



Infor LN Analytics for Program Cost Ledger User Guide

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About this guide

This document explains how to generate various metrics and reports to evaluate the overall performance of projects/contracts using the BI reporting tool.

Organization

This table lists the chapters of this guide:

Chapter	Description
Introduction	An overview of the BI reporting tool.
EVM and Budget Data	Details of budget, time phasing, and earned value calculations.
Project Manager Dashboard	How to generate various metrics and reports for projects.
Contract Manager Dashboard	How to generate various metrics and reports for contracts.
Drill back to Infor LN	Lists the drill back to various LN sessions.
Program Manager Dashboard	How to generate various metrics and reports for programs\contracts\projects

Contacting Infor

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If we update this document after the product release, we will post the new version on this website. We recommend that you check this website periodically for updated documentation.

If you have comments about Infor documentation, contact documentation@infor.com.

To evaluate the overall performance of a project, the project managers require a reporting tool, that generates budget cost, revenue, and schedule reports at different levels, in a graphical format.

BI Reporting

In Project Management, business intelligence (BI) refers to software-based techniques used to identify, extract and analyze project data such as project or sales revenue, by associated costs and income. BI reporting technology provides current, predictive, and historical views of contract\project transactions. The common functions of BI reporting technology are analytics, project performance management, forecast analytics, project scheduling, the Dashboards, and so on. BI facilitates better decision-making.

The BI Reporting tool facilitates the generation of consolidated reports based on the data that the tool receives from Infor LN. This data includes expected costs, actual costs, planned dates, actual dates, expected schedule, actual schedule, and so on. The tool also facilitates graphical representation of the analysis of the data. Based on the data generated, the project manager can view, study and analyze the data in different formats, at various levels based on the requisite parameters.

The tool provides an overview of the essential parameters required to evaluate the performance of a contract\project. It also provides detailed information about the project. For example, a project manager can review the planned input, actual input, expected output, and actual output of a contract\project. By comparing these parameters, the project manager receives an overall report on the project's performance and can take the necessary measures to rectify any discrepancies.

Project Metrics

These metrics can be generated using the Infor BI Reporting tool:

- Overall Project Performance
- Finish Variance
- Earned Value
- Estimate at Completion
- Projects on Time
- Projects on Budget

Project Reports and Ad hoc Analysis

These reports can be generated using the Infor BI Reporting tool:

- Budget vs Actual by Project
- Budget vs Actual Hours by Project
- Time Phased Project Performance
- Time Phased Hours by Project
- Cost Forecast by Project
- Hours Forecast by Project
- Project Performance
- Project Scheduling
- Ad hoc Analysis

Contract Metrics

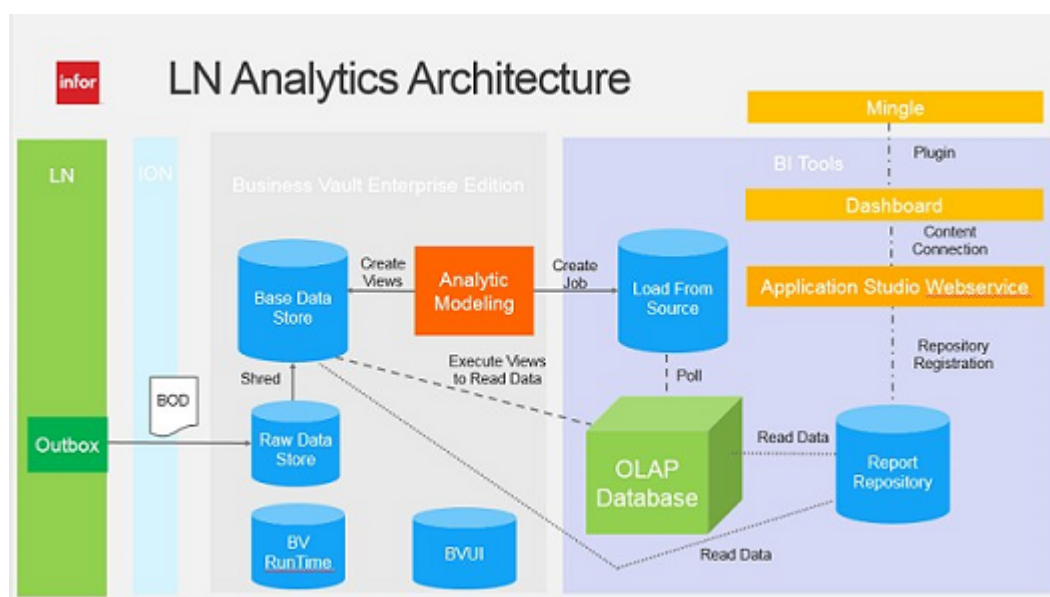
- Contract Overall Performance chart
- Revenues vs. Cost chart
- Planned vs. Expected Profit chart
- Overdue Bills
- Funded vs Invoiced Amount

Contract Reports and Ad hoc Analysis

- Contract Cost
- Contract Profitability
- Contract Cash Flow by Period
- Contract Overdue

The Architecture

Infor LN Analytics offers an optimal solution to implement an advanced business intelligence environment for the ERP system. The solution includes the common metrics that are required by the users for Program Cost Ledger analysis and reporting. This helps the users to accomplish the daily tasks effectively.



Using the LN Analytics solution, you can extract, transform, and load the data from an LN system to a BI environment. By default, the Infor suite manages the communication between modules and the storage data in the Business Vault.

The Business Vault is the central staging area. The ERP system can be connected to the vault using the standard ION connectors, custom-built ION connectors, or point-to-point integrations. When an ION connector is used, information corresponding to each transaction, posted in ERP, is converted to a standardized XML file, called a BOD (Business Object Document). This document is transferred to the Infor Business Vault using ION Connect. The information is stored in a raw data format and is automatically transformed to a relational schema in the Base Data Store, using a transformation process known as Shredding.

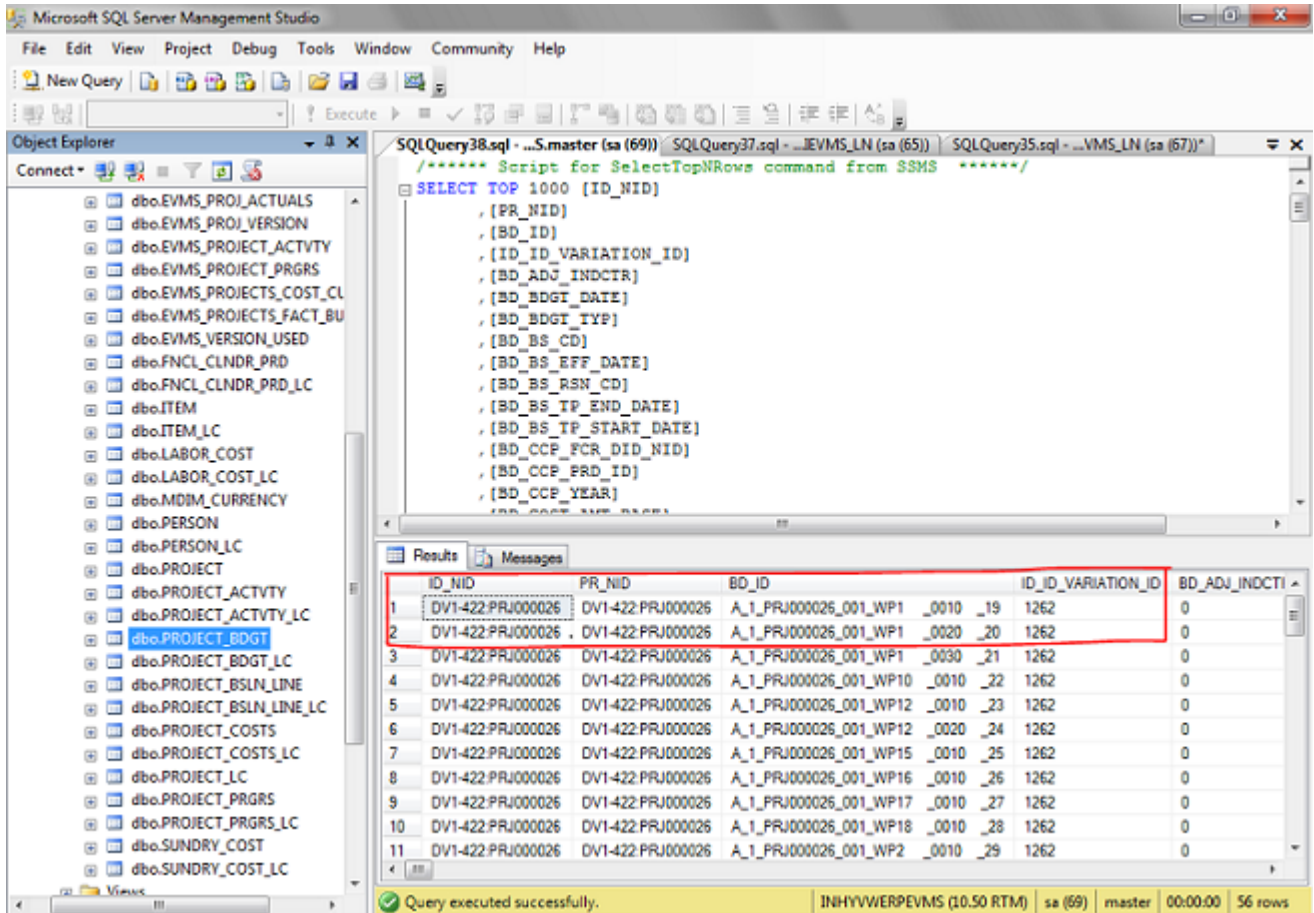
Business Vault Analytic Modeling is used for filling the OLAP database. Information to create the dimensions and cubes are published to the Load From Source database and the Base Data Store during a publication process. The OLAP database uses the published information in the Load From Source database and the information in the Base Data Store to create dimensions and cubes.

The reports use the data from the OLAP database and Base Data Store. Web services and plugins are used to display the reports and metrics in Infor Mingle.

Tracing the data transfer from Infor LN to BI

- 1 Data is transferred from Infor LN to Infor ION using Business Object Documents (BODs).
 - a The data from the BODs is transferred to ION.
 - b Select **OneView** to trace the path to the BOD; specify the BOD name and the date range for the search.
 - c Identify the business object document, specify the date range.
 - d Click **Search**.

- e Review the data that is transferred to ION.
- 2 Data is transferred from ION to the database through the business vault. The published data is stored in the database and reports only after the jobs in PCL are executed.



- a Review the data in the database.

Prerequisites

Prerequisites in Infor LN to view Budget\ Time Phased budget\ Earned Value\Forecast\Costs\Revenue and so on reports in the BI tool:

- The projects for which reports are generated must be activity-based.
 - Bottom-up Budget is the basis for time phased budget and earned value calculations.
 - The baseline to calculate the project performance and to time phase the project must be defined and approved. The last approved baseline is considered as the basis for time phasing and the project performance report.
- Calendar periods for which activities are scheduled and actualized must be defined.

- Control data must be generated for the budget.
 - Time Phase Budget data must be published from LN using the Time Phase Budget option in the Project Budget tab in the Publish Project Data (tpbod0200m000) session to view the Time phased budget in BI reports.
 - Maintain all the relevant earned value data for earned value calculations in PCL.
- The cost data is transferred from the project cost ledger or the cost history sessions.
- Generate and approve the forecast of all the budget lines in Infor LN, for an optimal BI forecast.

Parameters

The options to view the actual cost for which the report must be generated:

- Actual Cost: Only the actual costs are displayed.
- Actual Cost + Hard commitment: The sum of the actual costs and hard commitments is displayed.
- Actual Cost + Hard Commitment + Soft commitment: The sum of the actual costs, hard commitments, and soft commitments is displayed.

Note: When you modify this parameter, the data in the BI reports is updated.

This chapter explains the various earned value methods used to monitor the project progress.

Earned Value Management

Earned Value Management (EVM) is the project management methodology that integrates the scope, schedule, and cost of the project. The framework allows project management professionals to monitor these three components. EVM provides an objective measure of progress while delivering early warning indicators through trends and estimates.

You can maintain earned value methods for these earned value types:

- **Earned value Start/End Percentage:** Percentage values are assigned to the start and end of the activities. At the start of the activity, a particular percentage of the project is completed and the budget amounts are released based on these percentages:

Example: For an activity, the Scheduled Start Date is 1st Jan 2012, Scheduled End Date is 20th March 2012 and the budget amount is 10000 EUR.

- Start Percentage = 70%
- End Percentage = 30%
- Time Phase Budget in Period 1 (Jan 12) = $10000 * 70\% = 7000$ EUR
- Time Phase Budget in Period 2 (Feb 12) = $10000 * 0 = 0$ EUR
- Time Phase Budget in Period 3 (Mar 12) = $10000 * 30\% = 3000$ EUR

Note: You can manually define the percentage for the start and end of the activities.

- **Earned value Percentage Complete:** The budget amounts are released in proportion to the progress percentage of the project. The budget must be equally divided across the time period of the activity start and end date.

Example: For an activity, the Scheduled Start Date is 1st Jan 2012, Scheduled End Date is 20th March 2012 and the budget amount is 10000 EUR.

- As the EVM is percentage complete, you must time phase the budget proportionately over the duration of the activity.
- Activity Duration: 31 Days (in Jan) + 29 Days (in Feb) + 20 Days (in March) = 80 Days

- Time Phase Budget in Period 1 (Jan 12) = $10000 / 80 * 31 = 3875$ EUR
- Time Phase Budget in Period 2 (Feb 12) = $10000 / 80 * 29 = 3625$ EUR
- Time Phase Budget in Period 3 (Mar 12) = $10000 / 80 * 20 = 2500$ EUR
- **Earned value Milestones:** Milestones are attached to the activity and a percentage or amount of the budget is assigned to each milestone. When a milestone is reached, the assigned budget is released.

Example: For an activity, the Scheduled Start Date is 1st Jan 2012, Scheduled End Date is 20th March 2012 and the budget amount is 10000 EUR.

- The Activity is linked to Milestone M1 and M2.
- M1 (Scheduled Completion Date) = 12th Feb 2012
- M2 (Scheduled Completion Date) = 20th March 2012
- Percentage assigned to M1: = 40%
- Percentage assigned to M2: = 60%
- Time Phase Budget in Period 1 (Jan 12) = 0 = 0 EUR
- Time Phase Budget in Period 2 (Feb 12) = 4000 = 4000 EUR
- Time Phase Budget in Period 3 (Mar 12) = 6000 = 6000 EUR

Note: You can manually enter or modify the percentages for each milestone.

- **Level of Effort:** The earned value is equal to the scheduled or planned value of the project. The budget amounts are released in proportion to the effort. If a project is completed in the specified time, and the budget is released based on the effort made to complete the project.
- **Apportioned:** The budget amounts are released based on the linked activities that use the same earned value method. This method is used for the distribution of the earned value across the activities.

Example:

When an activity A2 is linked to activity A1:

- Earned Value (EV) method of the activity A2 = Apportioned.
- Earned Value (EV) method of the activity A1 = Percent Complete.

The activity A2 also must use the Earned Value (EV) method of A1, Percent Complete.

Process Budget Data

The data from the budget transactions and actual transactions in Infor LN are transferred to Infor BI Reporting. The base data for the budget transactions is retrieved from the bottom-up budget data. The base data for the actual transactions is retrieved from the project cost ledger data.

The **Project Manager** menu displays the various metrics and reports that helps the project manager to monitor the overall progress of the project.

Metrics

Infor BI is used to display various metrics to help project managers monitor the overall progress of a project.

- Overall Project Performance
- Earned Value
- Finish Variance
- Estimate at Completion
- Projects on Time
- Projects on Budget

Overall Project Performance

This metric is used to generate a traffic light based graphical view of the overall health of the project.

Traffic Light Indicators:

- Green: Project is on schedule
- Yellow: Project requires attention
- Red: Project requires immediate attention

Project Manager Dashboard indices:

Indicator	Effort	SPI	CPI	VAC	OTP
	(Earned Value hours - Actual Hours)/Earned Value * 100	Earned Value/ Planned Value	Earned Value / Actual Cost	Budget at Completion – Estimate at completion)/ Budget at Completion *100	No. of activities completed till date / No. of activities planned to be completed as on date.
Green	>=0	>=1	>=1	>0	>=1
Yellow	= -5 to 0	=0.95 to 0.99	=0.95 to 0.99	= -5 to 0	= 0.95 to 0.99
Red	< -5	< 0.95	< 0.95	< -5	< 0.95

Note:

- Effort is not specified if the Earned Value is zero.
- SPI is not specified if the budget (planned value) is defined for the project.
- CPI is not specified if the Actual Cost is not yet booked for the project (or booked with zero cost).
- VAC is not specified if the budget is not defined for project.
- OTP is not specified if an activity is not completed.

The indicators list additional information for each metric:

- Click Effort to view the "Effort by Project" on page 16.
- Click SPI to view the "Earned Value by Project" on page 16.
- Click CPI to view the "Earned Value by Project" on page 16.
- Click VAC to view the "Estimate at Completion by Project" on page 17.
- Click OTP to view the "Activity Performance" on page 17 of the project.
- You can view the "CPI/ SPI Trend by Project" on page 17 from "Earned Value by Project" on page 16 which can be accessed using CPI or SPI.

Effort by Project

The Effort by Project trend graph displays the planned, earned, and actual labor hours by project for a specified period of time (start date of project to the current date). On a specific date, if the planned hours exceed the earned hours, the graph indicates that the hours are not consumed as planned. On a specific date, if the actual hours exceed the earned hours, the graph indicates an overrun of the hours.

Earned Value by Project

To view the Earned Value by Project metric, click **Schedule Performance Index** or **Cost Performance Index**. This metric is used to display the budget that must be spent, based on the amount of work completed on a specific date. This metric is also used to indicate the budget consumption in the future.

The Earned Value metric provides the project manager with an effective method to measure performance and predict results. This helps in creating comprehensive progress reports and early identification of overruns. Cost and time allocation decisions can also be made in advance. The Earned Value metric is a useful tool to predict the outcome of projects, to determine the time to completion, cost to completion, and expected final costs of the project.

Estimate at Completion by Project

This bar chart displays the BAC, EAC, and VAC values for the project selected in the Overall Project Performance metric. Variance at Completion (VAC) value = Budget at Completion (BAC) - Estimate at Completion (EAC). A negative variance at completion indicates a cost overrun. A positive variance at completion indicates a cost deficit.

Activity Performance

When you select the **On Time Performance** option, by default, the data is displayed based on the Activity Performance metric. Activity Performance is calculated based on the total number of activities actually completed compared to the number of activities, planned to be completed periodically. Future period plan is displayed as a dotted curve. The user can also view the Milestone Performance metric using the toggle option.

Milestone Performance

When you select the **On Time Performance** option, by default, the data is displayed based on the Activity Performance metric. However, the user can view another Milestone Performance metric using the toggle option. These metrics are used to indicate the progress of the activities or milestone, according to the defined baseline plan. Milestone performance is calculated based on the total number of milestones actually completed compared to the number of milestones planned to be completed, periodically. Future period plan is displayed as a dotted curve.

CPI\ SPI Trend by Project

The cost performance index (CPI) and schedule performance index (SPI) values are calculated using the Planned Value, Earned Value, and Actual Value of the selected project, for the specified period.

Cost Performance Index shows the value earned for the amount spent on the project.

Schedule Performance Index shows if the project is to be delivered on time, or early, or late.

To view the CPI/ SPI Trend by Project metric, go to **Overall Project Performance > CPI or SPI > Earned Value by Project > CPI\ SPI Trend**.

CPI = Earned Value (EV)/ Actual Costs (AC):

- If CPI < 1, the costs are not incurred efficiently on the project
- If CPI = 1, the project is on track
- If CPI > 1, the costs are incurred efficiently on the project

SPI = Earned Value (EV)/ Planned Value (PV):

- If SPI < 1, the project is behind schedule
- If SPI = 1, the project can be completed on the date scheduled by the plan
- If SPI > 1, the project can be completed prior to the scheduled date

Finish Variance

This bar metric is used to display the data, based on the baseline finish date in comparison with the expected finish date. A positive difference between the expected finish date and the baseline finish date indicates an issue with the progress of the project. The project manager can investigate the issues and identify the reasons, based on which corrective actions can be initiated.

`Finish Variance = Expected Finish Date - Baseline Finish Date`

Note: Infor LN selects the baseline finish date from the latest Approved Baseline details for the Top activity. The expected finish date is selected from the Project Scheduling Report. By default, the expected finish date is same as the baseline finish date of the Top activity unless the user modifies the report.

Earned Value

The Earned Value bar chart displays the planned value, earned value and actual cost of all the projects assigned to a project manager. The user can view the project performance and the difference between the Planned Amount, Amount Earned, and Amount Consumed on a specific date. This chart indicates the schedule variance with regards to the amounts, and also the cost variance of the amount of consumption. The project manager can use the Earned Value metric to initiate corrective actions when the difference between the planned and earned, or earned and actual amount displays a negative value.

Estimate at Completion

This bar chart displays the BAC, EAC, and VAC for all the projects assigned to a project manager.

Budget at Completion is the current project budget.

Estimate at Completion is the sum of the Actual Costs incurred till date and the Last Approved forecast.

Variance at Completion (VAC) value = Budget at Completion (BAC) - Estimate at Completion (EAC).

Note: Generate and approve the forecast (in Infor LN) for all the budget lines in Infor LN, for an optimal BI forecast.

Variance at Completion

The Variance at Completion bar chart displays the variance at completion for all the projects assigned to a project manager. A negative variance at completion indicates a cost overrun. A positive variance at completion indicates a cost deficit. See "Estimate at Completion" on page 18

Variance at Completion (VAC) value = Budget at Completion (BAC) - Estimate at Completion (EAC).

Projects on Budget

The Projects on Budget donut chart displays the percentage of the closed projects that are within and exceeded total budget. The chart includes all projects closed till date.

- **On Budget**
All closed projects with Actual Costs less than or equal to the Total budget.
- **Beyond Budget**
All closed projects with Actual Costs higher than the Total budget.

Projects on Time

The Projects on Time donut chart displays the percentage of the closed projects that are delivered on time and delayed. The chart is displayed for current and last year closed projects.

- **On Time**
All closed projects which have their top activity's Actual finish date less than or equal to Baseline Schedule date.
- **Delayed**
All closed projects which have their top activity's Actual finish date greater than Baseline Schedule date.

Reports

Infor BI generates various reports to help project managers monitor the overall progress of a project.

These reports are generated:

- Budget vs Actuals
- Time Phased Performance
- Cost Forecast
- Earned Value Management
- Schedule
- Ad Hoc

Budget vs. Actuals

The **Budget vs. Actuals** menu includes these reports:

- Budget vs. Actuals by Project
- Budget vs. Actuals by Project/Activity
- Budget vs. Actuals by Project/Activity/Control Cost Component
- Budget vs. Actuals by Project/Activity/Control Code
- Budget vs. Actual Hours by Project
- Budget vs. Actual Hours by Project/Activity
- Budget vs. Actual Hours by Project/Activity/Cost Component
- Budget vs. Actual Hours by Project/Activity/Control Code

Budget vs Actual by Project

The Budget vs Actual by Project report displays the actual cost in comparison with the available budget for the selected project.

Select a project and click Budget vs Actual by Project/ Activity to view the report.

To view the actual cost against the available budget, select a project range. The data is generated based on these attributes:

- **Company**
The code of the company.
- **Currency Type**
The type of the currency used for the project.
- **Project**
The code of the project for which the budget report is generated.

- **Status**
The project status.
- **Acquiring Method**
The method used to acquire the project.
- **Financing Method**
The financing method used for the project.
- **Business Sector**
The area of commercial endeavor. Projects can be categorized based on the business sector.
- **Geographical Area**
The geographical area associated with the project.
- **Category**
The user-defined classification of the project.
- **Program**
A group of related projects managed using a coordinated process to gain additional benefits and control.
- **Group**
The user-defined classification of the project.
- **Project Manager**
The employee who manages the project.
- **Actual Cost**
Actual Cost = Actual Cost + Hard Commitment
or
Actual Cost = Actual Cost + Hard Commitment + Soft Commitment

The report displays:

- **Project**
The project for which the report is generated.
- **Currency**
The project currency.
- **Budget**
The budget allocated to the selected project.
- **Actual Cost**
The actual cost incurred on the project.
- **Balance Budget**
 - **Amount**
The balance amount calculated using the formula:

(Budget - Actual Cost)

- %

The balance amount expressed as a percentage:

$((\text{Budget} - \text{Actual Cost}) / \text{Budget}) * 100$

Budget vs Actual by Project/ Activity

The Budget vs Actual by Project/ Activity report displays the actual cost in comparison with the available budget for the project, at the activity level.

Select an activity and click Budget vs Actual by Project / Activity / Cost Component or Budget vs Actual by Project / Activity / Control Code to view the report for:

- The budget vs actual data at the project/ activity/ cost component level
- The budget vs actual data at the project/ activity/ control code level

To generate the report, specify this information:

- **Company**

The code of the company.

- **Currency Type**

The type of the currency used for the project.

- **Project**

The code of the project for which the budget report is generated.

The report displays:

- **Activity**

The activity linked to the project.

- **Status**

The status of the budget.

- **Currency**

The project currency.

- **Budget**

The budget allocated to the project.

- **Actual Cost**

The actual cost incurred on the project.

- **Balance Budget**

- **Amount**

The balance amount calculated using the formula:

$(\text{Budget} - \text{Actual Cost})$

- %
The balance amount expressed as a percentage:
 $((\text{Budget} - \text{Actual Cost}) / \text{Budget}) * 100$

Budget vs Actual by Project/ Activity/ Cost Component

The Budget vs Actual by Project/ Activity/ Cost Component report displays the actual cost in comparison with the available budget for the project, at the cost component level.

To generate the report, specify:

- **Company**
The code of the company.
- **Currency Type**
The type of the currency used for the project.
- **Project**
The code of the project for which the budget report is generated.
- **Activity**
The activity linked to the project.

The report displays:

- **Cost Component**
The cost component linked to the project.
- **Currency**
The project currency.
- **Budget**
The budget allocated to the selected project.
- **Actual Cost**
The actual cost incurred on the project.
- **Balance Budget**
 - **Amount**
The balance amount calculated using the formula:
 $(\text{Budget} - \text{Actual Cost})$
 - %
The balance amount expressed as a percentage:
 $((\text{Budget} - \text{Actual Cost}) / \text{Budget}) * 100$

Budget vs Actual by Project/ Activity/ Control Code

The Budget vs Actual by Project/ Activity/ Control Code report displays the actual cost in comparison with the available budget for the project, at the control code level.

To generate the report, specify this information:

- **Company**
The code of the company.
- **Currency Type**
The type of the currency used for the project.
- **Project**
The code of the project for which the budget report is generated.
- **Activity**
The activity linked to the project.

The report displays:

- **Control Code**
The control code linked to the project.
- **Currency**
The project currency.
- **Budget**
The budget allocated to the selected project.
- **Actual Cost**
The actual cost incurred on the project.
- **Balance Budget**
 - **Amount**
The balance amount calculated using the formula:
(Budget - Actual Cost)
 - **%**
The balance amount expressed as a percentage:
 $((\text{Budget} - \text{Actual Cost}) / \text{Budget}) * 100$

Budget vs Actual Hours by Project

The Budget vs Actual Hours by Project report displays the planned hours in comparison with the actual hours of the project, for the available budget.

Select a project and click Budget vs Actual Hours by Project/ Activity to view the report.

To view the planned hours against the actual hours of the project, for the available budget, select a project range. The data is generated based on these attributes:

- **Company**
The code of the company.
- **Project**
The code of the project for which the budget report is generated.
- **Status**
The project status.
- **Acquiring Method**
The method used to acquire the project.
- **Financing Method**
The financing method used for the project.
- **Business Sector**
The area of commercial endeavor. Projects can be categorized based on the business sector.
- **Geographical Area**
The geographical area associated with the project.
- **Category**
The user-defined classification of the project.
- **Group**
The user-defined classification of the project.
- **Program**
A group of related projects managed in a coordinated way to obtain more benefits and control.
- **Project Manager**
The employee who manages the project.

The report displays:

- **Project**
The code of the project for which the report is generated.
- **Planned Hours**
The budgeted hours required for the completion of the project.
- **Actual Hours**
The actual hours utilized for the completion of the project.
- **Balance Hours**
The balance hours calculated using the formula:
(Planned Hours - Actual Hours)
- **Budget %**

The balance hours expressed as a percentage:
 $((\text{Planned Hours} - \text{Actual Hours}) / \text{Planned Hours}) * 100$

Budget vs Actual Hours by Project/ Activity

The Budget vs Actual Hours by Project/ Activity report displays the planned hours in comparison with the actual hours of the project for the available budget at the activity level.

Select an activity and click Budget vs Actual Hours by Project / Activity / Cost Component or Budget vs Actual Hours by Project / Activity / Control Code level to view the report for:

- The budget vs actual hours data at project/ activity / cost component level
- The budget vs actual hours data at project/ activity / control code level

To generate the report, specify:

- **Company**
The code of the company.
- **Project**
The code of the project for which the budget report is generated.

The report displays:

- **Activity**
The activity linked to the project.
- **Status**
The status of the budget.
- **Planned Hours**
The budgeted hours required for the completion of the project.
- **Actual Hours**
The actual hours utilized for the completion of the project.
- **Balance Hours**
The balance hours calculated using the formula:
 $((\text{Planned Hours} - \text{Actual Hours}) / \text{Planned Hours}) * 100$
- **Budget %**
The balance hours expressed as a percentage:
 $((\text{Planned Hours} - \text{Actual Hours}) / \text{Planned Hours}) * 100$

Budget vs Actual Hours by Project/ Activity/ Cost Component

The Budget vs Actual Hours by Project/ Activity/ Cost Component report displays the planned hours in comparison with the actual hours of the project for the available budget, at the cost component level.

To generate the report, specify this information:

- **Company**
The code of the company.
- **Project**
The code of the project for which the budget report is generated.
- **Activity**
The activity linked to the project.

The report displays:

- **Cost Component**
The cost component linked to the project.
- **Planned Hours**
The budgeted hours required for the completion of the project.
- **Actual Hours**
The actual hours utilized for the completion of the project.
- **Balance Hours**
The balance hours calculated using the formula:
(Planned Hours - Actual Hours)
- **Budget %**
The balance hours expressed as a percentage:
 $((\text{Planned Hours} - \text{Actual Hours}) / \text{Planned Hours}) * 100$

Budget vs Actual Hours by Project/ Activity/ Control Code

The Budget vs Actual Hours by Project/ Activity/ Control Code report displays the planned hours in comparison with the actual hours of the project for the available budget, at the control code level.

To generate the report, specify this information:

- **Company**
The code of the company.
- **Project**
The code of the project for which the budget report is generated.
- **Activity**
The activity linked to the project.

The report displays:

- **Control Code**
The control code linked to the project.

- **Planned Hours**

The budgeted hours required for the completion of the project.

- **Actual Hours**

The actual hours utilized for the completion of the project.

- **Balance Hours**

The balance hours calculated using the formula:

(Planned Hours - Actual Hours)

- **Budget %**

The balance hours expressed as a percentage:

$((\text{Planned Hours} - \text{Actual Hours}) / \text{Planned Hours}) * 100$

Note: In the graphical representation of the budget, the percentage of the balance budget amount is indicated using colors:

- Blue: Percentage of the budget used for the project.
- Yellow: Percentage of the budget available for the project.
- Red: Percentage of the available budget for the project is negative.

Time Phased Performance

The **Time Phased Performance** menu includes these reports:

- Time Phased Project Performance
- Time Phased Budget vs. Actuals by Project/Activity
- Time Phased Budget vs. Actuals by Project/Activity/Cost Component
- Time Phased Budget vs. Actuals by Project/Activity/Control Code
- Time Phased Hours by Project
- Time Phased Hours by Project/Activity
- Time Phased Hours by Project/Activity/Cost Component
- Time Phased Hours by Project/Activity/Control Code

Time Phased Project Performance

The Time Phased Project performance report allows you to review the time phased budget and the actual cost data of the project for the current and the cumulative periods. Time phasing is based on the Earned Value (EV) method specified for the activity.

Select a project and click Time Phased Budget vs Actuals by Project/ Activity to view the report.

To view the time phased budget and the actual cost data of the project for the current and the cumulative periods, select a project range. The data is generated based on these attributes:

- **Currency Type**

The type of the currency used for the project.

- **Company**

The code of the company.

- **Project**

The code of the project for which the budget report is generated.

- **Status**

The project status.

- **Acquiring Method**

The method used to acquire the project.

- **Financing Method**

The financing method used for the project.

- **Business Sector**

The area of commercial endeavor. Projects can be categorized based on the business sector.

- **Geographical Area**

The geographical area associated with the project.

- **Category**

The user-defined classification of the project.

- **Group**

The user-defined classification of the project.

- **Program**

A group of related projects managed in a coordinated way to obtain more benefits and control.

- **Project Manager**

The employee who manages the project.

- **Actual Cost**

Actual Cost = Actual Cost + Hard Commitment

or

Actual Cost = Actual Cost + Hard Commitment + Soft Commitment

The report displays:

- **Project**

The code of the project for which the report is generated.

- **Currency**

The project currency.

Note: This value is based on the specified **Currency Type**.

- **Period/ Cumulative**

- **Year**

The current/ cumulative year for which the report is generated.

- **Period**

The current/ cumulative period of the year for which the report is generated.

- **Budget**

The budget allocated to the project in the current/ cumulative period.

- **Actual Cost**

The actual cost incurred on the project in the current/ cumulative period.

- **Balance Budget**

The balance amount in the current/ cumulative period, calculated using the formula:
(Budget - Actual Cost)

- **Balance Budget %**

The balance amount expressed as a percentage:
 $((\text{Budget} - \text{Actual Cost}) / \text{Budget}) * 100$

Time Phased Budget vs Actuals by Project/ Activity

The Time Phased Budget vs Actuals by Project/ Activity report displays the time phased budget and actual cost data of the project for the current and the cumulative periods, at the activity level.

Select an activity and click Time Phased Budget vs Actuals by Project/ Activity/ Cost Component report or Time Phased Budget vs Actuals by Project/ Activity/ Control Code to view the report for:

- The time phased budget vs actual cost data at the project/ activity/ cost component level
- The time phased budget vs actual cost data at the project/ activity/ control code level

To generate the report, specify this information:

- **Company**

The code of the company.

- **Currency Type**

The type of the currency used for the project.

- **Project**

The code of the project for which the budget report is generated.

- **Period (Monthly)**

The periods of the year (range) for which report is generated.

The report displays:

- **Activity (Description)**

The activity linked to the project.

- **Currency**

The project currency.

Note: This value is based on the specified **Currency Type**.

- **Period/ Cumulative**

- **Year**

- The current/ cumulative year for which the report is generated.

- **Period**

- The current/ cumulative period of the year for which the report is generated.

- **Budget**

- The budget allocated to the project in the current/ cumulative period.

- **Actual Cost**

- The actual cost incurred on the project in the current/ cumulative period.

- **Balance Budget**

- The balance amount in the current/ cumulative period, calculated using the formula:
(Budget - Actual Cost)

- **Balance Budget %**

- The balance amount expressed as a percentage:
 $((\text{Budget} - \text{Actual Cost}) / \text{Budget}) * 100$

Time Phased Budget vs Actuals by Project/ Activity/ Cost Component

The Time Phased Budget vs Actuals by Project/ Activity/ Cost Component report displays the time phased budget data and actual cost data of the project for the current and the cumulative periods, at the cost component level. Time phasing is based on the Earned Value (EV) method defined for the activity.

To generate the report, specify this information:

- **Company**

- The code of the company.

- **Currency Type**

- The type of the currency used for the project.

- **Project**

- The code of the project for which the budget report is generated.

- **Activity**

- The code of the activity linked to the project.

- **Period (Monthly)**

- The periods of the year (range) for which report is generated.

The report displays:

- **Cost Component (Description)**

The cost component linked to the project.

- **Currency**

The project currency.

Note: This value is based on the specified **Currency Type**.

- **Period/ Cumulative**

- **Year**

The current/ cumulative year for which the report is generated.

- **Period**

The current/ cumulative period of the year for which the report is generated.

- **Budget**

The budget allocated to the project in the current/ cumulative period.

- **Actual Cost**

The actual cost incurred on the project in the current/ cumulative period.

- **Balance Budget**

The balance amount in the current/ cumulative period, calculated using the formula:
(Budget - Actual Cost)

- **Balance Budget %**

The balance amount expressed as a percentage:
 $((\text{Budget} - \text{Actual Cost}) / \text{Budget}) * 100$

Time Phased Budget vs Actuals by Project/ Activity/ Control Code

The Time Phased Budget vs Actuals by Project/ Activity/ Control Code report displays the time phased budget data and actual cost data of the project for the current and the cumulative periods, at the control code level. Time phasing is based on the Earned Value (EV) method specified for the activity.

To generate the report, specify this information:

- **Company**

The code of the company.

- **Currency Type**

The type of the currency used for the project.

- **Project**

The code of the project for which the budget report is generated.

- **Activity**

The code of the activity linked to the project.

- **Period (Monthly)**

The periods of the year (range) for which report is generated.

The report displays:

- **Control Code (Description)**

The control code linked to the project.

- **Currency**

The project currency.

Note: This value is based on the **Currency Type**, selected in the settings.

- **Period/ Cumulative**

- **Year**

The current/ cumulative year for which report is generated.

- **Period**

The current/ cumulative period of the year for which report is generated.

- **Budget**

The budget allocated to the project in the current/ cumulative period.

- **Actual Cost**

The actual cost incurred on the project in the current/ cumulative period.

- **Balance Budget**

The balance amount in the current/ cumulative period, calculated using the formula:
(Budget - Actual Cost)

- **Balance Budget %**

The balance amount expressed as a percentage:
 $((\text{Budget} - \text{Actual Cost}) / \text{Budget}) * 100$

Time Phased Hours by Project

The Time Phased performance report allows you to review the time phased budget data and the actual hours utilized for the project in the current and the cumulative periods. Time phasing is based on the Earned Value (EV) method, specified for the activity.

Select a project and click Time Phased Hours by Project/ Activity to view the report.

To view the time phased budget data and the actual hours utilized for the project in the current and the cumulative periods, select a project range. The data is generated based on these attributes:

- **Company**

The code of the company.

- **Project**
The code of the project for which the budget report is generated.
- **Status**
The project status.
- **Acquiring Method**
The method used to acquire the project.
- **Financing Method**
The financing method used for the project.
- **Business Sector**
The area of commercial endeavor. Projects can be categorized based on the business sector.
- **Geographical Area**
The geographical area associated with the project.
- **Category**
The user-defined classification of the project.
- **Group**
The user-defined classification of the project.
- **Program**
A group of related projects managed in a coordinated way to obtain more benefits and control.
- **Project Manager**
The employee who manages the project.

The report displays:

- **Project**
The code of the project for which the report is generated.
- **Period/ Cumulative**
 - **Year**
The current/ cumulative year for which report is generated.
 - **Period**
The current/ cumulative period of the year for which report is generated.
 - **Planned Hours**
The estimated number of hours required for the completion of the project in the current/cumulative period. Calculations are based on the Earned Value (EV) method, defined on the activity.
 - **Actual Hours**
The actual hours used to complete the project in the current/ cumulative period.
 - **Balance Hours**
The balance hours in the current/ cumulative period, calculated using the formula:

(Budget - Actual Hours)

- **Balance Hours %**

The balance hours expressed as a percentage:

$((\text{Budget} - \text{Actual Cost}) / \text{Budget}) * 100$

Time Phased Hours by Project/ Activity

The Time Phased Hours by Project/ Activity report displays the time phased budget data and the actual hours utilized for the project in the current and the cumulative periods at the activity level.

Select the required activity and click Time Phased Hours by Project/ Activity/ Cost Component or Time Phased Hours by Project/ Activity/ Control Code to view the report for:

- The time phased budget data and the actual hours utilized for the project in the current and the cumulative periods at the project/ activity/ cost component level.
- The time phased budget data and the actual hours utilized for the project in the current and cumulative periods at the project/ activity/ control code level.

To generate the report, specify:

- **Company**

The code of the company.

- **Project**

The code of the project for which the budget report is generated.

The report displays:

- **Activity (Description)**

The activity linked to the project.

- **Period/ Cumulative**

- **Year**

The current/ cumulative year for which report is generated.

- **Period**

The current/ cumulative period of the year for which report is generated.

- **Planned Hours**

The estimated number of hours required for the completion of the project in the current/cumulative period. Calculations are based on the Earned Value (EV) method, defined for the activity.

- **Actual Hours**

The actual hours used to complete the project in the current/ cumulative period.

- **Balance Hours**

The balance hours in the current/ cumulative period, calculated using the formula:

(Budget - Actual Cost)

- **Balance Hours %**

The balance hours expressed as a percentage:

$((\text{Budget} - \text{Actual Cost}) / \text{Budget}) * 100$

Time Phased Hours by Project/ Activity/ Cost Component

The Time Phased Hours by Project/ Activity/ Cost Component report displays the time phased budget data and the actual hours utilized for the project in the current and the cumulative periods, at the cost component level. Time phasing is based on the Earned Value (EV) method, specified for the activity.

Note: At the cost component level and the control code level, the time phased hours report is displayed only for the cost type, **Labor**.

To generate the report, specify this information:

- **Company**

The code of the company.

- **Project**

The code of the project for which the budget report is generated.

- **Activity (Description)**

The activity linked to the project.

The report displays:

- **Cost Component (Description)**

The cost component linked to the project.

- **Period/ Cumulative**

- **Year**

The current/ cumulative year for which report is generated.

- **Period**

The current/ cumulative period of the year for which report is generated.

- **Planned Hours**

The estimated number of hours required for the completion of the project in the current/cumulative period. Calculations are based on the Earned Value (EV) method, defined for the activity.

- **Actual Hours**

The actual hours used to complete the project in the current/ cumulative period.

- **Balance Hours**

The balance hours in the current/ cumulative period, calculated using the formula:
 $(\text{Planned Hours} - \text{Actual Hours})$

- **Balance Hours %**

The balance hours expressed as a percentage:

$$((\text{Planned Hours} - \text{Actual Hours}) / \text{Budget}) * 100$$

Time Phased Hours by Project/ Activity/ Control Code

The Time Phased Hours by Project/ Activity/ Control Code report displays the time phased budget data and the actual hours utilized for the project in the current and the cumulative periods, at the control code level. Time phasing is based on the Earned Value (EV) method, specified for the activity

Note: At the cost component level and the control code level, the time phased hours report is displayed only for the cost type, **Labor**.

To generate the report, specify this information:

- **Company**
The code of the company.
- **Project**
The code of the project for which the budget report is generated.
- **Activity (Description)**
The activity linked to the project.

The report displays:

- **Control Code (Description)**
The control code linked to the project.
- **Period/ Cumulative**
 - **Year**
The current/ cumulative year for which report is generated.
 - **Period**
The current/ cumulative period of the year for which report is generated.
 - **Planned Hours**
The estimated number of hours required for the completion of the project in the current/cumulative period. Calculations are based on the Earned Value (EV) method, defined for the activity.
 - **Actual Hours**
The actual hours used to complete the project in the current/ cumulative period.
 - **Balance Hours**
The balance hours in the current/ cumulative period, calculated using the formula:
(Planned Hours - Actual Hours)
 - **Balance Hours %**
The balance hours expressed as a percentage:
 $((\text{Planned Hours} - \text{Actual Hours}) / \text{Planned Hours}) * 100$

Cost Forecast

The **Cost Forecast** menu includes these reports:

- Cost Forecast by Project
- Cost Forecast by Project/Activity
- Cost Forecast by Project/Activity/Control Code
- Hours Forecast by Project
- Hours Forecast by Project/Activity
- Hours Forecast by Project/Activity/Control Code

Cost Forecast by Project

The Cost Forecast report allows the project manager to analyze the expected future costs, the total cost required to complete the project, and to determine the budget variance.

To view the cost forecast data at the activity level, select a project range. The data is generated based on these attributes:

- **Currency Type**
The type of the currency used for the project.
- **Company**
The code of the company.
- **Project**
The code of the project for which the report is generated.
- **Status**
The project status.
- **Acquiring Method**
The method used to acquire the project.
- **Financing Method**
The financing method used for the project.
- **Business Sector**
The area of commercial endeavor. Projects can be categorized based on the business sector.
- **Geographical Area**
The geographical area associated with the project.
- **Category**
The user-defined classification of the project.
- **Group**
The user-defined classification of the project.
- **Program**

A group of related projects managed in a coordinated way to obtain more benefits and control.

- **Project Manager**

The employee who manages the project.

The report displays:

- **Budget**

The budget allocated to the selected project.

- **Actual Cost**

The cost data is populated from Infor LN.

- **Progress**

The project progress data is populated from Infor LN.

- **Forecast**

- **Estimate To Complete (ETC)**

Estimate To Complete is the additional cost incurred for an activity or a project.

Estimate To Complete = Estimate At Completion - Actual Cost

- **Estimate At Completion (EAC)**

Estimate At Completion is the total cost incurred for an activity or a project.

- **Variance At Completion (VAC)**

Variance At Completion is the difference between the budgeted amount and the estimated amount, at the end of the project.

Variance At Completion = Budget - Estimate At Completion

Cost Forecast by Project/ Activity

The Cost Forecast by Project/ Activity report allows the project manager to analyze the expected future costs, the total cost required to complete the project, and to determine the budget variance, at the activity level.

Select the required activity to view the forecast data of the project at the project/ activity/ control code level.

To generate the report, specify this information:

- **Company**

The code of the company.

- **Project**

The code of the project for which the report is generated.

- **Currency Type**

The type of the currency used for the project.

The report displays:

- **Activity (Description)**
The activity linked to the project.
- **Progress %**
The project progress data is generated by Infor LN.
- **Currency**
The currency used to display the data in the report.
Note: This value is based on the selected Currency Type.
- **Budget**
The budget data is based on the last approved version in the BI.
- **Actual Cost**
The cost data is generated by Infor LN.
- **Forecast**
 - **Estimate To Complete (ETC)**
Estimate To Complete is the additional cost incurred for an activity or a project.
$$\text{Estimate To Complete} = \text{Estimate At Completion} - \text{Actual Cost}$$
 - **Estimate At Completion (EAC)**
Estimate At Completion is the total cost incurred for an activity or a project.
 - **Variance At Completion (VAC)**
Variance At Completion is the difference between the budgeted amount and the estimated amount, at the end of the project.
$$\text{Variance At Completion} = \text{Budget} - \text{Estimate At Completion}$$

Cost Forecast by Project/ Activity/ Control Code

The Cost Forecast by Project/ Activity/ Control Code report allows the project manager to analyze the expected future costs, the total cost required to complete the project, and to determine the budget variance, at the control code level.

To generate the report, specify this information:

- **Company**
The code of the company.
- **Project**
The code of the project for which the report is generated.
- **Activity (Description)**
The activity linked to the project.

- **Currency Type**

The type of the currency used for the project.

The report displays:

- **Control Code (Description)**

The control code linked to the project.

- **Currency**

The currency used to display the data in the report.

Note: This value is based on the specified **Currency Type**.

- **Budget**

The budget data is based on the last approved version in the BI.

- **Actual Cost**

The cost data is populated from Infor LN.

- **Forecast**

- **Estimate To Complete (ETC)**

Estimate To Complete is the additional cost incurred for an activity or a project.

Estimate To Complete = Estimate At Completion - Actual Cost

- **Estimate At Completion (EAC)**

Estimate At Completion is the total cost incurred for an activity or a project.

- **Variance At Completion (VAC)**

Variance At Completion is the difference between the budgeted amount and the estimated amount, at the end of the project.

Variance At Completion = Budget - Estimate At Completion

Hours Forecast by Project

The Hours Forecast by Project report allows the project manager to analyze the planned hours, the actual hours utilized to complete the project, and to determine the variance, for the specified range of data.

To view the hours forecast data at the activity level, select a project range. The data is generated based on these attributes:

- **Company**

The code of the company.

- **Project**

The code of the project for which the report is generated.

- **Status**

The project status.

- **Acquiring Method**
The method used to acquire the project.
- **Financing Method**
The financing method used for the project.
- **Business Sector**
The area of commercial endeavor. Projects can be categorized based on the business sector.
- **Geographical Area**
The geographical area associated with the project.
- **Category**
The user-defined classification of the project.
- **Group**
The user-defined classification of the project.
- **Program**
A group of related projects managed in a coordinated way to obtain more benefits and control.
- **Project Manager**
The employee who manages the project.

The report displays:

- **Project**
The project for which the report is generated.
- **Planned Hours**
The estimated number of hours required for the completion of the project.
- **Actual Hours**
The actual number of hours utilized to complete the project.
- **Forecast**
 - **Estimate To Complete (ETC)**
Estimate To Complete is the additional cost incurred for an activity or a project.
$$\text{Estimate To Complete} = \text{Estimate At Completion} - \text{Actual Hours}$$
 - **Estimate At Completion (EAC)**
Estimate At Completion is the total cost incurred for an activity or a project.
 - **Variance At Completion (VAC)**
Variance At Completion is the difference between the budgeted amount and the estimated amount, at the end of the project.
$$\text{Variance At Completion} = \text{Planned Hours} - \text{Estimate At Completion}$$

Hours Forecast by Project/ Activity

The Hours Forecast by Project/ Activity report helps the project manager to analyze the planned hours, the actual hours utilized to complete the project, and to determine the variance; at the activity level.

Select the required activity to view the hours forecast data of the project at the project/ activity/ control code level.

To generate the report, specify this information:

- **Company**
The code of the company.
- **Project**
The code of the project for which the report is generated.

The report displays:

- **Activity (Description)**
The activity linked to the project.
- **Progress %**
The project progress data is generated by LN.
- **Planned Hours**
The estimated number of hours required for the completion of the project.
- **Actual Hours**
The actual number of hours utilized to complete the project.
- **Forecast**
 - **Estimate To Complete (ETC)**
Estimate To Complete is the additional cost incurred for an activity or a project.
$$\text{Estimate To Complete} = \text{Estimate At Completion} - \text{Actual Hours}$$
 - **Estimate At Completion (EAC)**
Estimate At Completion is the total cost incurred for an activity or a project.
 - **Variance At Completion (VAC)**
Variance At Completion is the difference between the budgeted amount and the estimated amount, at the end of the project.
$$\text{Variance At Completion} = \text{Planned Hours} - \text{Estimate At Completion}$$

Hours Forecast by Project/ Activity/ Control Code

The Hours Forecast by Project/ Activity/ Control Code report allows the project manager to analyze the planned hours, the actual hours utilized to complete the project, and to determine the variance; at the control code level.

Note: The hours forecast report at the control code level is displayed only for the cost type, **Labor**.

To generate the report, specify this information:

- **Company**
The code of the company.
- **Project**
The code of the project for which the report is generated.
- **Activity (Description)**
The activity linked to the project.

The report displays:

- **Control Code (Description)**
The control code linked to the project.
- **Planned Hours**
The estimated number of hours required for the completion of the project.
- **Actual Hours**
The actual number of hours utilized to complete the project.
- **Forecast**
 - **Estimate To Complete (ETC)**
Estimate To Complete is the additional cost incurred for an activity or a project.
$$\text{Estimate To Complete} = \text{Estimate At Completion} - \text{Actual Hours}$$
 - **Estimate At Completion (EAC)**
Estimate At Completion is the total cost incurred for an activity or a project.
 - **Variance At Completion (VAC)**
Variance At Completion is the difference between the budgeted amount and the estimated amount, at the end of the project.
$$\text{Variance At Completion} = \text{Planned Hours} - \text{Estimate At Completion}$$

Earned Value Management

The **Earned Value Management** menu includes these reports:

- Project Performance
- Project Performance Project/OBS
- Project Performance Project/Activity

Project Performance

The Project Performance report allows you to review the performance indices of the project. These indices are calculated using the earned value and the variance data for the current and cumulative periods.

Select the required project and click Project Performance by Project/ Activity or Project Performance by Project/ OBS to view the report for:

- The performance data of the project at the activity level.
- The performance data of the project at the organization breakdown structure (OBS) level.

To view the performance indices of the project, select a project range. The data is generated based on these attributes:

- **Currency Type**
The type of the currency used for the project.
- **Company**
The code of the company.
- **Project**
The code of the project for which the budget report is generated.
- **Status**
The project status.
- **Acquiring Method**
The method used to acquire the project.
- **Financing Method**
The financing method used for the project.
- **Business Sector**
The area of commercial endeavor. Projects can be categorized based on the business sector.
- **Geographical Area**
The geographical area associated with the project.
- **Category**
The user-defined classification of the project.
- **Group**
The user-defined classification of the project.
- **Program**
A group of related projects managed using a coordinated process to gain additional benefits and control.
- **Project Manager**
The employee who manages the project.
- **Actual Cost**

Actual Cost = Actual Cost + Hard Commitment

or

Actual Cost = Actual Cost + Hard Commitment + Soft Commitment

The report displays:

- **Project**
The project for which the report is generated.
- **Currency**
The project currency.
- **Period/ Cumulative**
 - **Year**
The current/ cumulative year for which the report is generated.
 - **Period**
The current/ cumulative period of the year for which the report is generated.
 - **Planned Value**
The amount of work planned in the current/ cumulative period.
 - **Earned Value**
The amount of work completed in the current/ cumulative period.
 - **Actuals**
The actual cost incurred for the task in the current/ cumulative period.
 - **Cost Variance**
The difference between the estimated cost and the actual cost incurred for the task.
 $\text{Cost Variance} = \text{Earned Value} - \text{Actual Costs}$
 - **Schedule Variance**
The time period during which a project is ahead of or behind the schedule.
 $\text{Schedule Variance} = \text{Earned Value} - \text{Planned Value}$
- **Cost Performance Index**
The "cost performance index" on page 66 is calculated by dividing the earned value with the actual cost.
- **Schedule Performance Index**
The "schedule performance index" on page 69 is calculated by dividing the earned value with the planned value.

EV Method in Infor LN	EV Calculation is based on
Percent Complete	Progress defined in Infor LN for the activity
Start and End Percent	Start and end date of the activity
Milestone	Milestone completion date

EV Method in Infor LN	EV Calculation is based on
Level of Effort	Effort to complete the project
Apportioned	Distribution of the Earned value

Project Performance by Project/ Activity

The Project Performance by Project/ Activity report displays the performance indices. These indices are calculated using the earned value and variance data of the project for the current and cumulative periods, at the activity level.

To generate the report, specify this information:

- **Company**
The code of the company.
- **Project**
The code of the project for which the budget report is generated.
- **Currency Type**
The type of the currency used for the project.
- **Period (Monthly)**
The period (range) of the year for which the report is generated.

The report displays:

- **Activity (Description)**
The activity linked to the project.
- **Currency**
The currency in which the report data is displayed.
Note: This value is based on the selected **Currency Type**.
- **Period/ Cumulative**
 - **Year**
The current/ cumulative year for which the report is generated.
 - **Period**
The current/ cumulative period of the year for which the report is generated.
 - **Planned Value**
The amount of work planned in the current/ cumulative period.
 - **Earned Value**
The amount of work completed in the current/ cumulative period.
 - **Actuals**
The actual cost incurred for the task in the current/ cumulative period.

- **Cost Variance**
The difference between the estimated cost and the actual cost incurred for the task.
 $\text{Cost Variance} = \text{Earned Value} - \text{Actuals}$
- **Schedule Variance**
The time period during which a project is ahead of or behind the schedule.
 $\text{Schedule Variance} = \text{Earned Value} - \text{Planned Value}$
- **Cost Performance Index**
The cost performance index is calculated by dividing the earned value with the actual cost.
- **Schedule Performance Index**
The schedule performance index is calculated by dividing the earned value with the planned value.

EV Method in Infor LN	EV Calculation is based on
Percent Complete	Progress defined in Infor LN for the activity
Start and End Percent	Start and end date of the activity
Milestone	Milestone completion date
Level of Effort	Effort to complete the project
Apportioned	Distribution of the Earned value

Project Performance by Project/ OBS

The Project Performance by Project/ OBS report displays the performance indices of the project. These indices are calculated using the earned value and the variance data of the project for the current and cumulative periods, at the organization breakdown structure (OBS) level.

To generate the report, specify this information:

- **Company**
The code of the company.
- **Project**
The code of the project for which the budget report is generated.
- **Currency Type**
The type of the currency used for the project.
- **Period (Monthly)**
The period (range) of the year for which the report is generated.

The report displays:

- **OBS (Description)**
The organization breakdown structure (OBS) linked to the project.

- **Currency**

The currency in which the report data is displayed.

Note: This value is based on the selected **Currency Type**.

- **Period/ Cumulative**

- **Year**

The current/ cumulative year for which the report is generated.

- **Period**

The current/ cumulative period of the year for which the report is generated.

- **Planned Value**

The amount of work planned in the current/ cumulative period.

- **Earned Value**

The amount of work completed in the current/ cumulative period.

- **Actuals**

The actual cost incurred for the task in the current/ cumulative period.

- **Cost Variance**

The difference between the estimated cost and the actual cost incurred for the task.

Cost Variance = Earned Value - Actuals

- **Schedule Variance**

The time period during which a project is ahead of or behind the schedule.

Schedule Variance = Earned Value - Planned Value

- **Cost Performance Index**

The cost performance index is calculated by dividing the earned value with the actual cost.

- **Schedule Performance Index**

The schedule performance index is calculated by dividing the earned value with the planned value.

EV Method in Infor LN	EV Calculation is based on
Percent Complete	Progress defined in Infor LN for the activity
Start and End Percent	Start and end date of the activity
Milestone	Milestone completion date
Level of Effort	Effort to complete the project
Apportioned	Distribution of the Earned value

Project Performance by OBS/ Project

The Project Performance by OBS/ Project report displays the performance indices. These are calculated using the earned value and the variance data for the current and cumulative periods. This report analyzes the earned value by OBS and by Projects linked to it.

To generate the report, specify:

- **Currency Type**
The type of the currency used for the project.
- **Company**
The code of the company.
- **OBS**
The code of the OBS Structure for which the report is generated.
- **Period**
The period (range) of the year for which the report is generated.
- **Actual Cost**
Actual Cost = Actual Cost + Hard Commitment, Actual Cost = Actual Cost + Hard Commitment + Soft Commitment

The report displays this data:

- **Project**
The code of the project for which the report is generated.
- **Currency**
The currency in which the report data is displayed.
Note: This value is based on the selected **Currency Type**.
- **Budget**
The budget allocated to the selected project. The Bottom-up budget specified in Infor LN (all budgets are considered irrespective of the status).
- **Period/ Cumulative**
 - **Year**
The current/ cumulative year for which the report is generated.
 - **Period**
The current/ cumulative period of the year for which the report is generated.
 - **Planned Value**
The amount of work planned in the current/ cumulative period. The Bottom-up budget specified in Infor LN. This budget is Time Phased based on the Earned Value Method of the activity.
 - **Earned Value**
The amount of work completed in the current/ cumulative period.
 - **Actuals**

The actual cost incurred for the task in the current/ cumulative period.

- **Cost Variance**

The difference between the estimated cost and the actual cost incurred for the task.

Cost variance = Earned value - Actual Costs

- **Schedule Variance**

The time period by which a project is ahead of or behind the schedule.

Schedule variance = Earned value – Planned value

- **Cost Performance Index**

The cost performance index is calculated by dividing the earned value with the actual cost.

- **Schedule Performance Index**

The schedule performance index is calculated by dividing the earned value with the planned value.

EV Method in Infor LN	EV Calculation is based on
Percent Complete	Progress defined in Infor LN for the activity
Start and End Percent	Start and end date of the activity
Milestone	Milestone completion date
Level of Effort	Effort to complete the project
Apportioned	Distribution of the Earned value

Schedule

The **Schedule** menu includes the Project Scheduling report.

Project Scheduling

The project schedule status allows the project manager to track the project schedule and identify variances for the project, if any. The report allows you to review the project performance based on the adherence to the schedule.

To generate the report, specify this information:

- **Company**

The code of the company.

- **Project**

The code of the project for which the report is generated.

- **Baseline ID**

The ID of the approved project baseline.

- **Baseline Execution Index**

A measure of baseline execution of the project.

- **Milestone Execution Index**

A measure of milestone execution of the project.

The report displays:

- **Activity (Description)**

The activity linked to the project.

- **Type**

The type of activity.

- **Duration (Days)**

The duration of the activity in the project.

- **Base Line Start Date**

The start date of the activity, as specified on the baseline.

- **Base Line Finish Date**

The end date of the activity, as specified on the baseline.

- **Actual Start Date**

The date when the activity is started.

- **Expected Finish Date**

The date when the activity is expected to finish. This date is the Scheduled Finish Date generated by Infor LN.

- **Actual Finish Date**

The date when the activity is completed.

- **Start Variance**

The number of days by which the activity starts earlier or later than the planned date.

Start Variance = Baseline Start Date - Actual Start Date.

- **Finish Variance**

The number of days by which the activity is expected to finish earlier or later than the planned date.

Finish Variance = Baseline Finish Date - Expected Finish Date.

Ad Hoc

The **Ad Hoc** menu includes the Ad-hoc report.

Ad hoc Analysis

The Ad hoc analysis report allows you to review the expected, actual, and balance budget data for a specific project.

Note: To review these reports, adhering to the pre-defined sequence is not mandatory.

To generate the report, specify this information:

- **Currency_Type**
The type of the currency based on which the budget data is analyzed.
- **Control_Code**
The control code linked to the project.
- **Cost_Component**
The cost component linked to the project.
- **Project**
The code of the project that must be analyzed. These are the hierarchies at which the project can be selected:
 - Acquiring Method
 - Business Sector
 - Category
 - Financing Method
 - Geographical Area
 - Group
 - Program
 - Status
 - Main Project
 - Project Manager
- **Activity**
The activity linked to the project.
- **Element**
The element linked to the project.
- **OBS**
The organization breakdown structure (OBS) linked to the project.
- **Actual Cost**
Actual Cost = Actual Cost + Hard Commitment
or
Actual Cost = Actual Cost + Hard Commitment + Soft Commitment

The report displays:

- **Company**

The code of the company.

- **Currency**

The project currency.

- **Budget**

The budget allocated to the project.

- **Actuals**

The actual cost incurred on the project.

- **Balance Budget**

The balance amount of the budget calculated using the formula:

Balance Budget = Budget - Actuals

Viewing Data in Reports

To view data in reports:

- 1 Create a project and define a structure.
- 2 Link the OBS to the project, if required.
- 3 Create a contract and a contract Line.
- 4 Link the project to the contract Line.
- 5 Create a base Line.
- 6 Create a budget.
- 7 Activate a project, contract, and contract line.
- 8 Approve the baseline.
- 9 Generate the control data.
- 10 Maintain the earned value data in Infor LN.
- 11 Publish the budgets (Bottom up and Time Phased Budgets) using the Project BODs staging session.
- 12 Maintain the progress of activities.
- 13 Earned value is calculated based on the earned value data and can be viewed in the reports.
- 14 Maintain the costs for the projects.
- 15 Maintain the forecast data for all the budgets and approve the same.
- 16 Maintain the Revenues.
- 17 Generate the Interim Results. Check the data in BI after the cube jobs are executed.

Note: Data (published or maintained) is updated (refreshed) only after these jobs are executed.

Contract Manager Dashboard

4

Contract Manager Dashboards can be used to combine and display the contract related statistics, metrics, and performance scorecards in a single screen. The dashboards display data in a graphical format, that helps in decision making. The dashboards also contain the data (KPI's) that facilitates management based on exceptions, by only displaying the variances between the planned and the actual results.

The Contract Manager includes these attributes:

- Profit Analysis
- Revenue vs Cost

Using the Contract Manager Dashboard, the user can view these charts and reports:

- Contract Overall Performance chart
- Revenues vs. Cost chart
- Planned vs. Expected Profit chart
- Overdue Bills
- Funded vs Invoiced Amount
- Contract Cost
- Contract Profitability
- Contract Cash Flow by Period
- Contract Overdue

Note: The Program Cost Ledger functionality is based on the assumption that one Contract Line can only be linked to one Project and vice versa.

Metrics

Infor BI is used to display various metrics to help project managers monitor the overall progress of a contract.

- Contract Overall Performance
- Revenue vs. Cost

- Planned vs. Expected Profit
- Funded vs. Invoiced Amount
- Overdue Bills

Contract Overall Performance

The Contract Overall Performance chart is a traffic light based metric that provides a graphical view of the overall performance of the contract.

Current Profit

- Green
Current profit is positive.
- Red
Current profit is negative.

Expected Profit

- Green
Expected profit is positive.
- Red
Expected profit is negative.

Overdue Bills

- Green
No overdues.
- Red
Overdue exists.

To maintain the profit data for the contract, the key metrics indicators used in this chart are Current profit, Expected Profit, and Planned profit.

The calculations used for these metrics are:

- Current Profit = Revenue Recognized - Cost of Sales
- Expected Profit = Sum of all Contract Line Amounts - Estimated Budget at Completion
- Revenue Recognized = Sum of all the Interim Revenues Results by contract line
- Cost of Sales = Sum of all the Interim Costs Results by contract line
- Contract Amount = Sum of all the contract line amounts
- Estimated Budget At Completion (EAC) = Sum of all the EAC amounts for the projects linked to the contract line

If the Current Profit is negative, the traffic light indicator is Red, indicating the possibility of a loss and that the user must take action.

If the Expected Profit is less than the Planned Profit, the traffic light indicator is Red. If the Expected Profit is equal to or greater than the Planned Profit, the traffic light indicator is Green.

Planned vs. Expected Profit

The Planned Profit vs. Expected Profit bar chart displays the Planned Profit, Current Profit, and Expected Profit for different contracts. This bar chart allows the user to compare the Planned Profit, Current Profit, and Expected Profit for different contracts.

- Green
Indicates the Expected Profit for the contract.
- Blue
Indicates the Planned Profit for the contract.
- Red
Indicates the Current Profit for the contract.

Profit with a negative value indicates that the contract has incurred a loss.

Note: Specify **Parameter** in the Custom Parameter (tcmcs0195m000) session to view the PCL reports for the CLINs and generate the interim results.

Planned vs. Expected Profit by CLIN

The Planned Vs. Expected Profit by CLIN bar chart displays the Planned profit, Current profit, and Expected profit for the contract lines linked to the contract. This allows the user to compare the profit margins for the various contract lines. See "Planned vs. Expected Profit" on page 57

Revenue vs. Cost

The Revenue vs. Cost chart is a bar chart that provides a graphical view of the recognized revenues and the corresponding cost of sales.

- Red
Indicates the Cost of Sales for the contract.
- Blue
Indicates the Revenues recognized for the contract.
- Green
Indicates the Profit for the contract.

This chart also displays the cumulative values for the Recognized Revenues, the Cost of Sales, and the Profit for a contract, during a specific period.

- **Cost of Sales:**
The sum of all the approved Interim Costs Result.
- **Revenue Recognized:**
The sum of all the approved Interim Revenues Result.
- **Profit:**
Revenue Recognized - Cost of Sales.

If the Revenue Recognized for a contract is greater than the Cost of Sales, the contract is profitable.
If the Revenues Recognized for a contract is less than the Cost of Sales, the contract is in a loss.

ITD Revenue vs. Cost by Period

The ITD Revenue vs. Cost by Period bar chart displays a graphical view of the recognized revenues and the corresponding cost of sales, for a contract.

This chart also displays the profit percentage for the contract. See "Revenue vs. Cost" on page 57.

Revenue vs. Cost by CLIN by Period

The Revenue vs. Cost by CLIN by Period chart provides a graphical view of the recognized revenues, corresponding cost of sales and profit % for a CLIN over the period of its execution.

- **Cost of Sales**
The sum of all the approved Interim Costs Result.
- **Revenue Recognized**
The sum of all the approved Interim Revenues Result.
- **Profit**
Revenue Recognized - Cost of Sales

Funded vs. Invoiced Amount

The Funded vs. Invoiced Amount metric is used to display the Contract Amount, Funded Amount, and the Invoiced Amount for various contracts. The metric is also used to display the percentage of the funded amount that is invoiced to the business partner.

The invoiced amount is the revenue transaction for which sales invoice processing is completed. This does not include "holdback" on page 68 and a manual invoice. You can use the **Include Advances** check box in the settings, to include or exclude advances in the invoiced amount.

Click a contract to view the contract line amounts linked to the contract.

Funded vs. Invoiced Amount by CLIN

The Funded vs. Invoiced Amount by CLIN bar chart displays the contract amount, funded amount, and the invoiced amount for the contract lines linked to the contract. The chart also displays the percentage of the funded amount that is invoiced to the business partner.

Overdue Bills

This metric is used to display the overdue invoices against the invoiced amounts, for a contract. Overdue invoices are the invoices with the planned invoice date in the past and which are yet to be invoiced. For example, installments with a planned invoiced date for the previous day but are not yet ready for sales invoice processing.

Click a bar to view the overdue bills of the contract lines linked to the selected contract.

Overdue Bills by CLIN

The Overdue Bills by CLIN bar chart displays the overdue amounts and the billed invoice amounts, for the contract lines linked to the specific contract. See "Overdue Bills" on page 59.

Reports

Infor LN generates various reports to help contract managers monitor the overall progress of a contract.

These reports are generated:

- Contract Cost
- Contract Profitability
- Contract Cash Flow by Period
- Contract Overdue

Contract Profitability Report

The Contract Profitability report helps the user to analyze the profit earned for the contract.

Note:

- This is an ad-hoc report and displays the correct values for the appropriate settings.
- Transaction and Base currency must be ignored for the analysis.

The Contract Profitability report displays this data:

- **Billed To Customer:**
The amount invoiced to the customer.
- **Actual Cost:**
The actual cost incurred for the projects linked to the contract.
- **Recognized Revenue:**
The revenues recognized.
- **Cost of Sales:**
The cost of sales recognized up to the current date.
- **Profit:**
The profit earned for the project.
 $\text{Profit} = \text{Recognized Revenue} - \text{Cost of Sales}$
- **Profit %:**
The profit expressed in percentage for the project.
 $\text{Profit \%} = (\text{Recognized Revenue} - \text{Cost of Sales}) / \text{Recognized Revenue}$

Contract Cost Report

The Contract Costs report allows the user to review the total costs incurred on the contracts of the type Cost Plus or Time and Materials.

Note:

- This is an ad-hoc report and displays the correct values for the appropriate settings.
- Transaction and Base currency must be ignored for the analysis.

The Contract Cost report displays this data:

- **Billed:**
The costs invoiced to the customer for the project.
- **To be Billed:**
The costs for the project that are yet to be invoiced to the customer.
- **Total:**
The sum of Billed costs and To be Billed costs for the project.
 $\text{Total} = \text{Billed} + \text{To be Billed}$
Total billed invoices and expenses for the year.
- **Unbillable Costs:**
The cost for the project that is not invoiced to the customer.
- **Total Costs:**
The total costs incurred for the project.

Total Costs = Billed + To be Billed + Unbillable

Contract Cash Flow by Period Report

The Contract Cash Flow by Period report displays the Net Income of a contract for a specific Period. This report also provides a breakup of the billed invoices, costs and overheads for a specific period.

The Contract Cash Flow by Period report displays this data:

- **Billed Invoice:**
The total invoiced amount to the customer. The **Include Advance** option enables you to include the advance amounts in the billed invoices.
- **Expenses:**
Categorized as these cost types:
 - Labor Costs
 - Subcontracted Service
 - Equipment Costs
 - Sundry Costs
 - Material Costs
 - Overhead
- **Total Expenses:**
The sum of expenses for all the cost types for the specific period.
Total = Billed + To be Billed
Total billed invoices and expenses for the year.
- **Net Income :**
Billed Invoice - Total Expenses.

Contract Overdue Report

The contract overdue report displays the overdue amount against the actually invoiced amount, for a contract.

Note:

- This is an ad-hoc report and displays the correct values when the selection is made for the appropriate settings.
- Transaction and Base currency must be ignored for the analysis.

To generate the report, specify this information:

- **Company**

The code of the company.

- **Currency Type**

The type of the currency in which the data is displayed.

- **Contract**

The contract number for which the report is generated.

- **Contract Line**

The contract line linked to the contract.

- **Include Advances**

If this check box is selected, the overdue amount of the contract includes advances.

The report displays:

- **Project**

The project linked to the contract.

- **Currency**

The currency is based on the specified **Currency Type**.

- **Billed to Customer**

The amount invoiced to the customer. These are the revenue transactions for which sales invoice processing is performed.

- **Anticipated Bills**

Any expected bill that can be invoiced to the customer, if required.

- **Overdue Bills**

The amount that is not paid by the customer on the due date.

- **Total Bill Amount**

The total amount including the overdue bills that must be paid to the customer.

Drill back to Infor LN

5

This table lists the drill back to various LN sessions.

S.No.	PCL Report\Metric	Column	LN session
1	Overall Project Performance	Project	Project 360 (tppdm6500m100)
2	Contract Overall Performance	Contract	Contract 360 (tpctm1300m000)
3	Contract Cost	Billed	Cost Transactions (tpppc2100m00) for Billable flag set to yes and already invoiced
		to be Billed	Cost Transactions (tpppc2100m00) for Billable flag set to yes and not yet invoiced
		Unbillable Costs	Cost Transactions (tpppc2100m00) for Billable flag set to No
4	Contract Profitability	Billed to Customer	Invoicing 360 (cisli360m000)

Glossary

activity

The smallest part of the activity structure used for a time-scaled budget. An entity that is used to represent a part of a project in an activity structure.

LN distinguishes these activity types:

- WBS Element
- Control Account
- Work Package
- Planning Package
- Milestone

actual cost

The real costs incurred on a project. These costs are logged in Project Cost Ledger (PCL). Example: Inventory Cost, Purchase Invoice Cost, Price Variances, Manual Costs, and so on.

actual value

The costs incurred to accomplish the work performed within a given period.

baseline (planning)

The baseline is a snapshot of the active plan's scheduled activities' start and end dates for a specific date and time.

control code

A common parent cost-object level, a level above the special cost object.

A control code is used for control purposes. For analysis, you can group cost objects of the same cost type under a control code. If you use a cost object to categorize a group of cost objects, it can be its own control code. You cannot have more than one control code in a tree based hierarchical structure. This is used for the frozen bottom-up budget.

cost component

A cost component is a collection of cost objects with a certain characteristic. A cost component does not depend on the cost type, therefore, for example, a project can be monitored from another dimension. For example, all the costs that refer to electrical work, such as, cable and installation work, are visible if the applicable cost objects are linked to the cost component, Electrical work.

cost performance index

A measure of cost efficiency on a project.

The cost performance index is determined by measuring the ratio of earned value (EV) to actual costs(AC):

$$\text{CPI} = \text{EV} / \text{AC}$$

If the result is less than 1.0, cost is greater than the budgeted cost.

If the result is greater than 1.0, cost is less than the budgeted cost.

Example:

EV	PV	AC	CPI	SPI
270	335	250	1.08	0.81

earned value

The budget amount based on the project progress for a specific period.

earned value concept

A time-phased method for measuring project performance. The amount of work that is planned with work that is actually accomplished is compared to determine if cost and schedule performance areas are planned.

There are a number of different ways in which you can use the earned value method to determine how budget amounts are to be earned:

- **Milestones**

Milestones are attached to the activity and a percentage or amount of the budget is assigned to each milestone. When you reach a milestone, the assigned budget is earned.

- **Start and End Percentage**

Percentage values are assigned to the start and end points of the activities. Consequently, the start percentage is earned when the activity starts and the remaining percentage is earned when the activity is completed.

- **Percent Complete**

Budget amounts are earned in proportion to the percentage progress of the activity.

- **Level of Effort**

Budget amounts are released in proportion to effort. This method is appropriate for time-driven activities where it is assumed that there is no discrepancy between the scheduled work planned (PV) and the work performed (EV).

- **Apportioned**

Apportioned efforts are those which have an intrinsic performance relationship to some other discrete activity. Budget amounts are earned in the same way as for the linked charge.

estimate at completion

The forecasted total cost of a project, activity, or organization-breakdown-structure element when the defined scope of work is completed. To calculate the estimate at completion: actual costs + estimate to complete

estimate to complete

A realistic forecast appraisal of the remaining work.

hard commitment

For a project, a soft commitment becomes a hard commitment when a purchase order is actually received and due for invoicing.

holdback

A percentage amount that the customer withholds from the contract amount. This serves as a guarantee that all activities are performed, and that contractual obligations are met. Therefore, the holdback amount is paid after the project activities are successfully completed.

milestone

An activity of zero days that usually represents a significant event in the project. In many cases, the completion of a phase of a major deliverable. Milestones can be used for the invoicing and the calculation of earned value.

organization breakdown structure

A representation of the structure of a project organization, this is usually depicted as a tree-like hierarchical structure. The organization breakdown structure is used to link the responsibilities of certain project parts, such as the allocation of a financial budget or the realization of project activities to an OBS element. Each OBS element can be linked to an employee. The OBS is a standard element and can also be made project specific.

planned value

The planned budget amount for a specific period.

progress

The process by which an element or activity is completed over the lifetime of the project. Progress can be recorded at cost type, cost object, or at control code level.

project currency

If the project is performed in another country, the project currency is useful for monitoring. This currency can be an external currency that is not specified as one of the home currencies.

schedule performance index

A measure of schedule efficiency on a project.

The schedule performance index is determined by measuring the ratio of earned value (EV) with the planned value (PV):

$$\text{SPI} = \text{EV} / \text{PV}$$

If the result is less than 1.0, the project is behind schedule.

If the result is greater than 1.0, the project is ahead of schedule.

Example:

EV	PV	AC	CPI	SPI
270	335	250	1.08	0.81

schedule variance

Any difference between the scheduled completion of an activity and the actual completion of that activity.

soft commitment

For a project, when a purchase order is approved and due for receipt, it is called a soft commitment.

