Enterprise Collaboration Systems (ECS)

ECS

- Cross-functional IS that enhance communication, coordination and collaboration among the members of business teams and workgroups
ECS Goals

- **Communicate**: share information with each other
- **Coordinate**: coordinate individual work efforts and use of resources with each other
- **Collaborate**: work together cooperatively on joint projects and assignments
Why Collaborate?

- Workgroups & project teams work **together** efficiently & effectively
  - regardless of location

- Share information,
- Coordinate work efforts and resources
- Work together cooperatively.
Committed to Lotus tools – Quickplace
Quickplace-web-based work spaces
Sametime (real-time online meetings)
Tools streamline communication
18,000 Quickplaces for 250,000 users
Case 2: The Business Case for EAI

- EAI involves using software to connect a variety of applications into a cohesive unit
- Helps enterprises align systems more closely with business processes
- Expect to spend $200,000 - $400,000 on an EAI project
- EAI is costly and complex
- Technical staff need lots of training
Case Study Questions

1. Why has EAI recently “become a critical part of the IT strategy at many organizations,” & a high-ranking project of top IT executives? Use Baxter International, GE Power & Corporate Express as examples.

2. What is the major difference in the business value of the EAI projects at Baxter International, GE Power & Corporate Express?

3. What are some of the challenges in developing & implementing EAI systems? How can companies meet this challenge?
Functional Business Systems

- A variety of information systems (transaction processing, management information systems, decision support, etc.)
- That support the business functions of
  - Accounting, finance, marketing, operations management & human resource management
Examples of Functional Business Information Systems

Functional Business Systems

- Marketing
  - Customer relationship management
  - Interactive marketing
  - Sales force automation

- Production Operations
  - Manufacturing resource planning
  - Manufacturing execution systems
  - Process control

- Human Resource Management
  - Compensation analysis
  - Employee skills inventory
  - Personnel requirements forecasting

- Accounting
  - Order processing
  - Inventory control
  - Accounts receivable
  - Accounts payable
  - Payroll
  - General ledger

- Finance
  - Cash management
  - Credit management
  - Investment management
  - Capital budgeting
  - Financial forecasting
Marketing Information Systems

- Interactive Marketing
- Sales Force Automation
- Customer Relationship Management
- Sales Management
  - Market Research and Forecasting
  - Advertising and Promotion
  - Product Management
Interactive marketing

- Interactive marketing:
  - A customer-focused marketing process
  - Using the Internet, intranets & extranets
  - To establish two-transactions
  - Between a company & its customers or potential customers

- Goal:
  - to profitably attract and keep customers
  - who will become partners with the business
  - in creating, purchasing & improving products & services
Targeted Marketing

- An advertising & promotion management concept that includes five targeting components

[Diagram with five components: Demographic/Psychographic, Context, Content, Community, Online Behavior]
Targeted Marketing Components

- **Community** – customize advertising to appeal to people of specific virtual communities
- **Content** – advertising placed on a variety of selected websites aimed at a specific audience
- **Context** – advertising placed on web pages that are relevant to the content of a product or service
- **Demographic/Psychographic** – web marketing efforts aimed at specific types or classes or people
- **Online Behavior** – promotion efforts tailored to each visit to a site by an individual, e.g., using cookies files
Internet Marketing

E-Mail $\rightarrow$ Push

Pull $\rightarrow$ Web Publishing
Sales Force Automation

- Outfit sales force with notebook computers, web browsers & sales contract management software
- Connect them to marketing websites & company intranet
- Goal:
  - Increase personal productivity
  - Speeds up capture & analysis of sales data from the field to marketing managers
  - Gain strategic advantage
Manufacturing Information Systems

- Support the production/operations function
- Includes all activities concerned with planning & control of producing goods or services
Computer-Integrated Manufacturing

Enterprise Resource Planning

Manufacturing Resource Planning Systems
- Production Forecasting
- Production Scheduling
- Material Requirements Planning
- Capacity Planning
- Production Cost Control
- Quality Control

Manufacturing Execution Systems
- Shop Floor Scheduling
- Shop Floor Control
- Machine Control
- Robotics Control
- Process Control

Engineering Systems
- Computer-Aided Design
- Computer-Aided Engineering
- Computer-Aided Process Planning
- Product Simulation and Prototyping

Computer-Integrated Manufacturing
CIM Objectives

- **Simplify** production processes, product designs & factory organization as a vital foundation to automation & integration

- **Automate** production processes & the business functions that support them with computers, machines, and robots

- **Integrate** all production & support processes using computer networks, cross-functional business software & other information technologies
CIM Systems

- **Computer-aided manufacturing (CAM)** - automate the production process
- **Manufacturing execution systems (MES)** – performance monitoring information systems for factory floor operations
- **Process Control** – control ongoing physical processes
- **Machine Control** – controls the actions of machines
Human Resource Management (HRM)

- Information systems designed to support
  - Planning to meet the personnel needs of the business
  - Development of employees to their full potential
  - Control of all personnel policies & programs
Human Resources Systems

Support...

Strategic Systems
- Human resource planning
- Labor force tracking

Tactical Systems
- Labor cost analysis and budgeting
- Turnover analysis

Operational Systems
- Recruiting
- Workforce planning/scheduling

Staffing

Training and Development
- Succession planning
- Performance appraisal planning

Compensation Administration
- Contract costing
- Salary forecasting

- Training effectiveness
- Career matching

- Skill assessment
- Performance evaluations

- Compensation effectiveness and equity analysis
- Benefit preference analysis

- Payroll control
- Benefits administration
HRM and the Internet

- Recruiting employees using the corporate website and commercial recruiting services
- Posting messages in selected Internet newsgroups
- Communicating with job applicants via e-mail
HRM & Corporate Intranets

- Process common HRM applications
- Allow HRM department to provide around-the-clock services
- Disseminate valuable information faster than through previous company channels
- Collect information from employees online
- Allow managers & other employees to perform HRM tasks with little intervention by the HRM department
- Training tool
Employee Self-Service (ESS)

- Intranet applications that allow employees to
  - View benefits
  - Enter travel and expense reports
  - Verify employment and salary information
  - Update their personal information
  - Enter data that has a time constraint to it
23,000 employees access detailed HR data
Intranet benefits employees searches
Savings of hundreds of thousands yearly
Employees use online e-forms
Accounting Information Systems

- Record & report the flow of funds through an organization
- Produce financial statements
- Forecasts of future conditions
Accounting Information Systems

- Sales Order Processing
- Billing
- Accounts Receivable
- Cash Receipts
- General Ledger
- Financial Reporting
- Sales Analysis
- Cash Disbursements
- Accounts Payable
- Purchases
- Inventory Processing
- Payroll
- Timekeeping
- Purchases Transaction Processing System
- Sales Transaction Processing System
- General Ledger Processing and Reporting System
Six essential Accounting Information Systems

- **Order Processing** – Captures and processes customer orders and produces data for inventory control & accounts receivable
- **Inventory Control** – Processes data reflecting changes in inventory & provides shipping & reorder information
- **Accounts Receivable** – Records amounts owed by customers & produces customer invoices, monthly customer statements & credit management reports
Six essential Accounting Information Systems

- **Accounts Payable** – Records purchases from, amounts owed to & payments to suppliers & produces cash management reports
- **Payroll** – Records employee work and compensation data & produces paychecks & other payroll documents and reports
- **General Ledger** – Consolidates data from other accounting systems & produces the periodic financial statements & reports of the business
Financial Management Systems

- Support business managers & professionals in decisions concerning
  - The financing of a business
  - The allocation and control of financial resources within a business
Financial Management System Examples

Information Systems in Finance

- Cash Management
  - Forecast and manage cash position.

- Investment Management
  - Manage short-term and other securities.

- Capital Budgeting
  - Evaluate risk/return of capital expenditures.

- Financial Planning
  - Forecast financial performance and financing needs.
Important Financial Management Systems

- Cash Management
  - Forecast and manage cash position

- Investment Management
  - Manage short-term and other securities

- Capital Budgeting
  - Evaluate risk/return of capital expenditures

- Financial Planning
  - Forecast financial performance and financing needs
Case 3: Improving Supply-Chain Results

- Supply chains are a kludge of systems including
  - Internally: manufacturing, warehousing, inventory control, planning, shipping & logistics
  - Relationships with suppliers and partners
  - Increasing dependence on the input of customers
- Companies are replacing this kludge with state-of-the-art software
- Two major software types:
  - Supply-chain execution
  - Supply-chain planning
Case Study Questions

1. What is the business value of SCM systems for Brunswick and Whirlpool?

2. Does the business value of SCM depend upon what type of business a company is in? Explain.

3. How does Brunswick’s approach to SCM differ from that of Whirlpool’s? Is one approach superior to all others? Why or why not?