

GLOSSARY

1. Inclusions and Exclusions

This glossary includes terms that are:

- Unique or nearly unique to project management (e.g., project scope statement, work package, work breakdown structure, critical path method)
- Not unique to project management, but used differently or with a narrower meaning in project management than in general everyday usage (e.g., early start date, schedule activity).

This glossary generally does not include:

- Application area-specific terms (e.g., project prospectus as a legal document—unique to real estate development)
- Terms whose uses in project management do not differ in any material way from everyday use (e.g., calendar day, delay)
- Compound terms whose meaning is clear from the combined meanings of the component parts
- Variants when the meaning of the variant is clear from the base term (e.g., exception report is included, exception reporting is not).

As a result of the above inclusions and exclusions, this glossary includes:

- A preponderance of terms related to Project Scope Management, Project Time Management, and Project Risk Management, since many of the terms used in these knowledge areas are unique or nearly unique to project management
- Many terms from Project Quality Management, since these terms are used more narrowly than in their everyday usage
- Relatively few terms related to Project Human Resource Management and Project Communications Management, since most of the terms used in these knowledge areas do not differ significantly from everyday usage
- Relatively few terms related to Project Cost Management, Project Integration Management, and Project Procurement Management, since many of the terms used in these knowledge areas have narrow meanings that are unique to a particular application area.

2. Common Acronyms

AC	Actual Cost
ACWP	Actual Cost of Work Performed
AD	Activity Description
ADM	Arrow Diagramming Method
AE	Apportioned Effort
AF	Actual Finish date
AOA	Activity-on-Arrow
AON	Activity-on-Node
AS	Actual Start date
BAC	Budget at Completion
BCWP	Budgeted Cost of Work Performed
BCWS	Budgeted Cost of Work Scheduled
BOM	Bill Of Materials
CA	Control Account
CAP	Control Account Plan
CCB	Change Control Board
COQ	Cost of Quality
CPF	Cost-Plus-Fee
CPFF	Cost-Plus-Fixed-Fee
CPI	Cost Performance Index
CPIF	Cost-Plus-Incentive-Fee
CPM	Critical Path Method
CPPC	Cost-Plus-Percentage of Cost
CV	Cost Variance
CWBS	Contract Work Breakdown Structure
DD	Data Date
DU	Duration
DUR	Duration
EAC	Estimate at Completion
EF	Early Finish date
EMV	Expected Monetary Value
ES	Early Start date
ETC	Estimate to Complete
EV	Earned Value
EVM	Earned Value Management
EVT	Earned Value Technique
FF	Finish-to-Finish
FF	Free Float
FFP	Firm-Fixed-Price
FMEA	Failure Mode and Effect Analysis
FPIF	Fixed-Price-Incentive-Fee
FS	Finish-to-Start

IFB	Invitation for Bid
LF	Late Finish date
LOE	Level of Effort
LS	Late Start date
OBS	Organizational Breakdown Structure
OD	Original Duration
PC	Percent Complete
PCT	Percent Complete
PDM	Precedence Diagramming Method
PF	Planned Finish date
PM	Project Management
PM	Project Manager
PMBOK®	Project Management Body of Knowledge
PMIS	Project Management Information System
PMO	Program Management Office
PMO	Project Management Office
PMP®	Project Management Professional
PS	Planned Start date
PSWBS	Project Summary Work Breakdown Structure
PV	Planned Value
QA	Quality Assurance
QC	Quality Control
RAM	Responsibility Assignment Matrix
RBS	Resource Breakdown Structure
RBS	Risk Breakdown Structure
RD	Remaining Duration
RFP	Request for Proposal
RFQ	Request for Quotation
SF	Scheduled Finish date
SF	Start-to-Finish
SOW	Statement of Work
SPI	Schedule Performance Index
SS	Scheduled Start date
SS	Start-to-Start
SV	Schedule Variance
SWOT	Strengths, Weaknesses, Opportunities, and Threats
TC	Target Completion date
TF	Target Finish date
TF	Total Float
T&M	Time and Material
TQM	Total Quality Management
TS	Target Start date
VE	Value Engineering
WBS	Work Breakdown Structure

3. Definitions

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 the same glossary term appears more than once in a given definition, only the first occurrence is italicized.
 - ◆ In some cases, a single glossary term consists of multiple words (e.g., risk response planning).
 - ◆ In many cases, there are multiple, consecutive glossary terms within a given definition. For example, *duration estimate* denotes two separate glossary entries, one for “duration” and another for “estimate.”
 - ◆ There are even some definitions with a string of consecutive italicized words (not separated by commas) that represent multiple, consecutive glossary terms, at least one of which consists of multiple words. For example, *critical path method late finish date* denotes two separate glossary entries, one for “critical path method” and another for “late finish date.” In situations such as this, an asterisk (*) will follow the last italicized word in the string to denote that there are multiple adjacent glossary terms.
- 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).

Accept. The act of formally receiving or acknowledging something and regarding it as being true, sound, suitable, or complete.

Acceptance. See *accept*.

Acceptance Criteria. Those *criteria*, including performance *requirements* and essential conditions, which must be met before project *deliverables* are accepted.

Acquire Project Team [Process]. The process of obtaining the human resources needed to complete the *project*.

Activity. A *component* of *work* performed during the course of a *project*. See also *schedule activity*.

Activity Attributes [Output/Input]. Multiple attributes associated with each *schedule activity* that can be included within the *activity list*. Activity attributes include *activity codes*, *predecessor activities*, *successor activities*, *logical relationships*, *leads* and *lags*, *resource requirements*, *imposed dates*, *constraints*, and *assumptions*.

Activity Code. One or more numerical or text values that identify characteristics of the *work* or in some way categorize the *schedule activity* that allows filtering and ordering of activities within reports.

Activity Definition [Process]. The *process* of identifying the specific *schedule activities* that need to be performed to produce the various project *deliverables*.

Activity Description (AD). A short phrase or label for each *schedule activity* used in conjunction with an *activity identifier* to differentiate that project schedule activity from

other schedule activities. The activity description normally describes the *scope* of work of the schedule activity.

Activity Duration. The time in *calendar units* between the start and finish of a *schedule activity*. See also *actual duration*, *original duration*, and *remaining duration*.

Activity Duration Estimating [Process]. The *process* of estimating the number of work periods that will be needed to complete individual *schedule activities*.

Activity Identifier. A short unique numeric or text identification assigned to each *schedule activity* to differentiate that *project activity** from other activities. Typically unique within any one *project schedule network diagram*.

Activity List [Output/Input]. A documented tabulation of *schedule activities* that shows the *activity description*, *activity identifier*, and a sufficiently detailed scope of work description so *project team members* understand what *work* is to be performed.

Activity-on-Arrow (AOA). See *arrow diagramming method*.

Activity-on-Node (AON). See *precedence diagramming method*.

Activity Resource Estimating [Process]. The *process* of estimating the types and quantities of *resources* required to perform each *schedule activity*.

Activity Sequencing [Process]. The *process* of identifying and documenting *dependencies* among *schedule activities*.

Actual Cost (AC). Total costs actually incurred and recorded in accomplishing work performed during a given time period for a *schedule activity* or *work breakdown structure component*. Actual cost can sometimes be direct labor hours alone, direct costs alone, or all costs including indirect costs. Also referred to as the actual cost of work performed (ACWP). See also *earned value management* and *earned value technique*.

Actual Cost of Work Performed (ACWP). See *actual cost (AC)*.

Actual Duration. The time in *calendar units* between the *actual start date* of the *schedule activity* and either the *data date* of the *project schedule* if the schedule activity is in progress or the *actual finish date* if the schedule activity is complete.

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

Actual Start Date (AS). The point in time that *work* actually started on a *schedule activity*.

Analogous Estimating [Technique]. An estimating *technique* that uses the values of parameters, such as *scope*, *cost*, *budget*, and *duration* or measures of scale such as size, weight, and complexity from a previous, similar *activity* as the basis for estimating the same parameter or measure for a future activity. It is frequently used to estimate a parameter when there is a limited amount of detailed information about the project (e.g., in the early *phases*). Analogous estimating is a form of *expert judgment*. Analogous estimating is most reliable when the previous activities are similar in fact and not just in appearance, and the *project team* members preparing the *estimates* have the needed expertise.

Application Area. A category of *projects* that have common *components* significant in such projects, but are not needed or present in all projects. Application areas are usually defined in terms of either the *product* (i.e., by similar technologies or production methods) or the type of *customer* (i.e., internal versus external, government versus commercial) or industry sector (i.e., utilities, automotive, aerospace, information technologies). Application areas can overlap.

Apportioned Effort (AE). *Effort* applied to project *work* that is not readily divisible into discrete efforts for that work, but which is related in direct proportion to measurable discrete work efforts. Contrast with *discrete effort*.

Approval. See *approve*.

Approve. The act of formally confirming, sanctioning, ratifying, or agreeing to something.

Approved Change Request [Output/Input]. A *change request* that has been processed through the *integrated change control* process and *approved*. Contrast with *requested change*.

Arrow. The graphic presentation of a *schedule activity* in the *arrow diagramming method* or a *logical relationship* between schedule activities in the *precedence diagramming method*.

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

As-of Date. See *data date*.

Assumptions [Output/Input]. Assumptions are factors that, for planning purposes, are considered to be true, real, or certain without proof or demonstration. 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 [Technique]. A *technique* that explores the accuracy of *assumptions* and identifies *risks* to the project from inaccuracy, inconsistency, or incompleteness of assumptions.

Authority. The right to apply *project resources**, expend *funds*, make decisions, or give *approvals*.

Backward Pass. The calculation of *late finish dates* and *late start dates* for the uncompleted portions of all *schedule activities*. Determined by working backwards through the *schedule 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 *schedule network analysis*.

Bar Chart [Tool]. A graphic display of schedule-related information. In the typical bar chart, *schedule activities* or *work breakdown structure components* 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 approved time phased plan (for a *project*, a *work breakdown structure component*, a *work package*, or a *schedule activity*), plus or minus approved *project scope*, *cost*, *schedule*, and *technical changes*. Generally refers to the current baseline, but may refer to the original or some other baseline. Usually used with a modifier (e.g., *cost baseline*, *schedule baseline*, *performance measurement baseline*, *technical baseline*). See also *performance measurement baseline*.

Baseline Finish Date. The finish date of a *schedule activity* in the approved *schedule baseline*. See also *scheduled finish date*.

Baseline Start Date. The start date of a *schedule activity* in the approved *schedule baseline*. See also *scheduled start date*.

- Bill of Materials (BOM).** A documented formal hierarchical tabulation of the physical assemblies, subassemblies, and *components* needed to fabricate a *product*.
- Bottom-up Estimating** [Technique]. A method of estimating a *component* of *work*. The work is *decomposed* into more detail. An *estimate* is prepared of what is needed to meet the *requirements* of each of the lower, more detailed pieces of work, and these estimates are then aggregated into a total quantity for the component of work. The accuracy of bottom-up estimating is driven by the size and complexity of the work identified at the lower levels. Generally smaller work scopes increase the accuracy of the estimates.
- Brainstorming** [Technique]. A general data gathering and creativity *technique* that can be used to identify *risks*, ideas, or solutions to *issues* by 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.
- Budget.** The approved *estimate* for the *project* or any *work breakdown structure* component or any *schedule activity*. See also *estimate*.
- Budget at Completion (BAC).** The sum of all the *budget* values established for the *work* to be performed on a *project* or a *work breakdown structure component* or a *schedule activity*. The total *planned value* for the project.
- Budgeted Cost of Work Performed (BCWP).** See *earned value (EV)*.
- Budgeted Cost of Work Scheduled (BCWS).** See *planned value (PV)*.
- Buffer.** See *reserve*.
- Buyer.** The acquirer of *products*, *services*, or *results* for an organization.
- 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 quarter years, months, shifts, or even in minutes.
- Change Control.** Identifying, documenting, approving or rejecting, and controlling changes to the *project baselines**.
- Change Control Board (CCB).** A formally constituted group of *stakeholders* responsible for reviewing, evaluating, approving, delaying, or rejecting changes to the *project*, with all decisions and recommendations being recorded.
- Change Control System** [Tool]. A collection of formal documented *procedures* that define how project *deliverables* and documentation will be controlled, changed, and approved. In most *application areas* the change control system is a subset of the *configuration management system*.
- Change Request.** Requests to expand or reduce the *project scope*, modify policies, *processes*, plans, or *procedures*, modify *costs* or *budgets*, or revise *schedules*. Requests for a change can be direct or indirect, externally or internally initiated, and legally or contractually mandated or optional. Only formally documented requested changes are processed and only approved change requests are implemented.
- Chart of Accounts** [Tool]. 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 organization*. Contrast with *code of accounts*.
- Charter.** See *project charter*.
- Checklist** [Output/Input]. Items listed together for convenience of comparison, or to ensure the actions associated with them are managed appropriately and not forgotten.

An example is a list of items to be inspected that is created during *quality* planning and applied during *quality control*.

- Claim.** A request, demand, or assertion of rights by a *seller* against a *buyer*, or vice versa, for consideration, compensation, or payment under the terms of a legally binding *contract*, such as for a disputed change.
- Close Project** [Process]. The *process* of finalizing all *activities* across all of the project *process groups* to formally close the *project* or *phase*.
- Closing Processes** [Process Group]. Those *processes* performed to formally terminate all *activities* of a *project* or *phase*, and transfer the completed *product* to others or close a cancelled *project*.
- Code of Accounts** [Tool]. Any numbering *system* used to uniquely identify each *component* of the *work breakdown structure*. Contrast with *chart of accounts*.
- Co-location** [Technique]. An organizational placement strategy where the *project team members* are physically located close to one another in order to improve *communication*, working relationships, and productivity.
- Common Cause.** A source of variation that is inherent in the *system* and predictable. On a *control chart*, it appears as part of the random process variation (i.e., variation from a *process* that would be considered normal or not unusual), and is indicated by a random pattern of points within the *control limits*. Also referred to as random cause. Contrast with *special cause*.
- Communication.** A *process* through which information is exchanged among persons using a common system of symbols, signs, or behaviors.
- Communication Management Plan** [Output/Input]. The *document* that describes: the *communications* needs and expectations for the *project*; how and in what format information will be communicated; when and where each communication will be made; and who is responsible for providing each type of communication. A communication management plan can be formal or informal, highly detailed or broadly framed, based on the requirements of the project *stakeholders*. The communication management plan is contained in, or is a subsidiary plan of, the *project management plan*.
- Communications Planning** [Process]. The *process* of determining the information and *communications* needs of the project *stakeholders*: who they are, what is their level of interest and influence on the *project*, who needs what information, when will they need it, and how it will be given to them.
- Compensation.** Something given or received, a payment or recompense, usually something monetary or in kind for *products*, *services*, or *results* provided or received.
- Component.** A constituent part, element, or piece of a complex whole.
- Configuration Management System** [Tool]. A subsystem of the overall *project management system*. It is a collection of formal documented *procedures* used to apply technical and administrative direction and surveillance to: identify and document the functional and physical characteristics of a *product*, *result*, *service*, or *component*; control any changes to such characteristics; record and report each change and its implementation status; and support the audit of the products, results, or components to verify conformance to *requirements*. It includes the documentation, tracking *systems*, and defined approval levels necessary for authorizing and controlling changes. In most *application areas*, the configuration management system includes the *change control system*.

Constraint [Input]. The state, quality, or sense of being restricted to a given course of action or inaction. An applicable restriction or limitation, either internal or external to the project, that will affect the performance of the *project* or a *process*. For example, a schedule constraint is any limitation or restraint placed on the *project schedule* that affects when a *schedule activity* can be scheduled and is usually in the form of fixed *imposed dates*. A cost constraint is any limitation or restraint placed on the *project budget* such as *funds* available over time. A project *resource* constraint is any limitation or restraint placed on resource usage, such as what resource *skills* or *disciplines* are available and the amount of a given resource available during a specified time frame.

Contingency. See *reserve*.

Contingency Allowance. See *reserve*.

Contingency Reserve [Output/Input]. The amount of *funds*, *budget*, or time needed above the *estimate* to reduce the *risk* of overruns of project *objectives* to a level acceptable to the *organization*.

Contract [Output/Input]. A contract is a mutually binding agreement that obligates the *seller* to provide the specified *product* or *service* or *result* and obligates the *buyer* to pay for it.

Contract Administration [Process]. The process of managing the *contract* and the relationship between the *buyer* and *seller*, reviewing and documenting how a seller is performing or has performed to establish required *corrective actions* and provide a basis for future relationships with the seller, managing contract related changes and, when appropriate, managing the contractual relationship with the outside buyer of the *project*.

Contract Closure [Process]. The process of completing and settling the *contract*, including resolution of any open items and closing each contract.

Contract Management Plan [Output/Input]. The *document* that describes how a specific *contract* will be administered and can include items such as required documentation delivery and performance requirements. A contract management plan can be formal or informal, highly detailed or broadly framed, based on the requirements in the contract. Each contract management plan is a subsidiary plan of the *project management plan*.

Contract Statement of Work (SOW) [Output/Input]. A narrative description of *products*, *services*, or *results* to be supplied under contract.

Contract Work Breakdown Structure (CWBS) [Output/Input]. A portion of the *work breakdown structure* for the *project* developed and maintained by a *seller* contracting to provide a *subproject* or project *component*.

Control [Technique]. Comparing actual performance with planned performance, analyzing *variances*, assessing trends to effect *process* improvements, evaluating possible alternatives, and recommending appropriate *corrective action* as needed.

Control Account (CA) [Tool]. A management control point where the integration of *scope*, *budget*, *actual cost*, and *schedule* takes place, and where the measurement of performance will occur. Control accounts are placed at selected management points (specific *components* at selected levels) of the *work breakdown structure*. Each control account may include one or more *work packages*, but each work package may be associated with only one control account. Each control account is associated with a specific single organizational *component* in the *organizational breakdown structure* (OBS). Previously called a Cost Account. See also *work package*.

- Control Account Plan (CAP)** [Tool]. A plan for all the *work* and *effort* to be performed in a control account. Each CAP has a definitive *statement of work*, *schedule*, and time-phased *budget*. Previously called a Cost Account Plan.
- Control Chart** [Tool]. A graphic display of process data over time and against established *control limits*, and that has a centerline that assists in detecting a trend of plotted values toward either *control limit*.
- Control Limits**. The area composed of three standard deviations on either side of the centerline, or mean, of a normal distribution of data plotted on a *control chart* that reflects the expected variation in the data. See also *specification limits*.
- Controlling**. See *control*.
- Corrective Action**. Documented direction for *executing* the *project work* to bring expected future performance of the *project work* in line with the *project management plan*.
- Cost**. The monetary value or price of a *project activity** or *component* that includes the monetary worth of the *resources* required to perform and complete the activity or component, or to produce the component. A specific cost can be composed of a combination of cost components including direct labor hours, other direct costs, indirect labor hours, other indirect costs, and purchased price. (However, in the *earned value management* methodology, in some instances, the term cost can represent only labor hours without conversion to monetary worth.) See also *actual cost* and *estimate*.
- Cost Baseline**. See *baseline*.
- Cost Budgeting** [Process]. The *process* of aggregating the estimated costs of individual activities or *work packages* to establish a cost *baseline*.
- Cost Control** [Process]. The *process* of influencing the factors that create variances, and controlling changes to the project budget.
- Cost Estimating** [Process]. The *process* of developing an approximation of the cost of the *resources* needed to complete *project activities**.
- Cost Management Plan** [Output/Input]. The document that sets out the format and establishes the *activities* and *criteria* for planning, structuring, and controlling the *project costs*. A cost management plan can be formal or informal, highly detailed or broadly framed, based on the requirements of the project stakeholders. The cost management plan is contained in, or is a subsidiary plan, of the *project management plan*.
- Cost of Quality (COQ)** [Technique]. Determining the costs incurred to ensure *quality*. Prevention and appraisal costs (cost of conformance) include costs for quality planning, quality control (QC), and quality assurance to ensure compliance to requirements (i.e., training, QC *systems*, etc.). Failure costs (cost of non-conformance) include costs to rework *products*, *components*, or *processes* that are non-compliant, costs of warranty work and waste, and loss of reputation.
- Cost Performance Index (CPI)**. A measure of cost efficiency on a *project*. It is the ratio of *earned value* (EV) to *actual costs* (AC). $CPI = EV \text{ divided by } AC$. A value equal to or greater than one indicates a favorable condition and a value less than one indicates an unfavorable condition.
- Cost-Plus-Fee (CPF)**. A type of *cost reimbursable contract* where the *buyer* reimburses the *seller* for seller's allowable costs for performing the contract work and seller also receives a fee calculated as an agreed upon percentage of the costs. The fee varies with the actual cost.
- Cost-Plus-Fixed-Fee (CPFF) Contract**. A type of *cost-reimbursable 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 *cost-reimbursable 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-Plus-Percentage of Cost (CPPC). See *cost-plus-fee*.

Cost-Reimbursable Contract. A type of *contract* involving payment (reimbursement) by the *buyer* to the *seller* for the seller's actual costs, plus a fee typically representing seller's profit. Costs are usually classified as direct costs or indirect costs. Direct costs are costs incurred for the exclusive benefit of the project, such as salaries of full-time project staff. Indirect costs, also called overhead and general and administrative cost, are costs allocated to the project by the performing organization as a cost of doing business, such as salaries of management indirectly involved in the project, and cost of electric utilities for the office. Indirect costs are usually calculated as a percentage of direct costs. Cost-reimbursable contracts often include incentive clauses where, if the seller meets or exceeds selected project objectives, such as schedule targets or total cost, then the seller receives from the buyer an incentive or bonus payment.

Cost Variance (CV). A measure of cost performance on a *project*. It is the algebraic difference between *earned value* (EV) and *actual cost* (AC). $CV = EV \text{ minus } AC$. A positive value indicates a favorable condition and a negative value indicates an unfavorable condition.

Crashing [Technique]. A specific type of project *schedule compression technique* performed by taking action to decrease the total *project schedule duration** after analyzing a number of alternatives to determine how to get the maximum schedule duration compression for the least additional cost. Typical approaches for crashing a schedule include reducing *schedule activity durations* and increasing the assignment of *resources* on schedule activities. See *schedule compression* and see also *fast tracking*.

Create WBS (Work Breakdown Structure) [Process]. The *process* of subdividing the major project *deliverables* and project *work* into smaller, more manageable *components*.

Criteria. *Standards*, rules, or tests on which a judgment or decision can be based, or by which a *product*, *service*, *result*, or *process* can be evaluated.

Critical Activity. Any *schedule activity* on a *critical path* in a *project schedule*. 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 Chain Method [Technique]. A *schedule network analysis technique** that modifies the project schedule to account for limited resources. The critical chain method mixes deterministic and probabilistic approaches to *schedule network analysis*.

Critical Path [Output/Input]. Generally, but not always, the sequence of *schedule activities* that determines the duration of the *project*. Generally, it is the longest path through the project. However, a critical path can end, as an example, on a *schedule milestone* that is in the middle of the project schedule and that has a finish-no-later-than *imposed date* schedule *constraint*. See also *critical path method*.

Critical Path Method (CPM) [Technique]. A *schedule network analysis technique** used to determine the amount of scheduling flexibility (the amount of *float*) on various logical *network paths* in the *project schedule* network, and to determine the minimum total project *duration*. *Early start and finish dates** are calculated by means of a *forward pass*, using a specified *start date*. *Late start and finish dates** are calculated by means of a *backward pass*, starting from a specified completion date, which sometimes is the project *early finish date* determined during the forward pass calculation.

Current Finish Date. The current *estimate* of the point in time when a *schedule activity* will be completed, where the estimate reflects any reported work progress. See also *scheduled finish date* and *baseline finish date*.

Current Start Date. The current *estimate* of the point in time when a *schedule activity* will begin, where the estimate reflects any reported work progress. See also *scheduled start date* and *baseline start date*.

Customer. The person or *organization* that will use the project's *product* or *service* or *result*. (See also *user*).

Data Date (DD). The *date* up to or through which the project's reporting *system* has provided actual status and accomplishments. In some reporting *systems*, the status information for the data date is included in the past and in some systems the status information is in the future. Also called *as-of date* and *time-now date*.

Date. A term representing the day, month, and year of a calendar, and, in some instances, the time of day.

Decision Tree Analysis [Technique]. 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 is used when some future scenarios or outcomes of actions are uncertain. It incorporates probabilities and the costs or rewards of each logical path of *events* and future decisions, and uses *expected monetary value analysis* to help the *organization* identify the relative values of alternate actions. See also *expected monetary value analysis*.

Decompose. See *decomposition*.

Decomposition [Technique]. A planning technique that subdivides the *project scope* and project *deliverables* into smaller, more manageable *components*, until the project *work* associated with accomplishing the project scope and providing the deliverables is defined in sufficient detail to support *executing*, *monitoring*, and *controlling* the *work*.

Defect. An imperfection or deficiency in a project *component* where that component does not meet its *requirements* or *specifications* and needs to be either repaired or replaced.

Defect Repair. Formally documented identification of a *defect* in a project *component* with a recommendation to either repair the defect or completely replace the component.

Deliverable [Output/Input]. Any unique and verifiable *product*, *result*, or capability to perform a *service* that must be produced to complete a process, phase, or 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. See also *product*, *service*, and *result*.

Delphi Technique [Technique]. An information gathering technique used as a way to reach a consensus of experts on a subject. Experts on the subject participate in this technique anonymously. A facilitator uses a questionnaire to solicit ideas about the important project points related to the subject. The responses are summarized and are then re-circulated to the experts for further comment. Consensus may be reached in a few rounds of this *process*. The Delphi technique helps reduce bias in the data and keeps any one person from having undue influence on the outcome.

Dependency. See *logical relationship*.

Design Review [Technique]. A management *technique* used for evaluating a proposed design to ensure that the design of the *system* or *product* meets the *customer requirements*, or to assure that the design will perform successfully, can be produced, and can be maintained.

- Develop Project Charter** [Process]. The *process* of developing the *project charter* that formally authorizes a *project*.
- Develop Project Management Plan** [Process]. The *process* of documenting the actions necessary to define, prepare, integrate, and coordinate all subsidiary plans into a *project management plan*.
- Develop Project Scope Statement (Preliminary)** [Process]. The *process* of developing the preliminary *project scope statement* that provides a high level *scope* narrative.
- Develop Project Team** [Process]. The *process* of improving the competencies and interaction of team members to enhance *project* performance.
- Direct and Manage Project Execution** [Process]. The *process* of executing the *work* defined in the *project management plan* to achieve the project's *requirements* defined in the *project scope statement*.
- Discipline.** A field of work requiring specific knowledge and that has a set of rules governing work conduct (e.g., mechanical engineering, computer programming, cost estimating, etc.).
- Discrete Effort.** *Work effort* that is directly identifiable to the completion of specific *work breakdown structure* components and *deliverables*, and that can be directly planned and measured. Contrast with *apportioned effort*.
- Document.** A medium and the information recorded thereon, that generally has permanence and can be read by a person or a machine. Examples include *project management plans*, *specifications*, *procedures*, studies, and manuals.
- Documented Procedure.** A formalized written description of how to carry out an *activity*, *process*, *technique*, or *methodology*.
- Dummy Activity.** A *schedule 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 schedule activity *arrows*. Dummy activities are generally shown graphically as a dashed line headed by an arrow.
- Duration (DU or DUR).** The total number of *work* periods (not including holidays or other nonworking periods) required to complete a *schedule activity* or *work breakdown structure component*. Usually expressed as workdays or workweeks. Sometimes incorrectly equated with elapsed time. Contrast with *effort*. See also *original duration*, *remaining duration*, and *actual duration*.
- Early Finish Date (EF).** In the *critical path method*, the earliest possible point in time on which the uncompleted portions of a *schedule activity* (or the *project*) can finish, based on the schedule *network logic*, the *data date*, and any schedule *constraints*. Early finish dates can change as the project progresses and as changes are made to the *project management plan*.
- Early Start Date (ES).** In the *critical path method*, the earliest possible point in time on which the uncompleted portions of a *schedule activity* (or the *project*) can start, based on the schedule *network logic*, the *data date*, and any schedule *constraints*. Early start dates can change as the project progresses and as changes are made to the *project management plan*.
- Earned Value (EV).** The value of completed work expressed in terms of the approved *budget* assigned to that work for a *schedule activity* or *work breakdown structure component*. Also referred to as the budgeted cost of work performed (BCWP).
- Earned Value Management (EVM).** A management methodology for integrating *scope*, *schedule*, and *resources*, and for objectively measuring project performance and

progress. Performance is measured by determining the budgeted cost of work performed (i.e., *earned value*) and comparing it to the actual cost of work performed (i.e., *actual cost*). Progress is measured by comparing the *earned value* to the *planned value*.

Earned Value Technique (EVT) [Technique]. A specific technique for measuring the performance of work for a *work breakdown structure component*, *control account*, or *project*. Also referred to as the earning rules and crediting method.

Effort. The number of labor units required to complete a *schedule activity* or *work breakdown structure component*. Usually expressed as staff hours, staff days, or staff weeks. Contrast with *duration*.

Enterprise. A company, business, firm, partnership, corporation, or governmental agency.

Enterprise Environmental Factors [Output/Input]. Any or all external environmental factors and internal organizational environmental factors that surround or influence the project's success. These factors are from any or all of the enterprises involved in the project, and include organizational culture and structure, infrastructure, existing resources, commercial databases, market conditions, and *project management software*.

Estimate [Output/Input]. A quantitative assessment of the likely amount or outcome. Usually applied to project *costs*, *resources*, *effort*, and *durations* and is usually preceded by a modifier (i.e., preliminary, conceptual, feasibility, order-of-magnitude, definitive). It should always include some indication of accuracy (e.g., $\pm x$ percent).

Estimate at Completion (EAC) [Output/Input]. The expected total cost of a *schedule activity*, a *work breakdown structure component*, or the *project* when the defined *scope* of work will be completed. EAC is equal to the *actual cost* (AC) plus the *estimate to complete* (ETC) for all of the remaining work. $EAC = AC \text{ plus } ETC$. The EAC may be calculated based on performance to date or estimated by the *project team* based on other factors, in which case it is often referred to as the latest revised estimate. See also *earned value technique* and *estimate to complete*.

Estimate to Complete (ETC) [Output/Input]. The expected cost needed to complete all the remaining work for a *schedule activity*, *work breakdown structure component*, or the *project*. See also *earned value technique* and *estimate at completion*.

Event. Something that happens, an occurrence, an outcome.

Exception Report. *Document* that includes only major variations from the plan (rather than all variations).

Execute. Directing, managing, performing, and accomplishing the *project work*, providing the *deliverables*, and providing *work performance information*.

Executing. See *execute*.

Executing Processes [Process Group]. Those *processes* performed to complete the *work* defined in the *project management plan* to accomplish the project's *objectives* defined in the *project scope statement*.

Execution. See *execute*.

Expected Monetary Value (EMV) Analysis. A statistical *technique* that calculates the average outcome when the future includes scenarios that may or may not happen. A common use of this technique is within *decision tree analysis*. Modeling and simulation are recommended for *cost* and *schedule risk* analysis because it is more powerful and less subject to misapplication than expected monetary value analysis.

Expert Judgment [Technique]. Judgment provided based upon expertise in an *application area*, *knowledge area*, *discipline*, industry, etc. as appropriate for the activity being performed. Such expertise may be provided by any group or person with specialized

education, *knowledge*, *skill*, experience, or training, and is available from many sources, including: other units within the performing organization; consultants; *stakeholders*, including *customers*; professional and technical associations; and industry groups.

Failure Mode and Effect Analysis (FMEA) [Technique]. An analytical *procedure* in which each potential failure mode in every *component* of a *product* is analyzed to determine its effect on the reliability of that component and, by itself or in combination with other possible failure modes, on the reliability of the product or system and on the required function of the component; or the examination of a *product* (at the *system* and/or lower levels) for all ways that a failure may occur. For each potential failure, an estimate is made of its effect on the total *system* and of its impact. In addition, a review is undertaken of the action planned to minimize the probability of failure and to minimize its effects.

Fast Tracking [Technique]. A specific project *schedule compression technique* that changes *network logic* to overlap *phases* that would normally be done in sequence, such as the design phase and construction phase, or to perform *schedule activities* in parallel. See *schedule compression* and see also *crashing*.

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

Finish-to-Finish (FF). The *logical relationship* where completion of *work* of the *successor activity* cannot finish until the completion of work of the *predecessor activity*. See also *logical relationship*.

Finish-to-Start (FS). The *logical relationship* where initiation of *work* of the *successor activity* depends upon the completion of work of the *predecessor activity*. See also *logical relationship*.

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

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 the seller meets defined performance *criteria*.

Fixed-Price or Lump-Sum Contract. A type of *contract* involving 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. The simplest form of a fixed price contract is a purchase order.

Float. Also called slack. See *total float* and see also *free float*.

Flowcharting [Technique]. The depiction in a diagram format of the *inputs*, *process* actions, and *outputs* of one or more processes within a *system*.

Forecasts. *Estimates* or predictions of conditions and *events* in the *project's* future based on information and knowledge available at the time of the forecast. Forecasts are updated and reissued based on *work performance information* provided as the project is *executed*. The information is based on the project's past performance and expected future performance, and includes information that could impact the project in the future, such as *estimate at completion* and *estimate to complete*.

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

- Free Float (FF).** The amount of time that a *schedule activity* can be delayed without delaying the early start of any immediately following schedule activities. See also *total float*.
- Functional Manager.** Someone with management *authority* over an organizational unit within a *functional organization*. The manager of any group that actually makes a *product* or performs a *service*. Sometimes called a line manager.
- Functional Organization.** A hierarchical *organization* where each employee has one clear superior, staff are grouped by areas of specialization, and managed by a person with expertise in that area.
- Funds.** A supply of money or pecuniary resources immediately available.
- Gantt Chart.** See *bar chart*.
- Goods.** Commodities, wares, merchandise.
- 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).
- Ground Rules [Tool].** A list of acceptable and unacceptable behaviors adopted by a *project team* to improve working relationships, effectiveness, and *communication*.
- Hammock Activity.** See *summary activity*.
- Historical Information.** Documents and data on prior projects including project files, records, correspondence, closed contracts, and closed projects.
- Human Resource Planning [Process].** The *process* of identifying and documenting *project roles*, responsibilities and reporting relationships, as well as creating the *staffing management plan*.
- Imposed Date.** A fixed date imposed on a *schedule activity* or *schedule milestone*, usually in the form of a “start no earlier than” and “finish no later than” date.
- Influence Diagram [Tool].** Graphical representation of situations showing causal influences, time ordering of *events*, and other relationships among variables and outcomes.
- Influencer.** Persons or groups that are not directly related to the acquisition or use of the project’s *product*, but, due to their position in the *customer organization**, can influence, positively or negatively, the course of the *project*.
- Information Distribution [Process].** The *process* of making needed information available to *project stakeholders* in a timely manner.
- Initiating Processes [Process Group].** Those *processes* performed to authorize and define the *scope* of a new *phase* or *project* or that can result in the continuation of halted project *work*. A large number of the initiating processes are typically done outside the project’s scope of control by the *organization*, *program*, or *portfolio* processes and those processes provide input to the project’s initiating processes group.
- Initiator.** A person or *organization* that has both the ability and *authority* to start a *project*.
- Input [Process Input].** Any item, whether internal or external to the project that is required by a *process* before that process proceeds. May be an *output* from a predecessor process.
- Inspection [Technique].** Examining or measuring to verify whether an *activity*, *component*, *product*, *result* or *service* conforms to specified *requirements*.
- Integral.** Essential to completeness; requisite; constituent with; formed as a unit with another component.

Integrated. Interrelated, interconnected, interlocked, or meshed components blended and unified into a functioning or unified whole.

Integrated Change Control [Process]. The *process* of reviewing all *change requests*, approving changes and controlling changes to *deliverables* and *organizational process assets*.

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.

Issue. A point or matter in question or in dispute, or a point or matter that is not settled and is under discussion or over which there are opposing views or disagreements.

Knowledge. Knowing something with the familiarity gained through experience, education, observation, or investigation, it is understanding a *process*, *practice*, or *technique*, or how to use a *tool*.

Knowledge Area Process. An identifiable project management *process* within a *knowledge area*.

Knowledge Area, Project Management. See *Project Management Knowledge Area*.

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

Late Finish Date (LF). In the *critical path method*, the latest possible point in time that a *schedule activity* may be completed based upon the schedule *network logic*, the project completion date, and any *constraints* assigned to the schedule activities without violating a schedule constraint or delaying the project completion date. The late finish dates are determined during the *backward pass* calculation of the project schedule network.

Late Start Date (LS). In the critical path method, the latest possible point in time that a *schedule activity* may begin based upon the schedule *network logic*, the project completion date, and any *constraints* assigned to the schedule activities without violating a schedule constraint or delaying the project completion date. The late start dates are determined during the *backward pass* calculation of the project schedule network.

Latest Revised Estimate. See *estimate at completion*.

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

Lessons Learned [Output/Input]. The learning gained from the process of performing the project. Lessons learned may be identified at any point. Also considered a project record, to be included in the *lessons learned knowledge base*.

Lessons Learned Knowledge Base. A store of historical information and *lessons learned* about both the outcomes of previous *project* selection decisions and previous project performance.

Level of Effort (LOE). Support-type *activity* (e.g., *seller* or *customer* liaison, project cost accounting, project management, etc.) that does not readily lend itself to measurement of discrete accomplishment. It is generally characterized by a uniform rate of *work* performance over a period of time determined by the activities supported.

Leveling. See *resource leveling*.

Life Cycle. See *project life cycle*.

Log. A document used to record and describe or denote selected items identified during execution of a process or activity. Usually used with a modifier, such as issue, quality control, action, or defect.

Logic. See *network logic*.

Logic Diagram. See *project schedule network diagram*.

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

Manage Project Team [Process]. The *process* of tracking team member performance, providing feedback, resolving issues, and coordinating changes to enhance project performance.

Manage Stakeholders [Process]. The *process* of managing *communications* to satisfy the *requirements* of, and resolve *issues* with, *project stakeholders*.

Master Schedule [Tool]. A summary-level *project schedule* that identifies the major *deliverables* and *work breakdown structure components* and key *schedule milestones*. See also *milestone schedule*.

Matériel. The aggregate of things used by an *organization* in any undertaking, such as equipment, apparatus, tools, machinery, gear, material, and supplies.

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

Methodology. A *system* of *practices*, *techniques*, *procedures*, and rules used by those who work in a *discipline*.

Milestone. A significant point or *event* in the *project*. See also *schedule milestone*.

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

Monitor. Collect *project* performance data with respect to a plan, produce performance measures, and report and disseminate performance information.

Monitor and Control Project Work [Process]. The process of *monitoring* and *controlling* the processes required to initiate, plan, execute, and close a *project* to meet the performance *objectives* defined in the *project management plan* and *project scope statement*.

Monitoring. See *monitor*.

Monitoring and Controlling Processes [Process Group]. Those *processes* performed to measure and *monitor project execution** so that corrective action can be taken when necessary to *control* the execution of the *phase* or project.

Monte Carlo Analysis. A *technique* that computes, or iterates, the *project cost* or *project schedule* many times using input values selected at random from probability distributions of possible *costs* or *durations*, to calculate a distribution of possible total project cost or completion dates.

Near-Critical Activity. A *schedule activity* that has low *total float*. The concept of near-critical is equally applicable to a *schedule activity* or *schedule network path*. The limit below which *total float* is considered near critical is subject to *expert judgment* and varies from *project* to project.

Network. See *project schedule network diagram*.

Network Analysis. See *schedule network analysis*.

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

Network Loop. A *schedule network path* that passes the same *node* twice. Network loops cannot be analyzed using traditional *schedule network analysis* techniques such as *critical path method*.

Network Open End. A *schedule activity* without any *predecessor activities* or *successor activities* creating an unintended break in a *schedule network path*. Network open ends are usually caused by missing *logical relationships*.

Network Path. Any continuous series of *schedule activities* connected with *logical relationships* in a *project schedule network diagram*.

Networking [Technique]. Developing relationships with persons who may be able to assist in the achievement of *objectives* and responsibilities.

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

Objective. Something toward which *work* is to be directed, a strategic position to be attained, or a purpose to be achieved, a *result* to be obtained, a *product* to be produced, or a *service* to be performed.

Operations. An organizational function performing the ongoing execution of *activities* that produce the same *product* or provide a repetitive *service*. Examples are: production operations, manufacturing operations, and accounting operations.

Opportunity. A condition or situation favorable to the *project*, a positive set of circumstances, a positive set of *events*, a *risk* that will have a positive impact on project *objectives*, or a possibility for positive changes. Contrast with *threat*.

Organization. A group of persons organized for some purpose or to perform some type of *work* within an *enterprise*.

Organization Chart [Tool]. A method for depicting interrelationships among a group of persons working together toward a common *objective*.

Organizational Breakdown Structure (OBS) [Tool]. A hierarchically organized depiction of the *project organization* arranged so as to relate the *work packages* to the *performing organizational units*. (Sometimes OBS is written as Organization Breakdown Structure with the same definition.)

Organizational Process Assets [Output/Input]. Any or all *process* related assets, from any or all of the organizations involved in the *project* that are or can be used to influence the project's success. These process assets include formal and informal plans, policies, *procedures*, and guidelines. The process assets also include the organizations' knowledge bases such as *lessons learned* and *historical information*.

Original Duration (OD). The *activity duration* originally assigned to a *schedule activity* and not updated as progress is reported on the activity. Typically used for comparison with *actual duration* and *remaining duration* when reporting *schedule progress*.

Output [Process Output]. A *product*, *result*, or *service* generated by a *process*. May be an input to a successor process.

Parametric Estimating [Technique]. 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* for activity

- parameters, such as *scope*, *cost*, *budget*, and *duration*. This technique can produce higher levels of accuracy depending upon the sophistication and the underlying data built into the model. An example for the cost parameter is multiplying the planned quantity of work to be performed by the historical cost per unit to obtain the estimated cost.
- Pareto Chart** [Tool]. A histogram, ordered by frequency of occurrence, that shows how many *results* were generated by each identified cause.
- Path Convergence.** The merging or joining of parallel schedule *network paths* into the same *node* in a *project schedule network diagram*. Path convergence is characterized by a *schedule activity* with more than one *predecessor activity*.
- Path Divergence.** Extending or generating parallel schedule *network paths* from the same *node* in a *project schedule network diagram*. Path divergence is characterized by a *schedule activity* with more than one *successor activity*.
- Percent Complete (PC or PCT).** An *estimate*, expressed as a percent, of the amount of *work* that has been completed on an *activity* or a *work breakdown structure component*.
- Perform Quality Assurance (QA)** [Process]. The *process* of applying the planned, systematic quality *activities* (such as audits or peer reviews) to ensure that the *project* employs all processes needed to meet requirements.
- Perform Quality Control (QC)** [Process]. The *process* of *monitoring* specific *project results** to determine whether they comply with relevant quality standards and identifying ways to eliminate causes of unsatisfactory performance.
- Performance Measurement Baseline.** An approved plan for the *project work* against which project execution is compared and deviations are measured for management *control*. The performance measurement baseline typically integrates *scope*, *schedule*, and *cost* parameters of a project, but may also include technical and *quality* parameters.
- Performance Reporting** [Process]. The *process* of collecting and distributing performance information. This includes status reporting, progress measurement, and *forecasting*.
- Performance Reports** [Output/Input]. *Documents* and presentations that provide organized and summarized *work performance information*, *earned value management* parameters and calculations, and analyses of *project work* progress and status. Common formats for performance reports include *bar charts*, *S-curves*, *histograms*, tables, and *project schedule network diagram* showing current schedule status.
- Performing Organization.** The *enterprise* whose personnel are most directly involved in doing the *work* of the *project*.
- Phase.** See *project phase*.
- Plan Contracting** [Process]. The *process* of documenting the *products*, *services*, and *results* requirements and identifying potential *sellers*.
- Plan Purchases and Acquisitions** [Process]. The *process* of determining what to purchase or acquire, and determining when and how to do so.
- Planned Finish Date (PF).** See *scheduled finish date*.
- Planned Start Date (PS).** See *scheduled start date*.
- Planned Value (PV).** The authorized *budget* assigned to the scheduled work to be accomplished for a *schedule activity* or *work breakdown structure component*. Also referred to as the budgeted cost of work scheduled (BCWS).
- Planning Package.** A WBS *component* below the *control account* with known *work* content but without detailed *schedule activities*. See also *control account*.

Planning Processes [Process Group]. Those *processes* performed to define and mature the *project scope*, develop the *project management plan*, and identify and schedule the *project activities** that occur within the *project*.

Portfolio. A collection of *projects* or *programs* and other work that are grouped together to facilitate effective management of that *work* to meet strategic business *objectives*. The projects or programs of the portfolio may not necessarily be interdependent or directly related.

Portfolio Management [Technique]. The centralized management of one or more *portfolios*, which includes identifying, prioritizing, authorizing, managing, and controlling *projects*, *programs*, and other related work, to achieve specific strategic business *objectives*.

Position Description [Tool]. An explanation of a *project team* member's *roles* and responsibilities.

Practice. A specific type of professional or management *activity* that contributes to the execution of a *process* and that may employ one or more *techniques* and *tools*.

Precedence Diagramming Method (PDM) [Technique]. A schedule network diagramming *technique* in which *schedule activities* are represented by boxes (or *nodes*). Schedule activities are graphically linked by one or more *logical 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 used.

Predecessor Activity. The *schedule activity* that determines when the *logical successor activity* can begin or end.

Preventive Action. Documented direction to perform an *activity* that can reduce the probability of negative consequences associated with *project risks**.

Probability and Impact Matrix [Tool]. 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.

Procedure. A series of steps followed in a regular definitive order to accomplish something.

Process. A set of interrelated actions and *activities* performed to achieve a specified set of *products*, *results*, or *services*.

Process Group. See *Project Management Process Groups*.

Procurement Documents [Output/Input]. Those *documents* utilized in bid and proposal activities, which include *buyer's* Invitation for Bid, Invitation for Negotiations, Request for Information, Request for Quotation, Request for Proposal and *seller's* responses.

Procurement Management Plan [Output/Input]. The *document* that describes how procurement *processes* from developing procurement documentation through *contract closure* will be managed.

Product. An artifact that is produced, is quantifiable, and can be either an end item in itself or a component item. Additional words for products are *materiel* and *goods*. Contrast with *result* and *service*. See also *deliverable*.

Product Life Cycle. A collection of generally sequential, non-overlapping *product phases** whose name and number are determined by the manufacturing and control needs of the *organization*. The last product life cycle phase for a product is generally the product's

deterioration and death. Generally, a *project life cycle* is contained within one or more product life cycles.

Product Scope. The features and functions that characterize a *product, service* or *result*.

Product Scope Description. The documented narrative description of the *product scope*.

Program. A group of related *projects* managed in a coordinated way to obtain benefits and control not available from managing them individually. Programs may include elements of related *work* outside of the *scope* of the discrete projects in the program.

Program Management. The centralized coordinated management of a *program* to achieve the program's strategic *objectives* and benefits.

Program Management Office (PMO). The centralized management of a particular *program* or programs such that corporate benefit is realized by the sharing of *resources, methodologies, tools, and techniques*, and related high-level project management focus. See also *project management office*.

Progressive Elaboration [Technique]. Continuously improving and detailing a plan as more detailed and specific information and more accurate estimates become available as the project progresses, and thereby producing more accurate and complete plans that result from the successive iterations of the planning *process*.

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

Project Calendar. A calendar of working days or shifts that establishes those *dates* on which *schedule activities* are worked and nonworking days that determine those dates on which schedule activities are idle. Typically defines holidays, weekends and shift hours. See also *resource calendar*.

Project Charter [Output/Input]. A *document* issued by the project *initiator* or *sponsor* that formally authorizes the existence of a *project*, and provides the *project manager* with the authority to apply organizational *resources* to project *activities*.

Project Communications Management [Knowledge Area]. See Appendix F.

Project Cost Management [Knowledge Area]. See Appendix F.

Project Human Resource Management [Knowledge Area]. See Appendix F.

Project Initiation. Launching a *process* that can result in the authorization and *scope* definition of a new *project*.

Project Integration Management [Knowledge Area]. See Appendix F.

Project Life Cycle. A collection of generally sequential *project phases* whose name and number are determined by the *control* needs of the *organization* or organizations involved in the *project*. A life cycle can be documented with a *methodology*.

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 complete project management body of knowledge includes proven traditional *practices* that are widely applied and innovative practices that are emerging in the profession. The body of knowledge includes both published and unpublished material. The PMBOK is constantly evolving.

Project Management Information System (PMIS) [Tool]. An information *system* consisting of the *tools* and *techniques* used to gather, integrate, and disseminate the

outputs of project management *processes*. It is used to support all aspects of the project from initiating through closing, and can include both manual and automated *systems*.

Project Management Knowledge Area. An identified area of *project management* defined by its *knowledge requirements* and described in terms of its *component processes, practices, inputs, outputs, tools, and techniques*.

Project Management Office (PMO). An organizational body or entity assigned various responsibilities related to the centralized and coordinated management of those *projects* under its domain. The responsibilities of a PMO can range from providing project management support functions to actually being responsible for the direct management of a project. See also *program management office*.

Project Management Plan [Output/Input]. A formal, approved *document* that defines how the project is executed, monitored and controlled. It may be summary or detailed and may be composed of one or more subsidiary management plans and other planning documents.

Project Management Process. One of the 44 *processes*, unique to *project management* and described in the *PMBOK® Guide*.

Project Management Process Group. A logical grouping of the *project management processes* described in the *PMBOK® Guide*. The project management process groups include *initiating processes, planning processes, executing processes, monitoring and controlling processes, and closing processes*. Collectively, these five groups are required for any *project*, have clear internal *dependencies*, and must be performed in the same sequence on each project, independent of the *application area* or the specifics of the applied *project life cycle*. Project management process groups are not *project phases*.

Project Management Professional (PMP®). A person certified as a PMP® by the Project Management Institute (PMI®).

Project Management Software [Tool]. A class of computer software applications specifically designed to aid the *project management team* with planning, monitoring, and controlling the project, including: *cost estimating, scheduling, communications, collaboration, configuration management, document control, records management, and risk analysis*.

Project Management System [Tool]. The aggregation of the *processes, tools, techniques, methodologies, resources, and procedures* to manage a project. The *system* is documented in the *project management plan* and its content will vary depending upon the *application area, organizational influence, complexity of the project, and the availability of existing systems*. A project management system, which can be formal or informal, aids a *project manager* in effectively guiding a *project* to completion. A project management system is a set of *processes* and the related monitoring and control functions that are consolidated and combined into a functioning, unified whole.

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 person assigned by the *performing organization* to achieve the *project objectives**.

Project Organization Chart [Output/Input]. A *document* that graphically depicts the *project team members* and their interrelationships for a specific *project*.

Project Phase. A collection of logically related *project activities**, usually culminating in the completion of a major *deliverable*. Project phases (also called phases) are mainly

completed sequentially, but can overlap in some project situations. Phases can be subdivided into *subphases* and then *components*; this hierarchy, if the project or portions of the project are divided into phases, is contained in the *work breakdown structure*. A project phase is a component of a *project life cycle*. A project phase is not a *project management process group**

Project Process Groups. The five *process groups* required for any project that have clear dependencies and that are required to be performed in the same sequence on each project, independent of the *application area* or the specifics of the applied *project life cycle*. The process groups are initiating, planning, executing, monitoring and controlling, and closing.

Project Procurement Management [Knowledge Area]. See Appendix F.

Project Quality Management [Knowledge Area]. See Appendix F.

Project Risk Management [Knowledge Area]. See Appendix F.

Project Schedule [Output/Input]. The planned *dates* for performing *schedule activities* and the planned dates for meeting *schedule milestones*.

Project Schedule Network Diagram [Output/Input]. Any schematic display of the *logical relationships* among the project *schedule activities*. Always drawn from left to right to reflect project *work* chronology.

Project Scope. The *work* that must be performed to deliver a *product, service, or result* with the specified features and functions.

Project Scope Management [Knowledge Area]. See Appendix F.

Project Scope Management Plan [Output/Input]. The *document* that describes how the *project scope* will be defined, developed, and verified and how the *work breakdown structure* will be created and defined, and that provides guidance on how the *project scope* will be managed and controlled by the *project management team*. It is contained in or is a subsidiary plan of the *project management plan*. The project scope management plan can be informal and broadly framed, or formal and highly detailed, based on the needs of the *project*.

Project Scope Statement [Output/Input]. The narrative description of the *project scope*, including major *deliverables*, project *objectives*, project *assumptions*, project *constraints*, and a *statement of work*, that provides a documented basis for making future project decisions and for confirming or developing a common understanding of *project scope* among the *stakeholders*. The definition of the *project scope* – what needs to be accomplished.

Project Sponsor. See *sponsor*.

Project Stakeholder. See *stakeholder*.

Project Summary Work Breakdown Structure (PSWBS) [Tool]. A *work breakdown structure* for the project that is only developed down to the *subproject* level of detail within some legs of the WBS, and where the detail of those subprojects are provided by use of *contract work breakdown structures*.

Project Team. All the *project team members*, including the *project management team*, the *project manager* and, for some projects, the *project sponsor*.

Project Team Directory. A documented list of *project team* members, their project *roles* and *communication* information.

Project Team Members. The persons who report either directly or indirectly to the *project manager*, and who are responsible for performing *project work* as a regular part of their assigned duties.

Project Time Management [Knowledge Area]. See Appendix F.

Project Work. See *work*.

Projectized Organization. Any organizational structure in which the *project manager* has full authority to assign priorities, apply *resources*, and direct the *work* of persons assigned to the *project*.

Qualitative Risk Analysis [Process]. The *process* of prioritizing *risks* for subsequent further analysis or action by assessing and combining their probability of occurrence and impact.

Quality. The degree to which a set of inherent characteristics fulfills *requirements*.

Quality Management Plan [Output/Input]. The quality management plan describes how the *project management team* will implement the *performing organization's* quality policy. The quality management plan is a component or a subsidiary plan of the *project management plan*. The quality management plan may be formal or informal, highly detailed, or broadly framed, based on the *requirements* of the *project*.

Quality Planning [Process]. The *process* of identifying which quality standards are relevant to the *project* and determining how to satisfy them.

Quantitative Risk Analysis [Process]. The *process* of numerically analyzing the effect on overall project *objectives* of identified *risks*.

Regulation. Requirements imposed by a governmental body. These *requirements* can establish *product, process* or *service* characteristics—including applicable administrative provisions—that have government-mandated compliance.

Reliability. The probability of a *product* performing its intended function under specific conditions for a given period of time.

Remaining Duration (RD). The time in *calendar units*, between the *data date* of the *project schedule* and the *finish date* of a *schedule activity* that has an *actual start date*. This represents the time needed to complete a *schedule activity* where the *work* is in progress.

Request for Information. A type of *procurement document* whereby the *buyer* requests a potential *seller* to provide various pieces of information related to a *product* or *service* or *seller* capability.

Request for Proposal (RFP). A type of *procurement document* used to request 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). A type of *procurement document* used to request price quotations from prospective *sellers* of common or standard *products* or *services*. Sometimes used in place of *request for proposal* and in some *application areas*, it may have a narrower or more specific meaning.

Request Seller Responses [Process]. The *process* of obtaining information, quotations, bids, offers, or proposals, as appropriate.

Requested Change [Output/Input]. A formally documented *change request* that is submitted for *approval* to the *integrated change control* process. Contrast with *approved change request*.

Requirement. A condition or capability that must be met or possessed by a *system, product, service, result*, or *component* to satisfy a *contract, standard, specification*, or other

formally imposed *documents*. Requirements include the quantified and documented needs, wants, and expectations of the *sponsor, customer, and other stakeholders*.

Reserve. A provision in the *project management 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*.

Reserve Analysis [Technique]. An analytical *technique* to determine the essential features and relationships of components in the *project management plan* to establish a *reserve* for the *schedule duration, budget, estimated cost, or funds* for a *project*.

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

Resource. Skilled human resources (specific disciplines either individually or in crews or teams), equipment, *services, supplies, commodities, materiel, budgets, or funds*.

Resource Breakdown Structure (RBS). A hierarchical structure of *resources* by resource category and resource type used in *resource leveling* schedules and to develop resource-limited schedules, and which may be used to identify and analyze project human resource assignments.

Resource Calendar. A calendar of working days and nonworking days that determines those *dates* on which each specific *resource* is idle or can be active. Typically defines resource specific holidays and resource availability periods. See also *project calendar*.

Resource-Constrained Schedule. See *resource-limited schedule*.

Resource Histogram. A *bar chart* showing the amount of time that a *resource* is scheduled to work over a series of time periods. Resource availability may be depicted as a line for comparison purposes. Contrasting bars may show actual amounts of resource used as the project progresses.

Resource Leveling [Technique]. Any form of *schedule network analysis* in which scheduling decisions (start and finish dates) are driven by resource constraints (e.g., limited resource availability or difficult-to-manage changes in resource availability levels).

Resource-Limited Schedule. A *project schedule* whose *schedule activity, scheduled start dates and scheduled finish dates* reflect expected resource availability. A resource-limited schedule does not have any early or late start or finish dates. The resource-limited schedule *total float* is determined by calculating the difference between the *critical path method late finish date** and the resource-limited scheduled finish date. Sometimes called resource-constrained schedule. See also *resource leveling*.

Resource Planning. See *activity resource estimating*.

Responsibility Assignment Matrix (RAM) [Tool]. A structure that relates the project *organizational breakdown structure* to the *work breakdown structure* to help ensure that each component of the project's *scope of work* is assigned to a responsible person.

Result. An output from performing project management *processes and activities*. Results include outcomes (e.g., *integrated systems, revised process, restructured organization, tests, trained personnel, etc.*) and *documents* (e.g., *policies, plans, studies, procedures, specifications, reports, etc.*). Contrast with *product* and *service*. See also *deliverable*.

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

Rework. Action taken to bring a defective or nonconforming *component* 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*. See also *risk category* and *risk breakdown structure*.
- Risk Acceptance** [Technique]. A *risk response planning technique** that indicates that the *project team* has decided not to change the *project management plan* to deal with a *risk*, or is unable to identify any other suitable response strategy.
- Risk Avoidance** [Technique]. A *risk response planning technique** for a *threat* that creates changes to the *project management plan* that are meant to either eliminate the *risk* or to protect the *project objectives* from its impact. Generally, risk avoidance involves relaxing the time, cost, scope, or quality *objectives*.
- Risk Breakdown Structure (RBS)** [Tool]. A hierarchically organized depiction of the identified *project risks** arranged by *risk category* and subcategory that identifies the various areas and causes of potential risks. The risk breakdown structure is often tailored to specific project types.
- Risk Category.** A group of potential causes of *risk*. Risk causes may be grouped into categories such as technical, external, organizational, environmental, or *project management*. A category may include subcategories such as technical maturity, weather, or aggressive estimating. See also *risk breakdown structure*.
- Risk Database.** A repository that provides for collection, maintenance, and analysis of data gathered and used in the risk management *processes*.
- Risk Identification** [Process]. The *process* of determining which *risks* might affect the *project* and documenting their characteristics.
- Risk Management Plan** [Output/Input]. The *document* describing how *project risk management* will be structured and performed on the *project*. It is contained in or is a subsidiary plan of the *project management plan*. The risk management plan can be informal and broadly framed, or formal and highly detailed, based on the needs of the project. Information in the risk management plan varies by *application area* and project size. The risk management plan is different from the *risk register* that contains the list of *project risks*, the *results* of risk analysis, and the risk responses.
- Risk Management Planning** [Process]. The *process* of deciding how to approach, plan, and execute *risk management activities* for a *project*.
- Risk Mitigation** [Technique]. A *risk response planning technique** associated with *threats* that seeks to reduce the probability of occurrence or impact of a *risk* to below an acceptable threshold.
- Risk Monitoring and Control** [Process]. The *process* of tracking identified *risks*, monitoring *residual risks*, identifying new risks, executing risk response plans, and evaluating their effectiveness throughout the *project life cycle*.
- Risk Register** [Output/Input]. The *document* containing the *results* of the *qualitative risk analysis*, *quantitative risk analysis*, and *risk response planning*. The risk register details all identified *risks*, including description, category, cause, probability of occurring, impact(s) on objectives, proposed responses, owners, and current status. The risk register is a component of the *project management plan*.
- Risk Response Planning** [Process]. The *process* of developing options and actions to enhance opportunities and to reduce threats to *project objectives*.
- Risk Transference** [Technique]. A *risk response planning technique** that shifts the impact of a *threat* to a third party, together with ownership of the response.
- Role.** A defined function to be performed by a *project team member*, such as testing, filing, inspecting, coding.

- Rolling Wave Planning** [Technique]. A form of *progressive elaboration* planning where the *work* to be accomplished in the near term is planned in detail at a low level of the *work breakdown structure*, while the work far in the future is planned at a relatively high level of the work breakdown structure, but the detailed planning of the work to be performed within another one or two periods in the near future is done as work is being completed during the current period.
- Root Cause Analysis** [Technique]. An analytical technique used to determine the basic underlying reason that causes a *variance* or a *defect* or a *risk*. A root cause may underlie more than one variance or defect or risk.
- Schedule**. See *project schedule* and see also *schedule model*.
- Schedule Activity**. A discrete scheduled *component* of *work* performed during the course of a *project*. A schedule activity normally has an estimated *duration*, an estimated *cost*, and estimated resource requirements. Schedule activities are connected to other schedule activities or schedule milestones with *logical relationships*, and are decomposed from *work packages*.
- Schedule Analysis**. See *schedule network analysis*.
- Schedule Compression** [Technique]. Shortening the *project schedule duration* without reducing the *project scope*. See also *crashing* and *fast tracking*.
- Schedule Control** [Process]. The *process* of controlling changes to the *project schedule*.
- Schedule Development** [Process]. The *process* of analyzing *schedule activity* sequences, schedule activity *durations*, *resource requirements*, and schedule *constraints* to create the *project schedule*.
- Schedule Management Plan** [Output/Input]. The *document* that establishes *criteria* and the *activities* for developing and controlling the *project schedule*. It is contained in, or is a subsidiary plan of, the *project management plan*. The schedule management plan may be formal or informal, highly detailed or broadly framed, based on the needs of the *project*.
- Schedule Milestone**. A significant *event* in the *project schedule*, such as an event restraining future work or marking the completion of a major *deliverable*. A schedule milestone has zero *duration*. Sometimes called a *milestone activity*. See also *milestone*.
- Schedule Model** [Tool]. A model used in conjunction with manual methods or *project management software* to perform *schedule network analysis* to generate the *project schedule* for use in managing the execution of a *project*. See also *project schedule*.
- Schedule Network Analysis** [Technique]. The *technique* of identifying *early and late start dates**, as well as *early and late finish dates**, for the uncompleted portions of project *schedule activities*. See also *critical path method*, *critical chain method*, *what-if analysis*, and *resource leveling*.
- Schedule Performance Index (SPI)**. A measure of schedule efficiency on a project. It is the ratio of *earned value* (EV) to *planned value* (PV). The SPI = EV divided by PV. An SPI equal to or greater than one indicates a favorable condition and a value of less than one indicates an unfavorable condition. See also *earned value management*.
- Schedule Variance (SV)**. A measure of schedule performance on a project. It is the algebraic difference between the *earned value* (EV) and the *planned value* (PV). SV = EV minus PV. See also *earned value management*.
- Scheduled Finish Date (SF)**. The point in time that *work* was scheduled to finish on a *schedule 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 *resource leveling* of scarce *resources*. Sometimes called planned finish date.

Scheduled Start Date (SS). The point in time that *work* was scheduled to start on a *schedule 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 *resource leveling* of scarce *resources*. Sometimes called planned start date.

Scope. The sum of the *products*, *services*, and *results* to be provided as a *project*. See also *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 Control [Process]. The *process* of *controlling* changes to the *project scope*.

Scope Creep. Adding features and functionality (*project scope*) without addressing the effects on time, *costs*, and *resources*, or without *customer* approval.

Scope Definition [Process]. The *process* of developing a detailed *project scope statement* as the basis for future project decisions.

Scope Planning [Process]. The *process* of creating a *project scope management plan*.

Scope Verification [Process]. The *process* of formalizing *acceptance* of the completed *project deliverables*.

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*.

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

Select Sellers [Process]. The *process* of reviewing offers, choosing from among potential sellers, and negotiating a written *contract* with a *seller*.

Seller. A provider or supplier of *products*, *services*, or *results* to an organization.

Sensitivity Analysis. A *quantitative risk analysis* and modeling *technique* used to help determine which *risks* have the most potential impact on the *project*. It examines the extent to which the uncertainty of each project element affects the *objective* being examined when all other uncertain elements are held at their *baseline* values. The typical display of *results* is in the form of a tornado diagram.

Service. Useful *work* performed that does not produce a tangible *product* or *result*, such as performing any of the business functions supporting production or distribution. Contrast with product and result. See also *deliverable*.

Should-Cost Estimate. An *estimate* of the *cost* of a *product* or *service* used to provide an assessment of the reasonableness of a prospective *seller'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*, usually expressed as a probability distribution of possible *costs* or *durations* at a detailed work level, and are typically performed using *Monte Carlo analysis*.

Skill. Ability to use *knowledge*, a developed aptitude, and/or a capability to effectively and readily execute or perform an *activity*.

Slack. See *total float* and *free float*.

Special Cause. A source of variation that is not inherent in the *system*, is not predictable, and is intermittent. It can be assigned to a defect in the *system*. On a *control chart*, points

beyond the *control limits*, or non-random patterns within the control limits, indicate it. Also referred to as assignable cause. Contrast with *common cause*.

Specification. A *document* that specifies, in a complete, precise, verifiable manner, the *requirements*, design, behavior, or other characteristics of a *system, component, product, result, or service* and, often, the *procedures* for determining whether these provisions have been satisfied. Examples are: requirement *specification*, design specification, product specification, and test specification.

Specification Limits. The area, on either side of the centerline, or mean, of data plotted on a *control chart* that meets the *customer's* requirements for a *product or service*. This area may be greater than or less than the area defined by the control limits. See also *control limits*.

Sponsor. The person or group that provides the financial resources, in cash or in kind, for the *project*.

Staffing Management Plan [Process]. The *document* that describes when and how human *resource requirements* will be met. It is contained in, or is a subsidiary plan of, the *project management plan*. The staffing management plan can be informal and broadly framed, or formal and highly detailed, based on the needs of the *project*. Information in the staffing management plan varies by *application area* and project size.

Stakeholder. Persons and *organizations* such as *customers, sponsors, performing organization* and the public, that are actively involved in the *project*, or whose interests may be positively or negatively affected by execution or completion of the project. They may also exert influence over the project and its *deliverables*.

Standard. A *document* established by consensus and approved by a recognized body that provides, for common and repeated use, rules, guidelines or characteristics for *activities* or their *results*, aimed at the achievement of the optimum degree of order in a given context.

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

Start-to-Finish (SF). The *logical relationship* where completion of the *successor schedule activity* is dependent upon the initiation of the *predecessor schedule activity*. See also *logical relationship*.

Start-to-Start (SS). The *logical relationship* where initiation of the work of the *successor schedule activity* depends upon the initiation of the work of the *predecessor schedule activity*. See also *logical relationship*.

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

Strengths, Weaknesses, Opportunities, and Threats (SWOT) Analysis. This information gathering technique examines the project from the perspective of each project's strengths, weaknesses, *opportunities*, and *threats* to increase the breadth of the *risks* considered by risk management.

Subnetwork. A subdivision (fragment) of a *project schedule network diagram*, usually representing a *subproject* or a *work package*. Often used to illustrate or study some potential or proposed schedule condition, such as changes in preferential schedule *logic* or *project scope*.

Subphase. A subdivision of a *phase*.

Subproject. A smaller portion of the overall *project* created when a project is subdivided into more manageable *components* or pieces. Subprojects are usually represented in the *work breakdown structure*. A subproject can be referred to as a project, managed as a project, and acquired from a seller. May be referred to as a *subnetwork* in a *project schedule network diagram*.

Successor. See *successor activity*.

Successor Activity. The schedule activity that follows a *predecessor activity*, as determined by their *logical relationship*.

Summary Activity. A group of related *schedule activities* aggregated at some summary level, and displayed/reported as a single activity at that summary level. See also *subproject* and *subnetwork*.

System. An *integrated* set of regularly interacting or interdependent *components* created to accomplish a defined *objective*, with defined and maintained relationships among its components, and the whole producing or operating better than the simple sum of its components. Systems may be either physically *process* based or management process based, or more commonly a combination of both. Systems for *project management* are composed of *project management processes, techniques, methodologies, and tools* operated by the *project management team*.

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

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

Target Schedule. A *schedule* adopted for comparison purposes during *schedule network analysis*, which can be different from the baseline schedule. See also *baseline*.

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

Task. A term for *work* whose meaning and placement within a structured plan for project work varies by the *application area*, industry, and brand of *project management software*.

Team Members. See *project team members*.

Technical Performance Measurement [Technique]. A performance measurement *technique* that compares technical accomplishments during *project* execution to the *project management plan's schedule* of planned technical achievements. It may use key technical parameters of the *product* produced by the project as a *quality* metric. The achieved metric values are part of the *work performance information*.

Technique. A defined systematic *procedure* employed by a human *resource* to perform an *activity* to produce a *product* or *result* or deliver a *service*, and that may employ one or more *tools*.

Template. A partially complete *document* in a predefined format that provides a defined structure for collecting, organizing and presenting information and data. Templates are often based upon documents created during prior *projects*. Templates can reduce the *effort* needed to perform *work* and increase the consistency of *results*.

Threat. A condition or situation unfavorable to the *project*, a negative set of circumstances, a negative set of events, a *risk* that will have a negative impact on a project objective if it occurs, or a possibility for negative changes. Contrast with *opportunity*.

- Three-Point Estimate** [Technique]. An analytical *technique* that uses three *cost* or *duration estimates* to represent the optimistic, most likely, and pessimistic scenarios. This technique is applied to improve the accuracy of the *estimates* of cost or duration when the underlying *activity* or cost *component* is uncertain.
- Threshold.** A *cost*, time, *quality*, technical, or *resource* value used as a parameter, and which may be included in *product specifications*. Crossing the threshold should trigger some action, such as generating an exception report.
- Time and Material (T&M) Contract.** A type of *contract* that is a hybrid contractual arrangement containing aspects of both *cost-reimbursable* and *fixed-price contracts*. Time and material contracts resemble cost-reimbursable type arrangements in that they have no definitive end, 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-price arrangements. For example, the unit rates are preset by the *buyer* and *seller*, when both parties agree on the rates for the category of senior engineers.
- Time-Now Date.** See *data date*.
- Time-Scaled Schedule Network Diagram** [Tool]. Any *project schedule network diagram* drawn in such a way that the positioning and length of the *schedule activity* represents its duration. Essentially, it is a *bar chart* that includes *schedule network logic*.
- Tool.** Something tangible, such as a template or software program, used in performing an *activity* to produce a *product* or *result*.
- Total Float (TF).** The total amount of time that a *schedule activity* may be delayed from its *early start date* without delaying the project *finish date*, or violating a *schedule constraint*. Calculated using the *critical path method* technique and determining the difference between the *early finish dates* and *late finish dates*. See also *free float*.
- Total Quality Management (TQM)** [Technique]. A common approach to implementing a *quality* improvement program within an *organization*.
- Trend Analysis** [Technique]. An analytical technique that uses mathematical models to forecast future outcomes based on historical *results*. It is a method of determining the *variance* from a *baseline* of a *budget*, *cost*, *schedule*, or *scope* parameter by using prior progress reporting periods' data and projecting how much that parameter's variance from baseline might be at some future point in the project if no changes are made in *executing* the *project*.
- Triggers.** 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. Triggers are sometimes called *risk* symptoms or warning signs.
- Triple Constraint.** A framework for evaluating competing demands. The triple constraint is often depicted as a triangle where one of the sides or one of the corners represent one of the parameters being managed by the project team.
- User.** The person or *organization* that will use the project's *product* or *service*. See also *customer*.
- Validation** [Technique]. The *technique* of evaluating a *component* or *product* during or at the end of a *phase* or *project* to ensure it complies with the specified *requirements*. Contrast with *verification*.

- Value Engineering (VE).** A creative approach used to optimize *project life cycle* costs, save time, increase profits, improve *quality*, expand market share, solve problems, and/or use *resources* more effectively.
- Variance.** A quantifiable deviation, departure, or divergence away from a known *baseline* or expected value.
- Variance Analysis** [Technique]. A method for resolving the total *variance* in the set of *scope*, *cost*, and *schedule* variables into specific component variances that are associated with defined factors affecting the scope, cost, and schedule variables.
- Verification** [Technique]. The technique of evaluating a *component* or *product* at the end of a *phase* or *project* to assure or confirm it satisfies the conditions imposed. Contrast with *validation*.
- Virtual Team.** A group of persons with a shared *objective* who fulfill their *roles* with little or no time spent meeting face to face. Various forms of technology are often used to facilitate *communication* among team members. Virtual teams can be comprised of persons separated by great distances.
- Voice of the Customer.** A planning *technique* used to provide *products*, *services*, and *results* that truly reflect *customer requirements* by translating those customer requirements into the appropriate technical requirements for each *phase* of project product development.
- War Room.** A room used for *project* conferences and planning, often displaying charts of *cost*, *schedule* status, and other key project data.
- Work.** Sustained physical or mental effort, exertion, or exercise of *skill* to overcome obstacles and achieve an *objective*.
- Work Authorization** [Technique]. A permission and direction, typically written, to begin work on a specific *schedule activity* or *work package* or *control account*. It is a method for sanctioning *project work* to ensure that the work is done by the identified *organization*, at the right time, and in the proper sequence.
- Work Authorization System** [Tool]. A subsystem of the overall *project management system*. It is a collection of formal documented *procedures* that defines how *project work* will be authorized (committed) to ensure that the work is done by the identified *organization*, at the right time, and in the proper sequence. It includes the steps, *documents*, *tracking system*, and defined approval levels needed to issue work authorizations.
- Work Breakdown Structure (WBS)** [Output/Input]. A *deliverable*-oriented hierarchical *decomposition* of the *work* to be *executed* by the *project team* to accomplish the project *objectives* and create the required deliverables. It organizes and defines the total *scope* of the *project*. Each descending level represents an increasingly detailed definition of the *project work*. The WBS is decomposed into *work packages*. The deliverable orientation of the hierarchy includes both internal and external deliverables. See also *work package*, *control account*, *contract work breakdown structure*, and *project summary work breakdown structure*.
- Work Breakdown Structure Component.** An entry in the *work breakdown structure* that can be at any level.
- Work Breakdown Structure Dictionary** [Output/Input]. A *document* that describes each *component* in the *work breakdown structure* (WBS). For each WBS component, the WBS dictionary includes a brief definition of the *scope* or *statement of work*, defined *deliverable(s)*, a list of associated *activities*, and a list of *milestones*. Other information may include: responsible *organization*, start and end dates, *resources* required, an

estimate of cost, charge number, *contract* information, *quality requirements*, and technical references to facilitate performance of the *work*.

Work Item. Term no longer in common usage. See *activity* and *schedule activity*.

Work Package. A *deliverable* or *project work component* at the lowest level of each branch of the *work breakdown structure*. The work package includes the *schedule activities* and *schedule milestones* required to complete the work package deliverable or project work component. See also *control account*.

Work Performance Information [Output/Input]. Information and data, on the status of the *project schedule activities* being performed to accomplish the *project work*, collected as part of the *direct and manage project execution processes**. Information includes: status of *deliverables*; implementation status for *change requests*, *corrective actions*, *preventive actions*, and *defect repairs*; forecasted *estimates to complete*; reported percent of *work* physically completed; achieved value of *technical performance measures*; start and finish dates of *schedule activities*.

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