Objectives

- Identify models for understanding information technology as strategic asset
- Understand how information systems can support different business strategies
- Analyze the potential contributions of information systems to achieve corporate strategic objectives.
- Identify the different frameworks and models that can be used to assess strategic information systems
Outline

- Business Strategy & Information Systems
- Frameworks
  - Competitive forces model
  - Generic business strategies
  - Value chain model
- E-commerce

What is Strategy?

- Firm’s *business strategy* determines:
  - Products / services firm produces
  - Industries in which firm competes
  - Competitors, suppliers, customers
  - Long-term goals

What is a Strategic Information System?

- System that changes goals, operations, products, services, or environmental relationships of organizations to help gain an edge over competition
- Information technology that alters the basic competitive structure of an industry
Killer Applications

- First it was email
- Then, the World Wide Web
- Next, e-Commerce
- Communities of interest
  - Bulletin boards, newsgroups, IM
  - eBay

Outline

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Frameworks for Strategic Planning

- Industry-level Strategies
  - Competitive Forces Model
- Business-level Strategies
  - Generic Business Strategies
  - Value Chain Model
- Firm-level Strategies

- Buyer Power
- Supplier Power
- Threat of Substitutes
- Threat of New Entrants
- Rivalry among Firms

Competitive (5) Forces Model

Ecosystem Strategic Model
Industry-Level Strategy: Network Economics

- “Network externalities”
- Add another participant to network
  - Zero marginal costs
  - Can create much larger marginal gain

Industry-Level Strategy: Information Partnerships

- Alliance between two or more corporations
  - Share information to gain strategic advantage
- Access to new customers
  - Cross-selling
  - Target products

Frameworks for Strategic Planning

- Industry-level Strategies
  - Competitive Forces Model (Five Forces Model)
- Business-level Strategies
  - Generic Business Strategies
  - Value Chain Model
- Firm-level Strategies
Business-Level Strategy:  
Generic Business Strategies  
(Michael Porter, 1980, 1995)

- Low-cost producer  
- Differentiate product or service  
- Focus on niche  
- Operational excellence  
- Strategic alliances (along Value Chain)

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**Low-Cost Producer: Role of Information Technology**

- Efficient Customer Response Systems  
  - Directly links consumer behavior back to distribution, production, and supply chains  
  - Performed through Supply Chain Management

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**Example: Baxter International**

1. **Traditional Delivery Practice**  
   - Bulk storage  
   - Delivery  
   - slammed  
   - To the Baxter Floor

2. **Just-in-Time Supply Method**  
   - Bulk storage  
   - More frequent deliveries  
   - slammed  
   - To the Baxter Floor

3. **Stockless Inventory Method**  
   - Daily deliveries  
   - To the Baxter Floor
Business-Level Strategy
Generic Business Strategies
Product Differentiation:
Role of Information Technology

- Creates brand loyalty by developing new and unique products and services
- Products and services not easily duplicated by competitors

Focus on a Niche:
Role of Information Technology

- Enables development of new market niches for specialized products or services
- Helps businesses compete better than competitors in target areas

Operational Excellence:
Role of Information Technology

- Ability to execute better than competition
- Information systems to support operations of the business
  - Sales and marketing
  - Production
  - Inventory management
  - Sourcing
  - Others . . .
Business-Level Strategy
Generic Business Strategies
Strategic Alliances:
Role of Information Technology

- Do not have to do everything yourself
- Exploit comparative advantages of other firms
- Link with other firms along extended value chain

Business-Level Strategy: Value Chain (Michael Porter, 1985)
- Series of linked activities or processes in organization
- IT can improve these processes

The Value Chain (Firm)
Use of Value Chain for Analysis

Questions:
- Does this process add value from the perspective of the customer?
- If yes, charge the customer for this added value
  – basis for your pricing strategy
- If no, ask these three questions...

Use of the Value Chain for Analysis

Questions:
- Can the process be changed so that it does add value? Be a source of addition revenue?
- If the process cannot be changed, does it need to be done? If not, eliminate it!
- If it cannot be eliminated, explore outsourcing it

Value Web (extending the Value Chain)

- Customer-driven network of independent firms
- Collection of firms that use IT to coordinate value chains for collectively producing product or service
Value Web
(extension of the Value Chain)

Frameworks for Strategic Planning

- Industry-level Strategies
  - Competitive Forces Model
- Business-level Strategies
  - Generic Business Strategies
  - Value Chain Model
- Firm-Level Strategies

Firm-Level Strategy:
Focus on Core Competencies

Core Competencies – an activity in which the firm excels
- Created based on experience and research
- Ex., best logistics, best customer service, best optic technology manufacturer
Outline

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E-Commerce: What’s New?

Internet capabilities
- Mass customization
- Personalization
- Disintermediation
- Net marketplaces
- E-commerce information flows
- Collaborative Commerce

Mass Customization

- Ability to offer individually tailored product or services
- Increases flexibility of organization
- Examples
  - Lands End
  - Dell
Build Your Car @Home…

Personalization

Disintermediation
Summary

- **Strategy & Frameworks**
  - Five Forces, Generic Business Models, Value Chain
- **Challenges**
  - How can creative use of IT result in a competitive advantage?
    - Evolution
    - Sustainability
  - How can one generate ideas for innovative use of IT?
- **Adoption of strategic systems**
  - Changes in social / technical elements of organization
- **E-Commerce - global opportunities**