

Systems analysis and design

In this chapter you will learn about systems analysis and design, specifically:

- the analysis stage
- the design stage:
 - validation
 - verification
- the development stage
- the testing stage
- the implementation stage, particularly changeover methods
- documentation
 - user documentation
 - technical documentation
- evaluation.

8.1 Introduction

A **systems analysis** team is often brought in to review an existing system and suggest a number of improvements. The existing method used may be either a manual paper-based system or a computer-based operation that is no longer regarded as adequate for the task.

There are many stages in systems analysis, as shown in Figure 8.1. These are covered in Sections 8.2 to 8.7.

8.2 Analysis stage

The basic steps in the **analysis** stage can be summarised as follows:

- 1 fact finding/collecting data from the current system
- 2 description of the current system – establishing the inputs, outputs and processing being done
- 3 identification of the problems with the current system
- 4 agreeing the objectives with the customer
- 5 identifying and agreeing the customer's requirements
- 6 interpreting the customer's requirements
- 7 producing a cost-benefit analysis
- 8 producing a data flow diagram.

Stages 2 to 7 are sometimes referred to as the **feasibility study** and this can be further broken down as shown in Figure 8.2.

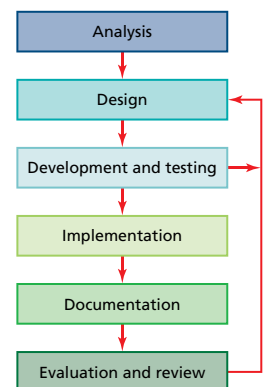


Figure 8.1 The stages in systems analysis

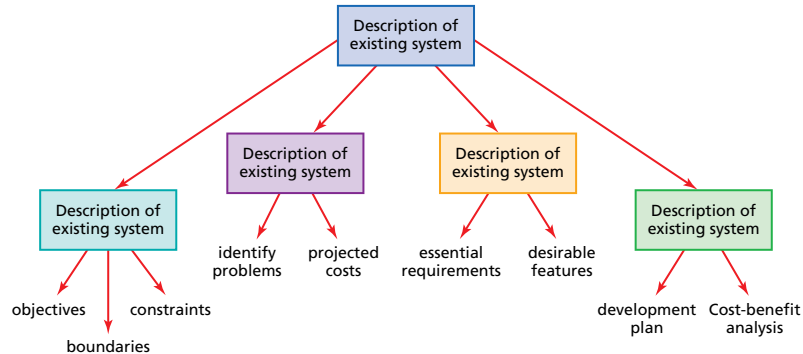


Figure 8.2 Stages in a feasibility study

Let us now consider the first item in the analysis stage – **fact finding**. There are four common methods used in fact finding, which have been summarised in Table 8.1 overleaf. The methods are: **observation, questionnaires, interviews** and **looking at existing paperwork**.