Chapter 2

Lecture 4

COMPETING WITH INFORMATION TECHNOLOGY (CONT'D)

LEARNING OBJECTIVES

Chapter 2

1. Give examples of how IT give competitive advantages to a business.
2. Give examples of how business process reengineering frequently involves the strategic use of IT.
3. Identify the business value of using Internet technologies to become an agile competitor or to form a virtual company.
4. Explain how knowledge management systems can help a business gain strategic advantages.

1. USING IT FOR COMPETITIVE STRATEGIES

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Strategy	Company	Strategic Use of Information Technology	Business Benefit
Cost Leadership	Dell Computer	Online build to order	Lowest-cost producer
	Priceline.com	Online seller bidding	Buyer-set pricing
	eBay.com	Online auctions	Auction-set prices
Differentiation	AVNET Marshall	Customer/supplier of e-commerce	Increase in market share
	Moen Inc.	Online customer design	Increase in market share
	Consolidated Freightways	Customer online shipment tracking	Increase in market share
Innovation	Charles Schwab & Co.	Online discount stock trading	Market leadership
	Federal Express	Online package tracking and flight management	Market leadership
	Amazon.com	Online full-service customer systems	Market leadership
Growth	Citicorp	Global intranet	Increase in global market
	Wal-Mart	Merchandise ordering by global satellite network	Market leadership
	Toys 'R' Us Inc.	POS inventory tracking	Market leadership
Alliance	Wal-Mart/Procter & Gamble	Automatic inventory replenishment by supplier	Reduced inventory cost/increased sales
	Cisco Systems	Virtual manufacturing alliances	Agile market leadership
	Staples Inc. and Partners	Online one-stop shopping with partners	Increase in market share

THE COMPETITIVE ADVANTAGE OF IT

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Does IT matter?

- No:
  - Nicholas Carr argues that IT is infrastructure like electricity
  - Too commonplace to get competitive advantage
- Yes:
  - IT is not just networks and computers
  - The important part is the software and information and how IT is used

BUILDING A CUSTOMER-FOCUSED BUSINESS

Chapter 2

- What is the business value in being customer-focused?
  - Keep customers loyal
  - Anticipate their future needs
  - Respond to customer concerns
  - Provide top-quality customer service
- Focus on customer value
  - Quality not price has become primary determinant of value

HOW CAN WE PROVIDE CUSTOMER VALUE?

Chapter 2

- Track individual preferences
- Keep up with market trends
- Supply products, services and information anytime, anywhere
- Provide customer services tailored to individual needs
- Use Customer Relationship Management (CRM) systems to focus on customer

BUILDING CUSTOMER VALUE USING THE INTERNET

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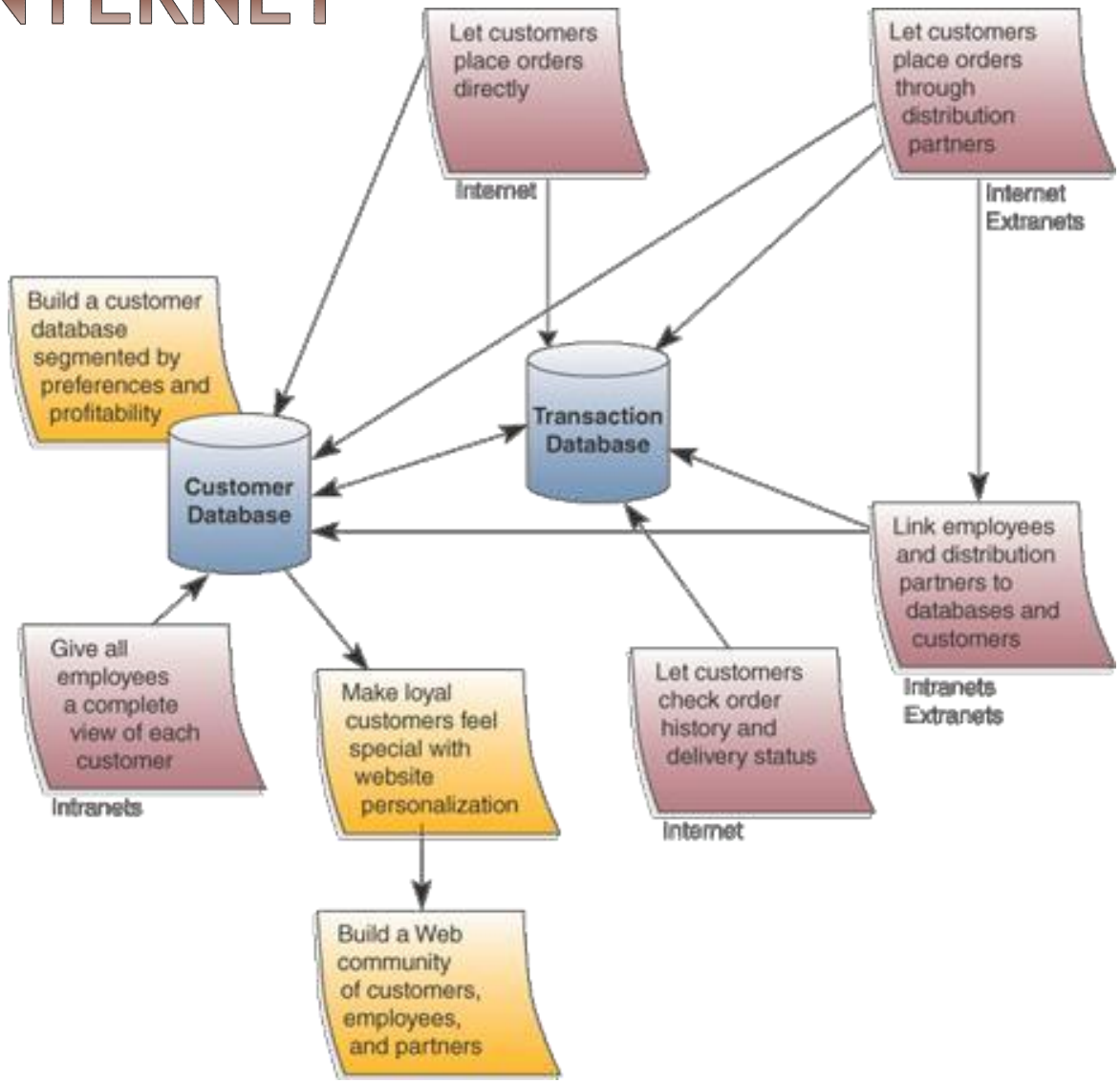

2. BUSINESS PROCESS REENGINEERING

Chapter 2

- One of the most important implementations of competitive strategies is BPR, simply called Reengineering
  - Fundamental rethinking and
  - radical redesign of business processes
  - to achieve improvements in cost, quality, speed and service
- BPR combines a strategy of promoting business innovation with a strategy of making major improvements to business operations so that a company can become a much stronger and more successful competitor in the marketplace.
- Risk of failure is too high.

HOW BPR DIFFERS FROM BUSINESS IMPROVEMENT

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	Business Improvement	Business Process Reengineering
Level of Change	Incremental	Radical
Process Change	Improved new version of process	Brand-new process
Starting Point	Existing processes	Clean slate
Frequency of Change	One-time or continuous	Periodic one-time change
Time Required	Short	Long
Typical Scope	Narrow, within functions	Broad, cross functional
Horizon	Past and present	Future
Participation	Bottom-up	Top-down
Path to Execution	Cultural	Cultural, structural
Primary Enabler	Statistical control	Information technology
Risk	Moderate	High

A CROSS-FUNCTIONAL PROCESS

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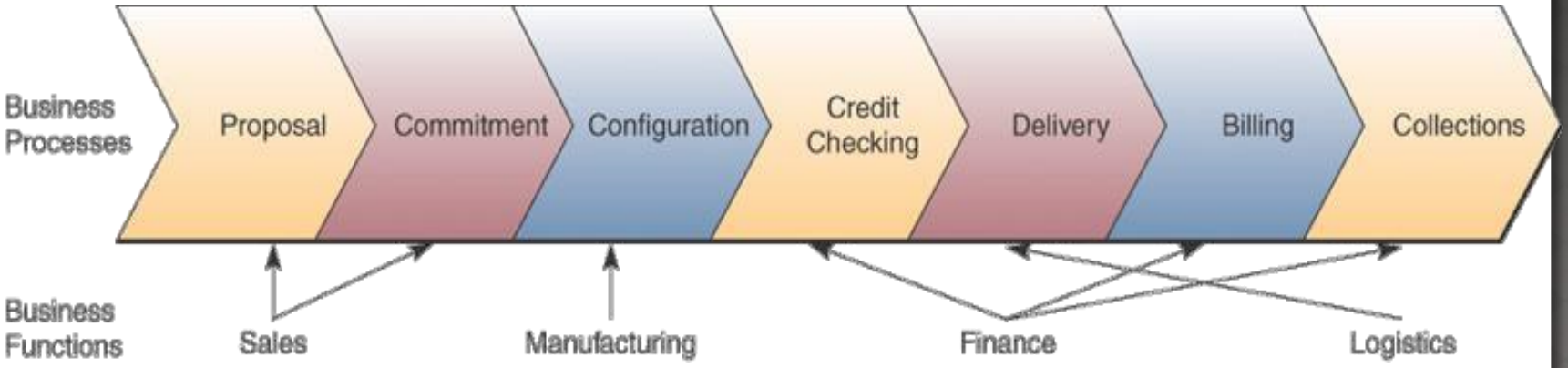

A cross-functional team includes employees from several different departments or specialties.

REENGINEERING ORDER MANAGEMENT

Chapter 2

Reengineering Order Management
• Customer relationship management systems using corporate intranets and the Internet.
• Supplier managed inventory systems using the Internet and extranets.
• Cross-functional ERP software for integrating manufacturing, distribution, finance, and human resource processes.
• Customer-accessible e-commerce websites for order entry, status checking, payment, and service.
• Customer, product, and order status databases accessed via intranets and extranets by employees and suppliers.

3. AGILITY

- Agility is the ability of a company to prosper
  - In a rapidly changing,
  - continually fragmenting global market for high-quality,
  - high-performance,
  - customer-configured products and services
- An agile company can make a profit with
  - Broad product ranges
  - Short model lifetimes
  - Mass customization (produce Individual products in large volumes)

AGILITY (CONT.)

- We are changing from a competitive environment in which mass-market products and services were:
  - *standardized*,
  - *long-lived*,
  - *information-poor*,
  - *and exchanged in one-time transactions*
- To an environment in which companies compete globally with niche market products and services that are:
  - *individualized*,
  - *short-lived*,
  - *information-rich*,
  - *and exchanged on an ongoing basis with customers*.

FOUR STRATEGIES FOR AGILITY

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An agile company:

- Provides products as solutions to their customers' individual problems
- Cooperates with customers, suppliers and competitors to bring products to market as quickly and cost-effectively as possible
- Organizes so that it thrives on change and uncertainty
- Leverages the impact of its people and the knowledge they possess

HOW IT HELPS A COMPANY BE AGILE

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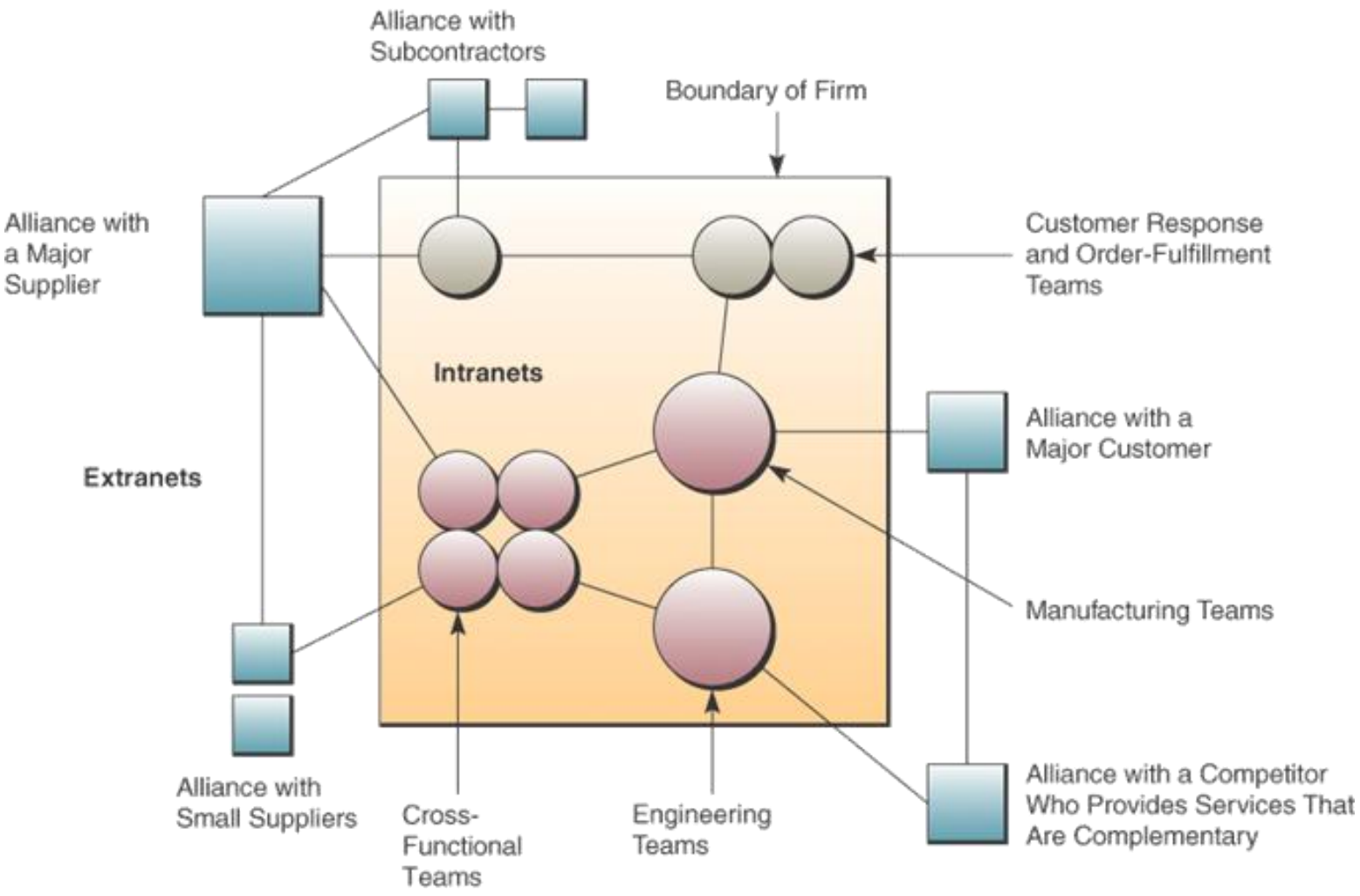
Type of Agility	Description	Role of IT	Example
Customer	Ability to co-opt customers in the exploitation of innovation opportunities • As sources of innovation ideas • As cocreators of innovation • As users in testing ideas or helping other users learn about the idea	Technologies for building and enhancing virtual customer communities for product design, feedback, and testing	eBay customers are its de facto product development team because they post an average of 10,000 messages each week to share tips, point out glitches, and lobby for changes.
Partnering	Ability to leverage assets, knowledge, and competencies of suppliers, distributors, contract manufacturers, and logistics providers in the exploration and exploitation of innovation opportunities	Technologies facilitating interfirm collaboration, such as collaborative platforms and portals, supply-chain systems, etc.	Yahoo! has accomplished a significant transformation of its service from a search engine into a portal by initiating numerous partnerships to provide content and other media-related services from its website.
Operational	Ability to accomplish speed, accuracy, and cost economy in the exploitation of innovation opportunities	Technologies for modularization and integration of business processes	Ingram Micro, a global wholesaler, has deployed an integrated trading system allowing its customers and suppliers to connect directly to its procurement and ERP systems.

VIRTUAL COMPANY

- A virtual company uses IT to link
  - People,
  - Organizations,
  - Assets,
  - And ideas
- Creates inter-enterprise information systems
  - to link customers, suppliers, subcontractors and competitors
- Creates virtual workgroups and alliances to exploit fast-changing business opportunities
- Uses the Internet, intranets, and extranets to support alliances with manufacturers.

A VIRTUAL COMPANY



STRATEGIES OF VIRTUAL COMPANIES

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Strategies of Virtual Companies
• Share infrastructure and risk with alliance partners.
• Link complementary core competencies.
• Reduce concept-to-cash time through sharing.
• Increase facilities and market coverage.
• Gain access to new markets and share market or customer loyalty.
• Migrate from selling products to selling solutions.

4. KNOWLEDGE CREATION

- Knowledge-creating company or learning organization
  - Consistently creates new business knowledge
  - Disseminates it throughout the company
  - And builds in the new knowledge into its products and services
- Knowledge management (KM) is acquiring data, processing data into information, using and communicating information in the most effective way, and discarding information at the proper time.

TWO KINDS OF KNOWLEDGE

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- Explicit knowledge
  - Data, documents and things written down or stored on computers
- Tacit knowledge
  - The "how-to" knowledge which reside in workers' minds
- A knowledge-creating company makes such tacit knowledge available to others

KNOWLEDGE ISSUES

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- What is the problem with organizational knowledge being tacit?
- Why are incentives to share this knowledge needed?
- **Legacy information systems** are earlier systems software and hardware that are incompatible or partially incompatible with current information technology.
  - Produce primarily historical information.
  - Data captured by legacy systems is still valuable.
  - Some legacy data may only exist as paper printouts.
  - Problem with converting legacy data is that such data may not be available in digital format.

KNOWLEDGE MANAGEMENT TECHNIQUES

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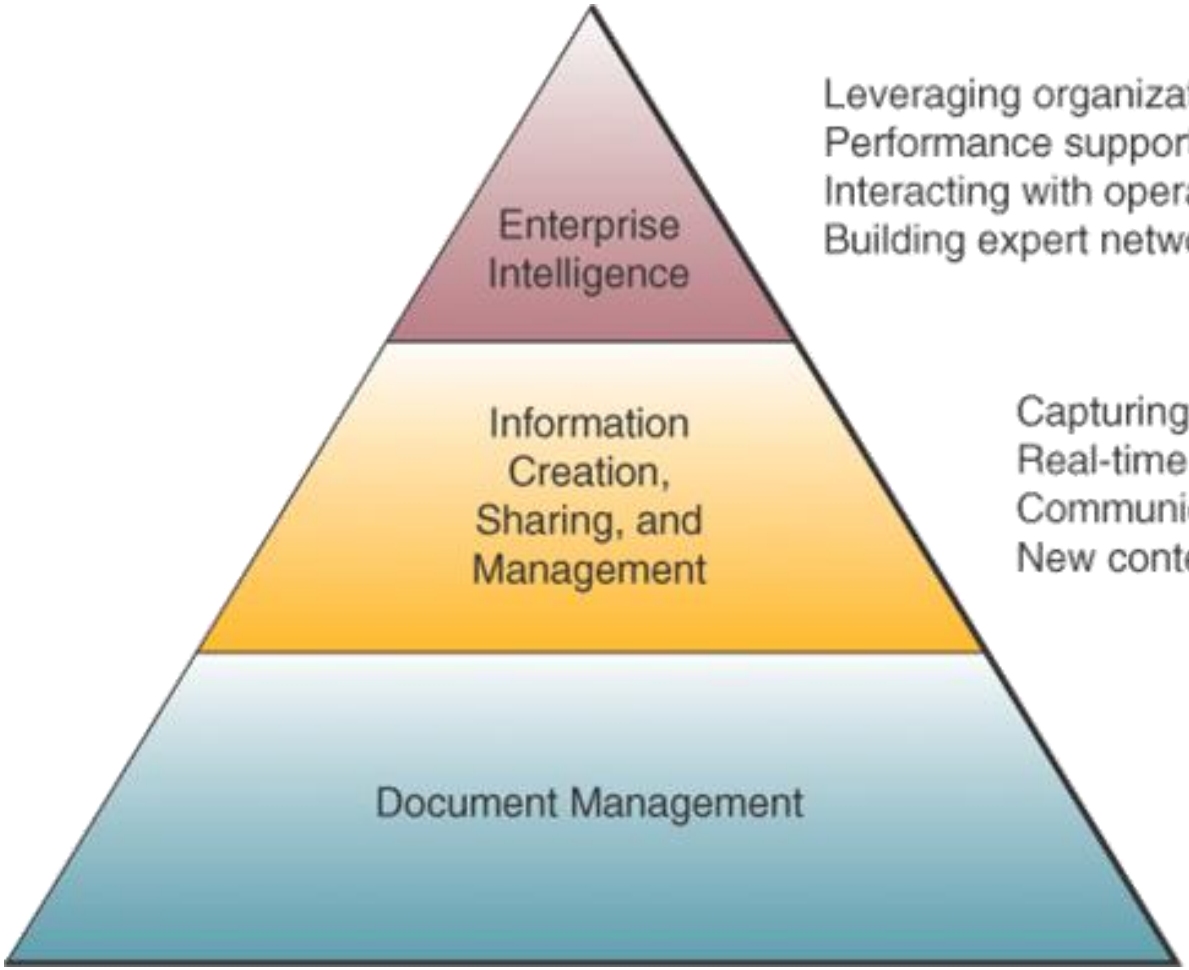

Leveraging organizational "know-how"
Performance support
Interacting with operational databases
Building expert networks

Capturing & distributing expert stories
Real-time information management
Communication and collaboration
New content creation

Accessing and retrieving documents stored online

KNOWLEDGE MANAGEMENT SYSTEMS (KMS)

- KMS manage organizational learning and business know-how
- Goal:
  - Help knowledge workers to create, organize, and make available knowledge
  - Whenever and wherever it's needed in an organization

THANK YOU