



Ithuta JV

Holthuta Ka Tsebo
Learning from Experience

CONSTRUCTION PROJECT MANAGEMENT GLOSSARY

Accountability

The obligation to report on one's actions.

Activity

Any work performed on a project. May be synonymous with task but in some cases it may be a specific level in the WBS (e.g., a phase is broken down into a set of activities, activities into a set of tasks). An activity must have duration and will result in one or more deliverables. An activity will generally have cost and resource requirements. See *Task*.

Actuals

The cost or effort incurred in the performance of tasks. Also, the dates on which tasks have been started or completed and the dates milestones have been reached.

Agent

Any person who acts as a representative for a client in the managing the overall construction work

Analogous Estimating

Estimating using similar projects or activities as a basis for determining the effort, cost and/or duration of a current one. Usually used in Top-down Estimating.

Approved Inspection Authority

An inspection authority approved by the Chief Inspector, provided that an inspection authority approved by the Chief Inspector with respect to any particular service shall be an approved inspection authority with respect to that service only

Assessment

In terms of OH and S, an assessment made in terms of Section 83(ii) of the OH and S Act

Assessor

In terms of OH and S, a person appointed in terms of Section 83(vii) of the OH and S Act

Assumption

Something taken as true without proof. In planning, assumptions regarding staffing, complexity, learning curves and many other factors are made to create plan scenarios. These provide the basis for estimating

Authority

The ability to get other people to act based on your decisions. Authority is generally based on the perception that a person has been officially empowered to issue binding orders

Baseline

A point of reference. The plan used as the comparison point for project control reporting. There are three baselines in a project—schedule baseline, cost baseline and product (scope) baseline. The combination of these is referred to as the performance measurement baseline.

Block and Tackle

A lifting device consisting of one or more pulley blocks reeved with chains, wire ropes or fibre ropes used solely for the raising and lowering of a load or moving a load horizontally

Boiler

Any apparatus to convert continuously any liquid into steam, vapour or gas at a pressure higher than that due to the atmosphere and where the heat is derived from a source other than steam or the ambient temperature of the atmosphere, and includes any superheater or economiser which is an integral part of a boiler or is separately fired there from, but does not include such an apparatus, superheater or economizer in which the product of the design pressure in Pascal and the volume in cubic metres is less than the figure 15 000

Board

The Compensation Board established by Section 10(xxviii) of the OH and S Act

Bottom-up Estimating

Approximating the size (duration and cost) and risk of a project (or phase) by breaking it down into activities, tasks and sub-tasks, estimating the effort, duration and cost of each and rolling them up to determine the full estimate. Determining duration through a bottom-up approach requires sequencing and resource leveling to be done as part of the scheduling process.

Budget

The amount allotted for the project that represents the estimate of planned expenditures and income. The budget may be expressed in terms of money or resource units (effort)

Building

Includes:

- a. Any structure attached to the soil;
- b. Any building or such structure or part thereof which is in the process of being erected, or
- c. Any prefabricated building or structure not attached to the soil

Built Environment

The functional area in which registered persons practice. The Built Environment includes all structures that are planned and/or erected above or underground, as well as the land utilized for the purpose and supporting infrastructure.

Builders Hoist

An appliance used in connection with building work for the raising or lowering of material by means of a platform, skip, cage or other receptacle on a fixed guide or guides

Business Case

The information that describes the justification for the project. The project is justified if the expected benefits outweigh estimated costs and risks. The business case is often complex and may require financial analysis, technical analysis, organization impact analysis and a feasibility study.

Certificated Engineer

Any person to whom a certificate of competency referred to in regulation E1 (1) of the Regulations, published under Government Notice R.929 of 28 June 1963, has been granted and includes any person who is the holder of a certificate of competency in mechanical or electro technical engineering issued before 1 January 1966 under the Mines and Works Act, 1956 (Act 27 of 1956)

Change

Difference in an expected value or event. The most significant changes in project management are related to scope definition, availability of resources, schedule and budget.

Change Control

The process of managing scope, schedule and budget changes to the plan. See *Scope, Change Control*.

Change Order

A written document between the owner and the contractor signed by the owner and the contractor authorizing a change in the work or an adjustment in the contract sum or the contract time. A change order may be signed by the architect or engineer, provided they have written authority from the owner for such procedure and that a copy of such written authority is furnished to the contractor upon request. The contract sum and the contract time may be changed only by 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 contract) the amount deducted from the contract sum

Change Request

A documented request for a change in scope or other aspects of the plan.

Chief Executive Officer (CEO)

In relation to a body corporate or enterprise conducted by the State, the person who is responsible for the overall management and control of the business of such body corporate or enterprise

Chief Inspector

The officer designated under Section 27 of the Act as Chief Inspector, including any officer acting as the Chief Inspector

Client

The person or organization that is the principle beneficiary of the project. Generally the client has a significant authority regarding scope definition and whether the project should be initiated and/or

Closing

The process of gaining formal acceptance for the results of a project or phase and bringing it to an orderly end, including the archiving of project information and post-project review.

Commissioner

The Compensation Commissioner appointed under Section 2(1)(a)(xviii) of the Act

Compensation

The compensation in terms of the Act and, where applicable, medical aid or payment of the cost of such medical aid

Competent Person

Any person having the knowledge, training and experience specific to the work/task being performed. In relation construction work, any person having the knowledge, training and experience specific the work or task being performed, provided that where appropriate qualifications and training are registered in terms of the provisions of the South African Qualifications Authority Act, 1995 (Act No. 58 of 1995), these qualifications and training shall be deemed be the required qualifications and training

Competent Person (Machinery)

Any person who:

- (a) has served an apprenticeship in an engineering trade which included the operation and maintenance of machinery, or has had at least five years' practical experience in the operation and maintenance of machinery, and who during or subsequent to such apprenticeship or period of practical experience, as the case may be, has had not less than one year's experience in the operation and maintenance appropriate to the class of machinery he is required to supervise, or;
- (b) has obtained an engineering diploma in either the mechanical or electro technical (heavy current) fields with an academic qualification of at least T3 or N5, or of an equivalent level, and who subsequent to achieving such qualification has had not less than two years' practical experience in the operation and maintenance appropriate to the class of machinery he is required to supervise, or;
- (c) is a graduate engineer and has had not less than two years' post-graduate practical experience in the operation and maintenance appropriate to the class of machinery he/her is required to supervise and who has passed the examination on the Act and the regulations made thereunder, held by the Commission of Examiners in terms of regulations E5 (2) of the regulations published under Government Notice R.929 of 28 June 1963, or
- (d) is a certificated engineer

Consensus

Unanimous agreement among the decision-makers that everyone can at least live with the decision (or solution). To live with the decision, one has to be convinced that the decision will adequately achieve objectives. As long as someone believes that the decision will not achieve the objectives, there is no consensus.

Contract Programme

The construction programme for the works agreed between the contractor and the Principal Agent.

Contractor

Any person or legal entity entering into contract with the client for the execution of the Works or part thereof.

Constraint

A restriction or limitation that influences the project plan. For example, a target date may be a constraint on scheduling. A schedule may be constrained by resource limitations.

Construction Management Contract

A written agreement wherein responsibilities for coordination and accomplishment of overall project planning, design and construction are given to a construction management firm. The building team generally consists of the owner, contractor and designer or architect.

Construction Project Management

The management of projects within the built environment from conception to completion, including management of related professional services. The Construction Project Manager is the one point of responsibility in this regard.

Construction Project Management Risk

Construction Project Management Risk is the possibility that the proposed construction project management system may not meet its objectives or produce its required and expected deliverables on account of an identified and evaluated threat causing a defined and quantified event that produces an outcome with losses and/or damages or that causes a serious problem to arise that can seriously affect the achievement of the objectives of the proposed system in a defined manner.

Construction Management

The management of the physical construction process within the built environment and includes the co-ordination, administration, and management of resources.

Construction Programme

The programme for the works indicating the logic sequence and duration of all activities to be completed by the contractors, subcontractors, and suppliers, in appropriate detail. for the monitoring of progress of the works.

Construction Vehicle

A vehicle used for means of conveyance for transporting persons or material or both such persons and material, as the case may be, both on and off the construction site for the purposes of performing construction work

Construction Work

Any work in connection with:

- a) The erection, maintenance, alteration, renovation, repair, demolition or dismantling of or addition to a building or any similar engineering structure;
- b) The installation, erection or dismantling of fixed plant where such work includes the risk of a person falling (from a height).
- c) The construction, maintenance, demolition or dismantling of any bridge, dam, canal, road, railway, runway, sewer or water reticulation system or any similar civil engineering structure; or
- d) The moving of earth, clearing of land, the making of an excavation, piling, or any similar type of work.

Contingency Reserve

A designated amount of time and/or budget to account for parts of the project that cannot be fully predicted. For example, it is relatively certain that there will be some rework, but the amount of rework and where it will occur in the project (or phase) are not known. These are sometimes called "known unknowns".

The purpose of the contingency reserve is to provide a more accurate sense of the expected completion date and cost of the project (or phase). Some PMs separate contingency reserves from management reserves while others combine the two into a single reserve. Reserves for changes and issues may be part of the contingency reserve or separate reserves.

Contract

1. An agreement between two or more parties, especially one that is written and enforceable by law. 2. The writing or document containing such an agreement.

Contract Administration

The contractual duties and responsibilities of the architect and engineer during the construction phase of a specific project.

Contract Documents

A term used to represent all executed agreements between the owner and contractor; any general, supplementary or other contract conditions; the drawings and specifications; all addenda issued prior to execution of the contract; and any other items specifically stipulated as being included in the contract documents.

Contract Period

The elapsed number of working days or calendar days from the specified date of commencing work to the specified date of completion, as specified in the contract

Controlling

The process of monitoring, measuring and reporting on progress and taking corrective action to ensure project objectives are met.

Cost Consultant

The person or entity appointed by the client to establish and agree all budgets and implement and manage the necessary cost control on the project.

Council

The Advisory Council for Occupational Health and Safety established under Section 2 of the Act

Critical Path

The path(s) in a project network that has the longest duration. This represents the series of activities that determines the earliest completion of the project. There may be more than one critical path and the critical path(s) may change during the project.

Danger

Anything that may cause injury or damage to persons or property

Debate

A discussion in which the participants exchange information for the purpose of supporting or refuting one another's' positions. Debates are win-lose discussions, as opposed to dialogues, which are win-win discussions.

Deliverable

Any item produced as the outcome of a project or any part of a project. The project deliverable is differentiated from interim deliverables that result from activities within the project. A deliverable must be tangible and verifiable. Every element of the WBS (activity or task) must have one or more deliverables.

Department

The Department of Manpower

Dependency

A relationship between two or more tasks. A dependency may be logical (see Logical Relationship) or resource based (see Resource dependency). Also see *Link*.

Design

In relation to a structure, includes drawings, calculations, design details and specifications.

Designer

Any person who:

- a) Checks and approves a design, controls other designers
- b) Is involved in the architectural or engineering aspects of a design
- c) Is involved in quantity surveying, specifying articles and drawing up specifications
- d) Works for a contractor to design and execute projects
- e) Designs formwork
- f) Is involved in the design shop fittings, landscapes and interior designs

Design Pressure

The pressure used in the design formulae to determine the dimensions of the component parts of a vessel under pressure

Dialogue

A discussion in which the participants share their thoughts and gain a better understanding of the subject and, possibly, reach consensus. This is contrasted with debate.

Direct Contractors

Contractors appointed by the client to execute work other than the works.

Director General

The Director-General of the Department of Labour

Disablement

Temporary partial disablement, temporary total disablement, permanent disablement or serious disfigurement, as the case may be

Divisional Inspector

The divisional inspector referred to in Regulation 1 of the General Administrative Regulations, published under Government Notice R.2206 of 5 October 1984

Documentation Programme

The schedule prepared by the Principal Consultant and agreed to by other consultants indicating the timeous provision of all necessary design documentation required by the contractors and subcontractors for the construction of the works.

Domestic Subcontractors

Specialists and other subcontractors executing work or supplying and fixing any goods and who are selected by the contractor.

Improper Conduct: as contemplated in section 27(3) of the Project and Construction Management Professions Act, means failure to comply with the code of conduct for

Drinking Water

Water that complies with SABS 241

Duration

The length of time required or planned for the execution of a project activity. Measured in calendar time units; days, weeks, months.

Early Start

The earliest time a task can begin. The time at which all the tasks' predecessors have been completed and its resources are planned to be available.

Effort

The amount of human resource time required to perform an activity. Measured in terms of person hours, person days, etc.

Electrical Installation

An electrical installation as defined in regulation 1 of the regulations published by Government Notice R 2270 of 11 October 1985

Emergency Plan

A written plan which, on the basis of identified potential incidents at an installation, together with their possible consequences, describes how such incidents and their consequences should be dealt with on-site and off-site

Employee

A person who has entered into or works under a contract of service of apprenticeship or learnership, with an Employer, whether the contract is express or implied, oral or in writing, and whether the remuneration is calculated by time or by work done, or is in cash or in kind, and includes:

- a. A casual Employee employed for the purpose of the Employer's business
- b. A director or a member of a body corporate who has entered into contract of service or of apprenticeship or learnership with the body corporate, is so far as he/her acts within the scope of his/her employment in terms of such contract
- c. A person provided by a labour broker against payment to a client for the rendering of such service or the performance of such work, and for which service or work such person is paid by the labour broker
- d. In the case of a deceased Employee, his/her dependents, and in the case of an Employee who is a person under disability, a curator acting on behalf of that Employee, but does *not* include:
 - i. A person, including a person in the employ of the State, performing military service or undergoing training referred to in the Defence Act, 1957 (Act No. 44 of 1957) and who is not a member of the Permanent Force of the South African Defence Force.
 - ii. A member of the Permanent Force of the South African Defence Force, while on 'service in the defence of the Republic' as defined in Section 1 of the Defence Act, 1957
 - iii. A member of the South African Police Services, while employed in terms of Section 7 of the Police Act, 1958 (Act No. 7 of 1958), on 'service in defence of the republic' as defined in Section 1 of the Defence Act, 1957
 - iv. A person who contracts for the carrying out of work and himself/herself engages other persons to perform such work
 - v. A domestic Employee employed a such in a private household

Employer

Subject to the provisions of subsection (2), any person who employs or provides work for any person and remunerates that person or expressly or tacitly undertakes to remunerate him/her but excludes a labour broker as defined in Section 1(1) of the Labour Relations Act, 1956 (Act No. 28 of 1956)

Employers' Organisation

An Employers' organisation as defined in section 1 of the Labour Relations Act, 1956 (Act No. 28 of 1956)

Estimate

An assessment of the required duration, effort and/or cost to complete a task or project. Since estimates are not Actuals, they should always be expressed with some indication of the degree of accuracy.

Estimate to Completion

The expected effort, cost and/or duration to complete a project or any part of a project. It may be made at any point in the project's life.

Event

In Risk Management, a significant happening or occurrence, associated with one or more aspects of the perceived threat, that has a substantial direct or indirect influence on one or more of the project objectives

Excavation Work

The making of any man-made cavity, trench, pit or depression formed by cutting, digging or scooping

Executing

The process of coordinating the people and other resources in the performance of the project or the actual performance of the project.

Fall Arrest Equipment

Equipment used arrest the person in a fall from an elevated position, including personal equipment, body harness, lanyards, deceleration devices, lifelines or similar equipment, but excludes body belts

Fall Prevention Equipment

Equipment used prevent persons from falling from an elevated position, including personal equipment, body harness, body belts, lanyards, lifelines or physical equipment, guardrails, screens, barricades, anchorages or similar equipment

Fall Prevention Plan

A documented plan, of all risks relating working from an elevated position, considering the nature of work undertaken, and setting out the procedures and methods be applied in order eliminate the risk

Fire Resistance

The minimum period for which a building element or component will comply with the requirements for stability, integrity, and insulation when tested in accordance with SABS 0177: Part II

Flammable Liquid

Any liquid which produces a vapour that forms an explosive mixture with air, and includes any liquid with a closed-cup flash-point of less than 55 degrees C

Float

The amount of time available for a task to slip before it results in a delay of the project end date. It is the difference between the task's early and late start dates.

Functional Manager-

A manager responsible for the activities of an organizational unit (department, work group, etc.), which provides some specialized products, services or staff to projects. For example, the manager of an engineering group, testing department or procedures development department. Also called a line manager.

Functional Group

An organizational unit that performs a specialized business function (e.g., design, Human Resource management, etc.) and may provide staff, products or services to a project.

Gantt Chart

A bar chart that depicts a schedule of activities and milestones. Generally activities (which may be projects, operational activities, project activities, tasks, etc.) are listed along the left side of the chart and the time line along the top or bottom. The activities are shown as horizontal bars of a length equivalent to the duration of the activity. Gantt Charts may be annotated with dependency relationships and other schedule-related information.

Gas Fuel

Liquefied petroleum gas, any coal produced gas or natural gas

Gas Fuel System

An assembly of tubes, pipes or similar ducts, fittings and valves for the process and conveyance of a gas fuel, excluding a boiler, pressure vessel or portable gas container connected to the system

Goal

A desired end result, often synonymous with objective. May be a high-level objective that has less-than-complete definition. See *Objective*.

Goods Hoist

An appliance used for the transportation of goods by means of a car, cage, cradle or other receptacle in a hatchway on fixed guides and in which persons never travel

Hand Held Fire Extinguisher

A rechargeable container which has a fire extinguishing substance that is expelled by the action of internal pressure for the purposes of extinguishing a fire

Hazard

A source or exposure to danger. See also *Threat*

Hazard Identification

Identification and documenting of existing and/or expected hazards associated with the construction work to be executed to being

Health and Safety Committee

A committee established under Section 19 of the OH and S Act

Health and Safety Equipment

Any article or part thereof which is manufactured, provided or installed in the interest of the health and safety of any person

Health and Safety File

File or record in permanent form containing the information required by the Construction Regulations, 2003

Health and Safety Representative

A person designated in terms of Section 17(i) of the OH and S Act

Health and Safety Specification

Detailing the key activities to ensure Health and Safety

Health and Safety Standard

Any standard, irrespective of whether or not it has the force of law, which, if applied for the purposes of the Act, will in the opinion of the Minister promote the attainment of the Act

Healthy

Free from illness or injury attributable to occupational causes

High Risk Substance

A substance listed in the Schedule to the General Administrative Regulations published under Government Notice R.2206 of 5 October 1984, as amended from time to time

Impact

The extent of level of severity of the consequence of the event on the project objectives. Usually expressed as a relative percentage (0-100%) or as a descriptive term (High-Medium-Low)

Implementation

May be a phase in the project life cycle in which a product is put into use. Also a term used as a synonym for development.

Incident

An incident as contemplated in Section 24(1) of the OH and S Act

Incremental Delivery

A project life cycle strategy used to reduce risk of project failure by dividing projects into more manageable pieces. The resulting sub-projects may deliver parts of the full product, or product versions. These will be enhanced to increase functionality or improve product quality in subsequent sub-projects.

Industrial Court

The industrial court referred to in Section 17 of the Labour Relations Act, 1956 (Act No. 28 of 1956)

In-house Projects

Projects performed primarily by performers who are part of the same organization as the client. For example, a product developed by a manufacturing company's own Engineering Department is an in-house project. If an outside contractor developed the same product, the project would be externally sourced. Note that vendors might be used in in-house projects depending on the degree to which they are responsible.

Initiating (Project)

The process of describing and deciding to begin a project (or phase) and authorizing the Project Manager to expend resources, effort and money for those that are initiated.

Inspection Authority

Any person who with the aid of specialized knowledge or equipment or after such investigations, tests, sampling or analyses as he/she may consider necessary, and whether for reward or otherwise, renders a service by making special findings, purporting to the objective findings, as to:

- a) The health of an person
- b) The safety or risk to health of any work, article, substance, plant or machinery, or of any condition prevalent or in any premises, or
- c) The question of whether any particular standard has been or is being complied with, with respect to any work, article, substance, plant or machinery, or with respect to work or condition prevalent or in any premises, or with respect to any other matter, and by issuing a certificate, stating such findings, to the person to whom the service is rendered

Inspector

A person designated under Section 28 of the OH and S Act

Kick-Off Meeting

A meeting at the beginning of the project or at the beginning of a major phase of the project to align peoples' understanding of project objectives, procedures and plans, and to begin the team-building and bonding process.

Late Start

The latest time a task can start before it causes a delay in the project end date.

Leveling

See *Resource Leveling*.

Lifting Machine

A power-driven machine which is designed and constructed for the purpose of raising or lowering a load or moving it in suspension, and includes a block and tackle, hoist, crane, lift truck or jib-crane, but does not include an elevator, escalator, goods hoist or builder's hoist

Link

A relationship between two or more tasks. See *Logical Relationship*.

Local Authority

- a) Any institution or body contemplated in Section 84(1)(f) of the Provincial Government Act, 1961 (Act No. 32 of 1961)
- b) Any regional services council established under Section 3 of the Regional Services Councils Act, 1985 (Act No. 109 of 1985)
- c) Any other institution or body or the holder of any office declared by the Minister by notice in the Gazette to be a local authority for the purposes of the Act

Logical Relationship-

A dependency relationship between two or more tasks or between tasks and milestones, such that one cannot start or finish before another has started or finished.

Machinery

Any article or combination of articles assembled, arranged or connected and which is used or intended to be used for converting any form of energy to performing work, or which is used or intended to be used, whether incidental thereto or not, for developing, receiving, storing, containing, confining, transforming, transmitting or controlling any form of energy

Major Hazard Installation

An installation:

- a) Where more than the prescribed quantity of any substance is or may be kept, whether permanently or temporarily, or

b) Where any substance is produced, processed, used, handled or stored in such form and quantity that it has the potential to cause a major incident

Major Incident

An occurrence of catastrophic proportions, resulting from the use of plant or machinery, or from activities at the workplace

Mandatory

An Agent, a Contractor or a sub-contractor for work, but without derogating from his/her status in his/her own right as an Employee or a

Management Reserve

A designated amount of time and/or budget to account for parts of the project that cannot be predicted. These are sometimes called "unknown unknowns." For example, major disruptions in the project caused by serious weather conditions, accidents, etc. Use of the management reserve generally requires a baseline change. See *Contingency Reserve*.

Material Data Sheet

A material safety data sheet as contemplated in Regulation 7 of the General Administrative Regulations

Medical Surveillance

A planned programme or periodic examination (which may include clinical examinations, biological monitoring or medical tests) of Employees by an occupational health practitioner, or in prescribed cases, by an occupational medicine practitioner

Method Statement

A written document detailing key activities to reduce hazards of work or an operation, included in which are identified risks as a consequence of a risk assessment

Multi-Project Schedule

A schedule of all the work (projects, operational activities, etc.) planned for an individual or organization unit. The purpose is to ensure that resources are not overburdened by inadvertently scheduling project or other work without regard to previously scheduled work. The Multi-Project Schedule is also used to determine the impact of slippage in one project on other projects assigned to the same resources.

Matrix Organization

A business structure in which people are assigned to both a functional group (departments, disciplines, etc.) and to projects or processes which cut across the organization and require resources from multiple functional groups.

Metrics

Metrics are quantitative measures such as the number of on time projects. They are used in improvement programs to determine if improvement has taken place or to determine if goals and objectives are met.

Milestone

A point in time when a deliverable or set of deliverables is available. Generally used to denote a significant event such as the completion of a phase of the project or of a set of critical activities. A milestone is an event; it has no duration or effort. It must be preceded by one or more tasks (even the beginning of a project is preceded by a set of tasks, which may be implied).

National Building Regulations

Means the National Building Regulations made under Section 17(1) of the National Building Regulations and Building Standards Act, 1977 (Act No.103 of 1977), and published under Government Notice No. R.1081 of 10 June 1988, as amended

Near Miss

Any unforeseen event involving one or more hazardous substances which, but for mitigating effects, actions or systems, could have escalated to a Major Incident

Network Diagram -

A graphic tool for depicting the sequence and relationships between tasks in a project. PERT Diagram, Critical Path Diagram, Arrow Diagram, Precedence Diagram are all forms of network diagrams.

Nominated Subcontractors

Specialists and other subcontractors executing work or supplying and fixing any goods who may be nominated by the Principal Consultant.

Objective -

An objective is something to be achieved. In project management, the objectives are the desired outcomes of the project or any part of the project, both in terms of concrete deliverables and behavioral outcomes (e.g., improved service, more money, etc.).

Occupational Health

Includes occupational hygiene, occupational medicine and biological monitoring

Occupational Health Practitioner

An occupational medicine practitioner or a person who holds a qualification in occupational health recognised as such by the South African Medical and Dental Council as referred to in the Medical, Dental and Supplementary Health Service Professions Act, 1974 (Act No. 56 of 1974) or the South Africa Nursing Council as referred to in the Nursing Act, 1978 (Act No. 50 of 1978).

Occupational Disease

Any disease contemplated in Section 65(1)(a) or (b) of the OH and S Act

Occupational Injury

A personal injury sustained as a result of an accident in the course of a person's work

Occupational Hygiene

The anticipation, recognition, evaluation and control of conditions arising in or from the workplace, which may cause illness or adverse health effects to person

Occupational Medicine

The prevention, diagnosis and treatment of illness, injury and adverse health effects associated with a particular type of work

Office

An office as defined in Section 1(1) of the Basic Conditions of Employment Act, 1983 (Act No. 3 of 1983)

Officer

An officer or Employee as defined in Section 1(1) of the Public Service Act, 1984 (Act No. 111 of 1984)

Organism

Any biological entity which is capable of causing illness to persons

Parametric Estimating

Estimating using an algorithm in which parameters that represent different attributes of the project are used to calculate project effort, cost, and/or duration. Parametric estimating is usually used in top-down Estimating.

PERT—Program Evaluation and Review Technique

A scheduling technique that makes use of dependency analysis and critical path to determine the duration of a project and slack to determine priorities of tasks. In PERT, task durations are computed as $(\text{Optimistic} + 4 \times \text{Most likely} + \text{Pessimistic estimates}) / 6$.

PERT Diagram

A type of network diagram deriving its name from the PERT technique. The term is often used as a synonym for network diagram.

Phase

A grouping of activities in a project that are required to meet a major milestone by providing a significant deliverable, such as a requirements definition or product design document. A project is broken down into a set of phases for control purposes. The phase is usually the highest level of breakdown of a project in the WBS.

Planning

The process of establishing and maintaining the definition of the scope of a project, the way the project will be performed (procedures and tasks), roles and responsibilities and the time and cost estimates.

Plant

Includes fixtures, fittings, implements, equipment, tools and appliances, and anything which is used for any purpose in connection with such plant

Post-implementation Review

See *Post-Project Review*.

Post-Project Review

An activity to assess and evaluate the way a project was performed, so as to learn from the experience and continuously improve project performance.

Power

Power is the ability to influence the actions of others. Power may come from formal delegation of authority, reference power, subject matter expertise, the ability to influence rewards and penalties, as well as other sources.

Permanent Disablement

In relation to an Employee and subject to Section 49 of the Act, means the permanent disability of such an Employee to perform any work as a result of an accident or occupational disease for which compensation is payable

Portable Electrical Tool

Any electrically operated implement, with the exception of ordinary household electrical appliances, which is designed for use with:

- a) A flexible cord at the supply end and which is intended for use by hand and to be carried by hand at the place of work; or
- b) A flexible cable at the supply end and which is intended for use by hand and to be moved by hand at the place of work

Premises

Any building, vehicle, vessel, train or aircraft: 'prescribed' means prescribed by regulation in terms of the Act

Predecessor Task

A task (or activity) that must be started or finished before another task or milestone can be performed.

Press

A driven machine that shears, punches, forms or assembles metal or other material by means of cutting, shaping or combination dies attached to slides having a controlled reciprocating motion but does not include bending brake presses, hot bending or hot metal presses, forging hammers and riveting machines or similar types of fastener applicators

Principal Agent

The person or entity appointed by the client and who has full authority and obligation to act in terms of the construction contracts.

Principal Contractor

An Employer who performs construction work appointed by the client to be in overall control and management of part or whole of a construction site

Principal Consultant

The person or entity appointed by the client to manage and administer the services of all other consultants.

Probability

The relative possibility that the event will occur, determined either deterministically (e.g. judgmentally) or probabilistically (e.g. in a Monte Carlo simulation). Probability is usually expressed as a percentage (0%=never to 100%=with absolute certainty) or as a range between 0 (never) and 1 (absolute certainty)

Process

A series of steps or actions to accomplish something. A natural series of changes or occurrences.

Procurement Programme

The programme indicating the timing of purchasing requirements for the project, including, but not limited to, the services of consultants, contractors, subcontractors, and suppliers required for the execution of the project programme.

Product

The project's material outcome. It maybe a service, event or any material object (e.g., a machine, computer system, new drug, building, etc.). The product includes all necessary aspects of the deliverable (e.g., training, documentation, etc.).

Product Life Cycle

The time from the delivery of a product, until the product is withdrawn from use or sale. There may be many projects during the product life cycle

Professional Engineer or Professional Certificated Engineer

Any person holding registration as either a Professional Engineer or Professional Certificated Engineer under the Engineering Profession Act, 2000 (Act No. 46 of 2000)

Professional Technologist

Any person holding registration as a Professional Technologist under the Engineering Profession Act, 2000 (Act No. 46 of 2000)

Program

A suite of related projects and ongoing operational activities managed as a whole.

Project

An effort to provide a product or service within finite time and cost constraints or the total development envisaged by the client, including the professional services

Project and Construction Management Professions Act

The Project and Construction Management Professions Act, 2000 (Act No. 48 of 2000)

Project Charter

A document that describes the project at a high level of detail and is used to authorize the Project Manager to begin work. It may also be called a "Project Brief," or any number of other synonyms.

Project Initiation Programme

The programme devised by the Principal Consultant in consultation with the client and other consultants for all the work necessary to be completed prior to commencement of work by the contractors.

Project Life Cycle

The full set of activities from the beginning to the end of a project. Generally associated with a set of phases, which are determined based on the major parts of project performance (e.g., requirements definition, design, construction, deployment) and the need for control by the Client organization (checkpoints for Go/No go decision-making).

Project Management

The process of managing a project which requires the application of planning, team-building, communicating, controlling, decision-making and closing skills, principles, tools and techniques.

Project Manager

The person responsible and accountable for managing a project's planning and performance. The single point of accountability for a project.

Properly Used

Used with reasonable care, and with due regard to any information, instruction or advice supplied by the designer, manufacturer, imported, seller or supplier

Public

Any person or group of persons who is, or whose environment is, either directly or indirectly affected by any project and construction management activity, or by a product, outcome or influence of a project and construction management activity, which may impact on the health, safety and interest of such person or group of persons

Quality Assurance (QA)

Making sure standards and procedures are effective and that they are complied with. Note, in some organizations QA is used to refer to the quality control function.

Quality Control (QC)

Making sure deliverables comply with acceptance criteria. Includes testing and reviews.

Ramp Down

Ramp down is the effort required to close or suspend a task. It may consist of filing away information, making notes, clean-up, etc. Ramp down can be significant, depending on the task. For tasks that are suspended the degree of ramp down (e.g., notes and filing away information) performed will reduce the ramp up effort. See Ramp Up.

Ramp Up

Ramp up is the work required to get ready to do a task. It consists of assembling materials, learning about the task (including new tools and techniques) and the time required getting into an optimum work pace. Initial ramp up can be significant, depending on the task. Each time a task is interrupted there is an additional ramp up—getting back to that optimal work pace. See *Ramp Down*.

Reasonably Practicable

Practicable, having regard to:

- a) The severity and scope of the hazard or risk concerned;
- b) The state of knowledge reasonably available concerning that hazard or risk and of any means or removing or mitigating that hazard or risk;
- c) The availability and suitability of means to remove or mitigate that hazard or risk and,
- d) The cost of removing or mitigating that hazard or risk in relation to the benefits deriving from this

Regulation

A regulation made under Section 43 of the OH and S Act

Relative Date

A date expressed as a number of periods (e.g., days, weeks, or months) from a reference point. For example, two months after the project start date. See *Calendar Date*.

Remuneration

Any payment in money or in kind or both in money and in kind, made or owing to any person in pursuance of such person's employment

Request for Proposal (RFP)

A document that describes a need for products and/or services and the conditions under which they are to be provided. The purpose of the RFP is to solicit bids or proposals from prospective suppliers. Also called a *Request for Quote (RFQ)*.

Requirements

The statement of detailed product objectives that describes the features and functions and performance constraints to be delivered in the product. The requirements provide the basis for accepting the product.

Residual Risks

Those Threats, or elements of Threats, Events, or elements of Events, that are present after the Risk Mitigation process has been undertaken and which need to be continuously monitored.

Resource

Any tangible support such as, a person, tool, supply item or facility used in the performance of a project. Human resources are people.

Resource Dependency

A dependency between tasks in which the tasks share the same resources and therefore cannot be worked on simultaneously. Resource dependent tasks can be scheduled at the same time but are limited by the availability of the shared resources.

Resource Leveling

Resource leveling is the part of the scheduling process in which the start and end dates of tasks are driven by resource limitations (e.g., limited availability of resources or difficult-to-manage resource levels). Among the scheduling objectives, is to ensure that resources are not overburdened (don't schedule more resources for a period than are available) and that (as much as possible) there are not significant peaks and valleys in the resource schedule.

Resource Loading

The process of assigning resources (people, facilities and equipment) to a project, usually activity by activity.

Responsibility

The obligation to perform or take care of something, usually with the liability to be accountable for loss or failure. Responsibility may be delegated to others but the delegation does not eliminate the responsibility.

Responsibility Assignment Matrix (RAM)

A tool used to relate each project activity in the WBS with a responsible organization unit or individual. Its purpose is to ensure that every activity is assigned to one or more individuals (only one with primary responsibility) and that the individuals are aware of their responsibilities.

Risk

The likelihood of the occurrence of an Event. Generally, the event is a negative one like project failure, but may also be a positive event, like the early completion of a project.

Risk Analysis

A detailed qualitative or quantitative analytical consideration of the identified Threat and/or Event in relation to any influence that consequential Events might have on the achievement of the project Objectives

Risk Assessment

Part of risk management in which planners identify potential risks and describe them, usually in terms of their symptoms, causes, probability of occurrence and potential impact.

Risk Evaluation

A more detailed analytical consideration of the identified Threat and/or Event in terms of its Probability of occurring and its Impact on the project Objectives, expressed as the Exposure

Risk Identification

A process in which potential Threats, or specific features of Threats, and their sources, are identified and defined of the likely Events they could be the cause of and which will have a significant impact on the project objectives

Risk Management

A continuous management and leadership process that is specifically designed to handle all aspects with respect to the identification, analysis, evaluation, prioritization and mitigation of Threats

Risk Mitigation

A generally used term to indicate one or more processes that are intended to reduce the overall Exposure by one or more measures aimed at reducing or removing the influence of the Threat, or changing the severity of the consequential Threat or reducing the Probability of either the Threat or Event occurring or reducing the level of the Impact

Risk Register

A tabulated form that includes all identified Threats, as well as progresses toward their assessment and mitigation. The Risk Register is an important part of the Risk Management Process

Risk Response

Similar to Risk Mitigation, action that can be taken to address the occurrence of a risk event. Contingency plans are collections of risk responses.

Risk Response Control

Responding to risk event occurrences throughout the project life cycle. Taking corrective action is an aspect of risk response control.

Risk Response Development

Part of risk management in which planners identify and define actions to be taken in case a risk (positive or negative) occurs.

Safe

Free from any hazard

Sanitary Facilities

Sanitary fixtures as defined in SABS 0400

Schedule

The project timeline, identifying the dates (absolute or relative to a start date) that project tasks will be started and completed, resources will be required and upon which milestones will be reached.

Scope

Scope is defined in terms of three dimensions—product, project and impact. Product scope is the full set of features and functions to be provided as a result of the project. Project scope is the work that has to be done to deliver the product. Impact scope is the depth and breadth of involvement by, and effect on, the performing and client organizations.

Scope Change

Any change in the definition of the project scope. Scope change can result from changes in client needs, discovery of defects or omissions, regulatory changes, etc.

Scope Change Control

Also called scope change management. The process of making sure that all changes to the project scope are consciously evaluated and their implications to the project plan are considered in making a decision to make the change, postpone it or reject it.

Scope Creep

The unconscious growth of the project scope resulting from uncontrolled changes to requirements.

Scope Definition

Breaking down the project's major deliverables into small, more manageable components to make verification, development and project control easier. This may be part of requirements definition and/or design.

Scope Planning

Development of a statement of the principle deliverables of a project along with the project's justification (business case) and objectives. Part of requirements definition.

Selected Subcontractors

These are specialists and other subcontractors executing work or supplying and fixing any goods and who are selected by the contractor in consultation with the Principal Consultant.

Scope Verification

PMI's PMBOK Guide defines this as the process to ensure that all project deliverables have been completed satisfactorily. It is associated with acceptance of the product by clients and sponsors.

Sequencing Tasks

A part of the scheduling process in which the tasks are positioned serially or parallel to one another based on dependencies between them. Sequencing results in a task network

Sell

Includes:

- a) Offer or display for sale or import into the republic for sale, or
- b) Exchange, donate, lease or offer or display for leasing

Slack

See *Float*.

Specifications

Detailed statements of project deliverables that result from requirements definition and design. Specifications generally describe the deliverables in terms of appearance, operational constraints and quality attributes. Specifications are the basis for acceptance criteria used in scope verification and quality control. In some organizations and industries, specifications may be qualified as requirements specifications and design specifications. See *Requirements*.

Spiral Development Approach

A project life cycle strategy in which prototypes and models are used early in project life to define requirements and design the product. Commonly used when the product being developed is new (as in Research & Development and e-commerce) and the clients do not have a concrete understanding of their requirements and design attributes.

Stakeholder

Anybody and everybody with a stake in the project - clients, sponsors, performers, the general public and even the family and friends of direct participants can be considered stakeholders. Not to be confused with the guy that holds the stake when the vampire slayer slays the

Statement of Work

A description of the scope of a project centered on the major deliverables and constraints.

Standard

Any provision occurring:

- a) In a specification, compulsory specification, code of practice or standard method as defined in Section I of the Standards Act, 1993 (Act No. 29 of 1993), or
- b) In any specification, code or any other directive having standardization as its aim and issued by an institution or organisation inside or outside of the Republic which, whether generally or with respect to any particular article or matter and whether internationally or in any particular country or territory, seeks to promote standardization

Straw Man

A tentative decision or solution put forth as a point of reference for detailed critical analysis

Structure

- a. Any building, steel or reinforced concrete structure (not being a building), railway line or siding, bridge, waterworks, reservoir, pipe or pipeline, cable, sewer, sewage works, fixed vessel, road, drainage works, earthworks, dam, wall, mast, tower, tower crane, batching plant, pylon, surface or underground tank, earth retaining structure or any structure designed to preserve or alter any natural feature, and any other similar structure, or
- b. Any fixed plant in respect of work which includes the installation, commissioning, decommissioning or dismantling and where such work involves a risk of any person falling from a height

Sub-contractor

A group or individual providing products or services to the project. Commonly, sub-contractors are considered to be vendors. However there is a growing understanding that any internal group that provides products or services (e.g., an internal technical writing department) is a sub-contractor to the project manager. Of course in this broader usage, the agreement between the parties is not a legally binding contract but it is a contract nonetheless.

Subject Matter Expert (SME)

An expert in some aspect of the project's content expected to provide input to the project team regarding business, scientific, engineering or other subjects. Input may be in the form of requirements, planning, resolutions to issues and/or review of project results.

Substance

Includes any solid, liquid, vapour, gas or aerosol, or combination

Substantially Practise

Regularly and consistently carry out project and construction management work as identified in the Act, and charging professional fee for such work and accruing professional responsibility to a client or an employer for the performance of such functions.

Sub-task

A breakdown of a task into the work elements that make it up. A task must be broken down into at least two sub-tasks for a meaningful decomposition.

Successor

A task or milestone that is logically linked to one or more predecessor tasks.

Suppliers

A person or entity appointed by the client to supply goods and products for incorporating into the works

System (Electrical)

An electrical system in which all the conductors and devices are electrically connected to a common source of electrical energy

Task

A piece of work requiring effort, resources and having a concrete outcome (a deliverable). A task may be of any size (a project is a very large task). Sometimes the term is used to denote a piece of work at a particular level in a Work Breakdown Structure (WBS) hierarchy e.g., a phase is broken into a set of activities, and an activity into a set of tasks. Except for this hierarchical usage, activity is synonymous with task.

Task Dependency

A relationship in which a task or milestone relies on other tasks to be performed (completely or partially) before it can be performed. Also referred to as a *logical relationship*.

Temporary Installation

An installation that can travel independently between any planned points of departure and arrival for the purpose of transporting any substance, and which is only deemed to be an installation at the points of departure and arrival, respectively.

The Council

The Council for the Built Environment established under section 2 of the Council for the Built Environment Act, 2000 (Act No 43 of 2000)

The South African Council for the Project and Construction Management Professions

The South African Council for the Project and Construction Management Professions established by section 2 of the Project and Construction Management Professions Act, 2000 (Act No. 48 of 2000), and "SACPCMP" has the same meaning.

Top-down Estimating

Approximating the size (duration and cost) and risk of a project (or phase) by looking at the project as a whole and comparing it to previously performed similar projects. The comparison may be made directly using "analogous estimating," through an algorithm as in "parametric estimating", or from the memory of estimating experts.

Trade Union

A Trade Union as defined in Section 1 of the Labour Relations Act, 1956 (Act No. 28 of 1956)

Uncertainty

The event or condition that is unidentifiable, unquantifiable and uncontrollable and that may provide a positive or negative effect on the achievement of specific objectives

User

In relation to plant and machinery, the person who uses plant and machinery for his/her own benefit or who has the right of control over the use of plant and machinery, but does not include a lessor of, or any person employed in connection with, that plant or machinery

Variance

The difference between estimated cost, duration or effort and the actual result of performance. In addition, can be the difference between the initial or baseline product scope and the actual product delivered.

Vendor

An organization or individuals providing products or services under contract to the client or to the project performance group. Also called *outside contractors* or *sub-contractors*.

Work

Work as an Employee or as a self-employed person, and for such purpose an Employee is deemed to be at work during the time that he/she is in the course of his/her employment, and a self-employed person is deemed to be at work during such time as he/she devotes to work as a self-employed person

Work Place

Any premises or place where a person performs work in the course of his/her employment

Works

All work executed or intended to be executed in accordance with the construction contracts

Work Breakdown Structure (WBS)

A hierarchical task list created by decomposing the project based on the breakdown of the product into components and the breakdown of the project process into increasingly detailed tasks. The WBS is depicted as a tree diagram (or hierarchy chart) or as a list in outline form with detailed items subordinated to higher-level items.

Work Package

A task at a low level of the Work Breakdown Structure at which project accounting is performed. Usually a week or so in duration and performed by an individual or small work group