

A.I.S. Class 2: Outline

- Review Timetable and Syllabus
- Discuss technical problems with Initial Computer Assignment
- Review use of Netscape, Bulletin Board, Listserve and e-mail
- Learning Objectives for Chapter 1
- Chapter 1: Introduction to A.I.S.
- Organizations and Information

Timetable

- Topics
- Readings
- Assignments Due
- Examinations
- Schedule Conflicts
- Group Work Instruction: September 18
- Presentation Instruction & Assistance

Syllabus

Questions ?

Initial Computer Assignment

Problems ?

Netscape, Bulletin Board, Listserve and e-mail

- If you are using your own browser, it may need to be configured
- You may need to reset Netscape to read all messages on Bulletin Board
- Remember you can use “threads”
- Use the Bulletin Board for postings:
 - * that will reach those who read the Board
 - * that remain all semester
 - * that you want to be public messages

A Warning . . .

- Use the Reload/Refresh features of your browser to avoid using old versions of Web Pages

Learning Objectives for Chapter 1

■ After studying this chapter you should be able to:

- ◆ discuss the impact of the information revolution on the accounting function
- ◆ explain the purpose of accounting and the role of the accounting professional in organizations
- ◆ describe the information customers served by accounting
- ◆ describe the traditional accounting model and the manual accounting process and the drawbacks of this traditional view

Learning Objectives for Chapter 1

■ After studying this chapter you should be able to:

- ◆ indicate the process of computerized bookkeeping and its advantages and limitations
- ◆ explain in general terms the database approach to satisfying accounting information and the advantages of the database approach
- ◆ discuss concepts of events orientation and the enterprise repository
- ◆ describe the roles that the future accounting professional can play

Introduction to A.I.S.

What are organizations, and what
do they do ?

Introduction to A.I.S.

- In “Images of Organization” Gareth Morgan suggests a number of metaphors for organizations:

- * machines
- * organisms
- * brains
- * psychic prisons
- * cultures
- * political systems
- * flux and transformation
- * instruments of domination

Introduction to A.I.S.

- A working definition:

Organizations are transmutative social entities forming goal-directed structured activity systems

- Can you give some different examples of organizations?

Introduction to A.I.S.

■ Some organizations:

- * Johnson & Johnson
- * Ernst & Young
- * AICPA
- * Institute of Management Accountants
- * American Accounting Association
- * Rutgers: the State University of New Jersey
- * Roman Catholic Church

Introduction to A.I.S.

■ So what do organizations do?

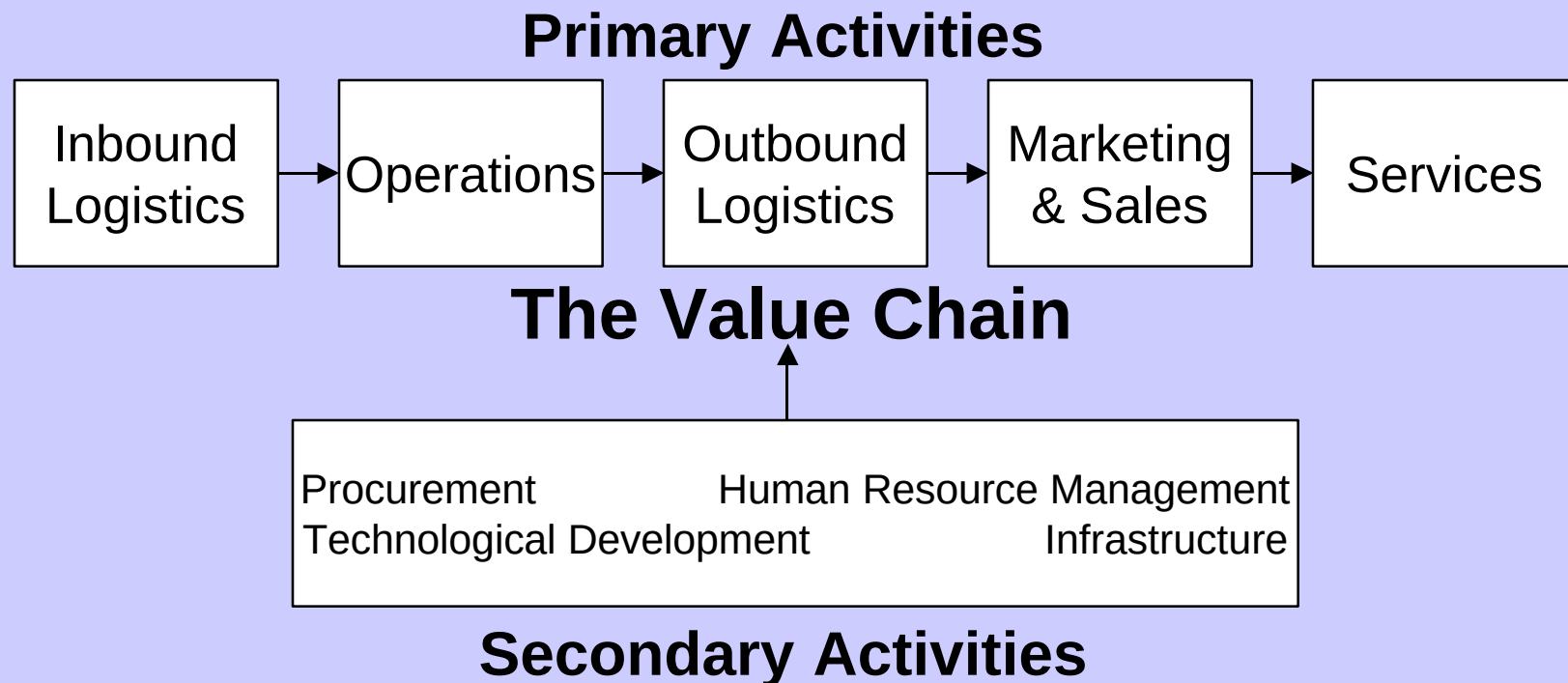
* According to Michael Porter:

- ◆ everything an organization does should contribute to the creation of value for its customers
- ◆ “margin” can be defined as the difference between value and costs; however, this includes ALL value and ALL costs

* For-profit organizations seek to maximize margin: others seek to maximize value within the constraints of their resources

Introduction to A.I.S.

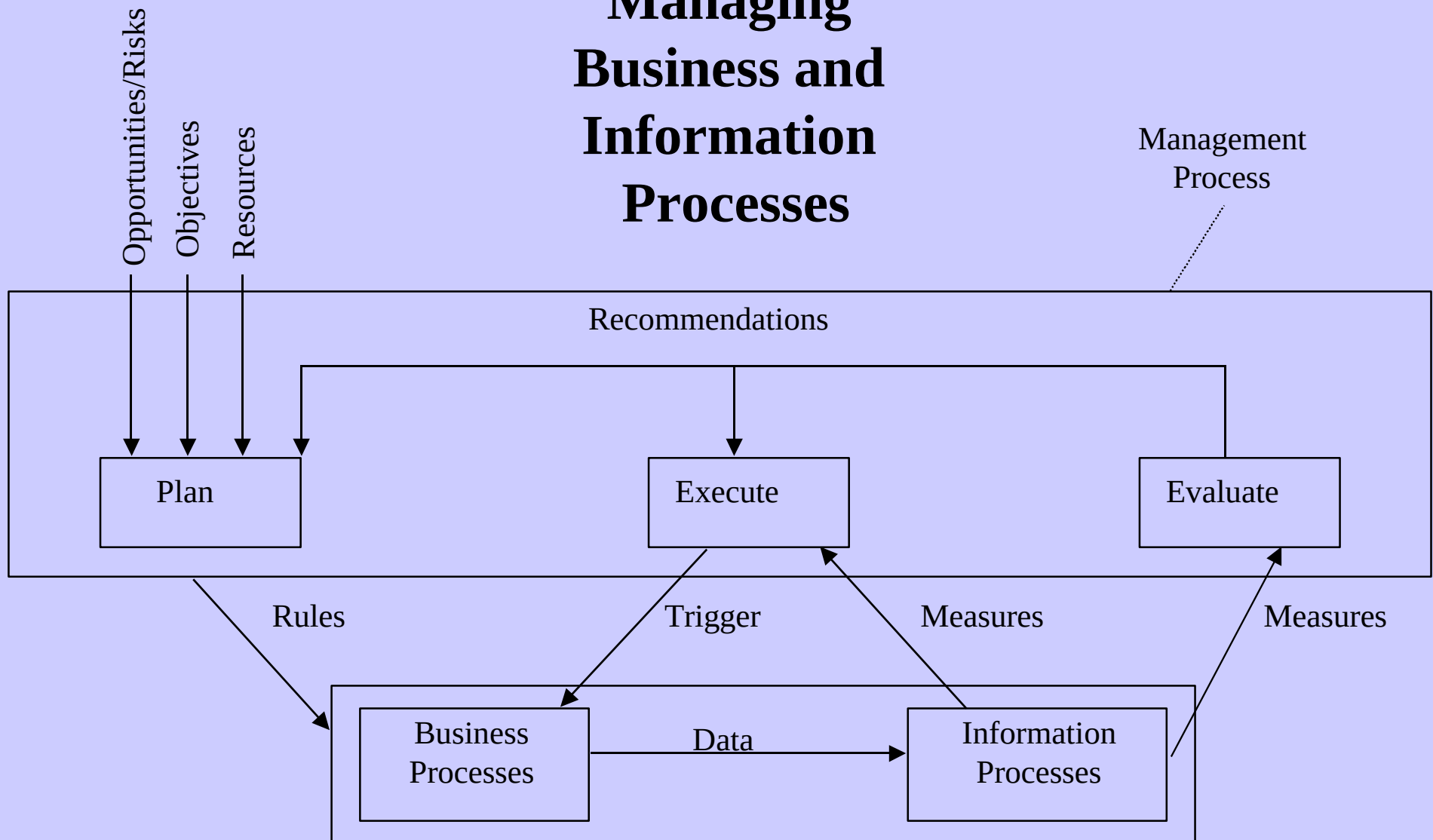
■ Value Chain Analysis (Michael Porter)



Introduction to A.I.S.

- Organizations create value through managing their business and information processes
- At the heart of managing is the decision-making involved in planning, executing and evaluating the organization's business and information processes

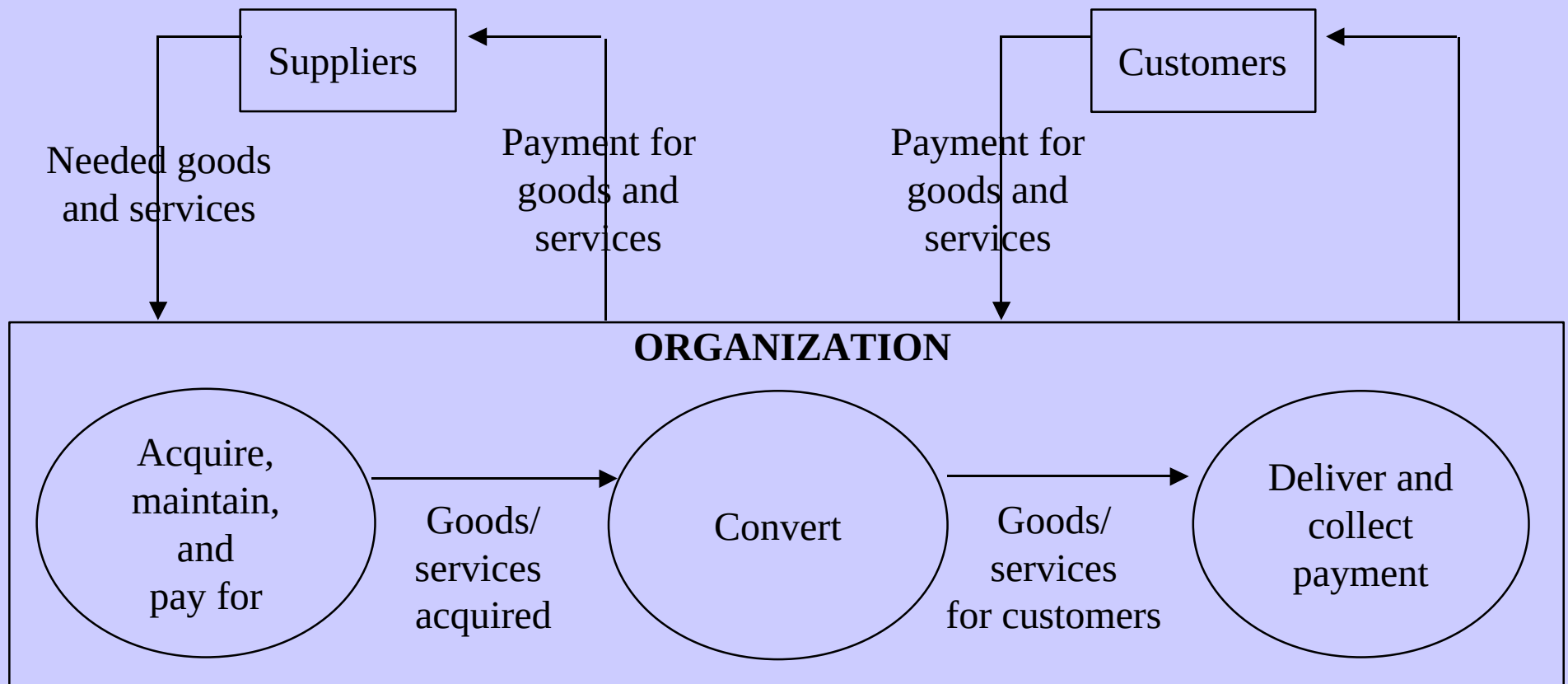
Managing Business and Information Processes



Introduction to A.I.S.

- Organizations typically have three main types of business processes (sometimes called business cycles):
 - * acquisition/expense/payment process
 - * conversion process
 - * sales/collection process
- Information processes include:
 - * recording
 - * maintaining
 - * reporting

Types of Business Processes



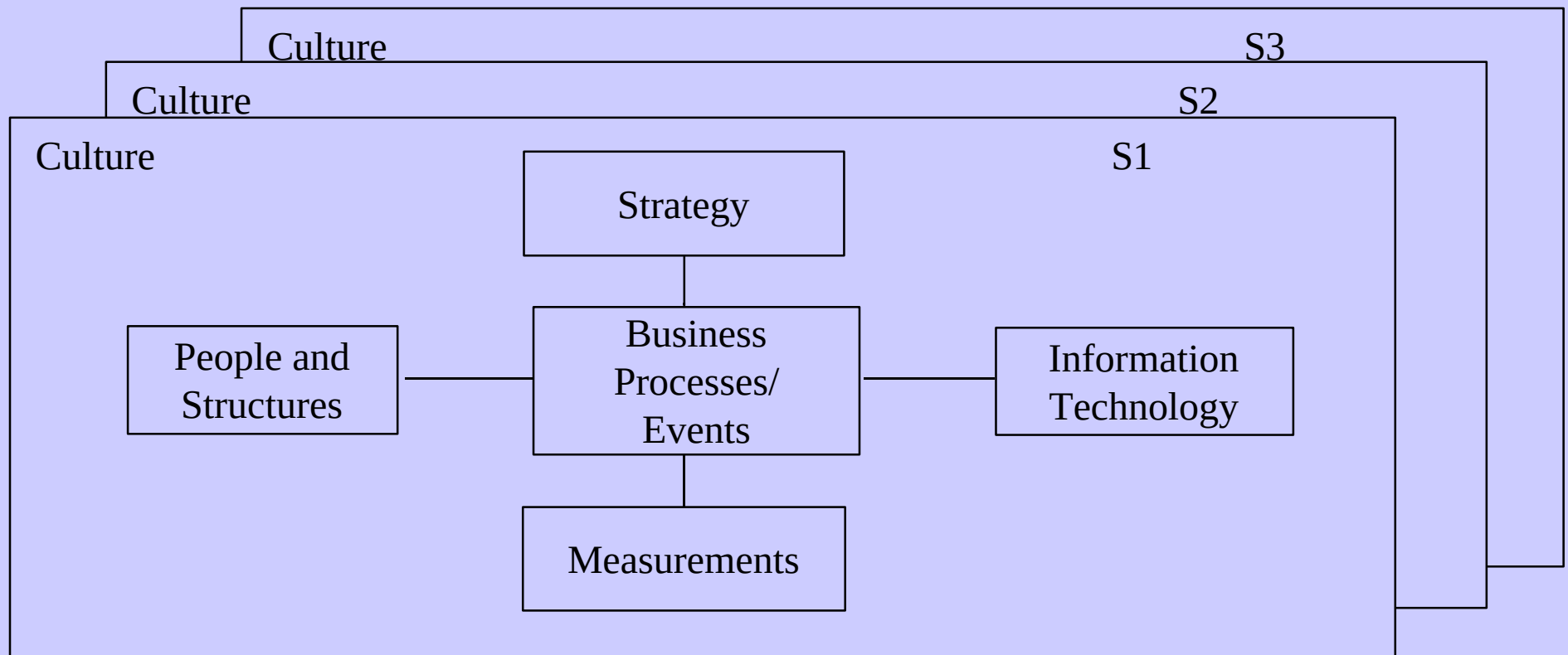
Introduction to A.I.S.

■ Digression: what is a process?

* A process is a time-dependent sequence of steps governed by a rule called a process law. All processes have five common ingredients:

- ◆ the entities participating in the process
- ◆ the elements describing the steps in a process (called *events* in business processes)
- ◆ the relationships between these elements
- ◆ the links to other processes
- ◆ the resource characteristics of the elements

Business Solution Framework



Introduction to A.I.S.

■ Change - the only constant in business:

* *Bob Elliott: The Third Wave Breaks the Shores of Accounting:*

- ◆ “IT is creating a wave of change that is crashing over accounting’s shoreline. It crashed across industry in the 1970s. Then it crashed across the services in the 1980s. And it will crash across accounting in the 1990s. It is changing the way business is done and the problems faced by managers. Managers now need new types of information in order to make decisions, so internal and external accounting must be changed.”

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- Change: the only constant in business:
 - * Downsizing and rightsizing
 - * Business process re-engineering
 - * Information superhighway
 - * Dissatisfaction with quality and timeliness of accounting information
 - * Expectation gap

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- The role of the accounting professional is in deciding:
 - * which events to capture information about
 - * what data relating to each event should be captured
 - * how data is to be captured while preventing input errors
 - * how data should be stored to optimize usability while maintaining integrity
 - * how meaningful reports can be generated on demand in real time

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- The purpose of accounting is to provide information used in decision making
- Accounting may be viewed as a system (a process) that converts data into useful information
- Double entry bookkeeping is a limited model for meeting information needs
- Who are the information “customers”?

Introduction to A.I.S.

■ Information customers:

* internal:

- ◆ employees
- ◆ management

* external:

- ◆ investors
- ◆ stockholders
- ◆ creditors
- ◆ customers
- ◆ financial institutions
- ◆ regulators
- ◆ government

Introduction to A.I.S.

■ Traditional accounting processes:

- * **The Basic Accounting Equation**
(Kieso & Weygand p. 71):
 - ◆ $\text{Assets} = \text{Liabilities} + \text{Stockholders' Equity}$
- * **Double Entry Bookkeeping:**
 - ◆ $\text{Debits} = \text{Credits}$
- * **Main steps:**
 - ◆ Capture transactions via source documents
 - ◆ Record transactions in journals
 - ◆ Post journals to ledgers
 - ◆ Extract a trial balance
 - ◆ Adjust and prepare financial statements

Introduction to A.I.S.

■ Problems with the traditional view:

- * “transactions” versus “events”
- * narrow focus on financial information
- * periodic not real-time recording & reporting
- * limited accessibility of information
- * too high a level of aggregation
- * limited flexibility in answering cross-functional queries
- * duplicate data in non-integrated systems

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■ Automation of Accounting:

* first wave: custom processing:

- ◆ computerized bookkeeping
- ◆ standard reports
- ◆ COBOL

* second wave: software packages:

- ◆ inexpensive, relatively error free, but less flexible
- ◆ data often accessed via proprietary file management software

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■ Computerized bookkeeping:

* Advantages

- ◆ automation of tedious clerical tasks
- ◆ speed and accuracy
- ◆ low cost of packages
- ◆ automatic generation of standard reports
- ◆ “redundant” data storage permits efficient generation of some reports

* Disadvantages

- ◆ “transactions” orientation only
- ◆ periodic not real-time reporting
- ◆ limited flexibility for “ad hoc” reports
- ◆ proprietary file management
- ◆ cross-functional queries difficult

Introduction to A.I.S.

■ The Database Approach to A.I.S.:

- * Events orientation
- * Enterprise-wide data repository
- * Advantages:
 - ◆ financial and non-financial data
 - ◆ real-time reporting
 - ◆ increased data accessibility
 - ◆ support for cross-functional data analysis
 - ◆ data storage in disaggregated form

Introduction to A.I.S.

- Future roles of accounting professionals:
 - * information processing within an organization
 - * auditing within a public accounting firm:
assurance services
 - * consultancy within an accounting or
consulting firm

Introduction to A.I.S.

- How accounting professionals can enhance their value:
 - * provide useful information for decision makers responsible for planning, executing or evaluating an organization's activities
 - * help embed information processes into business processes
 - * help management define business rules and policies that shape the nature of its business processes

Introduction to A.I.S.

■ Solving business problems:

* A framework:

- ◆ all individual solution components (strategy, business processes, organization structures, and IT are important
- ◆ align each business solution to the organization's business processes
- ◆ encourage continuous learning:
“In times of change, learners inherit the earth, while the learned find themselves beautifully equipped to deal with a world that no longer exists.” (*Eric Hoffer*)

Introduction to A.I.S.

■ A challenge for our times:

If we want to be the information professionals of the future, we accountants need to get to grips with the implications of information technology before engineers learn the accounting rules!