Levels of process detail

The management and ownership of processes takes place at various levels in an organization. For example, the high level process framework for the organization and strategic processes, such as 'define company direction,' are owned at the executive level, with tactical processes such as 'deal with an enquiry,' at lower levels. The detail required at each level can be provided by process chevron diagrams which simply show and list activities and process analysis techniques such as IDEFØ /ICOR maps or flow-charting and swim lane diagrams (see Figure 10.10). As one chief executive commented, 'I need to understand the process, but I don't want to see pages of wiring diagrams!' A key challenge in making best use of process management tools is to pitch the definition at the most appropriate level, bearing in mind the nature of the improvement likely.

PROCESS FLOWCHARTING

Another powerful method of describing a process is flowcharting which owes much to computer programming, where the technique is used to arrange the sequence of steps required for the operation of the programme. It has a much wider application, however, than computing.

Certain standard symbols are used on flowcharts which are shown in Figure 10.11. The starting point of the process is indicated by a circle. Each processing step, indicated by a rectangle, contains a description of the relevant operation, and where the process ends is indicated by an oval. A point where the process branches because of a decision is shown by a diamond. A parallelogram relates to process information but is not a processing step. The arrowed lines are used to connect symbols and to indicate direction of flow. For a complete description of the process, all operation steps (rectangles) and decisions (diamonds) should be connected by pathways to the start circle and end oval. If the flowchart cannot be drawn in this way, the process is not fully understood.

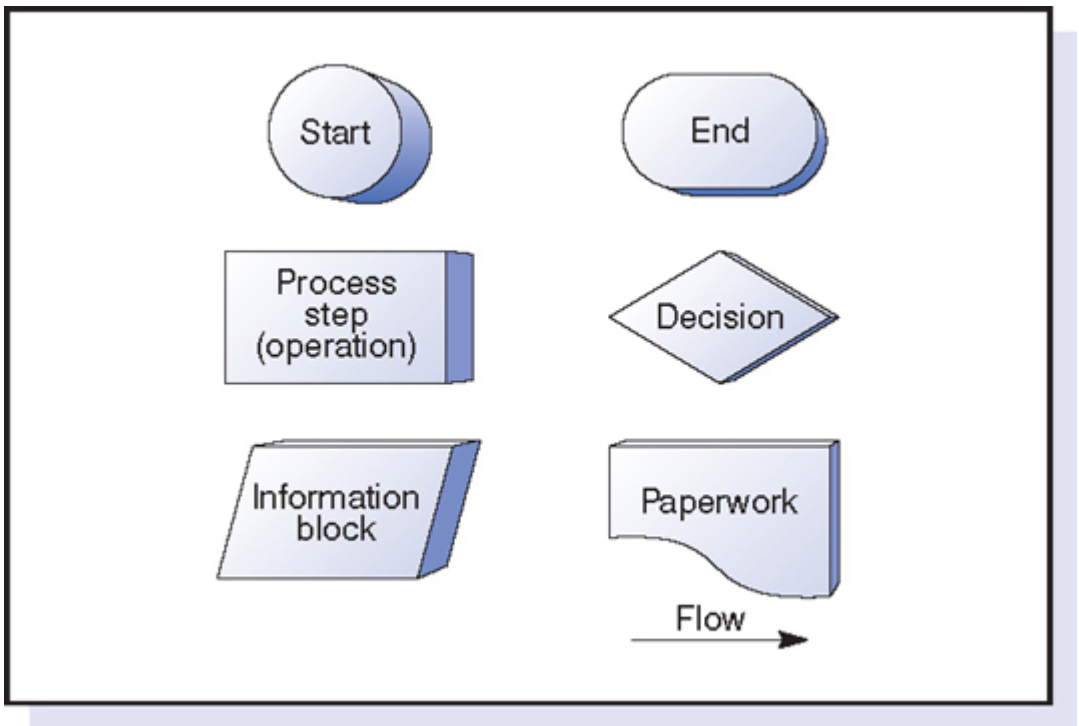

Figure 10.11
Flowcharting symbols

It is a salutary experience for most people to sit down and try to draw the flowchart for a process in which they take part every working day. It is often found that:

- The process flow is not fully understood.
- A single person is unable to complete the flowchart without help from others.

The very act of flowcharting will improve knowledge of the process, and will begin to develop the teamwork necessary to find improvements. In many cases, the convoluted flow and octopus-like appearance of the chart will highlight unnecessary movements of people and materials and lead to common-sense suggestions for waste elimination.

Figures 10.12 and 10.13 provide a before and after example of flow-charting in use to improve a travel booking procedure in a company. The total time taken for the starting or 'as-is' procedure, excluding the correction of any errors and the preparation of overview reports, was 23 minutes per travel request, the flowchart for the process shown in Figure 10.12. An improvement team was set up to analyse the process and make recommendations for improvement, using brainstorming and questioning techniques. They made proposals to change the procedure and the flowchart for the improved or 'to-be' process is shown in Figure 10.13. The proposal reduced the total administrative effort per travel request (or per travel arrangement, because the travel request was eliminated) from 23 minutes to 5 minutes.

The details that appear on a flowchart for an existing process should be obtained from direct observation of the process, not by imagining what is done or what should be done. The latter may be useful, however, in the planning phase, or for outlining the stages in the introduction of a new concept. Such an application is illustrated in Figure 10.14 for the installation of statistical process control (SPC) charting systems (see Chapter 13). Similar charts may be used in the planning the implementation of quality management systems.

It can be surprisingly difficult to draw flowcharts for even the simplest processes, particularly managerial ones, and following the first attempt it is useful to ask whether:

- The facts have been correctly recorded.
- Any over-simplifying assumptions have been made.
- All the factors concerning the process have been recorded.

The author has seen too many process flowcharts that are so incomplete as to be grossly inaccurate. Flowcharts should provide excellent docu-mentation and be useful trouble-shooting tools to determine how each step is related to the others. By reviewing the flowchart, it should be possible to discover inconsistencies and determine potential sources of variation and problems. For this reason, flowcharts are very useful to process improvement teams when examining an existing process to highlight the problem areas. A group of people, with the knowledge about the process, should take the following simple steps:

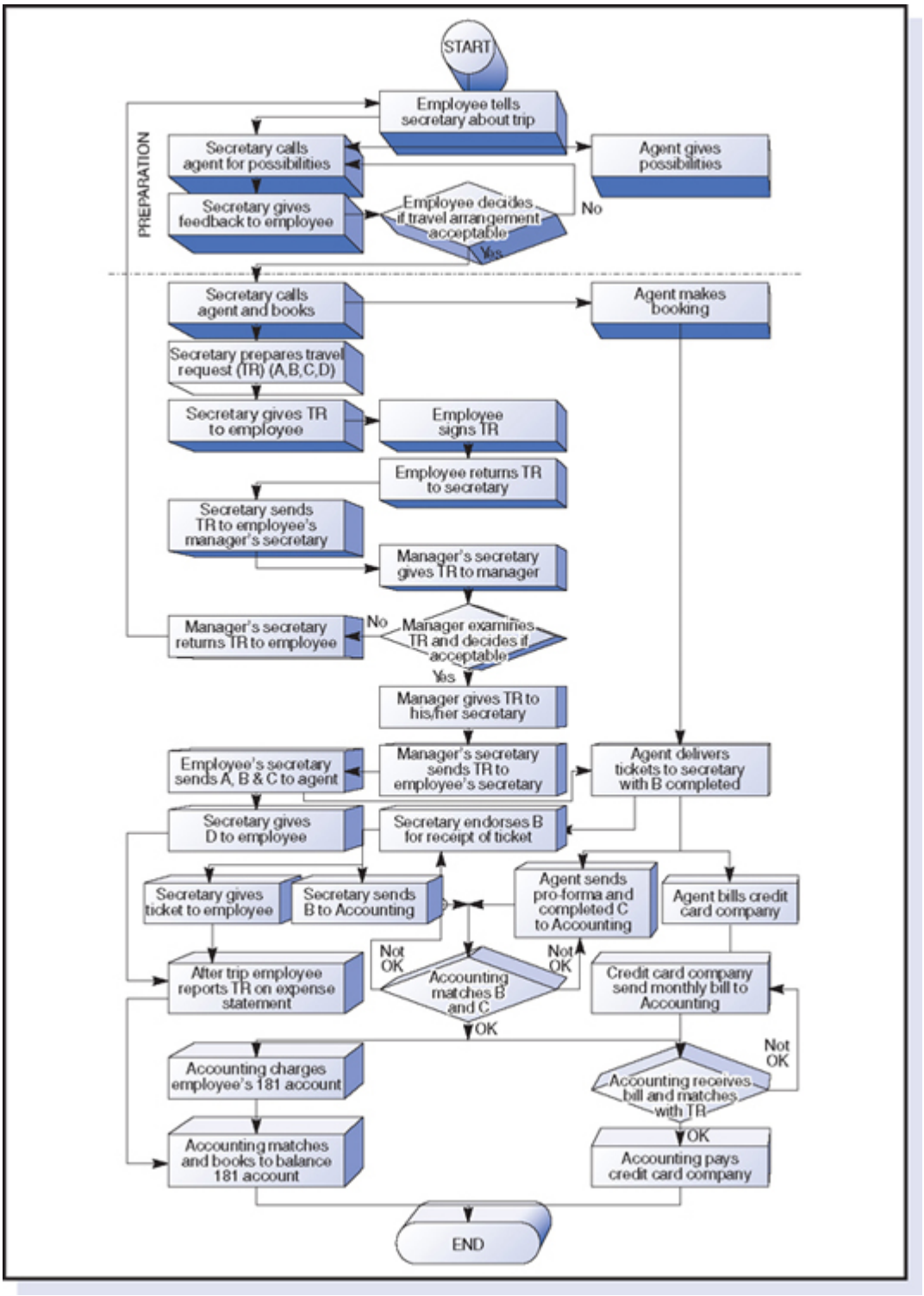

Figure 10.12
Original process for travel procedure

1. Draw a flowchart of existing process.
2. Draw a second chart of the flow the process could or should follow.
3. Compare the two to highlight the changes necessary.

   A number of commercial software packages which support process flowcharting are available.

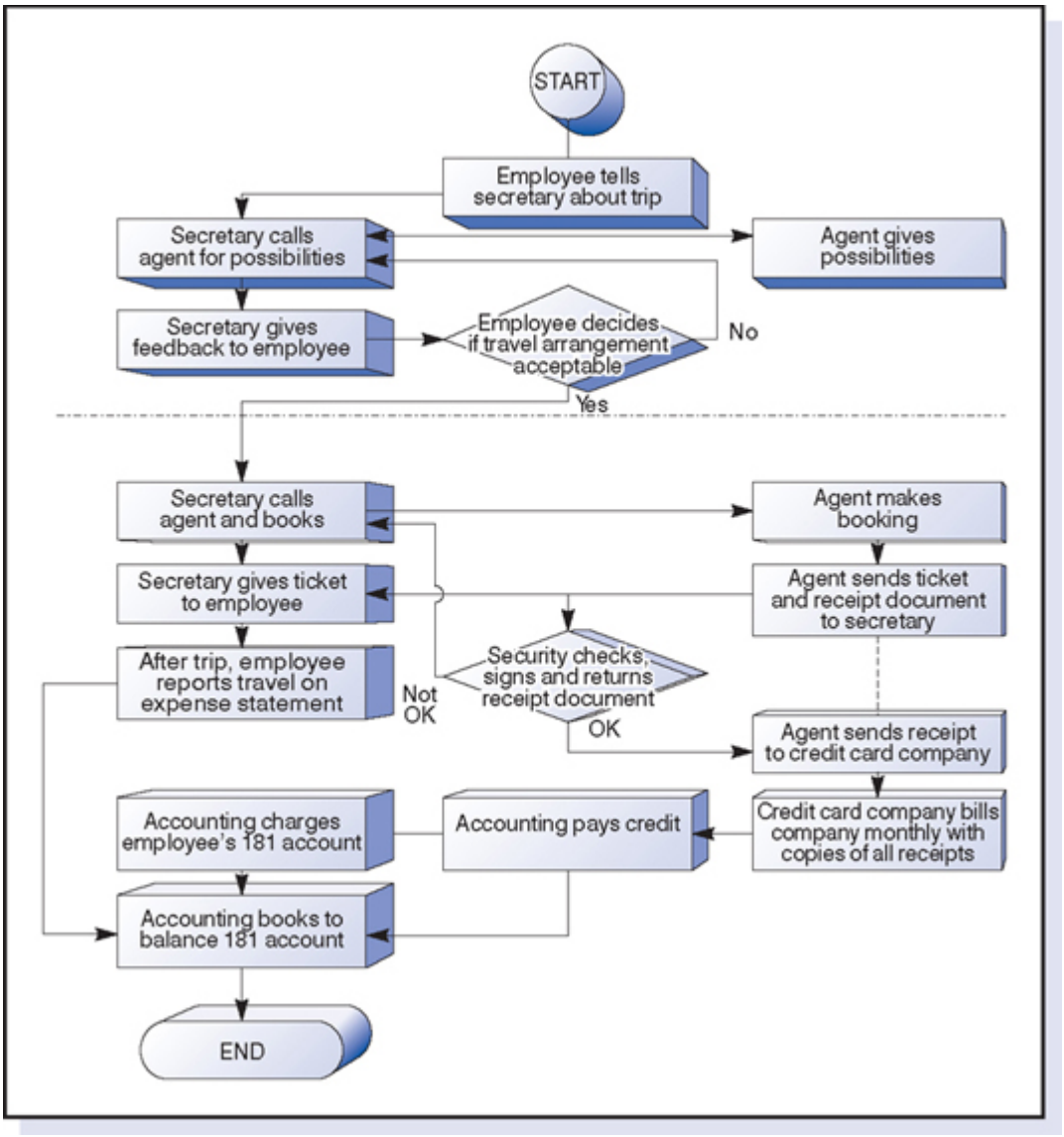

Figure 10.13
Improved travel procedure

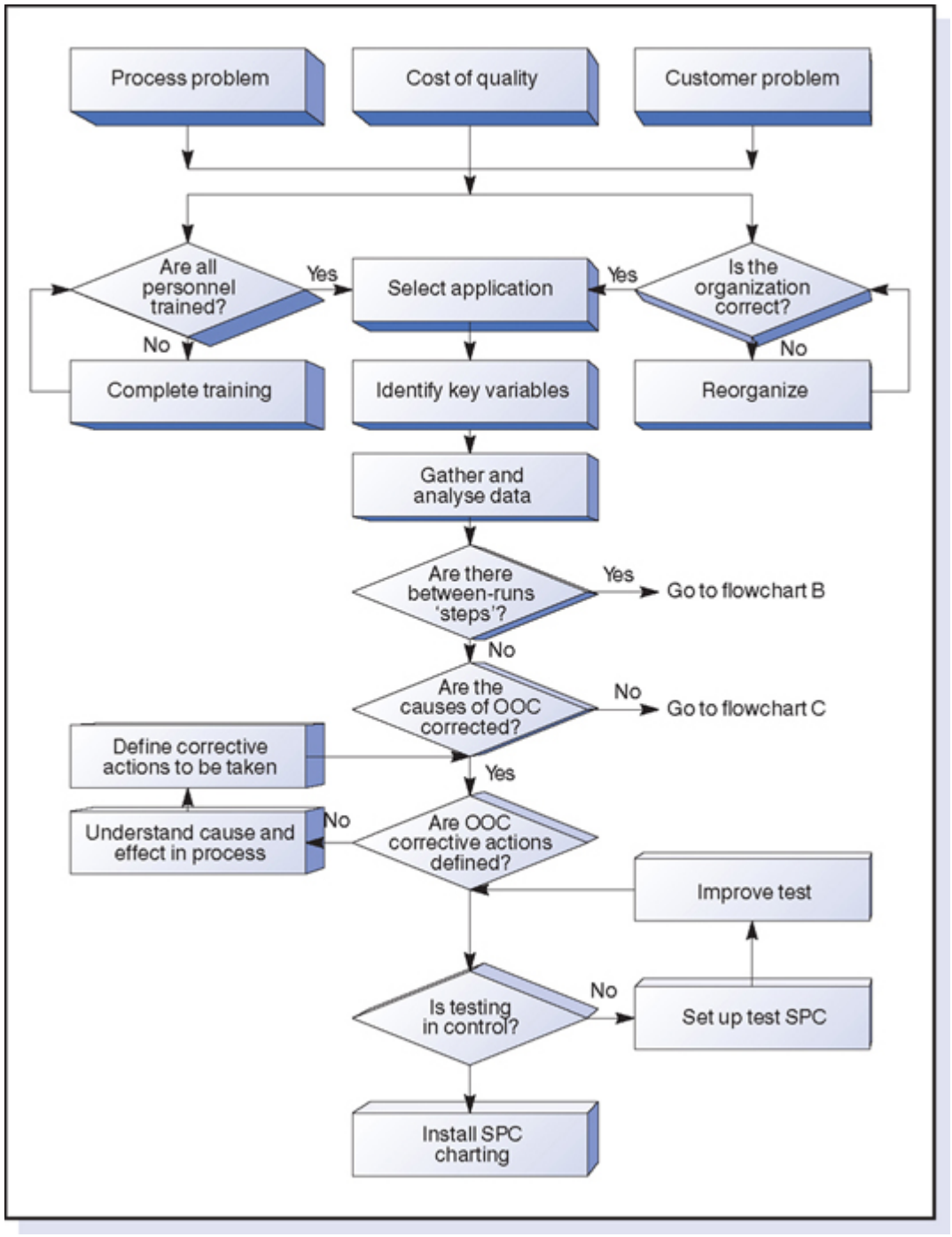

Figure 10.14
Flow chart for SPC implementation