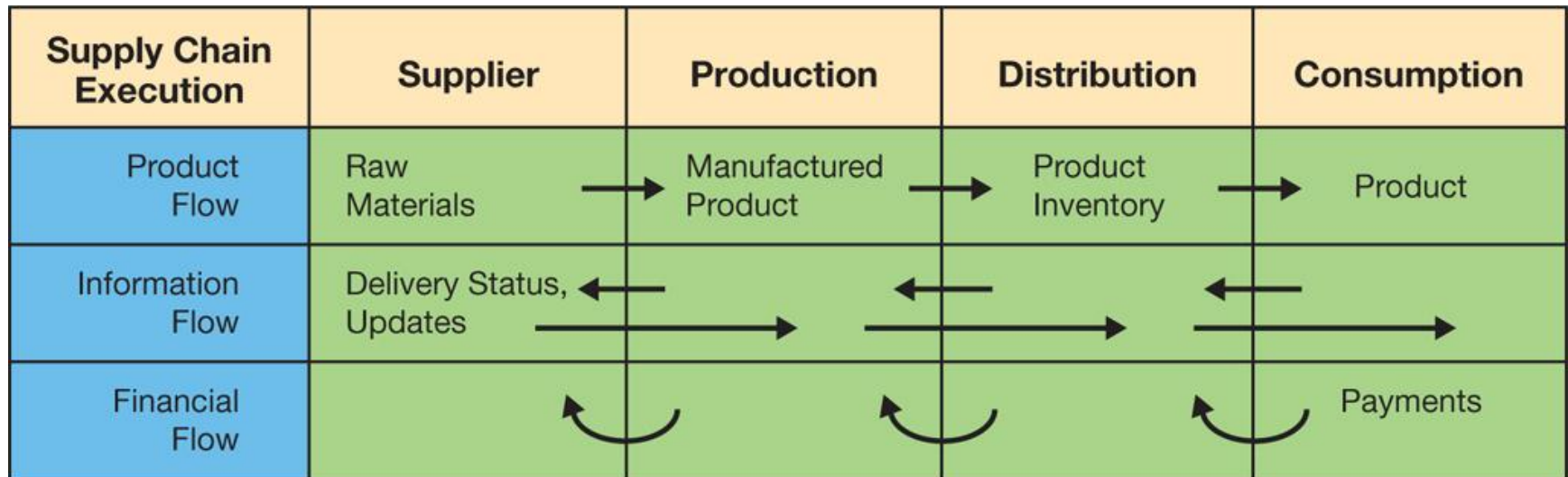
- SCP involves multiple SCM tools and modules working together to meet business needs and customer demand



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# Supply Chain Execution (SCE)

- SCE focuses on the efficient and effective flow of materials, information, and financial transactions



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# Supply Chain Visibility and Analytics

- Supply chain visibility
  - Product Tracking
  - Anticipating adverse impacts
    - Weather impacts
    - Labor negotiations
- Supply chain analytics
  - Monitoring SC Performance
  - Identifying problem spots

# Supply Chain Visibility and Analytics

The screenshot shows the SmartList application window. The title bar reads "SmartList" and the menu bar includes "File", "Edit", "Tools", "SmartList", "Additional", and "Help". The status bar at the top right indicates "Alicia Fabrikam, Inc. 4/12/2013". The toolbar contains icons for Search, Refresh, Columns, Favorites, Print, Excel, and Word.

The left pane displays a hierarchical tree view with folders such as "Items", "Landed Cost Group ID", "Landed Cost ID", "Vendor Items", "Manufacturing", "Payroll", "Purchasing", "Payables Transactions", "Purchase Line Items", "Purchase Orders", "Receivings Line Items", "Receivings Transactions", and "Vendor Addresses".

The right pane displays a table titled "Purchase Line Items" with the following columns: PO Number, Item Number, Item Description, QTY O..., and Promised Date. The table contains 14 rows of data.

| PO Number | Item Number   | Item Description             | QTY O... | Promised Date |
|-----------|---------------|------------------------------|----------|---------------|
| PO1004    | HDWR-SWM-0100 | Switching Module (<100)      | 1        | 4/1/2013      |
| PO1007    | S19           | Ring Generator               | 1        | 4/1/2013      |
| PO1007    | S15           | Network LDS/Card             | 2        | 4/1/2013      |
| PO1007    | S17           | Processor 486/25MHz          | 2        | 4/1/2013      |
| PO2020    | PHON-ATT-53BK | Cordless-Attractive 5352-... | 2        | 2/26/2013     |
| PO1014    | PHON-GTE-3458 | Memory-Grand M3458           | 4        | 5/8/2013      |
| PO1016    | E10           | Shoulder Rest - Deluxe W...  | 5        | 5/8/2013      |
| PO1004    | HDWR-SRG-0001 | Surge Protector Panel        | 6        | 4/1/2013      |
| PO1002    | PHON-GTE-5043 | Cordless-Grand S5043         | 10       | 4/1/2013      |
| PO1006    | PHON-ATT-53BL | Cordless-Attractive 5352-... | 10       | 4/1/2013      |
| PO1006    | PHON-ATT-53BK | Cordless-Attractive 5352-... | 10       | 4/1/2013      |
| PO1013    | E08           | Headset - Dual Ear           | 10       | 5/8/2013      |

At the bottom of the window, a status bar shows: "24 Purchase Line Item", "Completed", and "First 1000 records where Promised Date is less than 5/12/2013 and PO Line Status contains r and PO Line Status is".

Source: Courtesy of Microsoft, Inc.







# SCM Modules

| SCM Module                      | Key Uses   |
|---------------------------------|--|
| Demand planning and forecasting | Forecast and plan anticipated demand             |
| Safety stock planning           | Assign optimal safety and target stock levels    |
| Distribution planning           | Optimize the allocation of available supply      |
| Supply network collaboration    | Work with partners across the supply network     |
| Materials management            | Ensure production materials are available        |
| Manufacturing execution         | Support production processes                     |
| Order promising                 | Provide answers to customer queries              |
| Transportation execution        | Manage logistics                                 |
| Warehouse management            | Support receiving, storing, and picking of goods |
| Supply chain analytics          | Monitor key performance indicators               |

# Developing an SCM Strategy

- Tradeoffs
  - Supply Chain Efficiency
    - Minimizes cost, but increased risk of stock-outs
    - May sacrifice customer service
  - Supply Chain Effectiveness
    - Maximizes likelihood of meeting objectives
    - Increased costs associated with
      - Redundancy
      - Sticking levels
      - Cross-functionality

# Developing an SCM Strategy

| Supply Chain Strategy  | Procurement   | Production  | Transportation  |
|--|---|---|---|
| <p>Effectiveness</p>  <p>Efficiency</p> | <p>More Inventory<br/>Multiple Inventory Sources<br/>...</p>  <p>...</p> <p>Single Inventory Source<br/>Less Inventory</p> | <p>General Purpose Facilities<br/>More Facilities<br/>Higher Excess Capacity<br/>...</p>  <p>...</p> <p>Less Excess Capacity<br/>Fewer Facilities<br/>Special Purpose Facilities</p> | <p>Fast Delivery Times<br/>More Warehouses<br/>...</p>  <p>...</p> <p>Fewer Warehouses<br/>Longer Delivery Times</p> |

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# Managing B2B Financial Transactions

- B2B Financial Transactions
  - Extending credit to buyers (terms such as Net 30)
  - Payment by check (75%)
- Unknown suppliers & customers create significant fraud risk
  - Alibaba created the escrow service AliPay to reduce buyer risk

# Key Technologies for Enhancing SCM

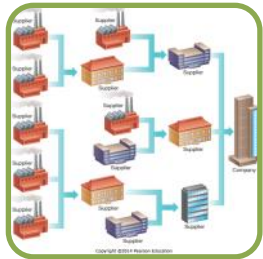
- Extensible Markup Language
  - XML, much like HTML for Web sites, creates a standard many businesses can use to help facilitate exchanging data
- Radio Frequency Identification
  - Replaces barcodes
  - As low as 10 cents

# Key Technologies for Enhancing SCM: Radio Frequency Identification



Source: Albert Lozano-Nieto/Fotolia

# Customer Relationship Management



## Supply Chain Management

- Describe supply chain management systems and how they help to improve interorganizational business processes.



## Customer Relationship Management

- Describe customer relationship management systems and how they help to improve the activities involved in promoting and selling products to customers as well as providing customer service and nourishing long-term relationships.

# Customer Relationships



**Widen**  
Attract New Customers



**Lengthen**  
Keep Current  
Customers Satisfied



**Deepen**  
Transform Minor  
Customers into  
Profitable Customers

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# Customer Relationship Management (CRM) Benefits

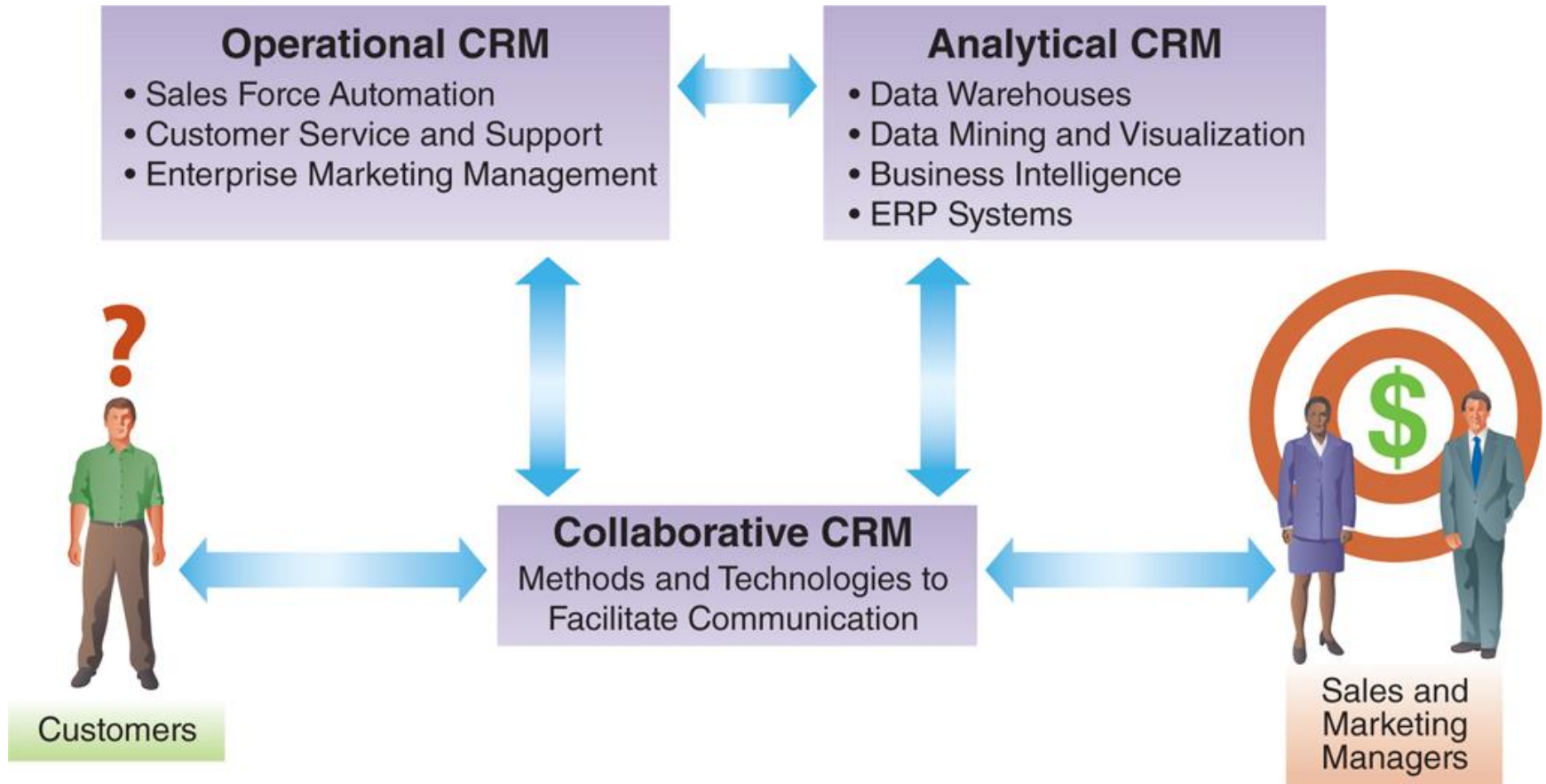
| Benefit                                  | Examples   |
|--|--|
| Enables 24/7/365 operation               | Web-based interfaces   |
| Individualized service                   | Learn how each customer defines product and service quality                                    |
| Improved information                     | Integrate all information for all points of contact  |
| Speeds problem identification/resolution | Improved record keeping and efficient methods of capturing customer complaints                 |
| Speeds processes                         | Integrated information removes information handoffs  |
| Improved integration                     | Information from the CRM can be integrated with other systems to streamline business processes |
| Improved product development             | Tracking customer behavior over time helps to identify future product and service offerings    |
| Improved planning                        | Provides mechanisms for managing and scheduling sales follow-ups                               |

# Developing a CRM Strategy



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# Architecture of a CRM System



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# Operational CRM

- Sales Force Automation (SFA)
  - Supports day-to-day sales force activities
- Customer Service and Support (CSS)
  - Automates service requests, complaints, product returns, and information requests
- Enterprise Marketing Management (EMM)
  - Improves the management of promotional campaigns

# Operational CRM: Sales Force Automation

The screenshot displays the Microsoft Dynamics CRM web interface. The browser address bar shows the URL <https://bigorg.crm5.dynamics.com/>. The user is logged in as Christoph Schneider, CityU, with a 'Sign Out' option. The main navigation pane on the left includes 'Sales', 'Marketing', 'Service', and 'Settings'. The 'Sales' section is expanded, showing 'Opportunities' as the active view. The main content area displays a table titled 'Opportunities: My Open Opportunities' with a search bar and a table of records. The table has columns for Topic, Potential Customer, Est. Close Date, Est. Revenue, Probability, and Rating. The data is as follows:

| Topic   | Potential Customer | Est. Close Date | Est. Revenue   | Probability | Rating |
|---|--------------------|-----------------|----------------|-------------|--------|
| Will expand their offerings to include some ...   | Variety Store      | 10/25/2012      | HK\$150,000.00 | 75          | Hot    |
| Will order some items soon                        | Variety Store      | 10/26/2012      | HK\$30,000.00  | 10          | Cold   |
| 6 orders of Product SKU JJ202                     | Basic Company      | 11/11/2012      | HK\$10,000.00  | 90          | Hot    |
| Needs to restock their supply of Product SK...    | Best o' Things     | 1/8/2013        | HK\$25,000.00  |             | Hot    |
| Very likely will order 18 Product SKU JJ202 th... | Elemental Goods    | 2/11/2013       | HK\$30,000.00  |             | Hot    |
| They sell many of the same items that we do ...   | Blue Company       | 3/14/2013       | HK\$26,000.00  | 95          | Hot    |
| Will be ordering about 110 items of all types...  | Litware Inc.       | 4/12/2013       | HK\$25,000.00  | 80          | Hot    |

At the bottom of the table, it shows '1 - 7 of 7 (0 selected)' and 'Page 1'. The footer of the interface includes a keyboard navigation bar with letters A through Z.

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# Operational CRM: Customer Service and Support

- Customer interaction centers (CIC) support multiple communication Channels
  - Web
    - Self-service technologies
  - Facebook
  - Industry Blogs
  - Phone
  - Face-to-Face

# Operational CRM: Enterprise Marketing Management

The screenshot shows the Microsoft Dynamics CRM interface. The browser address bar displays <https://bigorg.crm5.dyna...>. The ribbon is set to 'Campaigns' and includes tabs for 'File', 'View', 'Charts', and 'Customize'. The ribbon contains various action buttons such as 'New', 'New Template', 'Edit', 'Delete', 'Activate', 'Deactivate', 'Connect', 'Assign', 'Share', 'Copy a Link', 'E-mail a Link', 'Follow', 'Unfollow', 'Run Workflow', 'Start Dialog', 'Run Report', 'Import Data', 'Export to Excel', 'Filter', and 'Advanced Find'. The left navigation pane shows 'Marketing' selected, with sub-items like Leads, Accounts, Contacts, Marketing Lists, Campaigns, Products, Sales Literature, and Quick Campaigns. The main area displays a table titled 'Campaigns: My Campaigns' with the following data:

|                          | Name                               | Template | Status Reason   |
|--------------------------|------------------------------------|----------|-----------------|
| <input type="checkbox"/> | Ad campaign - Facebook             | No       | Suspended       |
| <input type="checkbox"/> | Charity event                      | No       | Proposed        |
| <input type="checkbox"/> | Co-branding with large retailer    | No       | Proposed        |
| <input type="checkbox"/> | Direct marketing campaign          | No       | Proposed        |
| <input type="checkbox"/> | Event campaign                     | No       | Proposed        |
| <input type="checkbox"/> | New ad campaign - Twitter          | No       | Ready To Launch |
| <input type="checkbox"/> | New customer loyalty program       | No       | Launched        |
| <input type="checkbox"/> | Product launch campaign - Facebook | No       | Launched        |

Source: Courtesy of Microsoft, Inc.

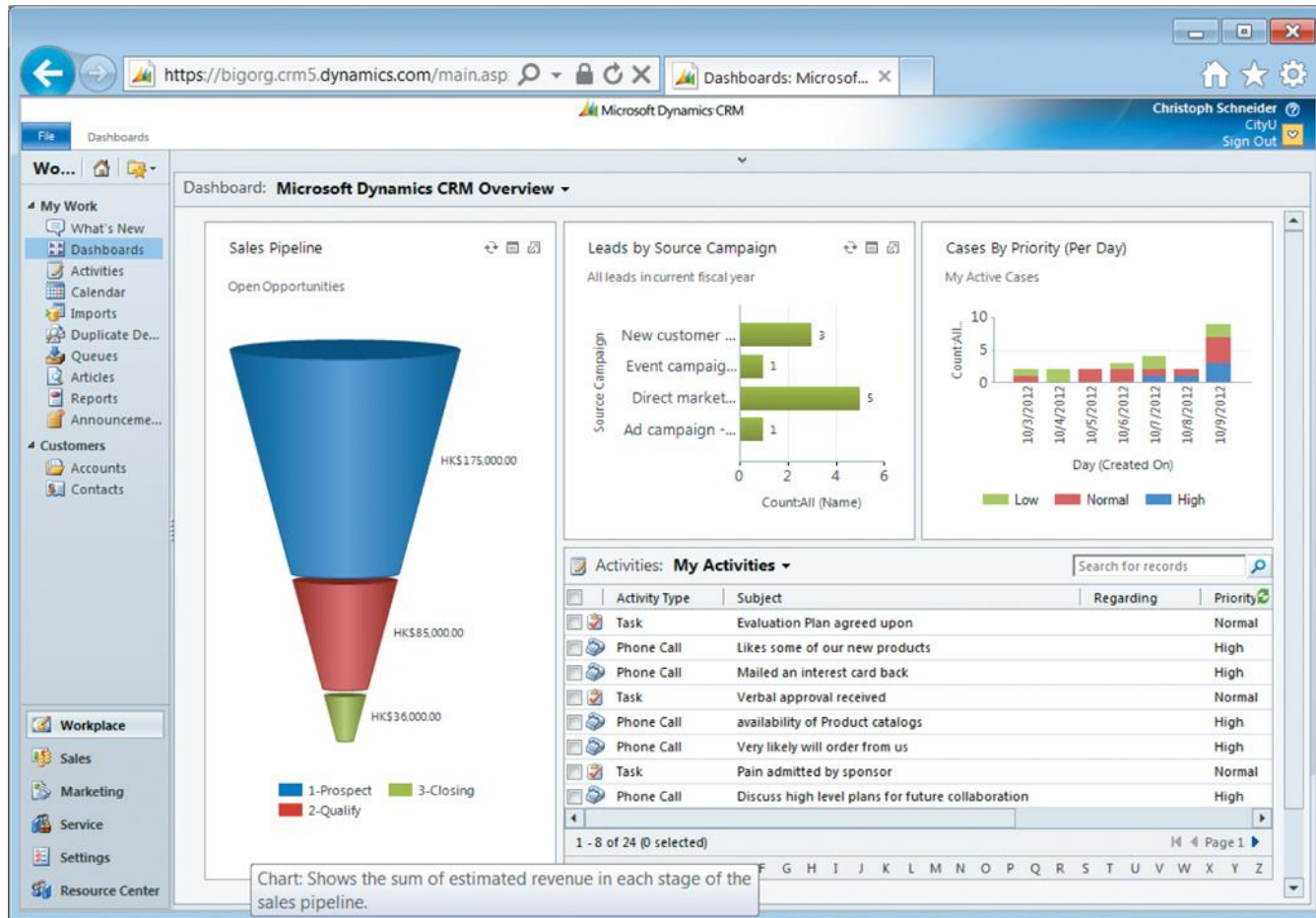
# Analytical CRM

“Analyzing customer behavior and perceptions in order to provide the business intelligence necessary to identify new opportunities and to provide superior customer service”

- Key Analytical Technologies (Chapter 6)
  - Data mining
  - Decision support
  - Other business intelligence technologies

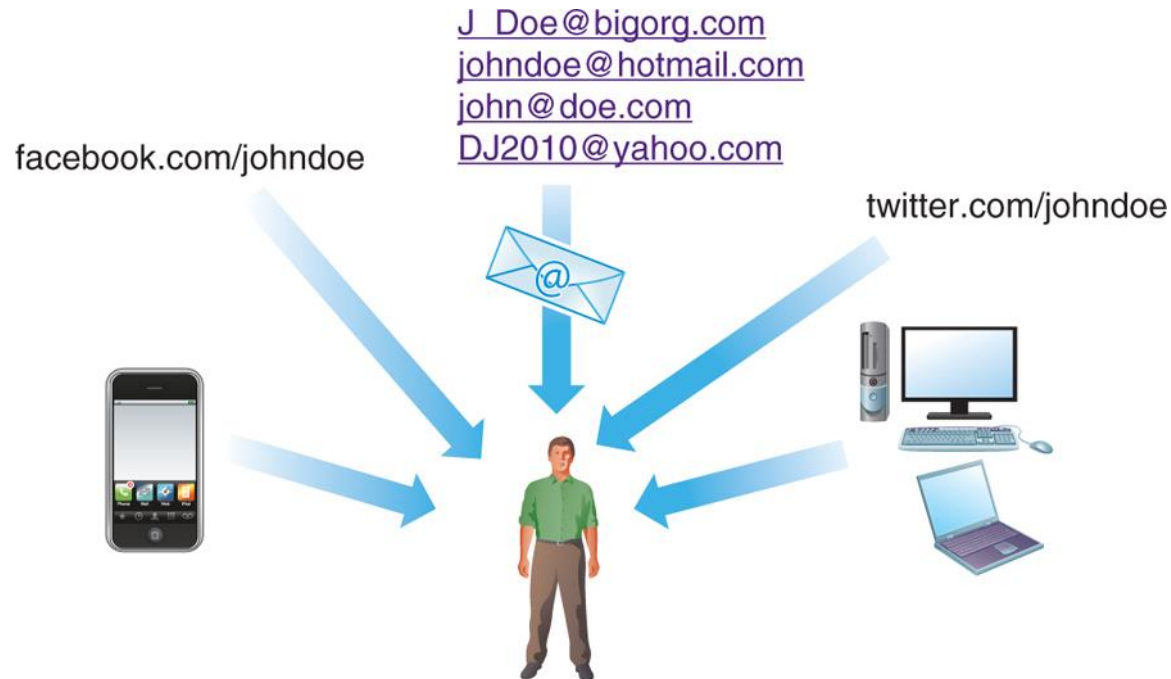


# Analytical CRM: Digital Dashboards



Source: Courtesy of Microsoft, Inc.

# Analytical CRM: Identity Management



Name: John Doe  
Age: 46  
Address: 462 Main Street, Pullman, WA 99163  
Occupation: Sales Representative  
Employer: Bigorg, Inc.  
Spouse: Jane Doe

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# Collaborative CRM

“Systems for providing effective and efficient communication with the customer from the entire organization”

- Greater Customer Focus
  - Understanding customer history and current needs
- Lower Communication Barriers
  - Personnel have complete customer information
  - Personnel use customer preferred communication methods
- Increased Information Integration
  - Personnel know prior and ongoing communication

# Ethical Concerns with CRM

- CRM systems may facilitate coercive sales practices
- Systems may categorize customers in a way customers take offense to
- Personalized communication may become too personal

**END OF CHAPTER CONTENT**

# Managing in the Digital World: Supply Chain Havoc

- Supply chains now based on a global economy
- Natural disasters can have a global impact
  - 2011 monsoons in Thailand impacted global hard drive supplies, 70% of all hard drive motors are manufactured in Thailand, worldwide shortages lasted over a year
  - When part of a supply chain disrupted, there is a domino effect, impacting all downstream products
  - Highly efficient supply chains that minimize inventory can increase the risk of disruption and make the supply chains more fragile

# When Things Go Wrong: Apple's "Very Angry Birds" Disrupt App Store Supply Chain

- An Apple server inserted incorrect Digital Rights Management (DRM) code into multiple apps
- Users were then prompted to update these apps
  - Users updated apps
  - The apps all crashed on launch
  - Very angry users flooded Apple's app store with negative review of the crashing apps
  - The apps weren't at fault
  - Apple had to remove negative review of apps that weren't caused by the apps
- With hundreds of millions of customers relying on Apple's app store, when things go wrong, they can go very very wrong

# Brief Case: The Formula for Success: Demand Media

- Demand Media, Inc. focuses on providing answers to common questions
  - Uses search data and auction data to identify topics with high interest
  - Demand Media crowdsources solutions as articles and video clips and posts them to its own sites and YouTube
  - The traffic to view the answers generates advertising revenue
  - Demand Media has created a very large content base
    - Over 45 sites with more traffic than ESPN and NBC combined
    - Publishes 4000 articles and videos a day
    - Posted over 170,000 YouTube uploads



# Coming Attractions: Saving Lives through 3D Bioprinting

- 3D printing is an alternative to cutting and milling materials to create a part
  - 3D printing builds a part up, eliminating waste
  - 3D printing is now very precise and accurate
- 3D printing now moving into the world of medicine
  - At Wake Forest University, new skin is being printed directly onto burn wounds of US Troops from Afghanistan
  - 3D printing may be able to create tissues drug companies can use to rapidly eliminate drugs with side effects, reducing the cost of drug development
  - 3D printing may one day be able to print entire human organs from a recipient's own cells, eliminating both organ shortages and organ rejection

# Key Players:

## Salesforce.com

- CRM software is becoming key to business success
  - Critical for most medium to large organizations
  - Becoming a necessity for many small businesses
  - Small business often don't have the infrastructure to host complete CRM solutions
- Salesforce.com hosts a CRM in an online cloud
  - Applications for Sales, Service, and Collaboration
  - External developers can add additional functionality
  - Small businesses can use the features they need from any online computer and many mobile devices

# Who's Going Mobile: The Power of Mobile CRM

- In many organizations, the sales staff is often in the field
  - Mobile CRM allows staff to use CRM features on the road
  - The best mobile CRM has all the functionality of desktop CRM
  - Mobile CRM promotes efficiency and effectiveness, with many benefits
    - Increased revenue growth and customer renewals
    - Larger deal size
    - Increased user adoption and higher quota attainment
    - Lower sales force turnover
  - CRM, including mobile CRM, spending is increasing faster than any other application software investment

## Ethical Dilemma:

### CRM: Targeting or Discriminating?

- CRM systems allow companies to send targeted offers to select customers
- Benefits include less advertising to uninterested parties
- Fine segmentation may allow companies to take advantage of population groups
- Some companies also sell data, without user knowledge or consent, at times in violation of their own stated practices
- Often these practices are legal, but are they ethical?

# Industry Analysis: Manufacturing

- Computer-aided Design (CAD)
  - Facilitates drawing, design, sharing, and collaboration
  - CAD design prototypes can be printed on 3D printers
- Computer-aided Engineering (CAE)
  - Test designs from CAD systems to refine before prototypes are made
- Computer-aided Manufacturing (CAM)
  - Controls the production of the final product
  - Uses the output of CAD systems
  - Also manages inventory, scheduling, and warehouses



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