

and *Management Handbook* (1965). The handbook tells us that the design process may be divided into four phases:

Phase 1 assimilation

The accumulation and ordering of general information and information specifically related to the problem in hand.

Phase 2 general study

The investigation of the nature of the problem.

The investigation of possible solutions or means of solution.

Phase 3 development

The development and refinement of one or more of the tentative solutions isolated during phase 2.

Phase 4 communication

The communication of one or more solutions to people inside or outside the design team.

However, a more detailed reading of the RIBA handbook reveals that these four phases are not necessarily sequential although it may seem logical that the overall development of a design will progress from phase 1 to phase 4. To see how this might actually work, however, we shall examine the transitions between the phases.

Actually, it is quite difficult for the designer to know what information to gather in phase 1 until there has been some investigation of the problem in phase 2. With the introduction of systematic design methods into design education it became fashionable to require students to prepare reports accompanying their designs. Frequently such reports contain a great deal of information, slavishly gathered at the beginning of the project. As a regular reader of such reports, I have become used to testing this information to see how it has had an impact on the design. In fact, students are often unable to point to any material effect on their solutions for quite large sections of their gathered data. One of the dangers here is that since gathering information is rather less mentally demanding than solving problems there is always a temptation to put off the transition from phase 1 to phase 2. Professional designers are unlikely to succumb to this temptation since they need to earn their living, but students often do, and such a map often serves only to encourage unproductive procrastination!

The detailed development of solutions (phase 3) rarely goes smoothly to one inevitable conclusion. In fact such work often

reveals the weaknesses in the designer's understanding of the problem and grasp of all the relevant information. In other words there is a need to return to phase 2 activities!

Even more sobering is the experience common to all designers, that when they show possible solutions to their clients (phase 4) only then will the clients see that they have described the problem badly (phase 1).

We could go on analysing the map in this way, but the general lesson would remain the same. Although it may seem logical that the activities listed here should be performed in the order shown by the map, the reality is much more confused. What the map does is to tell us that designers have to gather information about a problem, study it, devise a solution and draw it, though not necessarily in that order. The RIBA handbook is very honest here in declaring that there are likely to be unpredictable jumps between the four phases. What it does not tell us is how often or in what way these jumps are made (Fig. 3.1).

If we turn on through the pages of the RIBA handbook there is yet another, much larger scale map to be found. Because of its immense detail this 'Plan of Work', as it is called, looks much more promising at first sight. The plan of work consists of twelve stages described as a logical course of action:

- A Inception
- B Feasibility
- C Outline proposals
- D Scheme design
- E Detail design
- F Production information
- G Bills of quantities
- H Tender action
- J Project planning
- K Operations on site
- L Completion
- M Feed-back

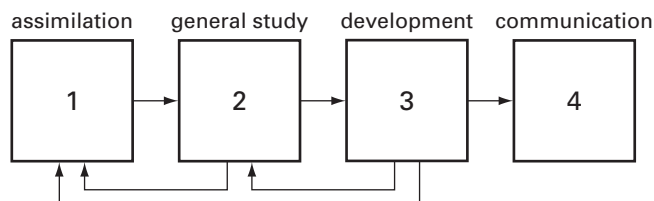


Figure 3.1

A map of the design process according to the RIBA plan of work