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In the search for cost efficiency and effective working, companies recognize the value of having project management applications that support the entire project lifecycle and provide complete transparency.

However, despite software vendors trying to offer a wider range of functionality to their customers, there is still a lack of end-to-end project management solutions that include all the surrounding business processes.

As a result, many companies still plan, calculate, execute, and maintain projects in spreadsheet software, such as Microsoft Excel. Even where specific applications are used, such as Microsoft Project or best-of-breed solutions, the project management processes within them are rarely integrated with other business processes, such as sales or accounting.

The project management functionality in SAP Business ByDesign has been designed to fill the gap. It's key characteristics include:

Management of Projects of All Types and Scopes

SAP Business ByDesign covers the complete life cycle for projects of all types and scopes. Projects may act as pure collectors of overhead costs for detailed cost reporting or be executed to serve specific market segments. Projects may be managed on behalf of a single customer or undertaken to sell services to multiple customers. To allow aggregated reporting, multiple projects can be bundled into programs.

Interactive Project Planning

The solution offers various graphical planning views to allow the project manager to plan projects of all sizes. Gantt charts, work breakdown structures, and network diagrams offer intuitive drag-and-drop editing for creating and editing project phases, milestones, and tasks; planning project flows by adding dependencies; and using forward and backward scheduling to help ensure that project deadlines are met within given time constraints.





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Integrated Project Staffing and Procurement

The project management capabilities supported by SAP Business ByDesign are fully integrated with its human resources and supplier relationship management features. As a result, project managers can search for team members with the best-fitting skill sets, whether they are internal employees, employees of a partner company, or external service agents. The project manager can use the integrated calendar to check the availability of employees before requesting their services or raising an order for the services of an external service agent directly from the project.

Integrated Self-Services Supporting the Project Team

The solution also includes a dedicated work center that provides the project team with all the information and self-services it needs to fulfill its tasks. The tasks and responsibilities of project team members are all in one place, with detailed information, checklists, and a shared document center to foster project collaboration. From the project team work center, team members have access to their time sheet, so they can confirm the time worked on projects, and to expense recording to enter their travel expenses.

End-to-End Process for Project Sales

The project management features of SAP Business ByDesign are tightly integrated with customer relationship management, supporting professional service organizations throughout the entire value chain as a result. This includes marketing and opportunity management, the creation of projects directly from sales orders, and project invoicing. The financial closing processes are supported by automatic revenue recognition with various accrual methods for fixed price or time and material projects.

Integrated Financial and Management Accounting

The solution fully integrates project planning and execution with financial and management accounting, providing complete transparency of project progress and profitability. For example, at the planning stage a project manager is automatically provided with project cost estimates – without having to calculate cost rates for resources or people. Due to the tight integration with time administration, reimbursement management, supplier invoicing, and customer invoicing, all costs and revenues are directly available in project reporting.





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SAP Business ByDesign enables companies to effectively execute both internal and external projects. While there is no difference in project management and operations for internal and external projects, they are handled differently in financial and management accounting.

Internal projects can be set up as overhead cost projects or direct cost projects.

Overhead cost projects allow overhead costs to be allocated and managed in more detail than cost centers alone. All costs charged to the tasks of overhead cost projects are automatically reallocated back to the cost centers responsible for the project tasks. The project costs are, therefore, pure overhead costs. No revenues can be assigned to overhead cost projects.

Direct cost projects are internal projects such as research, development, or marketing projects for a specific product or product line.

Because direct cost projects can be assigned to market segments they can have profit analysis. Unlike overhead cost projects, their costs remain on the project. In addition, costs are handled as expenses.

Usually, direct cost projects do not generate any revenues. However, if a business partner covers the project costs, manual customer invoices can be created.

These revenues are not considered to be sales revenues but other revenues and, as a result, are not supported by automatic revenue recognition.

External projects can be set up as customer projects or multicustomer projects.

Customer projects are always linked to sales orders. The solution handles costs and revenues posted to customer projects as cost of goods sold and sales revenues.

Multicustomer projects are projects where various standardized services are provided to customers, such as a big public event involving ticketing or advertising. The standardized services are sold using standard sales orders or point-of-sales transactions that are assigned to the relevant project tasks of the multicustomer project. The solution handles costs and revenues posted to multicustomer projects as operating costs and sales revenues.

External projects are integrated into the normal order-to-cash scenario, which offers standard functions such as opportunity management, reporting by function of expense, profit analysis, and automatic revenue recognition.

To support multiproject management, internal and external projects can be assigned to programs.





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Project Planning

New projects can quickly be created using the guided activity in SAP Business ByDesign. They can be created from scratch or based on a source, which can be an existing project, a project created in Microsoft Project, or a project template. Creating new projects based on a source saves time and effort, especially if the projects are fairly standardized. Customer projects can also be created directly from a sales order that has been raised to sell project-based services.

When creating a project, the project manager enters the project type, which classifies the project as an overhead cost project, a direct cost project, a customer project, or a multicustomer project. The project type also contains default parameters, such as language or approval settings, which automatically apply to the new project.

Central and Decentralized Planning

Every phase, milestone, or project task has a person responsible. At the highest level the person responsible is the project manager. He or she can define team members and make them responsible for a substructure of the project – for example, for a specific project phase. This creates a project reporting line different to the reporting line defined in organizational management and supports matrix organizations.

In the project team work center, each responsible person finds a work list with all the phases, milestones, and projects tasks he or she is responsible for, with their details.

Responsible persons can see the initial planning that has been done by the project manager and refine the planning and staffing within their area of responsibility.

They can also manage any checklists created by the project manager that are associated with their phases, tasks, and milestones.

The initial status of a project is “in planning.” If the project manager plans the entire project centrally, he or she can centrally release the project after planning. This activates time and expense recording for all phases, milestones, and project tasks.

If the project manager delegates the planning of phases, milestones, or tasks to other team members, he or she can set the project status to “started.” This activates time and expense recording for the project leader. It is then up to the team members to release the phases, milestones, or tasks they are responsible for.



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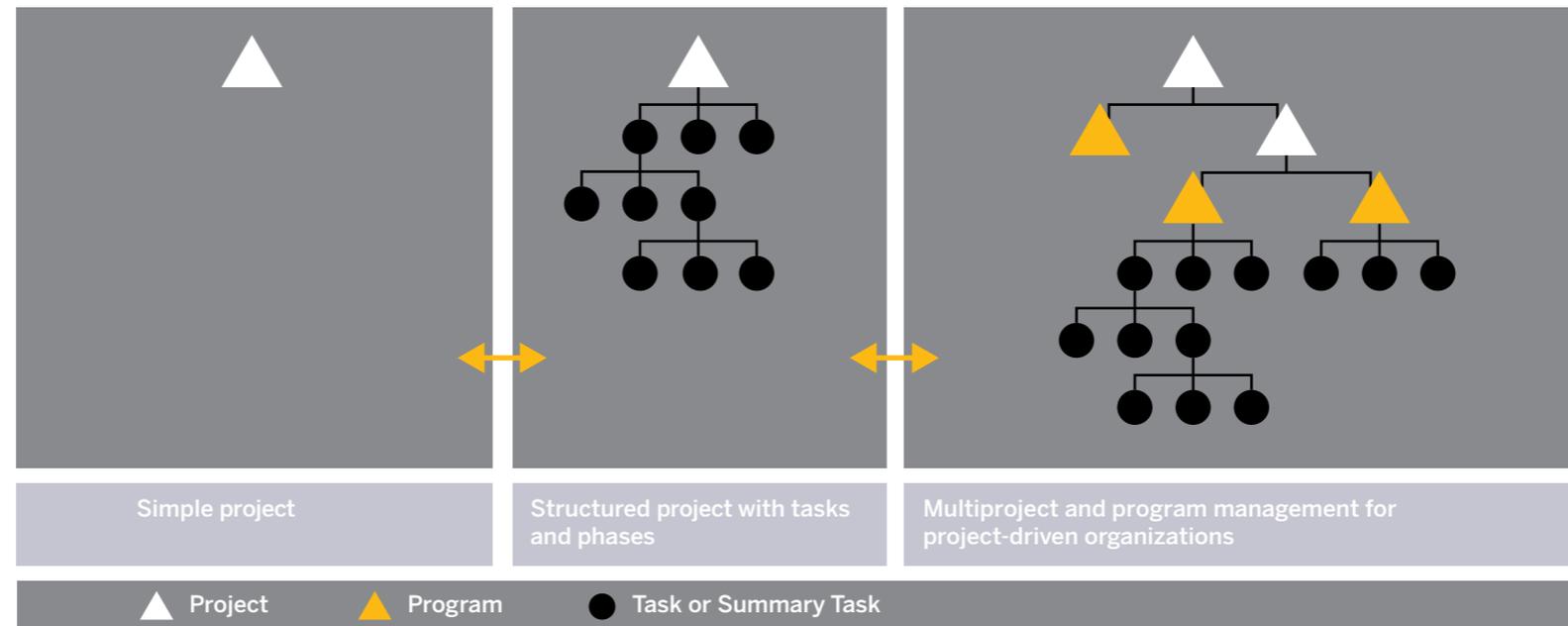
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Project Structure

Project managers can structure and schedule projects using different interactive graphical views, such as Gantt charts, work breakdown structures, and network diagrams. They can start with a simple structure containing just the major project phases and then easily expand it to include additional phases, milestones, or project tasks at any time.

By assigning a service or an amount of work to a phase or a task, the project manager defines work packages for that phase or task. Unstaffed work packages are visualized in red and need to be staffed.

In addition, the project manager can plan expenses and revenues on every project task.



Graphic: From Simple to Complex Multiproject Programs





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Project Scheduling

Project scheduling is a solution-driven process that helps the project manager to monitor the timeline of the project and ensure that deadlines are met. The duration of project tasks is planned at the lowest level of the project. The duration of superordinate project tasks are automatically derived from the subtasks they contain (bottom-up scheduling). Milestones are used to track important events within a project and have no duration.

The project manager can define the order in which project tasks are to be completed and specify time constraints and dependencies between project tasks.

During project planning, the solution automatically calculates the earliest and latest start and finish dates of all project tasks, using either forward or backward scheduling.

The project manager can use these dates to determine the window of time in which each project task must be completed to avoid delays in the project timeline.

During project execution, the project manager can manually trigger the solution to recalculate the project schedule, using the actual time it takes to complete project tasks or other changes to the project plan.

Project Resource Management

Before employees can record time and expenses they need to be assigned to the project. The project manager can assign individual employees or entire organizational units to the project. Project team members may be employees from the company running the project, employees of a partner company, or service agents from a supplier.

The resource management functionality in SAP Business ByDesign can be used to search for suitable resources that are available within a given period and possess the required skill sets (employees or service agents). The availability of selected employees can also be viewed using the availability calendar.

If a team member is available, he or she can be allocated to an unstaffed work package. Staffed work packages are shown in green and display the staffed team member.

Assigned employees become project team members. For each team member defined, additional information can be entered, such as the start date and finish date of the project assignment or the committed work. This additional information is used to calculate resource availability.



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Project Procurement

Integration with the supplier relationship management (SRM) functionality in SAP Business ByDesign makes it possible to create a purchase request for external services or materials directly from a project. The purchasing department automatically receives notification of the purchase request.

After a service has been purchased and confirmed, the responsible service agent can be assigned to a work package just like an employee.

From the solution's point of view it makes no difference if an internal or external team member works on a task. Furthermore, the person responsible does not have to deal with financial data resulting from the external purchase. This data is transferred directly from the SRM functionality to financial accounting.



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The execution phase of a project starts when the project status has been set to “released.” From this time on, work packages appear in the work lists of the project team members, and time and expense recording is activated.

Since project planning is an iterative process, the project manager or the persons responsible for a project substructure can still update the project plan.

For changes not involving the scope of the project – for example, if a task takes longer or requires more work than initially planned – the project manager can simply update the schedule of the remaining work in the project. Changes that affect the scope of the project may require the approval of the project stakeholders.



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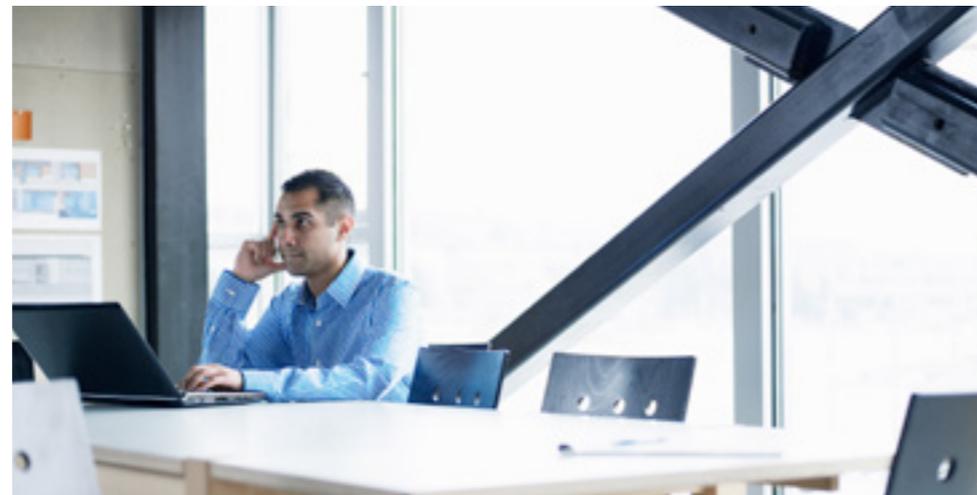
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Project Work List for Team Members

Project team members are typically responsible for a number of work packages. In the project team work center, SAP Business ByDesign automatically provides them with a work list containing all the work packages they have to perform.

From the work package work list, team members can access the corresponding project task to view all the details, such as the service to be provided and the hours planned. After work is completed, team members update the estimated remaining work and record their time and expenses.



Time Recording

Both internal and external project team members can use self-service to enter the time they have worked on the project.

The time recorded by internal project team members automatically generates a service cost allocation from the employee's cost center to the project task. The cost rates can either be based on real costs (defined per labor resource) or internal service costs (defined per service).

The time recorded by service agents and employees from a partner company automatically generates a service confirmation of the cost rate from the project purchase order. SAP Business ByDesign supports intercompany processes such as purchasing and invoicing for project work as well as for products. This is useful when a company has a number of legal entities and wants to be able to assign products and employees to projects at any of them.

Time recording can also be performed on behalf of team members, such as by a team assistant. Unplanned as well as planned work can be recorded, although unplanned work always requires approval by the person responsible for that part of the project.



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Expense Recording

Internal project team members and employees from a partner company can enter their expenses into an expense report using the self-service functionality of expense and reimbursement management.

After an optional approval process, expenses are reimbursed to the project team member.

SAP Business ByDesign automates intercompany processes, reducing manual invoicing for the customers.

If the project team member is an employee of a partner company his or her time recordings simultaneously create expenses for the project of the buying company and in the selling company. The selling company uses the automated invoicing processes in SAP Business ByDesign to invoice the buying company.

External project team members include their expenses in their supplier invoice to the company.

Expense recording can also be performed on behalf of other employees – for example, by a team assistant or by using a mobile device.



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Approvals

The project manager receives and approves all pending approval tasks in the project management work center, regardless of whether they come from employees or service agents. After timesheets and expense reports have been approved, SAP Business ByDesign processes the financial postings.

It is essential for project managers to keep recorded times and expenses under control, but at the same time, approval tasks should be kept to a minimum. Therefore, the conditions under which time and expenses need to be approved can be configured in SAP Business ByDesign.

For time recordings, the project manager can decide whether he or she wants to approve all recorded times or only times which have not been planned. Unplanned work, as well as work recorded by external team members or by persons who are not part of the project team, always needs to be approved.

Different approval scenarios for expense reports can be configured in expense and reimbursement management. If the approval process for expense reports is activated, expense reports are first sent to the expense clerk for review before being forwarded to the project manager for approval.

For shopping carts, purchase orders, or supplier invoices, the approval process can be activated and configured individually. Goods and service receipts are always sent for approval if the confirmed quantity exceeds the ordered quantity.

The approval conditions for expense reports, shopping carts, purchase orders, supplier invoices, and goods and service receipts can be further refined by specifying a threshold value. This helps ensure that approval is only required if the amount exceeds the defined threshold value.

Project Team Collaboration

Project teams working with SAP Business ByDesign benefit from the collaboration functions, such as the collaboration window and integrated business task management, which enable them to work together efficiently using multiple communication channels.

The solution also provides a document center for centrally uploading and storing documents, pictures, or other file types.

Files uploaded to the document center can be viewed, edited, and deleted using a standard Web browser.

The document center helps ensure that the documents are up to date by offering exclusive editing rights using a check-in/check-out policy. Document versioning stores the history of the changes to a file.



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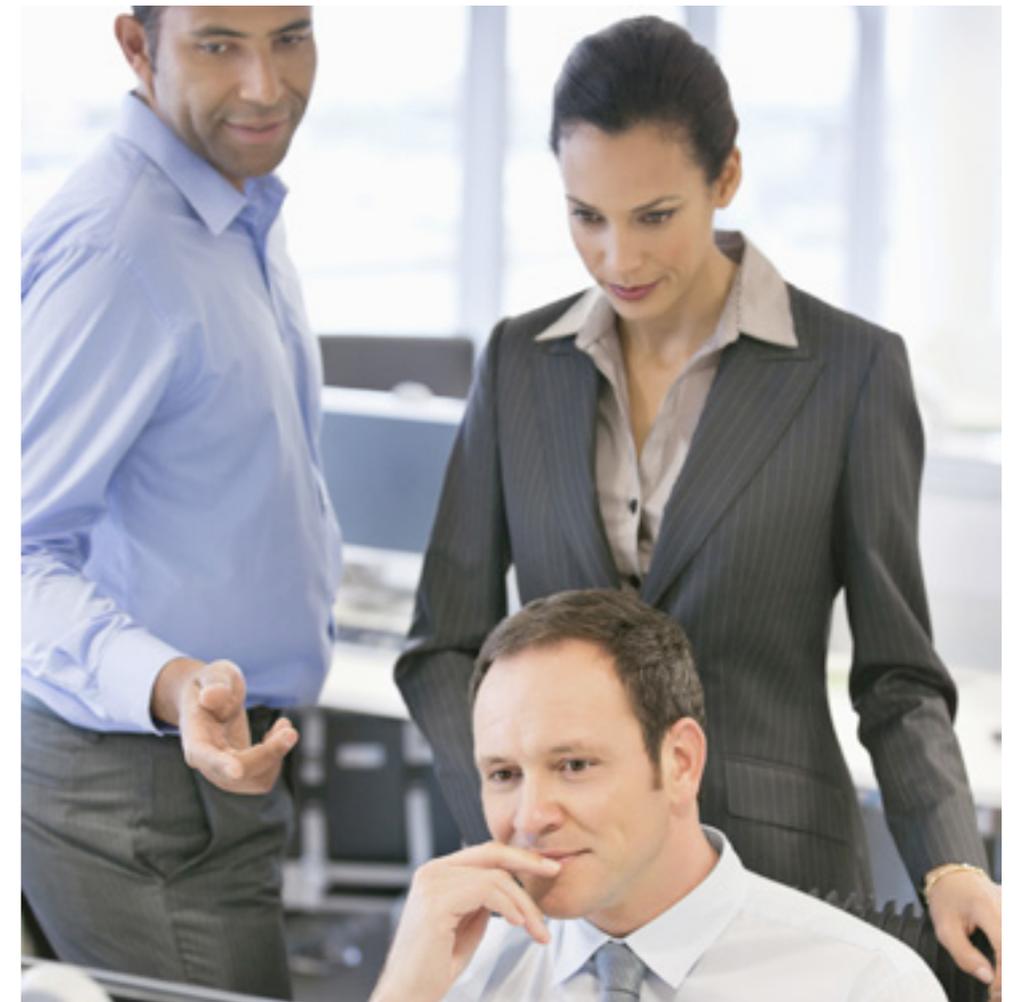
Change Management

Change management is an important part of project management. The original project plan, including planned start and finish dates, planned durations, and planned work, serves as the baseline or primary reference point against which project execution is measured.

SAP Business ByDesign automatically creates the initial baseline by copying the plan data when the project manager starts or releases the project. The project manager and stakeholders can then use reports to monitor the progress of ongoing projects and track and analyze deviations from the baseline plan.

If the current project data consistently differs from baseline data, it indicates that the original plan may be inaccurate, caused by changes to the scope or nature of the project.

When there are significant changes to the project scope, such as additional tasks, the baseline can be modified by carrying out the required changes in the baseline editor, or by creating a new baseline from the project plan, and then submitted to the project stakeholder for approval.





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Project Invoicing

SAP Business ByDesign offers sophisticated project invoicing functionality that allows both the project manager and the invoicing clerk to invoice customers for project-based time and expenses or fixed-price project services.

Companies using SAP Business ByDesign benefit from the full integration of project invoicing into the end-to-end business processes of the order-to-cash scenario (see the "Business Scenarios" section for more details). They are supported by standard functions such as reporting by function of expense, profit analysis, and automatic revenue recognition for project sales.

Generally speaking, project team members enter a time or expense item and also the relevant project tasks, but they aren't aware of the sales order item. So special determination logic allows the solution to find and automatically assign the correct sales order item for the entered time and expense items.

SAP Business ByDesign also offers a special invoice preparation view that allows the project manager to review the assignments made by the solution and provide any that are missing.

In the same view, the project manager can also prepare defaults for the invoicing clerk, defining when times and expenses are to be invoiced or written off.

A project invoice request can be created at any point during the project's duration. The solution offers a guided activity to manually create a project invoice request, starting from either the project or the related sales order. However, the solution also supports the ability to automatically create a project invoice request based on the sales order items and the automatic assignment of time and expenses. The automatic project invoice request can then be edited and completed.

Furthermore, it is possible to create an invoice schedule with fixed invoicing dates or invoicing based on the completion of project milestones (milestone billing). Based on this schedule, the solution automatically creates project invoice requests and sends business tasks to the invoicing clerk to review and release the project invoice requests.





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In SAP Business ByDesign project logistics data is decoupled from financial data, but both are updated in real time. Due to this flexible integration, the project manager can focus entirely on project tasks such as planning and monitoring, while the finance department handles controlling aspects.

Both project manager and financial specialist are always kept in sync with up-to-date project data. As a result, project managers and the financial department both gain an integrated and flexible project management solution for project maintenance, monitoring, and reporting.

SAP Business ByDesign provides project managers and financial analysts with reliable and accurate data relating to project progress and deviations concerning work and schedule. Project managers can also easily change and track the status of projects and the tasks within them.

Equally importantly, the actual consumption of resources is transparent to them, and they can track project status and escalate “red flag” issues when they occur.

Project snapshots, details of a project at a specific point of time, help project managers and team members to identify trends in the work that has been carried out, schedule deviations, and project costs. A snapshot can be created automatically at regular intervals, using a snapshot run, or created manually at any time.

Project managers and financial analysts both gain an in-depth view of the costs, revenues, margins, and deviations of projects broken down by project structure. In addition, the financial analyst can analyze the costs and revenues that have been deferred or accrued by automatic revenue recognition.

Earned value analysis (EVA) is a method for providing a solid valuation of the progress of projects in terms of scope, schedule, and costs. Simply comparing actual and planned costs may lead to the wrong conclusions, as the actual progress of the project is not considered, EVA introduces the earned value as a quantification of the project progress, which can then be viewed in relation to the planned value (PV) and to the actual costs (AC).

To support project invoicing, a special customer projects report allows the project manager and the financial analyst to track time and expenses recorded against customer projects, the amounts already invoiced, and the amounts still open.

Profit analysis can be done based on market segments, defined by profit analysis attributes. These attributes are automatically derived from the master records of customers, services, cost centers, and projects.

Project profit analysis can be performed using the standard profit analysis reports based on data from journal entries (earned profit analysis) or based on data from sales orders or customer invoices.