Introduction
PERSPECTIVE

• ADVANCES IN INFORMATION TECHNOLOGY (IT) PROVIDE OPPORTUNITIES FOR DRAMATICALLY INCREASED CONNECTIVITY AND INTEGRATION AMONG SYSTEMS ENABLING:

– NEW BUSINESS STRATEGIES AND OPPORTUNITIES

– NEW FORMS OF INTER- AND INTRA-ORGANIZATIONAL RELATIONSHIPS
BUSINESS FORCES
• GLOBALIZATION
• WORLD-WIDE COMPETITION
• NEW BUSINESS MODELS
• VOLATILE ENVIRONMENT

INCREASED CONNECTIVITY
• INTER-ORGANIZATIONAL RELATIONSHIPS
• INTRA-ORGANIZATIONAL COORDINATION TO INCREASE EFFICIENCY & EFFECTIVENESS
• ADAPTABLE ORGANIZATIONAL STRUCTURES

INFORMATION TECHNOLOGY (IT) OPPORTUNITIES
• CONTINUED DRAMATIC COST/PERFORMANCE AND CAPACITY ADVANCES
• NEW IT ARCHITECTURES ENCOMPASSING:
  -- EXTENSIVE COMMUNICATION NETWORKS / INTERNET
  -- ACCESSIBLE DISTRIBUTED DATABASES
  -- ENHANCED HUMAN INTERFACE / WEB APPLICATIONS
SOME RECENT EXAMPLES AND CHALLENGES

• **RAYTHEON PREDICTS BIG PROFIT SHORTFALL**
  “Many problems related to integrating acquisitions ..” *(BG)*

• **GOING NOWHERE FAST IN CYBERSPACE**
  “Poor integration of the two units (FedEX & RPS) have kept it from capturing much Net traffic ...” *(BW)*

• **LACK OF IT INTEGRATION FACTOR IN HMO CRISIS**
  “Harvard Pilgrim had separate financial and billing systems and never fully integrated them ...” *(CW)*

• **MARKET MAKES IT PRIORITY IN DRUG MERGER**
  “Competitive pressures make it priority for (Glaxo Wellcome and Smith-Kline Beecham) to combine their systems ...” *(CW)*
OPERATIONAL EXAMPLE (FINANCIAL SERVICES)

- SEPARATE SYSTEM FOR EACH PRODUCT AREA / COUNTRY

CONCERNS:
- GLOBAL RISK
- GLOBAL PROFITABILITY
- GLOBAL CUSTOMER STATUS
INTEGRATED INFORMATION FROM DISPARATE SYSTEMS

New consumer examples:
MaxMiles (freq flyer)
Yodlee (bank accounts)
WHY IS INTEGRATED INFORMATION IMPORTANT?

• WHEN RUSSIA SUSPENDED PAYMENTS ON ITS DEBT A FEW YEARS AGO:
  - How long did it take financial services organizations to determine impact on them?

• WELL, THAT WAS AN EXCEPTIONAL EVENT:
  - Unlikely to happen again
    (except in Brazil, Argentina, LTCM, …)
  - Never happened before
“Citicorp faces record loss of $2.5 billion in quarter” - 1987

Merrill Lynch makes management changes
   - Boston Globe, p.41, May 5, 1987

Air Force general defends B-1
INTERACTION OF STRATEGY, TECHNOLOGY, AND ORGANIZATIONAL FACTORS

Strategic Applications

Organizational Actions

Technology Actions

Success
COURSE STRUCTURE

Part 1: STRATEGIC CONNECTIVITY [20%]

Part 2: PHYSICAL CONNECTIVITY [30%]
(Communications, Networking, Internet Technology
- emerging technologies, e.g., ATM, DSL)

Part 3: LOGICAL CONNECTIVITY [30%]
(Distributed databases, Web, and data semantics
- emerging technologies, e.g., XML, Web Services)

Part 4: ORGANIZATIONAL CONNECTIVITY [20%]
(Loosely-coupled organizations,
Intra-organization data standards)
STUDENT BACKGROUND

• NAME, DEPARTMENT, YEAR

• RELATED BACKGROUND
  – PRIOR IT-RELATED COURSES
  – EXPERIENCE
  • STRATEGY AND APPLICATIONS
  • COMMUNICATION TECHNOLOGY
  • DATABASE TECHNOLOGY
  • ORGANIZATIONAL ISSUES

• WHY 15.565 / 15.578?
COURSE OPERATION

• **MATERIALS**
  – COURSE READINGS (MOSTLY ARTICLES -- FROM COPYTECH)
  – SUPPLEMENTAL READINGS (DEWEY LIBRARY AND WEB)
  – COPY OF LECTURE NOTES

• **ASSIGNMENTS** (Subject to change)
  – ASSIGNED READINGS, BE PREPARED FOR CLASS …
  – 4 WRITTEN **HOMEWORK ASSIGNMENTS** (HW) [20%]
  – **TERM PROJECT** (578) / **COMPUTER PROJECT** (565) [25%]
  – **CLASS PARTICIPATION** [10%]

• **EXAMINATIONS**
  – **MID-TERM** [20%]
  – **FINAL** [25%]
TEN REASONS WHY YOU MIGHT NOT LIKE THIS CLASS

1. **MULTI-CULTURE** (STRATEGY / TECHNOLOGY / ORGANIZATION)
   - There is at least one area that you know too much about or do not like

2. **DOES NOT FOCUS PRIMARILY ON LATEST “BUZZWORDS”**
   - Addresses issues of lasting long-term importance

3. **SOME READINGS MORE THAN A YEAR OLD**
   - Sometimes really good ideas last more than a year

4. **COURSE STILL EVOLVING**

5. **CONSIDERABLE WORK LOAD (BUT CONSISTENT WITH CREDITS)**

6. **HIGH EXPECTATIONS**

7. **THE FACT I COULD NOT THINK OF FOUR MORE …**
   
   • **WE WILL WORK TO MAKE COURSE VALUABLE AND ENJOYABLE**
   
   • **FILL IN STUDENT INFORMATION SHEET BEFORE YOU LEAVE**