



Project Management  
based on SAP® Business One

## Project Management for Construction Companies

The industry solution for small and midsize businesses



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## **About MARINGO**

Since its foundation in Cologne (Germany) in 1986 the software development company has been specialized in the development and sales of business software solutions, in particular "ProjectManagement based on SAP® Business One" and "MARI Company Consolidation". In order to distribute its products also in the North American market a branch office of MARINGO was founded in New York.

MARINGO Computers is one of the leading SAP Channel Partners in the SAP Business One environment in Germany.

## **About SAP**

SAP® is the world's leading provider of business software solutions for different industries. With over 12 million users in more than 120 countries, with over 100,000 installations and more than 1,300 partners worldwide, SAP is the leading manufacturer of business software solutions and the world's third largest independent software provider.

# Integrated Project Management

Increasing complexity of plants, tighter time constraints, declining budgets and scarce resources with growing international competition and consistently high quality and safety requirements, these are the challenges that project engineers are facing daily in the construction industry.

In order to meet these requirements, businesses need increasingly short-time access to up-to-date project figures. Efficient project controlling becomes a crucial factor for the entire business. This refers in particular to small and midsize businesses.

ProjectManagement based on SAP® Business One is an industry solution for small and midsize businesses of the construction industry. Through the integration with the ERP solution SAP® Business One, ProjectManagement does not only support classical project planning and project management but also integrated management functions like sales, financials, purchasing and inventory. The particular strength of ProjectManagement is project controlling.

ProjectManagement is a software solution for the entire business: project managers, project team members, executives, purchasers, accountants and controllers capture their data in a single system. The centralized information provides for transparency: All employees have always access to the same up-to-the-minute data.

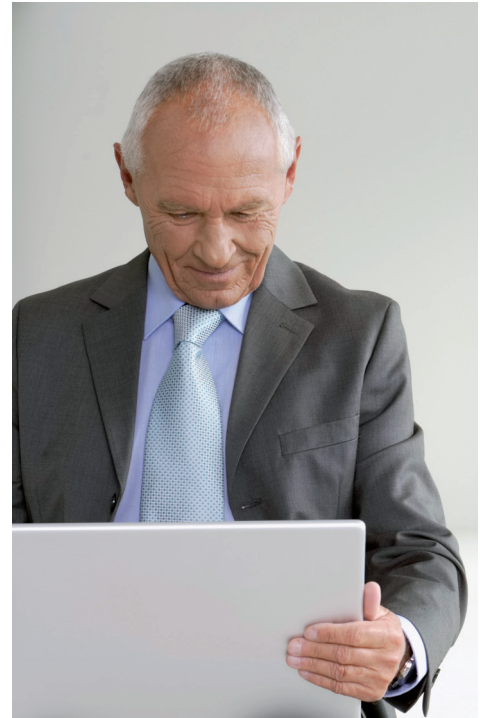
## About ProjectManagement

ProjectManagement has been specifically designed for the needs of small and mid-size businesses. Your benefits: You can plan, structure and analyze projects with a single software system without losing data and with 360-degree visibility into your projects.

ProjectManagement is distributed at home and abroad by a network of MARINGO and SAP partners who provide local service and support. The software supports multiple companies and multiple currencies and is available in different languages. More than 8,000 users worldwide are already using ProjectManagement based on SAP Business One.

## About SAP Business One

SAP® Business One integrates in a single application the core functionality for every process you need to run your entire business. Your benefits: The software helps you control centrally financials, sales, customer relationship management and inventory. Which means you will be better able to control your entire business.



*Our productivity is so much better that we could absorb 50% more business without staffing up. And with all the new visibility, we can increase our chances of seizing the most profitable opportunities."*

**Jason Miceli,**

CFO and Senior Network Engineer, CSDNET Inc.

# Benefits

## Powerful analyses enable quickly a solid ground for decision-making

With ProjectManagement you have a complete overview of all your business-relevant data: How many hours were recorded for a project? What purchases were made for a project and what was already paid? What costs have to be expected in a single period? Is the project still on budget and on schedule? These and many other analyses are provided by the program at the touch of a button. Moreover, the data can be represented in graphic form with Xcelsius. This gives project managers and executives a solid ground for decision-making at any time.

## Run on one solution

One centralized data repository reduces time and costs: Data has to be captured twice in a heterogeneous software landscape, e.g. address data for invoices and for delivery notes, project data in the project management functionality and in Excel etc. Redundant data entry takes time which could be spent more productively, furthermore it delays the analysis of data.

An integrated system like ProjectManagement lowers not only the time and costs for data entry but also for software maintenance and update.

## Role-based access control for data security

ProjectManagement provides a sophisticated access control. Access rights are assigned on the basis of the employee's roles within the company and ensure that all employees gain only access to the data they need. When initializing the system, access rights are assigned to different levels (menus, windows and user-defined fields).

## Usability for quick system implementation

ProjectManagement has a nice modern, intuitive user interface which Look and Feel is based on version 8.8 of SAP Business One. The software is easy to use what reduces the learning curve significantly. Moreover, it is an easy-to-implement solution with a short implementation time.

## Flexible and adaptable to your individual business needs

ProjectManagement based on SAP Business One offers a base software system with powerful core functionality for every process you need to run your entire business. But as each business is unique, many processes and analyses up to menus and user-defined fields can be adapted to individual business requirements. The result is a tailored but still affordable software solution. More than 8,000 users worldwide demonstrate that ProjectManagement is an approved solution meeting the individual needs of very different businesses in different countries.

## Software of the leading provider of business management solutions features investment security

SAP Business One is a product of SAP, the world's leading provider of business management solutions. Over 25,000 installations worldwide demonstrate that the solution is accepted at the market. Moreover, businesses that apply SAP Business One invest in a future-proof software solution. For this reason, MARINGO has decided to integrate ProjectManagement exclusively with SAP Business One. The successful integration of ProjectManagement with SAP Business One has been certified and qualified by SAP as "Certified Integration with SAP Applications".

## Easy recording of services simplifies accounting and controlling

Services, materials and travel expenses have to be recorded in real-time in order to have always an overview of the latest project data. The Web Client and Mobile Client of ProjectManagement allow for the entry of data independent of location and time. In particular businesses in the construction industry benefit from these functionalities because plants are often constructed abroad and not at the business' location.

*"We expect that we save more than 4,500 working hours through the efficiency increase of the new system". This refers, for example, to the entry of data directly through the employees and the removing of double entries."*

**Donna Jones**

*CFO, Melink Incorporation*

### Access to project data independent of time and place increases flexibility

The Web Client and Mobile Client allow authorized users to access their project and contact data independent of location and time.

### Tool for plant maintenance included

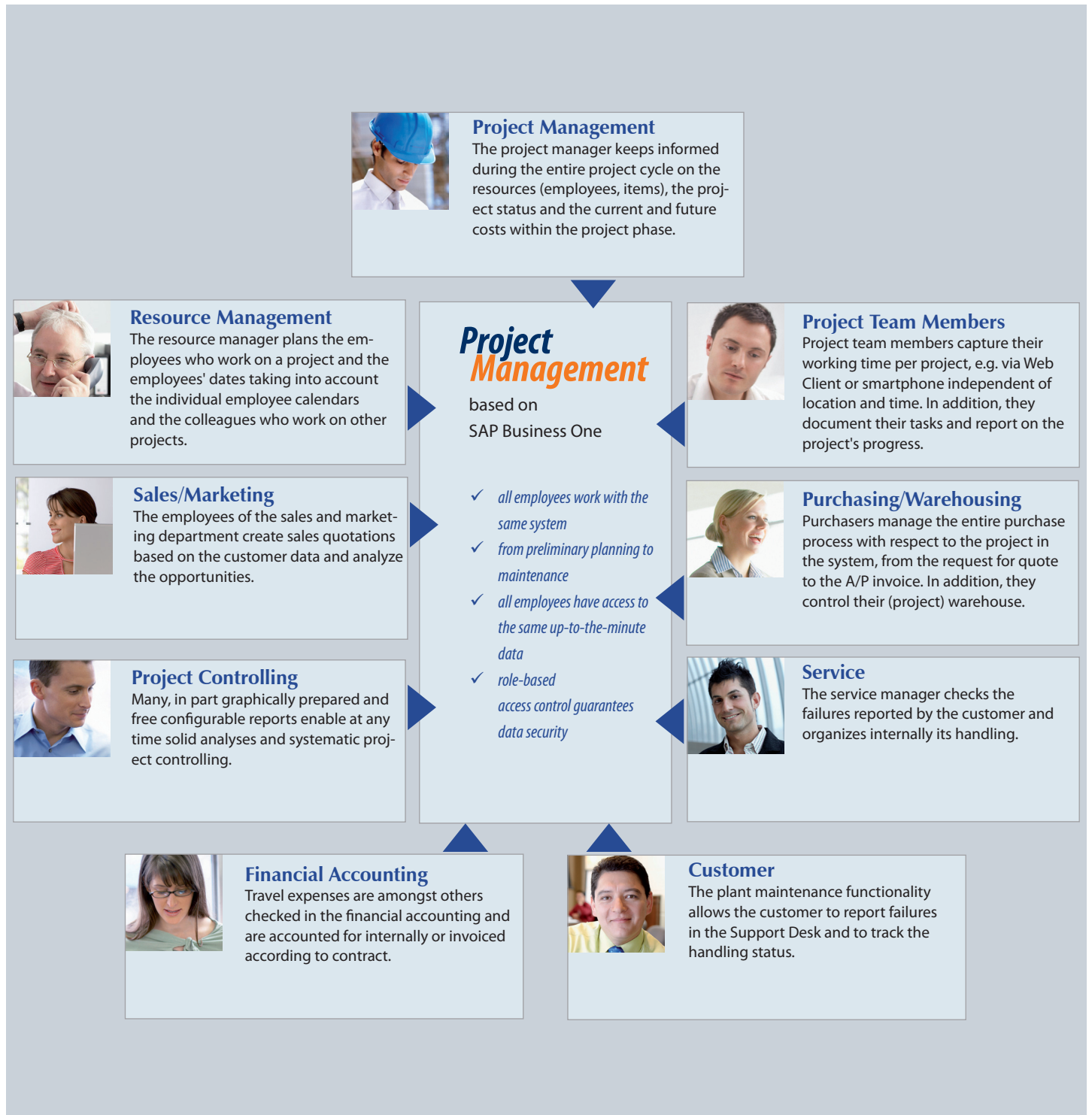
The Support Desk of ProjectManagement allows recording and handling online failures or ideas and suggestions for further development.

### Global support in business growth

Like SAP Business One, ProjectManagement is available in different languages and is distributed worldwide by a network of SAP and MARINGO partners who provide local service and support. The solution supports in addition multiple companies and multiple currencies. Moreover, SAP Business One is easy to integrate with SAP Business Suite what facilitates the cooperation with major enterprises. Which means ProjectManagement supports your business growth even globally.

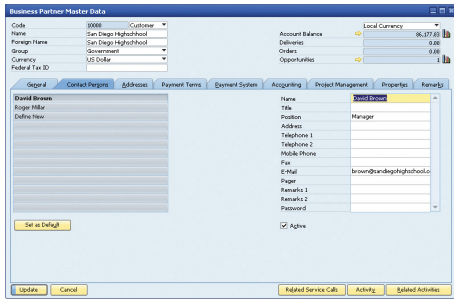


# One Business – One Software



# Business Partners

This document describes in the following the functionalities of ProjectManagement based on SAP Business One considering a typical project workflow.



■ *All critical information on customers and vendors – such as address, contact person, ship to address, accounting data or projects – is entered in the functionality for managing business partners.*

## Complete business partner data

The data of new business partners is entered in the system (address, contact person etc.). The customer data can be accessed directly, also the data that was added by a colleague. Because the master data of business partners (vendors, customers and leads) is stored in a single system. The master data includes amongst others the address, contact person, bill to and ship to address and payment terms. It provides also information on projects and related activities, such as phone calls or meetings, accounting terms or account data. In addition, the system provides an alert or a reminder function.

## Centralized data repository

Data is entered only once. Later the system will use the corresponding data automatically in documents, such as sales quotations, sales orders, delivery notes, invoices and analyses etc.

Because data is kept centrally, updated data like a new address or contact person, is stored quickly in the system and is directly available to all users.

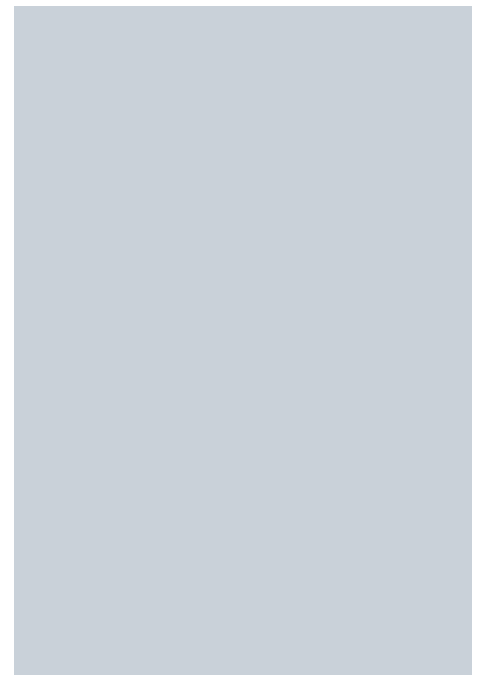
## Overview of customer relationship cycle

Customer master data in business partners functionality provides also information on the projects that were already carried out for the respective customer. You can open the respective projects directly from the business partner master thus being informed on all previous business events.

## Managing multiple companies

ProjectManagement supports multiple companies and multiple currencies and is available in different languages. That's why the software suits also for businesses that have subsidiaries or affiliated companies at home and abroad or which want to expand their business activities.

*Compared to a heterogeneous software landscape, keeping data centrally in ProjectManagement reduces the administrative efforts in the back office considerably.*



# Project and Contract Management

## Project definition

ProjectManagement supports a systematic approach right from the beginning. When creating a project, managers are assigned and general project data (customer, project manager, contract etc.) is stored.

## Hierarchical project phases

ProjectManagement allows structuring the project in as many phases as you like. Phases simplify the overview of the project and - depending on the setting - affect also the invoicing and the assignment of materials and costs.

## Import of Material Lists

A configurable interface helps you import material lists for the planned plant from CAD programs. Prices for respective materials can be considered directly.

## Planning Versions

When creating the project, you will be able to run through the project in various planning versions and to store the planning versions in the system.

## Project warehouse and budget

Already at the start of the project, you can define the budget and, if necessary, define a project warehouse.

## Documentation and information

The project master functionality enables access to all project relevant data, from the sales quotation and planning, contracts, purchase documents and costs to external documents.

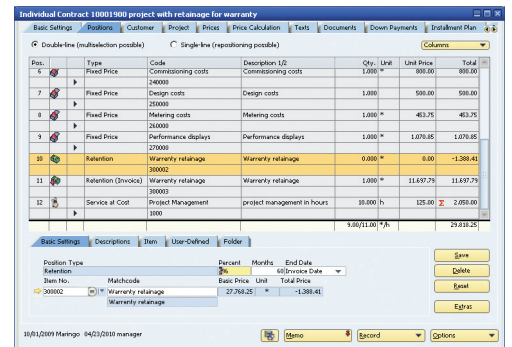
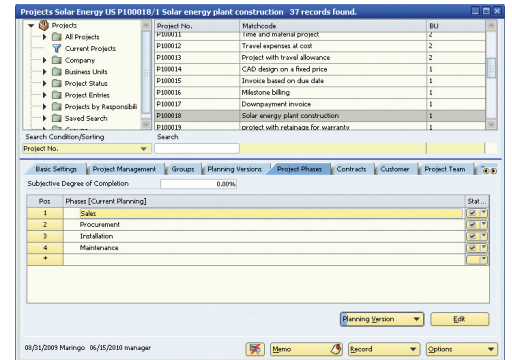
## Fully integrated with Windows

ProjectManagement is fully integrated with the Windows environment, i.e. the project master functionality of ProjectManagement allows storing Word, Excel, PowerPoint or Microsoft Project documents, such as specification sheets or presentations.

## Contract management and accounting

The contract is an important part of the project because it forms the basis for the project accounting. ProjectManagement provides different types of contract and methods of accounting: fixed price contract, service at cost contract, maintenance contract or call off contract. The system supports many accounting options based on the project contract, such as the accounting by phase, by milestones, periodic accounting, down payments, final invoices and much more.

*With ProjectManagement you guarantee a uniform approach giving you full control of your budget right from the beginning.*



■ All critical information on a project, such as status, contracts, phases and cost etc., is entered in the functionality for managing project data.



# Purchasing and Material Management

| Pos. | Item   | Matchcode                         | Demand | Date       | Qty.  | Purchase Price | Ordered    | Date | Qty.   | Purchase Price | Goods |
|------|--------|-----------------------------------|--------|------------|-------|----------------|------------|------|--------|----------------|-------|
| 1    | 210000 | Inverters                         |        | 04/08/2010 | 3.00  | 750.00         | 04/09/2010 | 3.00 | 750.00 | 04             |       |
| 2    | 220002 | Connector MC32-0003 Female Co     |        | 04/08/2010 | 19.00 | 60.00          |            |      | 60.00  | 04             |       |
| 3    | 220003 | Connector MC32-0003 Male Comp     |        | 04/08/2010 | 3.00  | 60.00          |            |      | 0.00   | 04             |       |
| 4    | 220004 | Array marshalling box c/w isolato |        | 04/08/2010 | 1.00  | 120.00         |            |      | 0.00   | 04             |       |
| 5    | 220005 | Cable 25mm                        |        | 04/08/2010 | 30.00 | 20.00          |            |      | 0.00   | 04             |       |
| 6    | 220006 | Lockable AC Isolator at Main DB   |        | 04/08/2010 | 1.00  | 70.00          |            |      | 0.00   | 04             |       |
| 7    | 200001 | NDQ162E1 solar module, polycrys   |        | 04/08/2010 | 2.00  | 348.80         | 04/09/2010 | 2.00 | 348.80 | 04             |       |
|      |        |                                   |        |            | 79.00 | 5,467.60       |            |      | 10.00  | 3,247.60       |       |

| Be | Document No. | Document Type | Doc. Date  | Posting Date | Net Value | Total Amount | Curr | A | Effect | ERP | Open Item No. | Open Item St. |
|----|--------------|---------------|------------|--------------|-----------|--------------|------|---|--------|-----|---------------|---------------|
|    | 2010-6       | A/P Invoice   | 04/14/2010 | 04/14/2010   | 2,340.00  | 2,340.00     | USD  | ✓ | Yes+   | Yes | 6             | Open          |
|    | 2010-4       | Part Goods    | 04/09/2010 | 04/09/2010   | 3,247.60  | 3,247.60     | USD  | ✓ | No     | Yes |               |               |
|    | 2010-5       | Purchase O    | 04/09/2010 | 04/09/2010   | 3,247.60  | 3,247.60     | USD  | ✓ | No     | Yes |               | closed        |
|    | 2010-3       | A/P Invoice   | 04/08/2010 | 04/08/2010   | 3,247.60  | 3,247.60     | USD  | ✓ | Yes+   | Yes | 3             | Open          |
|    |              |               |            |              | 5,587.60  | 5,587.60     |      |   |        |     |               |               |

The balance statistic shows the current purchase status of each item.

## Project related requirements planning and warehousing

Purchasing materials according to the needs is a key factor for successful projects. Project-Management thus supports phase-related purchasing and - if requested - warehousing.

Goods receipts and issues are documented with corresponding documents and material costs are assigned automatically to the project.

## Purchase process data always on hand

You can control the entire purchase process for your project with ProjectManagement. From the request for quote at different vendors and quoted prices, to sales orders, goods receipt, vendor selection and the automatic transfer of sales prices to the project contract up to the A/P invoice and payment, Project-Management based on SAP Business One supports all business processes and enables you to trace all processes from start to finish.

## Purchase status of all materials

The balance statistic provides information on the purchase status during the entire purchase process. The traffic light function visualizes whether materials and services have been ordered, delivered and paid including detailed information, such as date or price.

## Purchase of external services

The purchase of external services (e.g. the use of freelancers) is also managed in the purchase process.

## Approval process for documents

In addition, ProjectManagement allows defining approval processes for documents. You can, for example, define through access rights that purchase documents having a certain value must be approved. ProjectManagement allows representing also partial services that are placed internally with other departments.

*All this enables you to control the purchase costs during the entire project cycle and to take action in time, if necessary.*

# Sales Quotation

Because it all depends on the calculation ProjectManagement supports you in particular in this area.

## Import of materials and prices

You can create a preliminary project plan. The number of materials and the materials required to build a plant can be imported directly to the project contract from the CAD planning. Prices (price list, middle purchase price etc.) are stored in the system for standard materials. You can also use the prices of a current request for quote from the purchase module for the preliminary project calculation. The sales prices based on the request for quote are automatically transferred to your calculation. Granting discounts is also possible.

## Planning of preliminary projects

The structure of preliminary projects corresponds to the structure of normal projects. The costs of the planned services, items or travel expenses are included automatically as sales prices in your calculation.

## Overhead calculation

ProjectManagement calculates the sales price for the given materials and services automatically on the basis of a predefined overhead calculation.

## Calculation options

You can define standards for your business which are used to calculate the sales price. In addition, you can adapt individually the calculation method for each service and for each item in the sales quotation. ProjectManagement allows generating also different calculation options.

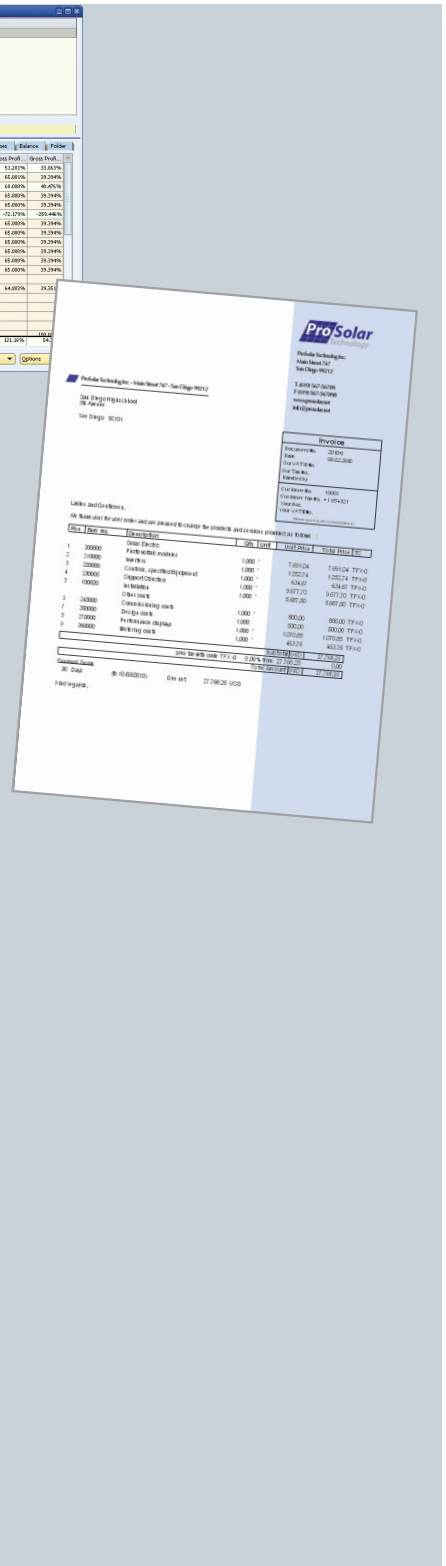
| Pos. | Position                                    | Costs  | Total Costs | Imp. Cost Ma. | Imp. Sales M. | Unit Price | EP Discount | Total Price | Extra Price | Gross Profit | Gross Profit % | Gross Profit % |
|------|---|--------|-------------|---------------|---------------|------------|-------------|-------------|-------------|--------------|----------------|----------------|
| 1.1  | HQ0211 solar module, polycrystallin         | 307,05 | 8.128,85    | 60,00%        | 5,00%         | 12,77      | 0,00%       | 12,77       | 0,00%       | 4.351,01     | 5,21%          | 13,91%         |
| 2    | Mounting                                    | 0,00   | 0,00        | 60,00%        | 5,00%         | 0,00       | 0,00%       | 0,00        | 0,00%       | 2,897,71     | 66,89%         | 66,89%         |
| 2.1  | PROFUS 55 30 (2 x DC Plug) 1 x AC           | 85,16  | 695,31      | 60,00%        | 5,00%         | 1,27       | 0,00%       | 1,27        | 0,00%       | 542,85       | 65,00%         | 29,24%         |
| 2.2  | Connectors                                  | 750,00 | 2.259,89    | 60,00%        | 5,00%         | 1,27       | 0,00%       | 1,27        | 0,00%       | 1.442,93     | 65,00%         | 29,24%         |
| 3    | Control specified Equipment                 | 0,00   | 0,00        | 60,00%        | 5,00%         | 0,00       | 0,00%       | 0,00        | 0,00%       | 14,97,72     | 72,17%         | 20,44%         |
| 3.1  | Connector MC4-MC4 Female Coupler            | 60,00  | 480,00      | 60,00%        | 5,00%         | 8,00       | 0,00%       | 8,00        | 0,00%       | 54,00        | 65,00%         | 19,24%         |
| 3.2  | Connector MC4-MC4 Male Coupler              | 60,00  | 480,00      | 60,00%        | 5,00%         | 8,00       | 0,00%       | 8,00        | 0,00%       | 54,00        | 65,00%         | 19,24%         |
| 3.4  | Wiring marshalling box solar isolator auto. | 120,00 | 120,00      | 60,00%        | 5,00%         | 20,00      | 0,00%       | 20,00       | 0,00%       | 7,00         | 65,00%         | 19,24%         |
| 3.5  | Cable 2-core                                | 20,00  | 1.600,00    | 60,00%        | 5,00%         | 20,00      | 0,00%       | 20,00       | 0,00%       | 60,00        | 65,00%         | 19,24%         |
| 3.6  | Cable 4-core AC Isolator at Main DB         | 70,00  | 70,00       | 60,00%        | 5,00%         | 10,00      | 0,00%       | 10,00       | 0,00%       | 4,00         | 65,00%         | 19,24%         |
| 3.7  | Wiring protection                           | 20,00  | 50,00       | 60,00%        | 5,00%         | 4,25       | 0,00%       | 4,25        | 0,00%       | 22,50        | 65,00%         | 19,24%         |
| 3.8  | Electrician fee for 1000' 2 CSA             | 0,00   | 0,00        | 60,00%        | 5,00%         | 0,00       | 0,00%       | 0,00        | 0,00%       | 0,00         | 0,00%          | 0,00%          |
| 3.9  | Cable to black, weather resistant 1/2"      | 2,99   | 2,99        | 60,00%        | 5,00%         | 4,92       | 0,00%       | 4,92        | 0,00%       | 1,94         | 64,82%         | 19,25%         |
| 3.10 | Cable to black, weather resistant 3/8"      | 0,90   | 0,90        | 60,00%        | 5,00%         | 0,90       | 0,00%       | 0,90        | 0,00%       | 0,00         | 0,00%          | 0,00%          |
| 3.11 | Cable to black, weather resistant 200'      | 0,00   | 0,00        | 60,00%        | 5,00%         | 0,00       | 0,00%       | 0,00        | 0,00%       | 0,00         | 0,00%          | 0,00%          |
| 3.12 | Flux, softflux, PVC, insulating, 1000'      | 0,00   | 0,00        | 60,00%        | 5,00%         | 0,00       | 0,00%       | 0,00        | 0,00%       | 0,00         | 0,00%          | 0,00%          |
| 3.13 | Cable wire Coupler Insulated w/black        | 0,00   | 0,00        | 60,00%        | 5,00%         | 0,00       | 0,00%       | 0,00        | 0,00%       | 0,00         | 0,00%          | 0,00%          |
| 3.14 | Control specified Equipment                 | 0,00   | 10,00       | 60,00%        | 5,00%         | 1,67       | 0,00%       | 1,67        | 0,00%       | 22,50        | 131,16%        | 14,84%         |

**A general overhead calculation is subject to the project calculation which can be adapted individually for each item.**

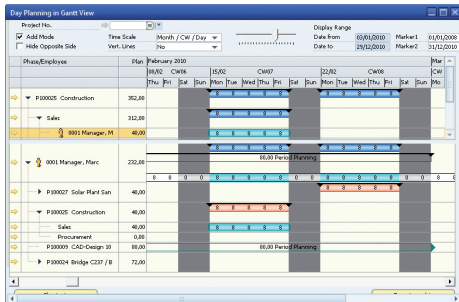
## Sales documents

When the calculation is completed, ProjectManagement will create a sales document in the corporate design of your business. You can print the document including corresponding attachments directly from ProjectManagement and send it by post or forward it via email.

*ProjectManagement provides many features to support quotation costing, such as the sales price wizard, an import interface for materials and an automated printout.*

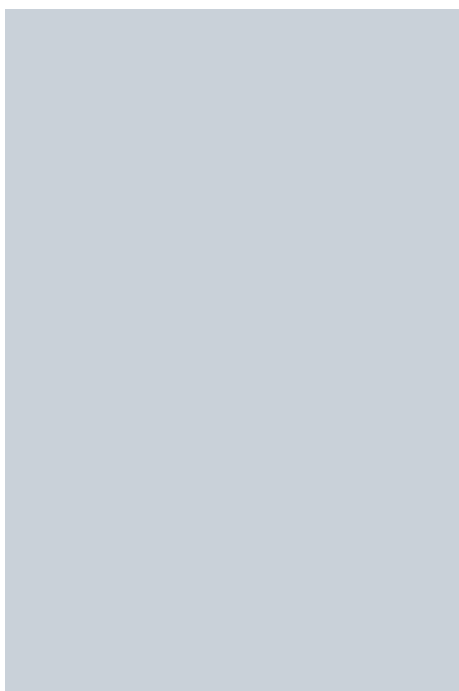


# Project Planning



| Start      | End        | Number  | Resource        | Phase | Position    | Activity | Hours  | Commit | Days      | Costs     | Planned Rev. |
|------------|------------|---------|-----------------|-------|-------------|----------|--------|--------|-----------|-----------|--------------|
| 01/02/2010 | 05/02/2010 | 00000   | Installer       | Subst | Installer   | 40,000   | 40,000 | 5,000  | 15,366,93 | 2,900,000 | 29,244,25    |
| 01/02/2010 | 05/02/2010 | 00001   | Project manager | Subst | Project man | 40,000   | 40,000 | 5,000  | 1,600,000 | 5,000,000 | 5,000,000    |
| 01/02/2010 | 05/02/2010 | 2100001 | Electrician     | Subst | Electrician | 1,000    | 1,000  | 1,000  | 240,000   | 390,000   | 390,000      |
| 01/02/2010 | 05/02/2010 | 2400001 | Welding         | Subst | Welding     | 1,000    | 1,000  | 1,000  | 1,375,36  | 2,242,24  | 2,242,24     |
| 01/02/2010 | 05/02/2010 | 2700001 | Mobile work     | Subst | Mobile work | 1,000    | 1,000  | 1,000  | 3,000,000 | 6,000,000 | 6,000,000    |
| 01/02/2010 | 05/02/2010 | 2800001 | Welding         | Subst | Welding     | 1,000    | 1,000  | 1,000  | 5,000,000 | 9,999,99  | 9,999,99     |

ProjectManagement provides different views on a project: The Gantt View, for example, provides a visual overview of the periods and possible entries and the Standard Planning provides an overview of the costs and tasks.



## Project planning

Once the order has been placed, you can transform a precalculation into a current planning.

## Sophisticated planning options

ProjectManagement provides sophisticated planning options, such as Gantt View, Standard Planning or Periodic Planning.

## Resource pool planning

Employees or resource pools are available for planning. You can see directly whether the planned resources are available at the requested time or you can request the resource manager for the respective resources. Later you can assign the hours planned for the resource pool by drag and drop to the employees.

## Employee calendar

Different working time rules (business calendars) and vacation are considered in the planning, e.g. different calendars are defined for different states, for employees working part time etc. Calendars of freelancers are also considered.

## Project phases

ProjectManagement allows you to structure projects in as many phases as you like. Tasks within project phases are assigned to the employees.

## Approval

ProjectManagement supports approval processes on different levels: The authorized person approves materials, services, travel expenses or entire projects for invoicing to the customer. Depending on the setting, the system informs the respective employees automatically on the data approval.

## Adapt planning and costs

It is also possible to change planning, to move dates and to create different planning versions. Each change updates automatically the data on each level (time, costs, resources and analyses).

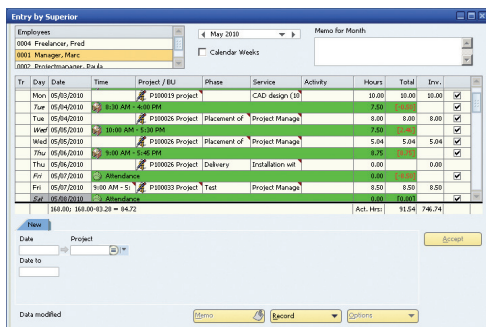
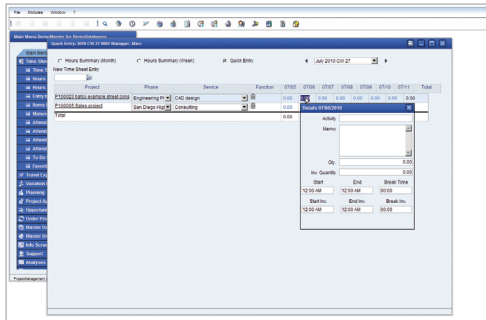
## Interfaces to Outlook and MS Project

A two-way connection to Microsoft Project enables the data synchronization. This allows connecting the functions of both products or to transfer, for example, planning data with other businesses.

If planning is finished, you can inform the employees automatically via Outlook of the planned dates.

*ProjectManagement allows you to view your project from different perspectives: costs, time and resources.*

# Services, Items and Travel Expenses Entry



## Time and location independent

In order to keep you always informed on projects at home and abroad, ProjectManagement offers timekeeping options independent of location and time besides the option to capture hours and items from the office:

- via Web Client or
- via Mobile Client (smartphone)

## Variable entry options

Also the options to capture times and materials are manifold. This refers on the one hand to the responsibility: Hours can be recorded either by the employee, the project manager or the back office. On the other different entry devices are available: bar code, laser pen or touch screen. Time Touch thus allows the employees to capture their services by touch screen. This is, for example, of particular importance for the use in an assembly hall.

## Attendance and project times

ProjectManagement enables you to capture only the attendance times or to record hours for one or more projects.

## Entry of hours or periods

In addition, it is possible to record services for periods, e.g. "assembly of plant" over a period of several days in a single accounting process.

## Quick analysis

ProjectManagement generates flexible and definable hours lists at the touch of a button in order to provide them to the customer or to determine actual/target differences.

## Travel expenses entry and accounting

The employee records travel costs and expenses in the system that occurred within the scope of the project. The costs are assigned directly to the respective projects and are accounted for internally.

## Vacation Management

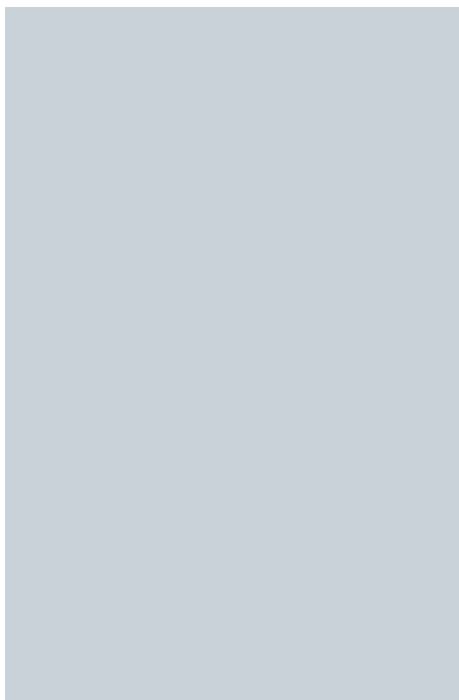
ProjectManagement provides a vacation management system including vacation approval processes. Approved vacation is transferred automatically to the time sheet entry and planning.

## Approval process

Depending on the type of project and proceeding in your company, approval processes can also be defined for the service recording, for example, before the services are invoiced to the customer.

*ProjectManagement supports many devices to record services thus enabling the employees to capture their working times precisely and quickly.*

- ProjectManagement provides different time sheet entry options: Times can be captured either in the Web Client or in Time Touch or by the employees, managers or the back office.



# Mobile Data Entry and Data Retrieval

## Access to customer and project data

The work on a project is often accompanied by business travel. As project managers often require quick access to customer and project data when out of office, a Mobile Client\* has been developed for ProjectManagement based on SAP Business One.

## Time sheet entry

If you work out of office, you have the option to record your working times already on site via smartphone.

## Travel expenses entry

The Mobile Client allows the employees also to record their travel expenses in the system. The data will be considered immediately when analyzing project data. This means you have always access to up-to-date data.

## Approval processes

Approval processes can delay projects if the responsible employee is out of office. The Mobile Client allows you to approve

- items,
- services,
- travel expenses and
- vacation.



- *Mobile office: The Mobile Client provides access to the majority of project relevant data and allows you to take action immediately.*

## Support desk

The system provides you also with information on plant maintenance if you are out of office. The Mobile Client gives you an immediate overview of failures and of the current handling status and allows you also to track and add information.

*With the Mobile Client your are more flexible: You can always take action and have always access to up-to-date data.*

\* The delivery of the Mobile Client is planned for summer 2010.

# Invoice Creation and Posting

## Automated invoicing

The contract collector of ProjectManagement helps you generate invoices by making invoice proposals for all contract positions according to contract, i.e. at a given date, after project completion or after approval.

## Final invoice

When down payment has been agreed, a final invoice can be generated. If the customer has made one or more down payments, these down payments will reduce the total value of the final account.

## Retention guarantee

With fixed price projects ProjectManagement allows retaining a specified percentage of money of the total volume for a given period as a safeguard against defects. After expiry of the given period, also retentions will be proposed automatically for invoicing. In addition, the respective balance sheet accounts are posted in the financial accounting.

## Invoice posting

Having checked by the financial accounting, the invoices can be posted and stored at the touch of a button and the corresponding documents can be printed in the corporate business design including all attachments.

## Currencies and payment methods

ProjectManagement considers different currencies with the respective exchange rates and supports different payment methods, such as invoice, check, cash or payment by credit card.

| Contract No. | Matchcode     | Customer | REF. No. | Project | Qty. | Price    | Total     | Down Payment | Curr |
|--------------|---------------|----------|----------|---------|------|----------|-----------|--------------|------|
| 100018       | Solar ener    | 10000 Sa |          | P10001  |      |          | 11.885.63 | 0.00         | USD  |
| 1            | Photo voltaic | +_SYS000 |          |         | 1.00 | 4.614.54 | 4.614.54  |              | USD  |
| 2            | Inverters     | +_SYS000 |          |         | 1.00 | 3.930.33 | 3.930.33  |              | USD  |
| 3.a          | Controls; sp  | +_SYS000 |          |         | 1.00 | 11.60    | 11.60     |              | USD  |
| 4.a          | Support Stu   | +_SYS000 |          |         | 1.00 | 3.329.16 | 3.329.16  |              | USD  |
| 100018       | Solar ener    | 10000 Sa |          | P10001  |      |          | 27.768.25 | 0.00         | USD  |
| 100018       | Solar ener    | 10000 Sa | 123      | P10001  |      |          | 39.633.88 | 0.00         | USD  |
|              |               |          |          |         |      |          | 79.307.76 | 0.00         | USD  |

■ After expiry of the agreed period, ProjectManagement proposes items and services for invoicing to the customer.

## Travel expenses accounting

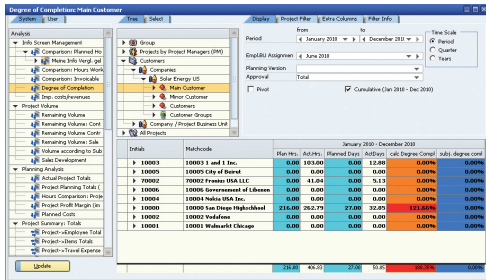
Travel expenses are accounted for internally by the employees. Thereafter, depending on the project contract, the costs can be invoiced to the customer.

## Expense accounting

ProjectManagement considers automatically the guidelines according to German law when calculating travel expenses and allowances.

*ProjectManagement supports internal and external invoicing and posts generated invoices in a single process.*

# Project Analysis



The Degree of Completion report shows the commercial and subjective degree of completion of a project.

## Up-to-date analyses at any time ...

Gathering figures after month, quarter or project completion is interesting but is often too late to make decisions. In order to be capable to act quickly, also the management in small or midsize businesses requires access to up-to-date figures at any time. ProjectManagement provides the latest data at the touch of a button.

## ... and at any place

The Web Client enables access to analyses irrespective of where you are.

## Over 200 standard reports

ProjectManagement provides more than 200 templates for standard reports that are filled with the latest data at the touch of a button. This includes

- Degree of Completion
- Remaining Volume
- Planned/Actual Hours Comparison
- Employee Utilization
- Project Totals
- Breakeven Analysis: one breakeven analysis per project can be freely defined
- and much more.

## Easy to customize

The analyses are prepared in table form or graphically by means of Xcelsius or Crystal Reports. All analyses can be adapted within seconds to your individual business needs.

## Export interface to Excel

In addition, you are able to export the analyses to Excel or to forward them as PDF file via email to colleagues or customers.

## Work in progress

The value of a plant in progress has to be determined for business management reasons at the end of a year. ProjectManagement helps you also assess work in progress with a freely definable template. The calculation can also be effected according to IAS/US GAAP. You can evaluate the financial situation of your business based on the up-to-date figures. The values are transferred to the financial accounting/balance sheet at the touch of a button.

The centralized data and the many standard reports allow ProjectManagement to deliver at the touch of a button the important business analyses that are required by project managers and executives.



Xcelsius allows visualizing amongst others the employee utilization per project type.



If necessary, the software provides also information on project sales and revenues and visualizes the latest data.

# Plant Maintenance

## Failure recording

The maintenance in regular intervals of a plant increases not only its life cycle but also the time and effort in the business. The web-based Support Desk of ProjectManagement allows documenting without any effort the plant maintenance. The customer takes a responsible part in the handling of support tickets, for example, by reporting failures via the Support Desk.

## Linking images and documents

If necessary, you can add images or texts with more detailed information on the failure. Different communications channels are integrated, e.g. email or phone, in order to forward the data quickly to the responsible person.

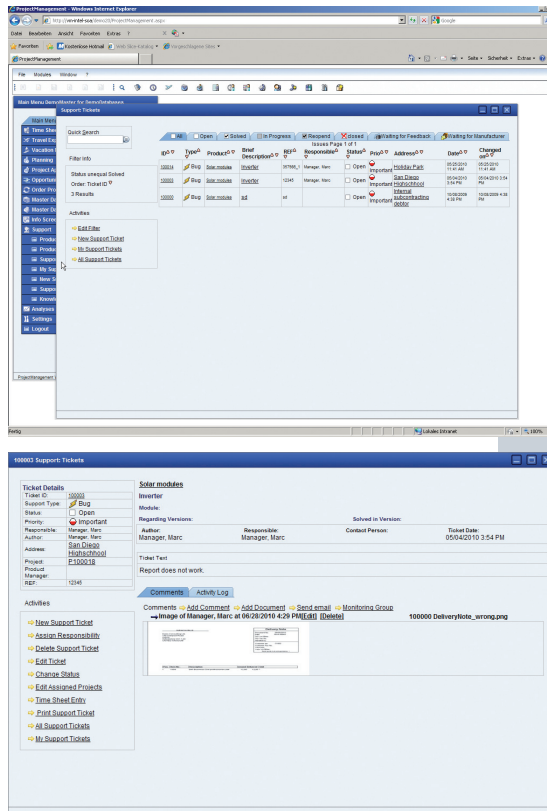
## Failure handling

Failure handling or maintenance intervals are documented internally in the Support Desk and the respective information is forwarded to the responsible employee. All involved parties have an overview of the current handling status at any time.

## Recording handling times

The Support Desk enables the employees also to record the hours spent on maintenance. The hours are automatically available in the system for approval or accounting.

*The Support Desk for an efficient maintenance management is included in delivery of the ProjectManagement application.*



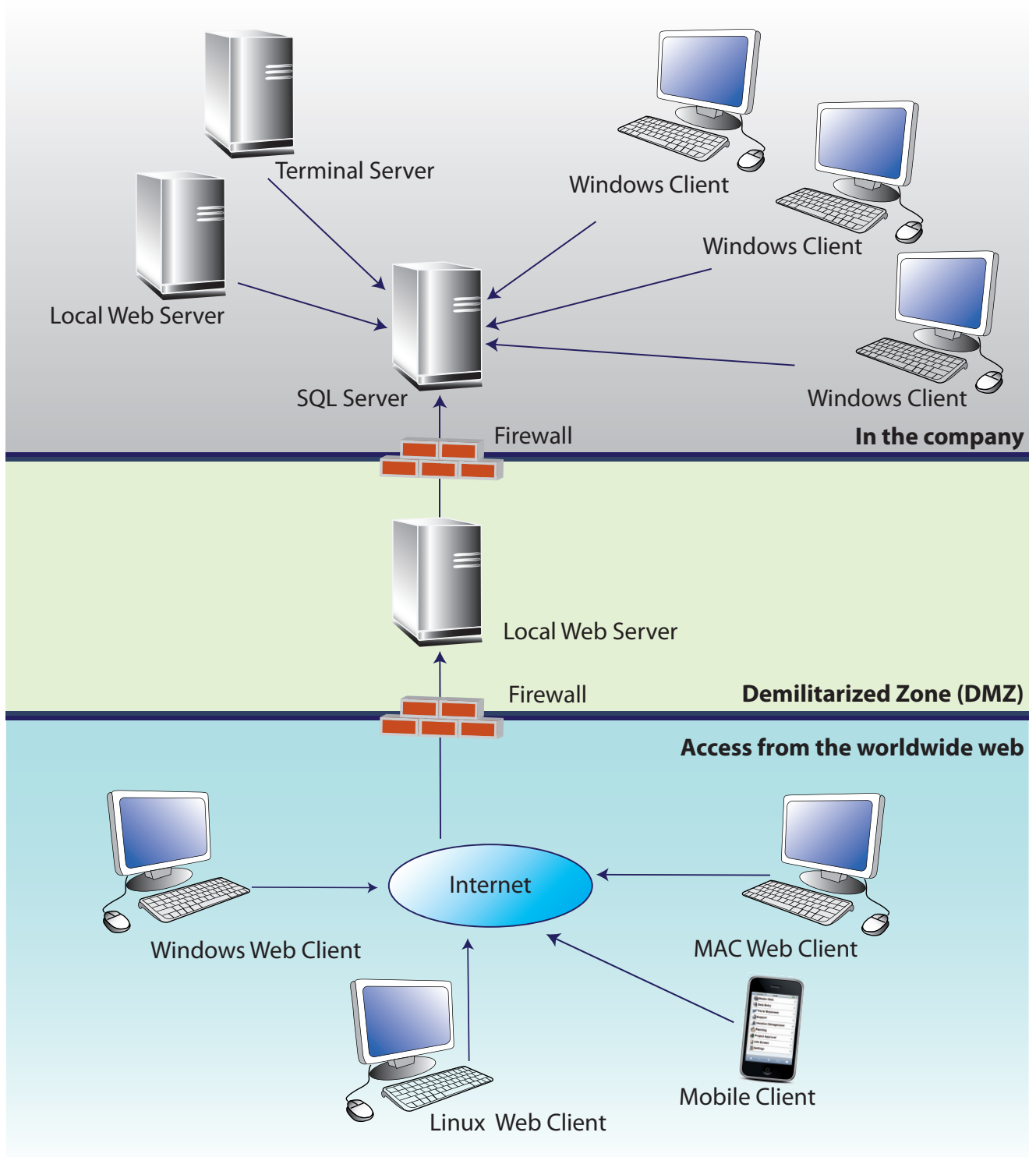
**The Support Desk of ProjectManagement**



# Functional Overview

| Project Data Management:            | Preliminary Project                 | Project Planning   | Purchasing                         | Time and Travel Expenses Entry     | Project Warehouse              |
|-------------------------------------|-------------------------------------|--|------------------------------------|------------------------------------|--------------------------------|
| Project Master                      | Preliminary Project                 | Planning Versions  | Purchase Process                   | Time Sheet Entry                   | Items Entry                    |
| Project Templates                   | Preliminary Project Creation Wizard | Standard Planning  | Purchase Process Wizard            | Project Entry                      | Demand Confirmation            |
| Project Creation Wizard             | Preliminary Planning                | Gantt View   | Request for Quote                  | Entry by Manager                   | Project Materials Management   |
| Phases                              | Calculation                         | Period Planning  | Quoted Prices                      | Entry Journal                      | Materials Reverse Entry        |
| Services                            | Transformation Wizard               | Planning Transfer Wizard                                   | Vendor Selection Wizard            | Basic Settings                     |                                |
| Document Management                 | Sales Development Report            | MS Project Interface                                       | Sales Price Wizard                 | Vacation Management                |                                |
|                                     | Edit List of Items                  | Planning Reports   | Enter Purchase Document Wizard     | Time Touch                         |                                |
|                                     | Items Import                        | Management Information                                     | Purchase Order Collector           | Online/Offline Entry Outlook       |                                |
|                                     | Extra Charges                       | Exchange Server Calendar Synchronization                   | Balance Statistic                  | Travel Categories                  |                                |
|                                     | Price Calculation Definition        | Exchange Server Calendar Synchronization (Project Manager) | Purchase Process Overview          | Travel Expenses Entry              |                                |
|                                     | Price Calculation Wizard            | Outlook Integration  | Material Requirements Request      | Travel Expenses Accounting         |                                |
|                                     | Sales Quotation Versions            |  | Edit Material Requirements Request | Invoicing to Customer              |                                |
|                                     |                                     |  | Approval Process for Documents     | Travel Expenses Transfer Wizard    |                                |
|                                     |                                     |  | Quality Status                     | Travel Expenses Entry (Accountant) |                                |
|                                     |                                     |  | Internal Placement of Order        | Travel Expenses Report             |                                |
| Approval                            | Contract Management                 | Invoicing  | Controlling                        | Web Client                         | Plant Maintenance              |
| Service Approval                    | Fixed Price Contract                | Standard Invoicing   | Time and Material Transfer Wizard  | Time and Material Entry            | Recurrent Planning             |
| Material Approval                   | Time and Material Contract          | Contract Collector   | Project Manager Reports            | Travel Expenses Entry              | Service Contracts Accounting   |
| Travel Expenses Approval            | Phases and Milestone Contract       | Final Account for Down Payment Contracts                   | Manager Reports                    | Planning Information               | Support Ticket Creation Wizard |
| Travel Expenses Approval by Manager | Recurrent Invoicing Contract        | Annex to Invoice   | Resource Pool Manager Reports      | Project Approval                   | Support Service Entry          |
| Approval Summary Report             | Down Payment Invoice                |  | Business Unit Reports              | Reminder                           | Maintenance Contract           |
|                                     | Call-Off Contract                   |  | Management Summary Reports         | Reports                            | Support Desk                   |
|                                     | Contract Reports                    |  | Degree of Completion Report        | User Settings                      | Email Import                   |
|                                     | Retentions                          |  | Breakeven Analysis                 | Material Requirements Request      |                                |
|                                     |                                     |  | Xelsius Analyses                   | Vacation Management                |                                |
| Inter-Company Invoicing             | Plants in Progress                  | Alert and Workflow Management                              | Employee Data Management           | Resource Pool Management           | Attendance Time Recording      |
| General Accounting Matrix           | Definition Data Source              | Approval Process for Sales and Purchase Documents          | Employee                           | Resource Pool                      | Working Time Rules             |
| Inter-Company Accounting Matrix     | Column Definition Calculation Table | Notification Projects/ Contract Changes                    | New Employee Wizard                | Resource Pool Planning             | Attendance Time Recording      |
| Definition Accounting Wizard        | Definition Cost Rates               |  | Calendars                          | Resource Pool Report               | Attendance Management          |
| Accounting Simulator                | Assessment Wizard                   |  | Skills                             | Planning Confirmation              | Attendance Error List          |
| Accounting Wizard                   | Assessment Lists                    |  | Definition Vacation                |                                    | Basic Settings                 |
| Distribution List                   |                                     |  | Human Resources Reports            |                                    | Time Touch                     |
| Cost Rate Wizard                    |                                     |  |                                    |                                    |                                |

# Software Architecture



# System Requirements

| Database Server                    |   |
|------------------------------------|---|
| <b>Operating System</b>            | Microsoft Windows Server 2003, Standard 32/64 bit, Enterprise 32/64 bit<br>Microsoft Windows Server 2003 R2, Standard 32/64 bit, Enterprise 32/64 bit<br>Microsoft Windows Server 2008, Standard 32/64 bit, Enterprise 32/64 bit<br>Microsoft Windows Server 2008 R2, Standard 64 bit, Enterprise 64 bit<br>For more information, see SAP Business One. |
| <b>CPU</b>                         | <b>3 – 20 users:</b> 1x Intel Pentium IV<br><b>21 – 75 users:</b> 2x Intel Pentium IV<br><b>75+ users:</b> 4x Intel Pentium IV  |
| <b>RAM</b>                         | <b>3 – 10 users:</b> 2 GB<br><b>more than 10 users:</b> 2 GB + 64 MB per user   |
| <b>Free Hard Disk Storage Unit</b> | MS SQL Server - System Partition 1 GB; Data Partition 10 GB   |
| <b>Database</b>                    | Microsoft Windows SQL Server 2005, Standard 32/64 bit, Enterprise 32/64 bit<br>Microsoft Windows SQL Server 2008, Standard 32/64 bit, Enterprise 32/64 bit  |
| <b>Software</b>                    | Microsoft IE 6.0 SP1 or higher; Microsoft .Net Framework 3.5  |
| Workstation                        |   |
| <b>Operating System</b>            | Microsoft Windows XP Professional 32 bit<br>Microsoft Windows Vista, 32/64 bit, Business, Enterprise & Ultimate Edition<br>Microsoft Windows 7, 32/64 bit, Business, Enterprise & Ultimate Edition  |
| <b>CPU</b>                         | from 1x Intel Pentium IV  |
| <b>RAM</b>                         | 1 GB plus 120 – 140 MB for ProjectManagement  |
| <b>Free Hard Disk Storage Unit</b> | 2 GB  |
| <b>Display</b>                     | 1024 x 768 with 24 bit colors or higher   |
| <b>Software</b>                    | Microsoft .Net Framework 3.5  |
| Web Server                         |   |
| <b>Operating System</b>            | Microsoft Windows Server 2003, Standard 32/64 bit, Enterprise 32/64 bit<br>Microsoft Windows Server 2003 R2, Standard 32/64 bit, Enterprise 32/64 bit<br>Microsoft Windows Server 2008, Standard 32/64 bit, Enterprise 32/64 bit<br>Microsoft Windows Server 2008 R2, Standard 64 bit, Enterprise 64 bit  |
| <b>RAM</b>                         | 2 GB or higher  |
| <b>Free Hard Disk Storage Unit</b> | 2 GB  |
| <b>Software</b>                    | Microsoft Internet Information Server 6.0 SP1 or higher, in 32 bit mode; Microsoft .Net Framework 3.5   |



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