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Glossary

Actual Costs

Actual costs are the actual costs in a previous billing period within the business costing. In project management, the actual cost are the actual total costs of a project, sub- project or job for a specific deadline. The actual costs, together with the planned costs and progress, important key figures for controlling (management accounting) (budget control, earned value analysis, ...).

Application Planning (=Resource Planning, Capacity Planning)

Application planning refers to planning the time/effort of the resources involved in the project implementation, depending on their availability. In Projectile the planning components consist of calculating the available capacity of the individual project employee, as well as scheduling the resources.

Approval(Freigabe)

Approval refers to, depending on the context, approving a plan, sharing something for certain purposes or granting certain rights to a person. In project management, approval is described as the authorization to carry out subsequent work with defined contents. An approval is often associated with quality control and is usually defined as a milestone in the project plan.

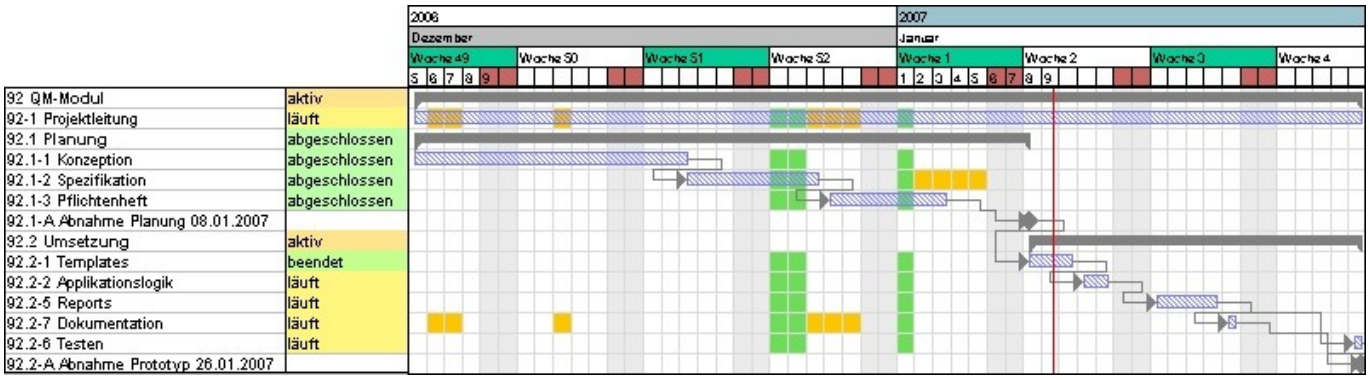
Backwards Calculation (=Backwards Scheduling)

Within the network diagram technology, forward calculation and backward calculation is needed to determine the overall project duration, early and finish dates and buffer times. Backward calculation is a method, to plan a project from its scheduled end as the starting point. When scheduling, a deadline is given for when the project results must be completed. Scheduling is then performed from the finish date backwards to the latest possible start date of the project.

Bar Chart-Network Diagram (=Networked Bar Diagram, Network-Gantt)

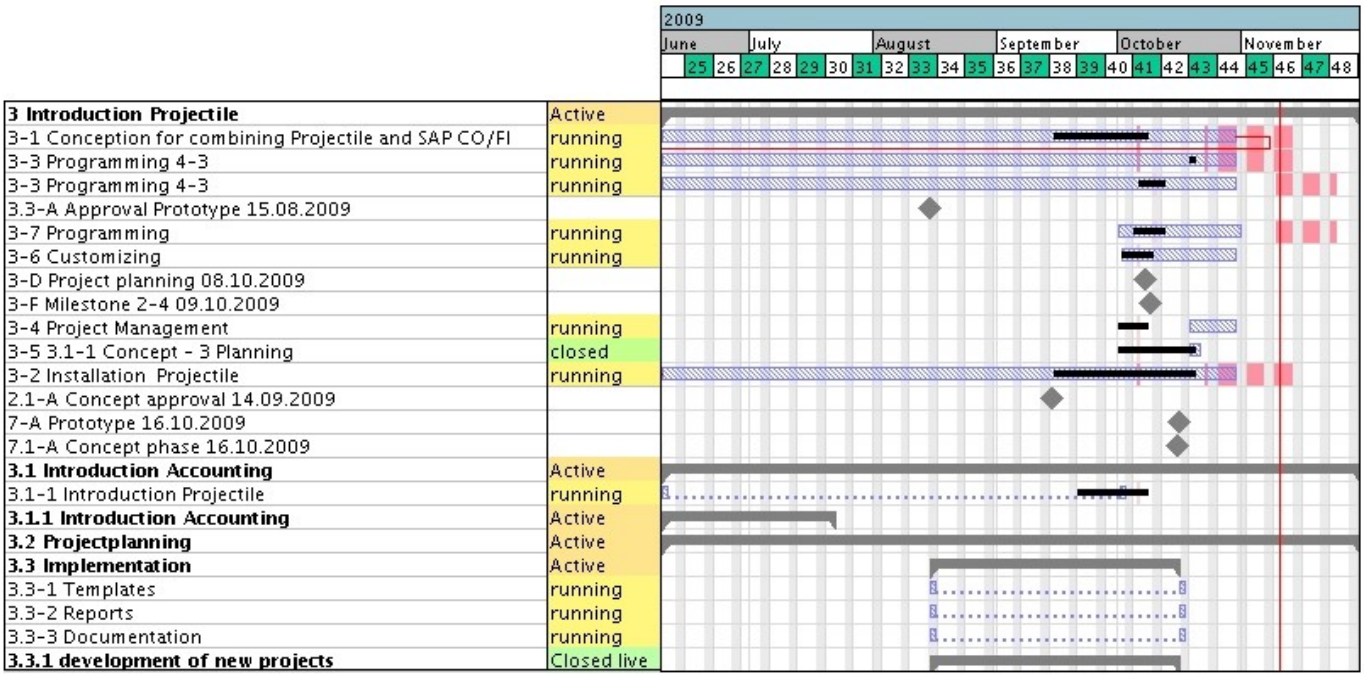
A bar chart-network diagram is an extension of the bar chart to display the dependencies between jobs or projects. In Projectile cross-linked processes in the document project timing/order relationship

are defined and visualized in the Gantt chart.



Bar Chart (= Gantt-Diagram)

A bar chart is a diagram for visualizing the time planning of a project. The duration of a job or project are symbolized through the length of the bar in the time axis. The bars contain either actual data or target data. Events or milestones are displayed as time points. In Projectile the processes are visualized in the project charts.



Basic Plan

The basic plan contains all data of an approved project plan for a defined deadline (usually approval or placement of an order). The basic plan contains the minimum of deadlines, duration, time/effort and costs.

Bottom-Up Planning

Bottom-up planning means planning projects using the Bottom-Up principle. In Projectile, bottom-up planning is used by default. Here the occupations, processes, times and costs are not planned in detail on the project level, but are begun from the job level. After the project has been roughly planned (defining parent projects and sub-projects without definite time planning and cost planning) the jobs are then precisely defined. Through selecting projects, employees, occupations and the duration, the internal and external costs and the duration are defined (see also costing). These values are calculated to the assigned project and passed on the the next project level. All internal and external costs of a sub-project are passed on the parent project until the top project (root of the project tree) is reached.

Bottom-Up Principle

In project management, the bottom-up principle means the general procedure when editing or planning from the jobs up to the top project (from bottom to top: jobs - sub-projects - parent projects). An alternative to the bottom-up principle is the top-down principle.

Budget, Project Budget

The available financial means of a project is the project budget according to DIN 69903. The project budget contains, through a business perspective, all expenses (personnel costs, travel costs, external costs, non-personnel costs, allowance for depreciation, etc.) or (from the project leader's perspective) the financial means for the project-specified purchases only available to the person responsible for the project. In Projectile an unlimited amount of Budgets can be defined.

Buffer Time

The buffer time is a term used in network diagram technology. The buffer time is a temporal scope for performing a process. This margin can be applied by shifting the process and/or by extending the task duration. From the information of various specifications in the network diagram, four types of buffer time can be determined. Most often used are the total float and the free buffers. The total float of a task i is calculated as the difference of LSi (late start date of i) and ESi (Early start date of i) or LFi (Late finish date of i) and EFi (Early finish date of i). The total float indicates how much the process can be shifted without jeopardizing the project end: Total float = LSi - ESi = LFi - EFi . The free buffer is the time, which does not endanger the earliest possible begin and/or end of the successor. (Formally: All successor processes can be performed at its earliest time). It can only occur if at least two completed operations have the same successor. The calculation occurs with a “normal sequence” (end - start) by forming the difference of early end of the considered process and the early start of its successor. With a begin sequence (start - start) the earliest start dates are compared and with an end sequence (end - end), the earliest end dates of the transactions are compared.

Die Pufferzeit ist ein Begriff aus der Netzplantechnik. Die Pufferzeit ist ein zeitlicher Spielraum für die Ausführung eines Vorganges. Dieser Spielraum kann durch Verschiebung des Vorganges und/oder

durch Verlängerung (Dehnung) der Vorgangsdauer genutzt werden. Aus den Angaben mehrerer Vorgaben lassen sich im Netzplan anschließend vier Arten von Pufferzeit bestimmen. Am häufigsten werden der Gesamtpuffer und der Freie Puffer verwendet. Der Gesamtpuffer GPi eines Vorgangs i errechnet sich aus der Differenz von SAZi (Spätester Anfangszeitpunkt von i) und FAZi (Frühester Anfangszeitpunkt von i), bzw. SEZi (Spätester Endzeitpunkt von i) und FEZi (Frühester Endzeitpunkt von i). Das heißt, der Gesamtpuffer gibt an um wie viel sich der Vorgang verschieben lässt ohne das Projektende zu gefährden: GPi = SAZi − FAZi = SEZi − FEZi. Der Freie Puffer ist die Zeit, die den frühest möglichen Beginn bzw. Ende des Nachfolgers nicht gefährdet. (Formal: Alle Nachfolge-Vorgänge können in ihrer frühesten Lage durchgeführt werden). Er kann nur entstehen, wenn mindestens zwei abgeschlossene Vorgänge auf denselben Nachfolger treffen. Seine Berechnung erfolgt bei einer “Normalfolge” (Ende - Anfang) durch Bildung der Differenz von Frühestem Ende des betrachteten Vorgangs und dem Frühestem Beginn seines Nachfolgers. Bei einer Anfangsfolge (Anfang - Anfang) werden die frühesten Anfangstermine und bei einer Endfolge (Ende - Ende) die frühesten Endetermine der Vorgänge verglichen.

Calculation

Calculation refers to determining the accounting unit costs (of a product, service or semi-finished product), determining the production costs of an item and determining the selling prices. It can be distinguished between the preliminary cost estimate in the planning phase and the post-calculation after completion of all production and/or trading and marketing operations. The differences from pre-calculation and post-calculation should be interpreted and returned to the controlling costs and pricing in a feedback loop.

Capacity Planning

Capacity planning is the quantitative assignment of the performing capacity of each individual job necessary for the project, taking the estimation into account. In Projectile the capacities are determined as a weighted quotient of the planned working time and the planned project time in the constant time interval. The system also considers on request, the possibility that the planned project will become an order and weighs the target project times accordingly.

Capacity Requirement (= Resource Requirement)

Capacity requirement or resource requirement refers to the demand of staff and resources required for processing of the jobs of a project necessary to determine the estimated costs and the time span of the network diagram.

Controlling (Management Accounting)

Controlling is a management subsystem within the company, whose core function of the procurement, processing and analyzing data in preparation for making objective decisions. Project

controlling is in turn a subsystem of controlling, which is limited to one or several projects.

Contractor/Agent (Auftragnehmer)

The contractor/agent is the salesperson of a product or a service. He/she is the contract partner of the customer, who buys the services agreed upon in the order.

Costing

In Projectile costing, i.e. determining the internal work costs for a project, is illustrated in two stages. The internal cost rates of the employees (see Employee have the highest priority in costing. These costs represent the real work costs. If the employee does not have the cost rates, the general internal rates of the firm (see Occupation) are applied for the cost transfers.

Cost Center

A cost center is a, through geographical, functional or technical aspects, part of an organization, in which costs are incurred (causation principle). The cost center has the task of collecting the costs incurred in the defined area and thus allowing the responsible person cost control. Furthermore, the cost center in the process of full cost accounting, is a prerequisite for the formation of cost rates, which are necessary for cost calculation for the allocation of overhead.

Cost Unit

A cost unit is a reference object, which are calculated into the business accounting costs. A distinction is made between overhead cost unit and marketing-oriented cost unit. The overhead cost units are cost units, which collect the costs of internal services or projects, without, however, these leading to sales of these services in the market and thus to sales-related revenue. The sales-oriented cost units are cost units, which are assigned to performance-related costs as well as proceeds from sales. Here, the cost unit is also equivalent to a profit unit.

CPI

The CPI (Cost Performance Index) is the cost-related achievement ratio of the earned-value-analysis. It is formed from the ratio of earned value and actual cost. This means that with a CPI of greater than 100% (or 1.00) the results of the project were provided at a lower cost than originally planned, while with a value of less than 100% (or 1.00) the project's budget has been overdrawn.

Critical Path

The critical path indicates the path through a network diagram, where the buffer time is zero, i.e. each missed deadline of activities or events on the critical path, influences the project end deadline. All jobs of a network diagram that can not be shifted to a new date without shifting the project end deadline lie on the critical path.

Customer (Auftraggeber)

The customer is completely responsible for the project. The customer approves the project budget and the scheduling. In Projectile the customer is administered in the document type customer. The person responsible for the project has the role of the contractor towards the customer of the project. In project management, the contract management and purchasing management deals with the relationship between the customer role and contractor role.

Degree of Completion

The degree of completion of a job or project is equivalent exactly to the percentage to which work of a job or project is completed. Quantitatively, the degree of completion the quotient from the actual time and the target time. Qualitatively, it is referred to the percentage for which the project or job contents are processed. The status of a project can be determined by the difference of these figures. In Projectile the qualitative degree of completion for projects can be defined in the document degree of completion. The project status and completion levels are documented in the project documentation and in the automatically generated status reports.

Earned-Value-Analysis

The Earned Value analysis describes a method to make the progress of a project measurable and predictable at any time . The key figure, which happens with this method, is also described as earned value. From the three basic factors earned value, planned and actual expenditure the cost variance, schedule variance as the absolute factor and the cost performance index (CPI) as well as the schedule performance index (SPI) are calculated as relative factors.

Forward Calculation (=Forward Scheduling)

Within the network diagram technology forward calculation and backward calculation is required to determine the overall project duration, early and late dates and buffer times. The forward calculation determines the finish time starting from the beginning of the project. According to the order relationships all processes and events beginning at the process begin, with their respective durations, time intervals, buffer times, etc. are entered into the appropriate calendar.

Invoicing (=Cost Sheet)

With invoicing, goods or service from the supplier are paid for by the purchaser by agreement. The compensation can be performed on the basis of time/effort or fixed-price and is usually controlled through payment plans. With time/effort-related compensation, the customer often demands a detailed list of all resulting expenses or costs with the invoice. DIN 69903 interprets invoicing as a complete process from costing, assignment and billing to acceptance of the invoice. In Projectile this functionality is illustrated through the Billing Module.

Job

A job is an occupation, which an project employee completes for a project in a given time span. A job is the part of a project, which is not further subdivided in the work breakdown structure and can lie on any structure level (see also DIN 69901). To reach the project objective it is necessary to process all jobs. In Projectile all jobs in the document type jobs are defined. It is only possible to record project times in the system to the jobs and not to the projects.

Key Figures

Key figures are consolidated values, which are calculated using algorithms from the document data or other key figures and which describe a document. Each key figure is assigned an Id number as a unique identification number. Projectile supports key figures for the forms contact, project, jobs and employees. Using key figures in Projectile allows the user to generate aggregate values, values for any point in time and/or values for any defined periods. The values generated by a key figure are marked with a production date, so that they can be stored and reused without re-calculation being necessary. Furthermore, each key figure can be assigned to a document, through which the key figures can be integrated in the screen views and reports.

Knowledge Management

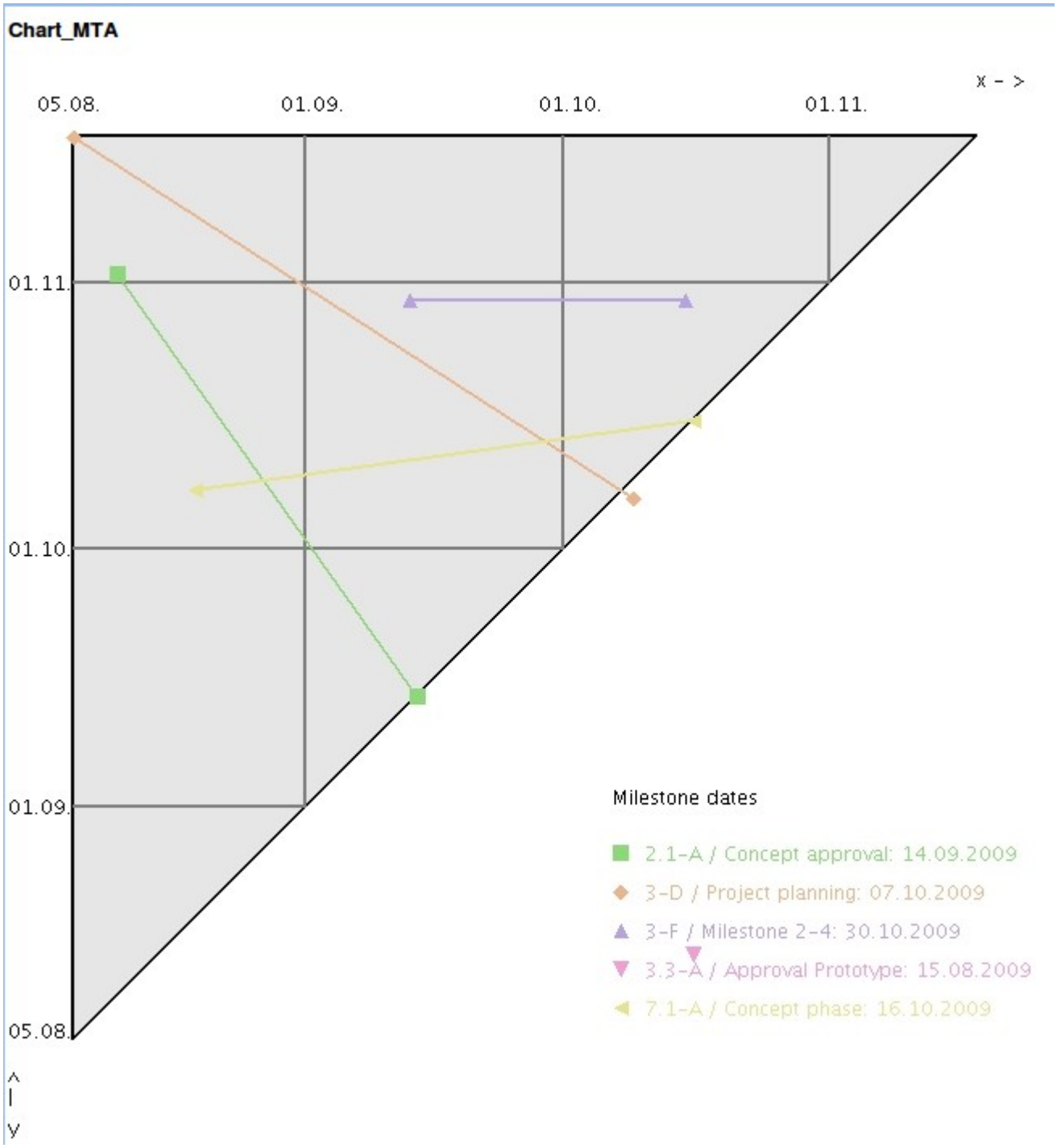
Knowledge management refers to a direction of management theory, which aims to establish and develop knowledge in organizations to achieve the best possible business objectives. Contributions to knowledge management are being developed in many disciplines, especially in business informatics, business administration, computer science, social science or information science.

Milestones

A milestone is a significant control event in the project plan, defined by a deadline and results that must be available at this date to the agreed quality according to the project order. Typical milestones are typically critical interim results, approvals, production start, etc. In Projectile the milestones are defined in the document type milestone and the trend dates for the milestone trend analysis are administered in the document type deadline.

Milestone-Trend-Analysis

The milestone-trend-analysis is a future-related tool for controlling the schedule of a project: On periodical reporting dates the schedule of the project is re-estimated through retrieving trend data of the estimated milestone achievement. From the curve progression, a trend can be inferred through the adherence of deadlines of the project. The deadlines for the milestones can be administered in the document type deadlines and the analysis is visualized in the project chart.



Multi-Project Management (=Program Management)

Multi-project management is the simultaneous planning, overall management and monitoring of several (interdependent) projects. Entire projects portfolios are observed. Multi-project management maneuvers through the field of tension between operational and strategic decisions. It is important on the strategic level of the project portfolio, to “properly” assemble and set the “correct” priorities, and on the operational level to conduct the various economic projects to resolve resource conflicts and solve time-related bottlenecks.

Network Diagram

The network diagram is a structural model for the analysis and presentation of the logical and time process conditions of a project. A network plan illustrates the processes and the sequence relationships and is an essential tool for project management, especially for scheduling and deadline monitoring.

Network Diagram Technology

Network diagram technology is a tool for planning, monitoring and controlling projects. Basically, work breakdown structure and scheduling are required, and ideally cost planning and capacity planning are included. Two methods of network techniques are used in practice: the Critical Path Method (CPM) and the Metra Potential Method (MPM). With CPM the events are shown as arrows and nodes represent events. In many cases, fictitious processes are required. In MPM, the operations are represented as nodes, arrows show the dependencies of the nodes on each other.

Offer

An offer consists of at least, a description of the services/items (item specifications, requirement specifications) to be rendered and the calculation of the price to be paid by the customer. When submitting a binding quote, the bidder obligates himself/herself to complete the order, if the offer has been accepted by the customer. Information about terms of payment, terms of delivery and a binding period is necessary with binding offers.

Organizational Unit

An organizational unit is an element of the organizational structure, which is generally visualized in an organigram. Examples of organizational units are subsidiaries, branches, divisions or departments. In Projectile organizational units are illustrated using the form unit.

Payment Plan

A payment plan specifies a series of accounting positions, in which the total price is paid in a series of installments, according to the pre-agreed dependencies of delivery and installment payments.

Phase

A phase refers to a temporal or logical structure section of a project. At least each end phase is also a milestone, i.e. required period results are available. The division of projects in certain phases is called the model phase.

Portfolio (=Project Portfolio)

In business management, a portfolio is a compilation of investments. Building a portfolio is usually preceded by an extensive analysis. Owning a portfolio is typically part of a strategy, to lower the risks of financial investments through diversification. The portfolio of a company describes the business segment. Product portfolio is the further refinement of the company's portfolio for the individual product and the project portfolio is a set or a subset of all the ongoing projects of an organization.

Portfolio-Management (=Project Portfolio-Management)

Portfolio management refers to the administration of a portfolio, i.e. a stock of investments. The portfolio management process includes the portfolio planning (selection and analysis), the realization of portfolio (monitoring and auditing), and portfolio control (performance measurement, attribution). In relation to projects questions about the alignment of project objectives with company strategy, project evaluation and the earnings prospects of projects have priority. The methods included to the portfolio management are composition, structure and key figures determination of portfolios, assessment and prioritization of investments and the simulation of possible portfolios.

Predecessor

The predecessor is an integral part of the order relationship and describes the relationships between processes within a process chain. Due to the logic of processing steps to manufacture a product or a service, certain processes may only be performed after one or more other processes are completed. Within the network diagram technique in the context of project planning, the predecessor is process in which a process precedes another process.

Pricing

In Projectile pricing, i.e. determining external costs for transferring the costs further to the customers, is displayed multi-level.

1. The cost rate of the job has the highest priority in the pricing calculation. If a job has an external hourly rate, this is used with the calculation, the order preparation and invoicing.
2. If no external hourly rate is used for a job, the next level of external hourly rates of a project) is applied. If a project has this hourly rate, all activities for pricing use these rates for cost transfers.
3. If no external hourly rate exists on the project level, but for the customer) of the project , then this rate is used for the offer preparation and invoicing.
4. If no external hourly rates are stored for the project and the customer, the external rate of employees are applied.
5. If external hourly rates are stored for employees, these rates may be overridden customer-related or project-related. It is also applied here, that the project rate of the employee overrides the customer rate of the employee.
6. If nothing is stored here either, the system checks whether project-related occupations are defined for this project. If there are no definitions, it will be determined whether customer-related occupations are stored with the customer of the project and what rates are available.
7. If no cost rate exists here either, the general external occupation rate of the firm (see occupations) is used for cost transfers.

Process

The jobs which are defined in the work breakdown structure, are (in terms of network diagram technology) processes. The processes are then linked through order relationships with one another. Processes are depending on the network diagram type, symbolized through arrows or through nodes. Processes are created through the project planning from the jobs.

Profit

Profit is the surplus value implemented on the market, which is expressed as a monetary or percentage value, which is the objective in the free-market production process. In Projectile the profit of a project is determined as the difference between revenues and costs, i.e. profit [EUR] = sales [EUR] - costs [EUR]. The percentage of profit is defined as the quotient of the absolute profit through sales: profit [%] = (profit [EUR] / sales [EUR]) * 100.

Progress Report (= Status Report)

Status reports are an important part of project management and project controlling. Here, the progress of individual sub-tasks of the project plan is documented. It is shown who is working where, how far the task has progressed, or if there are any problems or obstacles. Furthermore, due dates are displayed and the upcoming task will be included. Status reports are distributed to the project manager and all project participants, and provide the basis of the status meetings.

Project

A project is an undertaking, which is basically characterized by uniqueness of conditions in their entirety and meets the following criteria:

- Uniqueness, no routine activities
- Unique objectives
- Time, financial, personnel or other boundaries
- Large complexity (Indicator: effort/time, amount of involved departments, risks)

The projects in Projectile are administered in the document type project.

Project Controlling

Project controlling is a method for early detection of project differences using comparisons of plan results and actual results. To evaluate the differences, a project report or an evaluation of the project manager is applied. The procedure for project controlling must already be specified in the project order. In Projectile charts for controlling purposes (target/actual comparisons for projects, jobs and times) are generated in the project charts .

Project Coordination

The project coordination is the main form of the project core organization. For the duration of a project, the existing line organization is extended to the staff function of a project coordinator. But usually, no decision-making and managerial authority over the line functions are transferred.

Project Documentation

The project documentation (according to DIN 69901) is the collection of selected, significant data of configuration, organization, use of resources, solutions, process and achieved objectives of the project. A project documentation consists of a minimum of project reports, project completion reports and requirement specifications or specifications.

Project Employee

Project staff are in principle all persons involved in a project, even if they do not belong directly to the project team. In Projectile the project staff can be administered in the document type Employee.

Project Management

Project management is a concept used to handle goal-oriented projects and efficiently. These organizational, methodological and interpersonal aspects (see also Chapter 1 - Introduction to Project Management).

Project Manager

A project manager is the person responsible for achieving the project objectives defined in a project order. He/she is the main contact person of the customer. Tasks, powers and responsibilities of the project manager should be established throughout the company. In Projectile the project manager (and where applicable, his/her representative) is defined in the document type project.

Project Plan

The project plan consists of several sub-plans for implementing a project and are created by the project manager or project team. This plan includes a project organization plan, schedule, budget plan, personnel plan, activity plan, implementation plan, risk plan and quality plan. Depending on project type, specific project plans may be added, such as a migration plan or test plan.

Project Planning

Project planning includes all occupations, which lead to a project plan. A project plan can consist of the following elements:

- work breakdown structure with a job description
- schedule (network diagram plan, bar chart plan, milestone plan)
- resource plan
- cost plan
- risk analysis

Project Risk (= Risk)

A risk is a calculated prognosis of potential damage or loss in a negative case or a potential benefit or profit in the positive case (chance). What is perceived as a loss or benefit depends on values. A risk is the possibility of an adverse event (mathematical) occurring or the possibility of an adverse event occurring multiplied by the financial level (BWL). A project risk can be classified in terms of its probability of occurrence, its effects (delay, cost increase, quality loss) and the damage they cause.

Project Structuring

Project structuring is the elaboration of a project structure plan. A project is hierarchically divided to smaller elements of the project from the sub-project down to jobs. The lowest level of the structure is the basis for the further project planning.

Project Team

The project team consists of the project employees, which are responsible, together with the project manager for the project implementation. For each upper project, the project team is defined in the document type project .

Project Timing/Order Relationship

An order relationship specifies the quantifiable relationship between events or processes (for example, between two jobs of a Project or between two sub-projects - see also DIN 69900-1). In Projectile, these relationships are defined for visualizing the sequence planning in a document project timing/order relationship. Usually, the following order relationships are used:

- Normal sequence (End - Begin)
- Begin sequence (Begin - Begin)
- End sequence (End - End)
- Jump sequence (Begin - End)

Project Objective

The project objective is part of the project order and consists of the three components:

- Contents
- Time
- Costs

It must be accessible, complete, consistent, auditable, documented and jointly agreed upon between the customer and project management.

Resources (= Working Resources)

Resources or working resources are personnel and material resources needed to complete tasks, jobs or projects (DIN 69902). The unit of resources can be both values (Euro, U.S. Dollar ...) and quantity units (work hours, machine uptime, construction material in tons, etc.). The resource allocation to a project can b performed by specifying dates and time periods in which they are available for the project.

Resource Management

The scheduling of personnel, equipment and other tools needed for the project work is the task of resource management. The aim of resource management is the optimal utilization of resources and the best suitable provision for the projects using these tools. The working times for working resources must be minimized, since they burden the project budget with appropriate costs. From the perspective of the organization is is strived for the most possible uniform and high utilization of resources.

Scheduling

Scheduling includes planning the start and finish times of all the jobs of a project.

Sequence Planning

In project management, sequence planning is the chronological and logical sequence of jobs in a project. The results of this sequence planning is the network diagram and is visualized using a bar chart. In Projectile the project processes are defined in the document project timing/order relationship and displayed in project chart.

SPI

The SPI (Schedule Performance Index) is the time-related performance key figure of the earned value analysis. It is formed from the ratio of earned value and estimated effort. This means that with a SPI of greater than 1.00 (100%) the project results are delivered faster than originally planned, and with a value of less than 1.00 (100%), the project is progressing too slowly.

Sub-Project

Larger projects are usually divided into sub-projects according to certain criteria (functional, organizational, technical, etc.) to manage and administer them better. With temporal division/splitting, sub-projects are often called project phases.

Successor

The successor is a part of the project timing/order relationship and describes the relationships between processes within a process chain. Due to the logic of processing steps to manufacture a product or a service, certain processes can possibly only be performed after one or more other processes are completed. Within the network technology, in the context of project planning, the successor is a process which follows another process.

Time/Effort

The time/effort of a job describes the amount of work necessary to render a defined job result. Unit: Person days (pd), person hours (ph).

Time/Effort Estimation

Time/effort estimation is the estimation of the necessary time or effort for processing a job. This is based on the experience of the project employee and is the foundation of capacity planning and deadline planning. In Projectile the target times (the time/effort) can be estimated on the project level and job level.

Top Down-Planning

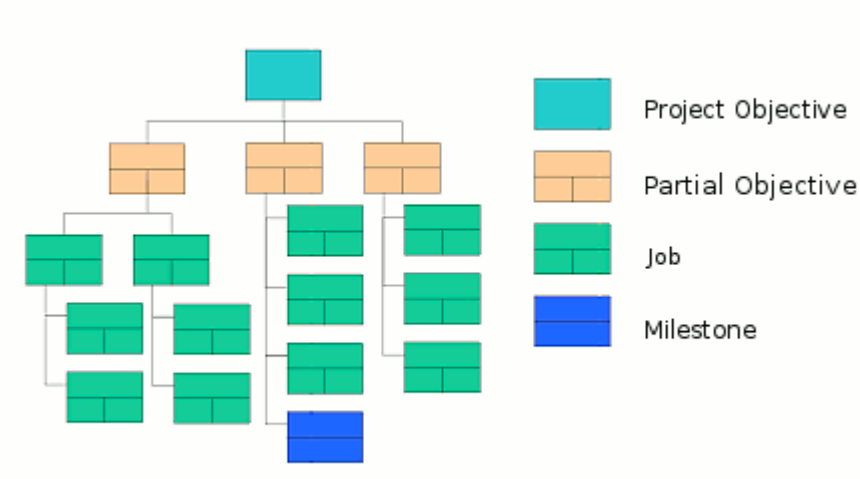
Top down planning refers to the project planning using the Top Down principle. Here the occupations, processes, times and costs will be planned in detail at the project level, and from this plan restrictions result for the lower levels (sub-projects and jobs).

Top Down Principle

The Top Down principle in project management is the general approach for the planning process of the top projects down to the individual jobs (i.e., from top to bottom: top project - sub-project - job).

Work Breakdown Structure

A work breakdown structure (project structure plan) is the subdivision of a project in work-related parts, e.g. phases, work orders, work procedures.



In Projectile the work breakdown structures are generated in the project chart.