Accounting Information Systems Overview

Drivers Of Business & Information System Change

- Globalisation
- Deregulation
- Advances in Technology
    - Metcalfe's Law (value of network doubles with each new connection)
    - Moore's Law (chip density double every 18 months)
- Outsourcing and Downsizing

What is a System?

System
A set of two or more interrelated components that interact to achieve a goal.

Goal Conflict
Occurs when components act in their own interest without regard for the overall goal.

Goal Congruence
Occurs when components acting in their own interest contribute toward the overall goal.

Data vs Information

Data
Data are facts that are collected, recorded, stored and processed. It is insufficient for decision making.

Information
Information is processed data used in decision making. Too much information however, will make it more, not less, difficult to make decisions. This is known as 'data overload' or 'information overload'.

Value of Information
The value of information is the benefit produced by the information minus the cost of producing it.
Information is valuable when: BENEFIT $ > Cost $

Benefits
- Reduce Uncertainty
- Improve Decisions
- Improve Planning
- Improve Scheduling

Costs
- Time and resources spent to produce and distribute the information.
- Note: the expected value of information should be calculated as effectively as possible so that the costs of producing that information do not exceed its benefits.

Characteristics of Useful Information

Relevant
Reduces uncertainty, improves decision-making, or confirms or corrects prior expectations.

Reliable
Free from error or bias; accurately represents organisation events or activities.

Existence
The transactions, assets, obligations and equity generated in the system exist.

Valid
Only those transactions and reports that are authorised by the firm should be processed.

Complete
Does not omit important aspects of the events or activities it measures.

Timely
Provided in time for decision-makers to make decisions.

Measurable
Transactions, assets, liabilities, and equities processed in the system are measured accurately.

Understandable
Presented in a useful and intelligible format.

Verifiable
Two independent, knowledgeable people can produce the same information.

Accessible
Available to users when they need it and in a format they can use.

Business Transactions
A transaction is an agreement between two entities to exchange goods or services or any other event that can be measured in economic terms by an organisation.

It is any event that both affects the financial position of the business and can be reliably recorded.

'Involves Give–Get' exchanges between two entities.

Accounting Information Systems (AIS)
An accounting information system (AIS) is a structure that a business uses to collect, store, manage, process, retrieve and report its financial data so it can be used by accountants, consultants, business analysts, managers, chief financial officers (CFOs), auditors, regulators, etc.

Collect, process, and store data and report information.
- If accounting = language of business
- AIS = information providing vehicle
- Accounting = AIS

Nature of an AIS
Can be a simple pencil & paper manual system OR a state of the art system using the latest computers and information technology.

Regardless of the tools used, the process is the same.

External & Internal
External = Financial Accounting
Internal = Management Accounting

Components of an AIS
- People using the system

- Procedures and instructions → For collecting, processing, and storing data
- Data
- Software
- Information Technology (IT) Infrastructure → Computers, peripherals, networks, and so on
- Internal Control and Security → Safeguard the system and its data

AIS & Business Functions
- Collect and store data about organisational → Activities, resources, and personnel
- Transform data into information enabling Management to Plan, execute, control, and evaluate → Activities, resources, and personnel
- Provide adequate control to safeguard → Assets and data

AIS Value Add
- Improve quality and reduce costs
- Improve efficiency
- Improve sharing knowledge
- Improve supply chain
- Improve efficiency and effectiveness
- Improve internal control
- Improve decision making

Improve Decision Making
- Identify situations that require action (sooner)
- Reduce uncertainty
- Provide alternative choices (e.g., what if analysis)
- Provide feedback on previous decisions (to take corrective action)
- Provide accurate and timely information

AIS & Corporate Strategy
Organisations have limited resources, therefore investments to AIS should have greatest impact on ROI.

Organisations need to understand:
- IT developments
- Business strategy
- Organisational culture
- They will effect and be effected by new AIS

Value Chain - Primary & Support Activities
The set of activities a product or service moves along before as output it is sold to a customer.
At each activity the product or service gains value.

Transaction Processing & Enterprise Resource Planning Systems

Data Processing Cycle

What This Determines

- What data should be entered and stored by an organisation, and who should have access to them?
- How should data be organised, updated, stored, accessed and retrieved?
- How can scheduled and unanticipated information needs be met?

Data Input

Data Input → Capture

Data must be collected about three facets of each business activity as it occurs.

1. Each activity of interest.
2. Resource(s) affected by each activity.
3. People who participate in each activity.

Paper-Based Source Documents

Data is collected on source documents:
- Examples
    - Sales-order form
    - Purchase requisition
- Data from paper-based documents will eventually need to be transferred to the AIS (digitised)

Turnaround:
- Usually paper-based
- Are sent from organisation to customer
- Same document is
- Returned by customer to organisation

Source Data Automation

Preferred approach to reduce errors, is to capture Source Data.
- In machine-readable form
- At the time of the business activity
    - e.g. ATMs; point-of-sale (POS)

Data Input → Accuracy & Control

Well-designed source documents can ensure that data captured is
- Accurate
    - Provide instructions and prompts
    - Check boxes
    - Drop-down boxes
- Complete
    - Internal control support
    - Pre-numbered documents
    - Mandatory fields

Data Storage

Types of AIS storage