Chapter 3

by

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Taxonomy of organizational applications
Buzzwords

- Business process reengineering (BPR)
- Enterprise resource planning (ERP)
  - Outgrowth of manufacturing resource planning (MRP)
- Supply chain management

Some types of applications

- Worker collaboration
- Operations and logistics
- Decision support
- Information and knowledge management
- Customer/supplier commerce
- Consumer commerce
Some ERP categories

• Sales force management  
• Document management  
• Customer service and support  
• Manufacturing logistics  
• Accounting  
• Human resources  
• Supply-chain management

Questions

• Do you have experience with any of these options?
  – In terms of:  
    • Effectiveness  
    • Pain  
    • Time/budget
Fundamental options

• Custom application molded to existing organization
• Custom application molded to re-engineered organization
• Mold organization to off-the-shelf application
  – Common off-the-shelf (COTS) technology
  – Highly configurable

Questions

• How standardized are organizational processes?
  – Customer service
  – Finance
  – Manufacturing
• Is software a good way to propagate best practices?
Productivity quandary

- Economists have difficulty identifying major productivity improvements due to investment in information technology
- Questions:
  - How does one separate quality from productivity?
  - In what ways can computing harm productivity?

Electronic commerce

- Two varieties:
  - Supply chain management: extension of ongoing business processes to suppliers and customers
  - Marketplace: dynamic, opportunistic transactions conducted over the network
- Question:
  - What are some characteristics of these options, in terms similar to social applications?
Electronic marketplace

• Matching buyers and sellers
  – Deferred-publication style
  – Recommender systems
• Negotiating terms
  – Task or work group
  – Electronic auctions
• Consummation
  – Electronic payments and fulfillment
• Customer service

Questions

• For both buyer and seller:
  – How does an auction differ from standard pricing/discounting?
  – What impact might recommender systems have?
  – Electronic payments? Bank account transfer authorizations?
Opportunities in consumer electronic commerce

- Equivalent of sales by direct-mail catalog
  - How is it different different?
- More ways to match buyer and seller
- More payment options
- Recommender systems
  - What uses?
- Mass customization
- Superstore: consolidation of suppliers

Advantages over direct-mail catalog

- Customers find you
  - But gaining attention remains an issue
- Multimedia
- Fewer human agents -- labor savings
- Escalation to remote conferencing
Matching buyer and seller

- Fixed price
- Price based on buyer characteristics
  - History
  - Demographics
  - Behavior
  - Sequential versioning
- Auctions

Intermediation

- What intermediaries will be eliminated?
- What are legitimate roles for intermediaries in the networked age?
- What are some innovative roles for intermediaries?
Payment options

- (Topic of Chapter 14)
- Account transfer authorization
- Credit/debit card
- Digital cash
  - Privacy
- Micropayments
  - Low transaction costs
  - Consolidation

Recommender systems

- Extend and systematize the “reference”
- Suggest coupled sales
- Customer service:
  - discussion forums
  - knowledge bases
Mass customization

- Requires supply chain management
- Just-in-time production
- Supplier component integration (e.g. Dell)

Superstore

- *Dynamic* consolidation of multiple suppliers
- Major application of XML (discussed in Chapter 15)
  - Consistent presentation