

6.10 Business Management Toolkit: Gantt Charts – Summary Notes



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A **Gantt chart** is an organisational planning tool that is a simple representation of a project's schedule – a business project will be plotted within the project's timeframe enabling managers to plan and schedule the business project and monitor its progress. Below is a Gantt chart for a firm's development of a new product to bring to market.

Figure1. Project - Bringing Product X to Market

GANTT Chart for Product X																
Task	Nov 30	Dec 07	Dec 14	Dec 21	Dec 28	Jan 04	Jan 11	Jan 18	Jan 25	Feb 01	Feb 08	Feb 15	Feb 22	Feb 29	Mar 07	Mar 14
1 Approve plan	Red															
2 Drawings		Red	Red													
3 Study market		Green	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow								
4 Write specifications		Green	Yellow													
5 Marketing strategy			Green	Green	Yellow	Yellow	Yellow	Yellow	Yellow							
6 Prototype				Red	Red	Red										
7 Materials							Red	Red								
8 Production facility							Red	Red								
9 Initial product									Red	Red						
10 Evaluate										Green	Green	Yellow				
11 Test market										Red	Red	Red				
12 Marketing										Green						
13 Changes													Red	Red		
14 Production																Red
Key:		Green	Duration of a normal job													
		Red	Duration of a critical job													
		Yellow	Slack time for a normal job													

GANTT CHARTS

A **Gantt chart** is an organisational planning tool that is a simple representation of a project's schedule – a business project will be plotted within the project's timeframe enabling managers to plan and schedule the business project and monitor its progress. They are a good visual depiction of the information, steps and stages that are required in the successful completion of a project, providing project managers with an instant overview.

The purpose of a Gantt chart is to enable managers to schedule and successfully complete a project that requires a large number of jobs to be completed in the minimum amount of time. Some activities will be critical, in that, if their deadline are missed then the whole project will be delayed and times and schedules will need to be altered.

RULES FOR A GANTT CHART

1. It is presented as a horizontal bar chart which shows all sequentially scheduled tasks (on the vertical axis) needed across a period of time (on the horizontal axis).
2. Each task is shown by its own horizontal rectangular bar, the length of which depicts the length of time required to complete the activity, with start and finish times obvious.
3. **Critical** and **non-critical** tasks are shown. Critical tasks need to be completed by deadline, if they are not then the entire activity is delayed. Non-critical tasks can experience time over-runs without delaying start times of other projects, any of this **slack time** is shown.
4. The links between **predecessor-successor tasks** are shown, these are tasks that require other tasks to be completed before they can begin.

STEPS IN COMPLETING A GANTT CHART

1. Identify all tasks involved in completing the project.
2. Estimate the length of time required for separate tasks to be completed.
3. Identify the tasks which cannot begin until other tasks have been completed; i.e., the dependencies.
4. Identify which tasks can run at the same time – this will minimise the time to complete the project.
5. Identify slack time in non-critical tasks.
6. Prepare the Gantt hart by placing all tasks in the correct sequence and identifying associated dates or time periods.

Table 1: Strengths and Weaknesses of using Gantt Charts in project management

Strengths	Weaknesses
Provides a clear visual representation of the current progress of each task	Based on timing estimates (i.e., the best guess at times required to complete the various tasks)
Provides a clear picture of the entire project	Can be difficult to both plan and follow when used in very complicated projects (although software can mitigate this to a large degree)
Provides flexibility and can be applied to many management projects	Is determined by largely qualitative and not quantitative data (e.g., costs)
Managers can plan to use resources to complete the project efficiently.	Deadlines may lower the quality of work if rushed to complete.