

UNIT-2:

What is Requirements Determination?

A requirement is a vital feature of a new system which may include processing or capturing of data, controlling the activities of business, producing information and supporting the management.

Requirements determination involves studying the existing system and gathering details to find out what are the requirements, how it works, and where improvements should be made.

Major Activities in requirement Determination

Requirements Anticipation

- It predicts the characteristics of system based on previous experience which include certain problems or features and requirements for a new system.
- It can lead to analysis of areas that would otherwise go unnoticed by inexperienced analyst. But if shortcuts are taken and bias is introduced in conducting the investigation, then requirement Anticipation can be half-baked.

Requirements Investigation

- It is studying the current system and documenting its features for further analysis.
- It is at the heart of system analysis where analyst documenting and describing system features using fact-finding techniques, prototyping, and computer assisted tools.

Requirements Specifications

- It includes the analysis of data which determine the requirement specification, description of features for new system, and specifying what information requirements will be provided.

- It includes analysis of factual data, identification of essential requirements, and selection of Requirement-fulfillment strategies.

Fact Finding Techniques

To study any system the analyst needs to do collect facts and all relevant information. The facts when expressed in quantitative form are termed as data. The success of any project is depended upon the accuracy of available data. Accurate information can be collected with help of certain methods/ techniques. These specific methods for finding information of the system are termed as fact finding techniques. Interview, Questionnaire, Record View and Observations are the different fact finding techniques used by the analyst. The analyst may use more than one technique for investigation.

Interview

This method is used to collect the information from groups or individuals. Analyst selects the people who are related with the system for the interview. In this method the analyst sits face to face with the people and records their responses. The interviewer must plan in advance the type of questions he/ she is going to ask and should be ready to answer any type of question. He should also choose a suitable place and time which will be comfortable for the respondent.

The information collected is quite accurate and reliable as the interviewer can clear and cross check the doubts there itself. This method also helps gap the areas of misunderstandings and help to discuss about the future problems. Structured and unstructured are the two sub categories of Interview. Structured interview is more formal interview where fixed questions are asked and specific information is collected whereas unstructured interview is more or less like a casual conversation where in-depth areas topics are covered and other information apart from the topic may also be obtained.

Questionnaire

It is the technique used to extract information from number of people. This method can be adopted and used only by an skillful analyst. The Questionnaire consists of series of questions framed together in logical manner. The questions are simple, clear and to the point. This method is very useful for attaining information from people who are concerned with the usage of the system and who are living in different countries. The questionnaire can be mailed or send to

people by post. This is the cheapest source of fact finding.

RecordView

The information related to the system is published in the sources like newspapers, magazines, journals, documents etc. This record review helps the analyst to get valuable information about the system and the organization.

Observation

Unlike the other fact finding techniques, in this method the analyst himself visits the organization and observes and understand the flow of documents, working of the existing system, the users of the system etc. For this method to be adopted it takes an analyst to perform this job as he knows which points should be noticed and highlighted. In analyst may observe the unwanted things as well and simply cause delay in the development of the new system.

Feasibility Study

Feasibility Study can be considered as preliminary investigation that helps the management to take decision about whether study of system should be feasible for development or not.

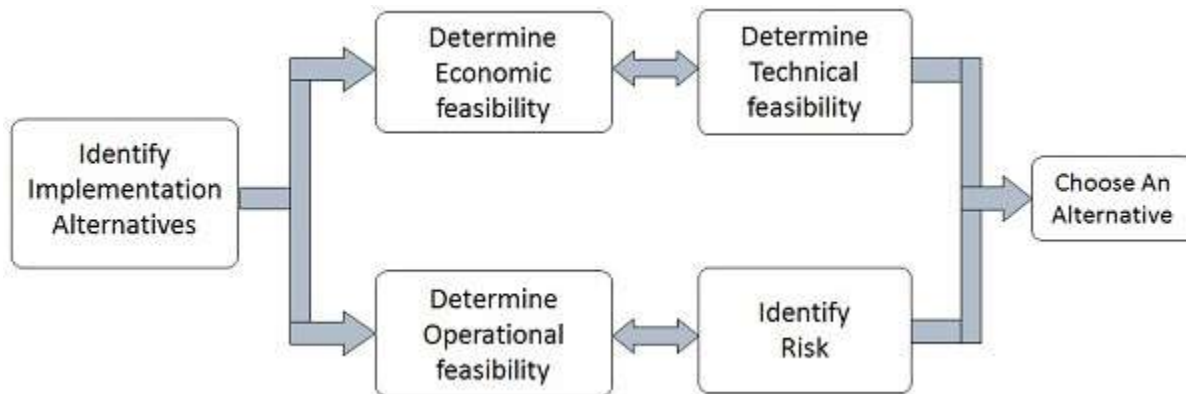
- It identifies the possibility of improving an existing system, developing a new system, and produce refined estimates for further development of system.
- It is used to obtain the outline of the problem and decide whether feasible or appropriate solution exists or not.
- The main objective of a feasibility study is to acquire problem scope instead of solving the problem.
- The output of a feasibility study is a formal system proposal act as decision document which includes the complete nature and scope of the proposed system.

Steps Involved in Feasibility Analysis

The following steps are to be followed while performing feasibility analysis –

- Form a project team and appoint a project leader.
- Develop system flowcharts.
- Identify the deficiencies of current system and set goals.

- Enumerate the alternative solution or potential candidate system to meet goals.
- Determine the feasibility of each alternative such as technical feasibility, operational feasibility, etc.
- Weight the performance and cost effectiveness of each candidate system.
- Rank the other alternatives and select the best candidate system.
- Prepare a system proposal of final project directive to management for approval.



Types of Feasibilities

Economic Feasibility

- It is evaluating the effectiveness of candidate system by using cost/benefit analysis method.
- It demonstrates the net benefit from the candidate system in terms of benefits and costs to the organization.
- The main aim of Economic Feasibility Analysis (EFS) is to estimate the economic requirements of candidate system before investments funds are committed to proposal.
- It prefers the alternative which will maximize the net worth of organization by earliest and highest return of funds along with lowest level of risk involved in developing the candidate system.

Technical Feasibility

- It investigates the technical feasibility of each implementation alternative.
- It analyzes and determines whether the solution can be supported by existing technology or not.
- The analyst determines whether current technical resources be upgraded or added it that fulfill the new requirements.
- It ensures that the candidate system provides appropriate responses to what extent it can support the technical enhancement.

Operational Feasibility

- It determines whether the system is operating effectively once it is developed and implemented.
- It ensures that the management should support the proposed system and its working feasible in the current organizational environment.
- It analyzes whether the users will be affected and they accept the modified or new business methods that affect the possible system benefits.
- It also ensures that the computer resources and network architecture of candidate system are workable.

Behavioral Feasibility

- It evaluates and estimates the user attitude or behavior towards the development of new system.
- It helps in determining if the system requires special effort to educate, retrain, transfer, and changes in employee's job status on new ways of conducting business.

Schedule Feasibility

- It ensures that the project should be completed within given time constraint or schedule.
- It also verifies and validates whether the deadlines of project are reasonable or not.

Cost benefit analysis: What is it?

A cost benefit analysis (also known as a benefit cost analysis) is a process by which organizations can analyze decisions, systems or projects, or determine a value for intangibles. The model is built by identifying the benefits of an action as well as the associated costs, and subtracting the costs from benefits. When completed, a cost benefit analysis will yield concrete results that can be used to develop reasonable conclusions around the feasibility and/or advisability of a decision or situation.

Why Use Cost Benefit Analysis?

Organizations rely on cost benefit analysis to support decision making because it provides an agnostic, evidence-based view of the issue being evaluated—without the influences of opinion, politics, or bias. By providing an unclouded view of the consequences of a decision, cost benefit analysis is an invaluable tool in developing business strategy, evaluating a new hire, or making resource allocation or purchase decisions.

Scenarios Utilizing Cost Benefit Analysis

As mentioned previously, cost benefit analysis is the foundation of the decision-making process across a wide variety of disciplines. In business, government, finance, and even the nonprofit world, cost benefit analysis offers unique and valuable insight when:

- Developing benchmarks for comparing projects
 - Deciding whether to pursue a proposed project
 - Evaluating new hires
 - Weighing investment opportunities
 - Measuring social benefits
 - Appraising the desirability of suggested policies
 - Assessing change initiatives
 - Quantifying effects on stakeholders and participants
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How to Do a Cost Benefit Analysis

While there is no “standard” format for performing a cost benefit analysis, there are certain core elements that will be present across almost all analyses. Use the structure that works best for your situation or industry, or try one of the resources and tools listed at the end of this article. We’ll go through the five basic steps to performing a cost benefit analysis in the sections below, but first, here’s a high-level overview of

1. Establish a framework to outline the parameters of the analysis
2. Identify costs and benefits so they can be categorized by type, and intent
3. Calculate costs and benefits across the assumed life of a project or initiative
4. Compare cost and benefits using aggregate information
5. Analyze results and make an informed, final recommendation

Identify and Categorize Costs and Benefits

Now that your framework is in place, it’s time to sort your costs and benefits into buckets by type. The primary categories that costs and benefits fall into

are **direct/indirect, tangible/intangible, and real**:

- **Direct costs** are often associated with production of a cost object (product, service, customer, project, or activity)
- **Indirect costs** are usually fixed in nature, and may come from overhead of a department or cost center
- **Tangible costs** are easy to measure and quantify, and are usually related to an identifiable source or asset, like payroll, rent, and purchasing tools
- **Intangible costs** are difficult to identify and measure, like shifts in customer satisfaction, and productivity levels
- **Real costs** are expenses associated with producing an offering, such as labor costs and raw materials.