MANAGEMENT INFORMATION SYSTEM

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MANAGEMENT INFORMATION SYSTEM

MIS is a computer-based information processing system(integrated user-machine system) which support the operation, management, and decision making functions of an organization.

it is an integrated user-machine system for providing information to support operation, management , and decision making functions of an organization.

Multiple approach

Operating element of an information system

Physical components

1. Hardware: Physical computer equipment and associated devices.

Functions

❖ input or entry

❖ output

❖ storage of data and programs

❖ communication

❖ Data preparation

2.<u>Software</u>: direct the operation of the hardware
(system Software and application Software)
3. <u>Database</u>: is a mechanized, formally defined, centrally controlled collection of data in an organization

any data available for information processing or retrieval operation

4.Procedure:

- ✓ User instructions (retrieve data, use result etc)
- ✓ Instruction for preparation of data
- ✓ Operating instructions for computer operations personnel

5.Operating personnel:

➢Computer operators

➢System analysts

➢Programmers

➢Data preparation personnel

➢IS Mgt.

➢Data administrator

2.Processing function

Another way of describing an information system is in terms of processing functions

Major processing functions

➤ Process transaction : activity such as making purchase or sale or manufacturing a product.

➤ Maintain master files: eg. Salary to employees (Employee's rate of pay, deduction etc)

➤ Produce reports:

➤ Process enquire: make any records or any item in the data base easily accessible to authorized personnel.

➢ Process interactive support applications: IS contains applications designed to support systems for planning, analysis, and decision making

3. Output for users

Evaluate the usefulness of IS on the basis of output

Five types

1.Transaction documents or screens

2. Preplanned reports

3.Preplaned inquiry responses

4.Ad hoc reports and responses

5.User-machine dialog results

2.MIS structure based on Mgt. activity

Classified on the basis of hierarchy of mgt. planning and control activity

Level	
Strategic Planning	Determine organizational goal, Define goal, policies, and general guidelines
Mgt. control and tactical planning	Acquisition of resources , plant layout, new product, Establishing and monitoring new budget
Operational planning and control	Effective use of existing facilities and resources

- Activities and information processing for the 3 levels are interrelated.

Inventory control(operational level)→accurate processing of transaction (Mgt.control level) →inventory strategy (Strategic Planning)

Information requirements by level of Mgt. activity

Characteristics of information	Operational planning and control	Mgt. control	Strategic control
Source	Largely internal		External
Scope	Well defined and narrow		Very wide
Level of aggregation	Defined		Aggregate
Time horizon	Historic		Future
Required accuracy	High		Low
Frequency of use	Very frequent		infrequent

I S for Operational control

1.Transaction processing

2.Report processing

3. Inquiry processing

1.Transaction processing: An inventory withdrawal transaction

→ the T P Program can examine balance on hand

→help in decision making

2.Report processing

generate special reports to provide information in a problem area

3. Inquiry processing : while online(telephone ordering) helps to identify the substitute products

IS for management control

managers of departments

summery information

reason for variance of performance and suggest solutions

Information needed

1. Planned performance (std, expected, budgeted)

2. Variance from planned performance

3. Reason for variance

4. Analysis of possible decision

Processing requirements

a) Planning and budget models: helps to find out problems in direction and revising plan

b) variance reporting programs: Performance and variance from planned

c) Problem analysis model: analyze data to provide input for decision making

d) Decision model: to analyze a problem situation and provide solution

e) Inquiry model: to assist I responding to inquiries

I S for strategic planning

Information needed

economy, political environment, industry, competitors and market share, current capabilities and performance of the organization

3.MIS structure based on organizational Function

There is no standard classification of function

1. Sales and marketing subsystems:

   a)Operational control activities: hiring and training of sales force, day to day scheduling of sales and promotional activities,etc

   b)Managerial control :comparison of overall performance against mkt. plan

   c) Strategic planning: new market and new market strategies

   (customer analysis, competitor analysis, customer analysis etc)

2. Production subsystem.

a) Operational control activities: comparison and find out the weakness

b) Managerial control :summery reports which compare overall planed or standard performance

c) Strategic planning: manufacturing approaches and alternative manufacturing approach

3.Logistical subsystem

(purchase ,receiving , inventory control and distribution)

a)Operational control activities: over stock items, inventory turnover report, past due purchase, etc

b)Managerial control : overall comparison of planed and actual inventory

c) Strategic planning: analysis of new distribution strategy, make or buy decision,

4. Personal subsystems

(hiring ,training ,record keeping, payment and termination of personnel)

a)Operational control activities: hiring ,training ,changing pay rates and issuing benefits.

b)Managerial control :comparing

c) Strategic planning: alternative strategies

5. Finance and Accounting Subsystem:

(financial arrangements, cash Mgt. collection, etc)

a)Operational control activities: recording, report unprocessed transaction .

b)Managerial control :financial utilization (budget versus actual)

c) Strategic planning: long term strategy to ensure finance, budgeting, minimize impact of tax.

6.Information Processing Subsystem:

  ensure necessary information

Oper: information on the daily schedule of jobs, equipment failure

Mgt: requires data on planed versus actual utilization, equipment cost, overall programmer performance and progress

Strategic: over all information system

Top management subsystems

5.

a)Operational control activities: meeting schedule, correspondence control files, contact files .

b)Managerial control :Plans and actual performance of all the functions.

c) Strategic planning: direction of the company and plans for ensuring necessary recources .

M.I. S. SUPPORT FOR DECISION MAKING

Structured decision . Frequently repeated and routine

Rules can be decided in advance

Can be handled by lower level employees

(it is automated)

Unstructured: data requirements are not completely known in advance