Chapter 2

Operations Strategy

Operations Management - 5th Edition

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Lecture Outline

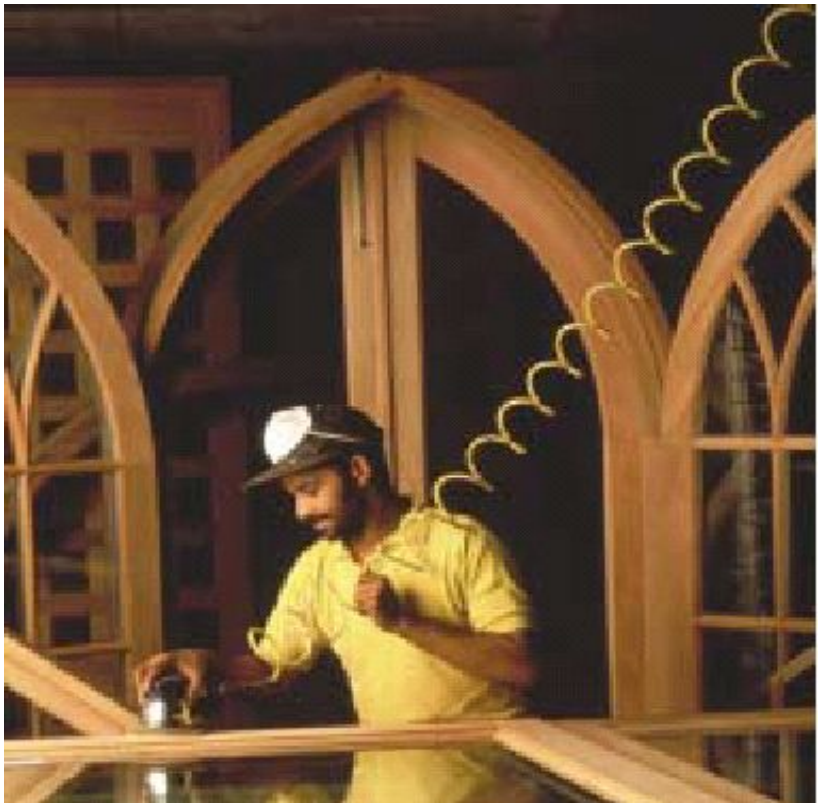
- Strategy Formulation
- Competitive Priorities
- Operations' Role in Corporate Strategy
- Strategy and the Internet
- Strategic Decisions in Operations
- Strategy Deployment
- Issues and Trends in Operations

Four Steps for Strategy Formulation

- Defining a primary task
  - What is the firm in the business of doing?
- Assessing core competencies
  - What does the firm do better than anyone else?
- Determining order winners and order qualifiers
  - What wins the order?
  - What qualifies an item to be considered for purchase?
- Positioning the firm
  - How will the firm compete?

Competitive Priorities

- Cost
- Quality
- Flexibility
- Speed



Competitive Priorities: Cost

- Lincoln Electric
  - reduced costs by $10 million a year for 10 years
  - skilled machine operators save the company millions that would have been spent on automated equipment
- Southwest Airlines
  - one type of airplane facilitates crew changes, record-keeping, maintenance, and inventory costs
  - direct flights mean no baggage transfers
  - $30 million annual savings in travel agent commissions by requiring customers to contact the airline directly

Competitive Priorities: Quality

- Ritz-Carlton - one customer at a time
  - Every employee is empowered to satisfy a guest's wish
  - Teams at all levels set objectives and devise quality action plans
  - Each hotel has a quality leader
  - Quality reports tracks
    - guest room preventive maintenance cycles
    - percentage of check-ins with no waiting
    - time spent to achieve industry-best clean room appearance
  - Guest Preference Reports are recorded in a database

Competitive Priorities: Flexibility

- Andersen Windows
  - number of products offered grew from 28,000 to 86,000
  - number of errors are down to 1 per 200 truckloads
- Custom Foot Shoe Store:
  - customer's feet are scanned electronically to capture measurements
  - custom shoes are mailed to the customer's home in weeks
  - prices are comparable to off-the-shelf shoes
- National Bicycle Industrial Company
  - offers 11,231,862 variations
  - delivers within two weeks at costs only 10% above standard models

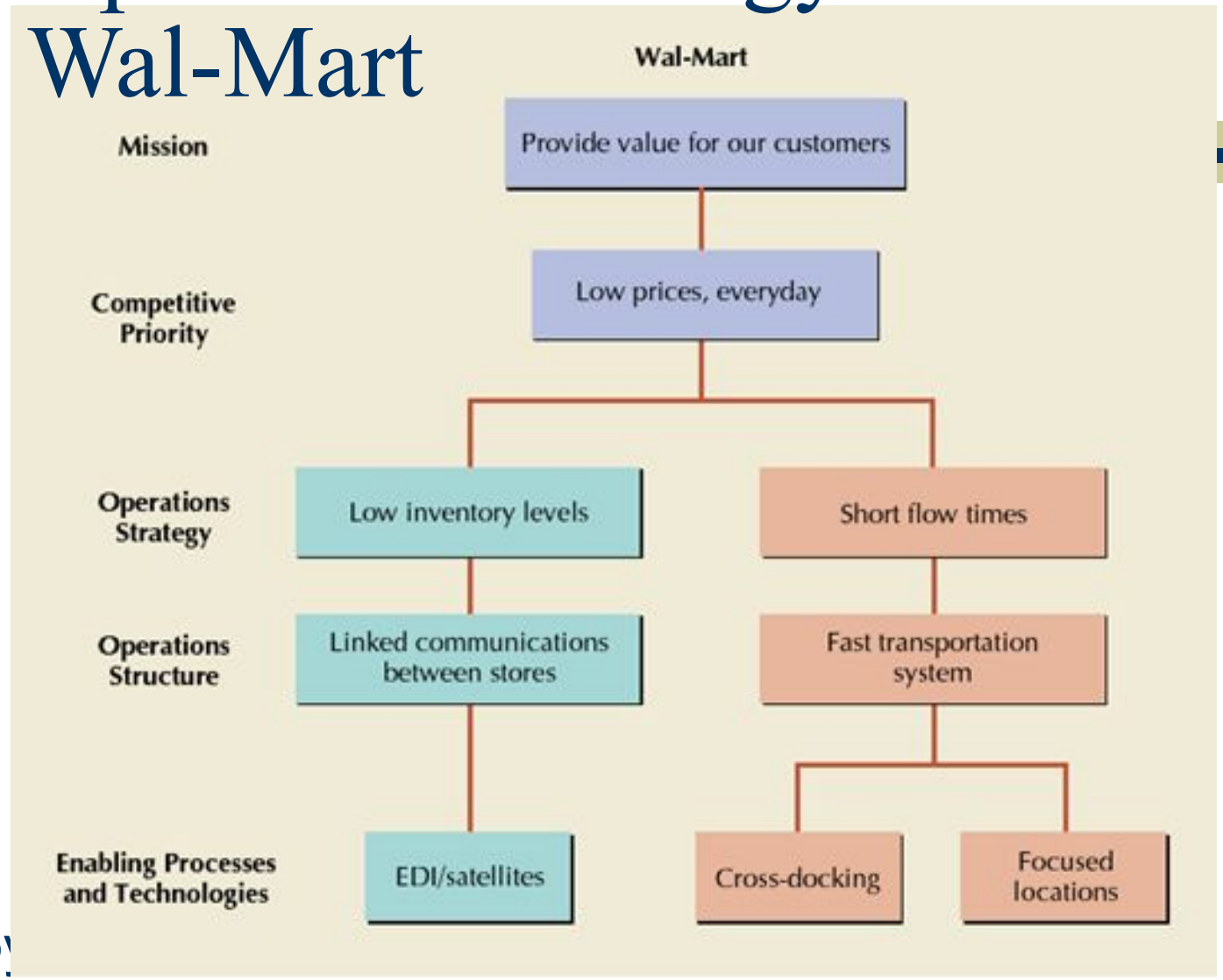
Competitive Priorities: Speed

- Citicorp
  - advertises a 15-minute mortgage approval
- L.L. Bean
  - ships orders the day they are received
- Wal-Mart
  - replenishes its stock twice a week
- Hewlett-Packard
  - produces electronic testing equipment in five days
- General Electric
  - reduces time to manufacture circuit-breaker boxes into three days and dishwashers into 18 hours
- Dell
  - ships custom-built computers in two days
- Motorola
  - needs less than 30 minutes to build to order pagers

Operations' Role in Corporate Strategy

- Operations provides support for a differentiated strategy
- Operations serves as a firm's *distinctive competence* in executing similar strategies better than competitors

Operations Strategy at Wal-Mart



Strategy and the Internet

- Internet can be used to create a distinctive business strategy
  - eBay
    - unlimited capacity and a huge market
    - all work is done by buyers and sellers and there is no marginal cost
  - Cisco
    - integrated value chain is its competitive advantage

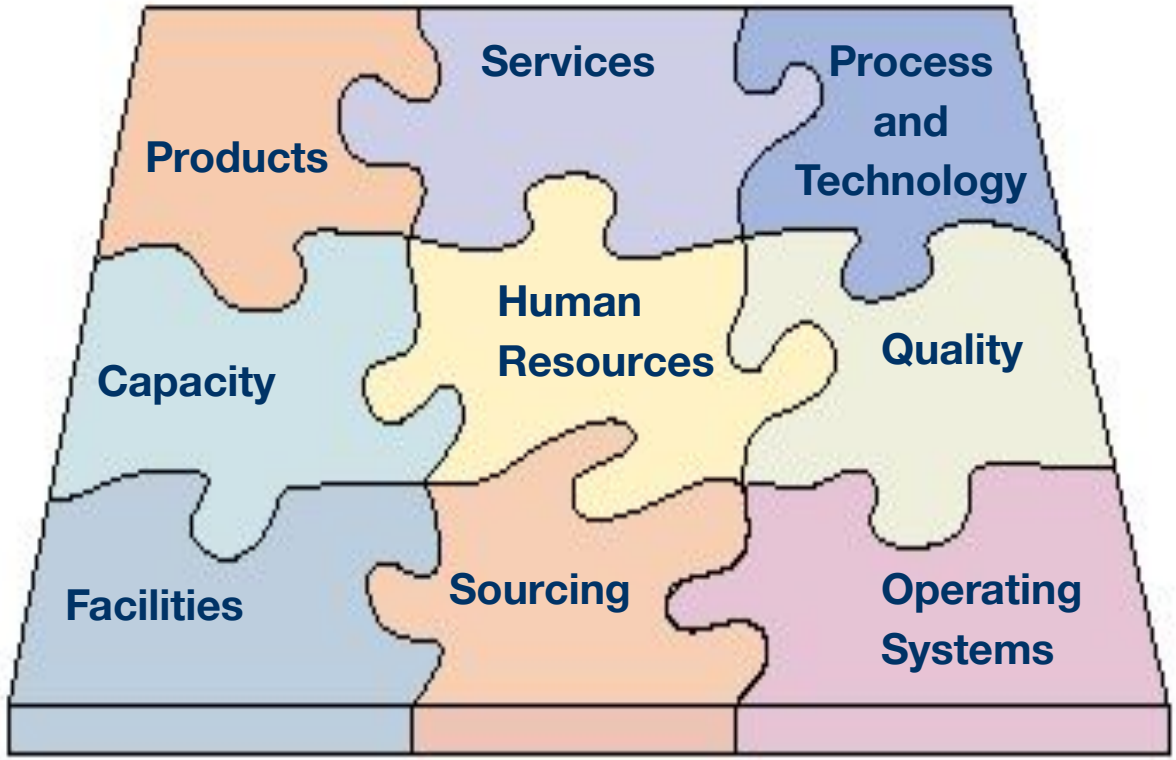
Strategy and the Internet (cont.)

- Internet can be used to strengthen existing competitive advantages by integrating new and traditional activities
  - GE's Trading Process Network: an automated Web-based purchasing system
    - cut average purchasing cost in half
    - enabled a much larger group of suppliers to bid on jobs
    - customers were able to track their orders through shop in real time
  - Intel
    - sells $2 billion a month over the Internet
    - purchases 80% of its direct materials online
    - replaced 19,000 sales-order faxes received daily

Strategy and the Internet (cont.)

- Lessons from the dot com shakedown
  - Internet is the great equalizer
    - allows innovations to be copied with little investment
    - companies may reach larger market
    - customers have more information and can compare prices and features of their products.
    - These benefits are temporary unless…
  - Companies provide unique value to customer

Strategic Decisions in Operations



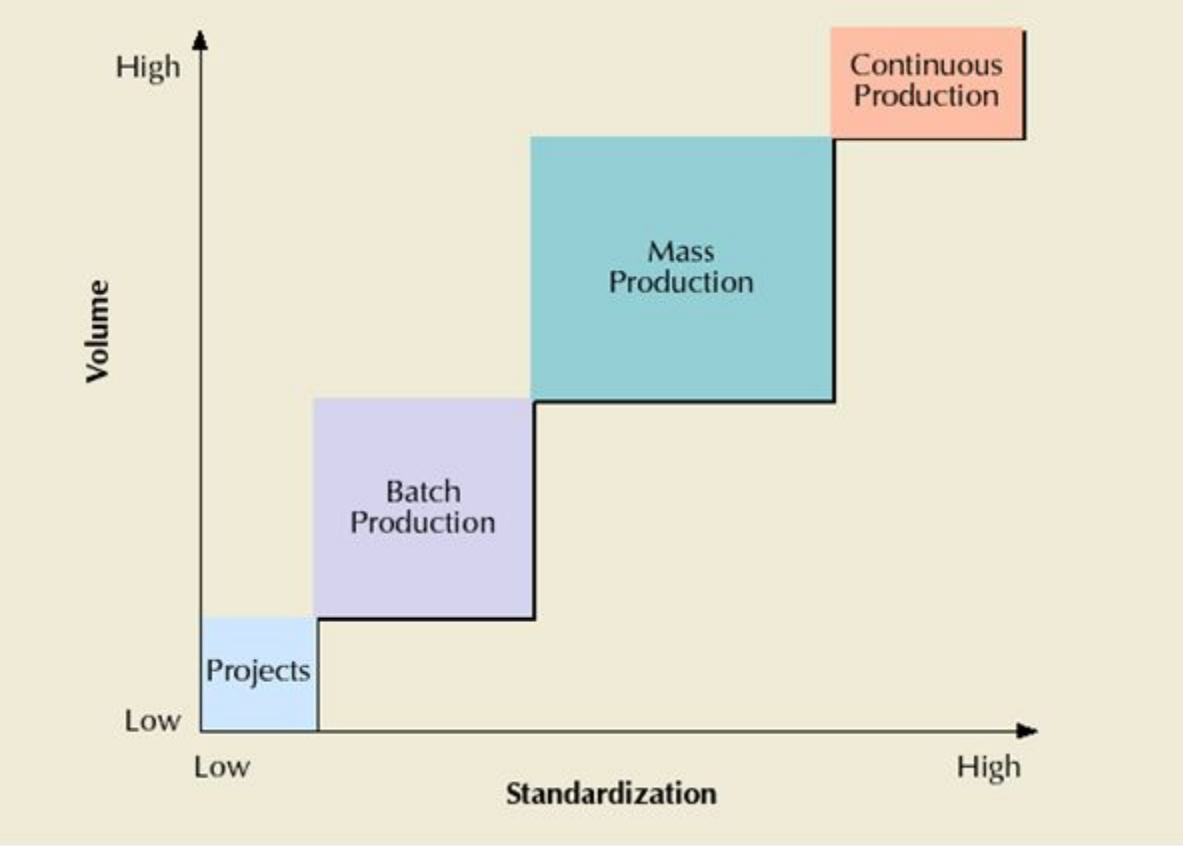
Operations Strategy: Products and Services

- **Make-to-order**
  - products and services are made to customer specifications after an order has been received
- **Make-to-stock**
  - products and services are made in anticipation of demand
- **Assemble-to-order**
  - products and services add options according to customer specifications

Production Strategy: Processes and technology

- **Project**
  - one-at-a-time production of a product to customer order
- **Batch production**
  - systems process many different jobs at the same time in groups (or batches)
- **Mass production**
  - large volumes of a standard product for a mass market
- **Continuous production**
  - used for very high volume commodity products

Product-Process Matrix



Source: Adapted from Robert Hayes and Steven Wheelwright, *Restoring the Competitive Edge: Competing Through Manufacturing* (New York: John Wiley & Sons, 1984), p. 209

More Standardized – Higher Volume

Continuous Production
A paper manufacturer produces a continuous sheet paper from wood pulp slurry, which is mixed, pressed, dried, and wound onto reels.

Mass Production
Here in a clean room a worker performs quality checks on a computer assembly line.

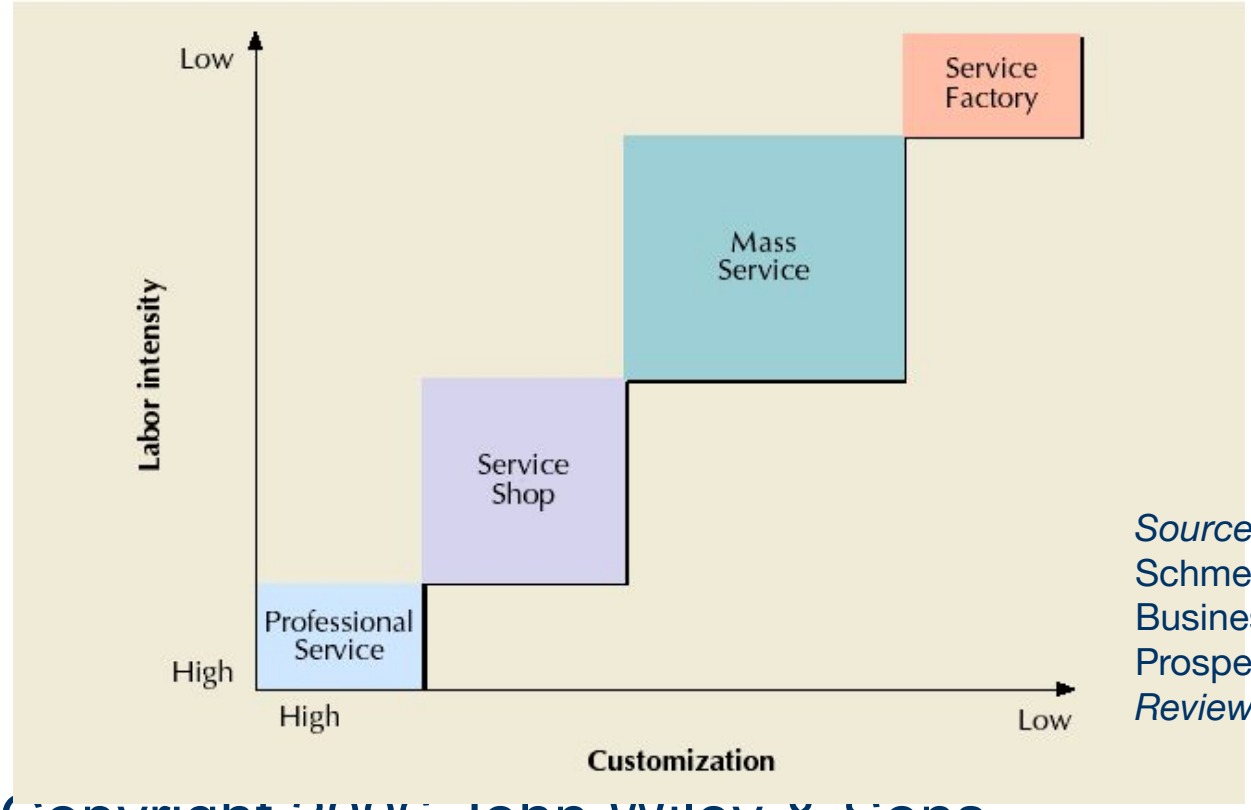
Batch Production
At Martin Guitars bindings on the guitar frame are installed by hand and are wrapped with a cloth webbing until glue is dried.

Project
Construction of the aircraft carrier USS Nimitz was a huge project that took almost 10 years to complete.

Service Strategy: Processes and Technology

- Professional service
  - highly customized and very labor intensive
- Service shop
  - customized and labor intensive
- Mass service
  - less customized and less labor intensive
- Service Factory
  - least customized and least labor intensive

Service-Process Matrix



Source: Adapted from Roger Schmenner, "How Can Service Businesses Survive and Prosper?" *Sloan Management Review* 27(3):29

Less Customized-Less Labor Intensive

Service Factory
Electricity is a commodity available continuously to customers.

Mass Service
A retail store provides a standard array of products from which customers may choose.

Service Shop
Although a lecture may be prepared in advance, its delivery is affected by students in each class.

Professional Service
A doctor provides personal service to each patient based on extensive training in medicine.

Operations Strategy: Capacity and Facility

- Capacity strategic decisions include*:*
  - *When*, *how much*, and in *what* form to alter capacity
- Facility strategic decisions include:
  - whether demand should be met with a few large facilities or with several smaller ones
  - whether facilities should focus on serving certain geographic regions, product lines, or customers
  - facility location can also be a strategic decision

Operations Strategy: Human Resources

- What is skill levels and degree of autonomy required to operate production system?
- What are training requirements and selection criteria?
- What are policies on performance evaluations, compensation, and incentives?
- Will workers be salaried, paid an hourly rate, or paid a piece rate?
- Will profit sharing be allowed, and if so, on what criteria?

Operations Strategy: Human Resources (cont.)

- Will workers perform individual tasks or work in teams?
- Will they have supervisors or work in self-managed work groups?
- How many levels of management will be required?
- Will extensive worker training be necessary?
- Should workforce be cross-trained?
- What efforts will be made in terms of retention?

Operations Strategy: Quality

- What is target level of quality for our products and services?
- How will it be measured?
- How will employees be involved with quality?
- What will be the responsibilities of the quality department?

Operations Strategy: Quality (cont.)

- What types of systems will be set up to ensure quality?
- How will quality awareness be maintained?
- How will quality efforts be evaluated?
- How will customer perceptions of quality be determined?
- How will decisions in other functional areas affect quality?

Operations Strategy: Sourcing

- Vertical integration
  - degree to which a firm produces parts that go into its products
- Strategic Decisions
  - How much of work should be done outside the firm?
  - On what basis should particular items be made in-house?
  - When should items be outsourced?
  - How should suppliers be selected?

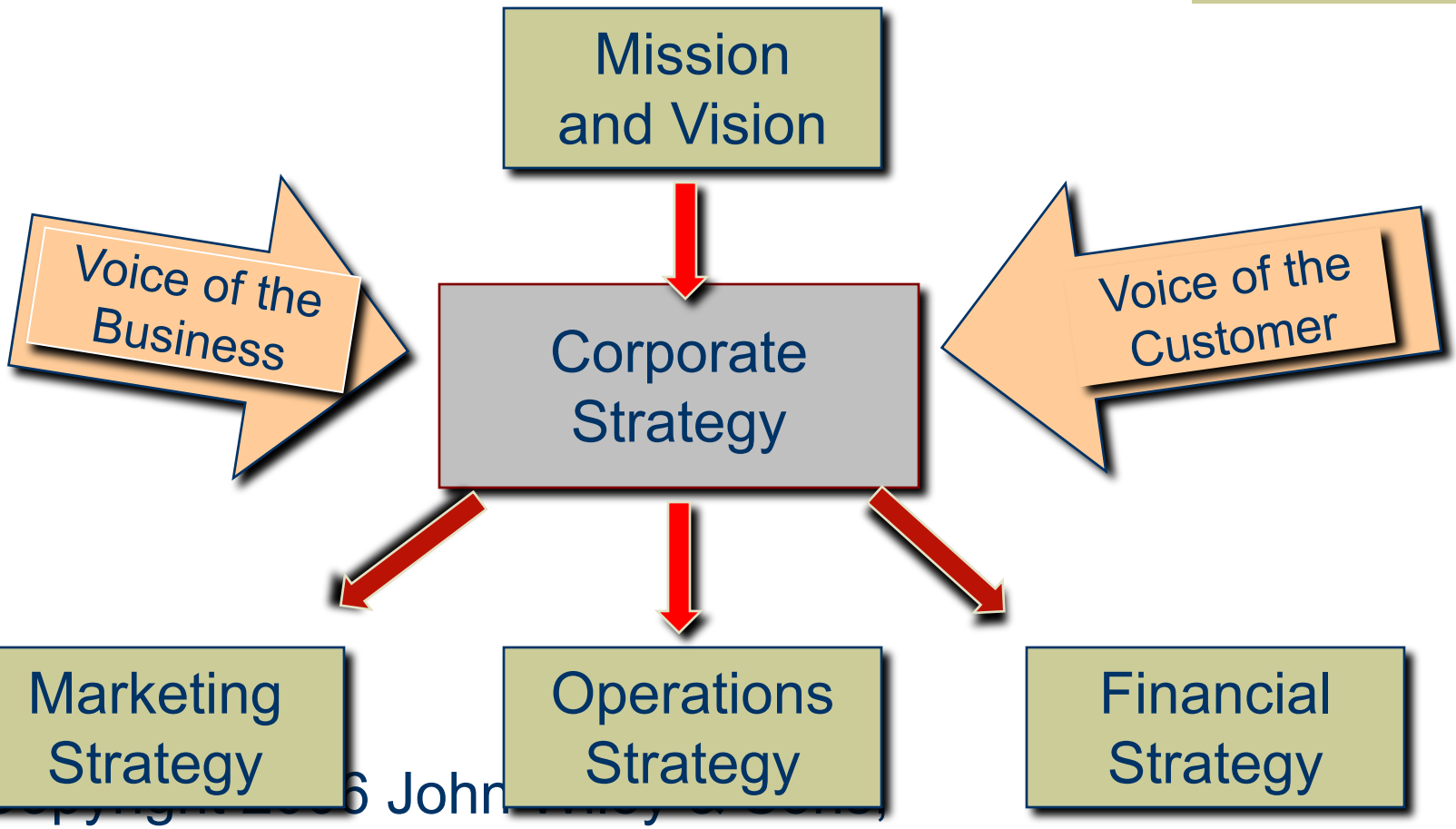
Operations Strategy: Sourcing (cont.)

- What type of relationship should be maintained with suppliers?
- What is expected from suppliers?
- How many suppliers should be used?
- How can quality and dependability of suppliers be ensured?
- How can suppliers be encouraged to collaborate?

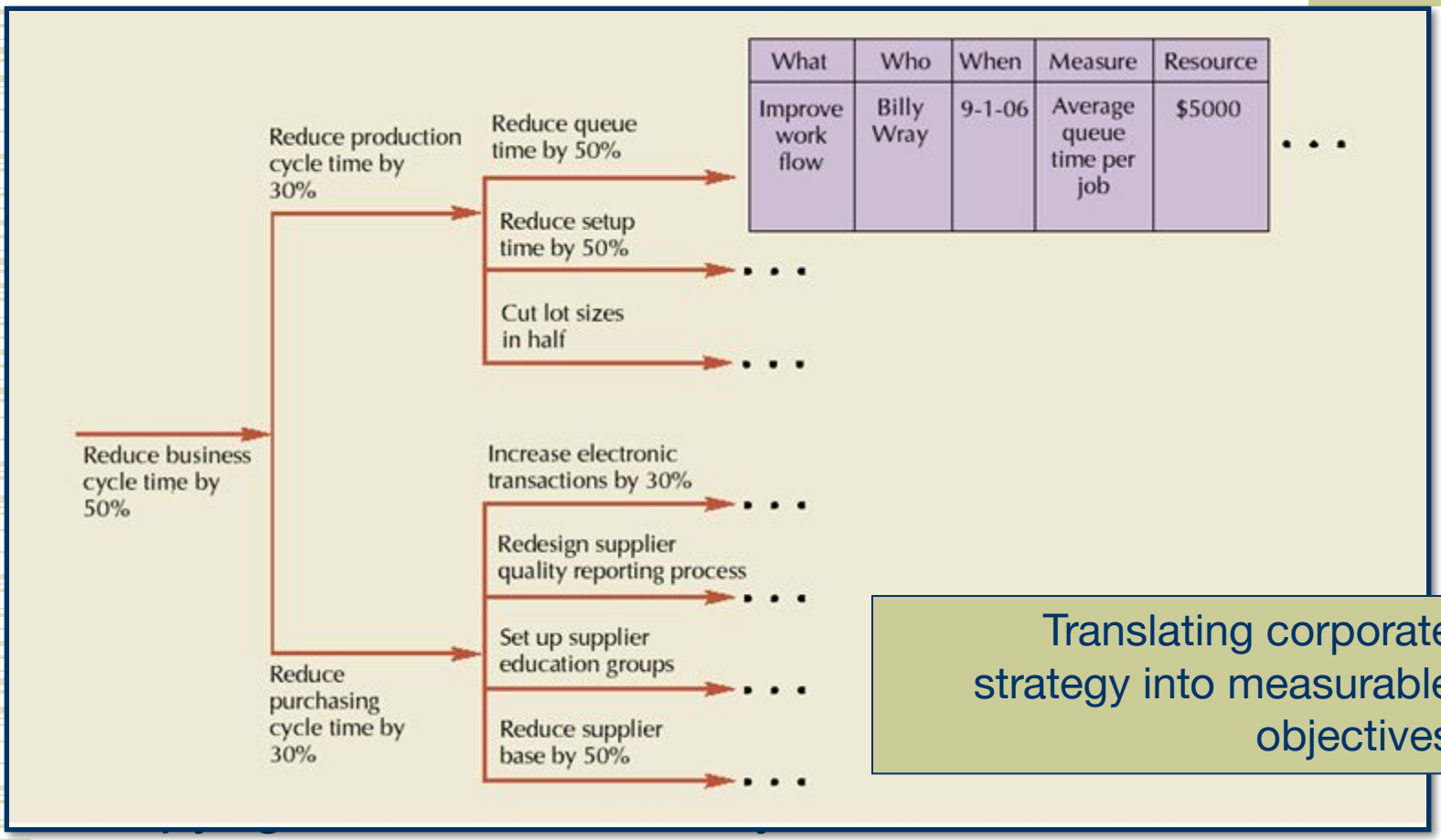
Operations Strategy: Operating Systems

- How will operating systems execute strategic decisions?
- How to align information technology and operations strategic goals?
- How information technology supports both customer and worker demands for rapid access, storage, and retrieval of information?
- How information technology support decisions making process related to inventory levels, scheduling priorities, and reward systems?

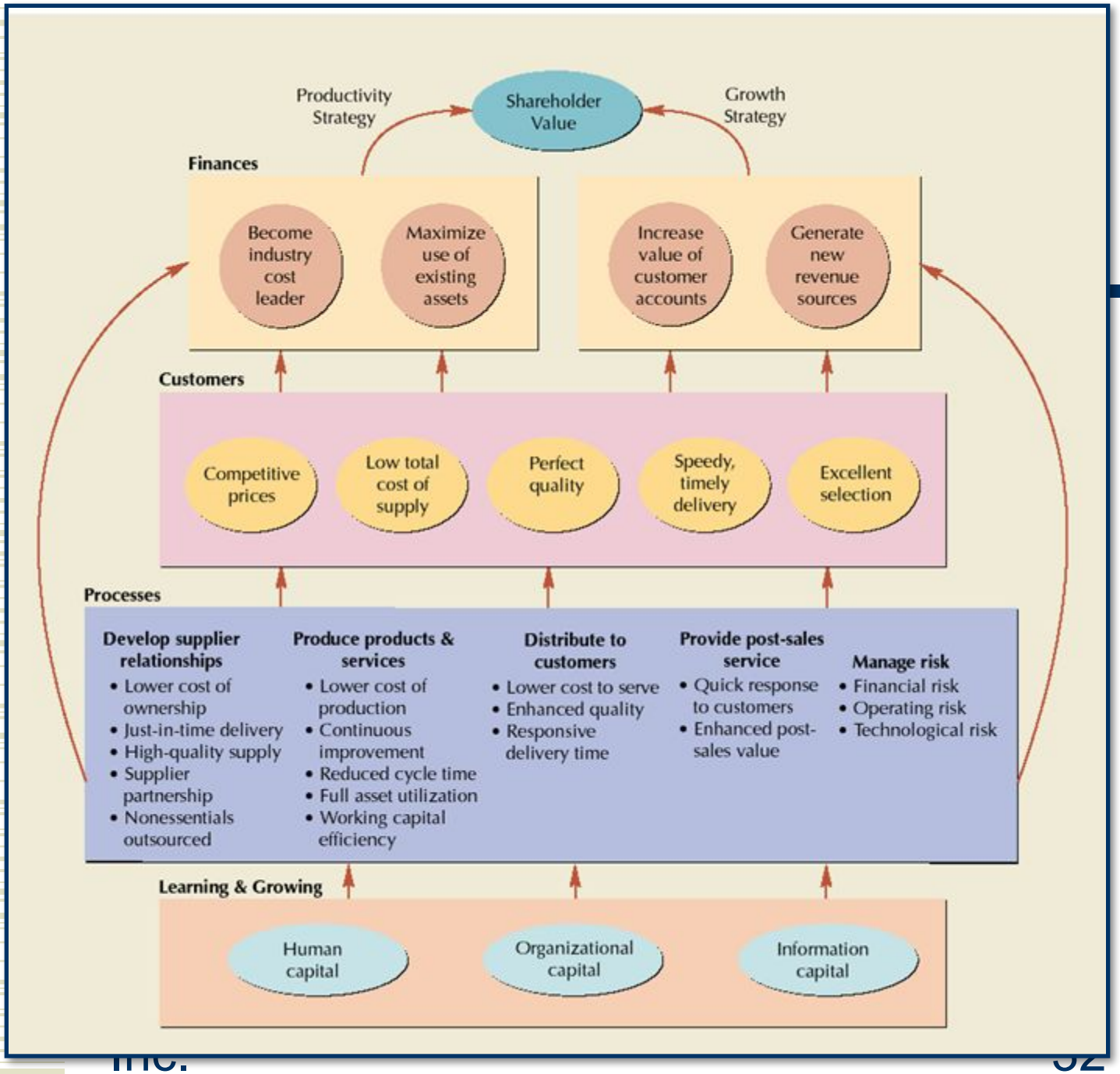
Strategic Planning



Policy Deployment



Translating corporate strategy into measurable objectives

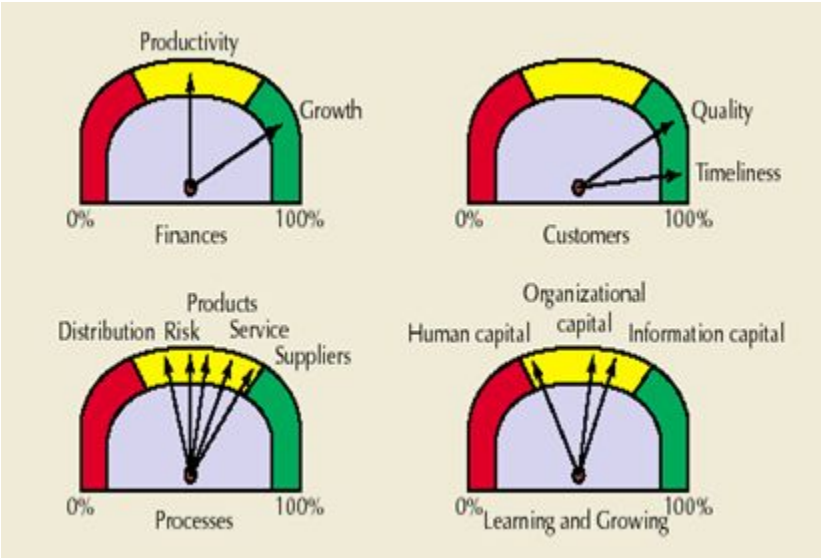


Key Performance Indicators

Source:
Robert Kaplan and David Norton, *Strategy Maps: Converting Intangible Assets into Tangible Outcomes* (Boston: Harvard Business School Press, 2004), Figure 3-2, p. 67

Balanced Scorecard

Radar Chart



Dashboard

Issues and Trends in Operations

- Global markets, global sourcing, and global operations
- Virtual companies
- Greater choice, more individualism
- Emphasis on service
- Speed and flexibility

Issues and Trends in Operations (cont.)

- Supply chains
- Collaborative commerce
- Technological advances
- Knowledge and ability to learn
- Environmental and social responsibilities

Changing Corporation

Characteristic	20th-Century Corporation	21st-Century Corporation
Organization	◆ Pyramid	◆ Web
Focus	◆ Internal	◆ External
Style	◆ Structures	◆ Flexible
Source of strength	◆ Stability	◆ Change
Structure	◆ Self-sufficiency	◆ Interdependencies
Resources	◆ Physical assets	◆ Information

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Changing Corporation (cont.)

Characteristic	20th-Century Corporation	21st-Century Corporation
Operations	◆ Vertical integration	◆ Virtual integration
Products	◆ Mass production	◆ Mass customization
Reach	◆ Domestic	◆ Global
Financials	◆ Quarterly	◆ Real-time
Inventories	◆ Months	◆ Hours
Strategy	◆ Top-down	◆ Bottom-up

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Changing Corporation (cont.)

Characteristic	20th-Century Corporation	21st-Century Corporation
Leadership	◆ Dogmatic	◆ Inspirational
Workers	◆ Employees	◆ Employees, free agents
Job expectations	◆ Security	◆ Personal growth
Motivation	◆ To compete	◆ To build
Improvements	◆ Incremental	◆ Revolutionary
Quality	◆ Affordable best	◆ No compromise

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