

PROJECT MANAGEMENT GLOSSARY OF TERMS

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—A—

Acceptance Criteria	Those <i>criteria</i> , including performance <i>requirements</i> and essential conditions, which must be met before <i>project deliverables</i> are accepted.
Activity	(1) A <i>component</i> of <i>work</i> performed during the course of a <i>project</i> . See also <i>schedule activity</i> . (2) A <i>task</i> or set of tasks that are carried out in order to create an assignable <i>deliverable</i> . <i>Task</i> and activity are sometimes used interchangeably.
Activity-On-Node (AON)	See <i>precedence diagramming method</i> .
Actual Cost (AC)	Total <i>costs</i> actually incurred and recorded in accomplishing <i>work</i> performed during a given time period for a <i>schedule activity</i> or <i>work breakdown structure component</i> . Actual cost can sometimes be direct labor hours alone, <i>direct costs</i> alone, or all <i>costs</i> , including indirect <i>costs</i> . Also referred to as the actual cost of <i>work</i> performed (ACWP). See also <i>earned value</i> .
Actual Finish Date (AF)	The point in time that <i>work</i> actually ended on a <i>schedule activity</i> . (Note: In some application areas, the <i>activity</i> is considered "finished" when <i>work</i> is "substantially complete.")
Actual Start Date (AS)	The point in time that <i>work</i> actually started on a <i>schedule activity</i> .
Agreement	A legal document that binds two or more parties to specific and implied obligations (e.g., a <i>contract</i>).
Align	Building a common understanding of the <i>project</i> and developing a common view of what the solution will and will not address.
Approved Change Request [Output/Input]	A <i>change request</i> that has been processed through the integrated <i>change control process</i> and approved. Contrast with <i>requested change</i> .
As-Late-As-Possible ("ALAP")	An <i>activity</i> for which the application sets the early dates as late as possible without delaying the early dates of any <i>successor</i> .
As-Soon-As-Possible ("ASAP")	An <i>activity</i> for which the application sets the early dates as soon as possible. This is the default <i>activity</i> type in most <i>project management systems</i> .
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 <i>project</i> planning, and are part of the progressive elaboration of the <i>project</i> . <i>Project teams</i> frequently identify, document, and validate assumptions as part of their planning <i>process</i> . Assumptions generally involve a degree of <i>risk</i> .
Authority	The right to apply <i>project resources</i> , expend funds, make decisions, or give approvals.

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Backward Pass	The calculation of <i>late finish dates</i> and <i>late start dates</i> for the uncompleted portions of all schedule activities. Determined by working backward through the schedule <i>network logic</i> from the <i>project's</i> end date. The end date may be calculated in a <i>forward pass</i> or set by the <i>customer</i> or <i>sponsor</i> . See also <i>schedule network analysis</i> .
Bar Chart	See <i>Gantt Chart</i>
Baseline	The approved time phased plan (for a <i>project</i> , a <i>work breakdown structure component</i> , a <i>work package</i> , or a <i>schedule activity</i>), plus or minus approved <i>project scope</i> , <i>cost</i> , 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.
Baseline Finish Date	See <i>scheduled finish date</i> .
Baseline Start Date	See <i>scheduled start date</i> .
Bottom-up Estimating [Technique]	A method of estimating a <i>component</i> of <i>work</i> . The <i>work</i> is decomposed into more detail. An <i>estimate</i> is prepared of what is needed to meet the <i>requirements</i> of each of the lower, more detailed pieces of <i>work</i> , and these <i>estimates</i> are then aggregated into a total quantity for the <i>component</i> of <i>work</i> . The accuracy of bottom-up estimating is driven by the size and complexity of the <i>work</i> identified at the lower levels. Generally smaller <i>work scopes</i> increase the accuracy of the <i>estimates</i> .
Budget	The approved <i>estimate</i> for the <i>project</i> or any <i>work breakdown structure component</i> or any <i>schedule activity</i> .
Budget at Completion (BAC)	The sum of all <i>budget</i> values established for the <i>work</i> to be performed on a <i>project</i> or a <i>work breakdown structure component</i> or a <i>schedule activity</i> . The total <i>planned value</i> of the <i>project</i> .
Budget Authority	<i>Authority</i> provided by law to enter into financial obligations that will result in immediate or future outlays of federal government funds. Budget authority includes the credit subsidy <i>costs</i> for direct loan and loan guarantee programs. Basic forms of budget authority include appropriations, borrowing <i>authority</i> , contract <i>authority</i> , and <i>authority</i> to obligate and expend offsetting receipts and collections.

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Change	A systematic way of reaching an intended outcome. Philosophically, change is what <i>project management</i> is all about.
Change Control	(1) Identifying, documenting, approving, or rejecting, and controlling changes to the <i>project baselines</i> . (2) The <i>process</i> of accepting or rejecting changes to the <i>project's baselines</i> . Lack of change control is a common cause of <i>scope creep</i> .

Change Control Board (CCB)	A formally constituted group of <i>stakeholders</i> responsible for reviewing, evaluating, approving, delaying, or rejecting changes to the <i>project</i> , with all decisions and recommendation being recorded.
Change Control System [Tool]	A collection of formal, documented <i>procedures</i> that define how <i>project deliverables</i> and documentation will be controlled, changed, and approved. In most application areas, the change control system is a subset of the <i>configuration management system</i> .
Change Order	A written document between the owner and the contractor signed by the owner and the contractor authorizing a change in the <i>work</i> or an adjustment in the <i>contract</i> sum or the <i>contract</i> time. A change order may be signed by the architect or engineer, provided they have written <i>authority</i> from the owner for such <i>procedure</i> and that a copy of such written <i>authority</i> is furnished to the contractor upon request. The <i>contract</i> sum and the <i>contract</i> time may be changed only by a change order. A change order may be in the form of additional compensation or time, or less compensation or time (known as a deduction from the <i>contract</i>); the amount deducted from the <i>contract</i> sum by change order.
Change Order Proposal	A change order proposal is the written document before it has been approved and effected by the contractor and the owner. A change order proposal can be issued by either the contractor or the owner. The change order proposal becomes a <i>change order</i> only after it has been approved and effected by the contractor and owner.
Change Order Request	A written document issued by the owner requesting an adjustment to the <i>contract</i> sum or an extension of the <i>contract</i> time; generally issued by the architect or the owner's representative.
Change Request	Requests to expand or reduce the <i>project scope</i> , modify policies, <i>processes</i> , plans, or <i>procedures</i> , modify <i>costs</i> or <i>budgets</i> , or revise schedules. Requests for a change can be direct or indirect, externally or internally initiated, legally or contractually mandated, or optional. Only formal, documented, <i>requested changes</i> are processed and only <i>approved change requests</i> are implemented.
Charter	See <i>project charter</i> .
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 <i>quality planning</i> and applied during <i>quality control</i> .
Claim	A request, demand, or assertion of rights by a seller against a buyer, of vice versa, for consideration, compensation, or payment under the terms of a legally binding <i>contract</i> , such as for a disputed change.
Closure	The <i>process</i> of finalizing all activities across all of the <i>project process</i> groups to formally close the <i>project</i> or <i>phase</i> .
Co-location [Technique]	An organizational placement strategy where the <i>project team members</i> are physically located close to one another in order to improve communication, working relationships, and productivity.
Commitment	Official consignment or pledge to do something

Communication Management Plan [Output/Input]	The document that describes: the communications needs and expectations for the <i>project</i> ; 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 <i>requirements</i> of the <i>project stakeholders</i> . The communication management plan is contained in, or is a subsidiary plan of, the <i>project management plan</i> .
Component	A constituent part, an element
Configuration Management System [Tool]	A subsystem of the overall <i>project management system</i> . It is a collection of formal documented <i>procedures</i> used to apply technical and administrative direction and surveillance to: identify and document the functional and physical characteristics of a <i>product</i> , result, <i>service</i> , or <i>component</i> ; control any changes to such characteristics; record and report each change and its implementation status; and support the audit of the <i>products</i> , results, or <i>components</i> to verify conformance to <i>requirements</i> . It includes the documentation, tracking <i>systems</i> , and defined approval levels necessary for authorizing and controlling changes. In most application areas, the configuration management includes the <i>change control system</i> .
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 <i>project</i> that will affect the performance of the <i>project</i> or a <i>process</i> . For example, a schedule <i>constraint</i> is any limitation or restraint placed on the <i>project schedule</i> that affects when a <i>schedule activity</i> can be scheduled, and is usually in the form of fixed <i>imposed dates</i> . A <i>cost constraint</i> is any limitation or restraint placed on the <i>project budget</i> , such as funds available over time. A <i>project resource constraint</i> is any limitation or restraint placed on <i>resource</i> usage, such as what <i>resource skills</i> or disciplines are available, and the amount of a given <i>resource</i> available during a specified time frame.
Constructability	The optimizing of <i>cost</i> , time, and quality factors with the material, equipment, construction means, methods, and <i>techniques</i> used on a <i>project</i> ; accomplished by matching owner values with available construction industry <i>practices</i> .
Construction Budget	The target <i>cost</i> figure covering the construction <i>phase</i> of a <i>project</i> . It includes the <i>cost</i> of <i>contracts</i> with trade contractors; construction support items; other purchased labor, material and equipment; and the construction manager's <i>cost</i> (but not the <i>cost</i> of land, A/E fees, or consultant fees).
Construction Management (CM)	A <i>project</i> delivery <i>system</i> that uses a construction manager to facilitate the design and construction of a <i>project</i> by organizing and directing men, materials, and equipment to accomplish the purpose of the designer. A professional <i>service</i> that applies effective management <i>techniques</i> to the planning, design, and construction of a <i>project</i> from inception to completion for the purpose of controlling time, <i>cost</i> and quality, as defined by the Construction Management Association of America (CMAA).
Contingency	See <i>reserve</i> .

Contingency Allowance	As a result of <i>risk analysis</i> , money or time may be set aside as <i>contingency</i> , which may be used in the event of <i>risks</i> occurring. Contingency allowance provides for variations, which may occur in the expected values of elements of <i>cost</i> or schedule, but not <i>scope</i> or quality. (Note: <i>contingency</i> should not be shown in the plan as separate items and not hidden in activities as 'an extra 10%' on <i>duration</i> or <i>cost</i> .)
Contingency Plan	A fallback position or workaround in the event of an adverse occurrence or <i>risk</i> event on a <i>project</i> .
Contingency Reserve [Output/Input]	The amount of money or time needed above the <i>estimate</i> to reduce the <i>risk</i> of overruns of <i>project objectives</i> to a level acceptable to the <i>organization</i> .
Contract [Output/Input]	A contract is a mutually binding <i>agreement</i> , which obligates the seller to provide the specified <i>product</i> or <i>service</i> or result, and obligates the buyer to pay for it.
Contract Administration [Process]	The <i>process</i> of managing the <i>contract</i> and the relationship with the buyer and seller; reviewing and documenting how a seller is performing or has performed to establish required <i>corrective actions</i> and provide a basis for future relationships with the seller; managing <i>contract</i> related changes; and, when appropriate, managing the contractual relationship with the outside buyer of the <i>project</i> .
Contract Closure [Process]	The <i>process</i> of completing and settling the <i>contract</i> , including resolution of any open items, and closing each <i>contract</i> .
Contract Documents	A term used to represent all executed <i>agreements</i> between the owner and contractor; any general, supplementary, or other <i>contract</i> conditions; the drawings and <i>specifications</i> ; all bidding documents, less bidding information, plus pre-award addenda issued prior to execution of the <i>contract</i> and post-award <i>Change Orders</i> ; and any other items specifically stipulated as being included in the <i>contract</i> documents, which collectively form the <i>contract</i> between the contractor and the owner.
Contract Management Plan [Output/Input]	The document that describes how a specific <i>contract</i> will be administered, and can include items such as required documentation delivery and performance <i>requirements</i> . A contract management plan can be formal or informal, highly detailed or broadly framed, based on the <i>requirements</i> in the <i>contract</i> . Each contract management plan is a subsidiary plan of the <i>project management plan</i> .
Contract Overrun	The <i>cost</i> deficit after determining the difference between the original <i>contract</i> price and the final completed <i>cost</i> , including all adjustments by approved <i>change order</i> .
Corrective Action	Documented direction for executing the <i>project work</i> to bring expected future performance of the <i>project work</i> in line with the <i>project management plan</i> .

Cost	The monetary value or price of a <i>project activity</i> or <i>component</i> that includes the monetary worth of the <i>resources</i> required to perform and complete the <i>activity</i> or <i>component</i> , or to produce the <i>component</i> . A specific cost can be composed of a combination of cost <i>components</i> , including direct labor hours, other <i>direct costs</i> , indirect labor hours, other indirect costs, and purchased price. (However, in the <i>earned value management methodology</i> , in some instances, the term cost can represent only labor hours without conversion to monetary worth.) See also <i>actual cost</i> and <i>estimate</i> .
Cost/Benefit	A criterion for comparing <i>programs</i> , <i>projects</i> , and alternatives when benefits or a given <i>objective</i> .
Cost Budgeting [Process]	The <i>process</i> of aggregating the estimated <i>cost estimates</i> of individual activities or <i>work packages</i> to establish a <i>cost baseline</i> .
Cost Control [Process]	The <i>process</i> of influencing the factors that creates variances, and controlling changes to the <i>project budget</i> .
Cost Estimate Validation Process (CEVP)	Using <i>input</i> from various disciplinary experts, <i>costs</i> associated with potential <i>risks</i> to a <i>project</i> are assessed and the <i>probability</i> of delivering a <i>project</i> at a given <i>cost</i> and by a given date is determined.
Cost Estimating [Process]	The <i>process</i> of developing an approximation of the <i>cost</i> of the <i>resources</i> needed to complete <i>project</i> activities.
Cost Management Plan [Output/Input]	The document that sets out the format and establishes the activities and <i>criteria</i> for planning, structuring, and controlling the <i>project costs</i> . A cost management plan can be formal or informal, highly detailed or broadly framed, based on the <i>requirements</i> of the <i>project stakeholders</i> . The cost management plan is contained in, or is a subsidiary plan of, the <i>project management plan</i> .
Cost Performance Index (CPI).	A measurement of <i>cost</i> efficiency on a <i>project</i> . It is the ratio of <i>earned value</i> (EV) to <i>actual cost</i> (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) Contract	A type of <i>cost reimbursable contract</i> where the buyer reimburses the seller for the seller's allowable <i>costs</i> for performing the <i>contract work</i> , and seller also receives a fee calculated as an agreed upon percentage of the <i>costs</i> . The fee varies with the <i>actual cost</i> .
Cost-Plus-Fixed-Fee (CPFF) Contract	A type of <i>cost-reimbursable contract</i> where the buyer reimburses the seller for the seller's allowable <i>costs</i> (allowable <i>costs</i> are defined by the <i>contract</i>), plus a fixed amount of profit (fee).
Cost-Plus-Incentive-Fee (CPIF) Contract	A type of <i>cost-reimbursable contract</i> where the buyer reimburses the seller for the seller's allowable <i>costs</i> (allowable <i>costs</i> are defined by the <i>contract</i>), and the seller earns its profit if it meets defined performance <i>criteria</i> .
Cost Risk Assessment [Process]	A Cost Risk Assessment is a highly structured approach to incorporate consideration of uncertainty in <i>project</i> modeling and management. It is applied to the <i>work product</i> for a <i>project</i> at any stage in the <i>project</i> evolution from the early conceptual or planning studies, through design and eventual construction.

Cost-Reimbursable Contract	A type of <i>contract</i> involving payment (reimbursement) by the buyer to the seller for the seller's <i>actual cost</i> , plus a fee typically representing seller's profit. <i>Costs</i> are usually classified as <i>direct costs</i> or indirect <i>costs</i> . <i>Direct costs</i> are <i>costs</i> incurred for the exclusive benefit of the <i>project</i> , such as salaries of full-time <i>project</i> staff. Indirect <i>costs</i> (also called overhead, and general and administrative <i>costs</i>) are <i>costs</i> allocated to the <i>project</i> by the performing <i>organization</i> as a <i>cost</i> of doing business, such as salaries of management indirectly involved in the <i>project</i> , and the <i>cost</i> of electric utilities for the office. Indirect <i>costs</i> are usually calculated as a percentage of <i>direct costs</i> . Cost-reimbursable <i>contracts</i> often include incentive clauses where, if the seller meets or exceeds selected <i>project objectives</i> , such as schedule targets or total <i>cost</i> , then the seller receives from the buyer an incentive or bonus payment.
Cost Variance (CV)	A measurement of <i>cost</i> performance on a <i>project</i> . It is the algebraic difference between the <i>earned value</i> (EV) and <i>actual cost</i> (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 <i>project schedule compression technique</i> performed by taking action to decrease the total <i>project schedule duration</i> after analyzing a number of alternatives to determine how to get the maximum schedule <i>duration</i> compression for the least additional <i>cost</i> . Typical approaches for <i>crashing</i> a schedule include reducing <i>schedule activity durations</i> and increasing the assignment of <i>resources</i> on schedule activities. See also <i>schedule compression</i> and <i>fast tracking</i> .
Criteria	<i>Standards</i> , rules, or tests on which a judgment or decision can be based, or by which a <i>product</i> , <i>service</i> , result, or <i>process</i> can be evaluated.
Critical Activity	Any <i>schedule activity</i> on a <i>critical path</i> in a <i>project schedule</i> . Most commonly determined by using the <i>critical path method</i> . Although some activities are "critical" in the dictionary sense, without being on the <i>critical path</i> , this meaning is seldom used in the <i>project</i> context.
Critical Chain Method [Technique]	A <i>schedule network analysis technique</i> that modifies the <i>project schedule</i> to account for limited <i>resources</i> . The critical chain method mixes deterministic and probabilistic approaches to <i>schedule network analysis</i> .
Critical Path [Output/Input]	Generally, but not always, the sequence of schedule activities that determines the <i>duration</i> of the <i>project</i> . Generally, it is the longest path through the <i>project</i> . However, a critical path can end, for example, on a <i>schedule milestone</i> that is in the middle of the <i>project schedule</i> and that has a finish-no-later-than <i>imposed date</i> schedule <i>constraint</i> . See also <i>critical path method</i> .
Critical Path Method (CPM) [Technique]	A <i>schedule network analysis technique</i> used to determine the amount of <i>scheduling</i> flexibility (the least amount of <i>float</i>) on various logical <i>network paths</i> in the <i>project schedule</i> network, and to determine the minimum total <i>project duration</i> . Early start and finish date are calculated by means of a <i>forward pass</i> using a specified <i>start date</i> . Late start and finish dates are calculated by means of a <i>backward pass</i> , starting from a specified completion date, which sometimes is the <i>project early finish date</i> determined during the <i>forward pass</i> calculation.

Customer	The person or <i>organization</i> that will use the <i>project's product</i> or <i>service</i> or result. See also <i>user</i> .
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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 <i>costs</i> or rewards of each logical path of events and future decisions, and uses expected monetary value analysis to help the <i>organization</i> identify the relative values of alternate actions.
Decomposition [Technique]	A planning <i>technique</i> that subdivides the <i>project scope</i> and <i>project deliverables</i> into smaller, more manageable <i>components</i> , until the <i>project work</i> associated with accomplishing the <i>project scope</i> and providing the deliverables is defined in sufficient detail to support executing, monitoring, and controlling the <i>work</i> .
Deliverable [Output/Input]	Any unique and verifiable <i>product</i> , result, or capability to perform a <i>service</i> that must be produced to complete a <i>process</i> , <i>phase</i> , or <i>project</i> . Often used more narrowly in reference to an external deliverable, which is a deliverable that is subject to approval by the <i>project sponsor</i> or <i>customer</i> . See also <i>product</i> , <i>service</i> , and result.
Delphi Technique [Technique]	An information-gathering <i>technique</i> used as a way to reach a consensus of experts on a subject. Experts on the subject participate in this <i>technique</i> anonymously. A facilitator uses a questionnaire to solicit ideas about the important <i>project</i> points related to the subject. The responses are summarized and are then recirculated to the experts for further comment. Consensus may be reached in a few rounds of this <i>process</i> . The Delphi <i>technique</i> helps reduce bias in the data and keeps any one person from having undue influence on the outcome.
Dependency	A relation between activities, such that one requires <i>input</i> from the other.
Design-Build (D-B)	<p>(1) A procurement or <i>project</i> delivery arrangement whereby a single entity (a contractor with subconsultants, or <i>team</i> of contractors and engineers, often with subconsultants) is entrusted with both design and construction of a <i>project</i>. This contrasts with traditional procurement, where one <i>contract</i> is bid for the design <i>phase</i> and then a second <i>contract</i> is bid for the construction <i>phase</i> of the <i>project</i>.</p> <p>(2) A <i>project</i> delivery method where a design-build contractor (contractor-led D-B), A/E design professional (design-led D-B), or CM (CM-led D-B) is directly responsible for both the total <i>project</i> design and construction of the <i>project</i>. Design-Build liability can be explicitly conveyed through the <i>contract documents</i>, or implicitly conveyed through the assumption of <i>project</i>-specific design liability, via performance <i>specifications</i>.</p> <p>(3) A written <i>agreement</i> between and contractor and owner wherein the contractor agrees to provide both design and construction services.</p>

Design-Build Contracting	A <i>contract</i> structure where both design and construction <i>responsibility</i> are vested in a single contractor.
Design-Build Contractor	A contractor that provides design and construction services under a single <i>responsibility contract</i> to an owner.
Design-Build Construction	When a Prime or Main contractor bids or negotiates to provide Design and Construction services for the entire construction <i>project</i> .
Direct Costs	The <i>costs</i> directly attributed to a work- <i>scope</i> , such as labor, material, equipment, and subcontracts, but not the <i>cost</i> of <i>operations</i> overhead and the labor, material, equipment, and subcontracts expended in support of the undertaking. Direct Costs, Hard Costs, and Construction Costs are synonymous.
Direct Labor Costs	<i>Costs</i> accruing from expended labor excluding the bonus portion of overtime, insurances, and payroll taxes.
Direct Material Costs	<i>Costs</i> accruing from material acquisition, including purchase price, freight, and taxes.
Duration (DU or DUR)	The number of <i>work</i> periods (not including holidays or other nonworking periods) required to complete a <i>schedule activity</i> or <i>work breakdown structure component</i> . Usually expressed as workdays or workweeks. Sometimes incorrectly equated with elapsed time. Contrast with <i>effort</i> .
Actual Duration	The time in calendar units between the <i>actual start date</i> of the <i>schedule activity</i> and either the data date of the <i>project schedule</i> if the <i>schedule activity</i> is in progress or the <i>actual finish date</i> if the <i>schedule activity</i> is complete.
Original Duration (OD)	The <i>activity duration</i> originally assigned to a <i>schedule activity</i> and not updated as progress is reported on the <i>activity</i> . Typically used for comparison with <i>actual duration</i> and <i>remaining duration</i> when reporting schedule progress.
Remaining Duration (RD)	The time in calendar units, between the data date of the <i>project schedule</i> and the finish date of a <i>schedule activity</i> that has an <i>actual start date</i> . This represents the time needed to complete a <i>schedule activity</i> where the <i>work</i> is in progress.

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Early Finish Date (EF)	In the <i>critical path method</i> , the earliest possible point in time on which the uncompleted portions of a <i>schedule activity</i> (or the <i>project</i>) can finish, based on the schedule <i>network logic</i> , the data date, and any schedule <i>constraints</i> . Early finish dates can change as the <i>project</i> progresses and as changes are made to the <i>project management plan</i> .
Early Start Date (ES)	In the <i>critical path method</i> , the earliest possible point in time on which the uncompleted portions of a <i>schedule activity</i> (or the <i>project</i>) can start, based on the schedule <i>network logic</i> the data date, and any schedule <i>constraints</i> . Early start dates can change as the <i>project</i> progresses and changes are made to the <i>project management plan</i> .

Earned Value (EV)	The value of completed <i>work</i> expressed in terms of the approved <i>budget</i> assigned to that <i>work</i> for a <i>schedule activity</i> or <i>work breakdown structure component</i> . Also referred to as the budgeted <i>cost</i> of <i>work</i> performed.
Earned Value Management (EVM)	A management <i>methodology</i> for integrating <i>scope</i> , schedule, and <i>resources</i> , and for objectively measuring <i>project</i> performance and progress. Performance is measured by determining the budgeted <i>cost</i> of <i>work</i> performed (i.e., <i>earned value</i>) and comparing it to the <i>actual cost</i> of <i>work</i> performed (i.e., <i>actual cost</i>). Progress is measured by comparing the <i>earned value</i> to the <i>planned value</i> .
Effort	The number of labor units required to complete a <i>schedule activity</i> or <i>work breakdown structure component</i> . Usually expressed as staff hours, staff days, or staff weeks. Contrast with <i>duration</i> .
Endorsement	Something, as a signature or voucher that validates or sanctions.
Estimate [Output/Input]	A quantitative assessment of the likely amount or outcome. Usually applied to <i>project costs</i> , <i>resources</i> , <i>effort</i> , and <i>durations</i> 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., ±x percent).
Estimate At Completion (EAC) [Output/Input]	The expected total <i>cost</i> of a <i>schedule activity</i> , a <i>work breakdown structure component</i> , or <i>project</i> when the defined <i>scope</i> of <i>work</i> will be completed. EAC is equal to the <i>actual cost</i> (AC) plus the <i>estimate to complete</i> (ETC) for all of the remaining <i>work</i> . EAC = AC plus ETC. The EAC may be calculated based on performance to date or estimated by the <i>project team</i> based on other factors, in which case it is often referred to as the latest revised <i>estimate</i> . See also <i>earned value technique</i> and <i>estimate to complete</i> .
Estimate To Complete (ETC) [Output/Input]	The expected additional <i>cost</i> needed to complete all the remaining <i>work</i> for a <i>schedule activity</i> , <i>work breakdown structure component</i> , or the <i>project</i> . See also <i>earned value technique</i> and <i>estimate at completion</i> .
Exception Report	Document that includes only major variations from plan (rather than all variations).

— F —

Failure Mode and Effect Analysis (FMEA) [Technique]	An analytical <i>procedure</i> in which each potential failure mode in every <i>component</i> of a <i>product</i> is analyzed to determine its effect on the <i>reliability</i> of that <i>component</i> and, by itself or in combination with other possible failure modes, on the <i>reliability</i> of the <i>product</i> or <i>system</i> and on the required function of the <i>component</i> ; or the examination of a <i>product</i> (at the <i>system</i> and/or lower levels) for all ways that a failure may occur. For each potential failure, an <i>estimate</i> is made of its effect on the total <i>system</i> and of its <i>impact</i> . In addition, a review is undertaken of the action planned to minimize the <i>probability</i> of failure and to minimize its effects.
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Fast Tracking [Technique]	A specific project <i>schedule compression technique</i> that changes <i>network logic</i> to overlap <i>phases</i> that would normally be done in sequence, such as the design <i>phase</i> and construction <i>phase</i> , or to perform schedule activities in parallel. See <i>schedule compression</i> and <i>crashing</i> .
Final Acceptance	The action of the owner accepting the <i>work</i> from the contractor when the owner deems the <i>work</i> completed in accordance with the <i>contract requirements</i> . The owner when making the <i>final payment</i> to the contractor confirms final acceptance.
Final Completion	The point at which both parties to a <i>contract</i> declare the other has satisfactorily completed its responsibilities under the <i>contract</i> .
Final Inspection	A final site review of the <i>project</i> by the contractor, owner, or owner's authorized representative prior to issuing the final certificate for payment.
Final Payment	The last payment from the owner to the contractor of the entire unpaid balance of the <i>contract</i> sum, as adjusted by any approved <i>change orders</i> .
Finish Date	A point in time associated with a <i>schedule activity's</i> completion. Usually qualified by one of the following: actual, planned, estimated, scheduled, early, late, <i>baseline</i> , target, or current.
Firm-Fixed-Price (FFP) Contract	A type of fixed price <i>contract</i> where the buyer pays the seller a set amount (as defined by the <i>contract</i>), regardless of the seller's <i>costs</i> .
Fixed Duration Scheduling	A <i>scheduling</i> method in which, regardless of the number of <i>resources</i> assigned to the <i>task</i> , the <i>duration</i> remains the same.
Fixed Fee	A set <i>contract</i> amount for all labor, materials, equipment and <i>services</i> ; and contractor's overhead and profit for all <i>work</i> being performed for a specific <i>scope</i> of <i>work</i> .
Fixed-Price-Incentive-Fee (FPIF) Contract	A type of <i>contract</i> where the buyer pays the seller a set amount (as defined by the <i>contract</i>), and the seller can earn an additional amount if the seller meets defined performance <i>criteria</i> .
Fixed-Price or Lump-Sum Contract	A type of <i>contract</i> involving a fixed total price for a well-defined <i>product</i> . Fixed-price <i>contracts</i> may also include incentives for meeting or exceeding selected <i>project objectives</i> , such as schedule targets. The simplest form of a fixed price <i>contract</i> is a purchase order.
Float	Also called <i>slack</i> .
Free Float (FF)	(1) The amount of time that a <i>schedule activity</i> can be delayed without delaying the early start of any immediately following schedule activities. (2) Time an <i>activity</i> can be delayed beyond its early dates without delaying any <i>successor activity</i> beyond its early dates. (3) Free float = [(ES of following <i>activity</i>) – (ES of present <i>activity</i>)] – (<i>Duration</i> of present <i>activity</i>).
Independent Float	Degree of flexibility, which an <i>activity</i> has, that does not affect the <i>float</i> available on any preceding or succeeding activities.

Negative Float	Time by which the start or <i>finish date</i> of an <i>activity</i> exceeds a required or late date.
Positive Float	Time available to complete non-critical activities or <i>work</i> items without affecting total <i>project duration</i> .
Total Float (TF)	The total amount of time that a <i>schedule activity</i> may be delayed from its <i>early start date</i> without delaying the <i>project finish date</i> , or violating a schedule <i>constraint</i> . Calculated using the <i>critical path method technique</i> and determining the difference between the <i>early finish dates</i> and <i>late finish dates</i> .
Zero Float	No excess time between activities. An <i>activity</i> with zero float is considered a <i>critical activity</i> . If the <i>duration</i> of any <i>critical activity</i> is increased (the <i>activity</i> slips), the <i>project finish date</i> will slip.
Flowcharting [Technique]	The depiction in a diagram format of the <i>inputs</i> , <i>process</i> actions, and <i>outputs</i> of one or more <i>processes</i> within a <i>system</i> .
Forecasts	<i>Estimates</i> or predictions of conditions and events in the <i>project's</i> future based on information and <i>knowledge</i> available at the time of the forecast. Forecasts are updated and reissued based on <i>work performance information</i> provided as the <i>project</i> is executed. The information is based on the <i>project's</i> past performance and expected future performance, and includes information that could <i>impact</i> the <i>project</i> in the future, such as <i>estimate at completion</i> and <i>estimate to complete</i> .
Forward Pass	The calculation of the early start and <i>early finish dates</i> for the uncompleted portions of all network activities. See also <i>schedule network analysis</i> and <i>backward pass</i> .
Functional Manager	Someone with management <i>authority</i> over an organizational unit within a <i>functional organization</i> . The manager of any group that actually makes a <i>product</i> or performs a <i>service</i> .
Functional Organization	A hierarchical <i>organization</i> where each employee has one clear superior, and staff are grouped by areas of specialization and managed by a person with expertise in that area.

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Gantt Chart	A chart using timelines and other symbols that illustrate multiple time-based activities or <i>projects</i> on a horizontal time scale. Also referred to as a <i>bar chart</i> . Activities are listed, with other tabular information, on the left side. <i>Activity durations</i> are shown in the form of horizontal bars. Invented by Henry Gantt. See also <i>bar chart</i> .
Gantt Chart - Ground Rules [Tool]	A list of acceptable and unacceptable behaviors adopted by a <i>project team</i> to improve working relationships, effectiveness, and communication.

—H—

Hammock Task	See <i>summary activity</i> .
Historical Information	Documents and data on prior <i>projects</i> , including <i>project</i> files, records, correspondence, closed <i>contracts</i> , and closed <i>projects</i> .

—I—

Impact	An assessment of the adverse effect of the <i>risk</i> occurring. Used in <i>risk analysis</i> as one part of the assessment of a <i>risk</i> , the other being likelihood.
Imposed Date	A fixed date imposed on a <i>schedule activity</i> or <i>schedule milestone</i> , usually in the form of a "start no earlier than" and "finish no later than" date.
Initiate	The <i>process</i> of formally recognizing that a new <i>project</i> exists, which includes transition of <i>projects</i> from one <i>phase</i> to another such as Scoping to Design or PS&E to Construction.
Input [Process Input]	Any item, whether internal or external to the <i>project</i> , that is required by a <i>process</i> before that <i>process</i> proceeds. May be an <i>output</i> from a predecessor <i>process</i> .

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—K—

Knowledge	Knowing something with the familiarity gained through experience, education, observation, or investigation; it is also understanding a <i>process</i> , <i>practice</i> , or <i>technique</i> , or how to use a <i>tool</i> .
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Lag [Technique]	A modification of a <i>logical relationship</i> that directs a delay in the <i>successor activity</i> . For example, in a <i>finish-to-start dependency</i> with a ten-day lag, the <i>successor activity</i> cannot start until ten days after the <i>predecessor activity</i> has finished. See also <i>lead</i> .
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Late Finish Date (LF)	In the <i>critical path method</i> , the latest possible point in time that a <i>schedule activity</i> may be completed based upon the schedule <i>network logic</i> , the <i>project</i> completion date, and any <i>constraints</i> assigned to the schedule activities without violating a schedule <i>constraint</i> or delaying the <i>project</i> completion date. The late finish dates are determined during the <i>backward pass</i> calculation of the <i>project schedule</i> network.
Late Start Date (LS)	In the <i>critical path method</i> , the latest possible point in time that a <i>schedule activity</i> may begin based upon the schedule <i>network logic</i> , the <i>project</i> completion date, and any <i>constraints</i> assigned to the schedule activities without violating a schedule <i>constraint</i> or delaying the <i>project</i> completion date. The late start dates are determined during the <i>backward pass</i> calculation of the <i>project schedule</i> network.
Lead [Technique]	A modification of a <i>logical relationship</i> that allows an acceleration of the <i>successor activity</i> . For example, in a <i>finish-to-start dependency</i> with a ten-day lead, the <i>successor activity</i> can start ten days before the <i>predecessor activity</i> has finished. See also <i>lag</i> . A negative lead is equivalent to a positive <i>lag</i> .
Lessons Learned [Output/Input]	The learning gained from the <i>process</i> of performing the <i>project</i> . Lessons learned may be identified at any point. Also considered a <i>project</i> record, to be included in the lessons learned <i>knowledge</i> base.
Level of Effort (LOE)	Support-type <i>activity</i> (e.g., seller or <i>customer</i> liaison, <i>project cost</i> accounting, <i>project management</i> , etc.) that does not readily lend itself to measurement of discrete accomplishment. It is generally characterized by a uniform rate of <i>work</i> performance over a period of time determined by the activities supported.
Logic Diagram	See <i>network diagram</i> .
Logical Relationship	A <i>dependency</i> between two <i>project schedule</i> activities, or between a <i>project schedule activity</i> and a <i>schedule milestone</i> . See also <i>precedence relationship</i> . The four possible types of logical relationships are: <i>Finish-to-Start</i> ; <i>Finish-to-Finish</i> ; <i>Start-to-Start</i> ; and <i>Start-to-Finish</i> . The finish-to-start relationship is the most common type of logical relationship and is the default in most <i>scheduling</i> software.
<i>Finish-to-Finish (FF)</i>	The <i>logical relationship</i> where completion of <i>work</i> of the <i>successor activity</i> cannot finish until the completion of <i>work</i> of the <i>predecessor activity</i> . See also <i>logical relationship</i> .
<i>Finish-to-Start (FS)</i>	The <i>logical relationship</i> where initiation of <i>work</i> of the <i>successor activity</i> depends upon the completion of <i>work</i> of the <i>predecessor activity</i> . See also <i>logical relationship</i> .
<i>Start-to-Finish (SF)</i>	The <i>logical relationship</i> where completion of the <i>successor schedule activity</i> is dependent upon the initiation of the predecessor <i>schedule activity</i> . See also <i>logical relationship</i> .
<i>Start-to-Start (SS)</i>	The <i>logical relationship</i> where initiation of the <i>work</i> of the <i>successor schedule activity</i> depends upon the initiation of the <i>work</i> of the predecessor <i>schedule activity</i> . See also <i>logical relationship</i> .

—M—

Manage Project Team [Process]	The <i>process</i> of tracking <i>team member</i> performance, providing feedback, resolving issues, and coordinating changes to enhance <i>project</i> performance.
Manage Stakeholders [Process]	The <i>process</i> of managing communications to satisfy the <i>requirements</i> of, and resolve issues with, <i>project stakeholders</i> .
Master Deliverables List (MDL)	<p>WSDOT’s standardized Master Deliverables List (MDL) is the starting point for a <i>project</i>-specific <i>work breakdown structure</i> (WBS). The MDL is a comprehensive list that identifies <i>project phases</i>, sub-phases, work <i>processes</i>, and <i>deliverables</i>. In a few cases, the MDL goes to the <i>task</i> level, for example in the environmental area.</p> <p>Rather than build a <i>work breakdown structure</i> from scratch, <i>project teams</i> eliminate items from the MDL, and add the appropriate <i>tasks</i>.</p> <p>The <i>project team</i> identifies <i>project</i> specific <i>tasks</i> with <i>input</i> from <i>project customers</i>, <i>sponsors</i>, and <i>stakeholders</i>. The <i>tasks</i> developed at the <i>project</i> level must roll up into the <i>deliverables</i> in the standardized MDL. It is to be used by all <i>projects</i> in the Highway Construction Program. The MDL is available on the WSDOT PDIS Internet site; see the PDIS definition for a web address.</p>
Matrix Organization	Any organizational structure in which the <i>project manager</i> shares <i>responsibility</i> with the <i>functional managers</i> for assigning priorities and for directing the <i>work</i> of persons assigned to the <i>project</i> .
Methodology	A <i>system</i> of <i>practices</i> , <i>techniques</i> , <i>procedures</i> , and rules used by those who <i>work</i> in a discipline.
Milestone	A significant point or event in the <i>project</i> . See also <i>schedule milestone</i> .
Milestone Schedule [Tool]	A summary-level schedule that identifies the major <i>schedule milestones</i> . See also master schedule.
Mission (Mission Statement)	Derived from the <i>project vision</i> , an action statement that is feasible in time and place and compatible with the pursuit of the vision. A brief summary, approximately one or two sentences, that sums up the background, purposes, and benefits of the <i>project</i> . A statement that answers three questions: (1) What do we do? (2) For whom do we do it? (3) How do we go about it?
Monitor	Collect <i>project</i> performance data with respect to a plan, produce performance measures, and report and disseminate performance information.
Monitor and Control Project Work [Process]	The <i>process</i> of monitoring and controlling the <i>processes</i> required to <i>initiate</i> , plan, execute, and close a <i>project</i> to meet the performance <i>objectives</i> defined in the <i>project management plan</i> and <i>project scope statement</i> .
Monitoring and Controlling Processes [Process Group]	Those <i>processes</i> performed to measure and <i>monitor project</i> execution so that <i>corrective action</i> can be taken when necessary to control the execution of the <i>phase</i> or <i>project</i> .

Monte Carlo Analysis	A <i>technique</i> that computes, or iterates, the <i>project cost</i> or <i>project schedule</i> many times using <i>input</i> values selected at random from <i>probability</i> distributions of possible <i>costs</i> or <i>durations</i> , to calculate a distribution of possible total <i>project cost</i> or completion dates.
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Near-Critical Activity	A <i>schedule activity</i> that has low <i>total float</i> . The concept of near critical is equally applicable to a <i>schedule activity</i> or schedule <i>network path</i> . The limit below which <i>total float</i> is considered near critical is subject to expert judgment and varies from <i>project</i> to <i>project</i> .
Network Diagram	A schematic display of the sequential and <i>logical relationships</i> of the activities that comprise the <i>project</i> . One popular drawing convention is called precedence diagramming. A view of <i>project</i> data in which the <i>project</i> logic is depicted graphically. Frequently called a flowchart, <i>PERT</i> chart, or <i>logic diagram</i> .
Network Logic	The collection of <i>schedule activity</i> dependencies that makes up a <i>project schedule network diagram</i> .
Network Loop	A schedule <i>network path</i> that passes the same <i>node</i> twice. Network loops cannot be analyzed using traditional <i>schedule network analysis techniques</i> such as the <i>critical path method</i> .
Network Open End	A <i>schedule activity</i> without any predecessor activities or <i>successor</i> activities creating an unintended break in a schedule <i>network path</i> . Network open ends are usually caused by missing <i>logical relationships</i> .
Network Path	Any continuous series of schedule activities connected with <i>logical relationships</i> in a <i>project schedule network diagram</i> .
Networking [Technique]	Developing relationships with persons who may be able to assist in the achievement of <i>objectives</i> and responsibilities.
Node	One of the defining points of a schedule network; a junction point joined to some or all of the other <i>dependency</i> lines. See <i>precedence diagramming method</i> .

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Objective	Something toward which <i>work</i> is to be directed; a strategic position to be attained or purpose to be achieved; a result to be obtained; a <i>product</i> to be produced; or a <i>service</i> to be performed.
Operations	An organizational function performing the ongoing execution of activities that produce the same <i>product</i> or provide a repetitive <i>service</i> .

Opportunity	A condition or situation favorable to the <i>project</i> ; a positive set of circumstances; a positive set of events; a <i>risk</i> that will have a positive <i>impact</i> on <i>project objectives</i> ; or a possibility for positive changes. Contrast with <i>threat</i> .
Organization	A group of persons organized for some purpose or to perform some type of <i>work</i> within an enterprise.
Organization Chart [Tool]	A method for depicting interrelationships among a group of persons working together toward a common <i>objective</i> .
Output [Process Output]	A <i>product</i> , result, or <i>service</i> generated by a <i>process</i> . May be an <i>input</i> to a <i>successor process</i> .

—P—

Parametric Estimating [Technique]	An estimating <i>technique</i> 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 <i>estimate</i> for <i>activity</i> parameters, such as <i>scope</i> , <i>cost</i> , <i>budget</i> , and <i>duration</i> . This <i>technique</i> can produce higher levels of accuracy depending upon the sophistication and the underlying data built into the model. An example for the <i>cost</i> parameter is multiplying the planned quantity of <i>work</i> to be performed by the historical <i>cost</i> per unit to obtain the estimated <i>cost</i> .
Pareto Diagram [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 <i>network paths</i> into the same <i>node</i> in a <i>project schedule network diagram</i> . Path convergence is characterized by a <i>schedule activity</i> with more than one <i>predecessor activity</i> .
Path Divergence	Extending or generating parallel schedule <i>network paths</i> from the same <i>node</i> in a <i>project schedule network diagram</i> . Path divergence is characterized by a <i>schedule activity</i> with more than one <i>successor activity</i> .
Percent Complete (PC or PCT)	An <i>estimate</i> , expressed as a percent, of the amount of <i>work</i> that has been completed on an <i>activity</i> or a <i>work breakdown structure component</i> .
Performance Reporting [Process]	The <i>process</i> 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 <i>work performance information</i> , <i>earned value management</i> parameters and calculations, and analyses of <i>project work</i> progress and status. Common formats for performance reports include <i>bar charts</i> , <i>S-curves</i> , histograms, tables, and <i>project schedule network diagrams</i> showing current schedule status.
Phase	See <i>project phase</i>
Planned Finish Date (PF)	See <i>scheduled finish date</i> .

Planned Start Date (PS)	See <i>scheduled start date</i> .
Planned Value (PV)	The authorized <i>budget</i> assigned to the scheduled <i>work</i> to be accomplished for a <i>schedule activity</i> or <i>work breakdown structure component</i> . Also referred to as the budgeted <i>cost</i> of <i>work</i> scheduled.
Planning Processes [Process Group]	Those <i>processes</i> performed to define and mature the <i>project scope</i> , develop the <i>project management plan</i> , and identify and schedule the <i>project</i> activities that occur within the <i>project</i> .
Portfolio Management [Technique]	The centralized management of one or more portfolios, which includes identifying, prioritizing, authorizing, managing, and controlling <i>projects</i> , <i>programs</i> , and other related <i>work</i> , to achieve specific strategic business <i>objectives</i> .
Position Description [Tool]	An explanation of a <i>project team members</i> roles and responsibilities.
Practice	A specific type of professional or management <i>activity</i> that contributes to the execution of a <i>process</i> and that may employ one or more <i>techniques</i> and <i>tools</i> .
Precedence Diagramming Method (PDM) [Technique]	A schedule network diagramming <i>technique</i> in which schedule activities are represented by boxes (or <i>nodes</i>). Schedule activities are graphically linked by one or more <i>logical relationships</i> to show the sequence in which the activities are to be performed.
Precedence Relationship	The term used in the <i>precedence diagramming method</i> for a <i>logical relationship</i> . In current usage, however, precedence relationship, <i>logical relationship</i> , and <i>dependency</i> are widely used interchangeably, regardless of the diagramming method used.
Pre-Construction Planning (Meeting)	A <i>team</i> -building <i>process</i> with the contractor and WSDOT used for the purpose of establishing overall <i>project scheduling</i> ; understanding <i>project commitments</i> ; and defining roles, responsibilities and levels of <i>authority</i> .
Predecessor Activity	The <i>schedule activity</i> that determines when the logical <i>successor activity</i> can begin or end.
Pre-Design Phase	The <i>phase</i> prior to the start of design where feasibility studies are done and conceptual <i>project cost estimates</i> are prepared. (We call this scoping or planning.)
Preventive Action	Documented direction to perform an <i>activity</i> that can reduce the <i>probability</i> of negative consequences associated with <i>project risks</i>
Prime Contractor	(1) Any contractor having a <i>contract</i> directly with the owner. (2) Usually the main (general) contractor for a specific <i>project</i> .
Probability	The likelihood of occurrence. In the context of <i>project risk</i> , a measure of the likelihood of a <i>risk</i> occurring.
Probability and Impact Matrix [Tool]	A common way to determine whether a <i>risk</i> is considered low, moderate, or high by combining the two dimensions of a <i>risk</i> : its <i>probability</i> of occurrence, and its <i>impact</i> on <i>objectives</i> 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 <i>products</i> , results, or <i>services</i> .
Process Group	See <i>Program Management Process Groups</i> .
Procurement Documents [Output/Input]	Those documents utilized in bid and proposal activities, which include buyer's Invitation for Bid, Invitation for Negotiations, <i>Request for Information</i> , Request for Quotation, <i>Request for Proposal</i> , and seller's responses.
Procurement Management Plan [Output/Input]	The document that describes how procurement (the <i>processes</i> from developing procurement documentation through <i>contract closure</i>) will be managed.
Product	An artifact that is produced, is quantifiable, and can be either an end item in itself or a <i>component</i> item. Additional words for products are material and goods. Contrast with result and <i>service</i> . See also <i>deliverable</i> .
Product Life Cycle	A collection of generally sequential, non-overlapping <i>product phases</i> whose names and numbers are determined by the manufacturing and control needs of the <i>organization</i> . The last <i>product</i> life cycle <i>phase</i> for a <i>product</i> is generally the <i>product's</i> deterioration and death. Generally, a <i>project life cycle</i> is contained within one or more product life cycles.
Product Scope	The features and functions that characterize a <i>product</i> , <i>service</i> , or result.
Product Scope Description	The documented narrative description of the <i>product scope</i> .
Professional Engineer	A professional firm and/or individual who is professionally engaged in an engineering discipline.
Program	A group of related <i>projects</i> managed in a coordinated way to obtain benefits and control not available from managing them individually. Programs may include elements of related <i>work</i> outside the <i>scope</i> of the discrete <i>projects</i> in the program.
Program Evaluation and Review Technique ("PERT")	A <i>project management technique</i> for determining how much time a <i>project</i> needs before it is completed. Each <i>activity</i> is assigned a best, worst, and most probable time <i>estimate</i> . These are used to determine the average completion time, which is used to figure the <i>critical path</i> and completion time for the <i>project</i> .
Program Management	The management of a series of related <i>projects</i> designed to accomplish broad goals, to which the individual <i>projects</i> contribute, which are typically executed over an extended period of time (i.e., a biennium).
Program Management Office (PMO)	The centralized management of a particular <i>program</i> or programs such that corporate benefit is realized by the sharing of <i>resources</i> , methodologies, <i>tools</i> , and <i>techniques</i> , and related high-level <i>project management</i> focus. See also <i>project management office</i> .
Progress Meeting	A meeting dedicated essentially to contractor progress during the construction <i>phase</i> .
Progress Milestones	Those <i>milestones</i> identified as the basis for making progress payments.

Progress Payment	Partial payments on a contractor's <i>contract</i> amount, periodically paid by the owner for <i>work</i> accomplished by the contractor to date, determined by calculating the difference between the completed <i>work</i> and materials stored and a predetermined schedule of values or unit <i>costs</i> .
Progress Schedule	A line diagram showing proposed and actual starting and completion times of the respective <i>project</i> activities.
Project	A temporary endeavor undertaken to create a unique <i>product</i> , <i>service</i> , or result.
Project Budget	The amount and distribution of money allocated to a <i>project</i> .
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 <i>resource calendar</i> .
Project Charter [Output/Input]	A document issued by the <i>project</i> initiator or <i>sponsor</i> that formally authorizes the existence of a <i>project</i> , and provides the <i>project manager</i> with the <i>authority</i> to apply organizational <i>resources</i> to <i>project</i> activities.
Project Communication Plan	A plan, which may range from a formal Contract/Responsibility Chart with detailed instructions on a large <i>project</i> , to an informal list of contact names, telephone numbers, and schedule of meetings on a small <i>project</i> .
Project Communications Management [Knowledge Area]	A subset of <i>project management</i> that includes the <i>processes</i> required to ensure timely and appropriate generation, collection and dissemination, storage and ultimate disposition of <i>project</i> information. It consists of communications planning, information distribution, <i>performance reporting</i> , and administrative <i>closure</i> .
Project Cost	All <i>costs</i> for a specific <i>project</i> , including <i>costs</i> for land, professionals, construction, furnishings, fixtures, equipment, financing, and any other <i>project</i> -related <i>costs</i> .
Project Cost Management [Knowledge Area]	A subset of <i>project management</i> that includes the <i>processes</i> required to ensure that the <i>project</i> is completed within the approved <i>budget</i> . It consists of <i>resource planning</i> , <i>cost estimating</i> , <i>cost budgeting</i> , and <i>cost control</i> .
Project Cost Management	The <i>process</i> of placing <i>responsibility</i> on the designers and implementers to perform within established <i>budgets</i> . Actual and <i>budget project costs</i> are compared. Two principles apply: (1) There must be a basis for comparison; and (2) Only future <i>costs</i> can be controlled.
Project Human Resource Management [Knowledge Area]	A subset of <i>project management</i> that includes the <i>processes</i> required to make the most effective use of the people involved with the <i>project</i> . It consists of organizational planning, staff acquisition, and <i>team</i> development.
Project Initiation	Launching a <i>process</i> that can result in the authorization and <i>scope definition</i> of a new <i>project</i> .

Project Integration Management [Knowledge Area]	A subset of <i>project management</i> that includes the <i>processes</i> required to ensure that the various elements of the <i>project</i> are properly coordinated. It consists of <i>project plan</i> development, <i>project plan</i> execution, and integrated <i>change control</i> .
Project Life Cycle	A collection of generally sequential <i>project phases</i> whose names and numbers are determined by the control needs of the <i>organization</i> or <i>organizations</i> involved in the <i>project</i> . A life cycle can be documented with a <i>methodology</i> .
Project Management (PM)	The application of <i>knowledge</i> , <i>skills</i> , <i>tools</i> , and <i>techniques</i> to <i>project</i> activities to meet the <i>project requirements</i> .
Project Management Body of Knowledge (PMBOK®)	An inclusive term that describes the sum of <i>knowledge</i> within the profession of <i>project management</i> . As with other professions, such as law, medicine, and accounting, the body of <i>knowledge</i> rests with the practitioners and academics that apply and advance it. The complete <i>project management</i> body of <i>knowledge</i> includes proven traditional <i>practices</i> that are widely applied and innovative <i>practices</i> that are emerging in the profession. The body of <i>knowledge</i> includes both published and unpublished material. The PMBOK is constantly evolving.
Project Management Information System (PMIS) [Tool]	An information <i>system</i> consisting of the <i>tools</i> and <i>techniques</i> used to gather, integrate, and disseminate the <i>outputs</i> of <i>project management processes</i> . It is used to support all aspects of the <i>project</i> from initiating through closing, and can include both manual and automated <i>systems</i> .
Project Management Knowledge Area	An identified area of <i>project management</i> defined by its <i>knowledge requirements</i> and described in terms of its <i>component processes</i> , <i>practices</i> , <i>inputs</i> , <i>outputs</i> , <i>tools</i> , and <i>techniques</i> .
Project Management Office (PMO)	An organizational body or entity assigned various responsibilities related to the centralized and coordinated management of those <i>projects</i> under its domain. The responsibilities of a PMO can range from providing <i>project management</i> support functions to actually being responsible for the direct management of a <i>project</i> . See also <i>program management office</i> .
Project Management Plan [Output/Input]	A formal, approved document that defines how the <i>project</i> 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 <i>processes</i> , unique to <i>project management</i> and described in the PMBOK® Guide.
Project Management Process Group	A logical grouping of the <i>project management processes</i> described in the PMBOK® Guide. The project management process groups include initiating <i>processes</i> ; planning processes; executing processes; monitoring and controlling processes; and closing processes. Collectively, these five groups are required for any <i>project</i> , have clear internal dependencies, and must be performed in the same sequence on each <i>project</i> , independent of the application area or the specifics of the applied <i>project life cycle</i> . project management process groups are not <i>project phases</i> .
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 <i>project management team</i> with planning, monitoring, and controlling the <i>project</i> , including: <i>cost estimating</i> , <i>scheduling</i> , communications, collaboration, configuration management, document control, records management, and <i>risk analysis</i> .
Project Management System [Tool]	The aggregation of the <i>processes</i> , <i>tools</i> , <i>techniques</i> , methodologies, <i>resources</i> , and <i>procedures</i> to manage a <i>project</i> . The <i>system</i> is documented in the <i>project management plan</i> and its content will vary depending upon the application area, organizational influence, complexity of the <i>project</i> , and the availability of existing <i>systems</i> . A <i>project management</i> system, which can be formal or informal, aids a <i>project manager</i> in effectively guiding a <i>project</i> to completion. A <i>project management</i> system is a set of <i>processes</i> and the related monitoring and control functions that are consolidated and combined into a functioning, unified whole.
Project Management Team	The members of the <i>project team</i> who are directly involved in <i>project management</i> activities. On some smaller <i>projects</i> , the project management team may include virtually all of the <i>project team members</i> .
Project Manager (PM)	<p>(1) The person assigned by the performing <i>organization</i> to achieve the <i>project objectives</i>.</p> <p>(2) Any person assigned to lead a <i>team</i> toward completion of a <i>project</i>. A <i>project manager</i> applies specialized <i>knowledge</i>, <i>skills</i>, <i>tools</i>, and <i>techniques</i> in order to meet <i>customer</i> expectations of a <i>project</i>.</p> <p>(3) The person who heads up the <i>project team</i> and has the <i>authority</i> and <i>responsibility</i> for conducting the <i>project</i> and meeting <i>project objectives</i> through <i>project management</i>.</p> <p>(4) A qualified individual or firm authorized by the owner to be directly responsible for the day-to-day management and administration, and for coordinating time, equipment, money, <i>tasks</i>, and people for all or specified portions of a specific <i>project</i>.</p>
Project Network Diagram	Any schematic display of the <i>logical relationship</i> of <i>project</i> activities. (See precedence diagram.)
Project Organization Chart [Output/Input]	A document that graphically depicts the <i>project team members</i> and their interrelationships for a specific <i>project</i> .
Project Plan	A management summary document giving the essentials of a <i>project</i> in terms of its <i>objectives</i> , justification, and how the <i>objectives</i> are to be achieved. It should describe how all the major activities under each <i>project management</i> function are to be accomplished, including overall <i>project</i> control.
Project Phase	A collection of logically-related <i>project</i> activities, usually culminating in the completion of a major <i>deliverable</i> . Project phases (also called <i>phases</i>) are mainly completed sequentially, but can overlap in some <i>project</i> situations. <i>Phases</i> can be subdivided into subphases and then <i>components</i> ; this hierarchy, if the <i>project</i> or portions of the <i>project</i> are divided into <i>phases</i> , is contained in the <i>work breakdown structure</i> . A <i>project</i> phase is a <i>component</i> of a <i>project life cycle</i> . A <i>project</i> phase is not a <i>project management process</i> group.

Project Process Groups	The five <i>process</i> groups required for any <i>project</i> that have clear dependencies and that are required to be performed in the same sequence on each <i>project</i> , independent of the application area or the specifics of the applied <i>project life cycle</i> . The <i>process</i> groups are initiating, planning, executing, monitoring and controlling, and closing.
Project Procurement Management [Knowledge Area]	A subset of <i>project management</i> that includes the <i>processes</i> required to acquire goods and <i>services</i> to attain <i>project scope</i> from outside the performing <i>organization</i> . It consists of procurement, planning, solicitation planning, solicitation, source selection, <i>contract administration</i> , and <i>contract</i> closeout.
Project Quality Management [Knowledge Area]	A subset of <i>project management</i> that includes the <i>processes</i> required to ensure that the <i>project</i> will satisfy the needs for which it was undertaken. It consists of <i>quality planning</i> , <i>quality assurance</i> , and <i>quality control</i> .
Project Risk Management	The <i>process</i> of identification, assessment, allocation, and management of <i>project risks</i> .
Project Risk Management [Knowledge Area]	<i>Risk Management</i> is the systematic <i>process</i> of identifying, analyzing, and responding to <i>project risk</i> . It includes maximizing the <i>probability</i> and consequences of positive events and minimizing the <i>probability</i> and consequences of events adverse to <i>project objectives</i> . It includes the <i>processes</i> of <i>risk management planning</i> , <i>risk identification</i> , <i>qualitative risk analysis</i> , <i>quantitative risk analysis</i> , <i>risk response planning</i> , and <i>risk monitoring</i> and control.
Project Risks	Factors that may cause a failure to meet the <i>project's objectives</i> . <i>Risks</i> may be associated with opportunities. <i>Risk</i> is the <i>product</i> of the <i>probability</i> of an event occurring, times its <i>impact</i> if it did. <i>Risks</i> exist as a consequence of uncertainty.
Project Schedule [Output/Input]	The planned dates for performing schedule activities and the planned dates for meeting <i>schedule milestones</i> .
Project Scope	The <i>work</i> that must be performed to deliver a <i>product</i> , <i>service</i> , or result with the specified features and functions.
Project Scope Management [Knowledge Area]	A subset of <i>project management</i> that includes the <i>processes</i> required to ensure that the <i>project</i> includes all of the <i>work</i> required, and only the <i>work</i> required, to complete the <i>project</i> successfully. It consists of initiation, <i>scope planning</i> , <i>scope definition</i> , <i>scope verification</i> , and <i>scope change control</i> .
Project Scope Management Plan [Output/Input]	The document that describes how the <i>project scope</i> will be defined, developed, and verified; how the <i>work breakdown structure</i> will be created and defined; and provides guidance on how the <i>project scope</i> will be managed and controlled by the <i>project management team</i> . It is contained in or is a subsidiary plan of the <i>project management plan</i> . The project scope management plan can be informal and broadly framed, or formal and highly detailed, based on the needs of the <i>project</i> .

Project Scope Statement [Output/Input]	The narrative description of the <i>project scope</i> , including major <i>deliverables</i> , <i>project objectives</i> , <i>project assumptions</i> , <i>project constraints</i> , and a <i>statement of work</i> , that provides a documented basis for making future <i>project</i> decisions and for confirming or developing a common understanding of <i>project scope</i> among the <i>stakeholders</i> . The definition of the <i>project scope</i> — what needs to be accomplished.
Project Stakeholder	See <i>stakeholder</i> .
Project Summary Work Breakdown Structure (PSWBS) [Tool]	A <i>work breakdown structure</i> for the <i>project</i> 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 <i>contract work breakdown structures</i> .
Project Sponsor	The owner of the <i>project</i> business case, representing the funder's interests.
Project Team	All the <i>project team members</i> , including the <i>project management team</i> , the <i>project manager</i> and, for some <i>projects</i> , the <i>project sponsor</i> .
Project Team Directory	A documented list of <i>project team</i> members, and their <i>project</i> roles and communication information.
Project Team Members	The persons who report either directly or indirectly to the <i>project manager</i> , and who are responsible for performing <i>project work</i> as a regular part of their assigned duties.
Project Time Management [Knowledge Area]	A subset of <i>project management</i> that includes the <i>processes</i> required to ensure timely completion of the <i>project</i> . It consists of <i>activity</i> definition, <i>activity</i> sequencing, <i>activity duration</i> estimating, <i>schedule development</i> , and <i>schedule control</i> .
Project Vision	The picturing of the <i>project's deliverable</i> as the solution of the stated need or problem. A "word picture" describing the Project Vision.
Project Work	See <i>work</i> .
Projectized Organization	Any organizational structure in which the <i>project manager</i> has full <i>authority</i> to assign priorities, apply <i>resources</i> , and direct the <i>work</i> of persons assigned to the <i>project</i> .

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Qualitative Risk Analysis [Process]	The <i>process</i> of prioritizing <i>risks</i> for subsequent further analysis or action by assessing and combining their <i>probability</i> of occurrence and <i>impact</i> .
Quality	(1) The degree to which a set of inherent characteristics fulfills <i>requirements</i> . (2) The totality of features and characteristics of a <i>product</i> or <i>service</i> that bear on its ability to satisfy stated or implied needs.

Quality Assurance (QA)	All those planned and systematic actions necessary to provide adequate confidence that a <i>product</i> or <i>service</i> will satisfy given <i>requirements</i> for quality.
Quality Assurance (QA) [Process]	The <i>process</i> of applying the planned, systematic quality activities (such as audits or peer reviews) to ensure that the <i>project</i> employs all <i>processes</i> needed to meet <i>requirements</i> .
Quality Control (QC) [Process]	The <i>process</i> of monitoring specific <i>project</i> results to determine whether they comply with relevant quality <i>standards</i> , and identifying ways to eliminate causes of unsatisfactory performance.
Quality Management Plan [Output/Input]	The quality management plan describes how the <i>project management team</i> will implement the performing <i>organization's</i> quality policy. The quality management plan is a <i>component</i> or a subsidiary plan of the <i>project management plan</i> . The quality management plan may be formal or informal, highly detailed, or broadly framed, based on the <i>requirements</i> of the <i>project</i> .
Quality Planning [Process]	The <i>process</i> of identifying which quality <i>standards</i> are relevant to the <i>project</i> and determining how to satisfy them.
Quantitative Risk Analysis [Process]	The <i>process</i> of numerically analyzing the effect on overall <i>project objectives</i> of identified <i>risks</i> .

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Regulation	<i>Requirements</i> imposed by a governmental body. These <i>requirements</i> can establish <i>product, process</i> or <i>service</i> characteristics—including applicable administrative provisions—that have government-mandated compliance.
Reliability	The <i>probability</i> of a <i>product</i> performing its intended function under specific conditions for a given period of time.
Request for Information (RFI)	A type of procurement document whereby the buyer requests a potential seller to provide various pieces of information related to a <i>product</i> or <i>service</i> or seller capability.
Request for Proposal (RFP)	A type of procurement document used to request proposals from prospective sellers of <i>products</i> or <i>services</i> . In some application areas, it may have a narrower or more specific meaning.
Requested Change [Output/Input]	A formally documented <i>change request</i> that is submitted for approval to the integrated <i>change control process</i> . Contrast with <i>approved change request</i> .
Requirement	A condition or capability that must be met or possessed by a <i>system, product, service, result, or component</i> to satisfy a <i>contract, standard, specification</i> , or other formally imposed documents. Requirements include the quantified and documented needs, wants, and expectations of the <i>sponsor, customer</i> , and other <i>stakeholders</i> .

Reserve	A provision in the <i>project management plan</i> to mitigate <i>cost</i> and/or schedule <i>risk</i> . Often used with a modifier (e.g., management reserve, <i>contingency reserve</i>) to provide further detail on what types of <i>risk</i> are meant to be mitigated. The specific meaning of the modified term varies by application area.
Reserve Analysis [Technique]	An analytical <i>technique</i> to determine the essential features and relationships of <i>component</i> s in the <i>project management plan</i> to establish a <i>reserve</i> for the schedule <i>duration</i> , <i>budget</i> , estimated <i>cost</i> , or funds for a <i>project</i> .
Residual Risk	A <i>risk</i> that remains after <i>risk</i> responses have been implemented.
Resource	Skilled human resources (specific disciplines either individually or in crews or <i>teams</i>), equipment, <i>services</i> , supplies, commodities, material, <i>budgets</i> , or funds.
Resource Breakdown Structure (RBS)	A hierarchical structure of <i>resources</i> by <i>resource</i> category and <i>resource</i> type used in <i>resource leveling</i> schedules and to develop <i>resource-limited schedules</i> , and which may be used to identify and analyze <i>project</i> human <i>resource</i> assignments.
Resource Calendar	A calendar of working days and nonworking days that determines those dates on which each specific <i>resource</i> is idle or can be active. Typically defines <i>resource</i> -specific holidays and <i>resource</i> -availability periods. See also <i>project calendar</i> .
Resource-Constrained Schedule	See <i>resource-limited schedule</i> .
Resource Histogram	A <i>bar chart</i> showing the amount of time that a <i>resource</i> is scheduled to <i>work</i> over a series of time periods. <i>Resource</i> availability may be depicted as a line for comparison purposes. Contrasting bars may show actual amounts of <i>resource</i> used as the <i>project</i> progresses.
Resource Leveling [Technique]	Any form of <i>schedule network analysis</i> in which <i>scheduling</i> decisions (start and <i>finish dates</i>) are driven by <i>resource constraints</i> (e.g., limited <i>resource</i> availability or difficult-to-manage changes in <i>resource</i> availability levels).
Resource-Limited Schedule	A <i>project schedule</i> whose <i>schedule activity</i> , <i>scheduled start dates</i> and <i>scheduled finish dates</i> reflect expected <i>resource</i> availability. A resource-limited schedule does not have any early or late start or finish dates. The resource-limited schedule <i>total float</i> is determined by calculating the difference between the <i>critical path method late finish date</i> and the resource-limited <i>scheduled finish date</i> . Sometimes called resource constrained schedule. See also <i>resource leveling</i> .
Resource Planning	Determining what <i>resources</i> (people, equipment, materials) are needed in what quantities to perform <i>project</i> activities.
Responsibility	The duties, assignments, and accountability for results associated with a designated position in the <i>organization</i> .
Responsibility Assignment Matrix (RAM) [Tool]	A structure that relates the <i>project</i> organizational breakdown structure to the <i>work breakdown structure</i> to help ensure that each <i>component</i> of the <i>project's scope</i> of <i>work</i> is assigned to a responsible person.

Result	An <i>output</i> from performing <i>project management processes</i> and activities. Results include outcomes (e.g., integrated <i>systems</i> , revised <i>process</i> , restructured <i>organization</i> , tests, trained personnel) and documents (e.g., policies, plans, studies, <i>procedures</i> , <i>specifications</i> , reports). Contrast with <i>product</i> and <i>service</i> . See also <i>deliverable</i> .
Risk	An uncertain event or condition that, if it occurs, has a positive or negative effect on a <i>project's objectives</i> . See also <i>risk category</i> and <i>risk breakdown structure</i> .
Risk Acceptance [Technique]	A <i>risk response planning technique</i> that indicates that the <i>project team</i> has decided not to change the <i>project management plan</i> to deal with a <i>risk</i> , or is unable to identify any other suitable response strategy.
Risk Analysis	An examination of <i>risk</i> areas or events to assess the probable consequences for each event (or combination of events in the analysis), and determine possible options for avoidance.
Risk Avoidance [Technique]	A <i>risk response planning technique</i> for a <i>threat</i> that creates changes to the <i>project management plan</i> that are meant to either eliminate the <i>risk</i> or to protect the <i>project objectives</i> from its <i>impact</i> . Generally, <i>risk</i> avoidance involves relaxing the time, <i>cost</i> , <i>scope</i> , or quality <i>objectives</i> .
Risk Breakdown Structure (RBS) [Tool]	A hierarchically-organized depiction of the identified <i>project risks</i> arranged by <i>risk category</i> and subcategory that identifies the various areas and causes of potential risks. The risk breakdown structure is often tailored to specific <i>project</i> types.
Risk Category	A group of potential causes of <i>risk</i> . <i>Risk</i> causes may be grouped into categories such as technical, external, organizational, environmental, or <i>project management</i> . A category may include subcategories such as technical maturity, weather, or aggressive estimating. See also <i>risk breakdown structure</i> .
Risk Database	A repository that provides for collection, maintenance, and analysis of data gathered and used in the <i>risk management processes</i> .
Risk Identification [Process]	The <i>process</i> of determining which <i>risks</i> might affect the <i>project</i> and documenting their characteristics.
Risk Management	An organized assessment and control of <i>project risks</i> .
Risk Management Plan [Output/Input]	The document describing how <i>project risk management</i> will be structured and performed on the <i>project</i> . It is contained in or is a subsidiary plan of the <i>project management plan</i> . The risk management plan can be informal and broadly framed, or formal and highly detailed, based on the needs of the <i>project</i> . Information in the risk management plan varies by application area and <i>project</i> size. The risk management plan is different from the <i>risk register</i> that contains the list of <i>project risks</i> , the results of <i>risk analysis</i> , and the risk responses.
Risk Management Planning [Process]	The <i>process</i> of deciding how to approach, plan, and execute <i>risk management</i> activities for a <i>project</i> .
Risk Mitigation [Technique]	A <i>risk response planning technique</i> associated with <i>threats</i> that seeks to reduce the <i>probability</i> of occurrence or <i>impact</i> of a <i>risk</i> to below an acceptable <i>threshold</i> .

Risk Monitoring and Control [Process]	The <i>process</i> of tracking identified <i>risks</i> , monitoring <i>residual risks</i> , identifying new <i>risks</i> , executing risk response plans, and evaluating their effectiveness throughout the <i>project life cycle</i> .
Risk Register [Output/Input]	The document containing the results of the <i>qualitative risk analysis</i> , <i>quantitative risk analysis</i> , and <i>risk response planning</i> . The risk register details all identified <i>risks</i> , including description, category, cause, <i>probability</i> of occurring, <i>impact</i> (s) on <i>objectives</i> , proposed responses, owners, and current status. The risk register is a <i>component</i> of the <i>project management plan</i> .
Risk Response Planning [Process]	The <i>process</i> of developing options and actions to enhance opportunities and to reduce <i>threats</i> to <i>project objectives</i> .
Risk Transference [Technique]	A <i>risk response planning technique</i> that shifts the <i>impact</i> of a <i>threat</i> to a third party, together with ownership of the response.
Role	A defined function to be performed by a <i>project team member</i> , such as testing, filing, inspecting, and coding.
Root Cause Analysis [Technique]	An analytical <i>technique</i> used to determine the basic underlying reason that causes a variance or a defect or a <i>risk</i> . A root cause may underlie more than one variance or defect or <i>risk</i> .

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Scalability	Scale, defined by Webster's, is a progressive classification, as of size, amount, importance, or rank. In other words, scalability is the level of <i>work</i> planning required based on the <i>project</i> size, <i>project</i> complexity, and <i>team</i> size. The <i>project manager</i> determines the appropriate level of detail.
Schedule	See <i>project schedule</i> and see also <i>schedule model</i> .
Schedule Activity	A discrete scheduled <i>component</i> of <i>work</i> performed during the course of a <i>project</i> . A schedule <i>activity</i> normally has an estimated <i>duration</i> , an estimated <i>cost</i> , and estimated <i>resource requirements</i> . Schedule activities are connected to other schedule activities or <i>schedule milestones</i> with <i>logical relationships</i> , and are decomposed from <i>work packages</i> .
Schedule Analysis	See <i>schedule network analysis</i> .
Schedule Compression [Technique]	Shortening the <i>project schedule duration</i> without reducing the <i>project scope</i> . See also <i>crashing</i> and <i>fast tracking</i> .
Schedule Control [Process]	The <i>process</i> of controlling changes to the <i>project schedule</i> .
Schedule Development [Process]	The <i>process</i> of analyzing <i>schedule activity</i> sequences, schedule <i>activity durations</i> , <i>resource requirements</i> , and schedule <i>constraints</i> to create the <i>project schedule</i> .

Schedule Management Plan [Output/Input]	The document that establishes <i>criteria</i> and the activities for developing and controlling the <i>project schedule</i> . It is contained in, or is a subsidiary plan of, the <i>project management plan</i> . The schedule management plan may be formal or informal, highly detailed or broadly framed, based on the needs of the <i>project</i> .
Schedule Milestone	A significant event in the <i>project schedule</i> , such as an event restraining future <i>work</i> or marking the completion of a major <i>deliverable</i> . A schedule milestone has zero <i>duration</i> . Sometimes called a <i>milestone activity</i> . See also <i>milestone</i> .
Schedule Model [Tool]	A model used in conjunction with manual methods or <i>project management software</i> to perform <i>schedule network analysis</i> to generate the <i>project schedule</i> for use in managing the execution of a <i>project</i> . See also <i>project schedule</i> .
Schedule Network Analysis [Technique]	The <i>technique</i> of identifying early and <i>late start dates</i> , as well as early and <i>late finish dates</i> , for the uncompleted portions of <i>project schedule activities</i> . See also <i>critical path method</i> , <i>critical chain method</i> , what-if analysis, and <i>resource leveling</i> .
Schedule Performance Index (SPI)	A measure of schedule efficiency on a <i>project</i> . It is the ratio of <i>earned value</i> (EV) to <i>planned value</i> (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 <i>earned value management</i> .
Schedule Variance (SV)	A measure of schedule performance on a <i>project</i> . It is the algebraic difference between the <i>earned value</i> (EV) and the <i>planned value</i> (PV). SV = EV minus PV. See also <i>earned value management</i> .
Scheduled Finish Date (SF)	The point in time that <i>work</i> was scheduled to finish on a <i>schedule activity</i> . The scheduled finish date is normally within the range of dates delimited by the <i>early finish date</i> and the <i>late finish date</i> . It may reflect <i>resource leveling</i> of scarce <i>resources</i> . Sometimes called <i>planned finish date</i> .
Scheduled Start Date (SS)	The point in time that <i>work</i> was scheduled to start on a <i>schedule activity</i> . The scheduled start date is normally within the range of dates delimited by the <i>early start date</i> and the <i>late start date</i> . It may reflect <i>resource leveling</i> of scarce <i>resources</i> . Sometimes called <i>planned start date</i> .
Scheduling	The <i>process</i> of converting a general or outline plan for a <i>project</i> into a time-based schedule based on the available <i>resources</i> and time <i>constraints</i> .
Scope	The sum of the <i>products</i> , <i>services</i> , and results to be provided as a <i>project</i> . See also <i>project scope</i> and <i>product scope</i> .
Scope Baseline	See <i>baseline</i> .
Scope Change	Any change to the <i>project scope</i> . A scope change almost always requires an adjustment to the <i>project cost</i> or schedule.
Scope Control [Process]	The <i>process</i> of controlling changes to the <i>project scope</i> .

Scope Creep	Adding features and functionality (<i>project scope</i>) without addressing the effects on time, <i>costs</i> , and <i>resources</i> , or without <i>customer</i> approval.
Scope Definition [Process]	The <i>process</i> of developing a detailed <i>project scope statement</i> as the basis for future <i>project</i> decisions.
Scope Management	The function of controlling a <i>project</i> in terms of its goals and <i>objectives</i> through the <i>processes</i> of conceptual development; full definition or <i>scope</i> statement; execution; and termination.
Scope Planning [Process]	The <i>process</i> of creating a <i>project scope management plan</i> .
Scope Statement	A documented description of the <i>project's output</i> or <i>deliverables</i> .
Scope Verification [Process]	The <i>process</i> of formalizing acceptance of the completed <i>project deliverables</i> .
SCoRE (Scope, Cost, and Risk Evaluation)	<p>A peer level review/due diligence analysis on the <i>scope</i> schedule and cost <i>estimate</i> for <i>projects</i>. Evaluates the quality and completeness, including anticipated <i>risk</i> and variability, of the projected <i>cost</i> and schedule. (Some call this “<i>CEVP</i> light.” See also <i>CEVP</i>.)</p> <p>Objective: The SCoRE workshop is intended to provide an Evaluation of the <i>cost</i> and schedule <i>estimates</i> for a WSDOT or Regional transportation <i>project</i>. It considers data about the <i>project</i> brought by representatives of the <i>project team</i>. The depth, detail and completeness of the <i>project team</i> information will be a determining factor in the final SCoRE <i>output</i> and it is critical to have a clearly defined <i>scope</i> for the <i>project</i> at the beginning of the workshop. If there is uncertainty about <i>scope</i>, this issue must be resolved at the start of the session.</p>
S-Curve	Graphic display of cumulative <i>costs</i> , labor hours, percentage of <i>work</i> , 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 <i>project</i> that starts slowly, accelerates, and then trails off. Also a term for the cumulative likelihood distribution that is a result of a <i>simulation</i> , a <i>tool</i> of <i>quantitative risk analysis</i> .
Secondary Risk	A <i>risk</i> that arises as a direct result of implementing a risk response.
Service	Useful <i>work</i> performed that does not produce a tangible <i>product</i> or result, such as performing any of the business functions supporting production or distribution. Contrast with <i>product</i> and result. See also <i>deliverable</i> .
Simulation	A simulation uses a <i>project</i> model that translates the uncertainties specified at a detailed level into their potential <i>impact</i> on <i>objectives</i> that are expressed at the level of the total <i>project</i> . <i>Project</i> simulations use computer models and <i>estimates</i> of <i>risk</i> , usually expressed as a <i>probability</i> distribution of possible <i>costs</i> or <i>durations</i> at a detailed <i>work</i> level, and are typically performed using the <i>Monte Carlo analysis</i> .
Skill	Ability to use <i>knowledge</i> , a developed aptitude, and/or a capability to effectively and readily execute or perform an <i>activity</i> .
Slack	See <i>total float</i> and <i>free float</i> .

Special Cause	A source of variation that is not inherent in the <i>system</i> , is not predictable, and is intermittent. It can be assigned to a defect in the <i>system</i> . 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.
Specialty Groups	Functional groups responsible for specialized <i>services</i> or <i>products</i> (Environmental, Traffic, Bridge & Structures, Geotechnical, Right of Way, Materials, etc.)
Specification	A document that specifies, in a complete, precise, verifiable manner, the <i>requirements</i> , design, behavior, or other characteristics of a <i>system</i> , <i>component</i> , <i>product</i> , result, or <i>service</i> and, often, the <i>procedures</i> for determining whether these provisions have been satisfied. Examples are: <i>requirement</i> specification, design specification, <i>product</i> specification, and test specification.
Specification Limits	The area, on either side of the center line, or mean, of data plotted on a control chart that meets the <i>customer's requirements</i> for a <i>product</i> or <i>service</i> . This area may be greater than or less than the area defined by the control limits.
Sponsor	(1) The person or group that provides the financial <i>resources</i> , in cash or in kind, for the <i>project</i> and is responsible for the overall <i>project</i> delivery. (2) The person assigning the <i>project manager</i> the <i>responsibility</i> to conduct the <i>project's effort</i> and deliver the end <i>product</i> . (3) The executive who manages, administers, <i>monitors</i> , funds, and is responsible for the overall <i>project</i> delivery.
Sponsor - Stakeholder	Persons and <i>organizations</i> such as <i>customers</i> , <i>sponsors</i> , performing <i>organizations</i> , and the public that are actively involved in the <i>project</i> , or whose interests may be positively or negatively affected by execution or completion of the <i>project</i> . They may also exert influence over the <i>project</i> and its <i>deliverables</i> .
Stakeholder	Those with a particularly significant interest in the <i>project's</i> outcome, including those providing funding or right of way for the <i>project</i> and property owners who are affected by the <i>project</i> . Stakeholders are unique for each <i>project</i> .
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 <i>schedule activity's</i> start, usually qualified by one of the following: actual, planned, estimated, scheduled, early, late, target, <i>baseline</i> , or current.
Statement of Work (SOW)	A narrative description of <i>products</i> , <i>services</i> , or results to be supplied.
Subphase	A subdivision of a <i>phase</i> .

Subproject	A smaller portion of the overall <i>project</i> created when a <i>project</i> is subdivided into more manageable <i>components</i> or pieces. Subprojects are usually represented in the <i>work breakdown structure</i> . A subproject can be referred to as a <i>project</i> , managed as a <i>project</i> , and acquired from a seller. May be referred to as a subnetwork in a <i>project schedule network diagram</i> .
Substantial Completion	The stage in the progress of the <i>work</i> when the <i>work</i> , or designated portion of the <i>work</i> , is sufficiently complete in accordance with the <i>contract documents</i> so that the owner can occupy or utilize the <i>work</i> for its intended use.
Substantial Completion Date	The date on which a contractor reaches a point of completion, when subsequent interfacing contractors can productively begin <i>work</i> or the owner can occupy the <i>project</i> , in whole or in part, without undo interference.
Successor	The <i>schedule activity</i> that follows a <i>predecessor activity</i> , as determined by their <i>logical relationship</i> .
Summary Activity	A group of related schedule activities aggregated at some summary level, and displayed/reported as a single <i>activity</i> at that summary level. See also subproject and subnetwork.
Strengths, Weaknesses, Opportunities, and Threats (SWOT) Analysis	This information-gathering <i>technique</i> examines the <i>project</i> from the perspective of each <i>project's</i> strengths, weaknesses, opportunities, and <i>threats</i> to increase the breadth of the <i>risks</i> considered by <i>risk management</i> . A <i>process</i> whereby a group of people determine: 1. What Strengths do we have? (How can we take advantage of them?) 2. What Weaknesses do we have? (How can we minimize them?) 3. What Opportunities are there? (How can we capitalize on them?) 4. What <i>Threats</i> might prevent us from getting there? (Consider technical obstacles, competitive responses, values of people within the <i>organization</i> , etc. For every obstacle identified, what can we do to overcome or get around it? This helps to develop <i>contingency plans</i> .)
System	An integrated set of regularly interacting or interdependent <i>components</i> created to accomplish a defined <i>objective</i> , with defined and maintained relationships among its <i>components</i> , and the whole producing or operating better than the simple sum of its <i>components</i> . Systems may be either physically <i>process</i> -based or management <i>process</i> based, or more commonly a combination of both. Systems for <i>project management</i> are composed of <i>project management processes</i> , <i>techniques</i> , methodologies, and <i>tools</i> operated by the <i>project management team</i> .



Target Completion Date (TC)	An <i>imposed date</i> that constrains or otherwise modifies the <i>schedule network analysis</i> .
Target Finish Date (TF)	The date that <i>work</i> is planned (targeted) to finish on a <i>schedule activity</i> .

Target Schedule	A schedule adopted for comparison purposes during <i>schedule network analysis</i> , which can be different from the <i>baseline</i> schedule. See also <i>baseline</i> .
Target Start Date (TS)	The date that <i>work</i> is planned (targeted) to start on a <i>schedule activity</i> .
Task	A term for <i>work</i> whose meaning and placement within a structured plan for <i>project work</i> varies by the application area, industry, and brand of <i>project management software</i> .
Task Planning Worksheet	
Team	Two or more people working interdependently toward a common goal and a shared reward.
Team Building	The <i>process</i> of influencing a group of diverse individuals, each with their own goals, needs, and perspectives, to <i>work</i> together effectively for the good of the <i>project</i> such that their <i>team</i> will accomplish more than the sum of their individual <i>efforts</i> could otherwise achieve.
Team Members	See <i>project team members</i> .
Technical Performance Measurement [Technique]	A performance measurement <i>technique</i> that compares technical accomplishments during <i>project</i> execution to the <i>project management plan's</i> schedule of planned technical achievements. It may use key technical parameters of the <i>product</i> produced by the <i>project</i> as a quality metric. The achieved metric values are part of the <i>work performance information</i> .
Technique	A defined systematic <i>procedure</i> employed by a human <i>resource</i> to perform an <i>activity</i> to produce a <i>product</i> or result or deliver a <i>service</i> , and that may employ one or more <i>tools</i> .
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 <i>projects</i> . Templates can reduce the <i>effort</i> needed to perform <i>work</i> and increase the consistency of results.
Threat	A condition or situation unfavorable to the <i>project</i> , a negative set of circumstances, a negative set of events, a <i>risk</i> that will have a negative <i>impact</i> on a <i>project objective</i> if it occurs, or a possibility for negative changes. Contrast with <i>opportunity</i> .
Three-Point Estimate [Technique]	An analytical <i>technique</i> that uses three <i>cost</i> or <i>duration</i> estimates to represent the optimistic, most likely, and pessimistic scenarios. This <i>technique</i> is applied to improve the accuracy of the <i>estimates</i> of <i>cost</i> or <i>duration</i> when the underlying <i>activity</i> or <i>cost component</i> is uncertain.
Threshold	A <i>cost</i> , time, quality, technical, or <i>resource</i> value used as a parameter, and which may be included in <i>product specifications</i> . Crossing the threshold should trigger some action, such as generating an <i>exception report</i> .

Time and Material (T&M) Contract	A type of <i>contract</i> that is a hybrid contractual arrangement containing aspects of both cost-reimbursable and <i>fixed-price contracts</i> . Time and material <i>contracts</i> 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 <i>contracts</i> can grow in <i>contract</i> 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.
Tool	Something tangible, such as a <i>template</i> or software program, used in performing an <i>activity</i> to produce a <i>product</i> or result.
Trend Analysis [Technique]	An analytical <i>technique</i> that uses mathematical models to forecast future outcomes based on historical results. It is a method of determining the variance from a <i>baseline</i> of a <i>budget, cost, schedule, or scope</i> parameter by using prior progress reporting periods' data and projecting how much that parameter's variance from <i>baseline</i> might be at some future point in the <i>project</i> if no changes are made in executing the <i>project</i> .
Triggers	Indications that a <i>risk</i> has occurred or is about to occur. Triggers may be discovered in the <i>risk identification process</i> and watched in the <i>risk monitoring and control process</i> . Triggers are sometimes called <i>risk</i> 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 comers represent one of the parameters being managed by the <i>project team</i> .

—U—

User	The person or <i>organization</i> that will use the <i>project's product or service</i> . See also <i>customer</i> .
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—V—

Validation [Technique]	The <i>technique</i> of evaluating a <i>component</i> or <i>product</i> during or at the end of a <i>phase</i> or <i>project</i> to ensure it complies with the specified <i>requirements</i> . Contrast with <i>verification</i> .
Value Engineer	A person, usually certified, who is qualified to perform value engineering services for a client.
Value Engineering (VE)	(1) A creative approach used to optimize <i>project life cycle costs</i> , save time, increase profits, improve quality, expand market share, solve problems, and/or use <i>resources</i> more effectively. (2) An organized <i>effort</i> to analyze the functions of a <i>system, equipment, facilities, services, and supplies</i> , for the purpose of achieving the essential functions at the lowest life-cycle <i>cost</i> consistent with required performance, <i>reliability</i> , quality, and safety.

Value Engineering - Variance	A quantifiable deviation, departure, or divergence from a known <i>baseline</i> or expected value.
Variance Analysis [Technique]	A method for resolving the total variance in the set of <i>scope</i> , <i>cost</i> , and schedule variables into specific <i>component</i> variances that are associated with defined factors affecting the <i>scope</i> , <i>cost</i> , and schedule variables.
Verification [Technique]	The <i>technique</i> of evaluating a <i>component</i> or <i>product</i> at the end of a <i>phase</i> or <i>project</i> to assure or confirm it satisfies the conditions imposed. Contrast with <i>validation</i> .
Virtual Team	A group of persons with a shared <i>objective</i> 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 <i>team members</i> . Virtual teams can be comprised of persons separated by great distances.
Voice of the Customer	A planning <i>technique</i> used to provide <i>products</i> , <i>services</i> , and results that truly reflect <i>customer requirements</i> by translating those <i>customer requirements</i> into the appropriate technical <i>requirements</i> for each <i>phase</i> of <i>project product</i> development.

—W—

War Room	A room used for <i>project</i> conferences and planning, often displaying charts of <i>cost</i> , schedule status, and other key <i>project</i> data.
Work	Sustained physical or mental <i>effort</i> , exertion, or exercise of <i>skill</i> to overcome obstacles and achieve an <i>objective</i> .
Work Authorization [Technique]	A permission and direction, typically written, to begin <i>work</i> on a specific <i>schedule activity</i> or <i>work package</i> or control account. It is a method for sanctioning <i>project work</i> to ensure that the <i>work</i> is done by the identified <i>organization</i> , at the right time, and in the proper sequence.
Work Authorization System [Tool]	A subsystem of the overall <i>project management system</i> . It is a collection of formal documented <i>procedures</i> that defines how <i>project work</i> will be authorized (committed) to ensure that the <i>work</i> is done by the identified <i>organization</i> , at the right time, and in the proper sequence. It includes the steps, documents, tracking <i>system</i> , and defined approval levels needed to issue <i>work</i> authorizations.
Work Breakdown Structure (WBS) [Output/Input]	A <i>deliverable</i> -oriented hierarchical <i>decomposition</i> of the <i>work</i> to be executed by the <i>project team</i> to accomplish the <i>project objectives</i> and create the required <i>deliverables</i> . It organizes and defines the total <i>scope</i> of the <i>project</i> . Each descending level represents an increasingly detailed definition of the <i>project work</i> . The WBS is decomposed into <i>work packages</i> . The <i>deliverable</i> orientation of the hierarchy includes both internal and external <i>deliverables</i> . See also <i>work package</i> .

Work Order (WO)	A written order, signed by the owner or his representative, of a contractual status requiring performance by the contractor without negotiation of any sort.
Work Package	A <i>deliverable</i> or <i>project work component</i> at the lowest level of each branch of the <i>work breakdown structure</i> . The <i>work</i> package includes the schedule activities and <i>schedule milestones</i> required to complete the <i>work</i> package <i>deliverable</i> or <i>project work component</i> .
Work Performance Information [Output/Input]	Information and data on the status of the <i>project schedule</i> activities being performed to accomplish the <i>project work</i> , collected as part of the direct and manage <i>project</i> execution <i>processes</i> Information includes: status of <i>deliverables</i> ; implementation status for <i>change requests</i> , <i>corrective actions</i> , preventive actions, and defect repairs; forecasted <i>estimates</i> to complete; reported percent of <i>work</i> physically completed; achieved value of technical performance measures; and start and finish dates of schedule activities.
Work Plan	A comprehensive, realistic, and <i>deliverable</i> plan to accomplish the <i>team mission</i> and deliver the <i>project</i> . It includes <i>Initiate</i> & Align and Plan the Work elements, including a schedule and a <i>budget</i> .
Workaround [Technique]	A response to a negative <i>risk</i> that has occurred. Distinguished from <i>contingency plan</i> in that a workaround is not planned in advance of the occurrence of the <i>risk</i> event.

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—Y—

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—Z—

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