Introduction to Information Systems

MBA 8120 (Fall 2006) – Week 1

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Outline

- Why study information technology?
- Business Organizations in 2006
- Future Predictions
- MBA 8120 course overview
  - Topics
  - Schedule
  - Evaluation
Why Study Information Technology?

- What is the role of information systems in today’s competitive environment?
- What should managers know about information technology?
- How do information systems transform organizations and management?
Why Study Information Technology?
Why Study Information Technology?

“How can we leverage information technology to deliver business value?”

“How can we gather, focus, and apply information to deliver business value?”

Dennis Severance, Uni. of Michigan
Why Study Information Technology?

“How can we (manager) gather (monitor, collect, store), focus (analyze, organize, structure), and apply (share and use for business purposes) information (regarding products, etc.) to deliver (change business processes) business value (increase revenue, lower cost, invest now or in future)?”

Dennis Severance, Uni. of Michigan
Business in the Year 2006

Business Structure

- Flattened organization
- Rely on nearly instant information
- Deliver mass-customized products and services uniquely suited to specific markets / customers
Business in the Year 2006

Business Environment

- Ubiquitous Computing
- New Businesses
  - The eBay Effect
- 70% of invested capital in service industries
- “Romancing the Segment of One”
Business in the Year 2006

Digital Convergence of Media into Bits  (Straub 2004)

[Diagram showing digital convergence of media into bits]
## Business in the Year 2006
### Drivers of Change (Straub 2004)

<table>
<thead>
<tr>
<th>Source</th>
<th>#</th>
<th>Driver</th>
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<tbody>
<tr>
<td>Environmental</td>
<td>1</td>
<td><strong>Digitalization of media</strong></td>
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<td></td>
<td>2</td>
<td><strong>Inexpensive telecommunications</strong></td>
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<td><strong>Widespread diffusion of computers</strong></td>
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<td>Organizational</td>
<td>4</td>
<td><strong>Increasing pressure on costs and margins</strong>, including globalization and commoditization</td>
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<td>5</td>
<td><strong>Changing organizational models</strong>, empowerment of workers, informing of key business activities (e.g., data mining), outsourcing and downsizing, partnering, cross-functional business processes, virtual teams</td>
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<td>6</td>
<td><strong>Rapidly shrinking cycle times</strong></td>
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<td>7</td>
<td><strong>Intelligent products and services</strong></td>
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<td>8</td>
<td><strong>Demand for customized products and services</strong></td>
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Business in the Year 2006

Emergence of the Net-Enhanced Organization

- Digitally-enabled relationships with customers, suppliers, employees
- Core business processes via digital networks
- Digital management of key assets
- Rapid sensing & responding to change
- Flattened organizations
- Separating work from location
- Increasing flexibility
- Redefining organizational boundaries

Information systems link buyers & sellers to exchange information, products, services, payments

Source: Straub, 2004
Business in the Year 2006
Changing Face of Business

- “What is your China Price?” Retailers expect 30% discounts
- Location independence, work travels to where it is wanted
  - Global marketplace
  - Growth of outsourcing/offshoring
The three scariest words in U.S. industry: “The China Price”

Special Report

Cut your price at least 30% or lose your customers. Nearly every manufacturer is vulnerable. The result: A massive shift in economic power is under way.

Plus: Rethinking the free-trade model

By Pete Engardio, Dexter Roberts, and Aaron Bernstein (P.102)
"THE CHINA PRICE"

They are the three scariest words in U.S. industry. Cut your price at least 30% or lose your customers. Nearly every manufacturer is vulnerable—from furniture to networking gear. The result: A massive shift in economic power is under way. **BY PETE ENGARDO AND DEXTER ROBERTS**
Business in the Year 2006

U.S. versus Emerging Economies

- **Myth**
  - “U.S. will lead the way in innovation, while emerging economies like India and China will provide low cost operations”

- **Fact**
  - “Emerging economies have embraced and are fostering innovation while still able to pursue low cost operations”
  - Example: Detroit vs. Japan

- **Your Opinion??**

IT and Business Future

“What business would like to do in five years often depends on what its systems will be able to do.”

(Laudon and Laudon, 2006)

Digital firm

- Nearly all organization’s significant business relationships digitally enabled
Business Managers
In the Year 2010

- Changing skill set
  - Need for business knowledge
  - "Versatilists" - deep skills in multiple domains, multiple roles, broad experience
  - Focus on process improvement, total quality management, and project management

- Why are skills sets changing?
  - Increased speed of business
  - Flexibility
  - Differentiation
  - Smooth integration of technology and business

Source: Gartner Group, Nov. 28, 2005.
Predictions about the Internet for 2015
(authored in 2001)

- Technology capabilities
  - Wireless computers shrink to wristwatch size
  - Computers recognize you
  - Data is transmitted and received instantaneously

- Business changes
  - Global marketing
  - Shift business focus to training and round-the-clock service
  - Transactions occur via e-commerce, paperwork eliminated
  - Mobile workplace
  - Growth of leisure-oriented economy

- Social issues
  - Cultural heritage preserved
  - New virtual communities created
  - Abuse increases (i.e. electronic fraud and cyberterrorism)
  - Laws modified

Source: Jose A. Corrales, *Communications of the ACM*
The World Is Flat

1. 11/9/89 - capitalism
2. 8/9/95 - Netscape public
3. Work flow software
4. Open sourcing
5. Outsourcing Y2K
6. Offshoring
7. Supply chain
8. Insourcing
9. In-forming
10. Steroids (digital, mobile, personal, virtual)

T. L. Friedman, *The World is Flat*, Farrar, Straus and Giroux, 2005
MBA 8120

Technology to Support Business Strategy

Technology to Support Business Operations

Infrastructure Technologies
Sessions

- **Infrastructure**
  - Week 1 – Introduction; Systems to support business operations
  - Week 2 – Information systems and corporate strategy
  - Week 3 – Security
  - Week 4 – Ethics, privacy, and social issues

- **Deployment**
  - Week 5 – Information systems implementation and project management
  - Week 6 – Acquiring information systems; outsourcing
  - Week 7 – Emerging trends, course wrap-up
  - Week 8 – Final exam
Evaluation

- Project - 20%
- In-class questions - 20%
  (Weeks 2, 4, and 6)
- Class participation - 20%
  - Review of readings...prior class materials: - 10%
  - Case discussions (Hegelian Dialetic) Weeks 3 and 7 – 10%
- Final exam (open book, open notes) - 40%

Note: The project may be done individually or in groups of 3-4 people. The composition of the group may change if the majority of the group feels someone is not “pulling their weight.” Discuss this with me as soon as you feel you have a problem that you cannot resolve. Consider me your supervisor at work...generally, you would not complain to a boss about fellow workers within a group project team.

Individual case write-ups must be done individually. Reference all necessary materials that are not your own work.
Extra credit available

Clip newspaper, magazine articles, or Web reports on current topics of interest to the class. Presentation and defense of these materials to your classmates may earn you extra participation points.
Today’s Agenda

- Course introduction
- Information systems for business operations
- Technology requirements for online course
- Data management
- Student introductions
Take Aways

- Businesses operate in a complex environment.
- Information systems can have a large impact on the shape of an organization and how it operates.
- Managers need to understand the impact of technology on operations.
- Organizations are highly dependent upon information technology.
- Success of an organization may depend upon what its information systems are able to do.