System Development Life Cycle

INTRODUCTION

Information system development involves various activities performed together. The stages involved during System Life Cycle are ::

- Recognition of need
- Feasibility study
- Analysis
- Design
- Implementation
- Post implementation and maintenance

Recognition of need

It is the first stage of information system development cycle. This gives a clearer picture of what actually the existing system is. The preliminary investigation must define the scope of the project and the perceived problems, opportunities and directives that triggered the project.

The preliminary investigation include the following tasks:

a. List problems, opportunities and directives.
b. Negotiate preliminary scope.
c. Assess project worth.
d. Plan the project.
e. Present the project and plan.

Feasibility Study

The statement "don't try to fix it unless you understand it" apply describe the feasibility study stage of system analysis. The goal of feasibility study is to evaluate alternative system and to purpose the most feasible and desirable system for development.

It consist of the following:

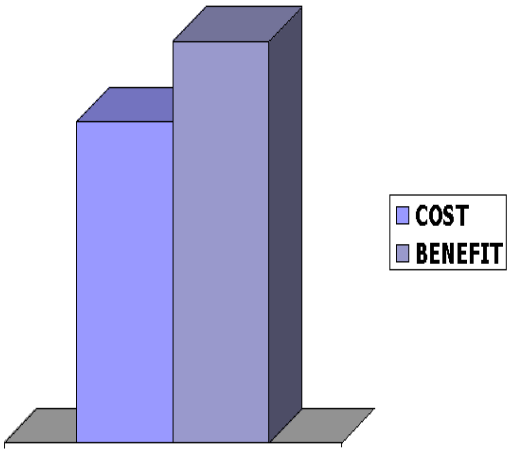
1. Statement of the problem
2. Summary of findings and recommendations
3. Details of findings
4. Recommendations and conclusions

There are basically five types of feasibility are addressed in the study.

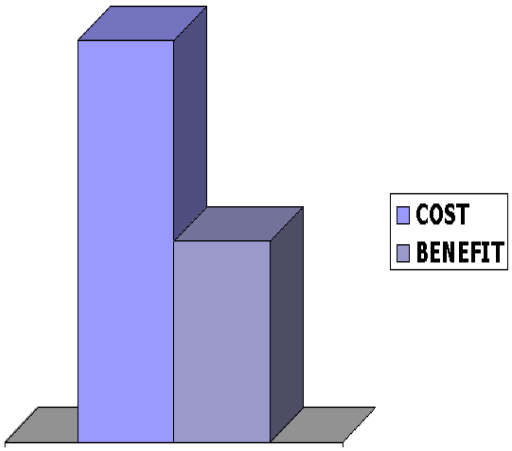
1. **Technical feasibility**
2. **Economic feasibility**
3. **Motivational feasibility**
4. **Schedule feasibility**
5. **Operational feasibility**

Cost /benefit analysis

Feasibility studies typically involve cost/benefit analysis. In the process of feasibility study, the cost and benefits are estimated with greater accuracy. If cost and benefit can be quantified, they are tangible ; if not , they are called intangible.



TANGIBLE



INTANGIBLE

System Analysis

System analysis is not a preliminary study. It is an in-depth study of end user information needs that produces functional requirements that are used as the basis for the design of a new information system.

System involves detailed study of:

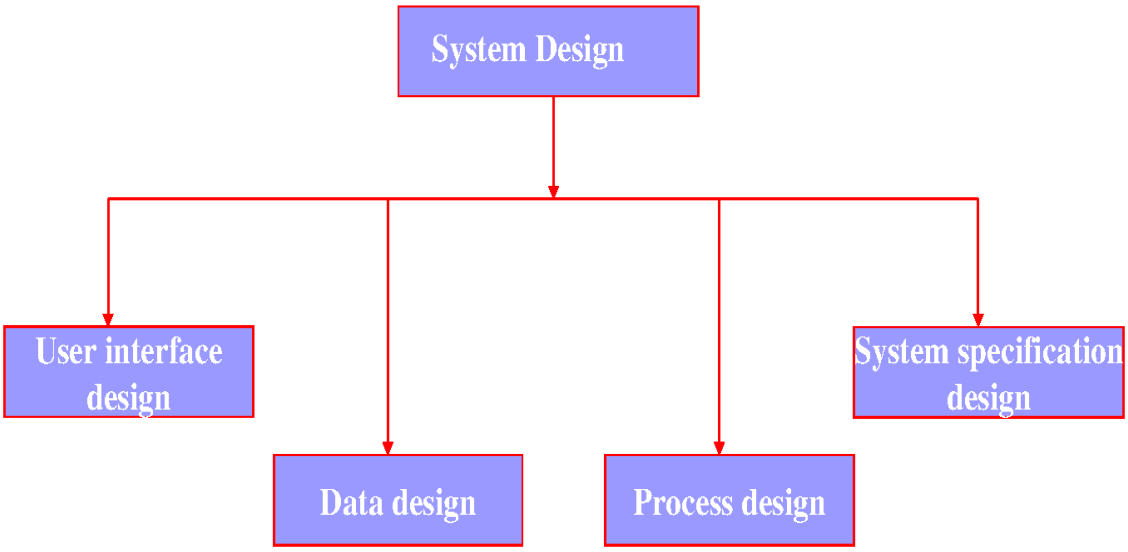
a. The information needs of the organization and end user.

b. The activities, resources and products of any present information system.

c. The information system capabilities required to meet your Information needs.

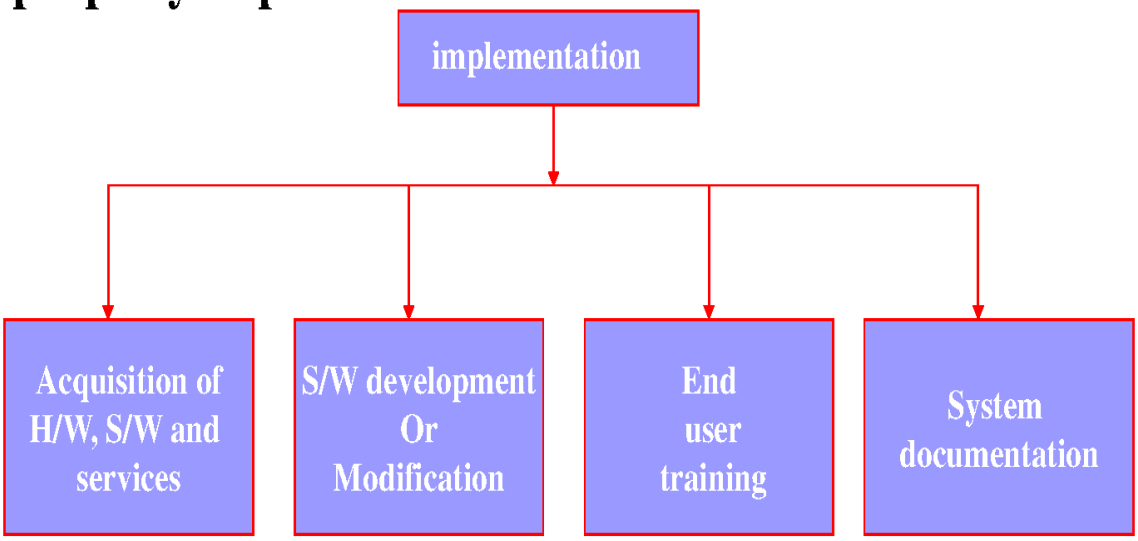
System Design

System design can be viewed as the design of user interface, data, process and system specification.



System Implementation

Implementation is the stage where theory is converted into practical. The implementation is a vital step in ensuring the success of new systems. Even a well designed system can fail if it is not properly implemented.



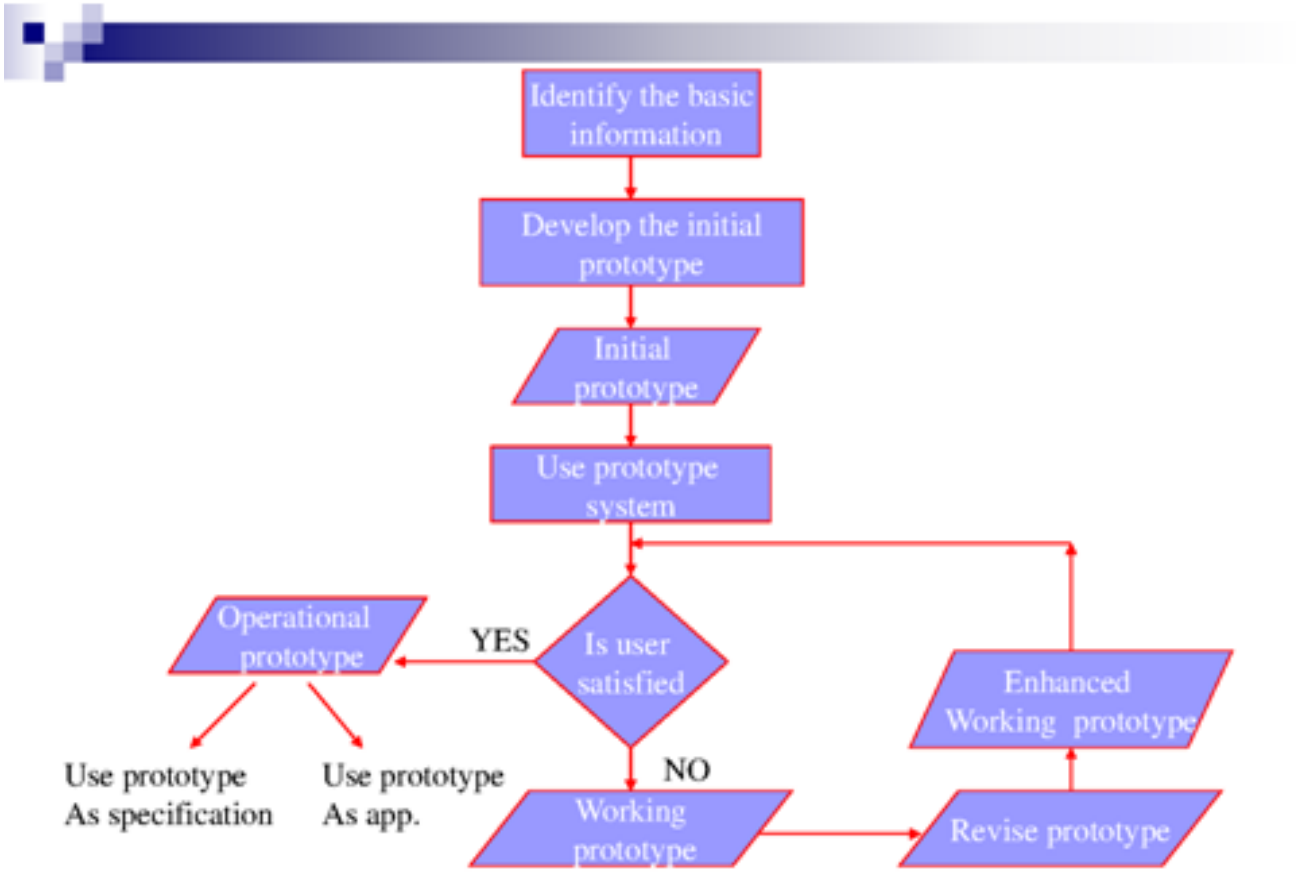
Post Implementation and Maintenance

Once a system is fully implemented and being operated by end user, the maintenance function begins. Systems maintenance is the monitoring, evaluating and modifying of operational information system to make desirable or necessary improvements.

PROTOTYPING

Prototyping is the process of building a model system. In terms of an information system prototype are employed to help system designers build an information system that intuitive & easy to manipulate end users.

Prototyping is an iterative process that is part of analysis phase of system development of life cycle.


Identify the basic information
Develop the initial prototype
Initial prototype
Use prototype system
Is user satisfied
YES
Operational prototype
Use prototype As specification
Use prototype As app.
NO
Working prototype
Revise prototype
Enhanced Working prototype

ADVANTAGES OF PROTOTYPING

- Prototype reduce the development time.
- It reduce the development cost.
- It requires the users involvement.
- Its results are higher user satisfaction.
- Prototype are an active, not passive, model that end user can see, touch & feel.
- Prototyping can increase creativity because it allows for quicker user feedback which can lead to better solutions.

DISADVANTAGES OF PROTOTYPING

- Prototyping often leads to premature commitment to a design.
- Prototyping can reduce creativity in designs.
- Not suitable for large applications.
- Structure of system can be damaged since many changes could be made.
- Developer misunderstanding of user objectives.