Information System for Managers

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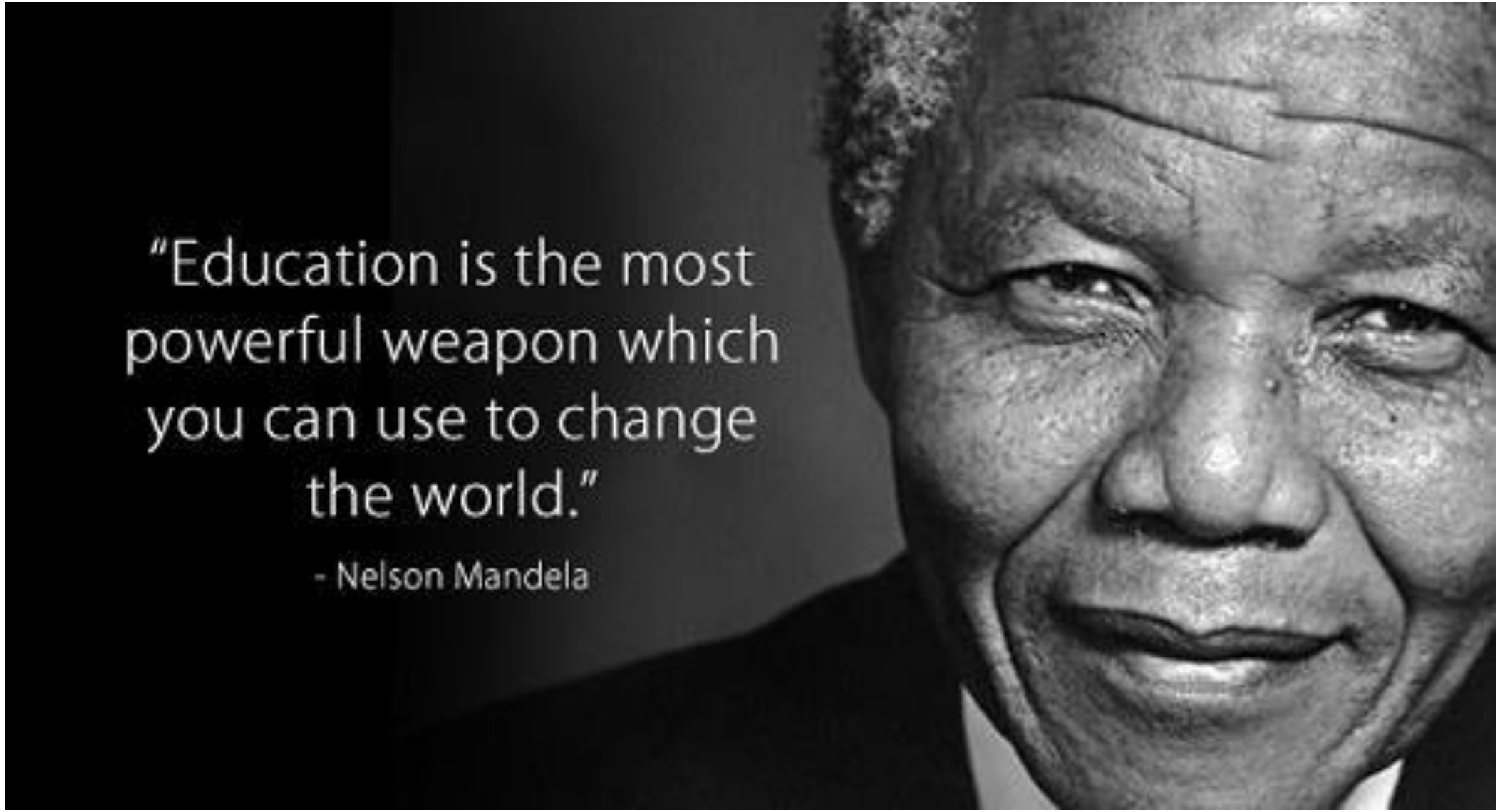
SVKM'S NMIMS Deemed to be UNIVERSITY
NMIMS GLOBAL ACCESS SCHOOL FOR CONTINUING EDUCATION

"WHAT SCULPTURE IS TO A BLOCK OF MARBLE, EDUCATION IS TO A HUMAN SOUL."

JOSEPH ADDISON


"Education is the most powerful weapon which you can use to change the world."
- Nelson Mandela

Tell me and I forget. Teach me and I remember. Involve me and I learn.

- *Benjamin Franklin*

PROGRESSIVE OVERLOAD

INCREMENTAL APPROACH

A few Questions Plaguing your mind

Why do you need to study Information Systems ?

How will this course help me ?

Topics to be covered

- Organizations and Information Systems
- Concepts of Management Information Systems
- Electronic Commerce, Electronic Business, Electronic Governance
- Managing Green IT and Smart Cities
- Information Technology Infrastructure and Choices
- Cloud Computing and Internet-of-Things
- Information Systems Security and Control
- Information Systems Development and Project Management
- Managing Data Resources
- Business Process Integration and Enterprise Systems

Organizations and Information Systems

Chapter 1

Objectives

1. Overview of the modern organisation
2. Understand information systems in organisations
3. Managing information systems in organisations

CASE STUDY – TATA MOTORS

NETWORK OF OVER 2,000 VENDORS

IS = SUPPLY CHAIN MANAGEMENT SYSTEM

HELPED REDUCE PAYMENT PROCESSING TIME FROM 48 HOURS TO 24 HOURS

100 PASSENGER CARS

DOOR HANDLES

1) INFORMS PRODUCTION SCHEDULE PRODUCTION PLAN (HOW MANY ITEMS NEEDED?)

2)SUPPLIER WILL EVALUATE HIS OWN INVENTORY

3)SUPPLIER DESPATCHES TRUCK (SHIPPING INVOICE)

4) RECEIPT OF TRUCK & CROSS CHECKING

5) QUALITY CHECK ON RECEIVED PARTS

6)ALERT TO ACCOUNTING SYSTEM TO RELEASE PAYMENT

7) PAYMENT SYSTEM ALERTS BANKS TO

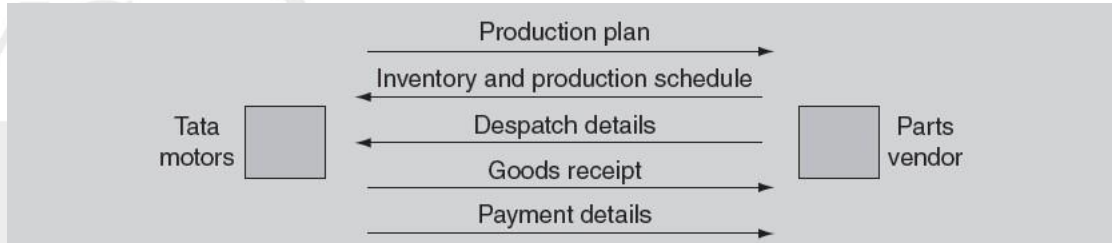


Figure 1.1: Exchange of Information between Tata Motors (TM) and its Parts Vendor. The Diagram only Shows Information Flows and not the Flows of Physical Goods.

Introduction

An organized set of seemingly related data
Method, or process of grouping things together

What is an Information System ?

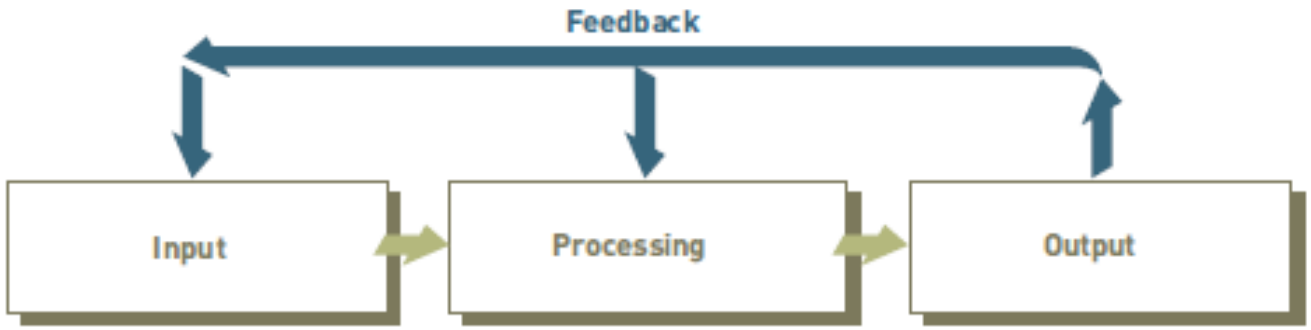
- A set of interrelated components that collect, manipulate, store, and disseminate data and information and provide a feedback mechanism to meet an objective.
- Information Systems (IS) are collections of computers, networks, software and people who create, store, modify and distribute data and information in any organisation.

What is an Information System ?

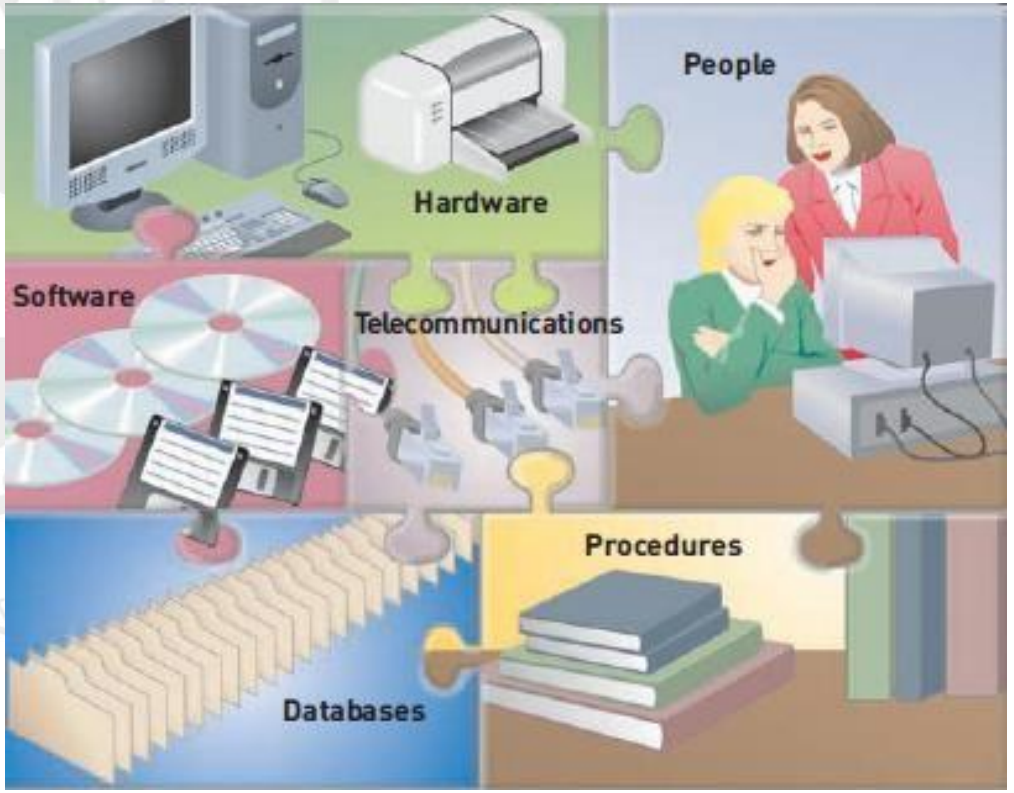
Definition :

A computer-based information system (CBIS) is a single set of hardware, software, databases, telecommunications, people, and procedures that are configured to collect, manipulate, store, and process data into information

Information Technology (IT) are the artefacts such as computers, software and networks that constitute the IS.



Components of a computerized Information system :



Types of Organizations

1. IT Enabled Organization
2. Networked Organization
3. Dispersed Organization
4. Knowledge Organization

IT - Enabled Organizations

Organisations are collections of people with shared goals
Has people or members who are engaged in activities for a common purpose
Organisations have many purposes

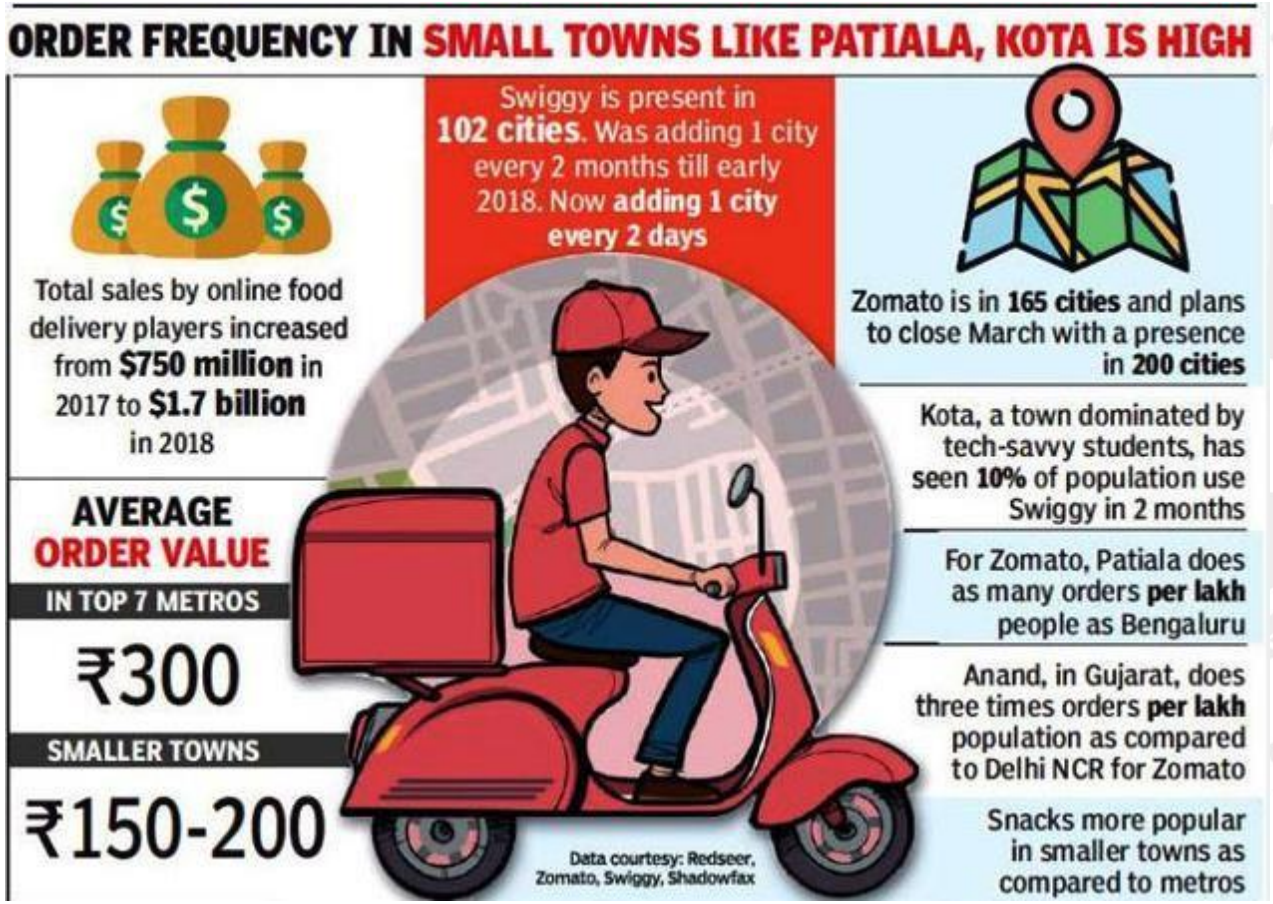
- Make cars
- Inform citizens
- Ferry passengers

Networked Organization

Organisations are collections of people with shared goals
Organisations are on digital networks linking them to others : Internet, Telecommunication
Requires sensing and responding to information flowing on the network
Responding to the continuous flow of information also requires the organisation to adjust to meet the challenge

Source: https://www.livemint.com/Politics/1P3kQo6cvnIGytjQHsWbWP/Schools-bet-big-on-virtual-classrooms.html

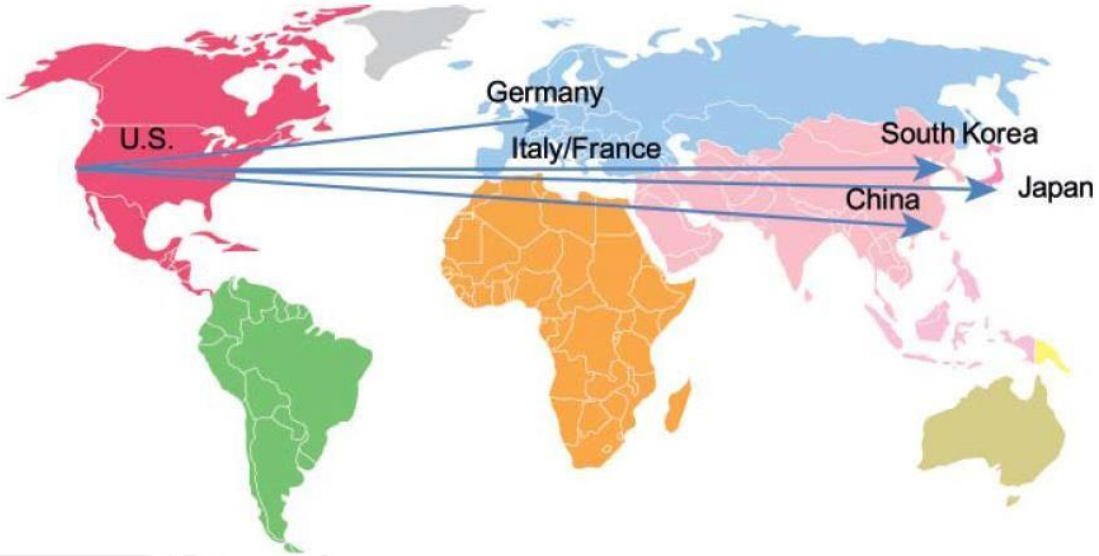
Food Delivery Apps



Dispersed Organization

Organisations are highly dispersed: they have operations and offices in many cities within the same country and also abroad

Firms disperse their operations to best meet customer needs or locate where resources are available



Apple iPhone's Global Supply Chain

Knowledge Organization

Modern organisations consist of ***knowledge workers*** – whose main job is to access and deal with knowledge and information

A major task of modern organisations is to process information

Knowledge Base :- Information stored, processed and converted in to a form that can be used by organizations

WHAT ARE INFORMATION SYSTEMS?

Information systems are collections of computers, networks, software and people who create, store, modify, and distribute data and information in any organisation.

Computers and information technology (IT) are key ingredients of modern information systems (IS).

IT v/s IS

Information Technology	VS	Information Systems
IT is the study, design, implementation, support or management of data within an information system.		IS refers to an entire set of information: not only the technology involved, bu the people & process as well.

Managing in the Internet Era

Organisations have to create a presence on the Internet

Challenge for organisations – find and use most relevant and useful data

The Internet presents many security challenges

BRITISH AIRWAYS

CLOUD computing

https://www.bbc.com/news/business-48905907

https://blogs.vmware.com/euc/2017/04/mobile-apps-steal-data-appthority.html

The IT Interaction Model

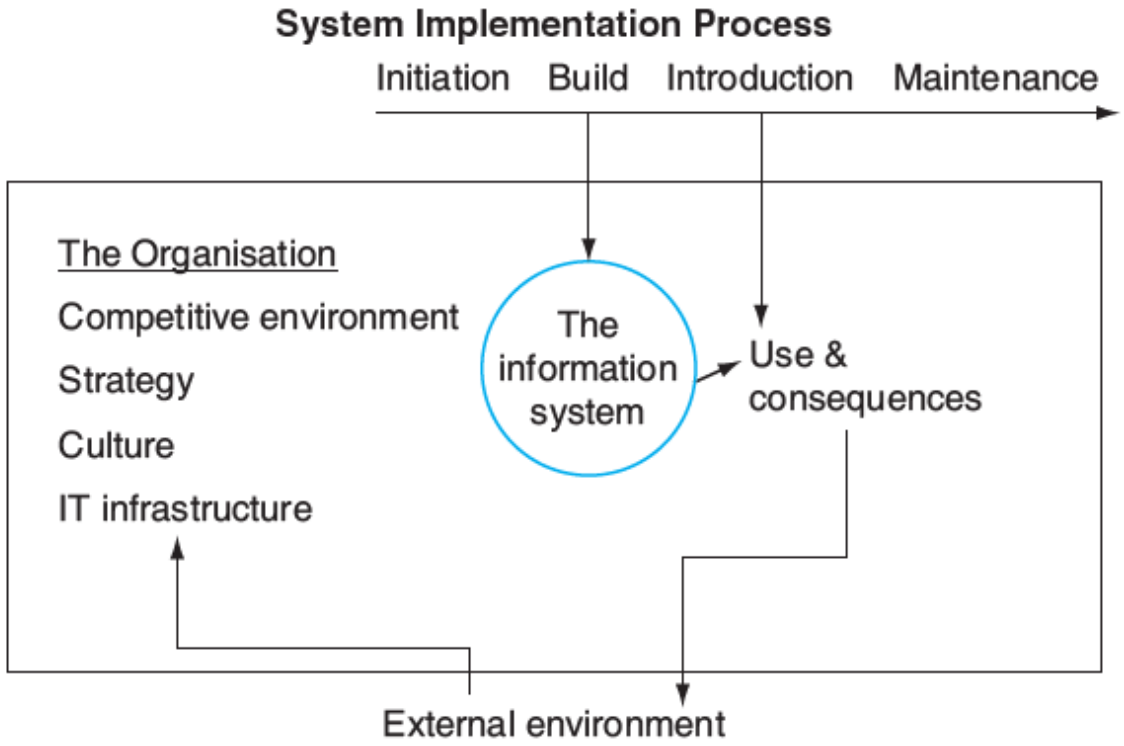
Challenge of managing IS in organisations

- Organisations do not remain static; they have to change to respond to the environment
- IS too continuously evolves

Important to understand how IS and organisations interact

When an organisation builds an information system, the system may be

- Used or not used
- Which may lead to positive or negative outcomes e.g. payroll system)



The IT Interaction Model (Contd)

Outcomes will have

- First-order effects :
  - Outcomes that arise as a direct consequence of the introduction of a new IS are known as first order effects
  - Increased speed in data processing, increased volume of processing, gain the firm incurs on using this IS
- Second-order effects :
  - Outcomes that are not immediately visible as they require years to become visible or measureable are known as second order effects
  - HR example: hiring new employees is easy, retaining them is easy, new incentive schemes can be planned for the employees
- Third-order effects :
  - Large scale benefits of using an IS

The IT Interaction Model

Whether an IS is successful is largely dependent on
- The competitive environment of the firm (e-commerce)
- The competitive strategy that the firm follows (DELL)
- The work culture of the firm (Google)

Information systems may impact the organisation by
- Changing work processes and functions
- Automate manual processes
- Eliminate some work processes

Building an IS requires choices to be made : MAKE v/s BUY
- Build the system, if internal skills are available
- Buy the system

Initiation requires understanding the need for the IS

Analysis is required to understand the specifications for the system

A new system has to be introduced and integrated within the organisation

Challenges for the Manager

A manager who has to manage the IS of an organisation faces many challenges

What systems to build?

New IS or make IS, competitors,

How much to spend on IS?

See what competitors are doing

What level of capabilities should be created with the IS?

Support one department or many departments

Primary partners or all stakeholders

Use internet or intranet

How centralized should the services be?

The systems should be both scalable and flexible

What security levels are required?

Security has to be adequate without being cumbersome and expensive

What is the technology Road Map for the organisation?

Smart Hospitals

Injury and trip to the hospital → Registration → Personal Information Into the System

Assigned a Bed, Doctor ,Nurse → Diagnosis : X-rays, CT Scans → Final Diagnosis, Cure, Discharge, Follow up, Insurance

Smart Hospitals :- https://www.youtube.com/watch?v=siCDVpmg4Xs

Banking Revolution

बैंक ऑफ़ इंडिया
Bank of India
Relationships beyond banking.

Reason for Revolution :

Faster work, to face competition, secure data transfer, make banking easy, automate all the branches across the country

Team Involved : Finacle of Infosys and Boston consulting group

Solution :

CORE = “Centralized on-line Real time exchange”

Core banking functions include recording of transactions, passbook maintenance, and interest calculations on loans and deposits, balance of payments and withdrawals

Banks makes these services available across different channels such as ATM , internet banking and branches

Impact of the project :

Operations are carried out fast and customers are happy

Operational excellence due to technological advancement

Account opening is done on the same day

SMS banking available

Test Yourself !

Questions !

Fill in the blanks

1.A(n)_____consists of hardware, software, databases, telecommunications, people, and procedures

True or False

1.A major task of modern organizations is to process information.

2.First term effects of the introduction of information systems in organizations are designed outcomes that are visible or measurable immediately

Select the right option

1.An essential component of modern day organization is an information system.

a) Which binds the organization
b) Which enables its interactions with the world through the Internet
c) Both a and b
d) only b

Answers

1. Information system

2. True

3. True

4. C

Suggested Reading for Reference

1. Management Information System new approaches to Organization and Technology, 14e, Kenneth C. Laudon , Jane P. Laudon.

2. Essentials of MIS: Jane P . Laudon, Kenneth C Laudon

3. Management Information Systems, 9e, James O'brien, George M Marakas, Ramesh Behl

4. Principles of Information Systems, 10e, Ralph Stair, George Reynolds

5. Management Information Systems, 6e, Effy Oz

Additional IT related Resources

QR Scan QR code to make cashless payment:
https://www.youtube.com/watch?v=lPfe7AwNStI

Stadiums go High-Tech :- https://www.youtube.com/watch?v=wL0A38O74lU

The Power of Data:- https://www.youtube.com/watch?v=xq3DVDyshTc

The future cars :- https://www.youtube.com/watch?v=vtgAx11yOzg

IT in healthcare by SAP :- https://www.youtube.com/watch?v=LjsvkRJrZZA

Smart Taxi Stands :- http://www.attsystemsgroup.com/wp-content/uploads/2014/11/Traffic_NewspaperClip-low-res.jpg

Thank you !