MBA 8473 - Session 4
Defining and Deploying e-Business Space and Internet Economy Models

Cognitive Objectives

24. Explain what is Internetworking.
25. Explain what is e-Commerce.
26. Explain Internet and e-commerce Fundamentals (see text book chapters for basics)
   1. Evaluate capabilities of Internet and e-commerce
   2. Examine opportunity space for e-commerce
27. Explain value-adding intermediaries
28. Contrast two major types of portals.
29. Identify Six Target Properties of e-Business Models
30. Explain and compare four emerging Internet economy business models.
31. Evaluate where we are headed - integration of telecommunications, content providers, and portals.

Appendix. Gives examples of Customer Relationship Management: Amazon vs Barnes and Noble
INTERNETWORKING (c.o. 24)

- LINKED NETWORKS
- EACH RETAINS IDENTITY
- INTO INTERCONNECTED NETWORK

ELECTRONIC COMMERCE (c.o. 25)

- DOING BUSINESS ELECTRONICALLY
- AUTOMATION OF
  - BUSINESS - TO - BUSINESS TRANSACTIONS (B2B)
  - BUSINESS - TO - CONSUMER TRANSACTIONS (B2C)
  - Consumer - To- Consumer Transactions (P2P)
Internet and eCommerce Capabilities (c.o. 26.1)

• People-to-people communication

• Building memory
  – Interlinking content – World Wide Web
  – Content aggregation and organization

• Distribution and sharing
  – Information retrieval
  – Information search
  – Collaborative filtering
  – Broadcast or push information
  – Narrowcast or pull information

Internet and eCommerce Opportunities (c.o. 26.2)

• Opportunity spaces - Intrepreneurial opportunities
  – Transforming B2C processes
    • Traditional value chain is designed to “push” flow of materials and information and analysis focuses on cost reduction to enhance profit margins.
      – May cause undesirable “Bullwhip” effect (discussed in session 2).
    • Reorientation of analysis in terms of customer needs
      – Adopt an outside-in strategy. Begin with customer needs and work backward along the fulfillment chain. Materials and information are “pulled” in this design.
      – Reversal of supply and demand (or value) chain (discussed in session 2)
      – Unbundling of supply and demand (or value) chain
        » Focus on core competencies only; unbundling of the value chain
Internet and eCommerce Opportunities (c.o. 26.2)

- **Opportunity spaces** - Entrepreneurial opportunities
  - New products/services
    - Customized to Personalized
    - Interactive
  - Transforming B2B processes
    - Selective bundling of supply/demand chain
      - Creation of B2B exchange hub
        - Define Electronic Business Communities (EBC) – Buying and Selling
        - Synergistic clusters, business ecosystems, coalitions, cooperative networks, and outsourcing. Ex. Airlines Networks; FedEx allying w/ USPS
        - (Visit Aspect Development/ I2’s home page to see examples for B2B community buying and selling solutions)
    - Value-added intermediation (see next two slides)
      - Portals: Horizontal and vertical
- People-to-people (P2P) processes
  - Napster like file-swapping models
    - WinMX

(c.o. 27)

Value adding intermediation: Portals

- Web-based window to information on defined subjects
- Technology support for consumers of information
- Technology support for suppliers of information
- Technology support for market transactions
- Distinction between horizontal and vertical portals
  - Contrast Yahoo from Auto-by-Tel
Contrasting two major types of Web-based Portals

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<tr>
<th>Criteria</th>
<th>Vertical (Vortals)</th>
<th>Horizontal</th>
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<tr>
<td>Domain</td>
<td>Narrow</td>
<td>Broad</td>
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<td>Content</td>
<td>Specific</td>
<td>General</td>
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<td>Purpose</td>
<td>Market-transacting</td>
<td>Support systems (individual &amp; group)</td>
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<td>Processes</td>
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<td>Execution</td>
<td>Communication</td>
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<td>Revenue Basis</td>
<td>Transactions</td>
<td>Advertising</td>
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<td>Examples</td>
<td>Chemdex (biological &amp; chemical reagents)</td>
<td>Yahoo</td>
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<td>Auto-by-Tel (automobiles)</td>
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Properties of e-Business: How to go about venturing eBusiness

1. **Technology to Business Models**: Technology cannot be an afterthought in forming business strategy, but the actual cause and driver.
2. **Shift Focus from Creating to Experiencing**: Do not use technology to only create the product. Use technology to enhance the end-to-end customer experience surrounding the product and service, from selection and ordering to receiving and after-sales relationship management.
3. **Shift Focus from Customization to Personalization**: e-Commerce enables listening to customers. Integrated, personalized service keeps customers coming back.
4. **Shift focus from Automation to Process Integration**: Develop an attractive front-end, plus integrated back-end. Invest in process integration - this is the cornerstone of the techno-enterprise.
5. **Design for Reach, Richness, and Digital Convergence**: Meld voice, data and video. Telephone networks, cable networks, wireless networks, and computer data networks are ceasing to be isolated. Being integrated based on the Internet Protocol, which is the packet-switching network layer for internet communication.
6. **Different Metrics of Success?**: Building a brand name and customer loyalty takes significant resources and time. Initial focus of leading Dot.Com companies on revenue stream. Subsequent focus on gross profit margins. Eventual focus on net earnings.

For more details on these properties see Appendix.
Mid-session summary questions

- What are various opportunity space created due to Internetworking?
  - **Intrepreneurial opportunities:** B2C processes.
    - What is unbundling of supply chain?
    - Can you explain with an example?
  - **Entrepreneurial opportunities:**
    - Personalized, customized and interactive products and services.
    - B2B processes
      - What is Selective bundling of supply/demand chain
        » Creation of B2B exchange hub.
        » What are the advantages and shortcomings of such B2B hubs.
      - What are value added intermediaries? Can you compare two extreme types of portals?
  - What are the six target properties of e-Business model?
    - Can you explain each with an example?

Emergent Internet Economy Business Models
(c.o. 30)

We discuss four such models that make up the Internet economy. These were found by the most extensive study in recent times.

(source: CISCO and U. of Texas 6/2000 report)
Four Models of Business in the Internet Economy

1. Internet Infrastructure
   - Companies with products and services that help create an IP based network infrastructure, a prerequisite for electronic commerce.
     • Backbone providers (e.g., Qwest, MCI Worldcom)
     • Service providers (e.g., Mindspring, AOL, Earthlink)
     • Networking hardware and software companies (e.g., Cisco, Lucent, 3Com)
     • PC and Server manufacturers (e.g., Dell, Compaq, HP)
     • Security vendors (e.g., ISS, Checkpoint, Network Associates)
     • Fiber optics makers (e.g., Corning)
     • Line acceleration hardware manufacturers (e.g., Ciena, Tellabs, Pairgain)

2. Internet Applications
   - Products and services build upon the above IP network infrastructure and make it technologically feasible to perform business activities online.
     • Internet consultants (e.g., USWeb/CKS, Scient, etc)
     • Internet commerce applications (e.g., Netscape, Microsoft, Sun, IBM)
     • Multimedia applications (e.g., RealNetworks, Macromedia)
     • Web development software (e.g., Adobe, NetObjects, Allaire, Vignette)
     • Search engine software (e.g., Inktomi, Verity)
     • Online training (e.g., Sylvan Prometric, Assymetrix)
     • Web-enabled databases (e.g., Oracle, IBM DB2, Microsoft SQL Server, etc; only Internet/intranet related revenues are counted)
Four Models of Business in the Internet Economy

3. Internet Intermediary

Internet intermediaries increase the efficiency of electronic markets by facilitating the meeting and interaction of buyers and sellers over the Internet. They act as catalysts in the process through which investments in the infrastructure and applications layers are transformed into business transactions.

- Market makers in vertical industries (e.g., VerticalNet, PCOrder)
- Online travel agents (e.g., TravelWeb.com, ITravel.com)
- Online brokerages (e.g., E*Trade, Schwab.com, DLJDirect)
- Content aggregators (e.g., Cnet, ZDnet, Broadcast.com)
- Portals/Content providers (e.g., Yahoo, Excite, Geocities)
- Internet ad brokers (e.g., Doubleclick, 24/7 Media)
- Online advertising (e.g., Yahoo, ESPNSportszone)

4. Internet Commerce

Internet commerce involves the sales of products and services to consumers or businesses over the Internet.

- E-tailers (e.g., Amazon.com, eToys.com)
- Manufacturers selling online (e.g., Cisco, Dell, IBM)
- Fee/Subscription-based companies (e.g., thestreet.com, WSJ.com)
- Airlines selling online tickets
- Online entertainment and professional services
Comparisons and Implications

- Explanation of revenue model

- Strategic migration possibilities and difficulties

Evaluate where we are headed - integration of telecommunications, content providers, and portals.
Summary and Review Questions

(End-session)

• What are the four emergent Internet economy business models?
• What are the business implications of these four layers?
  – Explanation of revenue model.
  – Strategic migration possibilities and difficulties
  – IT support
• Where are we headed? What is Convergence?

Appendix I

• Detailed notes of six eBusiness properties.
• Comparisons of two B2C’s and their customer relationship management (CRM)
• Cisco’s own e-commerce
• GE’s innovative use of internet
• Two additional e-Business properties
Properties of e-Business:
1. Technology to Business Models

- Technology cannot be an afterthought in forming business strategy, but the actual cause and driver
- The technology language now **must** be a business language
  - What does it do for strategy, structure, and core processes?
  - Does it enable building relationships with and positive experiences for customers?
  - What role does it play in enhancing customer loyalty?
  - What role does it play in building collaborations and cooperation across the supply chain?
  - Does it enable superior procurement of production and non-production goods and services?

Properties of e-Business:
2. Shift Focus from **Creating to Experiencing**

- Do not use technology to *only* create the product.
- Use technology to enhance the *end-to-end customer experience* surrounding the product and service, from selection and ordering to receiving and after-sales relationship management.
- Define value in terms of **whole customer experience**
  - Example - Amazon.com
  - An e-retail infrastructure that is logical and intuitive; a special orders department for hard-to-find, relatively unpopular books
- Wrap *experience attributes* around a commodity product or service
Properties of e-Business:

3. Shift Focus from Customization to Personalization

- e-Commerce enables *listening* to customers
- Integrated, personalized service keeps customers coming back
  - *Expedia*, now the third largest online travel agent
    - Sells $5 - $10 million in tickets and travel services every week
    - Selection, ease of use, and aggressive pricing builds customer traffic
    - Has a well developed personalization service to build loyalty
  - *Amazon.com* with a customer loyalty rate of 58% (see a comparison with Barnes&Noble in the appendix).

Properties of e-Business

4. Shift focus from *Automation* to *Process Integration*

- Web-front automation or any IT automation does not do it!
- Develop an attractive front-end, *plus* integrated back-end
- Invest in process integration - this is the *cornerstone* of the techno-enterprise
  - Within business
  - With suppliers and customers
  - MS Market and Ford’s procurement systems
Properties of e-Business:
5. Design for Reach, Richness, and Digital Convergence

- Embed interactivity, as appropriate
- Meld voice, data and video
  - Telephone networks, cable networks, wireless networks, and computer data networks are ceasing to be isolated
  - Being integrated based on the Internet Protocol, which is the packet-switching network layer for internet communication

Properties of e-Business:
6. Different Metrics of Success?

- Building a brand name and customer loyalty takes significant resources and time
  - Initial focus of leading Dot.Com companies on revenue stream
  - Subsequent focus on gross profit margins
  - Eventual focus on net earnings
Properties of e-Business:
7. Build Customer-Focused Electronic Business Communities

- Consider FDX Corporation (so named after Federal Express merged with Caliber Logistics)
- Spends about $1 billion a year in information technology
  - Focuses on business value of information technology
- Positioning themselves to be the warehouse, fulfillment, and shipping department of any company
- Partnership between National Semiconductor and FDX
  - NS has outsourced its warehousing and distribution to FDX
  - Delivery cycle time slashed from four weeks to seven days
  - Distribution costs down from 2.9% of sales to 1.2% of sales

Amazon vs. Barnes & Noble: A Comparison

- Amazon
  - 1 website
  - 3.1 million titles
  - 306% sales growth last quarter
  - $375,000 in annual sales per employee
  - 24 inventory turnovers per year
  - long term capital requirements: LOW

- Barnes & Noble
  - 1,011 stores
  - 175,000 titles per store
  - 10% sales growth last quarter
  - $100,000 in annual sales per employee
  - 3 inventory turnovers per year
  - long term capital requirements: HIGH
Amazon vs. Barnes & Noble: A Comparison

• Amazon
  - Limited direct warehousing, sales and rental costs
  - Wholesalers and suppliers ship most products
  - Customers co-create value by posting book reviews and recommendations
  - Software agents can be used by customers to alert them to special offers and new arrivals

• Barnes & Noble
  - Substantial warehousing, sales and rental costs
  - Products shipped by B&N
  - Value co-creation limited to book club meetings, or author speeches at defined locations at defined times
  - Traditional channels used to inform customers about special programs and new arrivals

Redefining Business Models

• Online services for ordering, configuring, customizing and supporting products at Cisco
  - Increasing proportion of online ordering
  - Custom configuration by customers
  - Reduces customer’s hassles for product integration into network
  - Support functions moved online leading to reduced technical support

• Customer co-creation of value at GE
  - Tech tip of the week