

28.1 STEPS IN PROJECT PLANNING

Project planning involves the following steps:

- 1 defining the objective(s) of the project
 - 2 dividing the project into major tasks that need to be undertaken to complete the project
 - 3 defining the specific activities that need to be undertaken to complete the major tasks
 - 4 mapping the activities into a format that clearly depicts their sequence and interdependencies
 - 5 estimating how long it will take to complete each activity
 - 6 estimating how much each activity will cost
 - 7 calculating the overall project timeline and budget.
- A completed project plan will likely include some or all of the following topics/sections:
- Document details including project name, version number, project purpose and content, security (who can access the document), plan author, plan maintainer.
 - A project overview that briefly describes the project, provides its background and states objectives.
 - Identification of stakeholders such as specific clients within the organisation, the project team, senior management, other relevant organisations and external consultants / experts.
 - The responsibilities of project stakeholders.
 - Project deliverables (see below).

- *Project constraints such as the schedule, budget, human resources, technology resources and quality standards that the project will adhere to.*
- Project team management – the processes will be used to identify, secure and maintain an effective project team.
- Communication management – the form and frequency of reporting and communication that will be adopted by the project team and between the project team and stakeholders.
- Risk management – a brief statement of how known and identified risks will be managed.
- Project documentation management – the names, purpose and source of documentation that will be produced and/or supported as part of project management.
- Project time and work management – overview of how the schedule and work breakdown and staff resource allocation will be maintained on the project. What techniques and tools will be employed to manage and control the project so that progress and the status of every project resource can be identified?
- Change management – how changes to project content, deliverables, budget and timeline will be managed. Up to what stage in the project will changes to the objectives and content of the project be able to be made? Who has authority to approve changes? How will the schedule and budget impact of such changes be calculated and communicated?
- Quality management – the techniques used to ensure that all project activities and outcomes comply with all relevant standards, procedures and specifications.
- Project resource requirements.
- Project budget and cost management – the steps and activities that will be undertaken to ensure that the project is completed within the approved budget.
- Evaluation – the activities that will be used to validate that project outcomes align with project objectives and the requirements of the client.

Project definition

A critical step in project planning is developing a statement of project scope and objectives in consultation with colleagues and managers and, where appropriate, relevant consultants or experts.

Clear and precise project definition is one of the most important actions that can be taken to ensure project success. Where project scope and objectives are clear, the more likely it is that they will be achieved. Defining a project is a process of selecting and reducing the ideas and perspectives of stakeholders into a set of clearly defined objectives and key success criteria. At the minimum, a project definition should include a statement of the business need that the project is intended to meet and a description of its output (that is, product, service or deliverable business objective).

Defining a project can begin with asking stakeholders a standard set of questions including:

Project purpose

What is the reason for doing the project?

What essentially is the project about?

Who wants it done and why?

What should the project be titled?

Project scope

What work must be done to produce project outcomes?

What processes need to be employed to create them?

A statement of scope makes clear where a project begins and ends, and what is needed to satisfy the client or organisation management that project deliverables will meet agreed performance criteria.

Project goals or targets

What needs to be achieved?

By when do outcomes need to be achieved?

Why are these goals vital to the project?

Project objectives and deliverables

What specific measurable objectives need to be developed from broad project aims or goals?

These objectives will inform the project team, and organisation of the extent to which goals or aims are being met and to what standard. Measurable objectives provide a means of determining if certain project milestones (or way points) including the final one of project completion have been reached. When achieved, measurable objectives demonstrate the degree to which beneficial gains have been realised, goals have been met, and that the purpose of the project has been achieved.

The success or failure of projects is correlated with the extent to which projects demonstrate that they deliver outcomes (project 'deliverables') that meet real organisational needs. Research has shown that when a project produces deliverables that are designed to meet a well-documented and recognised need, then there is a greater probability that the project will be successful. Therefore, managers should require a documented business case or argument for a project before agreement to allocate organisational resources to complete it can be given.

The fundamental objective of projects is to deliver something new or different. It is not always easy to differentiate between aims (goals), objectives and deliverables. An organisation may have an aim or goal to adopt more flexible working practices

that improve employee morale and increase productivity. Some specific measurable objectives may include increasing productivity by 10 per cent, lowering customer service complaints by 20 per cent or decreasing staff turnover to 5 per cent or less. Project deliverables are the tangible items that a project team is required to provide either during or at the end of a project. This could include developing a work-life balance policy and related strategies for evaluation by the organisation and its employees. Interim reports on progress required by senior management would also be an example of project deliverables.

A project definition document (sometimes referred to as a project charter) should be approved and issued by a manager with the authority to allocate organisational resources to the project.

Projects require clear approvals and sign-off by sponsors. Clear approval points, accompanied by formal sign-off by sponsors and other key stakeholders, should be milestones in the creation of project deliverables.

Determining project tasks and activities

Once project scope and objectives have been defined, the next step is to identify tasks and activities that need to be performed to complete the project. An approach to preparing a list of tasks/activities that is suitable for small projects is to have the project team 'brainstorm' the list. However, for large and more complex projects, a brainstorming approach is likely to overlook some items. For larger projects, developing a work breakdown structure (WBS) is recommended.

A WBS breaks a project down into manageable pieces to help ensure that all of the tasks needed to complete the project are identified. A WBS is a task-orientated hierarchical tree of end items that will be completed or created by the project team during the project. Completion of the project work scope occurs when all of the tasks have been achieved.

An example of a WBS for a staff satisfaction survey is shown at figure 28.1. A work package describes an item (or project deliverable) at the lowest level in a WBS. Not all paths through or branches of the WBS have to be broken down to the same level. A WBS often indicates the organisation or individual responsible for each item.

Deciding how much detail or how many levels to put in the WBS is guided by two criteria:

- 1 the level at which a person, team or organisation can be delegated authority, responsibility and accountability for achieving the work package
- 2 the level at which a project manager needs to monitor and control the budget and collect cost data during the project.

There is not a single correct WBS for any project. It, for example, is not unlikely that two different project teams might develop somewhat different WBSs for the same project.

In preparing a WBS, the top level (level 0) is the overall project to be completed. The next level (level 1) depicts tangible project deliverables. This level provides information about what has to be changed or produced to ensure that the project delivers agreed outcomes. After the project deliverables are described, the activities that must be undertaken to produce each deliverable are then defined at subsequent levels. This process is continued, breaking larger components of work into a series of smaller and smaller elements.

Smaller project WBSs may not require more than two or three levels of activities. For a very large project, the levels might extend to four or five levels. A point at which the detail will be too complex to manage needs to be recognised.

A practical method of developing a WBS is to write project deliverables and associated tasks/activities on Post-It notes and to place them on a whiteboard, matching each deliverable with its supporting tasks or activities. At a later time the project team can return to the whiteboard and rearrange the Post-It notes so that they are grouped in more sensible ways. Appropriate titles for each of the activity groups can then be determined. Finally, activity groupings can be converted into a WBS, which may be presented as a chart (as in figure 28.1) or as a numbered indented list.

Project scheduling methods

After identifying the tasks and activities that need to be completed, they need to be sequenced, the critical path identified and estimations of required resources need to be made and resources allocated. An examination of a number of methods used to integrate these internal planning variables and which depict the relationship between them in a graphic or schematic way follows.

A project schedule is a presentation of the tasks required, their sequence, duration, and resource requirements. Project schedules are frequently presented in the format of Gantt charts or milestone charts that pinpoint significant events in the life of a project. Milestones can quickly establish whether a project is on schedule and they can be an effective means of reporting on project status to management and stakeholders, as well as providing periodic sign-off points where required by any stakeholders.

Project scheduling commences with sequencing the detailed activities from the WBS in chronological order. The fact that sequencing is undertaken now is the reason why it does not matter how the initial WBS is structured, provided that all of the necessary work tasks are identified in the WBS. To order the separate tasks or activities, it is necessary to identify any interdependencies between the separate tasks. What must be done first and what tasks can be undertaken concurrently, or which tasks may be or must be completed sequentially?

Project scheduling is often done through the preparation of network diagrams, where the tasks in the WBS are placed according to the relationships amongst them. There are several ways of creating a network diagram.

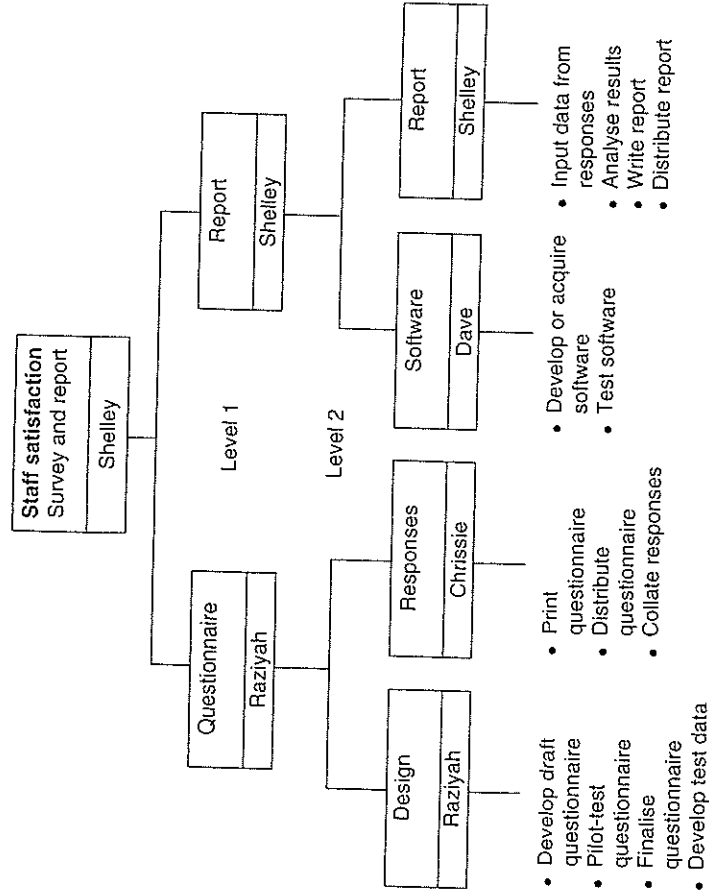


Figure 28.1 A work breakdown structure for a staff satisfaction survey

As the foundation for a project plan, a WBS:

- is a project management tool that provides a means of coordinating a project
- summarises information at various levels of project management and provides information on the projected, actual and current status of work packages
- keeps the program's status constantly visible so that the project manager can take action to ensure performance is as per the project plan
- is a document that shows the work involved in completing the project
- should be kept simple and where possible restricted to a one page diagram that conveys relevant information about the project framework
- is not a 'to do' list of every possible thing that needs to be done in the project', rather it consists of the work assignments for which project team members will be accountable for completing
- should reflect the way the work will be performed and the way in which project costs and data will be summarised and reported
- provides a framework on which costs, time and schedule performance at each level can be compared against project estimates and budget
- identifies all the major work to be done, but not the timing and sequence of the activities.