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Accounting Information Systems

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A.I.S. Class 3: Outline

- Key Questions from Class 2
- Introduction to A.I.S. (Conclusion)
- Learning Objectives for Appendix
- Flowcharting Symbols
- Traditional Systems - Sales & Purchases
- Working in Teams
- Group Contracts

Key Questions from Class 2

- What is business?
- What are organizations?
- What do organizations do?
- How do organizations create value?
- How are organizations managed?
- Describe common business processes
- Give three types of information process

Key Questions from Class 2

- A working definition:

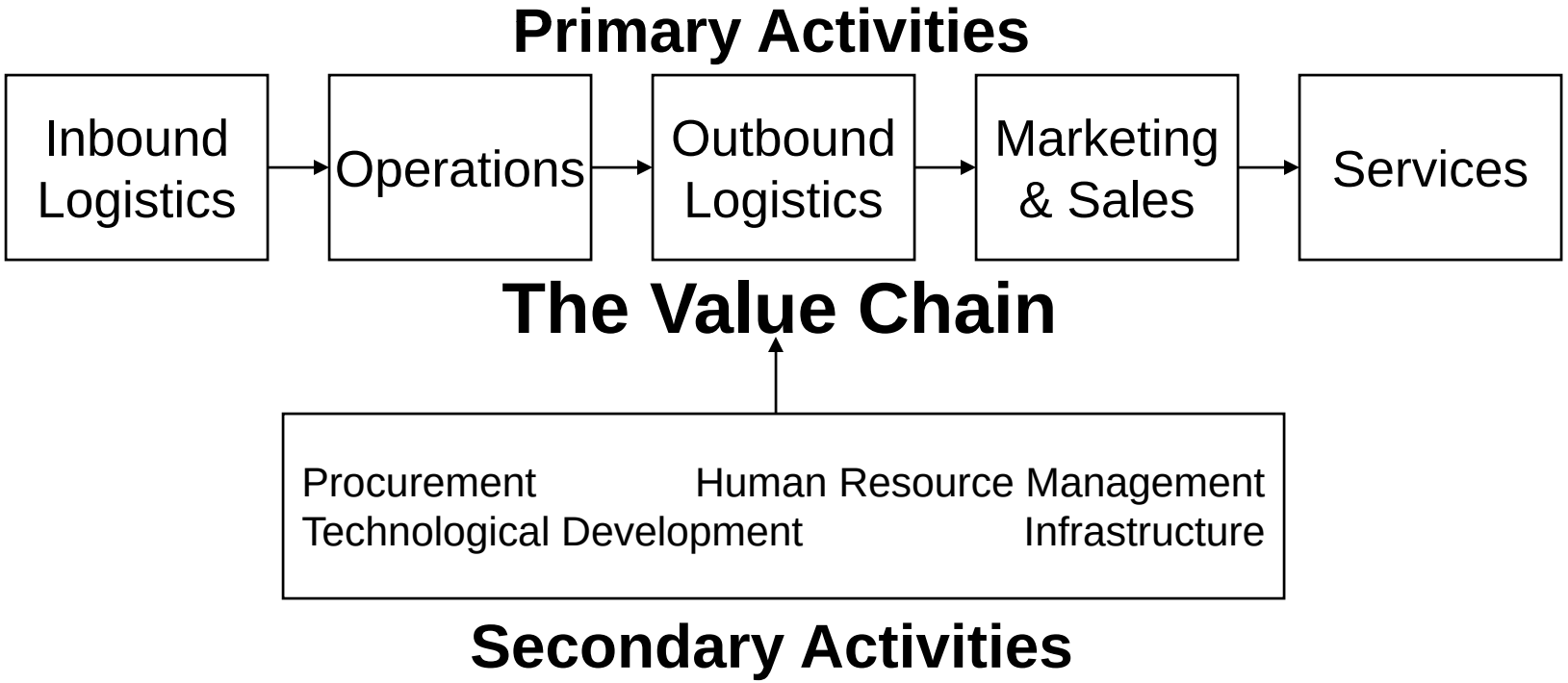
  Organizations are transmutative social entities forming goal-directed structured activity systems

Key Questions from Class 2

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

Key Questions from Class 2

- Value Chain Analysis (Michael Porter)



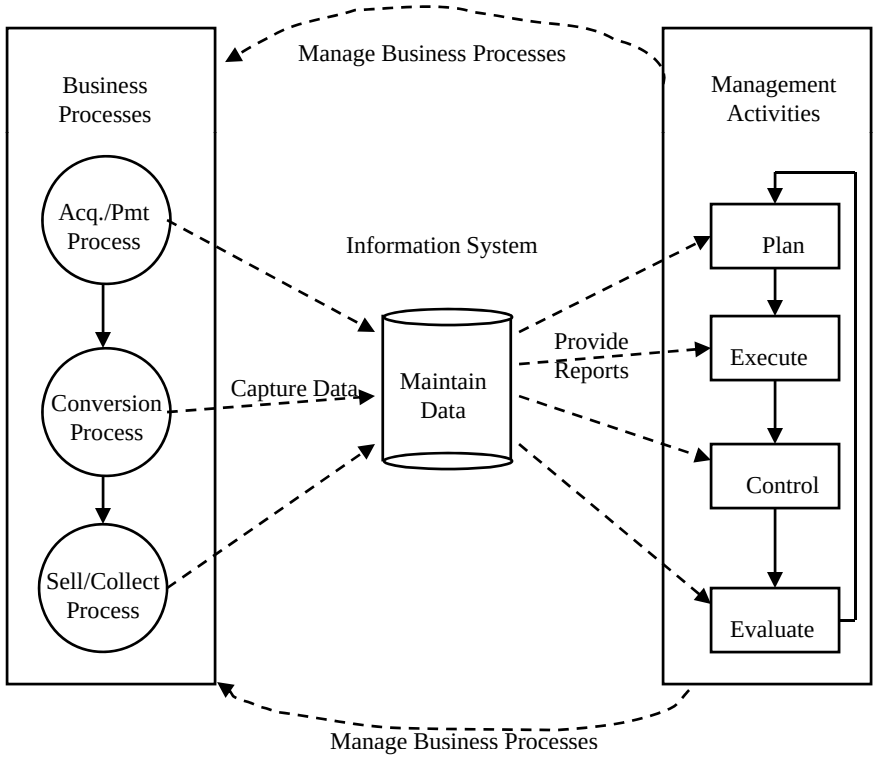
Key Questions from Class 2

- 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

Introduction to A.I.S.

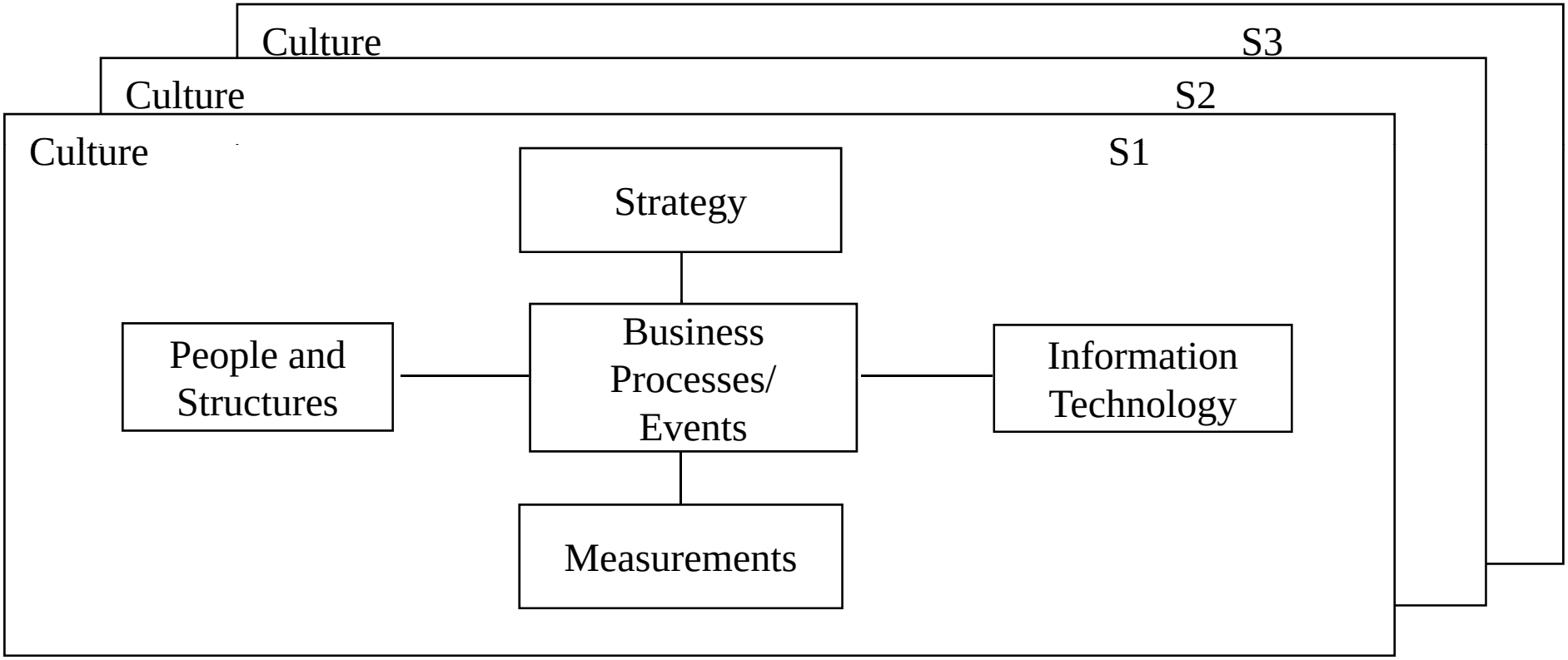
- Digression: what is a process?
  - A process is a time-dependent sequence of steps governed by a rule called a process law. All processes have five common ingredients:
    - the entities participating in the process
    - the elements describing the steps in a process (called *events* in business processes)
    - the relationships between these elements
    - the links to other processes
    - the resource characteristics of the elements

Business Management



Hollander Denna & Cherrington, 2000

Business Solution Framework



Introduction to A.I.S.

- 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
  * ENRON, WORLDCOM, Sarbanes-Oxley, etc.

Introduction to A.I.S.

- 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

Introduction to A.I.S.

- 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, Weygandt & Warfield p. 70):
    - Assets = Liabilities + Stockholders' Equity
  * Double Entry Bookkeeping:
    - Debits = 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

Introduction to A.I.S.

- 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

Introduction to A.I.S.

- 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:
  * processing information 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, controlling 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.

- 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!

Learning Objectives for Appendix

- After studying this appendix you should be able to:
  * explain the meaning of various flowcharting symbols for document flowcharts and computer-systems flowcharts
  * describe manual accounting procedures for handling credit sales and cash receipts from customers
  * read and interpret a document flowchart depicting manual credit sales and collection procedures

Learning Objectives for Appendix

- After studying this appendix you should be able to:
  * describe automated (computerized) accounting procedures for handling credit sales and cash receipts from customers
  * read and interpret a computer-systems flowchart depicting automated credit sales and collection procedures
  * describe manual accounting procedures for handling purchases on account and payments to vendors

Learning Objectives for Appendix

- After studying this appendix you should be able to:
  * read and interpret a document flowchart depicting procedures for purchases on account and payments to vendors
  * describe automated (computerized) accounting procedures for purchases on account and payments to vendors
  * read and interpret a computer-systems flowchart depicting procedures for on account purchases and payments to vendors

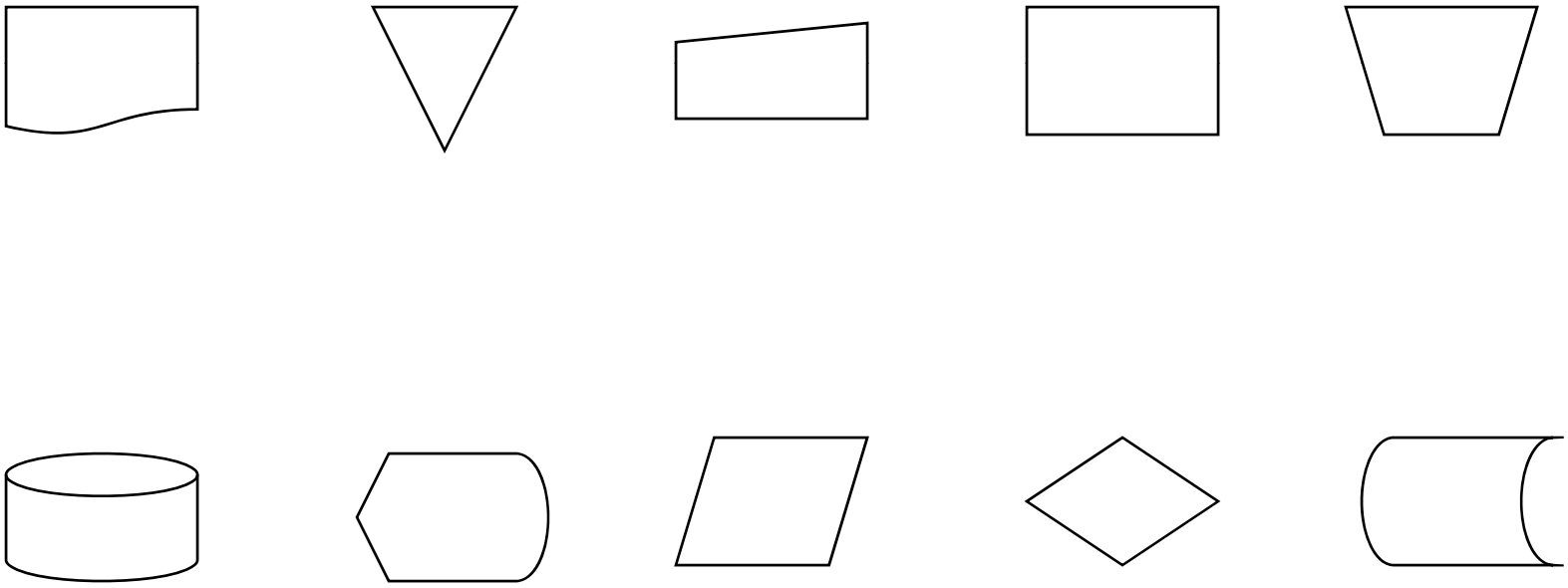
Learning Objectives for Appendix

- After studying this appendix you should be able to:
  - explain the drawbacks associated with traditional manual and automated accounting procedures for credit sales, collections, purchasing, and payments to vendors

Flowcharting Symbols

- We study flowcharts:
  - because they are used by businesses to describe their accounting systems
  - because auditing firms use them to document their understanding of clients' accounting systems
  - in order to understand the author's explanations in the Appendix
- We study the specific flowcharts in the Appendix:
  - to understand traditional accounting system designs
  - to understand the documents used, who creates them, how they flow, and what happens to them

Flowcharting Symbols



Traditional Systems - Sales & Purchases

- Sales & Collections
  - Manual procedures & flowcharts for credit sales
  - Manual procedures & flowcharts for collections
  - Automated procedures for credit sales
  - Automated procedures for collections
- Purchases and Payments
  - Manual procedures and flowcharts
  - Automated procedures

We will go through these one at a time in detail starting today – be prepared: your group may be called on to explain them!

- Drawbacks of automated accounting

Traditional Systems - Sales & Purchases

- Manual Sales and Collections
  - * See Appendix

Working in Teams

- We work in groups
  * to obtain better solutions
  * to solve larger problems
  * to play to the strengths of individuals rather than their weaknesses

Working in Teams

- In this class we will be working in groups:
  - So that we can work on a larger and more realistic project than would be possible for individuals working alone
  - As a basis for studying the material with other people, from whom we can also learn
  - To acquire and practice teamwork skills
- Note that the first two reasons suggest attention to the course material – the third reason suggests careful attention to group processes themselves

Working in Teams

- Groups exist as collections of people with
  * collective perception
  * needs
  * shared aims
  * interdependence
  * social organization
  * interaction
  * cohesiveness
  * membership

Working in Teams

- Groups need to
  * regulate their boundaries
  * maintain and develop inputs
  * maintain and develop outputs
  * control their activities
  * integrate their activities

Working in Teams

- Group properties of interest
  * background
  * participation pattern
  * communication
  * cohesion
  * atmosphere
  * norms
  * sociometric pattern
  * structures and organization
  * procedures
  * goals

Working in Teams

- Group Development
  * FORMING
  * STORMING
  * NORMING
  * PERFORMING
  * ADJOURNING

Working in Teams

- Group Processes
  - ask members to state feelings about group and its task
  - ask members what they want to do more of and less of
  - ask another group for feedback

Working in Teams

- Group Processes
  - how are ideas generated and evaluated?
  - how are tasks apportioned and delegated?
  - how are decisions reached?
  - how are conflicts identified and resolved?

Working in Teams

- Group Processes - "group think"
  * illusion of invulnerability
  * shared stereotypes
  * rationalization
  * illusion of morality
  * self-censorship
  * pressure to conform or agree
  * illusion of unanimity based on silent consent
  * filtering out or eliminating information

Working in Teams

- Group Processes
  - How does the group determine its tasks or agenda?
  - How does it make decisions?
  - How does it discover and use the resources of its members?
  - How does it co-ordinate members, sub-groups and activities?
  - How does it evaluate its work?

Working in Teams

- Group Participation
  * seeking ideas
  * seeking clarifications
  * seeking reactions to proposals or suggestions
  * suggesting ideas by questions
  * seeking other information
  * proposing ideas
  * building on ideas, suggesting or integrating
  * consensus building

Working in Teams

- Group Participation
  * supporting and encouraging
  * standard setting
  * stating difficulties
  * disagreeing or criticizing
  * summarizing, clarifying, explaining, repeating
  * gatekeeping
  * expressing group feelings
  * releasing tension

Working in Teams

- Bad Group Participation
  - interrupting
  - dominating
  - manipulating
  - blocking
  - belittling
  - distracting
  - splitting
  - excluding

Working in Teams

- Evaluating Group Activities
  * members have agreed on goals?
  * members have agreed on rules?
  * group has responded to members' moods?
  * group has listened to members' ideas?
  * all group members involved?
  * friendly and open, inviting criticism or exposure?
  * group has confronted obstructive members?

Working in Teams

- Evaluating Group Activities
  * group has discussed areas of difference?
  * group has evaluated progress towards goals?
  * group has decided on the task and follow up work?
  * group leader (if any) encouraged discussion first before presenting ideas?
  * group leader synthesized ideas and summarized?
  * group leader determined whether members agreed or are ready to move on?
  * group leader did not dominate nor group defer unduly?

Working in Teams

- Grading will be based on work product and peer evaluation
- Peer evaluation will address:
  * attendance
  * participation in discussions
  * attitude towards the group and its tasks
  * contribution towards group's workload and task performance
  * compliance with the group's own code of conduct

Working in Teams

- Read the following Course Documents on Blackboard:
  - Notes on Group Work
- The following additional documents will be posted next Monday:
  - Group Assignments

Group Contracts

- Groups will write their own codes of conduct for appropriate behavior
- Verbal and written warnings may be given, leading to a move to dismiss a non-complying group member
- Group contracts will be filed with me, and I will act as mediator if required
- Grades will be based on my assessment of the quality of the group's work product, modified in light of feedback YOU will provide as to performance of group members in respect of your group code of conduct
- Please print the document "AIS Group Documentation" and bring it to next week's classes