Leaning Objectives

1. Understand the five functional E-Business systems and how they provide value to the company.
2. Understand how the Internet supports business processes.
3. Understand transaction processing systems
4. Understand batch processing systems
5. Understand real time systems
6. Position E-Business

Five Functions

Marketing Information Systems

Interactive Marketing
Sales Force Automation
Customer Relationship Management
Sales Management

Market Research and Forecasting
Advertising and Promotions
Product Management

ERP

Enterprise Resource Planning

Supply chain management and manufacturing planning and control system. (started with manufacturing companies but has expanded to other industries)

ERP (continued)

SAP

A Germany-based international supplier of comprehensive, enterprise-class information systems with proven success supporting large, global manufacturing and distribution enterprises.

Highly integrated application software modules that perform common business functions based on multi-national leading practices.
What’s so hot about SAP?
Integration: business processes work together.
Innovative Technology: client-server architecture.
Acceptance: large share of worldwide client-server enterprise-wide application market.
Performance: good scalability, performance and high availability.
Job Insurance: CIOs staking their jobs on it can cite 6,000 others using it in 50 countries.

ERP (continued)

Business Benefits
• Integration leads to business process efficiency savings.
• Promotes standard, defined business processes.
• Reduces time to deploy and modify business processes and the related disruption.
• Supports multinational operations (currency, language, time clock)
• Supports competitive strategies.

Human Resource Management

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<th>Staffing</th>
<th>Training &amp; Development</th>
<th>Compensation Administration</th>
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<td>- Manpower Planning</td>
<td>- Succession planning</td>
<td>- Contract costing</td>
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<td>- Labor Force Tracking</td>
<td>- Performance appraisal</td>
<td>- Salary forecast</td>
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<td>Tactical Systems</td>
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<td>- Labor Cost Analysis</td>
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<td>- Recruitment Planning</td>
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<td>- Workforce Planning</td>
<td>- Performance evaluation</td>
<td>- Benefits Administration</td>
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</tbody>
</table>

Accounting Systems

1. Operational
2. Management

Accounting Systems (continued)

1. Operational Accounting Systems
   Record and track sales transactions, cash receipts and disbursements, purchases, payroll, general ledger accounts and to prepare financial statements.
Operational Accounting Systems
(continued)

Operational Processing
Inventory Control
Accounts Receivable
Accounts Payable
Payroll
General Ledger
Cost

Managerial Accounting Systems

Managerial accounting systems are used primarily for planning and control. For example:

- Budget Generation
- Cost and Time Projections
- Comparison Reports

Financial Information Systems

Financial information systems help managers evaluate current performance and make projections about the future profitability of a business so that they can make decisions about the:
- Financing of a business.
- Allocation of financial resources within a business.

Financial Information Systems
(continued)

Transaction Processing

1. Data entry
2. Transaction Processing
3. Database maintenance
4. Documents and report generation
5. Inquiry Processing
## Batch Processing

### Advantages
- Taking advantage of resources at preplanned times is more efficient.
- Control over data integrity and security.
- Protect remote servers.
- Economical for large amounts of data.

### Disadvantages
- Master files frequently out of date between batch processes.
- Scheduled reports only when scheduled and data is out of date if specially requested.
- No instant updates for customer or internal inquiries.

## Online (Real-time) Processing

### Advantages
- Transaction data is processed immediately after transaction occurs.
- Increasingly common in industries with order entry applications like retailing, direct sales channels of manufacturing companies and all forms of E-Commerce.

## Real-time Processing

- Receive user data (merchandise orders, banking transactions, information requests.)
- Pass directly to data processing system.
- Return requested information or confirmation to user at time of transaction.

## Online Processing

To further complicate things:

An online activity can be processed two ways:

- Batch processing by saving transactions.
- Real time processing as the transaction occurs.
Real-time Processing (continued)

Advantages

• Immediate database updates and user responses.

• Only update the records necessary at any one time.

• Multiple databases can be managed simultaneously.

Real-time Processing (continued)

Disadvantages

• Open databases mean a higher security risk.

• Requires fault-tolerant or backup systems to be reliable.

• Load balancing cannot necessarily compensate for heavy usage.

• Higher costs associated with redundant systems.

E-Business Application Architecture

E-Business (continued)

Supply Chain Management

Customer Relationship Management

E-Business (continued)

CRM Elements

• Contact Management
• Account Management
• Sales Force Management
• Time Management
• Customer Service
• Marketing
• Executive Information
• Telemarketing/Telesales
• Supply Chain Management
• Materials Requirements Planning (MRP)
• Enterprise Resource Planning (ERP)
CRM Issues

Where does Supply Chain Management stop and CRM start in terms of commercially available packages that fit a particular company in a specific industry.

Do these packages integrate with Enterprise Resource Management, Data Warehousing and Groupware.

E-Business (continued)

CRM Questions

• What are the most effective and efficient ways to manage customer information to increase customer retention?

• How can organizations acquire and manage data to improve customer experience, while at the same time, respect customer privacy and foster customer loyalty?

• How should organizations utilize superior customer information to optimize inventories, target sales promotions, and streamline manufacturing?

• How can businesses in B2B marketplaces use personalization to differentiate in a cluttered, competitive environment?

E-Business (continued)

IBM Storage Technology Division

OEM storage devices for PC manufacturers. (A major redefinition of the business)

Rapid growth and large volumes.

New OEM business processes.

Intense competition and increased need for cost management.

Shorter product life-cycles and “perishable” inventory.

Separate and potentially disparate locations, processes and systems.

Need for and addition of three new plants.
Global Management System

- **Strategy**
- **Business Processes**
- **Information Technology**

Global Optimization
- Integrated and centrally controlled processes
- Single, worldwide database, real-time information

Business Processes/Responsibilities

- **Division Headquarters**
  - Strategy, policies, standard procedures
  - Supply/demand planning

- **Sales Force/Order Desks**
  - Worldwide OEM sales and support
  - Customer satisfaction

- **Manufacturing Plants**
  - Order processing, pricing, credit validation
  - Volume, quality, costs

- **Logistics Centers**
  - Asset utilization and on-time shipments

- **Development Labs**
  - Product development
  - Prototype production

Performance Indicators

- Entering pricing data into system: 5-80 days to 5 minutes
- Check customer credit: 15-20 minutes to automatic
- Enter customer order: 30 minutes to 5 minutes
- Customer billing inquiry: 15-20 minutes to real-time
- Ship evaluation unit to customer: 3-30 days to 2 days
- Ship repair/replacement unit: 3-30 days to 2 days
- Credit returned drive: 1-5 months to 5 days
- Commit date for customer order: 2 hours - 3 weeks to real-time with some exceptions

SAP Success Factors

- Business processes were reengineered first with user process ownership a critical factor.
- Strong executive support throughout the project.
- Very capable users were part of the SAP team.

- Individuals were empowered to make rapid decisions which avoided committees and time consuming tasks.

- Individuals were empowered to make rapid decisions which avoided committees and time consuming tasks.
Bottom Line

The OEM success took the Storage Systems Division from an at-rise business to a major contributor to IBM’s profitability (at least for a number of years).