

Project timeline views

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Abstract

A temporal perspective of a project gives valuable insights and control advantage regarding tasks, milestones, and associated resources.

1 Introduction

A typical work breakdown structure of a project (Perdicoulis, 2013, WBS) indicates important pathways, such as those from milestones to tasks (Figure 1). On the other hand, other important relations are not evident — for instance, how the various tasks depend on each other. And, although the tasks and milestones are time-stamped, it is not easy to visualise how the project flows along time.

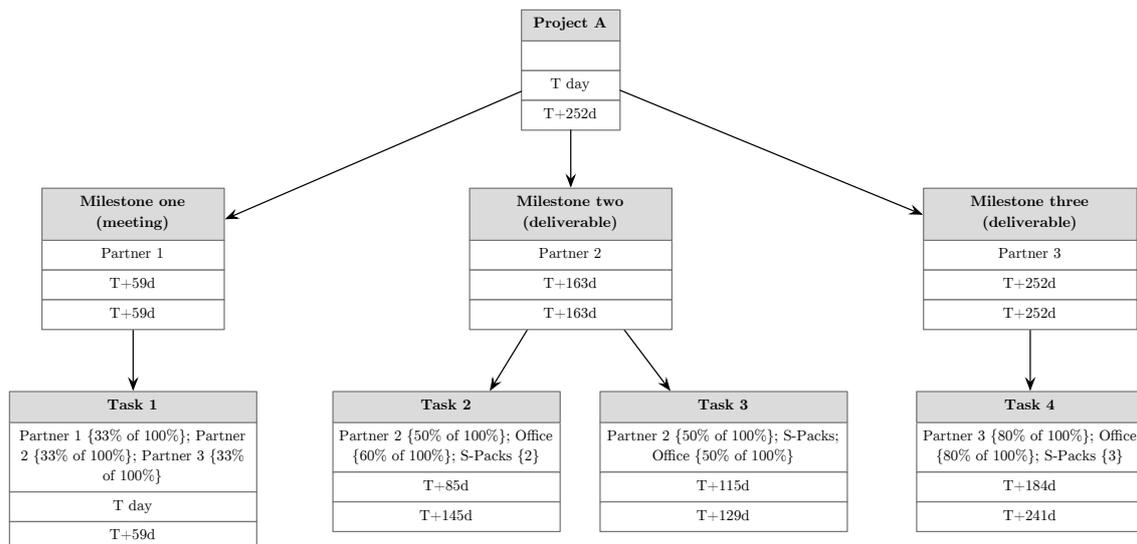


FIGURE 1 A fairly detailed WBS — not on a timeline, though

2 Sequence view

Figure 2 presents the project tasks and stages in a functional sequence that defines a process (Perdicoulis, 2010, pp.67–70). Figure 2 is special in the sense that it also contains resources associated with each task and milestone — e.g. the people responsible for each task or milestone, their duration, and consumables.

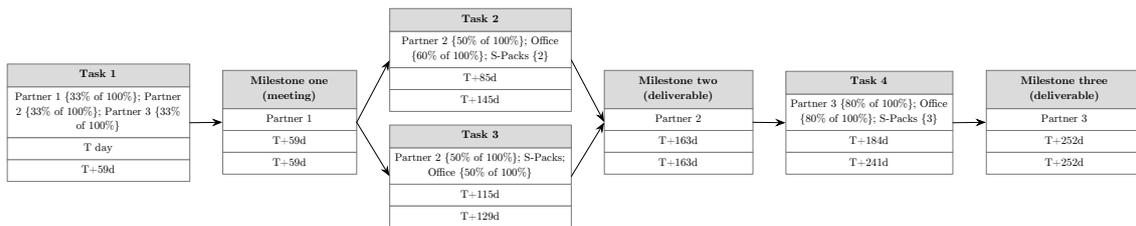


FIGURE 2 The project process as a timed sequence of tasks and milestones — i.e., special stages or outcomes of the project

For projects involving *alternative* parallel tasks, a display such as Figure 2 is a good way to discover the shortest or fastest pathways, also known as ‘critical paths’. This type of diagram is technically known as ‘PERT’, or ‘project evaluation and review technique’ (Perdicoulis, 2011, pp.48–52).

In the case of non-alternative parallel tasks, it is convenient to identify the longest paths of a project — for instance, which pathway delays the project the most. That could be a candidate for a project optimisation, aiming to find out how to shorten that path — e.g. by special training or practice, to carry out the tasks faster.

3 Dependency view

Figure 3 shows an alternative view of the project process, together with the associated resources, which is known as a ‘Gantt chart’ (Perdicoulis, 2011, pp.47–48). Such charts are popular for their facility to graphically represent and shape the *timing and duration* of the tasks and milestones, represented by bars of proportional length, as well as the *dependencies* between them, represented by arrows.

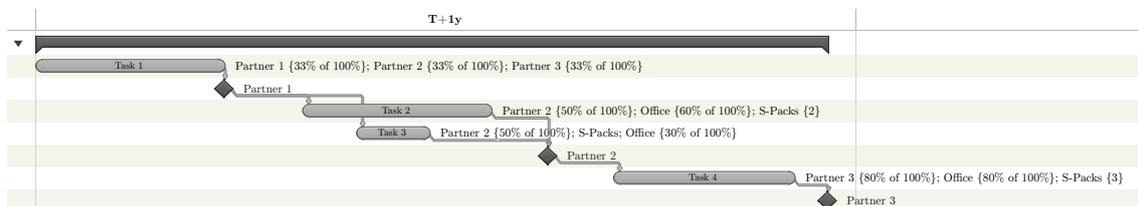


FIGURE 3 Dependencies between tasks and milestones should be neither ignored nor exaggerated

4 Resource view

Resources associated with a project can be marked on various specialised diagrams, such as Figures 1, 2, or 3, or can be presented as a list-style resource breakdown view (Perdicoulis, 2013, ReBS) — more or less like the ‘ingredients’ of a cooking recipe. If necessary, though, it is possible to view the whole project from the perspective of the resources along the execution of the project — i.e. in a temporal view, as in Figure 4.

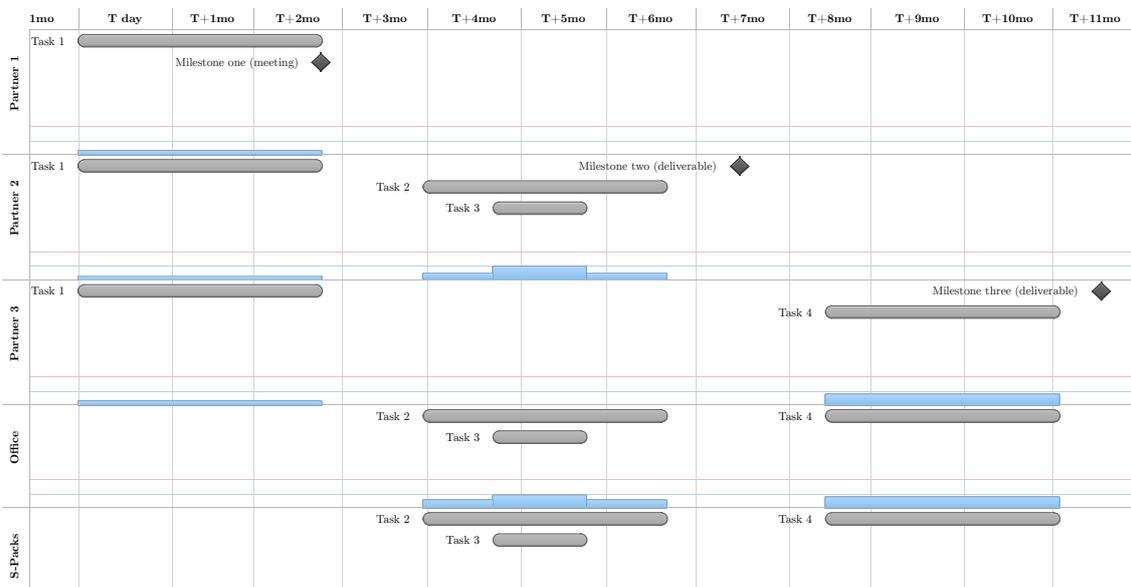


FIGURE 4 The project timeline from the perspective of resources such as people, infrastructures, and consumables

The resource view of Figure 4 reveals several important facts about project management. First of all, the project partners are under-occupied at all times — i.e. they all have free time to do other things during the time of the project (ca. one calendar year). And if they are receiving pay for their time — as opposed, for instance, to outcomes or expertise — then that should be adjusted to their occupation.

Infrastructure use (i.e. the office) is also under-occupied during the duration of the project. When two tasks are being executed at the same time (‘second’ and ‘third’ tasks), office use — as well as the occupation of Partner 2, who is responsible for them — show an increase. In this case the total use is still below the 100% level, but this should be a point of attention during project management.

It is also evident that the ‘S-Pack’ consumables will be needed for the ‘second’ to the ‘fourth’ tasks — i.e. not for the ‘first’ task. However, as a deficiency of the software used in this case, it is not clear from Figure 4 how many packs will be needed during each task — although this is accounted for in Figure 3.

5 Discussion

There are many specialised diagrams in project management, to the extent that one cannot — and should not — memorise all the types. In every case it is important to know one's needs for organisation and representation, and aim to satisfy these with the right set of diagrams.

Available software, whether specialised or not, may indicate how to make these diagrams, or how they may look, but software will always remain the means to an end: efficient organisation and communication of what is necessary for the project. In practice, limitations of one software should be resolved by another one.

6 Conclusion

Many of the project's aspects can be viewed along a timeline, thus giving a practical perspective on resource allocation, potential delays or idleness, and overall the opportunity for more efficient project management.

References

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