Managerial Briefing

Enterprise Resource Planning (ERP) Systems

Enterprise Resource Planning (ERP) System
- Computer system that integrates application programs in accounting, sales, manufacturing, and other functions in the firm
  - Enterprise-wide resources needed to make, ship, and account for customer orders
- Integration accomplished through a database shared by all the application programs
- Allows firm to achieve end-to-end connectivity

Reasons for Implementing ERP
- Desire to standardize and improve processes
- Improve the level of systems integration
- Improve information quality

ERP Systems
- Case studies show that firms that have implemented ERP systems have made improvements in inter-functional coordination and business performance at various levels (reduced cycle times, reduced inventory, information sharing).
- However, ERP systems are extremely complex pieces of software requiring huge investments of financial resources, time and expertise.
  - Improper implementation could lead to huge problems
    - Hershey’s
    - FoxMeyer Drug

SAP
- Systems, Applications, and Products in Data Processing (SAP)
- Name of the company
  - SAP AG
  - SAP America
- Name of the software
  - SAP R/2 – Mainframe version
  - SAP R/3 – Client/Server version

SAP AG
- Founded in Germany (1972)
- World’s fourth largest software provider
- World’s largest provider of Integrated Business Solutions software
- Company stock trades on the Frankfurt and New York exchanges
SAP R/3

- World-wide usage
- Designed to satisfy the information needs for all business sizes (small local to large international)
  - Multi-lingual
  - Multi-currency
- Designed to satisfy the information needs for various industries (industry solutions)

Enables a company to link its business processes
Ties together disparate business functions (integrated business solution)
Helps the organization run smoothly
Real-time environment

Integrated Business Solutions
Software Vendors

- SAP
- Oracle
  - PeopleSoft, J.D. Edwards
- Microsoft – Great Plains, Axapta, Solomon
- IBM
- Baan
- IFS

Central relational database (e.g., Oracle, Informix, Microsoft SQL, and many others)
Client/Server – three-tiered
ERP Component – Oriented towards common identifiable business modules (FI, MM, SD, CO, PP, HR)
Add-ons:
  - Customer Relationship Mgmt (CRM)
  - Supply Chain Mgmt (SCM)
  - Product Lifecycle Mgmt (PLM)

Relational Database

- Defines and links thousands of tables of information (25,000+)
- Advantages
  - Consistent and accurate data
  - Common definitions for terms
  - Shared, but restricted usage (e.g., profiles)
  - Eliminates data redundancy

Client/Server Environment

- Client
  - Software/hardware combination that can make a request for services from a central repository of resources
- Server
  - Software/hardware combination that can provide services to a group of clients in a controlled environment
Three-Tier SAP Structure

- GUI – Graphical User Interface
- Or Web Interface
  - http://www.drexel.edu/irt/sap/members.html
- Application server (one or many)
- Database server (one single location)

Business Modules

- Collections of logically related transactions within identifiable business functions
  - MM (“Buy”)
  - PP (“Make”)
  - SD (“Sell”)
  - FI and CO (“Track”)
  - HR

SAP R/3 Document Principle

- Each business transaction that writes data to the database creates a uniquely numbered electronic document
- Each document contains information such as
  - Responsible person
  - Date and time of the transaction
  - Commercial content
- Once created, a document cannot be deleted from the database

The Good News

- UTEP now part of SAP’s University Alliances Program
  - Effective March 2004
- First two courses: 2004
  - Spring 2004 course
    - POM 4375 / IE 4395 (team taught by Dr. Adriano Solis [College of Business Administration] & Dr. Rong Pan [College of Engineering])
    - Students were first introduced to SAP R/3
  - Fall 2004 course
    - POM 4399 / IE 4395 (team taught by Drs. Solis & Pan)
    - Students worked hands-on with SAP R/3