Basics of information system

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1.Defined information technology

- the study or use of technology for storing, retrieving, and sending information.

2.Defined information system

A set of interrelated components that collect, process, store, and disseminate data and information; an information system provides a feedback mechanism to monitor and control its operation to make sure it continues to meet its goals and objectives.

3.Discuss the role of I.S. in biasness area

- **Information Storage and Analysis**
- At the date of publication, many companies no longer manage their data and information manually with registers and hard-copy formats. Through the adoption of information systems, companies can make use of sophisticated and comprehensive databases that can contain all imaginable pieces of data about the company. Information systems store, update and even analyze the information, which the company can then use to pinpoint solutions to current or future problems. Furthermore, these systems can integrate data from various sources, inside and outside the company, keeping the company up to date with internal performance and external opportunities and threats.
- **Assist With Making Decisions**
- The long-term success of a company depends upon the adequacy of its strategic plans. An organization's management team uses information systems to formulate strategic plans and make decisions for the organization's longevity and prosperity. The business uses information systems to evaluate information from all sources, including information from external references such as Reuters or Bloomberg, which provide information on the general economy. This analysis of and comparison to market trends helps organizations analyze the adequacy and quality of their strategic decisions.

- **Assist With Business Processes**
- Information systems aid businesses in developing a larger number of value added-systems in the company. For example, a company can integrate information systems with the manufacturing cycle to ensure that the output it produces complies with the requirements of the various quality management standards. Adoption of information systems simplifies business processes and removes unnecessary activities. Information systems add controls to employee processes, ensuring that only users with the applicable rights can perform certain tasks.
- Further, information systems eliminate repetitive tasks and increase accuracy, allowing employees to concentrate on more high-level functions. Information systems can also lead to better project planning and implementation through effective monitoring and comparison against established criteria.
- **Considerations when Implementing Information Systems**
- Implementing information systems within an organization can prove to be costly. Implementation costs include not only installation of the systems but also employee training sessions. In addition, employees may see the adoption of information systems as an unwarranted change and, thus, may resist this change. Resistance to change can hinder business operations and can cause employee turnover.

4.Why it's important to study and understand I.S.

- Almost every aspect (sales, accounting, hr, inventory, ,...) of any business size (from corporation to startups) utilize software to be more efficient and gain competitive advantage.
- Information System allows you to have holistic view of those systems and will help you whether you will be on technical or business side.
- Knowing Information System will enable you more easily to dive into more details to any other domain specific system, while still having the bigger picture in your head.

5.Describe the characteristic of valuable information

- **Accessible**

Information should be easily accessible by authorized users so they can obtain it in the right format and at the right time to meet their needs.

- **Accurate**

Accurate information is error free. In some cases, inaccurate information is generated because inaccurate data is fed into the transformation process. This is commonly called garbage in, garbage out.

- **Complete**

Complete information contains all the important facts. For example, an investment report that does not include all important costs is not complete.

- **Economical**

Information should also be relatively economical to produce. Decision makers must always balance the value of information with the cost of producing it.

- **Flexible**

Flexible information can be used for a variety of purposes. For example, information on how much inventory is on hand for a particular part can be used by a sales representative in closing a sale, by a production manager to determine whether more inventory is needed, and by a financial executive to determine the amount of money the company has invested in inventory.

- **Relevant**

Relevant information is important to the decision maker. Information showing that lumber prices might drop is probably not relevant to a computer chip manufacturer.

- **Reliable**

Reliable information can be trusted by users. In many cases,

the reliability of the information depends on the reliability of the data-collection method. In other instances, reliability depends on the source of the information. A rumor from an unknown source that oil prices might go up may not be reliable.

- **Secure**

Information should be secure from access by unauthorized users.

- **Simple**

Information should be simple, not complex. Sophisticated and detailed information might not be needed. In fact, too much information can cause information overload, whereby a decision maker has too much information and is unable to deter
Mine what is really important.
- **Timely**

Timely information is delivered when it is needed. Knowing last week's weather conditions will not help when trying to decide what coat to wear today.
- **Verifiable**

Information should be verifiable. This means that you can check it to make sure it is correct, perhaps by checking many sources for the same information.

6.List the component of both types of I.S.

- I.S.
➤Collect (input).
➤Manipulate (process).
➤Store.
➤Disseminate (output) data and information.
➤Provide a corrective reaction (feedback) to meet an objective .

- **CBIS**

- Hardware
- software
- networks
- people
- and procedures

7.Identify classification of I.S. and discuss who use them and how are they used

- **personal IS**: An information system
- that improves the productivity of individual
- users in performing stand-alone
- tasks.
- **group IS**: An information system that
- improves communications and support
- collaboration among members of a
- workgroup.
- **enterprise IS**: An information system
- that an organization uses to define
- structured interactions among its own
- employees and/or with external customers,
- suppliers, government agencies,
- and other business partners

8.Benefits of information system

- **Human resources :**
- Information systems help human resource staff screen job applicants, administer performance tests to employees, monitor employee productivity, and generate required government reports.
- **Manufacturing :**
- Information systems are used to process customer orders, develop production schedules, control inventory levels, and monitor product quality.
- **Research and development :**
- Information systems help R&D staff design products, gather input from customers that leads to new ideas and improvements, and enable the sharing of information with a worldwide community of researchers.

Reference :

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