

SAP Project System

Overview

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Project System
SAP Suite Solution Management

28.04.2008

THE BEST-RUN BUSINESSES RUN SAP

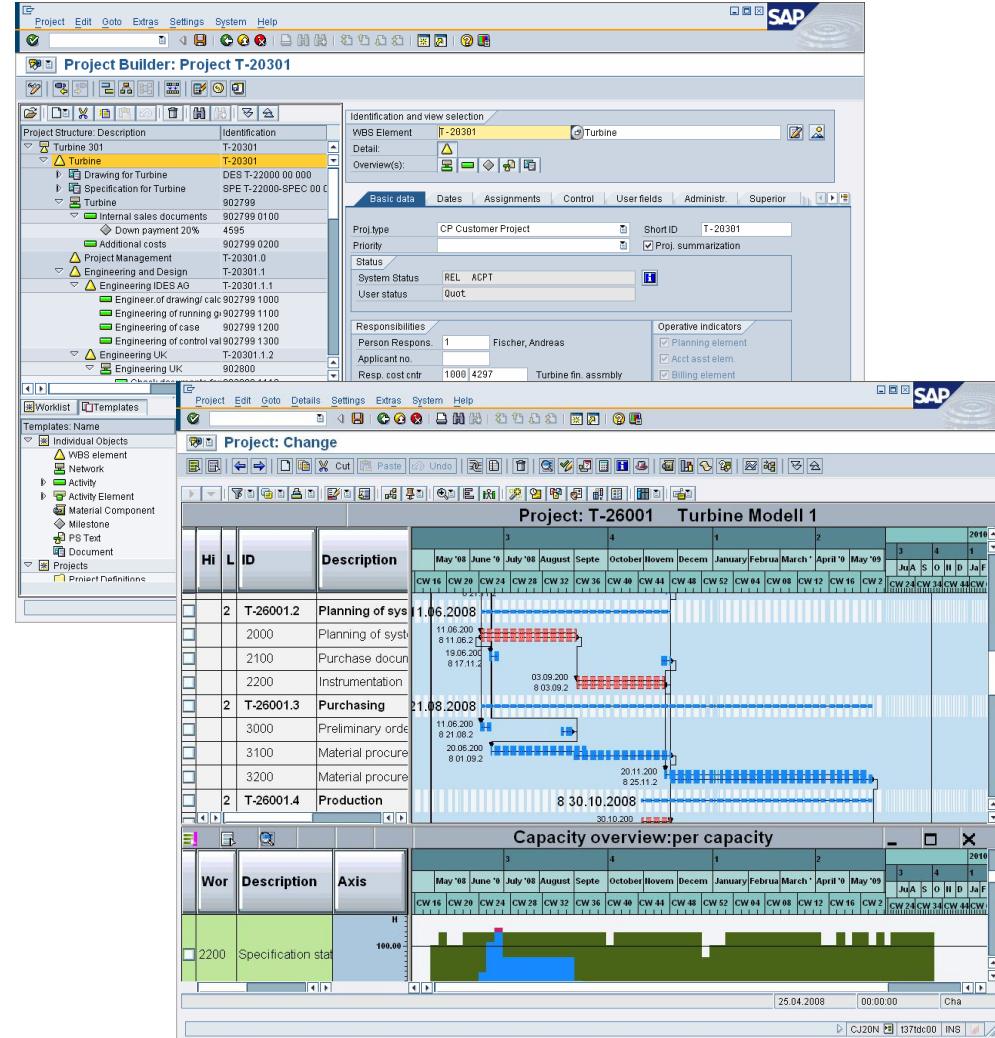


Introduction



Project System is part of SAP's solution for Project and Portfolio Management. Project System helps you manage the project through its entire life cycle, from setting up a structure, to drawing up detailed plans, to execute and completing the project.

Because of its tight integration into financial and logistic core enterprise processes Project System can especially be used for large and complex projects such as construction, production, maintenance, investment, or costs projects in all industries.



Project Builder and Project Planning Board

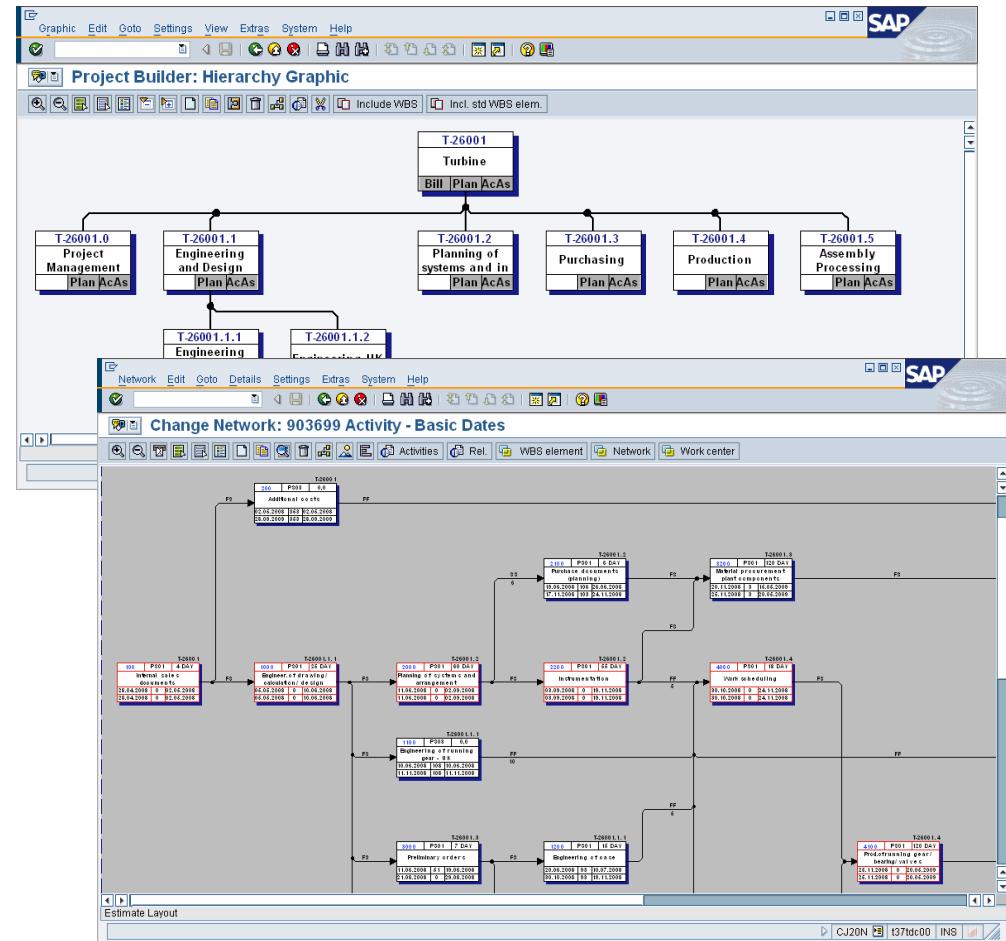
Project Structuring



In Project System you can use Work Breakdown Structures (WBS) and Networks to structure your projects hierarchical and/or using network techniques. Milestones and documents help you to mark project events of particular interest and document your project appropriate.

You can set up project structures manually or based on templates. Project structures can also be created automatically from sales documents or cProjects projects for example.

Using access control lists, partner data and persons responsible you can easily define authorizations and responsibilities for project elements.



Graphical Display of WBS and Networks

Project Scheduling

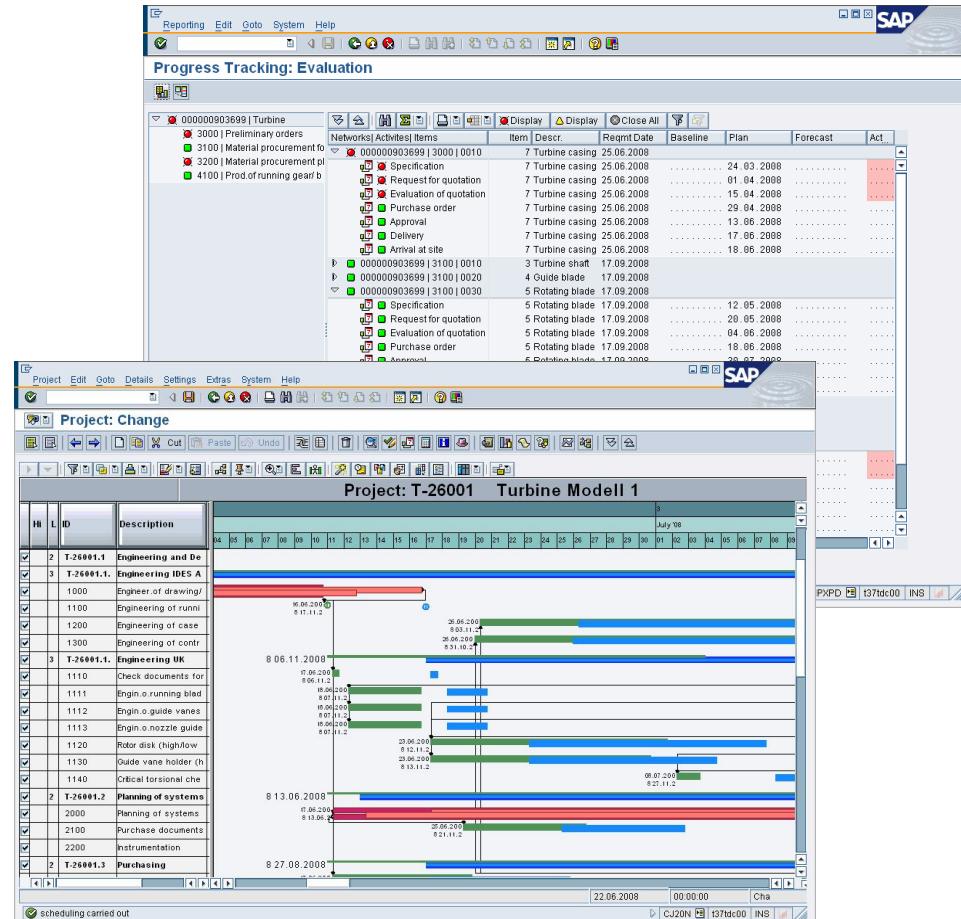


Project System provide various date planning functions. Flexible scheduling techniques can be used to calculate earliest/latest dates, floats or critical paths within projects.

Dependent dates, such as requirement dates of materials, services or capacities, billing dates or periods of planned costs can automatically be derived from planned dates.

Comparing forecasted, planned and actual dates you can easily identify deviations from your project plan.

Additional tools such as Progress Tracking, Subnetwork Monitor, Simulations or Milestone Trend Analysis enables you to manage the dates of your projects efficiently.



Progress Tracking and Project Planning Board

Capacity and Workforce Planning

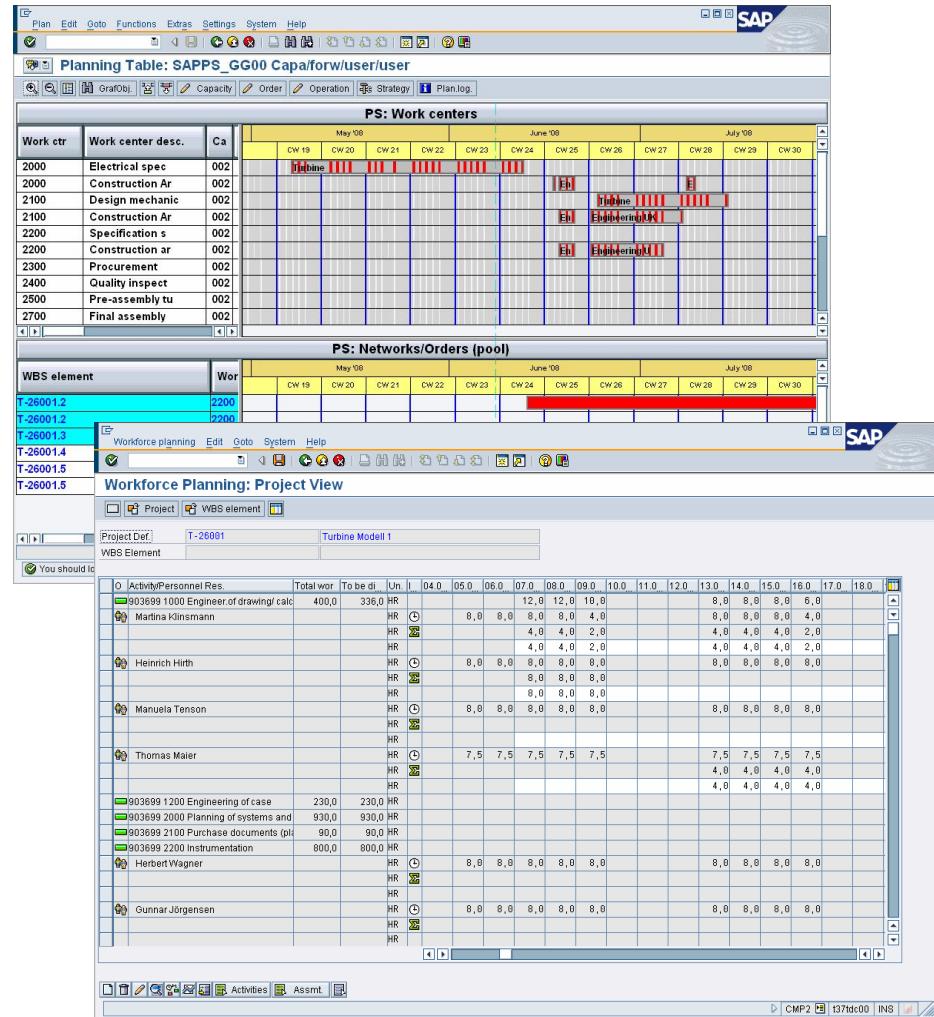


Networks in Project System enables you to plan, analyze and level work center based capacity requirements of your project.

You can use simulation versions for what-if analysis of your project schedules and capacity requirements.

For detailed workforce planning you can assign organizational units or individual personnel resources to work packages of your project.

Because of the tight integration of Project System to Human Capital Management you can directly access the availability or even qualifications of employes if required during workforce planning.



Capacity Leveling and Workforce Planning

Material and External Service Planning



If you assign material components to Networks you can plan material requirements based on your project schedule, check the material availability and trigger the material procurement and delivery later on.

Functions such as project specific bills of material, bill of material transfer, the open catalog interface or integrations to Integrated Product and Process Engineering (iPPE) helps you to plan materials efficiently in Project System.

In order to plan external services you can directly use purchasing info records, outline agreements or service specifications from Materials Management in Project System. The open catalog interface allows you to select services also from internal or external service catalogs.

The screenshot displays two overlapping SAP Project Builder windows. The top window, titled 'Project Builder: Project T-26001', shows the 'Identification' tab with a tree view of project structure and a table for 'Overall Assign'. The bottom window, titled 'Service Specifications: Ext. Specs f. Task List Maintain', shows the 'Service Selection' tab with a table for 'Services' containing various supply and installation items. Both windows include SAP navigation bars at the top and bottom.

Line	ID	Service No.	Short Text	Quantity	Un	Gross Price	Crcy	U	Overf. Tol.	P	User U
10		100087	Drilling water supply pipe	1	PC	185,53	EUR	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1
20		100088	Supply pipe to 5m (water)	1	PC	52,90	EUR	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1
30		100089	Supply pipe over 5m join (water)	1	M	34,50	EUR	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1
40		100090	Installation in segments (water)	1	PC	50,60	EUR	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1
50		100091	Drill gas supply pipe	1	PC	216,19	EUR	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1
60		100092	Supply pipe to 5m (gas)	1	PC	197,79	EUR	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1
70		100093	Supply pipe over 5m join (GAS)	1	M	41,40	EUR	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1
80		100094	Installation in segments (Gas)	1	PC	52,90	EUR	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1
90		100095	Supply pipes compression trial	1	PC	191,66	EUR	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1
100		100096	Divide house supply pipe	1	PC	89,70	EUR	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1

Material Components in the Project Builder and Service Specification

Financial Planning



You can use various techniques for planning costs and revenues in Project System depending on your financial planning requirements.

So the cost planning capabilities for example range from overall cost planning to Easy Cost Planning or detailed network costing.

Sales Pricing helps you to create quotations for customer projects based on the planned costs.

Project milestones can be used to derive billing dates automatically from the project schedule.

Project System cash management also allows you to plan and monitor incoming and outgoing payments for projects.

The screenshot displays three overlapping SAP Project System windows:

- Top Window: Change Cost Planning: WBS Element Overview**
 - Proj. Def.: T-26001 (Turbine Modell 1)
 - Period: 1 2008
 - Views in: 0 Controlling area currency

E	Lev	WBS element	Cost plan	Tra	P	Distributed	Distributable	Planned total	Costing
1	T-26001		500.000,00 EUR		435.000,00	65.000,00	871.628,02		
2	T-26001.0								
2	T-26001.1		116.000,00 EUR		116.000,00			212.705,84	
3	T-26001.1.1		116.000,00 EUR			116.000,00		212.705,84	
3	T-26001.1.2								
- Middle Window: Project Management: Change: Easy Cost Planning**
 - Costing Structure tree view showing categories like Turbine Modell 1, Turbine, Project Management, etc., with values in EUR.
 - Projectmanagement panel: Internal Labor Hours (200,00), Additional costs (euros) (3.000,00).
 - Note field and Confirm button.
- Bottom Window: Costing : Project Management**

ItemNo	Item Cat.	Resource	PlantA	Pur.	Quantity/BUn	Total Price	Price/Cost Elem.
1 E	4295	1463		180 H	318,81	318,81	626300
2 M	B-1000	1000		2 PC	1,02	0,00	400000
3 E	4100	1413		20 H	4.667,22	4.410,30	615000
4 V				1 EA	3.000,00	0,00	447000
5 G					0,00	0,00	655110
6 G					0,00	0,00	655300
7 G					0,00	0,00	655400

Overall Cost Planning and Easy Cost Planning

Budget Management



Budget is the approved cost structure for a project. You can allocate budget to projects in Investment Management or directly in Project System.

Budgets can be distributed hierarchically within the project structure. If required you can successively release budgets and post updates, such as budget supplements or returns.

Budget availability control enables you to control costs actively by issuing warnings and error messages when tolerance limits of the budget are exceeded because of assigned values.

The screenshot displays two SAP Project System windows. The top window, titled 'Change Original Budget: WBS Element Overview', shows a hierarchical budget structure for 'T-26001' under 'Turbine Model 1'. The budget table includes columns for WBS element, Budget, Tra..., Distributable, Assigned, Planned total..., Previous..., and Cumul... . The bottom window, titled 'Mass Release of Budget for Projects', allows for the mass release of budgets based on budget or plan, with options for release percentage (25,00), release date (2008), and processing options like test runs and post inconsistencies. Selections for the project (T-26001 to T-26010), project profile, controlling area, investment program, approval year, and position ID are also shown.

Allocation and Mass Release of Project Budgets

Confirmations



In the execution phase of projects confirmations can be used to document the actual work performed and the progress of individual work packages.

Using confirmations you can also enter forecast information such as the remaining work or duration.

Because of confirmations the dates and capacity requirements of your project will be adapted and actual costs are posted automatically to the project.

Project System provides various confirmation options including individual and collective confirmations, integration to the Cross Application Time Sheet (CATS) or external interfaces.

The screenshot shows the SAP Project System interface with the following details:

- Header:** Time Sheet, Edit, Goto, Extras, Environment, System, Help.
- Sub-Header:** Heinrich Hirth IDES AG Frankfurt, Times/Key Figures, Account Assignments.
- Activity Type:** IPRO Internal Project, Task Level.
- Account Assignment:** Acct assign to NP Network, Acct assign. Text Turbine.
- Calendar:** 18/4 2008, showing specific days highlighted in red.
- Actual Work Log:** A table showing work hours and short text for specific dates.
- Confirmation Dialog:** Enter Network Confirmation: Actual Data, containing fields for Activity (1000), Work Center (2000), Personnel no., Wage Type, Reason, Short Description, Processing (Processing % 20%), and Costs (Posting date 29.04.2008, Activity Type 1421). It also includes checkboxes for FinalConf, No date update, Completed, and Clear Open Reservs.
- Activity Overview:** Shows activity details with Start Date, Finish Date, Duration, and Work UoM.
- Confirmation Summary:** Shows Actual (20.04.2008, 29.04.2008, 80,0 HR) and Forecast (320,0 HR).

CATS and Individual Confirmation

Project Related Procurement



Reservations or purchase requisitions can automatically be created for a project based on your material and external service planning.

You can easily track all follow up in-house production and purchasing processes related to your project for example using the ProMan or Progress Tracking.

Commitments and actual costs because of purchasing documents, material movements or invoices are automatically posted to the project.

Valuated project stock helps you to manage and valuate material in your project independently if required.

The screenshot displays the SAP ProMan and Progress Tracking interface. On the left, the 'Project-Oriented Procurement' screen shows a hierarchical project structure for 'Turbine Modell 1' (T-26001), detailing various work packages like Turbine, Project Management, Engineering, and Purchasing, along with their respective tasks and documents. To the right, the 'Orders/Documents' screen lists procurement orders for components such as Hollow shaft, Turbine casing, Guide blade, Rotating blade, Generator, Control unit (rack), and Lubrication unit, with details like quantity, vendor, and purchase request status. Below these, the 'Progress Tracking: Overview' and 'Components' screens provide detailed tracking and configuration for specific components, including requirement dates, quantities, and base units of measure. The bottom section shows a table of events with columns for description, baseline, plan, plan set, fc set, actual, % of compl., scenario, std, prio, var, desc, and rank.

ProMan and Progress Tracking

Cost Integration and Billing



Costs actually incurred are posted directly to your project by account assignment of documents in Financial Accounting, Controlling or Materials Management for example.

Using Execution Services you can also directly post various documents in Easy Cost Planning based on planned values.

Costs of orders assigned to your project can be analyzed in project reporting and will be checked against the project budget.

Milestone billing and resource related billing can be used in customer projects to control billing processes based on the project progress.

The screenshot displays the SAP ERP interface for cost integration and billing, specifically focusing on Execution Services and Resource-related Billing.

Execution Services View: Shows a tree view of a costing structure for "Turbine Modell 1". The "Project Management" node is expanded, showing costs for Manager Hours, Büromaterial - Ordner, Drive Hours, Additional engineering, OHS Other Materials, OHS Administration, OHS Sales & Distrib., Engineering and Design, Engineering IDES A, Engineering UK, and Planning of systems ar. Total costs listed are 11.171,31 EUR.

Easy Cost Planning: Execution Services View: Shows a table for "ACTV Internal activity allocation" under "Execution Service". It lists documents (900053184), posting dates (29.04.2008), partner numbers (4100, 4295), partner activities (1413, 1463), and total quantities (20 H, 180 H).

Internal activity allocation : Project Management View: Shows a table for "Item Cat.", "Descripn", "Cost Ctr", "Acty Type", "BusProce...", "Quantity", "Unit", and "Postg Date". An entry for "Manager H" is shown with category 4295, cost center 1463, quantity 180 H, and posting date 29.04.2008.

Billing request for resource-related billing document <new>: Expenses View: Shows a table for "Description", "Status", "Locked", "Amt to be billed", "Currency", "Qty to be billed", "UM", "% to be bill...", "Net value", and "Currency". It details costs for Secondary costs, Engineering costs, Management costs, and Quality assurance.

Entry View: Shows a table for "Description", "S. Lo", "Amt already billed", "Open amount", "Amt to be billed", "Amount postponed", and "Amount reject...". It lists entries for Secondary costs, Engineering costs, Management costs, and Quality assurance, with amounts such as 8.548,26, 1.879,84, 5.734,98, and 933,44.

Execution Services and Resource Related Billing

Claim Management and Workflows

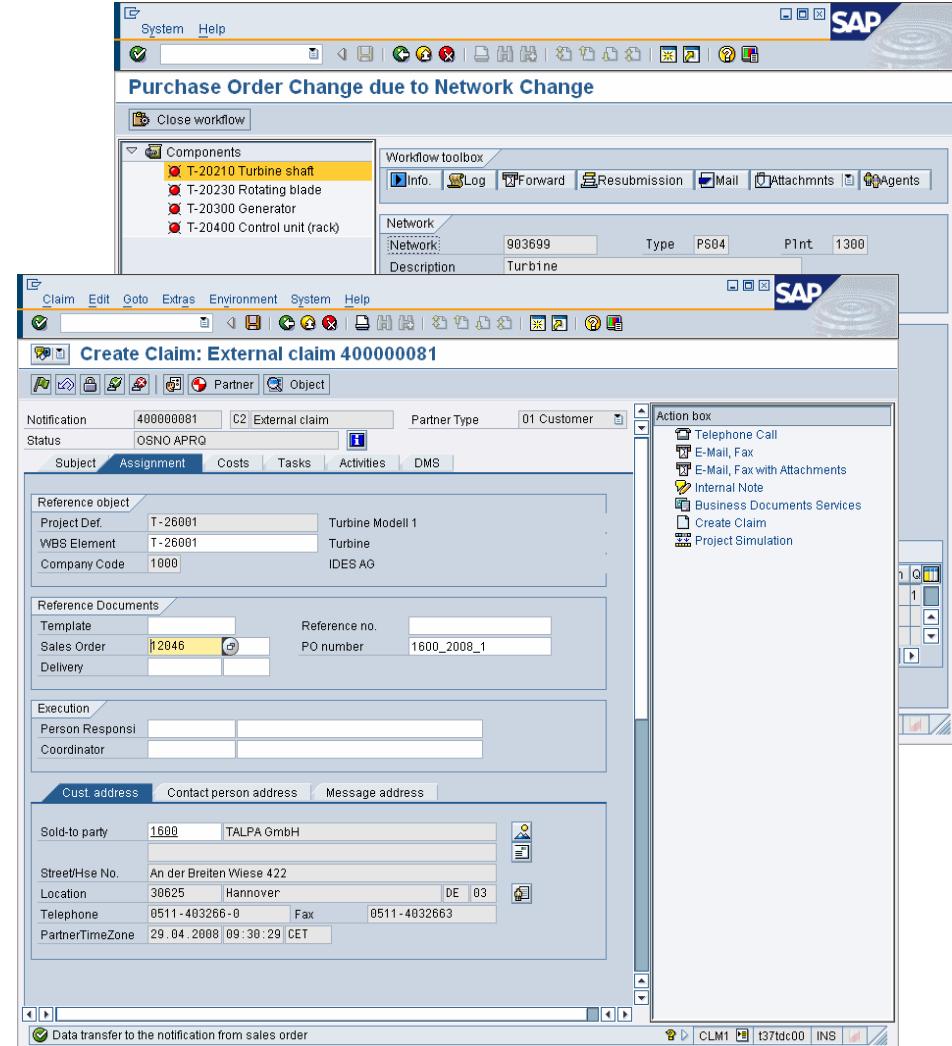


Project System supports Claim Management using a notification type called "claim". You can use claims to document variances from your project plan, name the person responsible, and initiate follow-up activities.

Costs that are caused by a deviation can be planned using claims and integrated into your project plan.

Standard workflows can be used in Claim Management for approval processes.

Other standard workflows are available in Project System in order to notify persons responsible in case of deviations affecting purchase orders or project capacity and date planning.



Workflow because of Network Changes Affecting Purchase Orders and Claim Management

Project Progress

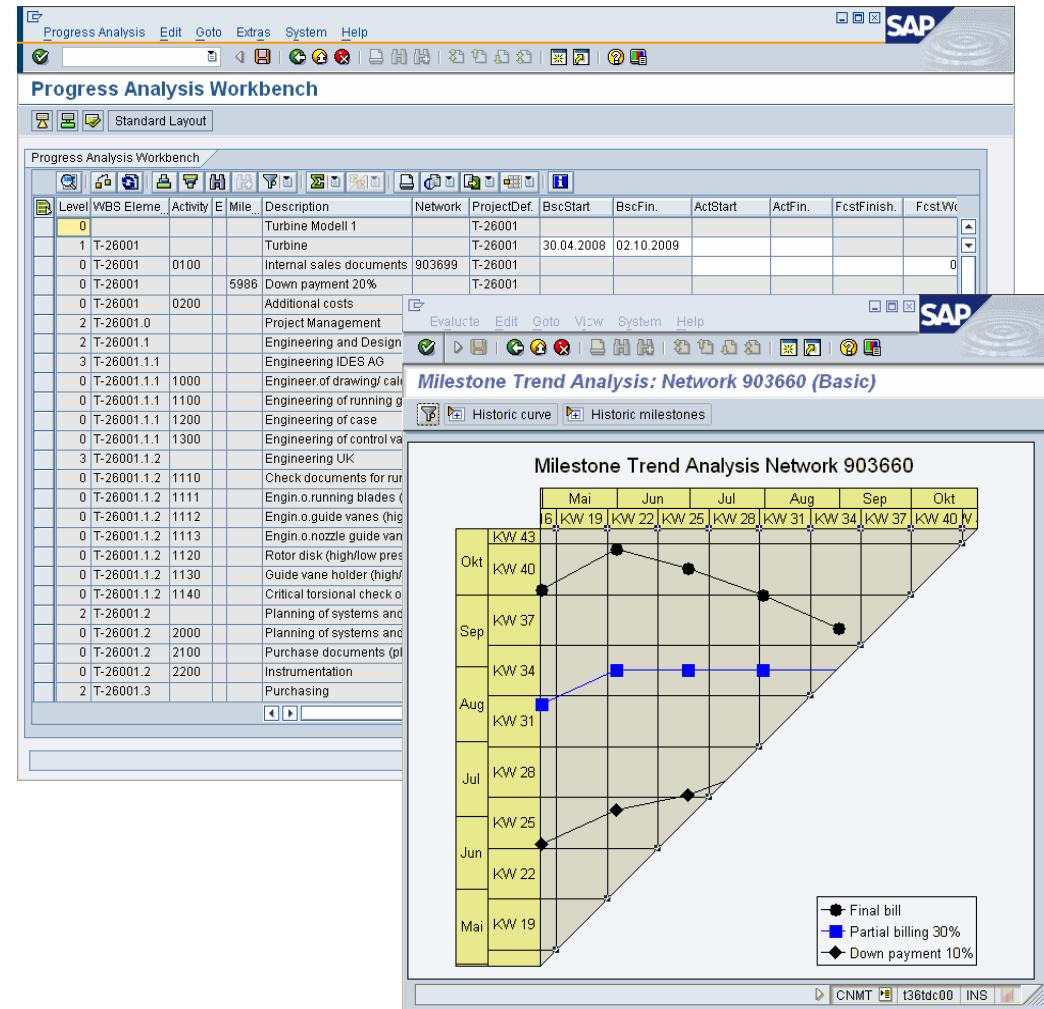


Milestone trend analysis and Progress Tracking can be used to effectively monitor the project schedule.

Progress Analysis in Project System provides several methods and interfaces to derive and analyze the POC and other project progress values of your project or individual work packages.

Using the Progress Analysis Workbench you can easily monitor and enter all progress related data for several projects simultaneously.

Forecast values can be calculated or entered manually using the Forecast Workbench for example.



Progress Analysis Workbench and
Milestone Trend Analysis

Period-End Closing



You can perform various period-end closing procedures on your project to ensure that all project data belonging to a period is determined and available for purposes of enterprise control.

Typical period-end closing procedures for projects are:

- Overhead calculation
- Template allocation
- Project interest calculation
- Progress and results analysis
- Project related incoming order analysis
- Settlement

You can use the Schedule Manager to easily plan, carry out and control your period-end closing procedures.

The screenshot displays two SAP application windows side-by-side. The left window is titled 'Actual Overhead Calculation: Project/WBS Element/Network Basic list' and shows a 'Selection' table with parameters like Project definition (T-26001), Period (004), and Fiscal Year (2008). The right window is titled 'Schedule Manager: Schedule Tasks for Task List Z-SAP-ROLE' and shows a 'Task List' tree view with nodes such as 'Close primary processes', 'Subsidiary ledgers', 'Cost Accounting', 'Overhead Costs', 'Product Costs', and 'Projects'. Below the tree is a calendar for April 2008 and a 'Daily overview' table for April 29, 2008, listing tasks like 'PS: Period-End Close' scheduled for 12:00 PM.

Overhead Calculation and Schedule Manager

Project Reporting



Project System provides various standard reports for realtime reporting of financial and logistic project data as well as predefined BI content.

Using report-report interfaces you can directly navigate from one report to other more detailed reports.

You can also define your own reports and queries depending on your reporting requirements.

Project System reports include:

- Project and individual structure reports
- Resource and material reports
- Hierarchy, cost element and line item reports
- Claim and project progress reports

The screenshot displays two SAP Project System reports overlaid. The top report is titled 'Execute Drilldown Report Costs: Plan/Act/Commit/Rem.plan/Assigned' and shows a table of costs. The bottom report is titled 'Project Info System: Structure Initial Screen' and shows a hierarchical tree view of project structures. Both reports are part of the SAP Project System interface.

Hierarchy Report and Project Structure Overview

Interfaces



Project System provides several options to exchange project data with external systems. For example you can use various BAPIs to export, import or maintain project data.

Based on the BAPI technology the OpenPS interface allows you to interchange project data with Microsoft Project Client based on predefined mapping rules.

As of SAP ERP 6.0 Enhancement Package 3 more than 50 Enterprise Services are available to interchange project data with other systems too. More information on Enterprise Services for Projects can be found on the Enterprise Services Workplace:

www.sdn.sap.com/irj/sdn/esworkplace

The screenshot shows two SAP application windows side-by-side. The left window is the 'BAPI Explorer' showing a hierarchical list of BAPIs under 'WBSPI', including methods like GetMultiple, CreateMultiple, DeleteMultiple, ExistenceCheck, GetData, GetGuidFromKey, GetInfo, GetKey, GetStat, and Maintain. The right window is the 'Enterprise Services Workplace' showing a detailed view of the 'IWbsElementTable' BAPI. It includes sections for 'Parameter', 'WBS Elements', and 'Description'. The 'Description' section notes that detailed information about a WBS element is transferred in this structure, and specifies that for every field to be changed, a character must be entered in the corresponding field in the *I_WBS_ELEMENT_TABLE_UPDATE* structure. Below this, it says 'For information about the individual parameters, see the corresponding data element documentation'. The bottom part of the workplace window shows the 'Project' business object definition, including sections for 'Definition', 'Related Business Objects', 'Technical Data', 'Business Context', 'Notes for SAP Back-End System Administration', 'Prerequisites', and 'Related Items'.

BAPI Explorer and Enterprise Services Workplace

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