

unit: 2

Information System Building Blocks.

Introduction:

An information system is the main tool that serves the goal of an organization. It is more than just a technology and should cover a wider range of perspective.

User point:

An I.S. is considered as an processing system that manipulates data in forms and reports.

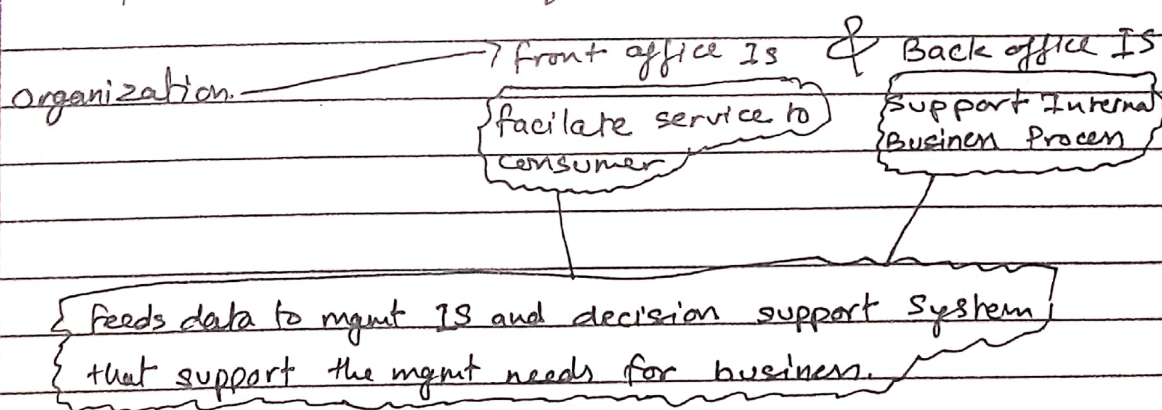
Manager points:

It is a tool to create a strategic plans.

Developer point:

A system developed by programming language, networking, technology and data base.

The product information System



- Most IS communicates with customer and supplier with E-commerce tech, customer relation mgmt (CRM) + supply chain mgmt (SCM)
- Uses Internet to support communication between employee and IS.

A Framework for System Development

Architecture:

The IS architecture provides the foundation for organization of various ~~computer~~ component of any IS that we are trying to develop.

From owner viewpoint:

The goal of owner of IS are:

- to improve business knowledge,
- to improve business process & service,
- to improve business communication & collaboration.

From Designer's perspective the goals of IS are:

- Database technology that supports the business and knowledge.
- the software technology that automates business process & service.
- The interface technology that supports business communication & collaboration.

Based on these factors:

IS can be categorized as:

① Knowledge Building Block:

→ Data & Info Refine → Business Knowledge
Processing

→ System owner, system user, system designer

Different views & perspective & views on knowledge.

From system owner:

Interested in those info that adds new business knowledge to make intelligent business decision to achieve goals.

From system users:

Interested in ~~knowledge~~ knowledge about data that defines business (consumer info, info about product & service etc)

- Passes info to the system owner.

From system designer

- concerned with Database technology and other Interface technology to be used.

② Process Building Blocks:

- Goals of IS is to improve the business & service process.



collection of linked task that provides delivery of service or product to client.

- System owner, system user, system designer.

diffⁿ perspective on processing Building Block.

System owner:

- Interested in reports of high level business (sales, service, manufacturing, shipping etc)
- Needs to know the cross functional IS.

System user:

- Concerned with work that must be performed to provide respond to business (sales, purchase, ...)

System Designer:

- Concerned by the limitation of specific application development technology like Java, Python, C, C++ etc.
- Views ~~is~~ is always technical and focus on which software technology to use.

③ Communication Building Block:

- Common goal of org. is to improve the business communication and collaboration between employee and other core element.
- IS should provide communication interface to system user to ~~provide~~ promote team work and co-ordination of activities.

Different prospective on communication building block by system owner, system users, system design:

System owner:

- Communication among employee, customer and external business.
- Communication regarding the location of business and requirement with other IS.

System User:

- Concern with I/O of the system.
- I/O represents how to interact with users, employee, consumers & other business.

System Designer:

- concerned about the technical communication regarding, specification and modules of the system that is being built.

Network Technology and its IS building system:

The basic building block of IS (knowledge process & communication) are all based on foundation of Network.

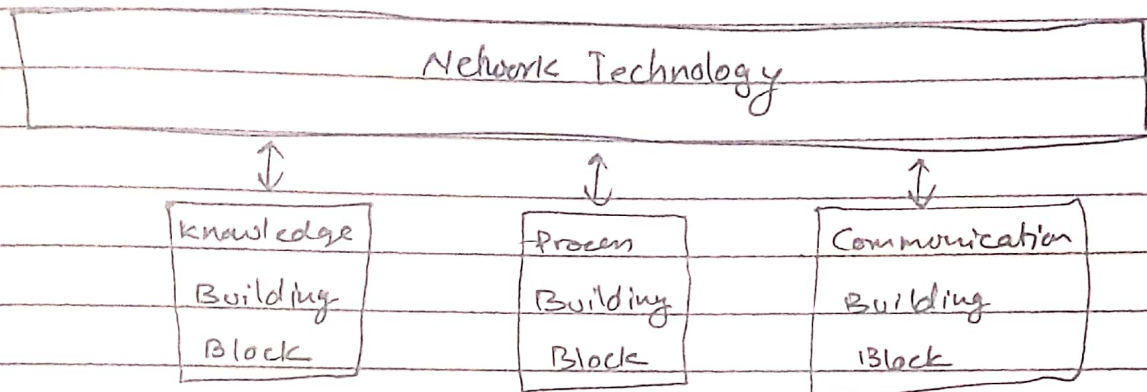


Fig. Network technology and its ^{building} system.

All Network (large/small) require specific specialized network hardware to make them work.

Building blocks of network are:

(i) Client Computer:

Computer that end user use to access the resources. sometimes can be referred as workstation.

(ii) Server Computer:

Computer that provide shared resource. Disk storage as well as a network service. Typically runs on specialized network OS along with special software to provide network service.

3) Network Interface:

- Sometimes called as Network port that is installed in computer to communicate over network.
- Network Interface also can be called as NIC (Network Interface Card). Nowadays, almost all the computers come with Network interface built in as an internal part of the computer motherboard. or we can easily install with its driver.

4) Cables:

- Computers in Network are usually physically connected to each other using cables.
- Twisted pair cable can also be referred as a copper, to distinguish it from fiber optic cable which is used for the highest speed Network connection.
- Fiber optic cable uses the strands of glass to transmit light signals at very high speed.

5) Switch:

- Cables don't connect computer directly to each other. Instead each computer is connected by cable & device as a switch for data transfer.

6) Wireless Network:

- In wireless network, transmitter & receiver are taking the place of cables.
- Advantage of wireless network: - Flexibility.
- client computer can be located anywhere within the range of network Broadcasting.

Disadvantages:

- It is less secure compared to cable network.

⑦ Network Software:

- A whole bunch of software has to be setup right in order to get Network work.
- Server computer typically use a special Network Operating System (NOS) in order to function efficiently & client computer needs to have their Network setting configured properly in order to access the Network.