



Course Summary:

Advanced Project Planning with Primavera P6



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This course covers the area of advanced project controls theory and methodology for both project and on-going operational purposes.

Course Aim

The aim of this training is to provide the candidate with advanced techniques for analysing and controlling a project plan throughout the execution phase.

Learning Outcomes

By the end of this training the candidate should be able to:

1. Analyse costs and benefits data relating to the project
2. Use Earned Value Analysis to analyse and interpret all the project data
3. Select and justify the methodology for detailed analysis of the resource assignments
4. Compare and contrast multiple paths through the plan

1. Enter the Data

1.1. Top-Down Estimation

Top-down estimation uses estimation weights to specify the labour and non-labour units applicable to each work breakdown structure (WBS) element and, therefore, to the activities in a project. The units are applied depending upon the weighting applied to each WBS element in relation to its sibling within the hierarchy.

1.2. Auto-Compute Actuals

Primavera P6 can automatically update the actuals in a project using the auto-compute actuals feature. The actuals are determined by the activity's percent complete, which are calculated by Primavera P6 progressing the schedule exactly as planned.

Auto-Compute Actuals are applied at three different levels:

- Activity
- Resource
- Expense

1.3. Global Change

The global change feature enables large amounts of data to be altered in a single process. Changes to data can be made in the following areas

- Activities
- Activity Resource Assignments
- Project Expenses

2. Analyse the Data

2.1. Portfolios

Projects can be grouped together into portfolios, making it a more streamlined process for opening and analysing multiple projects.

2.2. Advanced Scheduling

The critical path is the sequence of activities that determines a project's finish date. Using the advanced scheduling features of Primavera P6, it is possible to select a specific activity to act as the last activity in the critical path analysis (CPA). For example, the finish milestone of a particular phase or deliverable, but which is not the finish milestone of the overall project.

2.3. Resource Assignments Window

The resource assignments window is similar to the resource usage spreadsheet, but with the enhanced capability to view and add resource and role assignments to activities in the currently opened project(s).

It consists of three sections:

- **Activity Resource Assignments:** displays a list of the open project(s) resource assignments and details
- **Resource Usage Spreadsheet:** displays resource usage over time
- **Assignment Details:** contains the General and Planning tabs

2.3.1. Bucket Planning

When a resource has been assigned to an activity, it is the normal Primavera protocol to spread the budgeted units evenly over the activity's duration, or according to a resource curve when one is selected. However, this might not be appropriate for every activity. Some activities may require a more unique distribution of the resource units.

2.3.2. Levelling Resources

Resource levelling is as a specific feature within Primavera P6 which is used to automatically smooth the resource requirements to guarantee that the available resources are not over subscribed.

2.4. Risk

It is important this risk feature within Primavera P6 is not confused with the schedule risk analysis capability of Primavera Risk Analysis (formally known as Pertmaster).

The risk feature, within Primavera P6, allows for the identification, categorisation, and prioritisation of potential high-level risks associated with specific work breakdown structure (WBS) elements and resources

2.5. Thresholds and Issues

Thresholds define the tolerances which are acceptable within a project. The tolerances are defined using a lower and upper threshold value, at either WBS level or activity level.

Issues highlight areas of concern within a project which require consideration, and if necessary, corrective action before the project can be completed.

3. Report the Data

3.1. Period Performance

Storing period performance allows for the tracking of performance for the current financial period and also to compare this with the performance in the previous financial period(s). The data which can be stored is:

- Actuals
- Earned Value
- Planned Value

3.2. Earned Value Analysis (EVA)

Earned Value Analysis (EVA) is a version of a control curve: otherwise known as an "S-Curve". EVA measures the performance of a project using the value of work (the \$, or £, cost) or resource hours per day (i.e. units) needed to complete the scope of work. If the project manager is not the direct budget holder, then it may be more appropriate to use labour and non-labour units/ man-hours instead of the \$ cost.

3.3. Tracking Layouts

Tracking layouts provide the functionality to examine the data at a summary level, followed by focused analysis at a more detailed level.

If you would like further information on our project planning training packages, please contact us:

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