UNIT 3 FEASIBILITY STUDY

Structure

3.0 INTRODUCTION

Once a preliminary area of application has been identified, it may then be subjected to a more rigorous examination in a feasibility study. In the previous unit, we discussed the steps that make up the initial investigation. By the initial investigation, a user has recognized the need, user requirements are determined and the problem has been defined. Apart from this, an initial investigation is launched to study the present system and verify the problem in a systematic way. The next step is to determine exactly what the proposed system is to do by defining its expected performance. This kind of work will be carried out in the feasibility study. A feasibility study is carried out to select the best system that meets performance requirements.

3.1 OBJECTIVES

After going through this unit, you should be able to:

- explain what is known as feasibility, and what is feasibility study
- list and illustrate different types of feasibility
- discuss the purposes of feasibility study
- describe different steps in feasibility analysis
- explain in details cost/benefit analysis

3.2 PRELIMINARY STUDY

Feasibility is the determination of whether or not a project is worth doing. The process followed in making this determination is called a feasibility study. This type of study determines if a project can and should be taken. Once it has been determined that a project is feasible, the analyst can go ahead and prepare the project specification which finalizes project requirements. Generally, feasibility studies are undertaken within tight time constraints and normally culminate in a written and oral feasibility report. The contents and recommendations of such a study will be used as a sound basis for deciding whether to proceed, poslpone or cancel the project. Thus, since the feasibility study may lead to the commitmenl of large resources, it becomes necessary that it should be conducted competently and that no fundamental errors of judgment are made.

3.3 DIFFERENT TYPES OF FEASIBILITY

In subscclion 1.3.1 of unit1, you have noted that an important outcome of the preliminary investigation is the determination whether the system requested is feasible or not. That requires the need for a rigorous feasibility study.

In the conduct of the feasibility study, the analyst will usually consider seven distinct, but inter-related types of feasibility. They arc:

(1) Technical feasibility

(2) Operational feasibility

(3) Economic feasibility

(4) Social feasibility

(5) Management feasibility

(6) Legal feasibility

(7) Time feasibility

3.3.1 Technical feasibility

This is concerned with specifying equipment and software that will successfully satisfy the user requirement. The technical needs of the system may vary considembly, but might include:

- The facility Io produce outputs in a given time.
- Response time under certain conditions.
- Ability to process a certain volume of transaction at a particular speed.
- Facility to communicate data to distant location.

In examining technical feasibility, configuration of the system is given more importance than the aclual make of hardware. The configuration should give the complete picture about the system's requirements: How many workstations are required, how these units are interconnected so that they could operate and communicate smoothly. What speeds of input and output should be achieved at particular quality of printing. This can be used as a basis for the tender document against which dealers and manufacturers can later make their equipment bids. Specific hardware and software products can then be evaluated keeping in view with the logical needs.

At the feasibility stage, it is desirable that two or three different configurations will be pursued that satisfy the key technical requirements but which represent different levels of ambition and cost. Investigation of these technical alternatives can be aided by approaching a range of suppliers for preliminary discussions. Out of all types of feasibility, technical feasibility generally is the most difficult to determine.

33.2 Operational feasibility

It is mainly related to human organizational and political aspects. The points to be considered are:

what changes will be brought with the system?

what organizational structures are disturbed?

- what new skills will be required? Do the existing staff members have these skills? If not, can they be trained in due course of time?

Generally project will not be rejected simply because of operational infeasibility but such considerations are likely to critically affect the nature and scope of the eventual recommendations. This feasibility study is carried out by a small group of people who are familiar with information syslem techniques, who understand the parts of the business that are relevant to the project and are skilled in system analysis and design process.

3 3 3 Economic feasibility

Economic analysis is the most frequently used technique for evaluating the effectiveness of a proposed system. More commonly known as cost/benefit analysis; the procedure is to determine the benefits and savings that are expected from a proposed system and compare them with costs. If benefits outweigh costs, a decision is taken to design and implement the system. Otherwise, further justification or alternative in the proposed system will have to be made if it is to have a chance of being approved. This is an ongoing effort that improves in accuracy at each phase of the system life cycle.

33.4 Social feasibility

Social feasibility is a determination of whether a proposed project will be acceptable to the people or not. This determination typically examines the probability of the project being accepted by the group directly affected by the proposed system change.

3.3.5 Management feasibility

It is a determination of whether a proposed project will be acceptable to management. If management does not accept a project or gives a negligible support to it, the analyst will tend to view the project as a non-feasible one.

3.3.6 Legal feasibility

Legal feasibility is a determination of whether a proposed project infringes on known Acts, 'Statutes, as well as any pending legislation. Although in some instances the project might appear sound, on closer investigation it may be found to infringe on several legal areas.

33.7 Time feasibility

Time feasibility is a determination of whether a proposed project can be implemented fully within a stipulated time frame. If a project takes too much time it is likely to be rejected.

3.4 INVESTIGATIVE STUDY

3.4.1 Steps in feasibility analysis

Eight steps are involved in the feasibility analysis. They are:

(i) Form a project team and appoint a project leader.

(ii) Prepare system flowcharts,

(iii) Enumerate potential proposed systems.

(iv) Define and identify characteristics of proposed system.

(v) Determine and evaluate performance and cost effectiveness of each proposed system.

(vi) Weight system performance and cost data.

(vii) Select the best proposed system.

(viii) Prepare and report final project directive to management,

3.4.2 Analyzing systems data

After gathering sufficient data to understand how the existing system operates, a proper study on data should be made for evaluating the current operations.

Systems analysis is fact finding followed by analysis of the facts. Data analysis is also considered a pre-requisite condition for cost/benefit analysis. System investigation and data gathering lead to an assessment of current findings. Our interest is in determining how efficiently certain steps are performed to achieve intended goals and the cost of making improvements.

The details of the system learned by the analyst during the investigation tell what is happening, how it is done, when it is carried out. These details help the analyst to evaluate the current system. System analyst tries to find out the efficiency of certain steps and how they contribute to achieve the intended result. After examining the facts collected about the system, the analyst develops a profile of each application area. The systems profile consists of details describing the operating characteristics of the system, such as frequency of occurrence, volume of work or error rate. The analysis of details collected during the investigation phase indicates that are serious gaps in control and a bottleneck exists for processing claims.

3.4.3 Identifying design requirements

From the analysis, design requirements are formulated. The requirements for the new system are those features that must be incorporated to produce the improvements. These requirements are determined by comparing current performance with the objectives for acceptable systems performance. The new system should have the following features:

(a) Greater speed of processing

(b) Effective procedure to eliminate errors

(c) Better accuracy

(d) Faster retrieval of information

(e) Integration of data

(f) Larger capacity of storing data with reduced cost

To achieve these features, several alternatives must be studied and evaluated. One alternative may not satisfy all the features. The analyst then selects those that are feasible economically, technically and operationally. The approach may emphasize the introduction of computerised system, replacement staff, changes in operating procedures, or a combination of several options.

The analyst often suggests inputs, process, reporting and control procedures to help the management in decision making techniques. The procedures may be manual or automated but these will be useful in meeting systems requirements. Management will decide whether to accept and use them.

The role of a computer in a design revolves round its capabilities for calculation, storage and retrieval of data, summarizating, sorting, classification and communication of data. The.

analyst must decide about the speed and storage capacity of a computer required for achieving the design objectives. The analyst does this by matching the computer capabilities with an understanding of the systems requirements.

A new system might, for example, call for the automation of invoice handling so that the invoice could be classified and processed as soon as it is received. All these steps can take place by entering the invoice number, purchase order number and vendor identification through a terminal. The computer in turn can be substituted for human processing. These processes could be faster and accounting balances can be incorporated into the procedure. The results of day's work can be summarized and communicated to supervisors, whether they are sitting in the same building or miles away.

As you know that each approach has its benefits and drawbacks, depending on the particular business situation. Therefore, the analyst selects those alternatives most workable and studies them further and make decision which alternative should be selected? Cost and benefit analysis of each alternative further guides the selection process. Therefore, the analyst needs to be familiar with the cost and benefit categories and the evaluation of various methods before a final selection can be made. This is discussed in the next section.

Check Your Progress I

1. What do you mean by feasibility? What is feasibility study?
2. What are the seven types of feasibility?
3. Which are tho technical feasibility concerned with?
4. Name some points which are to be considered in the operational feasibility.

3.5 COST/BENEFIT ANALYSIS

Since cost plays quite an important role in deciding the new system, it must be identified and estimated properly. Costs vary by type and consist of various distinct elements. Benefits are also of different type and can be grouped on the basis of advantages they provide to the management. The benefits of a project include four types:

(i) Cost-savings benefits

(ii) Cost-avoidance benefits

(iii) Improved-service-level benefits

(iv) Improved-information benefits

Cost-savings benefits lead to reductions in administrative and operational costs. A reduction in the size of the clerical staff used in the support of an administrative activity is an example of a cost-saving benefit.

Cost-avoidance benefits are those which eliminate future administrative and operational costs. No need to hire additional staff in future to handle an administrative activity is an example of a cost-avoidance benefit.

Improved-service-level benefits are those where the performance of a system is improved by a new computer-based method. Registering a student in fifteen minutes rather than an hour is an example of this third type of benefit.

Improved-information benefits is where computer based methods lead to better information for decision making. For example, a system that reports the most-improved fifty customers, as measured by an increase in sales is an improved-information. This information makes it easier to provide better service to major customers.

Categories of Costs and Benefits:

The costs associated with the system are expenses, outlays or losses arising from developing and using a system. But the benefits are the advantages received from installing and using this system.

Costs and benefits can be classified as follows:

(a) Tangible or intangible

(b) Fixed or variable

(c) Direct or indirect

3.5.1 Tangible or intangible costs and benefits

Tangibility refers to the ease with which costs or benefits can be measurcd. An outlay of cash for any specific item or activity is referred to as a tangible cost. These costs arc known and can bc estimated quite accurately.

Costs that arc known to exist but their financial value cannot be exactly measured are rcfcrrcd to as intangible costs. The estimate is only an approximation. It is difficult to fix exact intangible costs. For example, employee movable problems because of installing new system is an intangible cost. How much moral of an employee has been affected cannot be exactly measured in terms of financial values.

Benefits are often more difficult to specify exactly than costs. For example, suppliers can easily quote the cost of purchasing a terminal but it is difficult for them to tell specific benefits or financial advantages for using it in a system. Tangible benefits such as completing jobs in fewer hours or producing error free reports are quantifiable. Intangible benefits such as more satisfied customers or an improved corporate image because of using new system are not easily quantified. Both tangible and intangible costs and benefits should be taken into consideration in the evaluation process. If the project is evaluated on a pwely intangible basis, bcncfits exceed costs by a substantial margin, then we will call such project as cost effective. On the other hand, if intangible costs and benefits are included, the total costs (tangible+intangible) exceed the bcncfits which makes the project an undesirable investment. Hcncc, it is desirable that systems projects should not be evaluated on the basis of intangible benefits alone.

3.5.2 Direct or Indirect costs and benefits

Direct costs are those which are directly associated with a system. They are applied directly to the operator. For example, the purchase of floppy for Rs.400/- is a direct cost because we can associate the floppy box with money spent.

Direct benefits also can bc specifically attributable to a given project. For example, a new system that can process 30 per cent more transactions per day is a direct benefit.

Indirect costs are not directly associated with a specific activity in the system. They are often referred to as overhead expenses. For example, cost of space to install a syslem, maintenance of computer centre, heat, light and air-conditioning are all tangible costs, but it is difficult to calculate the proportion of each attributable to a specific activity such as a report,

Indirect benefits are realized as a by-product of another system. For example, a syslcrn that tracks sales calls on customers provides an indirect marketing benefit by giving additional information about competition. In this case, competition information becomes an indirect bcnciit although its work in terms of money cannot be exactly measured.

3.5.3 Fixed or Variable costs and benefits

Some costs and benefits remain constant, regardless of how a system is used, Fixed costs are considcrcd as sunk costs. Once encountered, they will not recur. For cxample, the purchase of an equipment for a computer centre is called as fixed cost as it remains constant whether in equipment is being used extensively or not. Similarly, the insurance, purchase of

software etc. In contrast, variable costs are incurred on a regular basis. They are generally proportional to work volume and continue as long as the system is in operation. For example, the cost of computer forms vary in proportion to the amount of processing or the length of the reports desired.

Fixed benefits also remain constant. By using a new system, if 20 percent of staff members are reduced, we can call it a fixed benefit. The benefit of personnel saving may occur every month. Variable benefits, on the other hand. are realized on a regular basis. For example, the library information system that saves two minutes in providing information about a particular book whether it is issued or not, to the borrower compared with the manual system. The amount of time saved varies with the information given to the number of borrowers.

3.5.4 How to define Cost-benefit analysis?

We can define cost-benefit analysis as

i) that method by which we find and estimate the value of the gross benefits of a new system specification.

ii) that method by which we find and determine the increased operating costs associated with the above mentioned gross benefits.

iii) the subtraction of these operating costs from the associated gross benefits to arrive at net benefits.

iv) that method by which we find and estimate the monetary value of the development costs that produce the above mentioned benefits.

v) those methods by which we show the time-phased relationship between net benefits and development costs as they relate to cash flow, payback on investment, and time-in-process taking(or not taking) into operation factors such as inflation etc. In short, the calculation of actual net benefit as cash flowback over Lime.

Check Your Progress 2

1. Name different types of benefits.

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2. Name different types of costs and benefits.

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3. Give a good definition of cost-benefit analysis.

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3.6 FACT FINDINGS

What is fact finding?

Fact finding means learning as much as possible about the present system.

How to do fact finding?

To do fact finding, the analyst does the following:

- interviews personnel
- prepares questionnaires
- observes the current system
- gathers forms and documents currently in use
- determines the flow of data through the system, and
- clearly defines the system requirements.

3.6.1 Interviewing

By studying this organisation chart, the analyst can confidently schedule interviews with key personnel involved with the system. Of course, there should be preliminary interviews. Later he will conduct a detailed interview with all the people who actually operate the system. Not only will these people use the newly developed system, but they also may be the ones most afraid of change, especially if they feel the computer might replace them. Like an investigative reporter trying to discover the who, what, when, why and how of a story, the analyst should conduct the interview in such a way that people provide honest descriptions of their jobs. The following questions can help accomplish this goal.

- Who is involved with what you do?
- What do you do?
- Where do you do it?
- When do you do it?
- Why do you do it the way you do?
- How do you do it?
- Do you have suggestions for change?

Interviews help gather vital facts about existing problems, such as lack of quality control or sufficient security, but they also allow the analyst to involve people in change, easing them into it. After all, it is the users' system, not the analyst's.

3.6.2 Questionnaires

Questionnaires economically gather data from both large and small groups of people. Properly constructed, they do not take long to complete and statistical results can be quickly tabulated. Development of a questionnaire requires in depth planning, and usually more than one draft is necessary.

At this point of time, you may like to go to the block on 'Case Studies' which is included as part of this course. The case studies given here pertain to developing an information systems for a general gymnatorium. More specifically, you will see that in Case 'C', there is an example of a somewhat free format interview from which the crucial problem areas have been identified by the interviewer, who is the Chief Systems Analyst. But in addition, in order to get a more quantitative response of the people to the scheduling and ticketing problems considered therein, there is a questionnaire to gather additional facts to determine the nature of complaints.

You may also have had occasions to respond to such questionnaires, sometimes in newspapers or sometimes from marketing personnel, who do door to door surveys.

Questionnaire design is critical. Questions should be short, easy to understand, unbiased, nonthreatening, and specific. To make sure questions will stimulate needed information, the analyst can test them with one or two outsiders before widespread distribution. Prepaid return envelopes accompanying questionnaires sent to outside help assure prompt response.

The analyst should send questionnaires to everyone involved with the system. A questionnaire works particularly well when the analyst must gather data from a large number of people, when the analyst must ask everyone the same questions, or when facts must be collected from people, such as suppliers, who do not work for the organisation.

Questions can follow four formats:

i) Multiple choice: This gives respondents a specific set of potential answers. The format is ideal for computer tabulating.

ii) Open ended: Respondents must answer the question in their own words. Space is provided under each question for the response.

iii) Rating: This is similar to multiple choice except that respondents must rate their satisfaction.

iv) Rank: Rank requires respondents to prioritise their responses fmm high to low or on a percentage basis.

Aware that most people do not spend a lot of time responding to questionnaire. Most analysts decide to mix question formats, including follow-up questions, within the original questionnaire to permit elaboration of certain responses. By so organising a questionnaire, the respondents have an opportunity to express their opinions freely, and yet answer quickly through the use of multiple-choice, rating, and ranking questions. When all the questionnaires are returned, the data can be tabulated.

If the results of a questionnaire survey are incomplete or confusing, the analyst may want to contact selected outsiders by telephone or in person. This requires tact, of course, and an understanding that the analyst's own pressing need may not concern outsiders in the least.

3.6.3 Observing the current system

The analyst may want to observe the existing system personally by following transaction, such as in invoice, through it. Direct observation allows the analyst to verify his or her understanding of the system. Instead of getting second-hand impressions about a specific task, the analyst can experience the actual process. However, he or she must remain outside the flow as an observer, so as not to introduce biases or changes in actual procedures. Observing a system requires caution. when people know they are being observed: They usually behave differently, working more efficiently and at higher speeds to impress the analyst.

In some instances, the analyst may find it useful to visit another organisation with a computerised system similar to the one under study. Finding a comparable installation may pose a problem, however. Some competitive organisations may not want to share their experiences, others may be too large or too small for accurate comparisons, and still others may be unwilling to waste employees' time demonstrating their system. Whenever visiting another organisation, an analyst should follow the rules of etiquette: make an appointment, research the organisation beforehand, know what he or she wants to see, and write a follow-up, thank you letter.

Hardware and software vendors can also supply valuable information. Computer sales representatives will gladly share their experiences with potential clients, and software firms will send brochures describing their programs. Although very useful information from such sources should be reviewed carefully because vendors are more interested in promoting their' products than in solving your problems.

Buying a product from a new business, such as the explosive software industry poses unusual problems. Customers cannot evaluate decades of performance history by the company, and not enjoying the benefits of an objective "consumer report" on new products, they often feel at the mercy of fast-talking salespeople. Therefore, it is important for people in the market

for software to ask some really tough but relevant questions. Any reputable supplier should be able to answer the following 15 questions without backpedaling.

i) Range of Products: Can you offer us a complete range of software system designed to work together? Or will we have to piece together a patchwork of systems to fully computerise our organisation?

ii) Decision Support Systems: Are your systems just record keepers, or can they really help us make decisions? Can we pull together information from any of our integrated systems in the desired form.

iii) In-House Development: Can you provide business software for both mainframe and microcomputers? Do you develop this software yourself or do you simply market it for another company?

iv) Online: Are your systems truly online? How many of your systems are online? How secure are they?

v) Debugging and Testing: Will my company have to be the one that discovers the bugs in your brand new system? Just how long have your systems actually been used, and how have they been tested?

vi) Updates: Will you update your systems as technology advances and regulations change? What are some of your most recent updates? Will you keep us current on regulatory change?

vii) Flexibility/Adaptability: Are your systems really adaptable to our unique needs? Or will we have to change or add to them ourselves to get the features we want?

viii) History/Performance: How long have you been in business? What are your revenues? What is your growth record? Where will your company be in five years from now? Can you show me an annual report?

ix) Other Customers: How many systems has your company installed? How many of these were installed in the past six months? How many of your earlier customers are still using and liking your systems?

x) Security: Are your systems secure? Do you provide password type protection and to how many levels? What other type of security provisions do your systems have?

xi) Networking: Can you link our executives' personal computers directly to the mainframe, so they can get their own information? Is that software available right now?

xii) Training Support: How will you make sure our own people thoroughly understand your system? Do you have educational centres near us or will we have to travel all the way across the country to find one? Will you be there to help during installation and after?

xiii) In-House Specialists: How many of your people specialise in software for my industry? How many accountants work for you? Human resource specialists? Manufacturing experts?

xiv) Special Features: Do your systems have built-in features that make them easier to use? What happens if someone needs help figuring out a feature? Do you have online documentation that is easy to understand?

xv) Upgrading: As my business changes will your system be flexible enough to change with it? Or will we have to pay a lot to revamp it? Or even regenerate it?

3.6.4 Determination of DFD

Armed with interview results, tabulated questionnaires, and experience through personal observations, the analyst is ready to describe the current system in narrative form, with a data-flow diagram, or with a system flowchart. Since all organisations have an accounts payable (AP) system let us begin with such an example using a context DFD. A context DFD defines

the system under study in a general form, showing:.

Inputs to AP: Packing slips, invoices, checking account balances, payment notifications.

Outputs from AP: reports to management, cheque to suppliers.

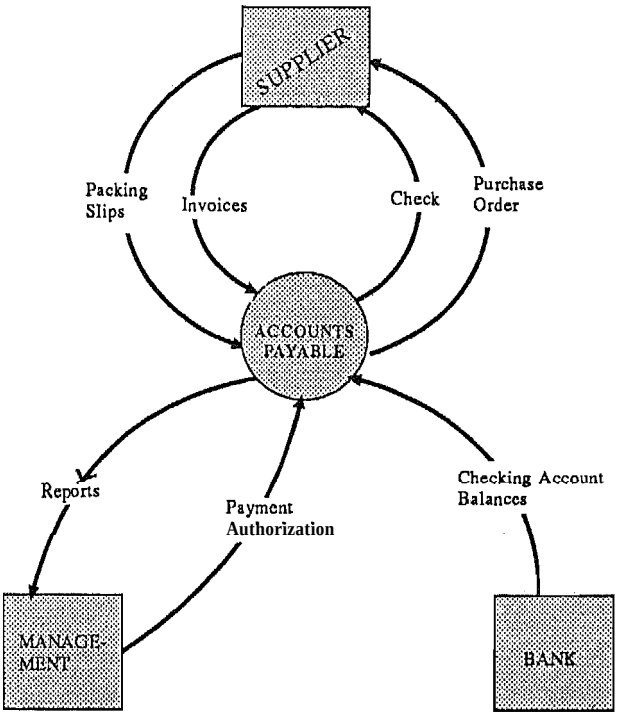

Figure 3.1: A context data-flow diagram depicts a typical accounts payable system in its broadest perspective, not showing any of the details or internal processes,

A context DFD does not show any detail but is an overview drawing of the system. It is an excellent diagram to share with management whose interest is general in nature. Context DFDs place a boundary around the system under investigation, saying that this is what will be examined - nolhing more and nolhing less:

After developing a context DFD, the analyst turns his attention to the details of accounts payable. Management reviews inventory reports and dctcrmines what lo order from suppliers: ordcrs are placed by the accounting department using a purchase order/requisition: on delivery, merchandise and packing slips cntcr the warchouse, and packing slips are sent to the accounting department, which receives invoices directly from suppliers, while merchandise stays in the warehouse or goes to a distribution outlet. Accounting clerks compare purchase order requisitions with invoices and packing slips to make sure all invoiced items have actually arrived, and then post the purchase to the supplier's lcdgcr. At the end of cach month, the accounting department prepares a report of balances due suppliers and an inventory report for management evaluation.

These detailed activities by the accounting department, management, warchouse personnel, the bank and suppliers add up lo six major activities (Figure 3.2):

1. Generation of reports
2. Ordering of stock
3. Printing of cheque
4. Posting of accounts
5. Reconciliation of bank statements
6. Authorisation of payment

During the design phase of the systems process, the analyst will study each of these activities

further, lcvcling the data-flow diagram of Figure **3.2** into far more details.

To draw the analysis DFD:

1. Look at the system from the inside to the outside
2. Identify the activities
3. Locate the data flows
4. Show the relationships between activities
5. Find the internal inputs or outputs that exist within the system
6. Level complex processes in the DFD into simpler ones
7. Look for duplication of data flows or data stores (files)

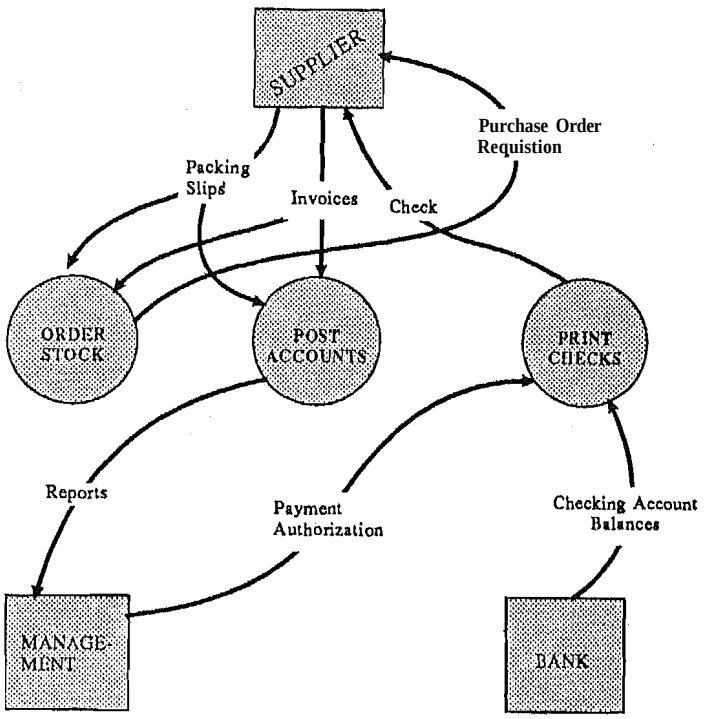

Figure **3.2**

While dctcrmining the flow of data, the analyst collects samples of all relevant documents, such as sample cheques, invoices, packing slips, and other relevant forms. To create a record of all purchases from and payments lo suppliers, a manual system requires that someone prepare a lcdgcr entry for each supplier.

The assembled documents help an analyst understand what data the new system must collect and process. For example, the company can easily obtain the following data from the invoice itself:

1. Supplier name, address, and telephone number
2. Invoice number
3. Invoicc date
4. Invoicc
5. Terms of invoice
6. Amount of invoice.

From the packing slip, it can obtain:

1. Supplier name

2 Shipping date

3 Date goods are received

4. Freight charges

5 Invoice number

Packing slips are carbon copies of invoices omitting certain data, such as the money value of the shipment. The warehouse clerk checks the merchandise receivcd against the packing slip to be sure everything is in the carton and notes any discrepancies. Then the packing slip goes to accounting for comparison with invoices to be sure that the company received what it is paying for.

The ledger offers two categories of facts - supplier data and purchase/payment history:

1. Supplier name

2 Supplier address

3. Supplier telephone number

4. Date of transaction

5. Description of transaction

6. Amount of invoice or payment

7. Discount

8. Balance due the supplicr

Each cheque sent to a supplier contains the following data:

1. Invoice number

2. Cheque number

3. Amount of payment

4. Payment date

In addition to these documcnls, it is useful to have copies of reports prepared by the accounting department.

3.6.5 New System

During fact finding, an analyst acts as a researcher, gathering facts, figures, and documents and coming to grips wilh the entire scope of the problem. Now he must decide what can be done, what it will cost, and the benefits expected Io be derived from the new system.

The first step is lo generate a list of alternative solutions to the existing accounts payable problem. Possible solutions range from doing nothing to installing a fully computerised AP system. In such a case there could bc four alternatives:

i) Do nothing leaving the existing system alone

ii) Hire more staff, partially automate the system, but continue with essentially a manual system

iii) Purchase AP software from an outside software supplicr

iv) Design, program, and install a customized AP system

When all necessary facts, figures, documents, data-llow diagrams, questionnaires and observations are complete, the analyst can write the final report. The format of the final report, called the feasibility study, parallels that of the preliminary report. It starts with a restatement of the problems and its importance, followed by a list of the study's objectives, a review of the analyst's findings, tallies of expected costs and savings, and the analyst's recommendations.

In a large organisation; the analyst may use a standardised form for the final report, in smaller organisations, the analyst simply chooses the most logical format. In any case, the analyst distributes the typed, photocopied report to the manager who will decide whether to adopt, modify, or rcjcct the recommended solution.

After management has thoroughly considered the feasibility study, it calls a meeting to discuss the study and to choose a course of action. This meeting should take place a few days after the study's distribution and should be conducted by the manager of the computing services department or whoever requested the analysis. The analyst plays a major role'and should be well prepared to answer questions and supply needed information. In fact, the analyst should rehearse the presentation in order to identify and improve upon weak areas.

If the analyst leads the mecting, he or she must exercise control. The following rules are helpful.

i) Never read the feasibility study aloud; instead, summarise it, while trying to lead the audience to support the studv's recommendations.

ii) Use visual aids, such as chalkboards, flipcharts, slides, photographs, and overhead transparencies.

iii) If appropriate, demonstrate equipment or software to show how it will work.

Often one key individual must be convinced, and this person will influence the others to follow. If all goes well, the meeting will end with a decision to implement the analyst's recommendations.

After the meeting, management notifies all appropriate staff members of its decision. If managcmcnt has decided to proceed to the design stage, the notification memo explains the plan briefly and establishes an overall schedule. Even if managcmcnt decides to maintain or modify the current system, it should still issue a memo, or people will wonder why the company wasted time with a study that produced no results.

After a dccision to proceed, analysis ends and design begins. The analyst will organise all the memoranda, questionnaires, interview documents and forms, data-flow diagrams, and reports from both the preliminary and detailed analysis into one file, which becomes the analysis documentation.

3.7 SUMMARY

The determination of whether or not a project is worth doing is known as feasibility. Once it has been determined that the project is worth doing i.e. the project is feasible, the analyst can go ahead and prepare the project specification which finalizes project requirements. The process by which we determine whcthcr a project is feasible or not is called feasibility study. There arc seven types of feasibility which are discussed in this unit, Different steps involved in the feasibility analysis are listed and an investigative study is made in this unit.

3.8 MODEL ANSWERS

Check Your Progress 1

1. Feasibility is the determination of whether or not a project is worth doing:
   The process followed in making this determination is called a feasibility study.
   Feasibility study determines if a project can and should be done.

2. The seven types of feasibility are:

   i) Technical feasibility

   ii) Operational feasibility

iii) Economic feasibility

iv) Social feasibility

v) Management feasibility

vi) Legal feasibility, and

vii) Time feasibility.

3. Technical feasibility is concerned with specifying equipment and software that will successfully satisfy the user requirement.

4. The main points to be cdnsidcred in Operational feasibility are :

i) What changes will be brought with the system?

ii) What organizational structures are disturbed?

iii) What new skills will be required?

iv) Do the existing staff members have these skills?

If not, can they be trained in due course of time?

Check Your Progress 2

1. The four types of benefits are:

i) Cost-savings benefit

ii) Cost-avoidance benefit

iii) Improved-scrvicc-level benefit

iv) Improved-information benefit.

2. Costs and benefits can be classified as follows:

i) Tangible or intangible costs and benefits

ii) Direct or indirect costs and benefits

iii) Fixed or variable costs and benefits

3. Costs-benefits analysis can be defined as the method by which we find and estimate the value of the gross benefits of a new system specification.