



PPM programme & project management

# Glossary

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Version: 4.0  
Release Date: April 2016

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## Introduction

Many of the words defined here have broader, and in some cases different, dictionary definitions.

The definitions use the following conventions:

- Terms used as part of the definitions and that are defined in the glossary are shown in italics.
- When synonyms are included, no definition is given and the reader is directed to the preferred term (i.e., see preferred term).

Related terms that are not synonyms are cross-referenced at the end of the definition (i.e., see also related term).

**A**

**Accountability Matrix.** See responsibility assignment matrix.

**Activity.** An element of work performed during the course of a project. An activity normally has an expected duration, an expected cost, and expected resource requirements. Activities can be subdivided into tasks.

Activity Definition. Identifying the specific activities that must be performed to produce the various project deliverables.

**Actual Finish Date (AF).** The point in time that work actually ended on an activity. (Note: In some application areas, the activity is considered "finished" when work is "substantially complete.")

**Actual Start Date (AS).** The point in time that work actually started on an activity. Administrative Closure. Generating, gathering, and disseminating information to formalise phase or project completion.

**Application Area.** A category of projects that have common elements not present in all projects. Application areas are usually defined in terms of either the product of the project (i.e., by similar technologies or industry sectors) or the type of customer (e.g., internal versus external, government versus commercial). Application areas often overlap.

**Arrow.** The graphic presentation of an activity. See also arrow diagramming method. Arrow Diagramming Method (ADM). A network diagramming technique in which activities are represented by arrows. The tail of the arrow represents the start, and the head represents the finish of the activity (the length of the arrow does not represent the expected duration of the activity). Activities are connected at points called nodes (usually drawn as small circles) to illustrate the sequence in which the activities are expected to be performed. See also precedence diagramming method.

**As-of Date.** See data date.

**Assumptions.** Assumptions are factors that, for planning purposes, are considered to be true, real, or certain. Assumptions affect all aspects of project planning, and are part of the progressive elaboration of the project. Project teams frequently identify, document, and validate assumptions as part of their planning process. Assumptions generally involve a degree of risk.

**Assumptions analysis.** A technique that explores the assumptions' accuracy and identifies risks to the project from inaccuracy, inconsistency, or incompleteness of assumptions.

**B**

**Backward Pass.** The calculation of late finish dates and late start dates for the uncompleted portions of all network activities. Determined by working backwards through the network logic from the project's end date. The end date may be calculated in a forward pass or set by the customer or sponsor. See also network analysis.

**Bar Chart.** A graphic display of schedule-related information. In the typical bar chart, activities or other project elements are listed down the left side of the chart, dates are shown across the top, and activity durations are shown as date-placed horizontal bars. Also called a Gantt chart.

**Baseline.** The original approved plan (for a project, a v.a1cpackage, or an activity), plus or minus approved scope changes. Usually used with a modifier (e.g., cost baseline, schedule baseline, performance measurement baseline).

**Baseline Finish Date.** See scheduled finish date.

**Baseline Start Date.** See scheduled start date.

**Brainstorming.** A general creativity technique that can be used to identify risks using a group of team members or subject-matter experts. Typically, a brainstorming session is structured so that each participant's ideas are recorded for later analysis. A tool of the risk identification process.

**Budget at Completion (BAC).** The sum of the total budgets for a project.

**Budget Estimate.** See estimate.

**Budgeted Cost of Work Performed (BCWP).** This term has been replaced with the term earned value.

**Budgeted Cost of Work Scheduled (BCWS).** This term has been replaced with the term planned value.

**Buffer.** See reserve.

## C

**Calendar Unit.** The smallest unit of time used in scheduling the project. Calendar units are generally in hours, days, or weeks, but can also be in shifts or even in minutes. Used primarily in relation to project management software.

**Change Control Board (CCB).** A formally constituted group of stakeholders responsible for approving or rejecting changes to the project baselines.

**Chart of Accounts.** Any numbering system used to monitor project costs by category (e.g., labor, supplies, materials, and equipment). The project chart of accounts is usually based upon the corporate chart of accounts of the primary performing organisation. See also code of accounts.

**Charter.** See project charter.

**Checklist.** A listing of many possible risks that might occur on a project. It is used as a tool in the risk identification process. Checklists are comprehensive, listing several types of risk that have been encountered on prior projects.

**Code of Accounts.** Any numbering system used to uniquely identify each element of the work breakdown structure. See also chart of accounts.

**Communications Planning.** Determining the information and communications needs of the project stakeholders: who needs what information, when they will need it, and how it will be given to them.

**Component.** A constituent part, an element.

**Constraint.** Applicable restriction that will affect the performance of the project. Any factor that affects when an activity can be scheduled.

**Contingencies.** See reserve and contingency planning.

**Contingency Allowance.** See reserve.

**Contingency Planning.** The development of a management plan that identifies alternative strategies to be used to ensure project success if specified risk events occur.

**Contingency Reserve.** The amount of money or time needed above the estimate to reduce the risk of overruns of project objectives to a level acceptable to the organisation.

**Contract.** A contract is a mutually binding agreement that obligates the seller to provide the specified product and obligates the buyer to pay for it. Contracts generally fall into one of three broad categories:

- Fixed price or lump-sum contracts-this category of contract involves a fixed total price for a well-defined product. Fixed-price contracts may also include incentives for meeting or exceeding selected project objectives, such as schedule targets.
- Cost reimbursable contracts-this category of contract involves payment (reimbursement) to the contractor for its actual costs. Costs are usually classified as direct costs (costs incurred directly by the project, such as wages for members of the project team) and indirect costs (costs allocated to the project by the performing organisation as a cost of doing business, such as salaries for corporate executives). Indirect costs are usually calculated as a percentage of direct costs. Cost-reimbursable contracts often include incentives for meeting or exceeding selected project objectives, such as schedule targets or total cost.
- Time and material contracts-time and material contracts are a hybrid type of contractual arrangement that contain aspects of both cost-reimbursable and fixed-price-type arrangements. Time and material contracts resemble cost-type arrangements in that they are open ended, because the full value of the arrangement is not defined at the time of the award. Thus, time and material contracts can grow in contract value as if they were cost-reimbursable-type arrangements. Conversely, time and material arrangements can also resemble fixed-unit arrangements when, for example, the unit rates are preset by the buyer and seller, as when both parties agree on the rates for the category of "senior engineers."

**Contract Administration.** Managing the relationship with the seller.

**Contract Closeout.** Completion and settlement of the contract, including resolution of any open items.

**Control.** The process of comparing actual performance with planned performance, analyzing variances, evaluating possible alternatives, and taking appropriate corrective action as needed.

**Control Account Plan (CAP).** Previously called a Cost Account Plan. The CAP is a management control point where the integration of scope and budget and schedule takes place, and where the measurement of performance will happen. CAPs are placed at selected management points of the work breakdown structure.

**Control Charts.** Control charts are a graphic display of the results, over time and against established control limits, of a process. They are used to determine if the process is "in control" or in need of adjustment.

**Corrective Action.** Changes made to bring expected future performance of the project in line with the plan.

**Cost Budgeting.** Allocating the cost estimates to individual work activities.

**Cost Control.** Controlling changes to the project budget.

**Cost Estimating.** Developing an approximation (estimate) of the cost of the resources needed to complete project activities.

**Cost of Quality.** The costs incurred to ensure quality. The cost of quality includes quality planning, quality control, quality assurance, and rework.

**Cost Performance Index (CPI).** The cost efficiency ratio of earned value to actual costs. CPI is often used to predict the magnitude of a possible cost overrun using the following formula:  $BAC/CPI = \text{projected cost at completion}$ .  $CPI = EV \text{ divided by } AC$ .

**Cost-Plus-Fixed-Fee (CPFF) Contract.** A type of contract where the buyer reimburses the seller for the seller's allowable costs (allowable costs are defined by the contract) plus a fixed amount of profit (fee).

**Cost-Plus-Incentive-Fee (CPIF) Contract.** A type of contract where the buyer reimburses the seller for the seller's allowable costs (allowable costs are defined by the contract), and the seller earns its profit if it meets defined performance criteria.

**Cost Variance (CV).** 1) Any difference between the budgeted cost of an activity and the actual cost of that activity. 2) In earned value,  $EV \text{ less } ACWP = CV$ .

**Crashing.** Taking action to decrease the total project duration after analyzing a number of alternatives to determine how to get the maximum duration compression for the least cost.

**Critical Activity.** Any activity on a critical path. Most commonly determined by using the critical path method. Although some activities are "critical," in the dictionary sense, without being on the critical path, this meaning is seldom used in the project context.

**Critical Path.** The series of activities that determines the duration of the project. In a deterministic model, the critical path is usually defined as those activities with float less than or equal to a specified value, often zero. It is the longest path through the project. See critical path method.

**Critical Path Method (CPM).** A network analysis technique used to predict project duration by analyzing which sequence of activities (which path) has the least amount of scheduling flexibility

(the least amount of float). Early dates are calculated by means of a forward pass, using a specified start date. Late dates are calculated by means of a backward pass, starting from a specified completion date (usually the forward pass' calculated project early finish date).

**Current Finish Date.** The current estimate of the point in time when an activity will be completed.

**Current Start Date.** The current estimate of the point in time when an activity will begin.

## D

**Data Date (DD).** The date at which, or up to which, the project's reporting system has provided actual status and accomplishments. Also called as-of date.

**Decision Tree Analysis.** The decision tree is a diagram that describes a decision under consideration and the implications of choosing one or another of the available alternatives. It incorporates probabilities or risks and the costs or rewards of each logical path of events and future decisions.

**Definitive Estimate.** See estimate.

**Deliverable.** Any measurable, tangible, verifiable outcome, result, or item that must be produced to complete a project or part of a project. Often used more narrowly in reference to an external deliverable, which is a deliverable that is subject to approval by the project sponsor or customer.

**Dependency.** See logical relationship.

**Dummy Activity.** An activity of zero duration used to show a logical relationship in the arrow diagramming method. Dummy activities are used when logical relationships cannot be completely or correctly described with regular activity arrows. Dummies are shown graphically as a dashed line headed by an arrow.

**Duration (DU).** The number of work periods (not including holidays or other nonworking periods) required to complete an activity or other project element. Usually expressed as workdays or workweeks. Sometimes incorrectly equated with elapsed time. See also~.

**Duration Compression.** Shortening the project schedule without reducing the project scope. Duration compression is not always possible and often requires an increase in project cost.

## E

**Early Finish Date (EF).** In the critical path method, the earliest possible point in time on which the uncompleted portions of an activity (or the project) can finish, based on the network logic and any schedule constraints. Early finish dates can change as the project progresses and changes are made to the project plan.

**Early Start Date (ES).** In the critical path method, the earliest possible point in time on which the uncompleted portions of an activity (or the project) can start, based on the network logic and any schedule constraints. Early start dates can change as the project progresses and changes are made to the project plan.

**Earned Value (EV).** The physical work accomplished plus the authorised budget for this work. The sum of the approved cost estimates (may include overhead allocation) for activities (or portions of activities) completed during a given period (usually project- to-date). Previously called the budgeted cost of work performed (BCWP) for an activity or group of activities.

**Earned Value Management (EVM).** A method for integrating scope, schedule, and resources, and for measuring project performance. It compares the amount of work that was planned with what was actually earned with what was actually spent to determine if cost and schedule performance are as planned.

**Effort.** The number of labor units required to complete an activity or other project element. Usually expressed as staff hours, staff days, or staff weeks. Should not be confused with duration.

**Element.** One of the parts, substances, or principles that make up a compound or complex whole.

**Estimate.** An assessment of the likely quantitative result. Usually applied to project costs and durations and should always include some indication of accuracy (e.g., + or - x per-cent). Usually used with a modifier (e.g., preliminary, conceptual, feasibility). Some application areas have specific modifiers that imply particular accuracy ranges (e.g., order-of-magnitude estimate, budget estimate, and definitive estimate in engineering and construction projects).

**Estimate at Completion (EAC).** The expected total cost of an activity, a group of activities, or the project when the defined scope of work has been completed. Most techniques for forecasting EAC include some adjustment of the original cost estimate, based on actual project performance to date.

**Estimate to Complete (ETC).** The expected additional cost needed to complete an activity, a group of activities, or the project. Most techniques for forecasting ETC include some adjustment to the original estimate, based on project performance to date. Also called "estimated to complete." See also earned value and estimate at completion.

**Event-on-Node.** A network diagramming technique in which events are represented by boxes (or nodes) connected by MOWS to show the sequence in which the events are to occur. Used in the original program evaluation and review technique.

**Exception Report.** Document that includes only major variations from plan.

## F

**Fast Tracking.** Compressing the project schedule by overlapping activities that would normally be done in sequence, such as design and construction.

**Finish Date.** A point in time associated with an activity's completion. Usually qualified by one of the following: actual, planned, estimated, scheduled, early, late, baseline, target, or current.

**Finish-to-Finish (FF).** See logical relationship.

**Finish-to-Start (FS).** See logical relationship.

**Firm Fixed-Price (FFP) Contract.** A type of contract where the buyer pays the seller a set amount (as defined by the contract), regardless of the seller's costs.

**Fixed-Price Contract.** See firm fixed-price contract.

**Fixed-Price-Incentive-Fee (FPIF) Contract.** A type of contract where the buyer pays the seller a set amount (as defined by the contract), and the seller can earn an additional amount if it meets defined performance criteria.

**Float.** The amount of time that an activity may be delayed from its early start without delaying the project finish date. Float is a mathematical calculation, and can change as the project progresses and changes are made to the project plan. Also called slack, total float, and path float. See also free float.

**Forecast Final Cost.** See estimate at completion.

**Forward Pass.** The calculation of the early start and early finish dates for the uncompleted portions of all network activities. See also network analysis and backward pass.

**Fragnet.** See subnet.

**Free Float (FF).** The amount of time that an activity can be delayed without delaying the early start of any immediately following activities. See also float.

**Functional Manager.** A manager responsible for activities in a specialised department or function (e.g., engineering, manufacturing, marketing).

**Functional Organisation.** An organisation structure in which staff are grouped hierarchically by specialty (e.g., production, marketing, engineering, and accounting at the top level; with engineering, further divided into mechanical, electrical, and others).

## G

**Gantt Chart.** See bar chart.

**Grade.** A category or rank used to distinguish items that have the same functional use (e.g., "hammer"), but do not share the same requirements for quality (e.g., different hammers may need to withstand different amounts of force).

**Graphical Evaluation and Review Technique (GERT).** A network analysis technique that allows for conditional and probabilistic treatment of logical relationships (i.e., some activity may not be performed).

**H**

**Hammock.** An aggregate or summary activity (a group of related activities is shown as one and reported at a summary level). A hammock may or may not have an internal sequence. See also subproject and subnet.

**Hanger.** An unintended break in a network path. Hangers are usually caused by missing activity or missing logical relationships.

**I**

**Information Distribution.** Making needed information available to project stakeholders in a timely manner.

**Initiation.** Authorising the project or phase.

**Integrated Change Control.** Coordinating changes across the entire project. Integrated Cost/Schedule Reporting. See earned value.

**Invitation for Bid (IFB).** Generally, this term is equivalent to request for proposal. However, in some application areas, it may have a narrower or more specific meaning.

**K**

**Key Event Schedule.** See master schedule.

**L**

**Lag.** A modification of a logical relationship that directs a delay in the successor task. For example, in a finish-to-start dependency with a ten-day lag, the successor activity cannot start until ten days after the predecessor has finished. See also lead.

**Late Finish Date (LF).** In the critical path method, the latest possible point in time that an activity may be completed without delaying a specified milestone (usually the project finish date).

**Late Start Date (LS).** In the critical path method, the latest possible point in time that an activity may begin without delaying a specified milestone (usually the project finish date).

**Lead.** A modification of a logical relationship that allows an acceleration of the successor task. For example, in a finish-to-start dependency with a ten-day lead, the successor activity can start ten days before the predecessor has finished. See also lag.

**Lessons learnt.** The learning gained from the process of performing the project. Lessons learnt may be identified at any point. Also considered a project record.

**Level of Effort (LOE).** Support-type activity (e.g., vendor or customer liaison) that does not readily lend itself to measurement of discrete accomplishment. It is generally characterised by a uniform rate of activity over a period of time determined by the activities it supports.

**Leveling.** See resource leveling.

**Life-Cycle Costing.** The concept of including acquisition, operating, and disposal costs when evaluating various alternatives.

**Line Manager.** 1) The manager of any group that actually makes a product or performs a service.  
2) A functional manager.

**Link.** See logical relationship.

**Logic.** See network logic.

**Logic Diagram.** See project network diagram.

**Logical Relationship.** A dependency between two project activities, or between a project activity and a milestone. See also precedence relationship. The four possible types of logical relationships are:

- Finish-to-start-the initiation of work of the successor depends upon the completion of work of the predecessor.
- Finish-to-finish-the completion of the work of the successor cannot finish until the completion of work of the predecessor.
- Start-to-start-the initiation of work of the successor depends upon the initiation of the work of the predecessor.
- Start-to-finish-the completion of the successor is dependent upon the initiation of the predecessor.

**Loop.** A network path that passes the same node twice. Loops cannot be analyzed using traditional network analysis techniques such as critical path method and program evaluation and review technique. Loops are allowed in graphical evaluation and review technique.

## M

**Master Schedule.** A summary-level schedule that identifies the major activities and key milestones. See also milestone schedule.

**Mathematical Analysis.** See network analysis.

**Matrix Organisation.** Any organisational structure in which the project manager shares responsibility with the functional managers for assigning priorities and for directing the work of individuals assigned to the project.

**Milestone.** A significant event in the project, usually completion of a major deliverable.

**Milestone Schedule.** A summary-level schedule that identifies the major milestones. See also master schedule.

**Mitigation.** See risk mitigation.

**Monitoring.** The capture, analysis, and reporting of project performance, usually as compared to plan.

**Monte Carlo Analysis.** A technique that performs a project simulation many times to calculate a distribution of likely results. See simulation.

## N

**Near-Critical Activity.** An activity that has low total float.

**Network.** See project network diagram.

**Network Analysis.** The process of identifying early and late start and finish dates for the uncompleted portions of project activities. See also critical path method, program evaluation and review technique, and graphical evaluation and review technique.

**Network Logic.** The collection of activity dependencies that makes up a project network diagram.

**Network Path.** Any continuous series of connected activities in a project network diagram.

**Node.** One of the defining points of a network; a junction point joined to some or all of the other dependency lines. See also arrow diagramming method and precedence diagramming method.

## O

**Order-of-Magnitude Estimate.** See estimate.

**Organisational Breakdown Structure (OBS).** A depiction of the project organisation arranged so as to relate work packages to organisational units.

**Organisational Planning.** Identifying, documenting, and assigning project roles, responsibilities, and reporting relationships.

**Overlap.** See lead.

## P

**Parametric Estimating.** An estimating technique that uses a statistical relationship between historical data and other variables (e.g., square footage in construction, lines of code in software development) to calculate an estimate.

**Pareto Diagram.** A histogram, ordered by frequency of occurrence, that shows how many results were generated by each identified cause.

**Path.** A set of sequentially connected activities in a project network diagram.

**Path Convergence.** The node in the schedule where parallel paths merge or join. At that node, delays or elongation or any converging path can delay the project. In quantitative risk analysis of a schedule, significant risk may occur at this point.

**Path Float.** See float.

**Percent Complete (PC).** An estimate, expressed as a percent, of the amount of work that has been completed on an activity or a group of activities.

**Performance Measurement Baseline.** An approved plan against which deviations are compared for management control.

**Performance Reporting.** Collecting and disseminating performance information. This includes status reporting, progress measurement, and forecasting.

**Performing Organisation.** The enterprise whose employees are most directly involved in doing the work of the project.

**PERT Chart.** The term is commonly used to refer to a project network diagram. See program evaluation and review technique for the traditional definition of PERT.

**Phase.** See project phase.

**Planned Finish Date (PF).** See scheduled finish date. Planned Start Date (PS). See scheduled start date.

**Planned Value (PV).** The physical work scheduled, plus the authorised budget to accomplish the scheduled work. Previously, this was called the budgeted costs for work scheduled (BCWS).

**Precedence Diagramming Method (PDM).** A network diagramming technique in which activities are represented by boxes (or nodes). Activities are linked by precedence relationships to show the sequence in which the activities are to be performed.

**Precedence Relationship.** The term used in the precedence diagramming method for a logical relationship. In current usage, however, precedence relationship, logical relationship, and dependency are widely used interchangeably, regardless of the diagramming method in use.

**Predecessor Activity.** 1) In the arrow diagramming method, the activity that enters a node. 2) In the precedence diagramming method, the “from” activity

**Probability and Impact Matrix.** A common way to determine whether a risk is considered low, moderate, or high by combining the two dimensions of a risk, its probability of occurrence, and its impact on objectives if it occurs.

**Procurement Planning.** Determining what to procure and when.

**Product Scope.** The features and functions that characterise a product or service.

**Program.** A group of related projects managed in a coordinated way. Programs usually include an element of ongoing work.

**Program Evaluation and Review Technique (PERT).** An event-oriented network analysis technique used to estimate program duration when there is uncertainty in the individual activity duration estimates. PERT applies the critical path method using durations that are computed by a weighted average of optimistic, pessimistic, and most likely duration estimates. PERT computes the standard deviation of the completion date from those of the path's activity durations. Also known as the Method of Moments Analysis.

**Project.** A temporary endeavor undertaken to create a unique product, service, or result.

**Project Charter.** A document issued by senior management that formally authorises the existence of a project. And it provides the project manager with the authority to apply organisational resources to project activities.

**Project Communications Management.** A subset of project management that includes the processes required to ensure timely and appropriate generation, collection and dissemination, storage and ultimate disposition of project information. It consists of communications planning, information distribution, performance reporting, and administrative closure.

**Project Cost Management.** A subset of project management that includes the processes required to ensure that the project is completed within the approved budget. It consists of resource planning, cost estimating, cost budgeting, and cost control.

**Project Human Resource Management.** A subset of project management that includes the processes required to make the most effective use of the people involved with the project. It consists of organisational planning, staff acquisition, and team development.

**Project Integration Management.** A subset of project management that includes the processes required to ensure that the various elements of the project are properly coordinated. It consists of project plan development, project plan execution, and integrated change control.

**Project life Cycle.** A collection of generally sequential project phases whose name and number are determined by the control needs of the organisation or organisations involved in the project.

**Project Management (PM).** The application of knowledge, skills, tools, and techniques to project activities to meet the project requirements.

**Project Management Body of Knowledge (PMBOK').** An inclusive term that describes the sum of knowledge within the profession of project management. As with other professions-such as law, medicine, and accounting-the body of knowledge rests with the practitioners and academics that apply and advance it. The PMBOK® includes proven, traditional practices that are widely applied, as well as innovative and advanced ones that have seen more limited use.

**Project Management Professional (PMP' ).** An individual certified as such by the Project Management Institute (PMI®).

**Project Management Software.** A class of computer applications specifically designed to aid with planning and controlling project costs and schedules.

**Project Management Team.** The members of the project team who are directly involved in project management activities. On some smaller projects, the project management team may include virtually all of the project team members.

**Project Manager (PM).** The individual responsible for managing a project.

**Project Network Diagram.** Any schematic display of the logical relationships of project activities. Always drawn from left to right to reflect project chronology. Often referred to as a PERT chart.

**Project Phase.** A collection of logically related project activities, usually culminating in the completion of a major deliverables.

**Project Plan.** A formal, approved document used to guide both project execution and project control. The primary uses of the project plan are to document planning assumptions and decisions, facilitate communication among stakeholders, and document approved scope, cost, and schedule baselines. A project plan may be summary or detailed.

**Project Plan Development.** Integrating and coordinating all project plans to create a consistent, coherent document.

**Project Plan Execution.** Carrying out the project plan by performing the activities included therein.

**Project Planning.** The development and maintenance of the project plan.

**Project Procurement Management.** A subset of project management that includes the processes required to acquire goods and services to attain project scope from outside the performing organisation. It consists of procurement planning, solicitation planning, solicitation, source selection, contract administration, and contract closeout.

**Project Quality Management.** A subset of project management that includes the processes required to ensure that the project will satisfy the needs for which it was undertaken. It consists of quality planning, quality assurance, and quality control.

**Project Risk Management.** Risk management is the systematic process of identifying, analyzing, and responding to project risk. It includes maximising the probability and consequences of positive events and minimising the probability and consequences of events adverse to project objectives. It includes the processes of risk management planning, risk identification, qualitative risk analysis, quantitative risk analysis, risk response planning, and risk monitoring and control.

**Project Schedule.** The planned dates for performing activities and the planned dates for meeting milestones.

**Project Scope.** The work that must be done to deliver a product with the specified features and functions.

**Project Scope Management.** A subset of project management that includes the processes required to ensure that the project includes all of the work required, and only the work required, to complete the project successfully. It consists of initiation, scope planning, scope definition, scope verification, and scope change control.

**Project Team Members.** The people who report either directly or indirectly to the project manager.

**Project Time Management.** A subset of project management that includes the processes required to ensure timely completion of the project. It consists of activity definition, activity sequencing, activity duration estimating, schedule development, and schedule control.

**Projectised Organisation.** Any organisational structure in which the project manager has full authority to assign priorities and to direct the work of individuals assigned to the project.

## Q

**Qualitative Risk Analysis.** Performing a qualitative analysis of risks and conditions to prioritise their effects on project objectives. It involves assessing the probability and impact of project risk(s) and using methods such as the probability and impact matrix to classify risks into categories of high, moderate, and low for prioritised risk response planning.

**Quality Assurance (QA).** 1) The process of evaluating overall project performance on a regular basis to provide confidence that the project will satisfy the relevant quality standards. 2) The organisational unit that is assigned responsibility for quality assurance.

**Quality Control (QC).** 1) The process of monitoring specific project results to determine if they comply with relevant quality standards and identifying ways to eliminate causes of unsatisfactory performance. 2) The organisational unit that is assigned responsibility for quality control.

**Quality Planning.** Identifying which quality standards are relevant to the project, and determining how to satisfy them.

**Quantitative Risk Analysis.** Measuring the probability and consequences of risk and estimating their implications for project objectives. Risks are characterised by probability distributions of possible outcomes. This process uses quantitative techniques such as simulation and decision tree analysis.

## R

**Remaining Duration (RDU).** The time needed to complete an activity.

**Request for Proposal (RFP).** A type of bid document used to solicit proposals from prospective sellers of products or services. In some application areas, it may have a narrower or more specific meaning.

**Request for Quotation (RFQ).** Generally, this term is equivalent to request for proposal. However, in some application areas, it may have a narrower or more specific meaning.

**Reserve.** A provision in the project plan to mitigate cost and/or schedule risk. Often used with a modifier (e.g., management reserve, contingency reserve) to provide further detail on what types of risk are meant to be mitigated. The specific meaning of the modified term varies by application area.

**Residual Risk.** A risk that remains after risk responses have been implemented.

**Resource levelling.** Any form of network analysis in which scheduling decisions (start and finish dates) are driven by resource management concerns (e.g., limited resource availability or difficult-to-manage changes in resource levels).

**Resource-Limited Schedule.** A project schedule whose start and finish dates reflect expected resource availability. The final project schedule should always be resource limited.

**Resource Planning.** Determining what resources (people, equipment, materials) are needed in what quantities to perform project activities.

**Responsibility Assignment Matrix (RAM).** A structure that relates the project organisation structure to the work breakdown structure to help ensure that each element of the project's scope of work is assigned to a responsible individual.

**Responsibility Chart.** See responsibility assignment matrix.

**Responsibility Matrix.** See responsibility assignment matrix.

**Retainage.** A portion of a contract payment that is held until contract completion to ensure full performance of the contract terms.

**Rework.** Action taken to bring a defective or nonconforming item into compliance with requirements or specifications.

**Risk.** An uncertain event or condition that, if it occurs, has a positive or negative effect on a project's objectives.

**Risk Acceptance.** This technique of the risk response planning process indicates that the project team has decided not to change the project plan to deal with a risk, or is unable to identify any other suitable response strategy.

**Risk Avoidance.** Risk avoidance is changing the project plan to eliminate the risk or to protect the project objectives from its impact. It is a tool of the risk response planning process.

**Risk Category.** A source of potential risk reflecting technical, project management, organisational, or external sources. **Risk Database.** A repository that provides for collection, maintenance, and analysis of data gathered and used in the risk management processes. A lessons-learned program uses a risk database. This is an output of the risk monitoring and control process.

**Risk Event.** A discrete occurrence that may affect the project for better or worse.

**Risk Identification.** Determining which risks might affect the project and documenting their characteristics. Tools used include brainstorming and checklists.

**Risk Management Plan.** Documents how the risk processes will be carried out during the project. This is the output of risk management planning.

**Risk Management Planning.** Deciding how to approach and plan risk management activities for a project.

**Risk Mitigation.** Risk mitigation seeks to reduce the probability and/or impact of a risk to below an acceptable threshold.

**Risk Monitoring and Control.** Monitoring residual risks, identifying new risks, executing risk reduction plans, and evaluating their effectiveness throughout the project life cycle.

**Risk Register.** See risk response plan.

**Risk Response Plan.** A document detailing all identified risks, including description, cause, probability of occurring, impact(s) on objectives, proposed responses, owners, and current status. Also known as risk register.

**Risk Response Planning.** Developing procedures and techniques to enhance opportunities and reduce threats to the project's objectives. The tools include avoidance, mitigation, transference, and acceptance.

**Risk Transference.** Risk transference is seeking to shift the impact of a risk to a third party together with ownership of the response.

## S

**S-Curve.** Graphic display of cumulative costs, labor hours, percentage of work, or other quantities, plotted against time. The name derives from the S-like shape of the curve (flatter at the beginning and end, steeper in the middle) produced on a project that starts slowly, accelerates, and then tails off. Also a term for the cumulative likelihood distribution that is a result of a simulation, a tool of quantitative risk analysis.

**Schedule.** See project schedule.

**Schedule Analysis.** See network analysis.

**Schedule Compression.** See duration compression.

**Schedule Control.** Controlling changes to the project schedule.

**Schedule Development.** Analysing activity sequences, activity durations, and resource requirements to create the project schedule.

**Schedule Performance Index (SPI).** The schedule efficiency ratio of earned value accomplished against the planned value. The SPI describes what portion of the planned schedule was actually accomplished. The  $SPI = EV \text{ divided by } PV$ .

**Schedule Variance (SV).** 1) Any difference between the scheduled completion of an activity and the actual completion of that activity. 2) In earned value,  $EV \text{ less } BCWS = SV$ .

**Scheduled Finish Date (SF).** The point in time that work was scheduled to finish on an activity. The scheduled finish date is normally within the range of dates delimited by the early finish date and the late finish date. It may reflect levelling or scarce resources.

**Scheduled Start Date (SS).** The point in time that work was scheduled to start on an activity. The scheduled start date is normally within the range of dates delimited by the early start date and the late start date. It may reflect levelling of scarce resources.

**Scope.** The sum of the products and services to be provided as a project. See project scope and product scope.

**Scope Baseline.** See baseline. Scope Change. Any change to the project scope. A scope change almost always requires an adjustment to the project cost or schedule.

**Scope Change Control.** Controlling changes to project scope. Scope Definition. Subdividing the major deliverables into smaller, more manageable components to provide better control.

**Scope Planning.** The process of progressively elaborating the work of the project, which includes developing a written scope statement that includes the project justification, the major deliverables, and the project objectives.

**Scope Statement.** The scope statement provides a documented basis for making future project decisions and for confirming or developing common understanding of project scope among the stakeholders. As the project progresses, the scope statement may need to be revised or refined to reflect approved changes to the scope of the project.

**Scope Verification.** Formalising acceptance of the project scope.

**Secondary Risk.** A risk that arises as a direct result of implementing a risk response.

**Seller.** The provider of goods or services to an organisation.

**Should-Cost Estimate.** An estimate of the cost of a product or service used to provide an assessment of the reasonableness of a prospective contractor's proposed cost.

**Simulation.** A simulation uses a project model that translates the uncertainties specified at a detailed level into their potential impact on objectives that are expressed at the level of the total project. Project simulations use computer models and estimates of risk at a detailed level, and are typically performed using the Monte Carlo technique.

**Slack.** Term used in arrow diagramming method for float.

**Solicitation.** Obtaining quotations, bids, offers, or proposals as appropriate.

**Solicitation Planning.** Documenting product requirements and identifying potential sources.

**Source Selection.** Choosing from among potential sellers.

**Staff Acquisition.** Getting needed human resources assigned to and working on the project. Stakeholder. Individuals and organisations that are actively involved in the project, or whose interests may be positively or negatively affected as a result of project execution or project completion. They may also exert influence over the project and its results.

**Start Date.** A point in time associated with an activity's start, usually qualified by one of the following: actual, planned, estimated, scheduled, early, late, target, baseline, or current.

**Start-to-Finish (SF).** See logical relationship.

**Start-to-Start (SS).** See logical relationship.

**Statement of Work (SOW).** A narrative description of products or services to be supplied under contract.

**Subnet.** A subdivision of a project network diagram, usually representing some form of subproject.

**Subnetwork.** See subnet.

**Subproject.** A smaller portion of the overall project.

**Successor Activity.** 1) In the arrow diagramming method, the activity that departs a node. 2) In the precedence diagramming method, the "to" activity.

## T

**Target Completion Date (TC).** An imposed date that constrains or otherwise modifies the network analysis.

**Target Finish Date (TF).** The date that work is planned (targeted) to finish on an activity.

**Target Schedule.** See baseline.

**Target Start Date (TS).** The date that work is planned (targeted) to start on an activity.

**Task.** A generic term for work that is not included in the work breakdown structure, but potentially could be a further decomposition of work by the individuals responsible for that work. Also, lowest level of effort on a project.

**Team Development.** Developing individual and group competencies to enhance project performance.

**Team Members.** See project team members.

**Technical Performance Measurement.** Technical performance measurement compares technical accomplishments during project execution to the project plan's schedule of technical achievement.

**Time-Scaled Network Diagram.** Any project network diagram drawn in such a way that the positioning and length of the activity represent its duration. Essentially, it is a bar chart that includes network logic.

**Total Float (TF).** See float.

**Total Quality Management (TQM).** A common approach to implementing a quality improvement program within an organisation.

**Transference.** See risk transference.

**Triggers.** Triggers, sometimes called risk symptoms or warning signs, are indications that a risk has occurred or is about to occur. Triggers may be discovered in the risk identification process and watched in the risk monitoring and control process.

## V

**Value Engineering (VE).** Value engineering is a creative approach used to optimise life-cycle costs, save time, increase profits, improve quality, expand market share, solve problems, and/or use resources more effectively.

## W

**Workaround.** A response to a negative risk event. Distinguished from contingency plan in that a workaround is not planned in advance of the occurrence of the risk event.

**Work Breakdown Structure (WBS).** A deliverable-oriented grouping of project elements that organises and defines the total work scope of the project. Each descending level represents an increasingly detailed definition of the project work.

**Work Item.** Term no longer in common usage. Synonymous with activity-see activity.

**Work Package.** A deliverable at the lowest level of the work breakdown structure, when that deliverable may be assigned to another project manager to plan and execute. This may be accomplished through the use of a subproject where the work package may be further decomposed into activities.