

Essential Definitions

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The PD – Eden Enterprise

WORD	DEFINITION	CATEGORY
Absolute Pressure	Absolute Pressure is measured relative to the atmospheric pressure that is equal to gauge pressure plus atmospheric pressure. The Absolute Pressure is the pressure of having no matter inside a space, or a perfect vacuum. (Refer to the Gauge Pressure)	Engineering
Absolute Zero Temperature	Absolute Zero Temperature is the lower limit of temperature of the ideal gas, 0°K = - 273.15°C	Engineering
AC (Alternating Current)	Alternating Current (AC) is an electric current that is reverses flow at regular intervals or cycles or movement of electric charge in a circuit periodically. (Opposite of the Direct Current (DC))	Engineering
Acceptable Risk	An Acceptable Risk is the level of human injury or property loss that is considered tolerable for a given activity by an individual or society.	Management
Acceptance Criteria	Acceptance Criteria is the quality provisions of the technical basis and conditions that used to determine whether goods or services are accepted or satisfied by a user or customer.	Management
Acceptance Test	An Acceptance Test is the test, inspection and examination work process to check the meeting of requirements for scope of works, specification, function, capability, performance and completeness. The Acceptance Test can be performed at the manufacturer's shop (FAT) and at the site (SAT), and User Acceptance Test (UAT).	Quality
Accountability	Accountability is 1) completely responsible for what they do; 2) the obligation of an individual or organization to account for its activities. The Accountability cannot be delegated, but it can be shared.	Management
Accounting System	An Accounting System is a set of principles, methods and procedures used by organisations for an accurate and timely recording and reporting financial information for management decisions. The Accounting System includes financial information collecting, interpretation, recording, storing, analysing and reporting to interested parties including stakeholders, investors, auditors, and tax authorities. A regulatory requires how a particular accounting system is to be maintained. The Accounting System is comprised of manual or computerized records for administering, recording, and reporting on financial transactions.	Controls
Acid Gas	Acid Gas is the natural gas or any other gas mixture containing a proportion of gases such as carbon dioxide (CO2) and/or hydrogen sulphide (H2S) that is form acidic compounds when mixed with water.	Substance

WORD	DEFINITION	CATEGORY
ACS (Automation Control System)	Automation Control System (ACS) is an application of control theory for regulation of processes without direct human involvement that is used in the various control systems for operating equipment such as machinery, processes in factories. The ACS sustains and improves the functioning of a controlled object with starting, stopping, monitoring, adjusting, etc. A benefit of ACS function is to save labour, materials and to improve quality, accuracy, and precision.	Engineering
Act of God	An Act of God is a very bad situation that cannot be prevented or controlled, is a contractual term used to denote an event such as an earthquake, flood, hurricane, lightning, snowstorm, etc. The Acts of God is insurable accidents and valid excuses for non-performance of a contract. (Refer to a Force Majeure)	Management
Active Bribery or Active Corruption	Active Bribery or Active Corruption is defined as paying or promising to pay a bribe.	Business
Actual Progress (AP)	Actual Progress (AP) is the actual earned value, the achieved performance or gained value with actual consumed resources. The Actual Progress is calculated based on an agreed upon the Progress Measurementation Method or Procedure.	Controls
ACWP (Actual Cost of Work Performed)	Actual Cost of Work Performed (ACWP) is a direct cost actually incurred and indirect costs applied in and recorded in the Earned Value Management System (EVMS) for accomplishing the work performed within a given accounting period. The ACWP reflects the applied costs that may be expressed as a value for a specific period or cumulative to date.	Controls Management
Advance Payment Bond (AP Bond)	An Advance Payment Bond (AP Bond) manages the risk of a party's (contractor's) failure to earn the whole of any advance payment from the owner (employer) by failing to provide goods and services to an equivalent value. The AP Bond is supplied by the contractor receiving an advance payment to the owner to guarantee the proper use of the advance payment. (Also, called as an Advance Payment Guarantee)	Controls
Advanced Project Management (APM)	Advanced Project Management (APM) is 1) using the advanced technology, and tools and systems in the project management (e.g. The Stanford Advanced Project Management Certificate Program provides professionals with advanced tools and techniques to strategically execute projects, programs, and portfolios); 2) the project management and control methodology that is managing and controlling the readiness and predecessor activities of the critical activities in advance rather than main activities of critical path, especially focusing on the work processes and resources availability.	Management

WORD **DEFINITION CATEGORY** AFC (Approved for An Approved for Constriction (AFC) means that drawings and Construction Construction) documents are reviewed and approved by authorities of internal and external organisations including the client team members of the construction. A Construction team must use only AFC marked or stamped drawings and document for the construction works and activities. Related Definitions in the Project: The Document Review and Approval An Approved for Design (AFD) means that drawings or AFD (Approved for Engineering Design) documents are reviewed and approved by a dedicated and authorised person or organization for use, mainly further design development, and procurement. Related Definitions in the Project: The Document Review and Approval AFE (Authority for An Authority for Expenditure (AFE) is a budgetary document, Controls **Expenditure**) usually prepared by the operator, to list estimated expenses of drilling a well to a specified depth, casing point or geological objective, and then either completing or abandoning the well. Such expenses may include excavation and surface site preparation, the daily rental rate of a drilling rig, costs of fuel, drillpipe, bits, casing, cement and logging, and coring and testing of the well, among others. This estimate of expenses is provided to partners for approval prior to commencement of drilling or subsequent operations. Failure to approve an authority for expenditure (AFE) may result in delay or cancellation of the proposed drilling project or subsequent operation. **Air Pollution** Air Pollution is the presence of concentrated contaminant or pollutant substances in the air including gases, particulates, and biological molecules that do not disperse properly. The Air Pollution interfere with biological processes including human health and economics, or produce other harmful environmental effects. **ALARP (As Low As** ALARP (As Low As Reasonably Practicable) is a term often HSE Reasonably used in health and safety system by the regulation and management of safety-critical and safety-involved systems. Practicable) The ALARP principle is interpreted as satisfying a requirement to keep the risk level as low as possible which the risk is the combination of the frequency (likelihood) and the consequence of a specified hazardous event. Reference Definition by Hse.gov.uk: The ALARP stands for As Low As Reasonably Practicable. Using reasonably practicable allows us to set goals for duty-holders, rather than being prescriptive. This is the level to which risks should be controlled. Thus, determining that risks have been reduced to ALARP involves an assessment of the risk to be avoided, of the sacrifice (in money, time and trouble) involved in taking measures to avoid that risk, and a comparison of the two. (Also

Refer to the SFAIRP (so far as is reasonably practicable))

WORD	DEFINITION	CATEGORY
Alert Level (or Threat Level)	Alert Level (or Threat Level) is a term used by governments to indicate the state of preparedness required by government departments, agencies and their staffs should react to each alert level based on the level of threat. The Alert Level describes a progressive, qualitative measure of the likelihood from negligible to imminent, based on government or company intelligence information.	HSE
Alignment Meeting	An Alignment Meeting is a work process that team members to be enhanced the communication and alignment of goals and objectives. It should allow all team members to be involved and actively generating ideas. (Refer to the Project Alignment Meeting)	Management
All Rights Reserved	All Rights Reserved is a copyright formality notifying the world that copyright exists in provided contents and the contents can not be reproduced, downloaded, disseminated, published, or transferred in any form or by any means, except with the prior written permission. In copyright law, by default all rights are reserved; nothing may be done with a copyrighted work without explicit permission which is originated in the Buenos Aires Convention of 1910, however, it is still used by many copyright holders.	Management
Alloy Steel	Alloy Steel is an iron based alloy containing carbon (usually less than 2.5 % by weight), manganese (usually greater than 0.25 % by weight), and a variety of elements in total amounts between 1.0 % and 50 % by weight to improve its mechanical properties. Low Alloy Steel (less than 5 %) to increase strength or hardenability, and High Alloy Steel (over 5 %) to achieve special properties, such as corrosion resistance or extreme temperature stability.	Substance
Alternative Proposal	A Base Proposal is prepared and developed in comply with the requirement of the Invitation of Bidder (ITB or ITT) document or client's instruction or contractor's own requirement. An Alternative Proposal may be developed and submitted to the client for their consideration when bidder or contractor has a better idea or suggestion than the requested such as the project duration, cost deduction, better performance or any other terms and conditions, but normally exception of safety related matters.	Management Business
Ancillary Drawing	An Ancillary Drawing provides necessary support to the primary drawing that is prepared to supplement end product drawings. The Ancillary Drawing may be required for logistics purposes, configuration management, and other similar functions unique to a design activity.	Engineering
Anion	An Anion is an ionic species having a negative charge atom that have gained electrons. Anions are one of the two types of ions. The other type is called a cation.	Technology

WORD **DEFINITION CATEGORY Anode** An Anode is an electrode of an electrochemical cell at which Engineering oxidation occurs. The Anode is a positively charged electrode, as of an electrolytic cell, storage battery, or electron tube, and a negatively charged terminal of a primary cell or of a storage battery that is supplying current. **Anodic Protection** Anodic Protection is the method to reduce the corrosion rate of Technology a metal surface with a low voltage direct current by connecting it as an anode with respect to an inert cathode in the cell formed due to an electrochemical reaction in the corrosive environment, and ensuring that the electrode potential is controlled to keep the metal in a passive state. The Anodic Protection is more suitable than cathodic protection for stainless steels specially in extremely corrosive environments, as in the handling and storage of concentrated sulphuric acid. **Antitrust** Antitrust means the efforts to prevent companies from working **Business** together to control prices unfairly in business, including manufacturing, transportation, distribution and marketing that refers to a field of economic policy and laws dealing with monopoly and monopolistic practices. Antitrust law or antitrust policy are terms primarily used in the United States, while in many other countries the terms competition law, or policy or fair trading, or anti-monopoly policy or law are used. **API Gravity** The API Gravity is typically used in reference to crude oil that is Engineering calculated using its specific gravity: the ratio of its density to that of water. The API sets standards for production, refinement and distribution of petroleum products including the method used for measuring the density of petroleum. API gravity which is always determined at 60 °F is calculated: API gravity = (141.5/Specific Gravity) - 131.5. The API gravity is used to classify oils as light. medium, heavy, or extra heavy (Light - API > 31.1, Medium -API between 22.3 and 31.1, Heavy - API < 22.3, Extra Heavy -API < 10.0). **Application Program** Application Program (or Application Software, App) is a Technology comprehensive, self-contained program that is written and designed for a specific need or purpose. (e.g. word processor, spreadsheet, web browser, email, media player, file viewer, etc.) (Opposite of the System Software which is the infrastructure in the computer (e.g. operating system, utilities and related components)) Reference Definition by Aiche.org: Application Program is a generic term for a computer program written for a particular application, possibly unique to a particular installation. Logical assembly of all the programming language ELEMENTS and constructs necessary for the intended signal processing required for the control of a MACHINE or PROCESS by a PES. **Appraisal** Appraisal is an act of examination and evaluation work Management performance of individual or team or organisation to record their success, quality and needs. Appraisals for internal and external including sub-contractors' and suppliers' key personnel and

organization helps for future project and business.

WORD	DEFINITION	CATEGORY
Arbitration	Arbitration is a dispute resolution work process utilising the independent third party to settle disputes without going to court. The third party acting as arbitrator must be agreed by both parties, reviews the evidence in the case and imposes a decision that is legally binding on both sides and enforceable in the courts.	Management
	Related Definition: International Chamber of Commerce (ICC)	
Architectural Engineering	Architectural Engineering is a part of the civil engineering, responsible for a building and structure design and engineering, and construction. Related Definitions in the Project: The Engineering	Engineering
Argument	An Argument is a process of disagreeing or set of reasons given in support of an idea, action or theory. The argument is not evidence or may be in written form contained in a brief summary.	General
Aromatic	Aromatic is an organic hydrocarbon characterized by unsaturated ring structures of carbon atoms contain a number of single and double bonds that interact with each other according to certain rules, commercial petroleum aromatics are benzene, toluene and xylene (BTX).	Substance
Arrangement Drawing	An Arrangement Drawing provides the physical relationship of significant items using appropriate projections or perspective views that is prepared to convey a general description of the configuration and location of significant items. The Arrangement Drawing includes information of parts list, fabrication and detail drawing, overall dimension, weight, lifting points, etc., for test, lift, transport, and install the equipment.	Engineering
Arrow Diagram Analysis	Arrow Diagram Analysis is a network scheduling technique which the activity is represented by arrows. The arrow is connected by each Node (Predecessor or Former Activity; Base Activity; Successor or Follow Activity) and it represents the start and the finish of the activity (Base), but the length of the arrow does not represent the expected duration of the activity. The Arrow Diagram Analysis shows the activities sequences in which the activities are to be performed in sequential order.	Controls
As Built Drawing	An As Built Drawing is a drawing which is marked up in the field reflecting changes to the design documents during construction, pre-commissioning and commissioning.	Engineering
Assembly Drawing	An Assembly Drawing defines the configuration and contents of the assembly that is used to represent items more than one component. The Assembly Drawing establishes item identification for each assembly containing detailed requirements for all parts and sub-assemblies that make the final product. The Assembly Drawing shows how the components fit together and orthogonal plans, sections and elevations, or three-dimensional views, containing overall dimensions, weight and mass, identification of all the components, quantities of material, supply details, list of reference drawings, and notes.	Engineering

Asset Integrity Management (AIM)

An Asset Integrity Management (AIM) is a process safety management system for ensuring the integrity of assets throughout their life cycle. An asset management is to effectively manage assets in order to gain maximum value, profitability and returns while safeguarding personnel, facility, and the environment, protecting health, safety environment. The AIM program incorporates design, inspection, maintenance. process, operations, management concepts from the design of new facilities to maintenance management to decommissioning for all these disciplines impact the integrity of infrastructure and equipment.

Management

Asset Management

Asset Management is the systematic and coordinated activities and practices that is the ability of an asset and asset system to perform its required function effectively and efficiently. The Asset Management performs the risks and expenditures over a lifecycle period for the purpose of achieving its organisational strategic plan.

Operation

Reference Definition by Assetmanagementstandards.com: Asset Management: Assets, and value realized from them, are the basis for any organisation delivering what it aims to do. Whether public or private sector, and whether the assets are physical, financial, human or 'intangible', it is good asset management that maximises value-for-money and satisfaction of stakeholders' expectations. It involves the coordinated and optimized planning, asset selection, acquisition/development, utilization, care (maintenance) and ultimate disposal or renewal of the appropriate assets and asset systems. Insights into the integration and optimization of asset management have developed since the 1990s (from the North Sea oil and gas industry and the Australian public sector), to identify a range of essential business processes, alignment activities and system integration features that yield very significant performance benefits.

Assignment Plan (or Manning Plan)

An Assignment Plan (or Manning Plan) is the resources mobilization plan for project team members to the project to meet the project schedule, goals and objectives, and other contractual requirements.

Management

Related Definition: Manning Plan

Associated Gas

Associated Gas is the gaseous phase of the crude oil and Substance usually contains some light liquids such as propane and butane. (Also, called as the Wet Gas) In traditional gas markets, the Associated Gas would command a lower price than the Nonassociated Gas (Nonassociated Gas).

Related Definitions: Nonassociated Gas; Gas Cap (Cap Gas);

Solution Gas.

Assumed Risk

An Assumed Risk is 1) a risk that has been identified, analysed, and accepted at the appropriate management level, or unanalysed or unknown risks fall under oversight and omissions by default; 2) an affirmative defence that some defendants in personal injury cases may use to argue that they are not liable for the plaintiff's injuries.

Management

WORD	DEFINITION	CATEGORY
At Cost	At Cost is to compensate of the direct cost based on actual invoiced/ paid amount used for a reimbursable contract basis. Indirect cost including company overhead and profit handles separately such as a fixed amount or proportionally calculated with incentive program.	Controls
Atmospheric Crude Distillation	Atmospheric Crude Distillation is a refining process of separating crude oil components at atmospheric pressure by heating to temperatures of about 600° to 750° F (depending on the nature of the crude oil and desired products) and subsequent condensing of the fractions by cooling. (Refer to a Crude Distillation Unit (CDU))	Technology
Atmospheric Pressure	Atmospheric Pressure is the pressure of the weight of air and water vapour on the surface of the earth: one standard atmosphere at zero degrees centigrade is equal to 1.033 kg/cm2 or 14.695 lb/in2 (psi).	Engineering
Atmospheric Storage Tank	An Atmospheric Storage Tank is a storage tank designed to operate at the approximately equal to the atmosphere any pressure, between ambient pressure and 0.5 psig measured at the top of the tank. (NFPA30)	Engineering
Audit Checklist	An Audit Checklist is a checklist document that contains numbers, statements, or other evidence to be used and found in the audit.	Quality
Audit Criteria	Audit Criteria is a criteria document, and used as a reference items and include company policies, plans, procedures, requirements, and other forms of documented information. The Audit Criteria is compared against audit evidence to determine how well they are being met.	Quality
Audit Programme (Program)	An Audit Programme (Program) is a set of audits schedule that are planned and carried out within a specific time frame.	Quality
Auditability	Auditability is the ability to keep an accurate record of all transactions for reconciliation purposes, and possible to establish whether a system is functioning properly and, thereafter, that it has worked properly.	Management
Authorised Work	Authorised Work is 1) an approved work permit that can be processed; 2) an additional work that effort for which defined contract costs have not been agreed to, but for which written authorization has been received.	Management
Authority	Authority is a person or organization having political or administrative power and control. The Authorities are the group of people with official legal power to make decisions or make people obey the laws in a particular area, such as a local government department.	Management

WORD	DEFINITION	CATEGORY
Autocratic Leadership	Autocratic Leadership is one of the leadership or management styles controlled by one leader who has total power, made all the decisions, and took very little inputs from other term members. The Autocratic Leadership is necessary within organisations and companies that demand error-free outcomes, and one of the most common management styles. The Autocratic manager likes to make all the important decisions, closely supervise and control team members, simply give orders, and expect to be obeyed.	Management
Auxiliary Energy or System	An Auxiliary Energy or System provides by an alternate source to operate mechanical components of an energy system, or a source of energy or energy supply system to back-up another, or any additional energy consumption due to fans, pumps, control gear etc.	Engineering
Availability	Availability is the fact or possibility which a system is actually capable of performing its mission, or the amount of time.	General
B/L (Bill of Lading or BOL)	Bill of Lading (B/L or BOL) is a shipping document issued by a carrier or his agent to recipient of a shipment. The B/L consists of an evidence of contract (consignor's and consignee's name) of carriage, name of the vessel and ports, receipt of goods or cargo, and document of title to the goods or cargo, etc.	Procurement
Back Charge	Back Charge is a money back against a contract to other party for correction of incomplete work or improper performance.	Controls
Back Pressure	Back Pressure (or Backpressure) is the pressure within a system caused by fluid friction or an induced resistance that the fluid encounters flowing through the system.	Technology
Back to Back Guarantee	A Back to Back Guarantee (also known as back-to-back credit or reciprocal credit) is two letters of credit issued by two banks, one guaranteeing payment by a seller and the other guaranteeing performance by a buyer that is the arrangement securities for a contractor or seller's performance at the same time a guarantee is arranged to the owner or buyer's payment. The Back to Back Guarantee is to protect the interests of both parties involved in the transaction from incurring a loss, or at least minimizing that loss to a great degree.	General
Backlog	A Backlog is a future workload and a value of unfulfilled orders or works to be performed works in future accounting periods.	Management
Balance of Payments (BOP)	Balance of Payments (BOP) is 1) the records all financial transactions that is the economic transactions occurring during specific time periods between entities in one country and the rest of the world, and can be summarised in a systematic way. The IMF Balance of Payments provides conceptual guidelines for compiling balance of payments statistics according to international standards. 2) the difference between a country receives from exports and it spends on imports.	Business

WORD	DEFINITION	CATEGORY
Balance of System (BOS)	A Balance of System (BOS) in a renewable energy system is all components other than the main mechanism facilities, such as photovoltaic (PV) panels for the solar energy, and a wind turbine for the wind power.	Technology
Balancing Agreement	A Balancing Agreement is a contract among parties of the production of a gas well used to define procedures for the capacities in pipelines or production from gas fields. The Balancing Agreement agrees to specify the gas custody transfer procedures for confirmation of scheduled quantities for balancing discrepancies between the nominated levels of produced gas quantities and the actual serviced quantities at delivery or receipt points.	Business
Ball Park Estimate	A Ball Park Estimate is an approximate or rough estimate (Refer to a ROM (Rough Order of Magnitude) Estimate) Related Definitions in the Project: The Cost Estimate (Estimation)	Controls
Bar (bar)	A Bar (bar) is a metric unit of gas pressure that is defined as exactly equal to 100,000 Pa (n/m2) which is approximately atmospheric pressure.	Engineering
Bar Chart Schedule	A Bar Chart Schedule is a simple schedule and shows a graphic presentation of work activities by a time scaled bar line. Related Definitions in the Project: The Project Schedule	Controls
Barrel (bbl)	A Barrel (Oil) is a unit of volume, an oil barrel (in north America) is defined as 42 U.S. gallon or 35 imperial gallons, equal to approximately 159 litres. A Barrel (Fluid) is a unit of volume, the UK a beer barrel is 164 litres and U.S. a beer barrel is 117 litres but the US most other fluids a barrel (except Oil) is 119 litres.	Engineering
Base Gas (or Cushion Gas)	Base Gas (or Cushion Gas) is the minimum volume of gas required in a gas store or an underground storage reservoir to provide and maintain the necessary pressure and deliverability rates throughout the withdrawal season. The Cushion Gas is initially established and un-produced reserves left in a partly depleted field may finally be used when the store is decommissioned that is typically 50% of the total stored volume may be a large part of the capital cost.	Substance

Base Load

Base Load is the portion of energy (electricity, LNG) delivered or produced that is continuous as a minimum over a given period of time at a steady rate, approximately equivalent to the minimum daily load. In electric system, the Base Load power is generated by nuclear or fossil-fuel (or, where available, biomass or geothermal) generators as the basis of the reliable and affordable electricity needed to satisfy this minimum demand.

Engineering

Reference Definition by EIA: Base load is the minimum amount of electric power delivered or required over a given period of time at a steady rate. Base Load Plant is a plant, usually housing high-efficiency steam-electric units, which is normally operated to take all or part of the minimum load of a system, and which consequently produces electricity at an essentially constant rate and runs continuously. These units are operated to maximize system mechanical and thermal efficiency and minimize system operating costs.

Baseline

A Baseline is a defined and agreed starting point of the implementation, and for the future measurement and comparison.

Management

Related Definitions in the Project: The Project Baseline

Baseline Risk Assessment

A Baseline Risk Assessment is an assessment process to obtain a benchmark of the types and size of potential hazards that is a significant impact on operational activities, processes and systems based business functions. The Baseline Risk Assessment focuses the identification of the risks within a task, process or activity, usually associated with the management of change.

Management

Reference Definition by Aiche.org: A Baseline Risk Assessment is a process to characterize the current and potential threats to human health and the environment that may be posed by contaminants migrating to groundwater or surface water; releasing to air; leaching through soil; remaining in the soil and bio-accumulating in the food chain. The primary purpose of the baseline risk assessment is to provide risk managers with an understanding of the actual and potential risks to human health and the environment posed by the site and any uncertainties associated with the assessment. This information may be useful in determining whether a current or potential threat to human health or the environment warrants remedial action.

Basic Engineering

Basic Engineering is a basis of detailed design and engineering development for a construction. A cost estimate in the basic engineering phase may typically be refined to +/- 15 \sim 30%, and this is used as the project final investment decision (FID). In many cases this package may also be called as a front end engineering design (FEED) and used as an Invitation of Bidder (ITB) or tender package for the EPC Contract.

Engineering

Related Definitions in the Project: The Engineering

WORD	DEFINITION	CATEGORY
Basic Solution	Basic Solution is an aqueous solution has a higher concentration of hydroxide ions that hydrogen ions; a pH between 7 and 14.	Substance
BAT (Best Available Techniques)	A Best Available Techniques (BAT) means the available techniques which are the best for preventing or minimising emissions and impacts on the environment. (Refers to the State of the Art)	HSE
Batch Plant	A Batch Plant is 1) a pilot plant; 2) a concrete ready mix plant at or near the construction site as a temporary concrete manufacturing facility. The Batch Plant is a device that combines various ingredients to form concrete which are sand, water, aggregate (rocks, gravel, etc.), fly ash, potash, and cement.	Construction
Battery Limit	A Battery Limit is the geographic boundaries identifying scope of works for unit, facility, system as well as contractor or subcontractor.	Engineering
bbl/d (bbl/day or BPD, Barrels per Day)	bbl/d (bbl/day or BPD, Barrels per Day) is a measure of oil output, usually used to quantify a refiner's output capacity or an oilfield's rate of flow. 1 bbl/d equals to 0.16 cubic meters per day (m3/d) in flow rate.	Engineering
BEDD (Basis of Engineering and Design Data)	A Basis of Engineering and Design Data (BEDD) is a summary of basic information to be followed in the basic and detailed design which defined a basis for the design of the process and utility units. The BEDD is developed by an engineering contractor or a consultant in accordance with BEDQ responses and contractor's experience and knowledge.	Engineering
BEDQ (Basis of Engineering and Design Questionnaire)	A Basis of Engineering and Design Questionnaire (BEDQ), contractor develops questionnaire list to be provided information by the plant owner for the development of Basis of Engineering and Design Data (BEDD) the plant.	Engineering
Bench Mark	A Bench Mark is the fixed permanent reference point as a plant monument used for the reference point of location and coordinate (elevation and horizontal coordinates) of the overall and units' plots and plant battery limits as well as individual facilities including buildings, equipment, roads etc., and the starting point of site survey activity.	Construction Engineering
Benchmark	A Benchmark is a standard or point of reference, or to develop a standard by measuring and comparing of a level of quality or performance or work process with other similar reference businesses.	Management

WORD **DEFINITION CATEGORY Benchmark Oil** A Benchmark Oil is a Crude Oil that serves as a reference price **Business** for buyers and sellers of crude oil. The most widely used Management benchmarks are associated with crude oil that has four common qualities: stable and ample production; a transparent, freeflowing market located in a geo-politically and financially stable region to encourage market interactions; adequate storage to encourage market development; and/or delivery points at locations suitable for trade with other market hubs, enabling arbitrage (profit opportunities) so that prices reflect global supply and demand. There are the main three West Texas Intermediate, Brent Crude, and Dubai Crude. **Benchmarking** Benchmarking is the comparison of current operating practices Management to industry best practices from other companies and regulatory standards. Benchmarking is used to measure performance using a specific indicator compared to others that defines the process of measuring products, services, and processes against those of organisations known to be leaders in one or more aspects of their operations. Reference Definition by OECD: Benchmarking refers to the case where there are two sources of data for the same target variable, with different frequencies, and is concerned with correcting inconsistencies between the different estimates, e.g. quarterly and annual estimates of value-added from different sources. **Best Practice** Best Practice is a recommendable practice, a method or Management technique that comes a superior result. **BFD (Block Flow** A Block Flow Diagram (BFD, Block Diagram) is a simple Engineering Diagram) diagram to show the essential of installation in sufficient block outline to indicate the main design features. **BHP** (Brake Brake Horsepower or British Horsepower (BHP) is a standard Engineering Horsepower) measure of power output for engines at the engine's flywheel which is more of a theoretical calculation, made under labcontrolled conditions, and without having anything attached to the engine, but the Horsepower (HP) is measured with all the components attached to the engine, to determine its maximum rate and speed. The mechanical horsepower, also known as imperial horsepower, of exactly 550 foot-pounds per second is approximately equivalent to 745.7 watts (W). The metric horsepower of 75 kgf-m per second is approximately equivalent to 735.5 W or 98.6% of an imperial mechanical horsepower. An Electrical Horsepower is 746 W. Bid A Bid is a written or formal offer, or complete proposal in Procurement response to an ITB (Invitation to Bid), RFQ (Request for Quotation), or Inquiry. The Bid includes price, time frame, terms of sale, and description of goods and services to be supplied. (Also, called as the Tender (UK) or Proposal) Related Definitions in the Project: The Procurement

WORD **DEFINITION CATEGORY Bid Evaluation** Bid Evaluation is an evaluation work process to select the General successful supplier or contractor (or subcontractor) among proposed bidders in accordance with bid evaluation criteria. The Bid Evaluation consists of a Commercial Bid Evaluation (CBE) and Technical Bid Evaluation (TBE) Related Definitions in the Project: The Procurement Bid/ No-bid (Go/ No-A Bid/ No-bid (Go/ No-go or Proposal/ No-proposal) Decision is Management go or Proposal/ Noa work process to decide whether or not the company participate in the business based on the assessment work proposal) Decision processes such as proposal opportunity, project, client, competitors and company capability assessment. A proposal cost and schedule, winning strategy and other decision factors such as workload, future business plan, client relationship, project execution risks, etc. should be considered for the Bid/ No-bid decision. Related Definition: The Proposal Work Process **Bidder** A Bidder is a person or company who develops and submits a Procurement proposal (bid, or tender document), and is a potential contractor or supplier to be selected through a bid evaluation process. (Also, called as the Tenderer) Related Definitions in the Project: The Procurement **Bidder List** A Bidder List is a potential equipment or bulk material suppliers General or manufacturers list for the project procurement, and a candidate list of third party company for study, review, test and inspection, audit, survey, verification, authority approval, and any other activities which is performed by third party including construction sub-contractors. The Bidder list is an agreed document between contractor and client (owner) before the bidder selection work process is commenced. Related Definitions in the Project: The Procurement **BIM** (Building Building Information Modelling (BIM) is an intelligent 3D model-Engineering Information based process involving the generation and management of 30823 Modelling) digital representations of physical and functional characteristics of buildings and infrastructure that gives architecture, engineering, and construction professionals the insight and tools to more efficiently extracte or exchange to support decision-making regarding a building construction. Reference Definition by Thenbs.com: BIM or Building Information Modelling is a process for creating and managing information on a construction project across the project lifecycle. One of the key outputs of this process is the Building Information Model, the digital description of every aspect of the built asset. This model draws on information assembled collaboratively and updated at key stages of a project. Creating a digital Building Information Model enables those who interact with the building to optimize their actions, resulting in a greater whole life value for the asset.

Bioenergy is the renewable energy made available from Engineering

materials derived from biological sources that is the complex

carbohydrates in organic material into energy.

Bioenergy

WORD	DEFINITION	CATEGORY
Biofuel (Biomass Fuel)	A Biofuel (Biomass Fuel) is any fuel that is derived from directly or indirectly from organic material, biomass including plant materials and animal waste such as include bioethanol from sugar cane or corn; charcoal or woodchips; and biogas from anaerobic decomposition of wastes.	Substance Engineering
Biomass Energy or Biomass Power	Biomass Energy or Biomass Power is carbon neutral electricity generated from renewable organic waste (Biomass). This organic waste can include scrap lumber, forest debris, agricultural harvest waste, and other industry byproducts. In biomass power plants, wood waste or other waste is burned to produce steam that runs a turbine to make electricity, or that provides heat to industries and homes (more about the Biomass) Related Definitions in the Project: The Renewable Energy	Engineering
Blackout	A Blackout is 1) a period of time when there is no electricity power because of a failure, or hidden by law. The Blackout may cause in an electricity network including faults at power stations, damage to electric transmission lines, substations or other parts of the distribution system, a short circuit, etc.; 2) a short period of time for a temporary loss of consciousness; 3) a period for which certain special offers or discounts are not available.	Engineering
Blanket Order	A Blanket Order is a purchase order that establishes the price basis and all applicable terms and conditions that applies for bulk materials supply for the large and mega project construction. After its acceptance by the supplier, purchase order (quantities) may be made against it periodically.	Procurement
Blast Resilience	A Blast Resilience design is required structures or structural components which have already a certain elasticity and flexibility in their conventional design to receive some blast loads, and those which are designed with an improved conventional (enhanced resilient) design to receive limited blast loads. The Blast Resilience Design is guided in ASCE (American Society Civil Engineers) Standard for Blast Protection of Buildings and ACI (American Concrete Institute), and AISC (The American Institute of Steel Construction) Codes.	Engineering
Blast Resistance	A Blast Resistance design is a safely stand against a blast load of explosion calculated by the Quantitative Risk Assessment (QRA) for buildings and structures to protect people and key control and electrical systems. A Blast Resistance design is guided in the ASCE (American Society Civil Engineers) Standard for Blast Protection of Buildings and ACI (American Concrete Institute), and AISC (The American Institute of Steel Construction) Codes.	Engineering
Blowdown	Blowdown is a process of discharging that remove a significant portion of accumulated deposits or other impurities from the aqueous solution.	Operation

WORD	DEFINITION	CATEGORY
BM (Bill of Material)	A Bill of Material (BM) is a listing of all comprehensive permanent components and parts for bulk material items which can be purchased from normal markets or manufacturers, and will be fabricated or assembled and installed as a part of a facility or plant. A BM list includes material codes (identification number), specifications and quantities as a minimum.	Engineering
BOD (Biological Oxygen Demand)	A Biological Oxygen Demand (BOD) is the amount of dissolved oxygen needed by aerobic biological organisms in a body of water to break down organic material present in a given water sample at certain temperature over a specific time period.	Engineering
BOE (Barrel of Oil Equivalent)	BOE (Barrel of Oil Equivalent) is quantify general energy requirements for practical purposes that is equivalent to the amount of energy found in a barrel of crude oil. One BOE is usually taken as representing 5.8 MMBtu.	Engineering
Bonded Area	A Bonded Area is a designated area including warehouse or other secured area used in export and import of international trades. The Bonded Area is authorised by customs authorities for the temporary storage of imported or to be exported goods or cargoes without the customs clearance is proceed (before payment of duties).	Procurement
Book Value	Book Value is the value at which an equity or other capital asset or liability is recorded in the balance sheet of an entity. The Book Value is calculated by total amount of the company assets, subtracting all debts and liabilities, and then dividing by the total number of shares.	Business
BOP (Balance of Plant)	Balance of Plant (BOP) is all infrastructural and facilities with the exceptions of the main product producing facilities in a plant. The BOP is generally used in the power project to all the supporting facilities and auxiliary systems of a power plant needed to deliver the electricity, other than the generating unit itself. In the power plant, the BOP includes transformers, inverters, supporting structures, and control and monitoring systems of the entire plant, but not the turbine, generator, and generator step-up transformer, and all its elements.	Engineering
BOQ (or BQ, Bill of Quantity)	A Bill of Quantity (BOQ or BQ) is a product specification that details the operations required to build a standard construction project. The BOQ or BQ is document used in bidding or tendering in the construction industry in which include itemized list of materials, parts, and labour required to construct for a specific scope of work. Refer to a BM or BOM	Construction Procurement
Borehole	A Borehole is a narrow shaft bored in the ground (Boring), either vertically or horizontally. The Borehole may be constructed for many different purposes, including the extraction of water, other liquids (such as petroleum) or gases (such as natural gas), as part of a geotechnical investigation, environmental site assessment, mineral exploration, temperature measurement, as a pilot hole for installing piers or underground utilities, for geothermal installations, or for underground storage of unwanted substances.	Construction

WORD	DEFINITION	CATEGORY
Bowtie	A Bowtie is a graphical illustrated risk evaluation method that can be used to analyse and demonstrate causal relationships in high risk scenarios. A Bowtie Diagram is a simple and effective tool for communicating risk assessment results to employees at all levels. This diagram clearly displays the links between the potential causes, preventative and mitigate controls and consequences of a major accident. It may be integrated with Layers of Protections Analysis (LOPA). The Bowtie method is originated by ICI in the late 1970's.	Management
BPSD (Barrel Per Stream Day)	A Barrel Per Stream Day (BPSD) is a unit of a capacity of refinery. The BPSD is the maximum number of barrels of input by which a distillation facility can process within a 24-hour period when running at full capacity with no allowance for downtime.	Operation
Brackish Water	Brackish Water is the water that is saltier than fresh water, but not as salty as sea water.	Substance
	Reference Definition by NGWA: Brackish Water is water where the salinity is appreciable but it is typically defined as distastefully salty but less saline than seawater (between 1,000 to 10,000 ppm) in total dissolved solids (TDS). In addition to certain surface water settings such as estuaries, brackish water can be found in aquifers. In some regions of the country with limited availability of freshwater, desalination of brackish groundwater is being used as an alternative supply.	
Brainstorming	Brainstorming is a work process of group problem solving technique that involves the contribution of ideas from all members of the group for a future activity through generating creative ideas and solutions by intensive group discussions. The Brainstorming creates new ideas, solves problems, motivates to team members, and develops team works. The Brainstorming needs to be structured and followed rule and procedures, and managed by the experienced facilitator.	Management
Breach of Contract	A Breach of Contract is a failure by one party to a contract to uphold their part of the deal.	Management
Break Even (or Breakeven Point)	A Break Even (or Breakeven Point) is to have no gain (profit or benefit) or loss at the end of a business activity. The Break Even is reached when the total revenue or income exactly matches the total costs and the business is not making a profit or a loss, also a financial result reflecting neither profit nor loss.	Business

WORD	DEFINITION	CATEGORY
Brent Crude	The Brent Crude is a major trading classification of sweet light crude oil that serves as a major Benchmark Oil price for purchases of oil worldwide. Brent stands for the differing layers of an oil field: Broom, Rannoch, Etieve, Ness, and Tarbat. The Brent Crude is a light, sweet crude with an API gravity of 38.06 and a specific gravity of 0.835, making it slightly heavier than West Texas Intermediate (WTI). The sulphur content is 0.37%. The price of Brent Crude is used to set prices for roughly two-thirds of the world's oil. It is mostly refined in Northwest Europe and is also called Brent Blend, London Brent, and Brent petroleum. The Brent field is located in the East Shetland Basin, halfway between Scotland and Norway.	Engineering
Bribery	Bribery is the crime of giving someone money or something else of value to influence the actions of an official or other person in charge of a public or legal duty.	Management
	Reference Definition by Thebriberyact2010.co.uk: Bribery means giving or receiving a financial or other advantage in connection with the improper performance of a position of trust, or a function that is expected to be performed impartially or in good faith. Bribery does not have to involve cash or an actual payment exchanging hands and can take many forms such as a gift, lavish treatment during a business trip or tickets to an event.	
Brownfield Plant	A Brownfield Plant is a plant that is a revamping, upgrading or modification of the existing plant. (Opposite of the Grass Root Plant)	Construction
Budget	A Budget is the quantitative expenses including money and effort hours for a planned or allowed to expend or to be expended for a work or project.	Controls
Budget Allowance	A Budget Allowance is to prepare for the possibility of future uncertainties, and money that will be given regularly, especially to pay for a particular thing.	Controls
Budget at Completion (BAC)	A Budget at Completion (BAC) is a sum of all budgets established for the contract through a given Work Breakdown Structure (WBS).	Controls
Budgetary Control	Budgetary Control is a method of controlling an organization's budget by regularly comparing records of how much cost spends, and needs, and then making changes to the budget if necessary.	Controls
Budgetary Cost	Budgetary Cost (or Cost Budget) is an estimated cost that used for only planning or studying purpose to understand the size of the business (project or work) and to make a business decision.	Controls

WORD **DEFINITION CATEGORY Budgetary Cost** A Budgetary Cost Estimate (Class 3) is a project cost estimate Controls Estimate (Class 3) process similarly defined by the AACE as the Class 3 Estimate, or Budget Authorization or Control. The project Budgetary Estimate methodology is semi-detailed unit costs with assembly level line items, and the expected accuracy is Low: -10% to -20% and High: +10% to +30%. The Project Budgetary Cost Estimate is normally performed during the FEED and used for the FID (Final Investment Decision). Related Definitions in the Project: The Cost Estimate (Estimation) The Budgeted Cost for Work Performed (BCWP) is a sum of **Budgeted Cost for** Controls **Work Performed** the budgets for completed work packages and completed (BCWP) portions of open work packages (WP), plus the applicable portion of the budgets for level of effort and apportioned effort. May be expressed as a value for a specific period or cumulative to date. **Budgeted Cost for** The Budgeted Cost for Work Scheduled (BCWS) is a sum of Controls the budgets for all work packages (WP), planning packages, **Work Scheduled** etc., scheduled to be accomplished (including in-process work (BCWS) packages), plus the amount of level of effort and apportioned effort scheduled to be accomplished within a given time period. May be expressed as a value for a specific period, or cumulative to date. **Bulk Material** A Bulk Material is a non-tagged item material that is ordered, Engineering stored, issued and sold by weight or volume, bought in lots. The Bulk Material can be purchased from a standard catalogue description and are bought in quantity for distribution as required. **Business Continuity** Business Continuity Plan (BCP) is the process of creating Management Plan (BCP) systems of prevention and recovery to help ensure that business processes can continue during a time of emergency or disaster, in the event of a terrorist attack, fire, flood or other natural disaster, or any other major interruption, depends on how effectively can be devised, and managed the business continuity. The BCP lifecycle is: Analyse Business -> Assess the Risks -> Develop Strategy -> Develop Plan -> Implementation -> Feedback A Business Cycle (or Economic Cycle) is the economy-wide **Business Cycle (or Business** fluctuations in production, trade, and general economic activity **Economic Cycle**) of nations that organised in business enterprises. The Business Cycle is recurrent sequences of alternating phases of expansion and contraction in the level of a time series. These fluctuations typically repeated between periods of relatively rapid economic growth and periods of relative stagnation or decline: Expansion/ Booming/ Contraction/ Recession/ Recovery Cycles.

WORD **DEFINITION CATEGORY Business Model or** A Business Model or Method (BM) is a plan for the successful **Business** operation of a business, identifying sources of revenue, the Method (BM) intended customer base, products, and details of financing that includes how the business makes money or how to deliver value to the customers at an appropriate cost. The BM is a framework for finding a systematic way to make long-term value for an organisation while delivering value to customers and capturing value through monetisation strategies. The BM (Business Model or Method) may be a class of patents which disclose and claim new methods of doing business that is combined with technology, resulting in a new way of doing business. **Buyer's Market** A Buyer's Market is a market condition favourable to buyers that Business more goods for sale than buyer's demand, so allowing orders to be executed at lower prices than normal circumstances. **Buyout** A Buyout is a situation where the existing owners (a person or **Business** group) of a firm buys all the shares belonging to a company and gets control of it, usually management and/or workers of that firm. The Buyout will often include the purchasing of the target company's outstanding debt, and may be for the whole firm or a division or a plant as the case applies. **By Product** A By Product (Byproduct) is produced as a result of making Operation something unexpected from a manufacturing process or (Byproduct) chemical reaction that is not main products, co-products. C&F (Cost and The Cost and Freight (C&F) is an Incoterm for an international **Procurement** trading, the price of purchase includes a price of good and Freight) freight cost. Seller (Supplier) is responsible for transportation of good to the designated position, and buyer is responsible for them from that point. Related Definitions in the Project: The Logistics Management **Capacity Factored** A Capacity Factored Estimate (Class 5) is a project cost Controls Estimate (Class 5) estimate process for a plant or process unit cost similarly defined by the AACC as a Class 5 Estimate, or Concept Screening Estimate. The Capacity Factored Estimate is derived from the cost of a similar plant of a different capacity, through the use of an appropriate exponential factor, parametric models, judgment, or analogy, and expected accuracy is Low: -20% to -50%, High: +30% to +100%. Related Definitions in the Project: The Estimate (Estimation)

WORD **DEFINITION CATEGORY CAPEX (Capital** A CAPEX (Capital Expenditure or CapEx) is an amount of Controls **Expenditure**) money invested to acquire new business or upgrade fixed Business assets that are used repeatedly in production processes at full cost price. The CAPEX can be tangible (such as buildings, machinery, equipment, and facility), or can be intangible (such as patent). (Refer to the OPEX (Operational Expenditure)) Reference Definition by Investopedia: A CAPEX (Capital Expenditure or CapEx) is funds used by a company to acquire or upgrade physical assets such as property, industrial buildings or equipment. It is often used to undertake new projects or investments by the firm. This type of outlay is also made by companies to maintain or increase the scope of their operations. These expenditures can include everything from repairing a roof to building, to purchasing a piece of equipment, or building a brand new factory. **Capital Budgeting** Capital Budgeting refers to the Investment Appraisal. The Controls Capital Budgeting is to budget for major capital investments or expenditures. Related Definitions in the Project: The Economic Reviews **Capital Cost** Capital Cost is the cost associated with constructing the facility Controls includes the direct costs of building the facility as well as the indirect costs. The Capital Cost does not include owner's production costs such as feed stock, operating utilities, and operations staff. Related Definitions in the Project: The Economic Reviews **Capital Injection** Capital Injection is the financial support by purchasing shares **Business** of a company or institution to provide the required capital or the investment made in a startup or a new company that is an additional investment of capital into a company by a capital transfer or a financial transaction. **Capital Spare** A Capital Spare is identified through a Failure Modes and Procurement Effects Analysis (FMEA) that determines the probability of failure through normal operation and a scheduled Preventative Maintenance (PM) program. Capital spares are a secondary tier of the inventory, available within a specified time frame. **Carbon Dioxide** Carbon Dioxide (CO2) Equivalent (CO2e) is a term for HSE describing different greenhouse gases in a common unit that (CO2) Equivalent (CO2e) uses the functionally equivalent amount or concentration of carbon dioxide (CO2) as the reference which would have the equivalent global warming impact. (e.g. 1kg of CH4 is expressed as 25kg of CO2e) Reference Definition by OECD: Carbon Dioxide (CO2) Equivalent is a measure used to compare the emissions from various greenhouse gases based upon their global warming potential. For example, the global warming potential for methane over 100 years is 21. This means that emissions of one million metric tons of methane is equivalent to emissions of 21 million metric tons of carbon dioxide.

WORD	DEFINITION	CATEGORY
Carbon Footprint	A Carbon Footprint is a measurement of the amount of carbon dioxide (CO2) that releases the greenhouse gas emissions, expressed as carbon dioxide equivalent into the atmosphere as a result of the activities of a particular individual, organisation, or community. (Refer to the Carbon Dioxide Equivalent)	HSE
Carbon Steel	The American Iron and Steel Institute (AISI) definition says that a Carbon Steel is: when no minimum content is specified or required for chromium, cobalt, molybdenum, nickel, niobium, titanium, tungsten, vanadium or zirconium, or any other element to be added to obtain a desired alloying effect; when the specified minimum for copper does not exceed 0.40 percent; or when the maximum content specified for any of the following elements does not exceed the percentages noted: manganese 1.65, silicon 0.60, copper 0.60.	Engineering
Cash Flow	A Cash Flow is the actual and forecasted expenditure of cash during a specified period of time. The Cash Flow is the difference in amount of cash available at the beginning of a period (opening balance: forecast) and the amount at the end of that period (closing balance: actual) of a project or business. Related Definitions in the Project: The Economic Reviews	Controls
Cash Flow Forecast	Cash Flow Forecasting or Cash Flow Management is a key aspect of financial management of a business. The Cash Flow Forecasting is a cash balance planning for the future cash requirements to avoid a crisis of liquidity. The best way of cash flow forecasting will be a realistic; definitions of income and cost for expenditure; factors in fixed and variable costs (indirect costs); develop multiple scenarios, etc.	Controls
Catalyst	A Catalyst is 1) a substance that causes or accelerates a chemical reaction without itself being affected; 2) a person, thing or event that quickly causes a change or action.	Substance
Catalytic Cracking	Catalytic Cracking is a petroleum refinery process of the reduction molecular weight of hydrocarbons by a catalyst such as alumina, silica, or zeolites in the cracking reaction increases the yield of high-quality products under much less severe operating conditions than in thermal cracking. The Cracking of petroleum hydrocarbons was originally done by thermal cracking, which has been almost completely replaced by the Catalytic Cracking because it produces more gasoline with a higher octane rating.	Technology
	Reference Definition by EIA: A Catalytic Cracking is a refining process of breaking down the larger, heavier, and more complex hydrocarbon molecules into simpler and lighter molecules. The Catalytic Cracking is accomplished by the use of a catalytic agent and is an effective process for increasing the yield of gasoline from crude oil. The Catalytic Cracking processes fresh feeds: Crude oil or petroleum distillates which are being fed to processing units for the first time, and recycled feeds: Feeds that are continuously fed back for additional processing.	

Engineering

WORD **DEFINITION CATEGORY**

Cathodic Protection

Cathodic Protection is a technique of preventing the rate of Technology corrosion of a structure.

Reference Definition by NACE: Cathodic Protection is a technique to reduce the corrosion rate of a metal surface by making that surface the cathode of an electrochemical cell.

Cause and Effect (C&E) Diagram

A Cause & Effects (C&E) Diagram is 1) a tool that identifies the instrument loops and connections with the process items that is to prevent accidents and help in the design of control and protective systems for process plants. The Cause and Effect is presented as a form of matrix in which the Cause means something happen and Effect is what happens as a result of the cause. A Cause & Effects Diagram is a deliverable of the Detailed Engineering and Design developed by Process discipline. (Refer to the Detailed Engineering Deliverable List (Typical)); 2) A C&E Diagram is a brainstorming tool in the shape of a fishbone showing all possible variables that affect a specific process output.

Reference Definition by InstrumentationPotal.com: A Cause and Effect (C&E) Diagram is presented as a form of matrix. The causes are listed in left section while the effects are listed on top section, both are described in form of tag number with their descriptions (other additional information such as P&ID may supplement). The marked intersection between both means that they are related as cause-effect. Marks could be in form of letter "X" which mean effect will be activated, "T" which mean effect will be activated with time delay, "P" which mean cause will give permissive to an effect. There are two categories of Cause and Effect Diagram: ESD C&E Diagram and Fire and Gas C&E Diagram.

Cause of Loss (or Nature of Loss)

A Cause of Loss (or Nature of Loss) is to identify the peril or **Business** action that caused loss or damage to goods or facilities.

CBE (Commercial **Bid Evaluation**)

Commercial Bid Evaluation (CBE) is the cost and commercial related items or conditions (e.g. proposed currency, payment method, guarantee and liability, bond and insurance) comparison table for proposed bidders, contractors, or subcontractors. The Bid Evaluation is performed based on bid evaluation criteria includes categorized weighted values including proposal terms and conditions, financial stability of the bidder, terms of payment, delivery schedule, and price analysis. Related Definitions in the Project: The Procurement

Quality

CBI (Condition **Based Inspection)**

A Condition Based Inspection (CBI) and maintenance is an item is preventively replaced if failure risk, which is calculated based on the information obtained from inspection, exceeds a predetermined threshold. The determination of optimal replacement threshold is often based on minimisation of longrun average maintenance costs per unit time due to preventive and failure replacements. It is assumed that inspections are performed at equal time intervals and that the corresponding cost is negligible. (Opposed to the RBI)

Management

Procurement

WORD	DEFINITION	CATEGORY
CBS (Cost Breakdown Structure)	A Cost Breakdown Structure (CBS) is a cost allocation to the lowest level of the Work Breakdown Structure (WBS). The CBS is a breakdown of the costs of the various components of the structure including all works or services done by the subcontractors. The CBS is used to continuously compare the actual costs with the budget, and integrate to the cost control system. Related Definitions in the Project: The Work Breakdown Structure (WBS)	Controls
CCC (Care, Custody, and Control)	A Care, Custody, and Control (CCC) is a term of insurance liability coverage, a property is belonging to other but legally, under an insured's property.	Management
CDO (Chief Diversity Officer)	The Chief Diversity Officer (CDO) is an organisation's executive level diversity and inclusion strategist who is primary responsible person for creating an organisation's strategy for recruitment of diverse and underrepresented candidates.	Management
Celsius (°C)	A Celsius (°C) is an International Standard (SI) unit of the temperature, 0 °C is the freezing of water and 100 °C is the boiling point of water. A Conversion to Celsius from Fahrenheit: °C = (°F - 32) x 5/9, where °F is the temperature in Fahrenheit.	Technology
Centralisation (Centralization)	A Centralisation (Centralization) is the process by which the activities of an organisation, particularly those regarding planning and decision-making, become concentrated within a particular location or group, keeping all of the important decision-making powers within the head office or the centre of the organisation. (Opposite of the Decentralisation)	Management
Certificate of Compliance (COC)	A Certificate of Compliance (COC) is a document certified by a competent authority that required information of the supplied good or service has been complied with the required specifications. The information requirements for the COC is rigorous on the applicant to satisfy the required specifications that a proposal complies with all of the relevant permitted activity rules, and to provide sufficient information to achieve the Certificate of Compliance.	Management
CGS (Centimetre, Gram and Second) Unit	A CGS (Centimetre, Gram and Second) Unit is a metric system that is based on the centimetre as the unit of length, the gram as the unit of mass, and the second as the unit of time. For the internation standardisation and scientific purposes, CGS units have now been replaced by the Internation Standard (SI) Units. (Refer to the MKS (Metre, Kilogramme, and Second) Unit)	Engineering

Essential WORD **DEFINITION CATEGORY Chain Reaction** A Chain Reaction is a sequence of reactions where a reactive Technology product or by-product causes additional reactions to take place. The Chain Reaction is in general very rapid but are also highly sensitive to reaction conditions, probably because the substances that sustain the reaction are easily affected by substances other than the reactants themselves. Reference Definition by Canadian Nuclear Association: A Chain Reaction is a reaction that stimulates its own repetition. In a nuclear chain reaction, the fission of one atomic nucleus (of uranium-235, for example) releases neutrons, which can be absorbed by other fissionable nuclei that can also fission, releasing still more neutrons. If more neutrons are released than are lost or absorbed by other materials, the chain reaction is said to achieve criticality. **Change Control** Change Control is a systematic process of controlling and Management managing all changes made to a product or system including the scope of a project or programme, plans or procedures, or contract terms and conditions including regulations, etc. from the baseline. The Change Control involves the change identification, evaluation, impact analysis, approval, or rejection or deferring of any changed items, and updating the baselines. The Change Control is a part of the change management. Change Management is a systematic work process of Change Management Management monitoring and controlling changes to minimize impact on the project. The Change Management includes the scope of work change, design or design basis change (before or after approval work process), work process change and organisational change. The Change Management work process is the identification of changes (e.g. difference from baseline), analysing impact, review and approval work process of change, update relevant work processes, implement changes and feed back results. A Project need to assign a nominated change management person. Change A Change Management Procedure is a project procedure that Management Management defines the change work management processes including an **Procedure** initiation, approval and implementation. Especially, the Change Management Procedure covers the critical information or document (e.g. P&ID) change after HAZOP reviews, is required an additional review and approval from authority groups including operation, maintenance, project and planning team because of a late change impact on the project. Change Order (CO) A Change Order (CO) is a formal documentation which covers Management any changes from baseline or contract basis, possibly affect to the overall project schedule and cost. A Change Order work is proceeded in accordance with a Project Change Management Procedure, and can be executed as an independent project. **Checklist Analysis** Checklist Analysis is a systematic evaluation against pre-Management

> established criteria in the form of one or more checklists to prompt team discussions of whether the existing safeguards

are adequate.

WORD	DEFINITION	CATEGORY
Checklist or Check Sheet	A Checklist is a list of documents that contains comprehensive list of things and used during all phases of the work process to verify that the parties' requirements are being achieved. This includes checklists for general verification as well as testing, training, and other specific requirements. The Checklist items need to be considered or taken action.	Management
Chemical	A Chemical is a basic substance that is used in or produced by a reaction involving changes to atoms or molecules of the chemistry technology.	Substance
Chemical Element	A Chemical Element is a substance consisting of atoms which all have the same number of protons that cannot be broken down into simpler substances using chemical methods. There are 118 elements have been identified. (Refer to the Period Table)	Science
Chemical Engineering	Chemical Engineering is a branch of engineering that applies physical sciences and life sciences together with mathematics and economics to produce, transform, transport, and properly use chemicals, materials and energy. It focuses on the chemical based manufacturing including: Fuels (gasoline, natural gas); Petrochemicals (chemicals obtained from petroleum or natural gas); Agricultural Chemicals (fertilizers, pesticides); Industrial Chemicals (acids, alkalis, organics, salts); Plastics, Polymers and Fibres; Paper and Paper Products; Pharmaceuticals and Drugs; Consumer Products (paints, soaps, household cleaners, etc.); Food Additives/Products; Advanced Materials (ceramics, electronic materials, composites, etc.) Related Definitions in the Project: The Engineering	Engineering
Chemical Industry	A Chemical Industry is to produce industrial chemicals, converts raw materials (oil, natural gas, air, water, metals, and minerals) into wide rage and immense variety of different products.	General
Chemical Property	Chemical Property is a characteristic that can be measured or observed following the chemical change to a substance. Chemical Properties are heat of combustion, reactivity with water, PH, and electromotive force, etc. (Refer to the Physical Property)	Technology
Chemical Reaction	A Chemical Reaction is a process in which one or more substances, the reactants, such as chemical elements or compounds are converted to one or more different substances, the products. The Chemical Reaction involves rearrangement of the molecular or ionic structure of a substance and transforms chemical substances to other products by contacting each other, bonds between atoms in the reactants are broken, and atoms rearrange and form new bonds to make the products.	Engineering

WORD	DEFINITION	CATEGORY
CHP (Combined Heat and Power Plant)	A Combined Heat and Power Plant (CHP) is one or more units of the plant that is a combined heat and power plant units consisting of a heat engine or power station to generate electricity and useful heat to produce at the same time. (Called as a Cogeneration) Related Definition: Trigeneration	Engineering
CID (Capital Investment Decision)	A Capital Investment Decision (CID) is a long term corporate finance decision based on key criteria to manage company's assets and capital structure. The CID includes allotting the capital investment funds of the firm in the most effective manner to make sure that the returns are the best possible returns. Assessing projects as well as the allocation of the capital depends on the project requirements are some of the most crucial capital investment decisions aspects. (Refer to the FID (Final Investment Decision))	Management
CIF (Cost, Insurance, and Freight)	The Cost, Insurance, and Freight (CIF) is the Incoterm for an international trading, the price of purchase includes a price of good, insurance and freight cost. Seller (Supplier) is responsible for transportation of good to the designated position, and buyer is responsible for them from that point.	Procurement
Circuit Breaker	A Circuit Breaker is 1) a safety device used to interrupt or break an electrical circuit that is an automatically operated electrical switch designed to protect an electrical circuit from damage caused by overcurrent or overload or short circuit. 2) temporarily halting trading at which trading is halted marketwide for single-day declines in the S&P 500 Index during dramatic drops and are set at 7%, 13%, and 20% of the closing price for the previous day. The Circuit Breaker is measures approved by the Securities and Exchange Commission (SEC) on U.S. stock exchanges.	Engineering Business
Civil Engineering	Civil Engineering is an engineering discipline, focuses on the design, engineering, construction and maintenance of a building, road, bridge, related infrastructure, and underground works such as a structure and equipment foundation, etc., and water and energy systems, sea ports and airports, and the infrastructure for a cleaner environment, etc. A Civil Engineer is responsible for design, build, and maintenance for structures and underground works. Related Definitions in the Project: The Engineering	Engineering
Clean Energy	Clean Energy is electricity or nuclear power, that does not pollute the atmosphere when used, and a clean coal plant is simply a coal plant with emissions reduction technology.	General
Client Confidentiality	Client Confidentiality is the principle that should not reveal information about their clients to a third party without the consent of the client or a clear legal reason. A Client Confidential Information is received from clients in any form for processing in production by institution or individual that must not be changed in any way without written permission from the client, and the highest possible levels of integrity, confidentiality, and restricted availability are vital.	Management

WORD **DEFINITION CATEGORY Client Relationship** A Client Relation (Customer Relationship) is a practice and **Business** strategy of building a strong relationship with clients or potential clients. **Client Relationship** A Client Relation Management (CRM or Customer Relationship Management Management) is the exercise of managing company's strengths Management (CRM) and interactions with clients including the building of client relationships to support potential future continuous business. The CRM is the practice and strategy that requires analysing and recognising needs, sharing objectives and goals, close communicating, trusting each other, keeping promises, delivering timely and quality responses, and improving relationship continuously; making for overall client / customer satisfaction. **Client Satisfaction** A Client Satisfaction or Customer Satisfaction is a marketing Management or Customer terminology, a Measurement of how supplied goods or provided Satisfaction services to meet or surpass client or customer's expectation. The Client Satisfaction development work process is a client relationship management and measurement system to maintain or improve a long term business partnership through a continuous improvement of performance and relationship. The process can be conducted structured interviews with the client or customer key people face to face, phone or internet or handwritten form. **Climate Prediction** A Climate Prediction (or Climate Forecast) is similar to the HSE (or Climate numerical weather prediction of the average or expected Forecast) atmospheric and earth-surface conditions of temperature, precipitation, humidity, winds, and their range of variability that produces a most likely description or estimate of the actual evolution of the climate in the future for seasonal, interannual, or long term time scales. The Climate Prediction uses the models of tracing atmospheric gases (carbon dioxide and methane, for example), sea ice and glacier cover, changes in incoming solar radiation, and a host of other parameters. (Refer to the Climate Prediction Center (CPC)) **Closed System** Closed System is 1) a type of thermodynamic system that can Technology exchange energy (as heat or work) but not matter with an outside system where mass is conserved within the boundaries of the system, but energy is allowed to freely enter or exit the system: 2) in electric (electric closed system or electric closed circuit), is an electric circuit through which current can flow in an uninterrupted or endless path.

Close-out

A Close-out is a work process to finalise all activities of the project at the end of the project including hand-over the facilities and documentations to the client according to the contract terms and conditions. The Project Close-out activity includes the preparation and development of project completion report (e.g. project histories and performance analysis with relevant raw data); project financial close out activities; archive project information to the company organisation; appraisals and demobilise project members. Any minor open issues including agreed punch works can be performed during a turn-around work period, any minor unsolved claims with other parties, and remaining financial follow-up activities such as a final payment to be paid after expiring of the warranty period, and bond returns, etc. can be handed-over to the company dedicated team.

Management

CNG (Compressed Natural Gas)

A Compressed Natural Gas (CNG) is a natural gas under Substance pressure which remains clear, odourless, and non-corrosive. Most vehicles use the gaseous form compressed to pressures above 3,100 pounds per square inch. It generates low hydrocarbon emissions, but a significant quantity of nitrogen oxide emissions.

COD (Chemical Oxygen Demand)

A Chemical Oxygen Demand (COD) is a measurement of the capacity of water to consume oxygen during the decomposition of organic matter and the oxidation of inorganic chemicals such as ammonia and nitrite. In environmental chemistry, the chemical oxygen demand (COD) test is commonly used to indirectly measure the amount of organic compounds in water. (Refer to the BOD (Biological Oxygen Demand))

Engineering

COF (Consequence of Failure)

Consequence of Failure (CoF) is defined for all consequences in safety, economy and environment that is evaluated as the outcome of a failure based on the assumption that such a failure will occur. The CoF analysis estimates failure consequences resulting from a failure mode due to the identified damage mechanisms that is to categorise assets based on the potential failure significance.

Management

Reference Definition by Inspectioneering.com: Consequence of Failure (COF) is one part of the equation to determine risk as part of Risk Based Inspection (RBI) methodology. The COF. calculated together with the Probability of Failure (POF), helps establish the risk level for particular piece of equipment and set inspection intervals based on the calculated risk. The COF is calculated by reviewing and ranking the potential consequences for the equipment, personnel, environment, etc. in the event of equipment failure. More details on COF are given in API RP 580: Risk Based Inspection (RBI), which contains directions on developing, implementing and maintaining an effective RBI program.

COG (Centre of Gravity (COG) is a weight control work process for module design and engineering for the transportation and installation at the site. The COG of a symmetrical body of a uniform material would be in the geometric centre, in volume or area at which the facility or contents is in balance.

Cogeneration (Combined Heat and Power or CHP) A Cogeneration (Combined Heat and Power or CHP) is the process of generating two or more forms of energy from a single energy source that produces electricity or shaft power by an energy conversion system and the concurrent use of rejected thermal energy from the conversion system as an auxiliary energy source.

Reference Definition by Cogeneurope: A Cogeneration (Combined Heat and Power or CHP) is the simultaneous production of electricity and heat, both of which are used. The central and most fundamental principle of cogeneration is that, in order to maximise the many benefits that arise from it, systems should be based on the heat demand of the application. This can be an individual building, an industrial factory or a town/city served by district heat/cooling. Through the utilisation of the heat, the efficiency of a cogeneration plant can reach 90% or more.

Combined Cycle Power Plant (CCPP) Combined Cycle Power Plant (CCPP) is a power plant that uses a gas turbine to drive an electrical generator, and recovers waste heat from the turbine exhaust to generate steam. The steam from waste heat is run through a steam turbine to provide supplemental electricity. Combining two or more thermodynamic cycles improves overall efficiency, which reduces fuel costs.

Reference Definition by Energy.gov: Combined Cycle Power Plant (CCPP) is a power plant that uses two thermodynamic cycles to achieve higher overall system efficiency; e.g.: the heat from a gas-fired combustion turbine is used to generate steam for heating or to operate a steam turbine to generate additional electricity.

Comfort Letter

A Comfort Letter is a document issued to back up an agreement, but which do not have any contractual standing. They are often issued by a parent or associate company stating that the group will back up the position of a small company to improve its trading position.

Engineering

Management

Engineering

Commercial **Baseline**

A Commercial Baseline is the basis of the proposal estimate terms and conditions including project execution plan, design and engineering basis, staffing plan, tagged item list and quantity, bulk material BM take off, equipment, material and subcontractors pricing basis, construction implementation plan, and other commercial basis such as applied company over head and profits, bonds, insurance, taxes, contingencies and allowances, etc. should be documented and updated them as necessary during the contract clarifications and negotiation meetings with owner, and hand-over to the project team for the Commercial Baseline. The Commercial Baseline document should include the Project Risk Management cost, any allowances and project contingencies.

Related Definitions in the Project: The Project Baseline

Commercial Power

Commercial Power is the power or energy output delivered by the seller to the buyer during the operating period that used by commercial entities, and generated by independent power producers or a jointly owned generator with tariff based and corporately aligned with companies that own distribution facilities are also included. The Commercial Power is usually the prime power source however, when economically feasible, the Commercial Power serves as an alternative or standby source.

Commissioning

Commissioning is the activities performed in getting processes running to establish normal operation. As part of these activities, it includes process verification and documenting that the facility and all of its system components and assemblies are designed, installed, tested and operated to meet the project individual units requirement of and systems. Commissioning activity consists of checking and testing all functions according to their design parameters in conditions as close as possible to the design conditions, and includes performance tests on mechanical equipment, water washing, flushing and drying of equipment and piping as well as control systems operability and functionality. The Commissioning activities are performed after construction and commissioning is completed.

Related Definitions in the Project: The Construction

Commissioning Sequence

Commissioning Sequences are 1) a Critical Utility Systems Operation (e.g. control systems (DCS, SIS, F&G, electrical, air system and water system, etc.) will be pre-commissioned and commissioned early and ready for service for the other facility commissioning activities, and then 2) Non-critical Utility Systems (e.g. fuel, steam, demi water, etc.) will be placed into service as required to process facilities commissioning activities such as heater dry outs, proving hot oil circulation loop, amine loop proving, etc. These are completed prior to RFSU (Ready for Start-up), and 3) the process systems are the last to be commissioned as they are typically commissioned, tightness tested and made ready for introducing hydrocarbon for the initial start-up.

Maintenance

Management

Operation

Business

WORD	DEFINITION	CATEGORY
Commodity	A Commodity is goods and services (a substance or product) that can be traded, bought, or sold on the market at a price.	General
Common Cause Failure (CCF)	A Common Cause Failure (CCF) is the failure of two or more items fail within a specified time such that the success of the system due to the same cause.	HSE
Common Cause of Variation	Common Cause Variation in statistical measurement is the usual quantifiable and historical variations in a system that is caused by unknown factors resulting in a steady but random distribution of output around the average of the data. The Common Cause Variation is a measure of the process's potential, or how well the process can perform when special cause variation is removed. The Common Cause Variation is also called random variation, noise, or natural pattern. (Refer to the Special Cause Variation)	Management
Common Law	A Common Law is a law stated in the decisions of judges from early times to the present rather than by parliament in legislation.	General
Common Sense	A Common Sense is a basic level of practical knowledge and judgment which is shared by nearly all people and can reasonably be expected of all people without any need for debate.	General
Communication and Coordination Management	Communication and Coordination Management includes the project information and interface management to ensure timely and appropriate creation, collection, distribution, and storage of project information. An effective communication and coordination is a key factor in the success of the Project Management that the plan must address the needs of, and be accepted and acknowledged by all parties.	Management
Company Capability Assessment	A Company Capability Assessment for the proposal is an evaluation work process to make a decision to participate the bid or not and to develop the winning proposal. The primary purpose of the Company Capability Assessment is to confirm a matching the company's business plan; workable in resource, technology, experience, etc.; winnable competition and it will make a profit, etc. Related Definition: Proposal Work Process	Management
Competitive Service	A Competitive Service is a job position of employment or service that all applicants must compete with other applicants in open competition. Related Definitions: Non-competitive Service; Excepted Service	Management
Completeness	Completeness is a quantity and quality of achieving finished or completed the tasks or works; 2) state or condition of completing whole or perfect and having nothing missing.	Management
Completion Report	A project Completion Report is a structured reporting format document as the final milestones of project prepared by the project manager.	Management

WORD **DEFINITION CATEGORY** Compressor A Compressor is a machine that presses gas or air into less Engineering space used to compress air for mechanical or electrical power production. Compressors are classified in many ways out of which the common one is the classification based on the principle of operation: Positive Displacement and Rotodynamic Compressors. Positive displacement compressors can be further divided into Reciprocating and rotary compressors. Reference Definition by Wikipedia: A Compressor is a machinery equipment to increase a pressure of gas used for transferring gases and a pressurisation for a storage and transportation (increasing pressure with decreasing volume), and other purposes. Compressors are similar to pumps: both increase the pressure on a fluid and both can transport the fluid through a pipe. As gases are compressible, the compressor also reduces the volume of a gas. Liquids are relatively incompressible; while some can be compressed, the main action of a pump is to pressurize and transport liquids. **Conceptual Design** A Conceptual Design is an initial design document for the Engineering feasibility study including operation capacities (feeds and products), screening of the process technologies, and high level process and basic documentations (BFD or PFD and overall plant layout) that result is the basis of the basis of FEED or Basic Engineering. At the Conceptual Design stage, the site (plant location) selection study, initial project schedule (Level 1) and budget cost estimate - factored estimate (-50 ~ +100%) can be performed together. Related Definitions in the Project: The Engineering Concession A Concession is the official permission to carry out a particular Management type of business by a government or company. Reference Definition by ISO: A Concession is 1) agreed to, often given up in order to reach an agreement or improve a situation; 2) in the Quality Management is a special approval that is granted to release a nonconforming product or service for use or delivery. Concessions are usually restricted to a specific use and limited by time and quantity and tend to specify that nonconforming characteristics may not violate specified limits Condensation A Condensation is the process of a substance in a gaseous Engineering state transforming into a liquid state. This change is caused by a change in pressure and temperature of the substance. Conditional A Conditional Exclusion is a clause in an insurance policy or a Controls

> special terms and conditions of a contract that excludes certain types of losses or causes of losses unless certain events or actions take place (e.g. Conditional Exclusion of terrorism)

Exclusion

WORD	DEFINITION	CATEGORY
Conditional Sentence	A Conditional Sentence is a type of sentence that states a condition and the outcome of that condition occurring. The Conditional Sentence is the validity of the main clause of the sentence that is conditional on the existence of certain circumstances, which may be ordered the sentence subject to conditions.	Management
Confidential Agreement (or Confidentiality Agreement)	A Confidential Agreement (or Confidentiality Agreement) is to protect confidential information that is a written and binding contract not to pass on any information whether or not the actual contract is ever signed. (Refer to NDA (Non-Disclosure Agreement))	Management
Confidentiality	Confidentiality is a state of keeping or being confidential which prevents it from unauthorized disclosure.	General
Confirmed Letter of Credit (L/C)	A Confirmed Letter of Credit (L/C) is an extra security for the seller with the letter of credit to be confirmed by the bank that the buyer's bank agrees to guarantee payment even if the issuing bank fails to make it. The Confirmed Letter of Credit provides more security than an unconfirmed one.	Procurement
Conflict of Interest (COI)	Conflict of Interest (COI) a situation in which an individual or organisation is in a position to exploit his or their own professional or official capacity, or involved in multiple interests, financial or otherwise in some way for personal or organisation benefit.	Management
Consortium	A Consortium is a short term organisation of two or more companies to do a particular business or project for a sharing purpose.	Management
Constraint	A Constraint is 1) to a degree of statistical dependence between or among variables, or something that controls what you do by keeping you within particular limits. 2) a specific limitation placed upon a project schedule to regulate the start or finish dates of a task or activity. Any factor that affects when an activity can be scheduled. A constraint can affect the start, completion, or duration of a scheduled activity. Schedule constraints are used to impose limits upon work items to prevent certain activities from being started too early or finished too late.	Controls

Constructability

Constructability is the collaboration work process of the construction knowledge and experience in planning, design, procurement, and field construction to achieve overall project objectives and goals. The Constructability reviews and studies including the construction abilities as a feasibility study including accessible and workable of construction labours and equipment; project equipment and material; maintenance equipment and people, and operation people considering the construction sequence. The Constructability reviews are required at various of project stages, for a site selection at the beginning stage, for development of overall plot plans at conceptual design and FEED stage, for finalization of detailed building and equipment layouts at detailed engineering stage, and for detailed construction planning at the construction stage. Related Definitions in the Project: The Construction

Construction

Construction

Construction is the installation and assembling activities for the project equipment and materials at the site in accordance with approved construction drawings, procedures specifications. The Construction requires large number of skilled construction labours and construction equipment until the plant is mechanically completed (M/C: Mechanical Completion). After the Construction activities are completed. the plant is handed over to the operation group with all required document. The Construction work comply with local laws and regulations, especially local labour laws, environment and safety requirement.

Construction

Construction **Allowance**

A Construction Allowance is a construction cutting waste. Construction bulk materials are supplied with manufacturer's standard size and length, and construction drawings are generated based on a process requirements and dimensional plot sizes. Also, construction allowance includes waste material quantities for construction fabrication or prefabrication mistake and errors. The Construction Allowance quantities of an industrial, company or specific project standard (ratios of each bulk items) should be added to the Engineering BM (Bill of

Related Definitions in the Project: The Construction

Related Definitions in the Project: The Construction

Construction

Construction Completion

Management Tool

Construction Completion Management Tool is a computerised systematic software including a structured testing, commissioning and start-up of multi-discipline process plant and utilities from construction planning through commissioning. The tool applies a database to include all relevant engineering information for items to be mechanically completed and commissioned. The Construction Completion Management Tool delivers a fully certified and documented operational plant.

Construction

Related Definitions in the Project: The Construction

Material) for purchasing.

Construction Contractor

A Construction Contractor is a company or firm which Construction undertakes works as part of a construction project based on the contract terms and conditions with a client.

WORD **DEFINITION CATEGORY** Construction Construction Engineering is to perform an engineering activity Construction **Engineering** or work at the construction site that covers a wide range of activities to evaluate and select the techniques for assembling materials and components as well as developing workable, cost-effective, low-risk technical solutions. (Refer to the Field Related Definitions in the Project: The Engineering Construction Construction Management is for the maximise construction Construction efficiency and minimise interferences with other activities at the Management site. The Construction Management is to control and manage the construction activities in accordance with the construction document and materials deliveries to the site as per the construction sequence. The Construction Management team evaluate and develop the optimum level (number) of construction labour mobilisation plan and minimisation of additional site works (e.g. re-do, preservation works etc.) by the quality and schedule control and management. Related Definitions in the Project: The Construction Construction A Construction Manager is a site manager of a small size of Construction construction project (Refer to the Site Manager). Normally, the Manager Construction Manager is responsible for direct construction activities such as erection and installation of equipment and materials reporting to the Site Manager, and supported by construction superintendents, supervisors and construction subcontractors. Related Definitions in the Project: The Construction Construction A Construction Organisation (Site Organization) consists of the Construction Organisation (Site site administration, field controls, field engineering, field Organization) material control, construction supervision (subcontractor management), safety (site), quality (quality control and inspection), pre-commissioning team and hand-over tam. The Construction Management Organisation is a normally a Project Task Force (TF) Organisation and full time assignment. Related Definitions in the Project: The Construction Construction A Construction Sequence means that the erection and Construction installation sequence of project equipment and materials as Sequence well as the completion sequence of units, systems or subsystems based on the plant commissioning sequence. The Construction Sequence develops based on the minimisation of the interference with engineering, procurement and operation activities, and the interface with inter-disciplinary activities at the site. (Refer to the Erection Sequence) Related Definitions in the Project: The Construction

WORD **DEFINITION CATEGORY Construction Team** Construction Team Mobilisation is required in the beginning of Construction **Mobilisation** the project for home office construction activities including development of construction execution plan (e.g. temporary facility planning and subcontracting plan) and constructability studies. They move or mobilize at the site when the construction drawings and materials are supporting site construction works and activities continuously without serious interference with engineering and procurement work, approximately 60% of engineering progress is achieved. Related Definitions in the Project: The Construction Consultant A Consultant is a person who advises people on a particular Management subject: with professional or special knowledge and experience. Consumable A Consumable Material (or Construction Material) is purchased Construction Material on a bulk basis and become incorporated into other goods and lost their identity in the assembly: welding rods, gases, paints, shims, etc. Contingency A Contingency is for something unknown or unpredictable General events, know-unknown, that might possibly happen in the future, usually potential risks or causing problems. The contingency is to cover a currently unforeseen cost element of time and material within the specified scope of work and services such as cost overruns, currency fluctuations, unexpected re-do works and contractual warranty and guarantees, but the contingency will not cover any additional scope of work changes and any unknow-unknow events. The contingency is in addition to any allowances included in the estimate. The Contingency is estimated based on the previous experiences by expert or risk simulation analysis results, and/or company procedure/ rule. **Contingency Plan** A Contingency Plan is a plan that is for an emergency situation, Management or with something that might possibly happen and cause problems in the future. Continual A Continual Improvement is an ongoing effort to improve Management products, services, or processes. **Improvement** Reference Definition by ISO: A Continual Improvement is a set of recurring activities that are carried out in order to enhance performance. Continual improvements can be achieved by carrying out audits, self-assessments, and management reviews. Continual improvements can also be realized by collecting data, analysing information, setting objectives, and implementing corrective and preventive actions.

WORD **DEFINITION CATEGORY** A Contract is an agreement between two or more parties, to **Contract** Management exchange providing a specific work (Scope of Work) with agreed compensations (mainly cost and/or any others specified in the contract) include terms and conditions. The Contract terms and conditions including both parties' obligation, liability, payment, and other terms and conditions are legally binded. The Contract dispute settlement process and change management work process are a part of contract. In addition to being a signed document, resulting from acceptance of offers by award notices, letters of intent (LOI), and other orders such as POs are one of the contracts. **Contract Basis for** A Contract Basis for the Baseline (Contract Summary) is a Management the Baseline summary of contract terms and conditions, focused on the (Contract Summary) directly involved in the project execution (scope of work, liability, payment and change management, etc.), and prepared by the project language and terminology rather that the legal. The Contract Basis for the Baseline Document should be developed by a project manager (PM) and reviewed by a legal prior to publish, and shared with the project key members as a project baseline document. Related Definitions in the Project: The Project Baseline Contract Document is the written documents that define the **Contract Document** Management basis of the contract including both parties' roles, responsibilities, and detailed description of the work or service such as drawings, specifications, procedures, any other conditions, etc. It should include sufficient information to be able to complete the work or service. **Contract Scope of** A Contract Scope of Work (SOW) is a foundation of the Project Management Work (SOW) Baseline. The SOW document is initiated by owner included in the ITB (Invitation to BID), and developed and proposed by contractor, and finalised after clarification and negotiation meeting between owner and contractor, and included in the Contract document. The project execution members including a Project Manager should review the project Contract Scope of Work (SOW) document and agree them before the contract is Related Definitions in the Project: The Project Baseline **Contract Type** Contract Types are several methods between contract parties, Management owner and contractor, depending on the project environments and project approaches. The Project Execution Plan (PEP) and procedures are developed based on the actual contract terms and conditions. There is two main type of contract: a fixed price and a reimbursement, and can be divided into: Fixed Price (Lump Sum) Contract; Cost plus (Reimbursable) Fee Contract; Incentive Contract, Unit Price Contract. Related Definitions in the Project: The Type of Contracts Contractor Management is a system of controls to ensure of the Contractor Management contracted services that is the managing of outsourced work Management

performed for an individual company.

WORD **DEFINITION CATEGORY** Control Control is a method or mechanism used as a standard rule or procedure that is to guide, check, verify or audit the operation of actions or behaviour. **Control Budget** A Control Budget is a project cost that is a detailed estimated Controls cost by the project execution team. The Control Budget is one of the project baseline information. (Refer to a Control Budget Estimate) **Control Budget** A Control Budget Estimate (Class 2) is a project cost estimate Controls Estimate (Class 2) work process similarly defined by the AACE Class 2 Estimate, or Control, or Bid/Tender Estimate. The Control Budget Estimate methodology is the detailed unit cost with bulk material take-offs; budgetary or committed cost from the potential bidders and construction subcontractors for equipment and construction direct cost; the detailed and accurately developed project resources mobilisation plan; and the re-defined company guidelines of indirect costs for the specific project. The expected accuracy of control budget estimate is Low: -5% to -15% High: +5% to +20%. The Control Budget Estimate is one of the project baseline documents. Related Definitions in the Project: The Cost Estimate (Estimation) A Control Drawing is a type of technical drawing used to fully **Control Drawing** Engineering and clearly define requirements for engineered items that details the allowed interconnections between the intrinsically safe and associated apparatus provided by the manufacturer. The Control Drawing presents the functions and performance requirements for the acquisition of commercial items and vendor-developed items from specialized segments of industry without disclosing details of designs. **Control Level** A Control Level Schedule (Level 3 Schedule or Network Controls Schedule (Level 3 Schedule) is an actual project schedule control and Schedule) management tool for a work level. The Project Control Level Schedule is integrated detailed EPC activities for the entire project scope of work based on a Critical Path Method (CPM) used a network scheduling technology with detailed input all major milestones, major elements of design and engineering, construction, procurement. pre-commissioning, commissioning activities. The Project Control Level Schedule shows detail and individual work tasks and clearly defined works by discipline or responsibility. This is a first level of detailed schedule that a meaningful critical path management can be performed to monitor and manage the overall project work accurately, and usually basis of a look ahead or window schedules for the project schedule control and management. Related Definitions in the Project: The Project Schedule **Control System** A Control System is 1) a system of devices or set of devices, Engineering that manages, commands, directs or regulates the behaviour of other devices or systems to achieve desire results. 2) is a procedure designed and established to check, evaluate,

manage, record the performance

Engineering

WORD **DEFINITION CATEGORY**

Control System Engineering

Control System Engineering is a branch of engineering disciplines (CSI or Electrical) that is an interdisciplinary approach to enable the plant control systems, focuses on defining customer needs and required functionality with design synthesis and system validation. A Control System Engineer (CSI Engineer) is responsible for designing, developing, installing, managing and/or maintaining equipment which is used to monitor and control engineering systems, machinery and processes.

Control Valve

A Control Valve is a device used to control conditions such as Engineering flow, pressure, temperature, and liquid level by fully or partially opening or closing in response to signals received from controllers that is capable of modulating flow at varying degrees between minimal flow and full capacity in response to a signal from an external control device.

Related Definitions in the Project: The Engineering

Cooperative (Cooperative)

A Cooperative (Co-operative) is 1) a company, business, or other organisation that is owned and managed jointly by its members to meet their common economic, social, and cultural needs. The Cooperative members contribute equity capital, and shares in the control of the company on the basis of their portions, and share the profits or benefits; 2) done together with other people's help.

Business

Coordination Drawing (or Composite Drawing)

A Coordination Drawing (or Composite Drawing) is graphically illustrate and dimension manufacturers' recommended maintenance clearances that shows the work with horizontal and vertical dimensions required to avoid interference with structural, framing of mechanical, electrical, and plumbing rough-ins, as well as fire protection, elevators, and floor and wall penetrations.

Engineering

Reference Mep-precision-detailers.com: Definition by Coordination in construction once referred to simply avoiding physical conflicts in the layout of equipment in spaces and the routing of duct, piping, and raceway systems through buildings. The risk of interference problems is highest on building projects that have intense mechanical, electrical, and plumbing (MEP) requirements. Production risks are compounded, as schedules become more intense. Eliminating coordination problems can be characterized as a prerequisite to the start of construction work on intense projects with dense MEP system requirements.

COPQ (Cost of Poor Quality)

The Cost of Poor Quality (COPQ) is the costs associated with any activity that is incurred to remedy defects discovered before the product or service is delivered to the customer and incurred to remedy defects discovered by customers. The COPQ is the financial qualification of any waste that is not integral to the product or service.

Quality

WORD	DEFINITION	CATEGORY
Copyright	Copyright is the legal right to control the production and selling of a book, play, film, photograph, or piece of music, etc., that grants the creator of an original work exclusive rights to its use and distribution, usually for a limited time, the duration of its author's life plus 50 years. The major international intellectual-property protection treaties are Berne Convention, Universal Copyright Convention, and WIPO Copyright Treaty.	Management
	Reference Definition by Wipo.int: Copyright (or author's right) is a legal term used to describe the rights that creators have over their literary and artistic works. Works covered by copyright range from books, music, paintings, sculpture, and films, to computer programs, databases, advertisements, maps, and technical drawings.	
Core Competence	A Core Competency is a theory of strategy that prescribes actions and enables a company to deliver unique value to achieve competitive advantage in the marketplace. The Core Competency concept was introduced by Prahalad and Hamel (1990) in a Harvard Business Review article. The criteria of core competencies are: provide a set of unifying principles for the organization and strategies; provides potential access to a wide variety of markets; critical in producing of end products and rare or difficult to imitate.	Management
Core Value	Core Value is the fundamental beliefs of a person or organisation that is summarized in the mission statement or in a statement of core values.	Management
Corrective Action	A Corrective Action is a work process that is taken to eliminate the causes of existing non-conformities in order to prevent recurrence. The Corrective Action is an improvement to organisational processes taken to eliminate causes of non-conformities or other undesirable situations. The Corrective Action is a plan or concept with a positive process to correct deviations from the plan in order to meet the overall work requirements to planning parameters and numerous standards. It focuses on the systematic investigation of the root causes of identified problems or risks.	Quality
Corrosion	Corrosion is a natural process of an oxidation or destruction of a component. It is the gradual destruction of materials (usually metals) by chemical reaction with their environment.	Engineering
Cost Centre (Cost Center)	A Cost Centre (Cost Center) is a part of a company or organisation responsible for the costs relating to it can be calculated for the cost accounts.	Controls
Cost Control and Management	Cost Control and Management is a process involved in budget cost estimate (planning, estimating, financing and funding assistance), execution (controlling cost), and managing project cost (in order to minimize cost and increase profitability) and ensure efficient operations to perform the project within the approved budget. Related Definitions in the Project: The Project Controls	Management

Controls

WORD **DEFINITION CATEGORY**

Cost Estimate

A Cost Estimate is an approximation or anticipated cost for specified work scope of a work, project, or operation that is the process of predicting the cost of a facility through quantitative analysis of the work required by the design documents to evaluate a single total value and may have identifiable component values. A project underestimation of resources and costs is one of the most common contributors to project failure. A reliable cost estimates are necessary for responsible management at every stage of the project. A main purpose of cost estimate is for a feasibility decision, funding arrangement and making a bid or contract. An accuracy of estimate is depended on the details of input information.

Related Definitions in the Project: The Project Controls; The Cost Estimate (Estimation)

Cost Estimate Classification

Cost Estimate Classification system improves communications among all the stakeholders involved with preparing, evaluating, and using cost estimates. The various parties that use cost estimates often misinterpret the quality and value of the information available to prepare cost estimates, the various methods employed during the estimating process, the accuracy level expected from estimates, and the level of risk associated with estimates. The Cost Estimate Classification applies the degree of project definition as the primary characteristic for determining an estimate's classification. (e.g. Factored Estimate (Capacity or Equipment); Budgetary Cost Estimate; Control Budget Estimate: Detailed Estimate, etc.) AACE developed: Level 1 Screening or Feasibility; Level 2 Conceptual Study or Feasibility; Level 3 Budget Authorization or Control; Level 4 Control or for Bid; Level 5 Check Estimate or for Bid. ASTM E2516 - 11 Standard Classification for Cost Estimate Classification System

Related Definitions in the Project: The Estimate (Estimation)

Cost Plus Award Fee (CPAF) Contract

A Cost plus Award Fee (CPAF) Contract is one of the Contract Management Type, and is to pay a fee based upon the contractor's work performance. In some contracts, the fee is determined subjectively by an awards fee based upon objective performance metrics. An aircraft development contract, for example, may pay award fees if the contractor achieves certain speed, range, or payload capacity goals.

Related Definitions in the Project: The Project Contract

Controls

WORD **DEFINITION CATEGORY Cost Plus Fee** A Cost plus Fee Contract is a contract where a contractor is Management Contract reimbursed by the owner for the actual cost of performing works plus additional payment to allow for contractor's overhead and profit in accordance with the contract. The owner and contractor agree and specify what is considered the cost item, and reimbursable expenses to the contractor, and contractor's fee that the contractor will retain for profit and overhead. The Cost plus Fee Contract is an adequate for the experienced owner in the construction industry, or for an owner who cannot initially define or sufficiently detail the scope of the work, and labour, material and equipment needed are also uncertain. Under this contract terms and conditions, complete records of all time and materials spent by the contractor on the work must be maintained. (Called as a Cost Reimbursement Contract) Related Definitions in the Project: The Project Contract **Cost Plus Fixed Fee** A Cost plus Fixed Fee (CPFF) Contract is one of the Management (CPFF) Contract reimbursement contract type, and is an owner to compensate to contractor a fixed amount of fee for contractor's overhead and profit that is agreed upon at the time of contract formation. The owner agrees to reimburse the contractor's actual costs. regardless of amount, and in addition to pay a negotiated fee for contractor's overhead and profit. Related Definitions in the Project: The Project Contract **Cost plus Fixed Fee** A Cost plus Fixed Fee (CPFF) with sharing Savings Contract is Management one of the Contract Type, and is to compensate a project cost (CPFF) with sharing Savings and an agreed fixed fee plus any cost savings sharing with the owner and the contractor. Related Definitions in the Project: The Project Contract **Cost Plus Incentive** A Cost plus Incentive Fee (CPIF) Contract is one of the Management Fee (CPIF) Contract reimbursement contract type, and is an owner to pay an incentive to contractor if the project is successfully completed. meet or exceed performance targets; under budget; ahead of schedule; excellent in safety record, etc., and can be included any cost savings rather than compensate fixed fee for contractor's overhead and profit. Related Definitions in the Project: The Project Contract **Cost Plus** A Cost plus Percentage of Cost Contract is one of the Contract Management **Percentage of Cost** Type, and is to compensate a fee based on a percentage of the Contract cost. Also, there is a Cost plus Percentage of the Construction Cost Contract. Related Definitions in the Project: The Project Contract **Cost Plus with** A Cost Plus with Guaranteed Maximum Price (GMP) and Management Incentive Contract is one of the Contract Type, and is Guaranteed **Maximum Price** compensated based on a fixed cost of money. The total project (GMP) and Incentive cost will not exceed an agreed upper limit and a bonus or Contract incentive is given if the project is finished below budget, ahead of schedule, etc. Related Definitions in the Project: The Project Contract

WORD	DEFINITION	CATEGORY
Cost Plus with Guaranteed Maximum Price (GMP) Contract	A Cost Plus with Guaranteed Maximum Price (GMP) Contract is one of the Contract Type, while the traditional cost-plus agreement does not have a fixed budget, an owner and contractor often agree to cap the price once the project design and engineering is substantially complete. Under a GMP agreement, a contractor is responsible for the difference of the exceeding capped amount, and if the total cost of the project is below the capped cost, the owner and contractor often agree to a shared savings benefit. Related Definitions in the Project: The Project Contract	Management
Cost Variation (CV)	A Cost Variation (CV) is an indicate the work actually performed more cost or less than planned from earned value data. It is the mathematical difference between Budgeted Cost for Work Performed (BCWP) and Actual Cost of Work Performed (ACWP). A positive value indicates a favourable condition and a negative value indicates an unfavourable condition. It may be expressed as a value for a specific period of time or cumulative to date.	Controls
Countermeasure	A Countermeasure is an action taken or a physical capability against an unwanted action or situation that is to reduce or eliminate one or more vulnerabilities.	Management
CPI (Consumer Price Index)	A Consumer Price Index (CPI) measures changes in the price level of a market basket of consumer goods and services purchased by households.	Business
CPM (Critical Path Method)	A Critical Path Method (CPM) is a popular network schedule management and control tool that shows activity sequences (predecessor and successor) and relationships (finish to start, finish to finish, start to start, start to finish) of all activities. The longest path resulting from complete works or tasks is called the critical path. The CPM is a supporting tool for developing the shortest duration to complete the project and the best way considering all factors such as resource mobilisation to complete the project. The CPM was developed in the late 1950s by Morgan R. Walker of DuPont and James E. Kelley, Jr. of Remington Rand. A commonly used tool for CPM scheduling is the Primavera software. Related Definitions in the Project: The Project Schedule; The Project Controls	Controls
Cracking	A Cracking is 1) a fracture of a material along a path that produces a linear discontinuity; 2) a secondary process in a refinery, to reduce hydrocarbon chains to smaller molecules, light hydrocarbon. Usually, the Cracking process condition is a high pressure and temperature with the catalyst.	Technology
Crashing	Crashing is a project schedule management strategy to minimize the duration of work or project by increasing resources and expenses, trade-off the project schedule and the project cost.	Controls
Critical Activity	A Critical Activity is a work element which must be properly managed to ensure the success of a project, and an organization, program, or an activity that is the critical path.	Controls

Critical Equipment

Critical Equipment is any equipment or machinery whose malfunction or failure leads a catastrophic accident that is significantly impact the ability to safely meet business objectives; adversely affect quality levels; violate environmental standards of the business organisation.

Engineering

Reference Definition by Aiche.org: Critical Equipment means equipment, instrumentation, controls, or systems whose malfunction or failure would likely result in a catastrophic release of highly hazardous chemicals, or whose proper operation is required to mitigate the consequences of such release. (Examples are most safety systems, such as area LEL monitors, fire protection systems such as deluge or underground systems, and key operational equipment usually handling high pressures or large volumes.

Critical Path

A Critical Path is a sequence of activities in a work package or planning package in the network that has the longest total duration with the least amount of total float or slack through an end point that is calculated by the schedule software application. The Critical Path that leads to the overall project duration.

Controls

Criticality

Criticality is 1) a fact of being extremely important; 2) in nuclear power plant, the condition of being able to sustain a nuclear chain reaction.

Management

Criticality Study

Criticality Study is the method of risk assessment that is the quality, state, or degree of being of the highest importance to determine the priority for maintenance work sequences. Criticality will be established on a scale of 1 to 4 with 1 being the most critical, 4 being the least that is to ensure high criticality equipment is given a higher priority for upgrade or replacement and to focus reliability improvement efforts on the most critical equipment.

Operation

Crowdfunding

Crowdfunding is the practice of funding by raising money from a large number of people who each contribute a relatively small amount that makes the easy accessibility of vast networks of people through social media and crowdfunding websites to bring investors and entrepreneurs together. The term crowdfunding was reportedly coined in 2006 by a man named Michael Sullivan, who started a fundraising effort to build a video blogging community. The type of Crowdfunding is a debt, donation, reward and equity crowdfunding. The Crowdfunding requires generally three plays: the initiator who proposes the idea to be funded; expert people who support the idea, and the organiser or operator that brings the parties together to launch the idea. Total Global Crowdfunding Industry estimated fundraising volume in 2015: \$34 Billion (P2P Lending \$25B; Reward and Donation \$5.5B; Equity \$2.5B), typically most successful startup fundraising efforts receive about 25-40% of their target from their close connections.

Reference Information from Statista.com: Transaction value in the Crowdfunding segment is projected to reach US\$940.9m in 2020. Transaction value is expected to show an annual growth rate (CAGR 2020-2024) of 5.8% resulting in a projected total amount of US\$1,180.5m by 2024. The average funding per campaign in the Crowdfunding segment amounts to US\$5,270 in 2020. From a global comparison perspective it is shown that the highest transaction value is reached in the United States (US\$438m in 2020).

Crude

Crude is a natural oil mixture from underground rocks that has not yet been processed or refined. The Crude oil is named according to their viscosity: Light Crude - API > 31.1; Medium Crude - API between 22.3 and 31.1; Heavy Crude - API < 22.3; Extra Heavy Crude - API < 10.0.

Cryogenics

Cryogenics is the process of producing, maintaining and Science utilising very low temperatures, assume it starts at or below - 150 °C. The National Institute of Standards and Technology has chosen to consider the field of cryogenics as that involving temperatures below -180 °C, relevant in the LNG business.

Reference Definition by Cryogenics.nist.gov: Cryogenics is the science that addresses the production and effects of very low temperatures. Prof. Kamerlingh Onnes of the University of Leiden in the Netherlands first used the word in 1894 to describe the art and science of producing much lower temperatures. He used the word in reference to the liquefaction of permanent gases such as oxygen, nitrogen, hydrogen, and helium. In particular, efficient heat exchangers are required to reach very low temperatures. Over the years the term cryogenics has generally been used to refer to temperatures below approximately -150 °C.

CSI (Control System and Instrumentation) Engineering

Control System and Instrumentation (CSI) Engineering is one of engineering disciples, responsible for a Control Systems and Instrumentations (Former Instrumentation Engineering or Control System Engineering)

Related Definitions in the Project: The Engineering

Business

Substance

Engineering

Management

WORD DEFINITION CATEGORY

CSR (Corporate Social Responsibility) A Corporate Social Responsibility (CSR) is a management concept whereby companies integrate social environmental concerns in their business operations and interactions with their stakeholders. CSR is generally understood as being the way through which a company achieves a balance of economic, environmental and social imperatives ("Triple-Bottom-Line- Approach"), while at the same time addressing the expectations of shareholders and stakeholders. In this sense it is important to draw a distinction between CSR, which can be a strategic business management concept, and charity, sponsorships or philanthropy. Even though the latter can also make a valuable contribution to poverty reduction, will directly enhance the reputation of a company and strengthen its brand, the concept of CSR clearly goes beyond that.

Procurement

Customs Clearance

Customs Clearance is a gateway pass certificate of the imported or exported goods, materials or cargoes that the national customs authority grants to enter or leave the country. The Customs Clearance is typically given to a shipping agent or freight forwarder to prove that all applicable customs duties have been paid and the shipment has been approved. Related Definitions in the Project: The Procurement; The Logistics Management

Customs Duty

A Customs Duty is a tariff or tax imposed on imports or exports of goods and services when they transported across international borders. The purpose of Customs Duty is to protect each country's economy, social, and environmental sustainability by controlling the flow of goods and services.

Procurement

Damage Assessment A Damage Assessment is an evaluation in commercial and technical of a damage or loss caused by an accident or incident or natural event to reinstate to the original status, possibly repair, replacement.

Management

Damages

Damages is the amount of money to compensate for an injury or a loss.

General

Data Protection

Data Protection is laws and regulations that aim to minimise intrusion into respondents' privacy.

Management

Database (or Data Base)

A Database (or Data Base) is an interrelated and a computerised system for the logical collection of information that makes it easy to search, select and store data or information, and managed as a unit using formal design and modeling techniques.

Management

Reference Definition by Aiche.org: Data Base is 1) a repository for equipment reliability information categorized to facilitate data retrieval; 2) tabular lists of multiple data vectors, with little text except that needed to explain the data presentation format.

WORD **DEFINITION CATEGORY Datasheet (Data** A Datasheet (Data Sheet) is a document summarising the Engineering performance and other technical characteristics of a product Sheet) that specifies various pieces of information about the product. machine, component, material in sufficient detail to be used by engineering, construction, operation and maintenance. The Datasheet is generated and initiated by a process engineering for all tagged equipment with the project specifications and procedures including the equipment numbering system. The Datasheet is divided into a process, mechanical, electrical, control system and vendor datasheet that is further developed by multi-disciplinary works. **DC (Direct Current)** A Direct Current (DC) is an electric current that is the one Engineering directional flow or movement of electric charge. The DC is produced by batteries and solar cells. (opposite of the Alternating Current (AC)) **DCF** (Discounted Discounted Cash Flow (DCF) is a present value of a future cash Controls flow. The DCF is calculated by dividing projected annual Cash Flow) earnings over an extended period by an appropriate discount rate, which is the weighted cost of raising capital by issuing debt or equity. Related Definitions in the Project: The Economic Reviews **DCF** (Discounted Discounted Cash Flow (DCF) Analysis is the method of valuing Controls a project using the concepts of the time value of money. The Cash Flow) Analysis DCF analysis is to determine the present value of future cash flows (future free cash flow projection and discount it). All future cash flow is estimated and discounted by using cost of capital to give its present value. If the DCF analysis value comes higher than the current cost of the investment, the opportunity is a positive. (Refer to the DCF Analysis Method) Related Definitions in the Project: The Economic Reviews DCS (Distributed A Distributed Control System (DCS) is a computer based Engineering **Control System)** control system for units and plants, wherein control elements are distributed throughout the system.

Deactivation and Decommissioning (D&D)

Deactivation and Decommissioning (D&D) is the planned shutdown or removal of a plant or facility from operation or usage that includes the process of safely closing a plant or facilities to retire it from service after its useful life has ended. The Deactivation and Decommissioning Knowledge Management Information Tool (D&D KM-IT) is a centralized web-based knowledge management information tool built for the D&D that is to improve efficiency by reducing the need to rediscover the knowledge and to promote reuse of the existing knowledge.

Operation

Reference Definition by Energy.gov: A Deactivation and Decommissioning (D&D) is the process of taking an active/excess/abandoned facility to a final disposition end state. Because of residual radioactivity, other hazardous constituents, and the physical condition of EM's (Office of Environmental Management) facilities, D&D presents unique hazards that must be addressed from a safety, programmatic, environmental, and technological standpoint. The general D&D process applies to all facilities across the EM complex.

Debottlenecking

A Debottlenecking is an act of removing the problems or constraints within a piece of equipment or a facility. The debottleneck is to remove obstacles that are preventing a process from being more efficient or workable.

Engineering

Decision Making

Decision Making is a process of making decisions among possible alternatives, and a risk taking judgment. The skills for the effective decision making is: recognise situations including a capability of organisation; create options or alternatives, identify and evaluate the possible consequences of each options; clarify and make a clear decision, and implement actions. Sequential Steps for the effective decision making (Source: Harvard Business Review): 1. Classifying the problem. 2. Defining the problem. 3. Specifying the answer to the problem. 4. Deciding what is "right," rather than what is acceptable, in order to meet the boundary conditions. 5. Building into the decision the action to carry it out. 6. Testing the validity and effectiveness of the decision against the actual course of events.

Management

Decommissioning

A Decommissioning is a process of permanently and officially Operation stopping of use and removing from service or usage.

Deductible

Deductible means an insurance term that is a specific amount, or percentage of the insured value, which will be deducted from all losses recoverable under a policy. A Deductible basically reduces the maximum payout, but an excess doesn't need to. (Refer to the Excess Insurance)

Related Definition: Problem Solving

Business

WORD **DEFINITION CATEGORY** Defect Liability Bond A Defect Liability Bond is used to ensure that the contractor **Business** continues to provide services, rectifying defects that become Controls apparent after the completion has been certified. This is generally an on demand bond that may be required on the project where there is no remaining payments to be made, or other security such as retention, after the project is completed (Refer to a Defect Liability Period) **Deliverable** Deliverable means tangible assets including facilities and Management document produced and generated that satisfies contractual requirements and objectives. Practically, deliverable lists are included in the scope of work of the contract and the Project Execution Procedure (PEP) **Demineralised** A Demineralised (or Demi) Water is water completely free of Technology (Demi) Water dissolved minerals, any process used to remove minerals from water. The common term of Demineralised Water is restricted to ion exchange processed water. **Depreciation** Depreciation is an assigning or allocating the cost of a tangible **Business** asset over the accounting periods that the asset is likely to be Related Definitions in the Project: The Economic Reviews A Depreciation Model is the formula that use to calculate **Business Depreciation Model** depreciation of assets. The Depreciation Models are: 1) Straight Line Depreciation model is to assume that the asset decreases by a fixed amount every year until the asset reaches its salvage value. 2) Exponential depreciation (or Accelerated Depreciation) model is based on a fixed annual percent decrease that allows company to write off assets faster in earlier years than the straight line depreciation method. Related Definitions in the Project: The Economic Reviews Design and Design and Engineering is the process of developing a Engineering component, system, process, or plant by the methodical series **Engineering** of steps that engineers use in creating functional products and processes and follow to come up with the solutions to problems to meet the project specifications, code and standards, regulations, etc. The Design and Engineering is the basic science, mathematics and engineering practices are applied to convert resources optimally to meet the project requirements as well as the variety of realistic constraints, such as economic factors, safety, environment, reliability, and social impacts. Related Definitions: Engineering **Design Basis (or** A Design Basis (or Basis of Design) defines in the contract Engineering which includes the applicable government laws and Basis of Design) regulations, process specifications of technology provider (if applicable), Owner's standard specifications and details, and Industry codes and standards and contractor provides specifications. Practically, the order of precedence in case of conflict in requirements is the order of the above lists. The Design Basis is a deliverable of the FEED and Detailed Engineering.

Design Change Control

Design Change Control is one of the most challenging aspects and the most important matters of the successful project execution. Early identification of change items is the critical to manage and minimise the negative impacts by all members' responsibility. The engineering manager is a primary responsible person for ensuring the change process is fully implemented, and evaluating the impact of the engineering baselines such as deliverables, technical matters, resources, etc. with discipline leads and other project team members, and communicating with a project management.

Management

Design Development

A Design Development is the design and engineering work Engineering process, normally based on FEED or basic engineering information in developing detailed design and engineering documents for construction. The Design Developments defines or refines and describes all important aspects of the project focusing on the selection of materials; development of technical specifications for detailed engineering and construction; and generation of construction drawings and documents. During Design Development, design issues should be resolved to fix and describe the size and character of the entire project as to civil and structural, mechanical and piping, control and electrical systems as well as materials and such other operability and maintainability requirements.

Design Pressure (DP)

Design Pressure (DP) is the maximum pressure used to determine the minimum wall thickness materials or physical characteristic of each component. ASME B31.3 specified as the design pressure and temperature are the most severe coincident conditions, defined as the conditions that result in the greatest pipe wall thickness or highest required pressure class or other component rating. Design conditions are not intended to be a combination of the highest potential pressure and the highest potential temperature, unless such conditions occur at the same time.

Engineering

Design Temperature

Design Temperature is the highest temperature that a system is designed to operate at the upper and/or lower design pressure.

Engineering

Detailed Design and Engineering

Detailed Design and Engineering is a development of all required construction documents and drawings up to AFC (Approved for Construction) stage for the construction, and detailed bill of materials (BOM) for the bulk material procurement based on the basic or front end engineering design (FEED) package. The Detailed Design and Engineering is limited to verifying design basis but producing all construction drawings after incorporating vendor information.

Engineering

Related Definitions in the Project: The Engineering

WORD	DEFINITION	CATEGORY
Detailed Drawing	A Detailed Drawing is the complete end-product definition of the component or system on the drawing that shows a detailed description of the geometric form and in detail parts (less detail on general arrangement drawings). The Detailed Drawing provides information about assembly and the junctions between components, construction details, etc. The Detailed Drawing includes configuration; dimensions; tolerances; materials; symbols and specifications; protective finishes and coatings, etc.	Engineering
Detailed Estimate (Class 1)	A Detailed Estimate (Class 1, Check Estimate or Definitive Estimate) is a project cost estimate process similarly defined by the AACE Class 1 Estimate, or the Check Estimate, or Definitive Estimate. The Detailed Estimate methodology is the detailed unit cost with detailed material take-off after the detailed engineering is completed, and the expected accuracy is Low: -3% to -10%, High: +3% to +15%. Related Definitions in the Project: The Cost Estimate (Estimation)	Controls
Detailed Network Schedule (Level 4 Schedule)	A Detailed Network Schedule (Level 4 Schedule or Execution Schedule or Construction Detailed Schedule) is a detailed and discipline-wide working level network critical path management (CPM) schedule displaying all detailed activities to be accomplished by the project workforce. The Detailed Network Schedule can be expanded of the Project Control Level (Level 3) Schedule. Sometime, the Detailed Network Schedule is developed by a construction subcontractor based on the project level 3 schedule. Related Definitions in the Project: The Project Schedule	Controls
Detailed Report Schedule (Level 5 Schedule)	A Detailed Report Schedule (Level 5 Schedule) is a detailed report format schedule, covers detailed activities with work steps with dates (planned, forecast and actual date), normally used for project documentation, engineering deliverables, procurement items, and equipment erection status, etc. Related Definitions in the Project: The Project Schedule	Controls
Deviation	A Deviation is a difference from baseline, contract basis or result. A deviation work is proceeded in accordance with the Change Management Procedure.	Management
	Reference Definition by Cambridge Dictionary: to do something that is different from the usual or common way of behaving.	
DFC (Direct Field Cost)	Direct Field Cost (DFC) is a direct cost, consist of equipment, materials, and direct hire or subcontractor labour directly associated with a particular item of work or activity at the field for construction of the permanent facility. Related Cost in the Project: The Project Cost	Controls
Differentiation	Differentiation is 1) the action or process of becoming or making something different (higher value), or results of effort to make unique value; 2) the rate of change of $f(x)$ with respect to x is measured by the derived function, which is denoted by $f'(x)$	General

WORD	DEFINITION	CATEGORY
Dimensioning	Dimensioning is 1) an act of cutting or shaping in accordance with specified length, width, height, etc.; 2) to provide a clear and complete description of an object. A complete set of dimensions will allow only one interpretation for design, fabrication and construction with accuracy, clearness and completeness.	Engineering
Direct Cost (DC)	Direct Cost (DC) is a directly involved in a specific task or project, and can be identified a specific cost centre. The Project Direct Cost includes cost of the employees; equipment and materials; and outsourcing contractor's cost, etc. which are directly involved efforts or expenses: project management; engineering; procurement and procurement related cost such as transportation and custom clearance; construction management, construction labour, equipment, and consumable materials; sub-contractor's cost. (Opposite of the Indirect Cost) Related Definitions in the Project: The Project Cost	Controls
Disclaimer	A Disclaimer is a written statement to define limited responsibility.	Management
Disclosure	A Disclosure is an action of making new or secret information known by the inappropriate attribution.	Management
Discount Factor (Df)	A Discount Factor (Df) is the percentage rate required to calculate the present value (PV) of a future cash flow. The Discount Factor Formula: $Df = 1/(1+r)^n$ where, $r = interest$ or discount rate or rate of return, $n = time$ periods. Related Definitions in the Project: The Economic Reviews	Business Controls
Discount Rate	A Discount Rate is 1) the reduced price that is offered to customers if they buy large quantities of products or services; 2) the rate of interest that a country's central bank charges for lending money to other banks; 3) the interest rate used to discount a stream of future cash flows to its present value. The Discount Rate often used in capital budgeting that makes the net present value (NPV) of all cash flows from a particular project equal to zero. Generally, the higher the internal rate of return (IRR) is more desirable for the capital budgeting review. Related Definitions in the Project: The Economic Reviews	Business Controls
Dispute Resolution Process	A Dispute Resolution Process is specified in the contract document to proceed when a part believes other party is violating an agreement or commitment. The Dispute Resolution Work Process will be Clarification, Negotiation, Mediation, Arbitration and Legal Acts (Litigation).	Management
Disruption	A Disruption is an interruption or disturbance in a normal way of a system, process, or event work that changes how we think, behave, do business, learn and go about our day-to-day. Harvard Business School professor and disruption guru Clayton Christensen says that a disruption displaces an existing market, industry, or technology and produces something new and more efficient and worthwhile. (Refer to the Innovation)	General

WORD	DEFINITION	CATEGORY
Diversion	Diversion is the act of causing to turn in a different direction, or to be used for a different purpose that is a technique used to ensure a uniform distribution of treatment fluid across the treatment interval.	Technology
Diversity	A Diversity is a measure of the same overall performance by recognising differences, understanding, acceptance, and respect. There are a variety and relative differences among groups of people and individuals based on race, ethnicity, gender, geographical area, language, socioeconomic status, age, experiences, physical abilities, religious, political learning, and so on. The Diversity is the exploration and development of these differences in mutual improvement societies, quality life, and survival: continuing to live and exist.	Management
Document	A Document is a written information and used for an instruction, communication and record to identify a document's purpose, determine the appropriate document type. A type of document is a plan, procedure, contract, specification, report, manual, calculation, drawing, diagram, list, engineering document, and electronic document, etc. Related Definition in the Project: The Document Review and Approval	Engineering
Document Distribution Matrix	A Document Distribution Matrix is a systematic organised matrix for the document and drawings to be distributed to related person or organisation for their information, review and approval, record, and use for further actions. The Document Distribution Matrix includes lists of key project positions or organisations on one side and types of documents on the other. Related Definition in the Project: The Document Review and Approval	Management
Document Numbering System	A Document Numbering System is a document management system defines numerical sequences with varying combinations of project specific identification codes for correspondence and other documents that require logging, issuing, and tracking. The Document Numbering System must be developed early in the project.	Engineering
Document Review and Approval	Document Review and Approval is a project design and engineering work process in the development of project deliverables, document and drawings. Following initial document development and the necessary internal check and review processes to ensure adequate quality it will be released for external review ultimately leading to its approval. Part of the internal checks includes proper documentation of required design and controlling steps, assurance of critical safety and alignment with operating requirements, project specifications whilst ensuring that contract, client and regulatory requirements are satisfied. Related Definition in the Project: The Document Review and Approval	Engineering

WORD **DEFINITION CATEGORY Document Review** A Document Review and Approval Cycle is a period of time Engineering frame including a preparation or development, or update of and Approval Cycle document in accordance with the document list (deliverable list), a review and approval work process including a specified review meeting, and update and re-issue. Related Definitions in the Project: The Document Review and Approval **Document Revision** A Document Revision Control is a process of information Engineering sharing and communicating between a series of draft Control documents which lead to a final and to be used for further development. The Document Revision Control is applied the unique identifier for each time the document is revised to identify the latest version of the document and differentiate between drafts and final approved versions of the document, and to track changes by different users. (Refer to the Document Revision Numbering System) **Double Taxation** Double Taxation Treaty (or Agreement) specify which country **Business** Treaty (or has taxing rights over an individual, and, if they both have such Agreement) rights, which one takes priority. The agreements may set down different rules for different types of income. They may also agree to exempt some income or gains from tax or allow a setoff of tax paid in one country against tax due in the other. **Downstream** Downstream Business in the Oil and Gas Business consists of Management **Business** from receiving facilities of oil or gas and treatment, upgrading and producing of the final products, downstream plants are a refinery, petrochemical, chemical plant and products distributions. **Drawing** A Drawing is the graphically illustrated engineering document Engineering or data set that discloses, directly or by reference the physical or functional requirements of an item. The Drawing is to explain and demonstrate the final shapes with dimensions created based on the project specifications and procedures, and used for design basis drawings (flow diagrams, one-line diagrams, manufacturing, fabrication and installation construction. Type of drawings are sketch, two-dimensional CAD, three-dimensional CAD and three-dimension model drawing. They are also used for quantities for bulk material and construction cost estimate work. Related Definition in the Project: The Document Review and Approval Drawing Index (or A Drawing Index (or Key Drawing Index) is overlaid with a grid Engineering **Key Drawing Index**) showing the extent of coverage of the individual layout drawings for other disciplines. The Index shows the actual drawings numbers.

WORD	DEFINITION	CATEGORY
Due Diligence	Due Diligence is to act as a reasonable and common sense, is a negotiation work process in an investigation business to confirm each party's understandings and expectations, considered reasonable for people to be performed work fairly prior to a contract signing. The Due Diligence is to ensure that there are no hidden details which could affect the future agreement or contract.	Management
EAC (Estimate at Completion)	An Estimate at Completion (EAC) is a current estimated total cost for the particular authorised work. It equals Actual Cost of Work Performed plus the estimated costs to complete (Estimate to Complete (ETC)) of the authorised work remaining.	Controls
Earned Value (EV)	The Earned Value (EV) is a project management technique for measuring project performance in terms of the estimated deliverables, budget and schedule for the project. The EV is a periodic, consistent, and objective measurement of work performed that is compared to the total estimated of plan (schedule progress or cost) to the actual work performance (schedule progress or cost performance), and obtain an estimate for the resources that will have been used at completion. Related Definitions in the Project: The Earned Value Management (EVM)	Controls
Earned Value Management (EVM)	The Earned Value Management (EVM) is a performance management process based on a structured approach to planning, data gathering and performance measurement that links resource planning to cost and schedule requirements. All project works or activities are budgeted and scheduled in time increments incorporating the baselines. The EVM is a single integrated system of combining measurements of the project scope of work, schedule and cost, and also able to provide accurate forecasts of project performance. Related Definitions in the Project: The Earned Value Management (EVM)	Controls
EBIT (Earnings Before Interest and Taxes)	EBIT stands for an Earnings Before Interest and Taxes that measures company's profit including all incomes and expenses (operating and non-operating) except interest expenses and income tax expenses. The EBIT is a way to determine the profitability of a business by excluding interest and income tax expenses.	Controls Business
	Reference Definition by Investopedia: Earnings before interest and taxes (EBIT) is a company's net income before income tax expense and interest expense have been deducted. EBIT is used to analyze the performance of a company's core operations without tax expenses and the costs of the capital structure influencing profit.	
Economics	Economics is the academic study of the production, distribution, and consumption of goods and services that is the analysis of how people use the resources available to them. The two largest branches of economics are microeconomics and macroeconomics	Science

macroeconomics.

WORD **DEFINITION CATEGORY Ecosystem** An Ecosystem is a biological community of interacting Engineering organisms and their physical environment that includes all of the living things (plants, animals and organisms) with their nonliving environments (weather, earth, sun, soil, climate, atmosphere). The Ecosystem is a complex network or interconnected system between different organisms and their environment generate cycles. **EDMS (Electronic** EDMS (Electronic Document Management System) is a Management software program that manages and controls the creation. **Document** Management storage and communication of documents in their native file format, or pdf file. The web-based document management System) systems are beginning to store content in the form of html to allow for better application of search capabilities such as fulltext searching and stemming. The EDMS provides a way to centrally store a large volume of digital documents within an organisation workflow. The EDMS includes document management, workflow, text retrieval, and imaging, and be capable of providing secure access, maintaining the context, and executing disposition instructions for all records in the system. (Refer to the Online Document Management System) Related Definitions in the Project: Document Review and Approval **Effectiveness** Effectiveness is an ability to be successful and a measure of Management the quality of delivery and maximising the impact. Reference Definition by ISO: Effectiveness refers to the degree to which a planned effect is achieved. Planned activities are effective if these activities are actually carried out and planned results are effective if these results are actually achieved; by Aiche: Effectiveness is the combination of process safety management performance and process safety management efficiency. An effective process safety management program produces the required work products of sufficient quality while consuming the minimum amount of resources. **Effort Hour** Effort Hour (previously called as the Man-hour) is an amount of Management work performed by the average worker in one hour or an amount of required hours for the particular work or task performed or to be performed. **EIA** (Environmental The UNEP defines Environmental Impact Assessment (EIA) as HSE **Impact Assessment)** a tool used to identify the environmental, social and economic impacts of a project prior to decision-making for its approval. It aims to predict environmental impacts at an early stage in project planning and design, find ways and means to reduce adverse impacts, shape projects to suit the local environment and present the predictions and options to decision-makers. By using the EIA both environmental and economic benefits can be achieved, such as reduced cost and time of project implementation and design, avoided treatment/clean-up costs

and impacts of laws and regulations.

WORD	DEFINITION	CATEGORY
Electric Power Distribution System	An Electric Power Distribution System is the final stage in the delivery of electricity from the local electric power distribution centres (stations or substations) to individual final users. (Refer to the Electrical Grid)	Engineering
Electrical Engineering	Electrical Engineering is a part of the design and engineering discipline, deals with the electricity power system including power generation and distribution system, and electrical power system controls. An Electrical Engineer is responsible for the technology and application of the electric power generation, distribution and system controls. Key deliverable of the Electrical Engineering is a one-line diagram (single-line diagram), electrical load list, electrical equipment datasheet, electrical bulk materials, and distribution network drawing. etc. The Electrical Engineering is expanded to telecommunication systems. Related Definitions in the Project: The Engineering	Engineering
Electrical Grid	An Electrical Grid (or Electric Power Network System) is an interconnected network system for delivering electric power (electricity) from electric power generation plants to final users (homes and plant). The Electrical Grid network system consists of electric power generation plant (or stations); high voltage (above 1500V DC) transmission lines from power generation sources to local distribution centres and low voltage (120 ~ 1500V DC) transmission lines from the local distribution centre to final users; substations; and transformers.	Engineering
Electrical Load	An Electrical Load is any electrical component or portion of a circuit that consumes electric power that includes appliances, lights, and any resistor or electric motor in a circuit that converts electrical energy into light, heat, or useful motion constitutes a load on the circuit. The Electrical Load is opposed to a power source, such as a battery or generator, which produces power.	Engineering
Electricity	An Electricity is a form of electrical energy that is expressed in terms of the movement and interaction of electrons. It occurs naturally (lightning) or is produced electric generators and observable in positive and negative forms. The Electricity is carried through wires and used to operate machines, lights, heat, etc.	Engineering

Electronic Commerce (ecommerce)

Electronic Commerce (e-commerce) is the activity of electronically buying and selling of goods or services using the over open networks, such as the Internet, and the transfer of money and data to execute these transactions.

Business

Reference Definition by Investopedia.com: Electronic Commerce (ecommerce) is a type of business model, or segment of a larger business model, that enables a firm or individual to conduct business over an electronic network, typically the internet. Electronic commerce operates in all four of the major market segments: business to business, business to consumer, consumer to consumer and consumer to business. It can be thought of as a more advanced form of mailorder purchasing through a catalogue. Almost any product or service can be offered via ecommerce, from books and music to financial services and plane tickets.

Emergency Plan

An Emergency Plan is the systematic procedures that clearly detail what needs to be done, how, when, and by whom before and after the time an anticipated disastrous event occurs. The part dealing with the first and immediate response to the event is called emergency plan.

HSE

Emission

An Emission is 1) an amount of gas, heat, light that is sent out; 2) an act of producing energy or gas from a source.

Engineering

Employee Retention

Employee Retention is an effort by a business to maintain a working environment that is the ability of an organization to retain its employees.

Management

Reference Definition by Managementstudyguide.com: Employee Retention refers to the various policies and practices which let the employees stick to an organisation for a longer period of time. Every organisation invests time and money to groom a new joinee, make him a corporate ready material and bring him at par with the existing employees. The organisation is completely at loss when the employees leave their job once they are fully trained. Employee retention takes into account the various measures taken so that an individual stay in an organization for the maximum period of time.

End User License Agreement (EULA)

An End-User License Agreement (EULA) is a legal contract between the licensor (manufacturer and/or the author) and the purchaser (end user) of an application. The EULA specifies in detail the rights and restrictions which apply to the use of the software including sharing the software with anyone else. **Business**

Reference Definition by Arts Law Centre of Australia 2010 & 2030: An End-User License Agreement (EULA) is the name given to a software license agreement that is the contract between the licensor and purchaser, which sets out the terms of use of the software. The EULA will be presented to the purchaser when the software is installed on a computer (if supplied on CD or DVD) or when the software is downloaded from a website, which will operate as a Clickthru agreement as to purchaser must click a button before the installation is completed. EULA can be used as an alternative to Terms of Use (TOU) or Terms of Service (TOS).

Endorsement

An Endorsement is 1) an attachment to an official document or insurance policy which adds, deletes or changes coverage provided by the original contents; 2) the Endorsement of any negotiable agreement that knows of no defect in it.

Management

Energy Conservation

Energy Conservation is 1) reducing the amount of energy consumed in a process or system by elimination of waste; 2) the total energy of an isolated system remains constant.

Engineering

Energy Efficiency

Energy Efficiency is the ratio between the useful output and input of an energy conversion process that is measured as the amount of energy output for a given energy input and listed as a percentage between 0% and 100%, for example the amount of mechanical energy that an electric motor produces for a given input of electrical energy.

Engineering

Reference Information by The Wind Energy Fact Sheet NSW in Australia: Energy Efficiency measures how much of the primary energy source (e.g. wind, coal, gas) is converted into electricity. NSW coal-fired power stations convert 29% to 37% of the coal into electricity, and NSW gas plants convert 32% to 50% of gas processed into electricity. Wind turbines convert around 45% of the wind passing through the blades into electricity (and almost 50% at peak efficiency). Over time, coal power stations operate at around 85% of full capacity (known as the capacity factor). Gas power station capacity factors vary from as high as 85% to less than 10% (if designed only to supply electricity at peak periods). The average capacity factor for a large-solar plant that produces electricity during daylight hours is around 20-25%. The average capacity factor for a wind farm in Australia is around 35%, and can range from 25% to 45%. Wind farm capacity factors are lower than coal and baseload gas plants. but they use their energy source more efficiently and can be large-scale suppliers of electricity.

Energy Factor (EF)

An Energy Factor (EF) is the measure of overall efficiency for a Engineering variety of appliances or equipment.

Reference Definition by Energy.gov: For water heaters, the energy factor is based on three factors: 1) the recovery efficiency, or how efficiently the heat from the energy source is transferred to the water; 2) stand-by losses, or the percentage of heat lost per hour from the stored water compared to the content of the water: and 3) cycling losses. For dishwashers, the energy factor is defined as the number of cycles per kWh of input power. For clothes washers, the energy factor is defined as the cubic foot capacity per kWh of input power per cycle. For clothes dryers, the energy factor is defined as the number of pounds of clothes dried per kWh of power consumed.

Engineered Item

An Engineered Item is a type of equipment that is applied the specific and unique engineering and specifications, and developed with a vendor or manufacturer, normally has a tag number. (Refer to the Bulk Material; Package Item; Tagged Item)

Engineering

Engineering

Engineering is an application of the scientific principle, theoretical knowledge, and analysing and developing the design economically with technologies and experiences. Engineering outputs (deliverables) are generated and developed based on the agreed design basis including specifications, codes and standards, and regulations to support to the manufacturing goods and constructing facilities. Engineering disciplines of energy and chemical industries are process, mechanical, piping and pipeline, electrical, control system and instrumentation (CSI) and civil, Structural and architecture (CSA).

Engineering

Engineering Discipline

Related Definitions in the Project: The Engineering

An Engineering Discipline is the main disciplines (Civil, Computer, Electrical, and Mechanical Engineering: 67%), and the medium four disciplines (Aerospace, Biomedical, Chemical, and Industrial/Manufacturing Engineering: 20%), and the smaller ten disciplines (Agricultural, Architectural, Engineering Management, Engineering Physics/Engineering Science, Environmental, General Engineering Studies, Materials, Mining, Nuclear, and Petroleum Engineering: less than 10%), and the specialty disciplines (such as Ocean Engineering, etc.: less than 5%) of all engineering bachelor's degrees awarded annually.

In 2014 ~ 2015, degrees awarded to students graduating with a bachelor's degree from an engineering program increased by 7.5 %, continuing a trend of annual growth since 2007. Some of the largest year-to-year percentage increases were seen in computer engineering related programs: Computer Engineering (16.2 %), Computer Science (inside engineering) (17.6 %); and Electrical/Computer Engineering (21.3 %). Electrical Engineering was an outlier, showing only a 1.1 % gain in bachelor's degrees over the previous year. (Source: ASEE) Related Definitions in the Project: The Engineering

Engineering

WORD	DEFINITION	CATEGORY
Engineering Drawing	An Engineering Drawing is a graphical language used communications by engineers and other technical personnel associated that is used to clearly and accurately capture all geometric features for the requirements of products or components. The Engineering Drawing conveys engineering ideas during the design process and information necessary for the analysis of machines, structures, or systems for the engineering, manufacturing, and construction.	Engineering
Engineering Management	Engineering Management is a combining engineering and management skills with technical expertise to coordinate work in various technical fields including inter-discipline and external interfaces, and to solve technical issues and problems. The Engineering Management is focusing on the application of engineering principles for the effective planning and efficient operations of resources and technology. Related Definitions in the Project: The Engineering	Engineering
English Unit	An English Unit is the historical units of measurement used in England up to 1824, the units were redefined in the United Kingdom in 1824 by a Weights and Measures Act, which retained many but not all of the unit names and redefined some of the definitions. Some fields of engineering in the United States use a system of measurement of physical quantities known as the English Engineering units, such as Foot, Pound, and Second (FPS) system of measurement. The English Units are Time: second (sec); Length: foot (ft); Mass: pound mass (lbm); Force: pound force (lbF); Temperature: Degree Fahrenheit (°F) degree; Absolute Temperature: degree Rankine (°R). (Refer to the SI Unit System)	Engineering
Enterprise	An Enterprise is an organisation for a business or company, or a project, typically one that is difficult and important plan, especially one that will earn money. The Enterprise encloses and directly or indirectly controls all necessary functions to provide goods and services involving financial and commercial and industrial aspects that can be a sole proprietorship; partnership; corporation; Limited Liability Company (LLC); Professional Company/Professional Limited Liability Company (PC/PLLC) as well as a non-profit institution, or an unincorporated enterprise.	Business
Enterprise Resource Planning (ERP)	Enterprise Resource Planning (ERP) is the integrated management of core business processes to maximize the production strategies that allows an organisation to utilise the integrated system applications to manage the business activities. The ERP production strategy can add value by separating, adding, and mixing in the product planning, development, and marketing as well as manufacturing process.	Management

WORD **DEFINITION CATEGORY Envelope Drawing** An Envelope Drawing is a solid representing all positions of an Engineering object that is the basic technical data and performance requirements for development or design selection of an item. A Module Envelope Drawing is a modularisation plan drawing (module drawing index) shows individual breakdown modules that is the basic technical data and performance requirements for development or design selection of each module. **Environmental** Environmental Protection is the practice of protecting the HSE **Protection** natural environment to conserve natural resources and the existing natural environment and the prevention of unwanted changes to ecosystems by individuals, organisations and governments. The Environmental Protection includes the protection of ecosystems and their constituent parts from changes associated with human activities, and the prevention of unwanted natural changes to ecosystems and their constituent parts. Reference Definition by OECD: Environmental Protection refers to any activity to maintain or restore the quality of environmental media through preventing the emission of pollutants or reducing the presence of polluting substances in environmental media. It may consist of: changes in characteristics of goods and services; changes in consumption patterns; changes in production techniques; treatment or disposal of residuals in separate environmental protection facilities; recycling, and prevention of degradation of the landscape and ecosystems. **EPC Project** An EPC (Engineering, Procurement and Construction) Project Management is one of the typical contract types of oil and gas business sector that defines contractor's scope of work (EPC). A Contractor to perform the Works for Engineering, Procurement and Construction up to a Mechanical Completion (MC), and handover to the Owner for a start-up and operation. **EPCM** (Engineering, An Engineering, Procurement, and Construction Management Management Procurement, and (EPCM) is a type of contract defining the contractor's scope of Construction work. The Contractor provides the overall project management, Management) engineering services of the preparation of plans, drawings and specifications and provide procurement with equipment and bulk material supply (necessary of all or part of the material requirements), and provide the construction management only. The Construction activity will be performed by construction subcontractors under the contractor's management. **Equipment** Equipment is a set of hardware which is designed to perform a Engineering specific processing function for a particular purpose and defined in terms of mechanical, electrical or instrumentation

> components contained within its boundaries. The Equipment include devices, machines, tools, and vehicles that is identified

with a unique number. (Refer to the Tagged Item)

Equipment Factored Estimate (Class 4)

An Equipment Factored Estimate (Class 4) is a project cost estimate process similarly defined by the AACE as a Class 4 Estimate, or the Study or Feasibility Estimate. The Equipment Factored Estimate method is the Equipment Factored or Parametric Models with specifications for the major equipment through the use of equipment installation factors, and the expected accuracy is Low: -15% to -30%, High: +20% to +50%. Related Definitions in the Project: The Cost Estimate (Estimation)

Controls

Equipment List

An Equipment List is a listing of all tagged equipment with equipment number, service description, capacity, dimension and size, weight, required power, PO number, reference P&ID numbers as well as detailed information of those tagged equipment. The Equipment List is initiated and developed by the process team, and updated and finalised by the equipment engineering (mechanical, etc.) team.

Engineering

Equity Capital

Equity Capital is funds paid into a business by investors in exchange for common or preferred stock that is computed by estimating the current market value, and a company gets from selling shares rather than borrowing money.

Business

Reference Definition by OECD: Equity Capital comprises: (i) equity in branches; (ii) all shares in subsidiaries and associates (except nonparticipating, preferred shares that are treated as debt securities and included under direct investment, other capital); and (iii) other capital contributions.

Erection All Risk (EAR)

An Erection All Risk (EAR or Construction All Risk (CAR)) Insurance is the comprehensive and adequate protection against all the risks involved in the construction activities and third-party claims in respect of property damage or bodily injury arising in connection with the execution of a project at the site.

Construction

Reference Definition by Axa-gulf: An Erection All Risk (EAR or Construction All Risk (CAR)) Insurance policy is specially designed to cover loss or damage to projects that involves erection/installation of plant, machinery and equipment ranging from erection of a single machine to a large power plant. This is an "All Risk" policy covering various activities of erection/installation, testing and commissioning of plant and equipment (except specific exclusions as mentioned in the policy). It protects a contractor or employer against physical loss or damage to the contract works, construction plant and equipment or machinery. It also includes cover for damage to property of third parties and bodily damage to third parties.

WORD **DEFINITION CATEGORY Erection Sequence** An Erection Sequence is an order or series of equipment and Construction facility erection or installation sequence, normally construction erection work starts from 1) underground works, 2) a tall and heavy equipment erection, 3) from the middle of plant area, 4) longest duration activities. The Construction Erection Sequence development requires considering of the equipment and material delivery schedule, engineering document and drawing release schedule as well as the construction erection equipment availability, accessibility and workable spaces. Related Definitions in the Project: The Construction Ergonomics is an engineering and scientific study for the people Engineering **Ergonomics** and working environmental to improve safety, health, productivity, effectiveness, efficiency, and be comfortable. Also called as a Human Factored Engineering. Reference Definition by Businessdictionary.com: Ergonomics is the study of capabilities and limitations of mental and physical work in different settings. Ergonomics applies anatomical, physiological, and psychological knowledge (called human factors) to work and work environments in order to reduce or eliminate factors that cause pain or discomfort. Ergonomic designs of tools and equipment have helped curtail the occurrence of musculoskeletal disorders and repetitive strain injuries such as carpal tunnel syndrome (CTL). Also called human engineering. **Erosion-Corrosion** Erosion-Corrosion is the combined effect due to corrosion and Technology erosion that is a degradation of material surface in the presence of a moving corrosive fluid or a material moving through the fluid, leading to accelerated loss of material. **ERP** (Emergency An Emergency Response Plan (ERP) is a comprehensive plan Response Plan) that integrates all emergency situations including fire-related emergency. The ERP outlines response procedures to all the different types of fire and fire-related incidents, and other mass casualty incident in the building or other work place and stipulate the relevant actions to be taken to protect and evacuate people in the building under different emergency scenarios. Reference Definition by Aiche.org: Emergency Response Plan is a written plan which addresses actions to take in case of plant fire, explosion or accidental chemical release.

Escrow Account is the accounts typically held in banks outside

of the debtor country in which funds are held for specific

disbursements. (Refer to the Escrow)

Escrow Account

Business

WORD	DEFINITION	CATEGORY
ESDV (Emergency Shut Down) Valve	An Emergency Shut Down Valve (ESDV) is an actuated valve designed to close the flow of a hazardous fluid when the detection of a dangerous event happens. The ESDVs are the final defence against process mal-operation; they have a function which requires much more reliable performance than standard on-off valves. Whenever dedicated sensors identify an abnormally dangerous process situation, the power to the ESD valve solenoid and the valve goes to the desired fail safe mode (fail close or fail open) as a part of a Safety Instrumented System (SIS).	Engineering
Estimate Actual (EA)	An Estimate Actual (EA) is a value entered into the Earned Value Management System (EVMS) to represent direct costs for material and subcontracted items for which earned value has been taken but invoices or billings have not entered the accounting system.	Controls
Estimation	Estimation is the process of finding an estimate, or approximation that is the numerical value of unknown population values from incomplete data such as a sample. (Refer to the Cost Estimate (Estimation))	Controls
ETC (Estimate to Complete)	Estimate to Complete (ETC) is the estimate of costs to complete all work from a point in time to the end of the program.	Controls
Evacuation	Evacuation is the process of leaving of the dangerous place and its vicinity in an emergency, in a systematic manner under the plan and procedure. Successful evacuation will result in persons being transferred to a place of safety.	HSE
Ex Work	An Ex-Work is an Incoterm for international trading, the purchasing price includes a price of good at the supplier's manufacturing shop. A buyer is responsible for all expenses from that point.	Procurement
Exchange Rate (FX Rate)	An Exchange Rate (FX Rate) is the rate or price between two currencies which one currency can be changed to another currency at the rate. The Exchange Rate forecast is a critical project financial risk, and the possible mitigation strategies are a buying insurance and a foreign exchange futures hedging. The Foreign Exchange Rate can be determined by the interest rate, inflation rate, trade balance, economic growth, and political stability, etc.	Business
Execution	Execution is 1) the implementation of a court judgement or order (kill); 2) the implementation processes that is the act of doing or performing the works and activities in accordance with agreed plans and procedures to satisfy the specifications and contractual requirements. (Refer to the Project Execution)	Management
Expedite	Expedite means to make faster or shorter or happen more quickly. The Expedite is monitoring the progress and actively ensuring compliance by a contractor or supplier with the contract or purchase order requirements, to ensure goods or services are delivered in accordance with the contract terms and conditions.	Procurement

WORD **DEFINITION CATEGORY Expenditure** Expenditure is an act of using or spending energy, time, or Controls money. A capital cost expenditure is a payment of cash or cashequivalent for goods or services, or a charge against available funds in settlement of an obligation as evidenced by an invoice, receipt, voucher, or other such document. Explosion is a sudden, loud, and violent release of energy that HSE **Explosion** happens such as a bomb exploding. **Explosion Proof (or** Explosion Proof (or Blast Proof) is capable of withstanding an Engineering **Blast Proof)** internal explosion without allowing flames or hot gases to escape and initiate an explosion in the adjacent atmosphere. The term Explosion Proof must be assigned to the products that are certified by competent authorities after passing prescribed tests. The NEC® includes definitions for several types of protection techniques acceptable when designing products for use in hazardous (classified) locations: Explosion proof, dust ignition proof, dust tight, purged/pressurized, intrinsically safe, and hermetically sealed. These definitions set the criteria that must be met by all components installed in hazardous (classified) locations. F&G (Fire and Gas) A Fire and Gas (F&G) System is designed to protect the plant Engineering **System** people and facilities from hazardous conditions that is a part of the safety and control systems covering the overall plant control and monitoring requirements. The F&G System can detect hazardous events, initiate timely actions, and alert personnel in order to minimise the consequences of a critical event. A Fire and Gas detection system is continuously monitoring all areas for abnormal conditions. Reference Definition by Honeywellprocess.com: Fire and gas (F&G) detection and mitigation systems are key to maintaining the overall safety and operation of industrial facilities. F&G systems include offshore petroleum exploration and production, onshore oil and gas facilities, refineries and chemical plants, marine operations, tank farms and terminals, pipelines, power plants, mining and paper mills. A F&G safety system continuously monitors for abnormal situations such as a fire, or combustible or toxic gas release within the plant; and provides early warning and mitigation actions to prevent escalation of the incident and protect the process or environment. **Facilitator** A Facilitator is a helper, to assist team or organisation finding a Management solution of a specific issue or answer to a problem more easily and efficiently. The Facilitator do not contribute to the actual content but operate a systematic work process. **Factored Estimate** A Factored Estimate is a cost estimate method using a Controls reference equipment cost with factors, or total installed cost of process and utility units or facilities. (Refer to the Capacity Factored Estimate and Equipment Factored Estimate) Related Definitions in the Project: The Cost Estimate (Estimation)

WORD **DEFINITION CATEGORY Fair Trade** Fair Trade is the concept of fair trade applies in general to trade **Business** operations that makes the people who produce the goods receive a fair price. Reference Definition by Fairtrade.org.uk: Fairtrade is about better prices, decent working conditions, local sustainability, and fair terms of trade for farmers and workers in the developing world. By requiring companies to pay sustainable prices (which must never fall lower than the market price), Fairtrade addresses the injustices of conventional trade, which traditionally discriminates against the poorest, weakest producers. It enables them to improve their position and have more control over their lives. **Fast Track** A Fast Track is a project execution strategy, start the Management procurement and/or construction work before the engineering work is finished. The Fast Track is the quickest way to complete a job or project by performing activities in parallel, but overlapping tasks in this way often increases risk. To develop the Fast Track Schedule by changing sequential activities to parallel activities (e.g. finish to start and start to start relationship with negative legs). (Refer to the Crashing) Reference Definition by Wikipedia: Fast-track building construction is construction industry jargon for a project delivery strategy to start construction before the design is complete. The purpose is to shorten the time to completion. **FAT (Factory** A Factory Acceptance Test (FAT) is a formal test and inspection Quality **Acceptance Test)** work process that performs at the vendor's or manufacturer's shop when the system, facility or software is fully fabricated and assembled prior to the shipping. The FAT is to check the functionality and capabilities of products and system. **Feasibility Study** A Feasibility Study is an assessment and evaluation process of Management a new project or system viability that focuses the technical 11/4/6 feasibility and commercial profitability. The Feasibility Study involves the legal, economic, technology, cost and schedule, environmental and other factors up to the completion of project as well as the commercial operations. In general, the Feasibility Study is a preliminary study performed in the early stage of the project or business such as the conceptual design or FEED engineering stage.

Related Definitions in the Project: The Engineering

FEED (Front End Engineering and Design)

Front End Engineering and Design (FEED, or Front End Engineering (FEE) or Front End Loading (FEL)) is a type of the design and engineering document that is developed based on a conceptual engineering or pre-FEED results. The FEED is used for the basis of the detailed design and engineering; the FID (final investment decision) with accurate TIC (Total Investment Cost) estimate and overall project execution planning as well as the tendering document for EPC contractor selection. The FEED engineering depth is similar to a basic engineering, and its main outputs are process studies including process technology selection, process and utility configuration, and optimizations for a cost minimization, supporting documentation for permits and funding, EPC execution planning including EPC cost estimate (Accuracy: +/- 15 ~ 30%), EPC Schedule, EPC tendering document, and basis of detailed design and engineering document. Type of FEED is a light, normal and extended FEED based on engineering deliverables and their depth and details depend on the client's demand. Related Definitions in the Project: The Engineering

Engineering

FEED (Front End Engineering and Design) Verification

FEED (Front End Engineering and Design) Verification is a technical evaluation work process to validate the technical baseline of the detailed design and engineering or the basis of EPC bidding. The FEED Verification is a systematic approach for reviewing a FEED Package developed by others to be verified the required accuracy, level of completeness, minimizes engineering risk of rework or cost escalations, and minimal project cost.

Engineering

Feedback

Feedback is 1) an information of opinion or an interest Management expression about a new product or service; 2) the responding process that makes it deviate from its initial state.

Related Definition: Engineering

Reference Definition by ISO: The term feedback is used to refer to a comment or an opinion expressed about a product or service or an interest expressed in a product or a service. It may also be used to refer to the customer complaints-handling process itself.

Feedback Control System

A Feedback Control System is 1) a type of process control system that uses the output as opposed to the input measured process variable via a sensor in making calculated corrective adjustments or modifications to the selected (independent) input variable to achieve a controlled (dependant) output variable, that is one with no change. The process signal can be electrical or electronic, ranging from very simple to highly complex circuits. (refer to the Closed Loop Control System, and opposite of Feed-Forward Control); 2) a management system that monitors and assesses the process and outcomes periodically or continuously in order to make changes for improved performance and efficiency.

Engineering

WORD **DEFINITION CATEGORY** FID (Final A Final Investment Decision (FID) is the final decision of the Management Investment Capital Investment Decision (CID) as a part of the long term Business corporate finance decisions based on key criteria to manage Decision) company's assets and capital structures. In general, the FID can be made after completion of permits and financial arrangements, and ready for commencement of the Construction works at the Site (EPC Contract). It is the point at which contracts for all major equipment can be placed, allowing procurement and construction to proceed and engineering to be Related Definitions in the Project: The Economic Reviews Field Engineering is one of the construction organisations that **Field Engineering** Construction is to perform the design and engineering work at the site. The Engineering primary responsibility of the Field Engineering is an interpretation of engineering design and document to the construction teams, supporting ad-hoc engineering related site activities including field material supply, gathering requested site information feedback to the Engineering division, and assisting engineering matter to operation and maintenance team. The Field Engineering team involves performing of completeness check and inspection of construction outcomes. and development of hand-over documentations. Related Definitions in the Project: The Engineering; The Construction **Field Fabrication** A Field Fabrication is an assembling and installation of Construction components at the job site. (e.g. piping pre-fabrication). Related Definitions in the Project: The Construction **Field Material** Field Material Control is the construction management activity Construction Control that is the systematic control over the materials at all its stages at the site to help in maintaining regular and uninterrupted flow of the materials. The Field Material Control activities are managing and controlling the delivered equipment and materials at the site including materials receiving, provide a receiving inspection and issue the report (OS&D report), warehouse management, inventory check and status reporting, field material purchasing, and hand-over excess materials. Related Definitions in the Project: The Construction **Final Acceptance** The Final Acceptance (FA) is an owner's acceptance of the Construction facility or project from the contractor after the entire work is (FA) Management completed, tested and inspected in accordance with the contract requirements. When the Final Acceptance is achieved. owner releases the Final Acceptance certificate to the contractor, and the plant is a permanently handed over to the owner. Related Definitions in the Project: The Construction **Financial** Financial Management is a management work process that is **Business** Management the specific planning, directing, monitoring, organising, and Management controlling of the usage organisation's monetary resources. The Financial Management is to attain its business objectives and to accomplish the objectives of the organisation, and to return

maximum value to shareholders by the efficient and effective

management of money.

FinTech (Financial Technology)

Fintech (Financial Technology) is an emerging financial services sector in the 21st century that uses new technology and innovation with available resources in order to compete in the marketplace of traditional financial institutions and intermediaries in the delivery of financial services. The Fintech can take the form of software, a service, or a business that provides technologically advanced ways to make financial processes more efficient by disrupting traditional methods. (Refer to the Cryptocurrency: Bitcoin)

Business

Fire and Gas (F&G) **Detection System**

A Fire and Gas (F&G) Detection System is a type of detector used for the risk reduction by the earliest warning of hazardous situations that includes heat, flame, smoke, and flammable gas instruments. The Fire and Gas Detection System is to promote the use of a combination of sensors to ensure the detection of flames and hazardous gases in industrial plants and facilities.

Engineering

Reference Definition by Excelmarco.com: The Fire and Gas Detection System provides early and reliable detection of the fire or gas, continuously monitor all areas where a fire or an accumulation of a flammable or explosive gas mixture may occur. On detection of any of these events the Fire and Gas Detection system shall alert personnel and initiate timely executive action to minimize the consequences.

Fire Protection

Fire Protection is the methods of providing for fire control or fire extinguishment to reduce the impact of uncontrolled fire and save lives and property. The Fire Protection may requires the implementation of safety planning, practical drills, the study and investigation of fire, and safety design, construction, safe operation, testing and application of mitigating systems.

HSE

Fire Triangle

A Fire Triangle is the three elements a fire needs to ignite that HSE is: 1) flammable substance (combustible material) - to burn; 2) oxygen - to combine and react; 3) heat or ignition source - to raise the temperature of the combustible material to its burning or ignition temperature.

First AID

A First AID is a basic medical care and treatment at the remote location using facilities and materials available at the time before a formal care and treatment by a professional. The common Fist AID Kits used in the school may contain (Wikipedia): Alcohol or nonalcohol antiseptic wipes; Band-Aids; Cotton Balls; Cotton Swabs; Iodine; Bandages; Hydrogen Peroxide; Gauze; Saline; Dressings; Eyewash; Antiseptic; solution; Relispray.

HSE

Fixed Cost

Fixed Cost is the same amount that does not change. A Fixed Controls Cost Contract is a type of contract that the contracted amount is not changed for the entire project life cycle.

Fixed Fee

A Fixed Fee is an amount that is paid to contractor for their overhead and profit, which does not change according to the amount of work done, or the number of times something is

Management Controls

WORD **DEFINITION CATEGORY Fixed Price Contract** A Fixed Price Contract is a type of contract where the contract Management amount (fixed cost) does not depend on resources used or time expended. (Called as a Lump Sum Contract) **FLNG** (Floating Floating Liquefied Natural Gas (FLNG) is the floating production Technology **Liquefied Natural** unit of LNG (Liquefied Natural Gas) that is the use of purpose built or converted ships to enable regasification and liquefaction Gas) of the LNG to be carried out offshore. The FLNG has the advantage that LNG production and importation can start more quickly than could happen onshore. Reference Definition by Schlumberger Oilfield Glossary: Floating Liquefied Natural Gas (FLNG) is deployed offshore in locations that have limited access to pipelines to carry natural gas to the mainland. They serve to recover, liquefy, store, and transfer LNG produced from subsea wells. Processed using equipment on the ship's deck, the natural gas may then be stored in the ship's hull before it is offloaded to carriers and sent directly to LNG markets. These vessels reduce the need for flaring of natural gas to the atmosphere during production or testing. Float (or Slack) Float (or slack) is 1) to stay on the surface of a liquid and not Controls sink; 2) an amount of time that an activity or a task in a project network can be delayed without causing the overall schedule delay. The Free on Board (FOB) is the Incoterm for international FOB (Free on Board) Procurement trading which the price of purchase includes a price of good and all expenses up to on board of transporter. Seller (Supplier) is responsible for transportation of good to the designated position (board), and buyer is responsible for them from that point. Related Definitions: The Procurement **Force Majeure** Force Majeure is an unexpected event such as a war, crime, or Management an earthquake includes an Act of God in which a part of the contract or purchase order cannot be performed due to causes. The Force Majeure is a contractual term used to define circumstances in which a party to a contract is not obliged to carry out its obligations because of major events outside its control that protects parties in the event.

Forecast (Forecasting)

A Forecast (Forecasting) is an estimate or predict of the future conditions and events of production or distribution demand and other factors affecting profit margins and business activities. The Forecasting is the work involved in anticipating future events, while establishing objectives is the work necessary to commit oneself to accomplish predetermined results. The accuracy of a projected forecast can be negatively impacted by unexpected events in the financial markets, fluctuation in commodities, or environmental disasters, etc.

Management Controls

Reference Definition by OECD: Forecasting and Prediction are often used synonymously in the customary sense of assessing the magnitude which a quantity will assume at some future point of time: as distinct from "estimation" which attempts to assess the magnitude of an already existent quantity. For example, the final yield of a crop is "forecast" during the growing period but "estimated" at harvest.

Framework

A Framework is a systematic approach of ideas and rules with a conceptual structure that is used for the plan set up or development which supports to achieve the specific objective.

Management

Framework Agreement

A Framework Agreement is an agreement between two parties that is a general term for agreements and set out terms and conditions for making specific purchases. The Framework Agreement is to establish the terms governing contracts to be awarded during a given period with regard to price and the quantity envisaged. Blanket orders or Umbrella agreements are a type of framework agreement.

Management

Reference Definition by Local.gov.uk: A Framework Agreement is 'an agreement between one or more contracting authorities and one or more economic operators, the purpose of which is to establish the terms governing contracts to be awarded during a given period, in particular with regard to price and, where appropriate, the quantity envisaged. Framework agreements continue to play a central role in public procurement including enabling councils to work together through central purchasing bodies. The rules remain largely the same as before including the maximum four-year duration.

Freight Forwarder

A Freight Forwarder is a company or an organisation that specialized in arranging storage and shipping of goods or cargoes on behalf of its shippers. The Freight Forwarder usually provides a full range of services including: tracking inland transportation; preparation of shipping and export documents; warehousing, booking cargo space; negotiating freight charges; freight consolidations; cargo insurance, and filing of insurance claims. The Freight Forwarder usually ship under his own bill of loading or airwaybill with his agents or associates at the destination provides document delivery, deconsolidation, and freight collection services.

Related Definitions in the Project: The Procurement; The Logistics Management

Procurement

Front End (or Frontend)

A Front End (or Front-end) is 1) the first part of a process, series of events, or period of time, or relating to the beginning of an undertaking (e.g. Front End Schedule, Front End Engineering and Design (FEED)); 2) in computer engineering, the parts of a computer, piece of software, website, physical infrastructure, or hardware that is directly accessed and interacted with by the user, and the Front End system can be a software application or the combination or hardware, software and network resources.

Management

Front End Schedule

A Front End Schedule provides information of the project Controls overall schedule that shows the starting and ending date, usually a bar chart schedule. The Front End Schedule is used for the status reporting and permits documentation. Related Definitions in the Project: The Project Schedule

Functional Organisation

A Functional Organisation (Organization) is the most commonly used of the organisational structure in production industries. The Functional Organisation structure is divided roles and functions by the division or department, such as project management, engineering, procurement, construction, and project controls. The Functional Organisation is normally applied for a small size of project. An advantage of the Functional Organisation will be a specialization, efficiency and productivity, but disadvantage will be a lack of team work and difficult management control.

Management

Related Definitions in the Project: The Project Organisation

Gantt Chart

A Gantt Chart is one of the schedule control and management Controls tool, shows bar chart with activities and time scale. The Gantt Chart schedule was invented in 1917 by the US engineer, Henry Gantt.

Related Definitions in the Project: The Project Schedule

Gap Analysis

A Gap is a difference in performance between an actual or Management present and desired state.

The Gap Analysis is a work process of assessing the differences and determinations of what steps or activities need to be taken in order to achieve the targets. The Gap Analysis helps a project or business understand and quantify the gaps, and by analysing these gaps, organisation can create specific action plans to move the organisation forward its goals and close the gaps. The Gap Analysis work processes are: 1) a development organisational goals; 2) assessment and evaluation of current states; 3) analysing the gaps between the current practices and identified benchmarking best practices; 4) questions on why the gap exists (the challenging question is not how far actual performance fell below target, but); and 5) development action plans in achieving the targets and goals; 6) select the best practices will be implemented.

WORD	DEFINITION	CATEGORY
Gas Treating Facility	Gas Treating Facility is to remove the inherent solid, liquid, and gas impurities from the natural gas mixtures (mainly methane (CH4) with various hydrocarbon components), which accelerate the corrosion of equipment and pipeline, and lower the heating value of the gas. The main Gas Treating Facilities are: Oil and Condensate Removal; Water Removal; Separation of Natural Gas Liquids; Sulphur and Carbon Dioxide Removal	Engineering Process
Gasification	Gasification is the conversion of solid or liquid material (e.g. coal or heavy hydrocarbon) into a gas for use as a fuel at high temperatures that is pyrolytic distillation or pyrolysis.	Engineering
General Damages	General Damages are the compensation for the direct effects of the accident of the injury suffered or breach of contract. The General Damages are likely to continue into the future and/or no exact value can be calculated, but the court is to determine the appropriate amount to be compensated as damages. (e.g. pain & suffering, loss of promotion or opportunities, disadvantage, inability to perform certain functions, hobbies, future loss of earnings etc.) (Opposite of the Special Damages)	Business Management
General Terms and Conditions	General Terms and Conditions are rules, provisions, requirements, specifications, and standards that is an integral part of an agreement or contract, usually standard for a company or corporation. The General Terms and Conditions is a general definition of the legal relationships and responsibilities of the parties to the contract and how the contract is to be administered. They are not specific to the particular project or transaction but apply to all projects or transactions. (Refer to the Terms and Conditions (Ts & Cs); Special Terms and Conditions)	Procurement Business
Geothermal Energy	Geothermal Energy is thermal energy generated and stored in the Earth. The production of geothermal energy involves drilling wells into the Earth's crust at approximately a depth of 3 ~ 10 km. This heat comes from the radioactive decay of minerals and continual heat loss from the earth's original formation. Hot water and steam from deep underground can be used to generate electricity in a geothermal power plant. Electricity is generated when geothermal heat produces steam that spins turbines on a generator. It's clean and sustainable, but the possibility is limited to a few locations on Earth and many technical problems exist that limit its utility. (more about the Geothermal Energy) Related Definitions in the Project: The Renewable Energy	Technology - Energy

WORD	DEFINITION	CATEGORY
Globalisation	Globalisation is the world wide movement towards economic, financial, trade and communications integration. The Globalisation is an acceptance of a set of economic rules for the entire world designed to maximise profits and productivity by universalising markets and production, and to obtain the support of the state with a view to making the national economy more productive and competitive.	General Management
	Reference Definition by OECD: The term globalisation is generally used to describe an increasing internationalisation of markets for goods and services, the means of production, financial systems, competition, corporations, technology and industries. Amongst other things this gives rise to increased mobility of capital, faster propagation of technological innovations and an increasing interdependency and uniformity of national markets.	
Good Engineering Practice (GEP)	Good Engineering Practice (GEP) is engineering and technical activities that ensures the engineering, operating, or maintenance activities based on established codes, standards, published technical reports, or recommended practices. The GEP is the company's manufacturing products of the required quality as expected that is the development and/or manufacturing effort consistently generates deliverable, and support the requirements for qualification or validation.	Management
Good Industry Practice (GIP)	Good Industry Practice (GIP) is the best or common practice that includes standards, practices, methods and procedures conforming to the contractual obligations and all applicable law and regulatory requirements.	Management
Governing Law	A Governing Law is a contract or agreement clause that specifies what jurisdiction's law is to be applied when there is a dispute in a transaction, interpretation and enforcement of the terms of the contract. (Called as the Rule of Court or Choice of Law; refer to the Rule of Law (or Law and Order))	Management
Grace Time (or Period)	Grace Time (or Period) is the extra time period immediately after the due date for an obligation that is the provision in most loan and insurance contracts. The Grace Time is waived provided by which the obligation is satisfied during the grace period. The Grace Time is not required by law, but lenders usually give one, and the law requires that they send a bill at least the Grace Time prior to the due date. (e.g. a credit card billing cycle ends and the payment is due)	Management
Green Energy	Green Energy comes from natural sources such as sunlight, wind, rain, tides, plants, algae and geothermal heat that is a subset of renewable energy. The Green Energy is the low or zero emissions and low environmental impacts to systems for human life that protects the natural environment.	Technology
Green Power	Green Power is a general term for energy produced from clean, renewable energy resources such as solar, wind, geothermal, biogas, eligible biomass, and low-impact small hydroelectric sources.	Technology - Energy

Greenhouse Gas

A Greenhouse Gas is the gases in the atmosphere that absorbs any bits radiation at specific wavelengths within the spectrum of infrared radiation emitted by the Earth's surface. The most significant Greenhouse Gas is water vapour (H2O), carbon dioxide (CO2), nitrous oxide (N2O), methane (CH4), and ozone (O3), and a number of entirely human-made greenhouse gases in the atmosphere, such as the halocarbons and other chlorine and bromine containing substances. However, even slight increases in atmospheric levels of carbon dioxide (CO2) can cause a substantial increase in temperature.

Reference Definition by Wikipedia: A greenhouse gas (sometimes abbreviated GHG) is a gas in an atmosphere that absorbs and emits radiation within the thermal infrared range. This process is the fundamental cause of the greenhouse effect. The primary greenhouse gases in Earth's atmosphere are water vapour, carbon dioxide, methane, nitrous oxide, and ozone. Without greenhouse gases, the average temperature of Earth's surface would be about 15 °C (27 °F) colder than the present average of 14 °C (57 °F). In the Solar System, the atmospheres of Venus, Mars and Titan also contain gases that cause a greenhouse effect.

Grid Line (or Gridline)

A Grid Line (or Gridline) is 1) any of a series of numbered Technology horizontal and perpendicular lines that divide a map into squares to form a grid by means of which any point may be located by a system of rectangular coordinates; 2) is the light gray line that divides each of the cells, rows, and columns in a spreadsheet; 3) the metallic contacts fused to the surface of the solar cell to provide a low resistance path for electrons to flow out to the cell interconnect wires.

Groupthink

Groupthink is 1) the practice of thinking or making decisions as a group in a way that discourages creativity or individual responsibility; 2) the process in which bad decisions are made by a group because its members do not want to express opinions, suggest new ideas, etc.

Reference Definition by Psysr.org: Groupthink, a term coined by social psychologist Irving Janis (1972), occurs when a group makes faulty decisions because group pressures lead to a deterioration of "mental efficiency, reality testing, and moral judgement". Groups affected by groupthink ignore alternatives and tend to take irrational actions that dehumanize other groups. A group is especially vulnerable to groupthink when its members are similar in background, when the group is insulated from outside opinions, and when there are no clear rules for decision making.

Substance

WORD	DEFINITION	CATEGORY
GTL (Gas to Liquid)	Gas to Liquid (GTL) is a refinery process technology to convert natural gas into hydrocarbon liquid products (synthetic gasoline or middle distillates), using the Fischer Tropsch synthesis method. Natural Gas is abundant, versatile and affordable, and GTL products contain almost none of the impurities such as sulphur, aromatics and nitrogen, and colourless and odourless. The gas is found in fields remote from markets such that delivery by pipeline is likely to be uneconomic.	Engineering
Guarantee	Guarantee is a written promise or agreement that something will be done or will do. The guarantor can only be sued if the actual debtor can't pay, in contrast to indemnity.	General
Guaranteed Maximum (G-Max) Price	A Guaranteed Maximum (G-Max) Price is a type of contract that the specified work is performed by an agreed maximum or not to exceed price basis.	Management
Guesstimation	A Guesstimation is an approximate estimate method (guess and estimate) with limited information used for an initial planning.	Controls Management
Hand Over (or Turnover)	Hand Over (or Turnover) is a responsibility transfer work process, giving of care, custody, and control (CCC) for project to owner at the final stage of project after the plant is constructed, inspected and tested. The Hand Over activity includes all constructed facilities as well as project documentations as specified in the contract. It is one of the project close out activities. Related Definitions in the Project: The Construction	Construction Management
Hazard	A Hazard is any dangerous and likely to cause damage or any source of potential damage, harm or adverse health effects on under certain conditions at work. The Hazard can cause harm or adverse effects to individuals as health effects or organisations as property or equipment losses. Identification of hazards is the first step in performing the risk assessment.	HSE
	Reference Definition by Aiche: Hazard is an inherent chemical or physical characteristic that has the potential for causing damage to people, property, or the environment.	
Hazard Analysis	Hazard Analysis is the process of recognising and identifying undesired events or hazards, and analysing consequences and impacts of undesired events or hazards. The result of Hazard Analysis is the identification of different type of hazards that can be a potential condition and exists or not (probability is 1 or 0).	HSE

Hazardous Material

A Hazardous Material is any substance or mixture that has the potential to cause harm to humans, animals, or the pesticides. environment. (e.g. Asbestos. chemicals. radioactive, etc.) (Refer to the Hazardous Chemical)

Reference Definition by Aiche.org: A Hazardous Material in a broad sense, any substance or mixture of substances having properties capable of producing adverse effects to the health or safety of human beings or the environment. Material presenting dangers beyond the fire problems relating to flash point and boiling point. These dangers may arise from, but are not limited to, toxicity, reactivity, instability, or corrosivity.

HAZID (Hazard Identification)

A Hazard Identification (HAZID) is a work process of identifying hazards, which forms the essential first step of a risk assessment of the project. The HAZID is to obtain a list of hazards for subsequent evaluation using a sort of risk assessment techniques. This is sometimes known as failure case selection, and is to perform a qualitative evaluation of the significance of the hazards and the measures for reducing the risks from them. This is sometimes known as a hazard assessment.

Engineering

HAZOP (Hazardous Operability)

A Hazardous Operability (HAZOP) study is a systematic, critical examination by the engineering team with operator support. It uses a key word approach in identifying departures from normal operation, how it may occur and hazard potential. Causes may include mal-operation or mal-function of individual items of equipment and the consequential effects on the facility as a whole. HAZOP is possibly the most important of safety reviews pursued as standard practice in any process development. It is carried out as a conclusion to Front End Engineering Design (FEED) and/or at the commencement of Detailed Engineering and may be regarded as a safety verification step. Accordingly, it does not replace, but rather supplements, existing good engineering practice employing Codes of Practice and experience which will have been used in the FEED.

Engineering

Heat and Material Balance (H&MB)

Heat and Material Balance (H&MB) is one of the basic process engineering documents produced by process design engineers in which energy output from a system that equals energy input. H&MB document includes operating conditions. compositions and key physical properties of every major process streams on the Process Flow Diagram (PFD). The H&MB may be included as part of the PFD or a separate document, particularly when several operating cases are evaluated. (Refer to the FEED Deliverable List (Sample))

Engineering

Heat Index (HI)

The Heat Index (HI) (or Apparent Temperature) is an index that HSE is what the temperature feels like to the human body when relative humidity is combined with the air temperature. There is direct relationship between the air temperature and relative humidity and the heat index, meaning as the air temperature and relative humidity increase (decrease), the heat index increases (decreases). (e.g. when the temperature is 32°C with 70% relative humidity, the heat index is 41°C.)

Heat Stress

Heat Stress is the elevated body temperature that occurs when a body produces or absorbs more heat than it dissipates by environmental air temperature or other factors such as work rate, humidity and clothing worn while working. The Heat Stress is the heat exhaustion, heat cramps (muscle pain or spasms) and heat stroke, caused by working in hot areas that may become a medical emergency requiring immediate treatment to prevent disability or death.

Construction

Reference Definition by CDC: Heat Stress is workers who are exposed to extreme heat or work in hot environments may be at risk of heat stress. Exposure to extreme heat can result in occupational illnesses and injuries. Heat stress can result in heat stroke, heat exhaustion, heat cramps, or heat rashes. Heat can also increase the risk of injuries in workers as it may result in sweaty palms, fogged-up safety glasses, and dizziness. Burns may also occur as a result of accidental contact with hot surfaces or steam.

Heat Transfer Equipment

Heat Transfer Equipment is used for transfer of heat from a hot fluid to cold fluid that is the exchange of thermal energy between physical systems. The flow of heat represents the movement of energy from one place to another, and temperature is the measure of thermal energy available. There are three primary mechanisms for heat transfer: conduction or diffusion, convection, and radiation. The most commonly used type of Heat Transfer Equipment is a shell and tube heat exchanger, and other heat transfer equipment are an intercoolers and heaters; condensers and boilers in steam plant; evaporators; regenerators and refrigeration units; automobile radiators; oil coolers of heat engine, etc.

Engineering

HMI (Human **Machine Interface)**

A Human Machine Interface (HMI) is a graphic based visualization of an industrial control and monitoring system that is a software application demonstrating information to an operator or user about the state of a process, and to accept and implement the operators control instructions. The HMI presents an interface, human vs. machine interaction to effective operation and control of the machine by human in a manufacturing or process control system. (e.g. a programmable automation controller (PAC), programmable logic controller (PLC), distributed control system (DCS), or supervisory control and data acquisition (SCADA) system)

Engineering

Home Office Construction Management

Home Office Construction Management is the construction Construction support, input and coordination activities with all various organisations to determine how to best perform the construction effort. The Home Office Construction Management is performed during the engineering and early procurement phase to develop the construction planning such as the selection of construction technology, constructability study, development of construction organisation, schedule, budget and resources requirement, and detailed construction methods procedures including temporary facilities, construction subcontracting plan.

WORD **DEFINITION CATEGORY Home Office Cost** Home Office Cost is the project direct cost, mainly labour and Controls expenses for the project execution or management by office based personnel. Related Cost in the Project: The Project Cost **Hot Work Permit** A Hot Work Permit is a type of the work permit that allows Construction employers to maintain safety and control over potentially hazardous hot work operations including the use of portable gas or arc welding equipment, or involve soldering, grinding, or any other similar activities producing a spark, flame, or heat. The Hot Work Permit provides detailed work procedures and check lists for hot work fire safety as a reminder to contractors of their fire prevention responsibilities for the works. **HOU (Heavy Oil** The Heavy Oil Upgrading (HOU) is a process for upgrading Engineering **Upgrading) Process** heavy oils that is the conversion processes of atmospheric and vacuum residues to the acceptable feedstock for petroleum refineries, or other heavy oils into more valuable products. The HOU technology for processing heavy oils and residues is now increasing with different characteristics such as thermal cracking, FCC (Fluid Catalytic Cracking), hydrocracking, HDS (Hydrodesulphurization), gasification, etc. **HS Code** Harmonized System or Harmonized Commodity **Procurement** Description and Coding System (HS Code) is an international (Harmonized System or Harmonized standardised system of names and numbers for the Commodity classification of commodities of the tariff nomenclature in which **Description and** articles are grouped largely according to the nature of the materials of which they are made, as has been traditional in Coding System) customs nomenclatures. The HS Code is used as a basis for the Customs tariffs and for the collection of international trade statistics based on a 6-digit nomenclature and individual countries have extended this to 10 digits for import and 8 for export. It came into effect in 1988 and has since been developed and maintained by the World Customs Organization (WCO) with over 200 member countries. **HSE (Health, Safety** A HSE means a Health, Safety and Environment (HSE), **HSE** and Environment) Environment, Health and Safety (EHS) or Safety, Health and Environment (SHE). A HSSE stands for Health, Safety, Security and Environment. **HSE (Health, Safety** A HSE (Health, Safety and Environmental) Plan is a plan **HSE** and Environmental) document that introduces to ensure the health, safety and Plan environmental issues are properly covered during a project development stage including an establishment of the HSE management system, implementation of the HSE policy, and achievement of the HSE objectives effectively. The HSE Plan is designed in accordance with the legislative requirements covering the roles and responsibilities of the staff, the emergency action plan, and so on.

WORD	DEFINITION	CATEGORY
HSE (Health, Safety and Environmental) Policy	A HSE (Health, Safety and Environmental) Policy is a written statement by an employer stating the company's commitment for the protection of the health and safety of employees and to the public. The HSE Policy statement is a company policy document for the business includes how company will manage HSE (health, safety and environment) in the business and communicate. The HSE Policy should clearly defines who does what and when and how.	HSE
HSSE (Health, Safety, Security and Environment)	A HSSE stands for Health, Safety, Security and Environment	HSE
Human Made Disaster (or Technological Man Made Disaster)	A Human Made Disaster (or Technological Man Made Disaster) is an event causing great harm, damage, or death, or serious difficulty that is caused by humans and occurred in or close to human settlements. This can include environmental degradation, pollution and accidents including famine, displaced populations, industrial accidents and transport accidents, etc.	HSE
Human Resource (HR)	A Human Resource (HR) is 1) a set of individuals who is a workforce of the organisation; 2) an organisational function that deals with the people and related to people such as hiring, compensation, training, performance management, and employee retention.	Management
Human Resource Management (HRM)	Human Resource Management (HRM) is the members and organisation management work process that aims to achieve its goals with maximisation of the employee and organisation performance in work or service. The HRM activities are recruitment, hiring of employee, providing orientation, training and skill development, performing performance appraisals, managing compensations and benefits, motivating including rewards, helping them with problems, and concerning industrial relations with labour laws. The primary objective of the HRM is to ensure the availability of right people for right jobs so as the organisational goals are achieved effectively.	Management
HVAC (Heating, Ventilating, and Air Conditioning)	A Heating, Ventilating, and Air Conditioning (HVAC) is a system technology to supply quality air to the indoor or building with heating or cooling, and ventilation system to maintain or keep air quality and temperature.	Engineering
Hybrid Organisation	A Hybrid Organisation is a mixture organisation of the public, private and voluntary sector, or the task force and functional organisation (Matrix Organisation). Related Definitions in the Project: The Project Organisation	Management
Hybrid System	A Hybrid System is a dynamical system that includes two different types of technologies. (e.g. a hybrid vehicle; a wind turbine and a solar photovoltaic array combined to meet a power demand)	Engineering

Science

WORD **DEFINITION CATEGORY**

Hydraulics

Hydraulic means operated, moved, or involving the pressure of water or some other liquid. Hydraulics is the branch of science and technology concerned with practical applications, such as the transmission of energy or the effects of flow of liquids through pipes and channels, especially as a source of mechanical force or control.

Reference Definition by Wikipedia: Hydraulics is a technology and applied science using engineering, chemistry, and other sciences involving the mechanical properties and use of liquids or fluids. At a very basic level, hydraulics is the liquid version of pneumatics. Fluid mechanics provides the theoretical foundation for hydraulics, which focuses on the applied engineering using the properties of fluids. In fluid power, hydraulics is used for the generation, control, and transmission of power by the use of pressurized liquids.

Hydrocarbon

A Hydrocarbon is an organic compound composed of hydrogen (H) and carbon (C) that makes up the majority of petroleum, natural gas and fuels. The Hydrocarbon consists of hundreds or thousands of individual atoms that are linked together in any number of ways, including chains, circles, and other complex shapes. The smallest hydrocarbon, methane (CH4), is composed of a single carbon atom and four hydrogen atoms. The Hydrocarbons are used as fuels, solvents, and as raw materials for numerous products such as dyes, pesticides, petroleum, and plastics. The Emission gases of hydrocarbons are a major cause of air pollution and global warming.

Engineering

- Energy

Hydropower (or **Hydroelectric** Power)

Hydropower (or Hydroelectric Power) is generated by the Technology gravitational force of falling or flowing water to create energy that can be captured and turned into electricity. The common type of hydroelectric power plant uses a dam on a river to store water in a reservoir. Water released from the reservoir flows through a turbine, spinning it, which in turn activates a generator to produce electricity. Most of the available locations for hydroelectric dams are already used in the developed world. ... (more about the Hydropower ...)

Related Definitions in the Project: The Renewable Energy

Hydrostatic Test (or Hydro Test)

A Hydrostatic Test (or Hydro Test) is a verification test for strength and leaks of the mechanical component and system after assembled, manufactured or erected piping and stationary equipment item or systems that will operate under desired conditions. The Hydrostatic Test is filling the vessel or pipe system with a liquid, usually water as the test medium and pressurisation of the vessel to the specified test pressure. The Hydrostatic Test is often required after shutdowns and repairs in order to validate under desired conditions once returned to service.

Quality Construction

Reference Definition by whatispiping.com: A hydrostatic test is performed by using water as the test medium, whereas a pneumatic test uses air, nitrogen, or any non-flammable and nontoxic gas. Pressure tests (both hydrostatic and pneumatic) must be performed under controlled conditions, following an approved test plan, and documented in a test record. A single approved test plan could be used for several similar tests, but for each test a separate test record is required.

Hygiene

Hygiene is a set of conditions or practices to maintaining health and preventing disease, especially in order to prevent illness or the spread of diseases through cleanliness.

HSE

Reference Definition by WHO: Hygiene refers to conditions and practices that help to maintain health and prevent the spread of diseases. Medical hygiene therefore includes a specific set of practices associated with this preservation of health, for example environmental cleaning, sterilization of equipment, hand hygiene, water and sanitation and safe disposal of medical waste.

I/O (In/ Out) List

An I/O (In/ Out) List is a document containing list of instrumentation that is the communication between the information processing systems; Inputs are the signals or data received by the system and outputs are the signals or data sent from it. The I/O List is used to describe any program, operation or device that transfers data to or from a computer or other device.

Engineering

Reference Definition by InstrumentationPotal.com: An I/O (In/Out) List is a document containing list of instrumentation which serve as an input or output of control system. Therefore, only the tag number that physically has a cable which connects to the control system appears on I/O List.

ICT (Information and Communication Technology)

An Information and Communication Technology (ICT) is an extended term for information technology (IT) which is all use of digital technology for information handling by an individual, business and organisation. The ICT covers any product that generates information, stores, retrieves, manipulates, transmits or receives information electronically in a digital form, communicates them with public, and information security, etc. (e.g. personal computers, digital television, email, mobile phone, SNS, etc.)

WORD	DEFINITION	CATEGORY
Ideal Gas	An Ideal Gas is a theoretical gas that is defined as all collisions between atoms or molecules are perfectly elastic, molecules occupy negligible space and no intermolecular attractive forces. The Ideal Gas follows the ideal gas law, which is the relationship described by the equation PV = nRT where, P is pressure, V is volume, n is the number of moles of an ideal gas, R is the ideal gas constant (0.082057), and T is the temperature. One mole of an ideal gas has a volume of 22.4 litres at the standard temperature and pressure (STP).	Substance
Identification and Prioritization	Identification and Prioritization is a framework process from problem solving work process that consists of 1) set of goals and objectives; 2) identify, assess and prioritise the problems; 3) any options generated should address these identified problems.	Management
	Reference Definition by AIChE: Identification and Prioritization consists of 1) cataloguing the hazardous materials and modes of transportation; 2) identifying sensitive areas and potential points of failure along the transit route, and 3) understanding interactions with other stakeholders in the supply chain. This process enables the identification of shipments that may require special attention, including escalating issues/scenarios for more detailed risk analysis.	
Idle Time (Task Idle Time)	Idle Time (Task Idle Time) means a non-productive period in the duration of a task due to management or as a result of factors beyond their control.	Controls
IFA (Issued for Approval)	Issued for Approval (IFA) means that documents or drawings are issued for client or delegated authorised person/ organisation to review and approval to use of them for further developments or activities. (e.g. Project Critical Document including P&ID, Plot Plan, etc.) Related Definitions in the Project: The Document Review and Approval	Engineering
IFC (Indirect Field Cost)	Indirect Field Cost (IFC) is the cost other than direct field costs (DFC) that is not become a permanent part of the project but are required for the completion of the work. The IFC include but not limited to field office administration, direct management and supervision, temporary facilities, construction equipment and small tools, start-up costs, insurances and taxes etc. Related Cost in the Project: The Project Cost	Controls
IFH (Issued for HAZOP)	Issued for HAZOP (IFH) means that drawings (P&IDs) and documents are issued for the HAZOP review. Related Definitions in the Project: The Document Review and Approval	Engineering

WORD	DEFINITION	CATEGORY
Imperial Unit	The Imperial Unit is a measurement system of the weight, length, area, and volume that is originally developed in England. (e.g. Length: inches, feet, yards; Area: square feet, acres; Weight: pounds, ounces; Volume: fluid ounces, gallons, pint, etc.) The Imperial Unit System has been replacing by the Metric System in most countries including England, however some imperial units and United States customary units are still used in the United Kingdom, Canada, United States and other countries formerly part of the British Empire.	Engineering
Incentive Contract	An Incentive Contract is one of the contract types that is an owner to make a additional compensation to a contractor based on the contractor's execution performance of cost, schedule, quality, and safety according to the contract terms and conditions. There is two possible incentive contracts, fixed price incentive contracts, and cost reimbursement incentive contracts. Fixed price incentive contracts is preferred when contract costs and performance requirements are reasonably certain. Related Definitions in the Project: The Project Contract	Business Management
Incident Investigation	Incident Investigation is a systematic approach for determining the causes of an incident and developing recommendations that is the account and analysis of an incident based on information gathered by a thorough examination of all contributing factors and causes involved.	HSE
Income	An Income is the earned money from doing work or received from investments that is an excess of revenue over all production cost and expenses in a particular period of time, annual tax accounting period. (Refer to the Profit) Related Definition in the Project: The Project Cost	Controls
Incoterms	The Incoterms are the international commercial terms made by the International Chamber of Commerce (ICC) that is used in international commercial trading or procurement processes. The last revision (1999) is named INCOTERMS 2000, and a new revision of Incoterms, to be called Incoterms 2020. (e.g. Ex-Work; FOB (Free on Board); FAS (Free Alongside Ship); C&F (Cost & Freight); CIF (Cost, Insurance & Freight); DAP (Delivered At Place (named place of destination)), etc.) Related Definitions in the Project: The Procurement	Procurement
Indemnity	An Indemnity is a protection against possible damage or loss, and is a promise by a third party to pay a debt owed, or repay a loss caused, by another party.	Management

WORD **DEFINITION CATEGORY Independent Power** An Independent Power Plant (IPP) is an electric power Business -Plant (IPP) generation plant constructed and operated by independently of Marketing the independent power produced (IPP) that is not owned by the Management national electricity company. The producing electricity by the Independent Power Plant (IPP) which is not a public utility but which makes electric energy available for sale to the third party such as an industrial complex and/or the general public through electricity arid. Related Definitions: Independent Power Producer (IPP), Power Purchase Agreements (PPA) **Index Linked** Index linked Instruments are designed to help protect investors **Business** Instrument from uncertainties in advance that is the indexation mechanism links the future values when the values of the indicators are known at the time of redemption. The Indexed Instruments include an interest rate, the consumer price index, a stock exchange index, a commodity price, an exchange rate, etc. can potentially provide protection from these instruments' effects. **Indirect Cost** Indirect Cost is any cost which is not directly involved in a Controls specific task or project, and can not be accurately attributed to a specific cost centre. The Indirect Cost is the costs of services and materials required in support of the project or business effort that do not contribute directly to the permanent facility. Main indirect cost of project is the company overhead (operating expenses) and profit. (Opposite of the Direct Cost) Related Cost in the Project: The Project Cost **Indirect Tax** An Indirect Tax is a type of tax that is the taxes on products, **Business** levied on goods and services rather than on income or profits, and that can be passed to other organisation by increasing the prices of the goods or services. (e.g. customs duty, VAT, etc.) Reference Definition by OECDE: As traditionally understood, indirect taxes are taxes that supposedly can be passed on, in whole or in part, to other institutional units by increasing the prices of the goods or services sold. (e.g. taxes on products) **Industry Standard** An Industry Standard is a set of criteria within a particular Management industry or business that is the minimal accepted requirements followed by the members of industry or business. Information Information Classification is the information sensitivity in Management Classification business that is all company responsible information from other parties for the project or business as: unclassified public information: client confidential information: company confidential information; proprietary information, etc. Related Definition in the Project: The Document Review and Approval

Information Management (IM)

Information Management (IM) is a systematic organisational work process for the information lifecycle: acquisition or (generation). collection organising and distribution (communication, distribution matrix), storing or archiving (numbering and filing system) and disposal (information (document) retention policy). Each information needs to be assigned a responsible person to develop correct information before released, and distributed to the right person or organisation, who should have it to support further progress and making right decision. The IM includes information storage or archiving to assure an accessibility for all relevant organisation, location and time depending on information confidentiality requirement, and security requirement (IP). The IM performs in accordance with the company information management policy and the project information (document) management and control procedures.

Management

Information Technology (IT)

Information Technology (IT) is a set of tools, processes, and methodologies used for the computing technologies, such as networking, hardware, software, the Internet, or the people that work with these technologies as well as other information distribution technologies such as television and telephones. The IT industry includes a computer hardware, software, electronics, semiconductors, internet, telecom equipment, engineering, healthcare, e-commerce, computer services, and also office automation, multimedia, and telecommunications.

Reference Definition by Wikipedia: Information technology (IT)

Engineering

is the application of computers and internet to store, retrieve, transmit, and manipulate data, or information, often in the context of a business or other enterprise. IT is considered a subset of information and communications technology (ICT).

Infrastructure

The Infrastructure is a fundamental supporting facility that is the system of public works in a country, state or region, such as roads, telecommunication, water supply, effluent treatment, electrical grid, and public institutions including emergency response organisations, etc.

Engineering

Inquiry

Inquiry is 1) a process of asking that has the aim of augmenting knowledge to solve a problem; 2) a bid document (normally, non-technical bid document) developed and sent by a buyer to supplier candidates (bidder list) of goods or services including a general item description and quantity, and terms and conditions, etc. (Refer to the Request For Quotation (RFQ)) Related Definitions in the Project: The Procurement

Procurement

Inrush Current (or Starting Current)

Inrush Current (or Starting Current) is the current that is required to energize an electrical equipment device when first applying voltage that can be several times greater than the motor's rated current. The Inrush Current is required to the starting torque by the mechanical strength of the shafts and other parts of the driven mechanism or to achieve the smooth start required by certain production processes. This arises due to the high initial currents required to charge the capacitors and inductors or transformers.

Engineering

Inspection

Inspection is the act of measuring proces carefully involving examining, gauging, and testing materials, equipment, or activity in accordance with the procedures and specifications to ensure its conformance with specific requirements. This may be performed visually or with special tools or equipment.

Quality

Reference Definition by Aiche.org: Inspection is a work activity designed to determine if ongoing work activities associated with operating and maintaining a facility comply with an established standard. Inspections normally provide immediate feedback to the persons in charge of the ongoing activities, but normally do not examine the management systems that help ensure that policies and procedures are followed.

Installation Drawing

An Installation Drawing provides information for properly positioning and installing items relative to their supporting structure and adjacent items that defines information needed by the tradesmen on site to install the works including dimensional data, hardware descriptions, general configuration information, etc.

Engineering

Instrument

An Instrument is a device used for measuring operation conditions of machine, process, media such as pressure, temperature, component and other required information.

Engineering

Instrument Data Sheet (Datasheet)

An Instrument Data Sheet (Datasheet) is a document summarising the performance and other technical characteristics of an instrument developed to enable the Instrument engineers to prepare documentation required for inquiry and purchase of instruments. The Instrument Data Sheet includes the operating and design process conditions and measurement range for each process level component (level gauge, level transmitter, level switch etc.) that the vendors can specify and size the instrument required. The physical properties of the fluids must be established in the process datasheet.

Engineering

Reference Definition by Instrumentationportal.com: Instrument Data Sheet is a document containing specification and information of an instrument device. It specifies general information of instrument such as tag number identification, service description, location (line number/equipment number), P&ID number or drawing number reference, process data (if applicable), calibrated range (if applicable), material, performance details (such as accuracy, linearity – if applicable), hazardous certification (for electrical device), accessories required, etc. The details of information in data sheet may differ among each types of instrument such as transmitter, switch, gauge, control valves.

Instrument Index

An Instrument Index is the control systems and instrumentation group document that includes description and complete listing by tag numbers, installation and procurement information as well as loop drawing number and field installation details. The Instrument Index is maintained for the life of the facility for the recording and control of all documents and records pertaining to the loops and their instrumentation and functions. An Instrument Index is a deliverable of the Detailed Engineering developed by Instrumentation and Controls discipline. (Refer to the Detailed Engineering Deliverable List (Typical))

Engineering

Reference Definition by Instrumentationportal.com: Instrument index is a document containing list of instrument devices within a plant. Instrument index shall include tag number of all physical instruments (e.g. field instrument, physical alarm and indicator) and pseudo instruments which commonly named "soft tag" (e.g. DCS indication, alarm, controller). Instrument index shall be created at the beginning of project and considered as a live document which should be kept updated even though the plant has been operated. Instrument index shall be revised if there is any plant or system modification which impact to additional, removal, or resetting of instrument. In instrument index document, the following information should be stated but not limited to: Tag number/ Loop Number/ Type of Instrument/ Location/ Service description/ P&ID Number/ Line number or equipment number/ I/O Type/ Control System/ Range or set point along with engineering unit used/ Applicable reference Document (Instrument Data Sheet Number, Hook-up Drawing Number, Instrument Layout Number, Loop Drawing Number)/ Package Number/ Manufacturer/ Model Number.

Instrumentation Engineering

Instrumentation Engineering is a specialised branch of control system, electrical and electronic engineering that focuses on the measurement, control and automation of processes. In scientific terms, instrumentation is defined as the art and science of measurement and control of process variables within a production, or manufacturing area.

Related Definitions in the Project: The Engineering

Engineering

Insulation

Insulation is the process of keeping heat, sound, or electricity from spreading that is a material or substance used to prevent, slow down or stop heat, electricity, or sound from going into or out of objects. The Insulation types are thermal (Hot and Cold) and Acoustic insulation.

Engineering

Insurance Spare

An Insurance Spare is a type of spare parts identified through a Failure Modes and Effects Analysis (FMEA) that determines the probability of failure (POF) through normal operation and a scheduled Preventive Maintenance (PM) program. The Insurance Spare is a super critical item and needs to be available at any time that may be identified in the company insurance spare parts policies.

Operation

Integrated
Gasification
Combined Cycle
(IGCC)

Integrated Gasification Combined Cycle (IGCC) is a electric power plant generating electricity from coal and other low grade hydrocarbons by gasifying technology. The IGCC uses a high pressure gasifier to turn coal and other carbon based fuels into pressurized gas then remove impurities from the syngas prior to the power generation cycle in which a gas turbine generator generates electricity and the waste heat is used to make steam to generate additional electricity via a steam turbine.

Reference Definition by Greenfacts.org: Integrated Gasification Combined Cycle (IGCC) is a power plant using gas produced from high-sulphur coal, heavy petroleum residues or biomass. IGCC is an advanced power generation technology which allows to reduce emissions of NOx, SO2, and particulate matter and improve fuel efficiency of coal. It is a combination of two technologies. Coal gasification, which uses coal to create a clean-burning gas (syngas). Combined-cycle, which is the most efficient method of producing electricity from gas commercially available today (a gas turbine generator generates electricity and the waste heat is used to make steam to generate

Engineering

Integration Management (Project Integration

Integration Management is to create better performance or more effective results combining and coordinating two or more functions. The Integration Management work process is to identify relevant effect elements, combine or coordinate or develop alternatives.

The Project Integration management includes process technology integration; risk, schedule and cost controls integration; internal and external organizational integration; inter disciplinary integration (e.g. process, control systems, electrical control systems, telecommunication systems and

additional electricity via a steam turbine).

rotating equipment control systems).

Management

Intelligent P&ID (Process and Instrumentation Diagram)

Management)

The Intelligent P&ID is a graphical represented 2D P&ID (Process and Instrumentation Diagram) that is generated and developed from a single data source for the entire project for all disciplines including safety and quality related information. The Intelligent P&ID can be developed and maintained a consistent set of all disciplines' design documents, and produced deliverable efficiently, and systematic handover to client at the project completion. (e.g. Intergraph Smart® P&ID)

Engineering

Interface Control Drawing (ICD)

An Interface Control Drawing (ICD) is a record of all interface information of physical and functional interfaces that specifies the interface requirements the participating systems must meet at a common boundary. The Interface Control Drawing provides the coordinate and control interfaces between related systems including mechanical, electrical, hydraulic, configuration, installation, operational sequence requirements, etc.

Engineering

Interface Management

Interface Management is the activities of defining, controlling, and communicating the information needed at the common boundary where direct contact between two different cultures, devices, entities, environments, systems, etc., when working with multiple contractors, subcontractors, and clients. Implementing an interface management process on a project streamlines communication, identifies critical interfaces, and monitors ongoing work progress while mitigating risks. The Project Interfaces are connection points between parties or elements. Within the context of Interface Management, all entities are working towards a common, agreed-upon goal, which is completion of the Project. As more individuals and

contractors work together, there is an increasing chance for miscommunication, lack of communication, or the inability to stay within scope, budget and schedule. Proactive Interface Management will deliver lower risk and leads to project Management

Interface Management System

success.

An Interface Management System is a systematic methodology enlisted when working with multiple contractors, subcontractors, and clients that incorporates the work processes, the people, and the tools to deliver effective interface management to projects. The Interface Management System is to identify interface, to resolve issues between parties, and to avoid ambiguity and divergence among the project participants by define the detailed scope of work; identify the distribution of the work; establish the exchange of information; create formal interface agreements; track each interface issue to resolution in real time through an online management system.

Management

International Labour Standard

International Labour Standards are the legal requirements specified by the ILO's constituents that is the basic principles and rights at work for governments, employers and employers. The International Labour Standards include respect for fundamental human rights; protection of wages; employment security; working conditions; labour market and social policies; industrial relations, etc.

Management Business

Reference Definition by ILO: International Labour Standards are legal instruments drawn up by the ILO's constituents (governments, employers and workers) and setting out basic principles and rights at work. They are either conventions, which are legally binding international treaties that may be ratified by member states, or recommendations, which serve as non-binding guidelines. In many cases, a convention lays down the basic principles to be implemented by ratifying countries, while a related recommendation supplements the convention by providing more detailed guidelines on how it could be applied. Recommendations can also be autonomous, i.e. not linked to any convention.

Investment Appraisal (or Capital Budgeting)

Investment Appraisal (or Capital Budgeting) is the decision making process for investing in long-term assets that is to determine and evaluate potential significant in amount of expenses or investments. The Investment Appraisal is usually involving the calculation of each project's or asset's future profit by period, the present value (PV) of the cash flows, pay back the initial cash investment, an assessment of risk, and other factors. The formal method of Investment Appraisal techniques: Net Present Value (NPV); Internal Rate of Return (IRR); Profitability Index (PI); Payback Period, etc. Related Definitions in the Project: The Economic Review

Business Management

IP (Intellectual Property)

Intellectual Property (IP) is the intangible creations of the human intellect that is a collection of ideas and concepts. The IP types are copyrights, patents, trademarks, and trade secrets. A copyright applies to a written document; a patent applies to a specific product design; and a trademark to a name, phrase or symbol.

Management Business

Reference Definition by WIPO: Intellectual Property (IP) refers to creations of the mind, such as inventions; literary and artistic works; designs; and symbols, names and images used in commerce. The IP is protected in law by, for example, patents, copyright and trademarks, which enable people to earn recognition or financial benefit from what they invent or create. By striking the right balance between the interests of innovators and the wider public interest, the IP system aims to foster an environment in which creativity and innovation can flourish.

IRR (Internal Rate of Return)

The Internal Rate of Return (IRR) is the one of the two discounted cash flow (DCF) techniques (the other is net present value or NPV) that is a rate of return used in the capital budgeting to measure and compare the profitability of investments.

Business

Related Definitions in the Project: The Economic Reviews

Reference Definition by Investopedia: The Internal Rate of Return (IRR) is a metric used in capital budgeting measuring the profitability of potential investments. Internal rate of return is a discount rate that makes the net present value (NPV) of all cash flows from a particular project equal to zero. IRR calculations rely on the same formula as NPV does

Irrevocable Letter of Credit (L/C)

An Irrevocable Letter of Credit (L/C) (or Irrevocable Credit) means that the issuing bank cannot cancel or amend without the beneficiary's prior written approval, its obligation to pay the credit provided the conditions included in the Letter of Credit (L/C) document are met within a specified time frame.

Procurement

WORD **DEFINITION CATEGORY** ISO (International The International Organization for Standardization (ISO) is an Quality **Organisation for** independent, non-governmental membership organization and Standardisation) the world's largest developer of voluntary International Standards, and develops and publishes International Standards (Source: www.iso.org/). ISO 9000 Quality management ISO 14000 Environmental management ISO 3166 Country codes ISO 26000 Social responsibility ISO 50001 Energy management ISO 31000 Risk management ISO 22000 Food safety management ISO 27001 Information security management ISO 45001 Occupational health and safety Isometric (ISO) An Isometric (ISO) Drawing is showing each pipe line details by Engineering **Drawing** at least one isometric. The ISO Drawing does not be to scale but should show all material, size, weld, and fitting information to represent a 2-dimensional view of a 3-dimensional piping system. The Isometric includes all pipe lengths and all necessary datum identifying the pipe location in the region where it is to be installed. The Isometric is the pipe manufacturing and construction drawing and includes a part list identifying all component parts of the pipe being detailed (Piping Bill of Material). Isometric Drawings for 2" and above pipe-work above and below ground is a deliverable of the Detailed Engineering developed by Piping & Layout discipline. (Refer to the Detailed Engineering Deliverable List (Typical)) ITB (Invitation to An Invitation to Bid (ITB) is a formal competitive solicitation that Management Bid) invites the prospective suppliers to submit a bid on materials or services through an advertising public opening at the time and date. The responses of ITB (bid or proposal document) are evaluated and awarded to the responsive, responsible bidder with the price. In general, when using this solicitation, price as well as specification requests are major considerations in the award process, and the evaluation results are published. ITP (Inspection and An Inspection and Test Plan (ITP) is the inspections and testing **Procurement** Test Plan) plans and procedures document which is used in manufacturing Quality shops for procured equipment and material. The ITP working process starts with an agreement between the purchaser and manufacturer. The manufacturer provides the inspection and test plan and procedures to the purchaser, which explains the equipment specification and related information such as cost and schedule impact. Before the start of manufacturing, the purchaser must provide an acceptance of the Inspection and

Test Plan (ITP) to the manufacturer.

WORD	DEFINITION	CATEGORY
Job Description	A Job Description is a document or written statement of a set of tasks or activities to be performed by an individual which is an employee's authority and responsibilities in the job including general tasks, or functions, responsibilities of a position, and to whom the position reports, specifications such as the qualifications or skills needed by the person in the job, and a salary range. The Job Description also lists the formal training, education, certification, licenses or work experience that qualifies an applicant for a position.	Management
Joint and Several Liability	Joint and Several Liability means that each of the people or organisation (joint partners) has a responsible liability together and in separation liability. The liability for default is under all participants as a group organisation (joint), or each person or partner as an individual has the entire contractual liability to be selected by the creditor.	Management
JV (Joint Venture)	A Joint Venture (JV) is a new business agreement with two or more parties to do a particular business or project with pooling resource operation. The other type of JV formation is such as JV limited by guarantee, joint ventures limited by guarantee with partners holding shares.	Management Business
Key Risk Indicator (KRI)	A Key Risk Indicator (KRI) is a metric for measuring the risks to help monitor the level of risk taking in an activity or an organisation that is the likelihood in the probability of an event and its consequence will exceed the organisation's ability to be successful. The KRI informs an early warning to identify potential event that may harm continuity of the project that is a natural way of the operational risk capital. (Refer to the Advanced Measurement Approach (AMA))	Management
Kick-Off (K/O) Meeting	The Kick-Off (K/O) Meeting is the first meeting with the project team and client of the project including the high-level project stakeholders such as the project sponsor, management, and project manager, as well as the key team members. The K/O Meeting provides the interested parties to discuss a plan or strategy and other base elements in the project (e.g. schedule, specifications, status reporting, etc.) before commencing the project. This meeting introduces the members of the project and provides a project manager the opportunity to define the common goal and the purpose of completing the project and as well build a consensus.	Management

KM (Knowledge Management)

Knowledge Management (KM) is the systematic process of an organisation's knowledge and information assets management that involves activities related to the gathering, using and sharing of knowledge within internal and external organisation. The KM consists of the initiatives (seeking external knowledge for gaining new knowledge), processes (refinement and creation of knowledge), strategies (using knowledge and evaluating value), and systems (storage, assessment, sharing, and developing the best knowledge).

Reference Definition by OECD: Knowledge management involves activities related to the capture, use and sharing of knowledge by the organisation. It involves the management both of external linkages and of knowledge flows within the enterprise, including methods and procedures for seeking external knowledge and for establishing closer relationships with other enterprises (suppliers, competitors), customers or research institutions. In addition to practices for gaining new knowledge, knowledge management involves methods for sharing and using knowledge, including establishing value systems for sharing knowledge and practices for codifying routines.

Know-how (or Knowhow)

Know-how (or Knowhow) is the practical knowledge, experience, and ability on how to accomplish that is the ability to produce a product with productive capability. The Know-how refers to productive knowledge that goes into making products faster by diversifying the productive knowledge and make a wider variety of products of increasing complexity, but the knowledge that is the slowest to transfer by requiring time-intensive processes of imitation and repetition.

Reference Definition by Wikipedia: Know-how (or knowhow) is a term for practical knowledge on how to accomplish something, as opposed to "know-what" (facts), "know-why" (science), or "know-who" (communication). Know-how is often tacit knowledge, which means that it is difficult to transfer to another person by means of writing it down or verbalising it. Dubickis and Gaile-Sarkane (2017) states that the performance of know-how transfer is affected by accuracy of the stated aim, applied teaching, learning and assessment methods and both internal and external environment characteristics of the stakeholders involved in the process. The opposite of tacit knowledge is explicit knowledge.

Management

KPI (Key Performance Indicator)

A Key Performance Indicator (KPI) is a type of performance measurement that is a measurable value. The KPI evaluates how effectively a company or organisation executes its strategic vision and achieves key business objectives. The KPI shows the progress toward realizing the organisation's objectives or strategic plans by monitoring activities.

Management

Reference Definition by Wikipedia: A performance indicator or key performance indicator (KPI) is a type of performance measurement. KPIs evaluate the success of an organization or of a particular activity in which it engages. Often success is simply the repeated, periodic achievement of some levels of operational goal. (e.g. zero defects, 10/10 customer satisfaction, etc.)

L/C (Letter of Credit)

A Letter of Credit (L/C) is a written commitment document to Procurement guarantee payment by a buyer's bank (Issuing Bank) to a seller (Beneficiary or Negotiating bank) who will receive payment subject to production and delivery conditions are met as defined in the L/C documents.

The most common L/C Documents are Bill of Lading (B/L, BOL), Commercial Invoice, Certificate of Origin and Insurance Policy.

Types of Letter of Credit (L/C) are Standby Letter of Credit (L/C), Irrevocable Letter of Credit (L/C), Revocable Letter of Credit (L/C), Unconfirmed, Confirmed and Transferable L/C.

Labour (Labor) Cost

Labour (Labor) Cost is the cost incurred by the employer in the employment of labour that is the amount of employee wages and benefits, plus payroll taxes paid by an employer. The Labour Cost is broken into direct and indirect costs.

Controls Management

For the purpose of labour cost statistics, the ILO defined as the statistics concept of labour cost comprises remuneration for work performed, payments in respect of time paid for but not worked, bonuses and gratuities, the cost of food, drink and other payments in kind, cost of workers' housing borne by employers, employers' social security expenditures, cost to the employer for vocational training, welfare services and miscellaneous items, such as transport of workers, work clothes and recruitment, together with taxes regarded as labour cost.

Labour Price Index (LPI)

The Labour Price Index (LPI) measures change in the price of labour services resulting from market pressures. (Refer to the Consumer Price Index (CPI); Producer Price Index (PPI))

Business Management

Reference Definition by the United States Bureau of Labour Statistics (BLS): A Labour Price Index (LPI) is defined as a labour price index (their Employment Cost Index) designed to measure changes in the hourly compensation of a fixed "basket of jobs". In that sense LPIs are similar to other price indices such as the consumer price index (CPI) which measures the price changes in a fixed basket of consumer goods. The focus of an LPI is to measure changes in the price of labour, defined as compensation per employee hour worked.

WORD	DEFINITION	CATEGORY
Lag	A Lag is a duration of a logical relationship between one activity and another activity.	Controls
Laws of Thermodynamics	The Laws of Thermodynamics describe the relationships between thermal energy, or heat, and other forms of energy, and how energy affects matter that defines fundamental physical quantities (temperature, energy, and entropy), and characterize thermodynamic systems at thermal equilibrium. There are four laws of thermodynamics are: Zeroth, First, Second and Third Law of Thermodynamics.	Science
Laydown Area	A Laydown Area is a space of ground or pavement located near or at the construction site that is for the receipt, storage and partial assembly of the project equipment and materials to be installed or constructed.	Construction
Layout Drawing	A Layout Drawing is a graphical statement of the overall form of a component or device that is similar to a detail, assembly, or installation drawing. The Layout Drawing provides the design solution used in preparing other engineering drawings.	Engineering
Leadership (Management) Type	Leadership (Management) Types can be defined as 1) Autocratic: controlled by one leader who has total power, made all the decisions with very little inputs from other term members; 2) Paternalistic: makes decisions after consult team members over issues and listen to their feedback or opinions; 3) Democratic: team members take a more participative role in the decision-making process; 4) Laissez Faire: leaders are handsoff and allow group members to make the decisions based on trust that leads to the lowest productivity. Leadership (Management) Types has been a gradual shift away from autocratic leadership in most business sectors.	Management
Lean Gas	Lean Gas is a gas that contains mainly methane (typically over 95%) and ethane, and few higher fractions. LNG (Liquefied Natural Gas) is liquefied Lean Gases. (Also, called as the Dry Gas. Opposite of the Rich Gas).	Substance
Lean Management	Lean Management is an approach to running an organisation to improve products, services, or processes by which customers do not pay for mistakes or waste but value. The Lean Management uses methods for eliminating factors that waste time, effort or money by analysing a business process and then revising it or cutting out any steps that do not create value for customers.	Management
	Reference Definition by Bizfluent.com: The origins of lean management, which is widely found throughout the business world, sprang from a simple concept. The core philosophy behind lean is that customers do not pay for mistakes or waste but value. As such, companies need to increase the value of their products or services in order to maximize profit. Lean management offers an opportunity to drive up value and promote continuous improvement.	

WORD	DEFINITION	CATEGORY
Legal Entity	A Legal Entity is an individual, association, corporation, partnership, proprietorship, or trust that has legal rights and responsibilities such as the capacity to make a contract or an agreement, and the capable of owning goods and assets, incurring liabilities and engaging in economic activities and transactions with others.	Business Management
Lessons Learned (LL)	Lessons Learned (LL) is knowledge or understanding gained by experience that may be positive, as in a successful test or mission, or negative, as in a mishap or failure. A Lesson must be significant in that it has a real or assumed impact on operations; valid in that is factually and technically correct; and applicable in that it identifies a specific design, process, or decision that reduces or eliminates the potential for failures and mishaps, or reinforces a positive result. Proved and validated Lessons Learned to be updated to the company plan and procedure. Related Definitions: The Lessons Learned (LL)	Management
Lethal Service	Lethal Service is the service utilizing of lethal substances which is the poisonous gases or liquids of such a nature that a very small amount of the gas or of the vapour of the liquid mixed or unmixed with air is dangerous to-life when inhaled. For purposes of this Division, this class includes substances of this nature which are stored under pressure or may generate a pressure if stored in a closed vessel. (ASME Boiler and Pressure Vessel Code, Section VIII, Div. I)	HSE Engineering
Letter of Indemnity (LOI)	A Letter of Indemnity (LOI) is a written undertaking document by a bank or insurance company who promises to act as a third party on behalf of the first party in a transaction or contract. This third party covers specific loss or damage arising a failure to act to the second party in the agreement caused by the first party. There are two different letters of indemnity: letters of indemnity for quantitative clauses and letters of indemnity for non-quantitative clauses. Also called as Indemnity bond or Bond of indemnity.	Business
Level of Effort (LOE)	Level of Effort (LOE) is a general or supportive nature of activities that defined as having no practicable measurable output or product such as general administrative, coordination, accounting, etc.	Management
	Reference Definition by Wikipedia: In project management, level of effort (LOE) is a support-type project activity that must be done to support other work activities or the entire project effort. It usually consists of short amounts of work that must be repeated periodically. Examples of such an activity may be project budget accounting, customer liaison, or oiling machinery during manufacturing.	

WORD **DEFINITION CATEGORY** Level of Schedule The Level of Schedules are a Project Master Schedule (Level Controls 1), Project Summary Schedule (Level 2), Control Level Schedule (Level 3) and Detailed Network Schedule (Level 4). and Reports Schedule (Level 5). The Master or Project Summary Schedule is one of the contract document, and the Control Level Schedule is a project baseline document. Related Definition: Project Schedule Life A Life Cycle (or Lifecycle) is a series of changes that a thing or Management Cycle (or Lifecycle) functional activity changes or grows through from the beginning of the life, production or system until death including reproduction. A Project Life Cycle means from the beginning of the project to the close-out activities that consists of initiation, planning, execution, monitoring and controlling, and close-out. **Life Science** Life Science is a branch of science involved in health, Engineering agriculture, medicine, and the pharmaceutical and food science industries. The Life Science includes biology, biochemistry, medicine, botany, cell biology, genetics, molecular biology, anthropology and sociology, etc. that deals with the structure and behaviour of living organisms and life processes. The Life Science industries are the fields of biotechnology, pharmaceuticals, biomedical technologies, life systems technologies, nutraceuticals, cosmeceuticals, food processing, environmental, biomedical devices, and organizations and institutions that devote the majority of their efforts in the various stages of research, development, technology transfer and commercialization. The Life Sciences are helpful in improving the quality and standard of life. **Limited Liability** Limited Liability is 1) a provision of the legal protection to a party **Business** that the financial liability is limited to a fixed sum; 2) applied to a contract having limited liability as a Limited Company. **Limited Liability** A Limited Liability Company (LLC) is a business structure or **Business** organisation that is operated and managed by members Company (LLC) (owners) with selective benefits of a corporation and a limited partnership (a newer type of business that is a blend between a sole proprietorship and a corporation.) The LLC members of the company are not personally liable for the company's debts or liabilities. The LLCs may be organised as not-for-profit, and a few types of businesses generally cannot be LLCs, such as banks and insurance companies. **Line Management** Line Management is the management of employees that clearly Management indicates the responsibilities and reporting structure throughout an organisation. A Line Manager is the person who is directly responsible for managing the work of employees in a company or business, and who is one level above that person. Reference Definition by Wikipedia: Line management refers to the management of employees who are directly involved in the production or delivery of products, goods and/or services. As the interface between an organisation and its front-line workforce, line management represents the lowest level of management within an organisational hierarchy (as distinct top/executive/senior management and management).

Liquidated Damages

Liquidated Damages are the predetermined amount of money that is the damages whose amount the parties designate during the performance of a contract for losses incurred party to collect as compensation upon the contract. The Liquidated Damages involve the exchange of money or the promise of performance have a liquidated damages stipulation. (e.g. late completion, lower performance, etc.)

Management

Reference Definition by Investopedia.com: Liquidated damages are presented in certain legal contracts as an estimate of otherwise intangible or hard-to-define losses to one of the parties. It is that provision allows for the payment of a specified sum should one of the parties be in breach of contract.

Liquidity

Liquidity is an availability of money to get into the business immediately, make the short term obligations, or can be converted into cash quickly without a significant loss in value.

Management

Litigation

Litigation is a legal action of case discussion by which process takes a case to a court of law so that a judgment can be made. The Litigation may lead to a full trial as a dispute resolution process. (Refer to the Dispute Resolution Process)

Management

LNG (Liquefied Natural Gas)

The Liquefied Natural Gas (LNG) is the liquid state composed predominantly of methane and contains minor quantities of ethane, propane, nitrogen, or other components normally found in natural gas. The LNG is compressed at moderate pressure (maximum transport pressure is set at around 25 kPa (4 psi)), but cooled to a temperature, around the boiling point of methane (-162°C) to remain liquid, and the volume of natural gas as liquid is 1/600th of its volume as gas.

Substance

Reference Definition by TxIng.com: Liquefied Natural Gas (LNG) is natural gas, predominantly methane, that has been cooled sufficiently to condense into a liquid. At atmospheric pressure, this happens at a temperature of –260° F (–161.5° C) using a simple refrigeration process. LNG is chemically equivalent to the gas that we safely use to generate electricity, heat our homes and cook our food. When natural gas is cooled into liquid phase, its volume shrinks by 600 times thereby making it easier to store and transport in specially designed ships. Once these ships reach their destination, LNG is warmed back to its gaseous phase and piped into the local gas pipeline grid in the same manner as locally produced gas. In the past 50 years, the LNG trade has grown to include over 40 countries either exporting or importing LNG. Some countries, such as Japan and Korea, depend on LNG for over 95% of their natural gas requirements and have been importing LNG safely for almost 50 years.

Load Analysis

Load Analysis is the verifying process of the system by assessing and quantifying the discrete components and comprise loads based on particular conditions. (Refer to the Electrical Load Analysis (ELA); Structural Load Analysis; Workload Analysis)

		ESSEIIliai
WORD	DEFINITION	CATEGORY
Load Current (A)	A Load Current (A) is the current required by the electrical device. The Load Current can be defined as 1) Full load current: the maximum current that an electrical machine can operate; 2) Rated Current: the current rated on the nameplate of an electrical machine; 3) Nominal Current: is generally mentioned in the specification documents that is normally the same value as the rated one; 4) No-Load Current: the value of the current required just to turn the motor shaft with nothing connected.	Engineering
Load Management	Load Management is the process of balancing the supply of electricity to influence the demand on a power source by adjusting or controlling the load rather than the power station output. The Load Management can be three categories: load clipping, load shifting, and valley filling.	Business
Local Content	Local Content is the amount of local people, material and services that is involved in the project or business when a foreign company makes products in a country. A minimum level of Local Content is sometimes a requirement under trade laws when giving foreign companies the right to manufacture in a particular place. Many oil and gas producing states are introducing requirements for a local content into their regulatory frameworks. These requirements aim to create jobs, promote enterprise development and accelerate the transfer of skills and technologies. The Local Content has therefore become a strategic issue for the oil and gas industry. (Opposite of the Foreign Content)	Management
Logistics Management	Logistics Management is a work process of the procurement management that is a part of the supply chain management including logistics planning, implementation, and control of the produced or procured items effectively and efficiently. The Logistic Management consist of the transportation for movements, warehouse management for storage, and information management such as related information from the point of origin to the point of end user; inbound and outbound movement; internal and external interfaces for the customs clearances to achieve the timely in its delivery with cost effective way and meeting the project or contract requirements. Related Definitions in the Project: The Procurement; The Logistics Management	Procurement

LOI (Letter of Intent)

A Letter of Intent (LOI) is an agreement document that outlines the general plans, deal, or confirms between two or more parties before a legal agreement is finalised. The LOI is not a contract and cannot be legally enforced but signifies a genuine interest in reaching the final agreement subject to due diligence, additional information, or fulfilment of certain conditions.

Management

Reference Definition by Businessdictionary.com: Letter of Intent (LOI) is an interim agreement that summarizes the main points of a proposed deal, or confirms that a certain course of action is going to be taken. Normally, it does not constitute a definitive contract but signifies a genuine interest in reaching the final agreement subject to due diligence, additional information, or fulfilment of certain conditions. The language used in writing a letter of intent is of vital importance, and determines whether it is only an expression of intent or an enforceable undertaking. Also called 'memorandum of understanding' or 'precontract

Look Ahead Schedule (Window Schedule) A Look Ahead Schedule (or Window Schedule) is shown present, previous and future time period on one window. There is 3 weeks for a weekly or 3 months for a monthly look ahead schedule.

Controls

Related Definitions in the Project: The Project Schedule

LOPA (Layers of Protection Analysis)

Layer of Protection Analysis (LOPA) is a risk assessment methodology for evaluating plant hazards and assessing risk method which provides a simplified balance between qualitative process hazard analysis (PHA) and consequences to provide an order of magnitude estimate of risk.

поп

Reference Definition by Aiche.org: Layers of Protection Analysis (LOPA) An approach that analyzes one incident scenario (cause-consequence pair) at a time, using predefined values for the initiating event frequency, independent protection layer failure probabilities, and consequence severity, in order to compare a scenario risk estimate to risk criteria for determining where additional risk reduction or more detailed analysis is needed. Scenarios are identified elsewhere, typically using a scenario-based hazard evaluation procedure such as a HAZOP Study.

Loss Event

A Loss Event is a circumstance that produces the loss and harm impacts from actual events and reflect the organisation's own experience. The Loss Event has the potential to be the most relevant basis for analysis and management response not only the current risks but also the management of future risks.

Reference Definition by Aiche.org: Loss Event is a point in time in an abnormal situation when an irreversible physical event occurs that has the potential for loss and harm impacts. Examples include release of a hazardous material, ignition of flammable vapours or ignitable dust cloud. overpressurization rupture of a tank or vessel. An incident might involve more than one loss event, such as a flammable liquid spill (first loss event) followed by ignition of a flash fire and pool fire (second loss event) that heats up an adjacent vessel and its contents to the point of rupture (third loss event). Generally

synonymous with hazardous event.

Loss Prevention

Loss Prevention is an elimination or reduction of hazardous conditions with the programme of preventing losses. The Loss Prevention is achieved through inspection and engineering efforts by internal and/or outside organisations including the insurer that is based on the concept of establishing policies. procedures and business practices to promote loss reduction opportunities identifying where losses can occur and specifically work to prevent losses rather than take remedial actions. The aim of Loss Prevention is to prevent any accident and reduce the risks of hazards in the workplace. It helps by saving lives preventing workers from operational risk exposure and avoiding unnecessary expenditure.

LSTK (Lump Sum Turnkey)

A Lump Sum Turnkey (LSTK) is a combination of Lump Sum (LS) contract and Turnkey (TK). A Lump Sum Contract is a contract under which an owner agrees to pay a specified contracted amount for completing work to a contractor, and the contractor is responsible for completing the project under the contractor's financial risk. Turnkey (TK) specifies that the scope of work includes start-up of the facility and achievement of the normal operation status under the contractor's responsibility.

LTA (Long Term Agreement)

A Long Term Agreement (LTA) is a type of the contracts that Management performs the work for another over an extended period of time, more than five years in duration. A Long Term Agreement is also deemed to be a comprehensive contract since there will never be a need for the parties to revise or renegotiate the contract as the future unfolds.

HSE

LTIFR (Lost Time Injury Frequency Rate)

The Lost Time Injury Frequency Rate (LTIFR) is the number of lost time injuries that occurred during the reporting period that gives a picture of how safe a workplace is for its workers. In many countries, the figure is typically calculated per 1,000,000 hours worked. The LTIFR is considered a lagging indicator, as the results are more meaningful when measured across a large group of workers.

Reference Definition by OSHA: Lost Time Injury Frequency Rate (LTIFR) is the rates are an occurrence of a Lost Time Injury over a period time per 1,000,000 or 100,000 or some other number of working hours in that period (200,000 working hours in the U.S).

Lump Sum

A Lump Sum is a price amount of an entire project or scope of work where no breakdown is given for individual items that is paid in one large amount on one occasion.

Related Definitions in the Project: The Project Contract

Lump Sum Contract

A Lump Sum Contract (known as a Fixed Price Contract) is a contract with a single lump sum price for all of the works, and the contractor is responsible for completing the project within the agreed fixed cost set forth in the contract. If the contractor completes the project under the fixed total cost, then the contractor makes additional profits from the project. The Lump Sum Contract is normally used in the construction industry to reduce the contract administration costs. The Lump Sum Contract is the most recognised agreement form on simple and small projects, and generally appropriate where the project is already well defined in scopes and responsibilities of both parties, and changes are unlikely therefore the owner must have sufficiently detailed and complete drawings and specifications, and construction documents at the time of the bid to allow the bidders to properly estimate the cost of labour and materials. The Lump Sum Contract can include incentives or benefits for early completion, or can also have penalties, called liquidated damages, for a late completion. Related Definitions in the Project: The Project Contract

M/C (Mechanical Completion)

A Mechanical Completion (M/C) is the final phase of Construction construction activities to verify the completeness of the constructed plant that each installed component conforms to or is fabricated, installed and tested in accordance with the project specifications and procedures after all mechanical works including pre-commissioning (PC) activities are completed. The M/C is one of the project key milestones when the M/C is achieved, owner (client) release the Mechanical Completion Certificate (MCC) and the plant is handed over for the commissioning and operation activities from the construction (normally EPC Contractor) to the plant operation group (normally owner organisation). Practically, some minor works can be transferred and performed during commissioning and operation which are not related safety and performance. Reference guide line is API 700 Plant Completion Checklist. Related Definitions in the Project: The Construction

1SE

Management

WORD	DEFINITION	CATEGORY
MAC (Main Automation Contractor)	A Main Automation Contractor (MAC) is a single responsible contractor for instrumentation, control, information, and safety aspects of the project who works as a partner with the end user and manages the plant automation solution. The MAC identifies all automation activities, develop an execution plan, obtain the best resources, select the best technologies, implements design and engineering, supplies programmes and hardware, and installs assembles in achieving the complete automation solution in an efficient and effective manner.	Engineering
Maintainability	Maintainability is the ease and speed of the system restoring to the normal operational status, to prevent unexpected working condition, to maximise a product's useful life, and to maximise efficiency, reliability, and safety operations. The Maintainability is the probability of performing a successful repair or replace using the prescribed practices and procedures for serviceability and reparability. This is similar to system reliability analysis except that the random variable of interest in maintainability analysis is time-to-repair rather than time-to-failure. Related Definitions in the Project: The Operation and Maintenance	Operation
Maintenance	Maintenance is the activities that performs equipment or facilities to minimize the possibility of damage or the lowering of performance quality because of corrosion, contamination, or deterioration for the continuous operation. Related Definitions in the Project: The Operation and Maintenance	Operation
Major Accident	Major Accident is an incident involving an explosion, fire, loss of well control, or release of oil, gas or dangerous substances, or an incident leading to serious damage to the installation or connected infrastructure, or any other incident leading to fatalities or serious injury, or serious danger to human health or the environment.	HSE
	Reference Definition by Hse.gov.uk: Major Accident is an occurrence (including in particular, a major emission, fire or explosion) resulting from uncontrolled developments in the course of the operation of any establishment and leading to serious danger to human health or the environment, immediate or delayed, inside or outside the establishment, and involving one or more dangerous substances.	
Major Incident	Major Incident is an event or situation, with a range of serious consequences, which requires special arrangements to be implemented by one or more emergency responder agencies, emergency services. (e.g. major fire, hazard material spill, etc.)	HSE

WORD **DEFINITION CATEGORY** Management Management

Management is an activity of the organisation and coordination of business in order to achieve defined objectives and goals that controls and manages resources (people, money, time, technology, procedure, etc.) efficiently and effectively. The Management includes to develop team objectives and goals, set up detailed execution plan and procedures, and coordinate with internal and external parties. Practice of modern management originates from the 16th century study of lowefficiency and failures of certain enterprises, conducted by the English statesman Sir Thomas More (1478-1535). The Management is also an academic discipline, a social science whose objective is to study social organisation.

Reference Definition by ISO: The term management refers to all the activities that are used to coordinate, direct, and control organizations. These activities include developing policies, setting objectives, and establishing processes to achieve these objectives. In this context, the term management does not refer to people.

Management A Management Commitment implies the direct participation by Commitment and critically important aspects such as safety, quality, the environment of continuous improvement belongs to all

Management the highest level management (top management) in all specific **Business** environment, security, etc., or programs of an organisation. It is important that the responsibility for leadership and for creating levels of management and members, but particularly to the highest.

Management Information System (MIS) is an automated Management **Information System** system of the processing of information designed to manage (MIS) and support managerial decisions within an organisation. The MIS uses computers and other intelligent devices and gather relevant data both from inside and outside an organisation.

> Management of Change (MOC) is a systematic approach to organisational changes that ensure safety, health, and environmental risks and hazards are properly controlled. The MOC provides the avoidance of the consequences of unforeseen that can affect processes, systems, people, or organisational structure through planning and coordinating the implementation of changes.

Reference Definition by Aiche.org: Management of Change is a management system to identify, review, and approve all modifications to equipment, procedures, raw materials, and processing conditions, other than replacement in kind, prior to implementation to help ensure that changes to processes are properly analysed (for example, for potential adverse impacts), documented, and communicated to employees affected.

Management Reserve (MR) is an amount of money included in Controls the total budget withheld by management group for future consideration of execution risks. It usually includes current contingency cost.

Management Management

Management Reserve (MR)

Management of

Change (MOC)

Management System

A Management System is a set of policies, practices, guidelines, processes and procedures for strategic planning and tactical implementation that is used in the development, deployment and execution of business and management activities. The Management System is to ensure that policies are followed and objectives are achieved, and can be extended the Quality Management System (QMS); Environmental Management System (EMS); Safety Management System (SMS); Energy Management System; Information Security Management System (ISMA), etc.

Management

Reference Definition by ISO: A Management System is a set of interrelated or interacting elements that organizations use to formulate policies and objectives and to establish the processes that are needed to ensure that policies are followed and objectives are achieved. These elements include structures, programs, procedures, practices, plans, rules, responsibilities, relationships, contracts, agreements. documents, records, methods, tools, techniques, technologies, and resources. There are many types of management systems: quality, environmental, financial, information security, business continuity, emergency, disaster, food safety, risk, and occupational health and safety management systems. The scope or focus of a management system could be restricted to a specific function or section of an organization or it could include the entire organization. It could even include a function that cuts across several organizations.

Marginal Cost

The Marginal Cost is the change in the total production cost that is the increase or decrease in the total cost of producing one additional unit of a product. The Marginal Cost is variable costs consisting of an estimated portion of fixed costs including direct variable labour and material costs.

Business

Reference Definition by Economicsonline.co.uk: Marginal Cost is the additional cost incurred in the production of one more unit of a good or service. It is derived from the variable cost of production, given that fixed costs do not change as output changes, hence no additional fixed cost is incurred in producing another unit of a good or service once production has already started. Marginal cost is significant in economic theory because a profit maximising firm will produce up to the point where marginal cost (MC) equals marginal revenue (MR).

WORD

CATEGORY

Marine Cargo Marine Cargo Insurance is the insurance of properties as they **Procurement** Insurance move from a point of origin to final destination. The Marine Cargo Insurance covers the loss of or damage to goods or cargoes while in sea or air as well as subsequent land transportations both domestic and international. (Refer to the Shipping Insurance) Related Definitions in the Project: The Logistics Management Reference Definition by Wikipedia: Marine insurance covers the loss or damage of ships, cargo, terminals, and any transport by which the property is transferred, acquired, or held between the points of origin and the final destination. Cargo insurance is the sub-branch of marine insurance, though Marine insurance also includes Onshore and Offshore exposed property, (container terminals, ports, oil platforms, pipelines), Hull, Marine Casualty, and Marine Liability. When goods are transported by mail or courier, shipping insurance is used instead. **Market Index** A Market Index is the overall performance measurement of the **Business** market and tracks of a group of companies, products, services, or goods that consists of weighted values of the components. The Market Index makes up certain list, and helps investors track changes in market values over long periods of time that needs to be investable and transparent. **Market Price** A Market Price is the actual price agreed upon by buyers and **Business** sellers in a given market. Marketing Marketing is the business ideas, brands, design, processes, **Business** and activities that involves finding out what customers want, and selling them effectively. The Marketing is measuring effectiveness, market research, learning customers' needs and the psychology of consumer behaviour, and how can add value through marketing activities for a successful business in the long term. Reference Definition by CIM (The Chartered Institute of Marketing): Marketing is the management process responsible identifying, anticipating and satisfying customer requirements profitably. **Mass Balance** Mass Balance (or Material Balance) is a specific input and Engineering output table that indicate the changes in mass occurring in an object, system, or component of a system over a particular period of time. (Refer to the Heat & Material Balance (H&MB)) **Mass Flow Diagram** A Mass Flow Diagram (MFD) is a simple block diagram which Engineering (MFD) identifies the mass flow of all matter through the process. Master Mark up A Master Mark up Drawing is a set of construction drawings that Engineering **Drawing** is maintained by the project manager, construction manager, or contractor to track design revisions during the course of construction. By the time the project is complete this set is the basis of as-built documentations.

DEFINITION

WORD **DEFINITION CATEGORY Master Schedule** A Master Schedule (or Level 1 Schedule or Management Level Controls (Level 1 Schedule) Schedule or Major Milestone Schedule or Report Schedule) is a simplest detailed project schedule that shows and highlights major project activities and milestones on an entire project calendar, and usually developed on the one page and used a bar chart or Gantt chart technique. Related Definitions in the Project: The Project Schedule **Material** A Material is a physical substance as a raw or component, a General part or assembled goods. The Material is purchased in quantity which are not uniquely identified for one specific use and are the same as many other items of the same materials and description. The Material is a part of, or incorporated into the finished facility. Related Definitions: Bulk Material **Material Breach** A Material Breach is a contract term which refers to a failure in Management the performance of a contract, significant enough substantial failure to give the affected party the right to sue for damages as well as release the aggrieved party (non-breaching party) from its obligations. The Material Breach is a major breach that is considered serious enough to need to formally write to the business requiring action to be taken to deal with the material breach (Notification of Contravention (NoC)). Material Handling Cost (or Material Related Cost, MRC) **Material Handling** Procurement consists of freight, insurance, custom clearance, etc. Cost Material Material Identification is the designation of the component of a Engineering product in words, symbols or numbers. The Material Identification Identification may be a trade name, chemical name or any other name a chemical is known by, also includes the name, address, and emergency telephone number of the distributing chemical company. (e.g. The name of a chemical is the Material Identification on MSDS system). The proper identification of a chemical allows an employee to get additional health hazard and safety information. Material Material Management is a systematic measuring and trending Management of bulk material quantities that improves forecasting and control Management of the cost associated with the purchase and installation of materials, and one of the critical items for the project success. The Material Management involves the quantity forecasting and supply of bulk material from BM take-off to construction installation including material handling. The Management within the procurement organisation is an

integrated effort between estimating, project controls, engineering disciplines, and construction including field

Related Definitions in the Project: The Procurement

material control.

WORD **DEFINITION CATEGORY Matrix Organisation** A Matrix Organisation (or Hybrid Organisation) is a general Management company's organisational structure in which the reporting **Hybrid Organisation)** process is set up as the dual relationships, the production team task force (project management) and functional the Project Management is management. Normally, responsible for the project profit and loss; relationship with client, and project operation and execution, and the functional management is responsible for the work qualities. Related Definitions in the Project: The Project Organisation **MCC (Motor Control** A Motor Control Centre (MCC) is an assembly of one or more Engineering Centre) and iMCC enclosed sections providing the motor controls and electrical - Electrical (Intelligent or distributions that is used in large commercial and industrial Integrated MCC) applications, and consists of variable frequency drives, programmable controllers, and metering. The Intelligent or Integrated MCC (iMCC) can be defined when the MCC includes: a computerised control system; network technology; enhanced diagnostic or protective functionality. **MEC (Main Electrical** A Main Electrical Contractor (MEC) is an electrical contractor Engineering Contractor) who provides a complete and integrated electrical system including the electrical system supply, installation, and commissioning as well supporting start-up operation. Mechanical A Mechanical Completion Certificate (MCC) is an owner's Construction acceptance certificate issued to a contractor when the Completion contractor completes or achieves the requirements of **Certificate (MCC)** Mechanical Completion (M/C) criteria in accordance of the contract. Related Definitions: Pre-commissioning (PC), Commissioning, Provisional Acceptance, RFSU (Ready for Start-up), Hand **Mechanical Data** A Mechanical Data Sheet is a basis of equipment purchasing Engineering and fabrication by vendor or manufacturer that is developed by Sheet the mechanical engineer after a process engineer initiated and provided the equipment process data sheets with other disciplines' information. The mechanical engineer uses the process data sheet and further develops mechanical details including equipment sizes and associated detail information for each equipment item, and detailed sized equipment list for other engineering disciplines to complete their detailed engineering and design (e.g. piping engineers used the

equipment list to create the plot plan and electrical engineers

Related Definitions: Data Sheet, Equipment List, Process Data

used it to design the electrical systems, etc.).

Sheet and Vendor Data Sheet

Essential WORD **DEFINITION CATEGORY** Mechanical Mechanical Engineering is an engineering discipline that Engineering applies principles of science, technology and industrial **Engineering** engineering practices for the mechanical design and engineering, focuses on machines, structures, devices, mechanical systems, and energy conversion systems. The Mechanical Engineer is responsible for the development of mechanical data sheets and bid evaluations, and involves the production, construction, operation and maintenance of machineries. Related Definitions in the Project: The Engineering Mechanical A Mechanical Schematic Diagram presents mechanical and Engineering other functional operation, structural loading, fluid circuitry, or **Schematic Diagram** other functions that contains design information, and is a tool for analysing complex systems used for the construction projects. The Mechanical Schematic Diagram is a set of detailed drawings used to determine the price of the project using appropriate standard symbols and connecting lines. Membership Membership Economy is replacing the ownership economy as **Business Economy** a subscription and community to build a loyalty and a long term connection to the business. Baxter states "There have always been organizations that leveraged principles of membership to build loyalty and recurring revenue but changes in technology have extended the infrastructure of trust, providing the opportunity for nearly any kind of business to join the Membership Economy.' Reference Definition by Robbiekellmanbaxter.com: Membership Economy shows how nimble companies that focus on ongoing, formal relationships over one-time transactions are thriving. By renting, lending, or offering access instead of just "ownership," organizations can leapfrog industry leaders. In terms of strategic business models, this is one that allows for breakthrough growth. With great case studies from American Express, LinkedIn, CrossFit, Salesforce.com, SurveyMonkey, and more, this book will show you how to radically rethink how your organization can build loyalty, viral growth, and recurring revenue. Memorandum of Memorandum of Intent (MOI) is the confirmation document of Management Intent (MOI) intent that is a halfway to the signing of a full contract and a kind of a Letter of Intent (LOI). The MOI is a legal status and a fairly brief document with the principal framework of the contract and expected that a full contract will be completed. Related Definition: Memorandum of Understanding (MoU); Heads of Agreement (HoA); Letter of Intent (LOI) **Metric System** A Metric System (more formally called the MKS (Metre, Engineering Kilogram, and Second) system) is a unit measurement system that measures length in metres; mass in kilograms; time in seconds, and capacity in litres, temperature in degrees Celsius.

> The Metric System is formally replaced by the very similar standard International System (SI) Units. (Refer to the CGS

Unit)

WORD	DEFINITION	CATEGORY
Midstream Business	Midstream Business in oil and gas industry, is the transportation by pipeline, rail, barge, oil tanker or truck, and storage that transports commodities such as crude oil, natural gas, natural gas liquids (NGLs, mainly ethane, propane and butane) and sulphur.	Business
Milestone	A Milestone is a major event or a critical activity of the project execution. The Milestone is a zero duration schedule event marking the due date for accomplishment of a specified work scope or objective. The Milestone may mark the start of interim step, or the end of one or more activities for major key issues, and a necessary of external review or approval for the following activity. In general, milestones do not impact project duration, but major progress achievement that must be met to achieve success, and sometimes milestone achievement is basis of the progress measurement and is linked to the payment schedule.	Management
Mishap	A Mishap is an unfortunate accident, or an unlucky event or accident that causes any person to be harmed, or in different circumstances, might have caused any person to be harmed. (Refer to the Near Miss)	HSE
Mission	A Mission is 1) an important assignment job given to a person or group of people of a company or an organisation that is trying to achieve through its plans or actions; 2) the divine activity of sending intermediaries that is expressed by the use of verbs meaning 'to send', normally with God as the expressed subject.	Management
Mitigation	Mitigation is a principle that makes something less harmful, unpleasant, or bad by the reasonable actions to minimize the amount of the loss suffered.	Management
MKS (Metre, Kilogramme, and Second) Unit	A MKS (Metre, Kilogramme, and Second) Unit is a physical metric system of units that expresses any given measurement using fundamental units of the Metre, Kilogramme, and Second (MKS). The MKS Unit system includes the Newton and Joule for the force and energy. (Refer to the Metric System, CGS (Centimetre, Gram and Second) Unit))	Engineering
Mobilisation (Mobilization)	Mobilisation (or Mobilization) is an act of mobilising that organise or prepare the required or planned resources including a group of people or tools and equipment, etc. for the specific purpose.	Management
Mobility	Mobility is the ability to move or be easily moved.	General
Modelling	Modelling is 1) the work of a fashion model in order to advertise them; 2) the work of making a simple description of physical, conceptual or mathematical simulations of the real world.	Construction
Moderator	A Moderator is a person (an arbitrator or mediator) or material which tries to help other things come to an agreement.	General

WORD	DEFINITION	CATEGORY
Modular	Modular means related module, or constructed with standardized units (modules) that applies pre-engineered, factory fabricated structures between 80 to 95% are completed at the factory and then delivered to the site for final assembly.	Construction
Modular Construction	Modular Construction is a construction technique in which all or a part of sections or facilities are prefabricated or assembled in one location and then transported to the site, placed in position, and connected. The modules are limited in size and weight only by handling capabilities such as fabrication yard, inland and ocean transportation, erection or installation capacity.	Construction
Modular Design	A Modular Design is an engineering technique that is a module design of a complete unit or plant divide into smaller sections (system or subsystem) with tie-in provisions. Related Definitions in the Project: The Modularisation (Modularization)	Engineering
Modularisation (or Modularization)	Modularisation (or Modularization) is for difficulties in a skilled labour mobilisation at the site or remote areas and significantly disadvantages in economics for a traditional stick built construction method, requires large number of labour, construction equipment and supporting infrastructures, modularisation method is applicable. Modules are self contained and operated with essential utility supply. Module design and Engineering is slightly different form a normal engineering, reinforcement of structures for transportations and minimize ground spaces are executed, modules are fabricated (pre-fabricated) or manufactured at the module shop yard, tested, pre-commissioned, preserved and transported to the site for installation and connection (tie-ins) to other module or existing facility to complete a unit or plant. Modularisation plan develops in the beginning of the project, and perform a module design and engineering, procurement and construction. Optimum Module Size and Inclusions are depend on a transportation ability for inland and ocean, module erection and handling capacity at the site, module fabrication yard capacity as well as ability of skilled labour mobilisation and level of direct cost at the site, and a severity of project such as project duration, quality, safety and environmental requirement. In general, a Modularization project is shorter project schedule, but cost is dependent. Related Definitions in the Project: The Modularisation (Modularization)	Management
Modularity	Modularity is a degree of the modular application that depends on the project, especially the location of the construction site. Related Definitions in the Project: The Modularisation (Modularization).	Construction

WORD	DEFINITION	CATEGORY
Module	A Module a set of separated parts from a complete unit or plant, or the self contained and operated with essential utility supply that is a transportable pre-assembly components of process plant designed to minimise site installation and commissioning activities, and labour costs. Module Types are pre-assembled unit (PAU), pre-assembled Rack (PAR), pre-assembled building (PAB), and vendor assembled unit (VAU) Related Definitions in the Project: The Modularisation (Modularization)	Management
Module Envelope Drawing	A Module Envelope Drawing is a modularisation plan drawing (module drawing index) shows individual breakdown modules that is the basic technical data and performance requirements for development or design selection of an each module. The Module Envelope Drawing is extended detail drawings, specifications, or vendor item control or source control drawings, etc.	Engineering
MOM (Minutes of Meeting)	MOM stands for a Minutes of Meeting. The Minutes means a written record of meetings.	Management
Monetary	Monetary means relating to the money in a country or to the mechanisms by which it is supplied to and circulates in the economy.	Controls
Monetary System	A Monetary System is the set of policies, frameworks, and institutions that is the system used by a country to provide money and to control the exchange of money. There are three common types of monetary systems: commodity money, commodity-based money, and fiat money which is a national currency that is not pegged to the price of a commodity such as gold or silver.	Business
	Reference Definition by OECD: Agri Monetary System is until the introduction of the single currency on 1 January 1999, intervention support prices and payments under the Common Agricultural Policy (CAP) were set in ECUs and then converted into each country's currency using special conversion rates called "green rates". These rates were usually different from those established under the European Monetary System (EMS) and from those of the EU member states which are not members of the EMS.	

WORD **DEFINITION CATEGORY Money Laundering** Money Laundering is the illegal process of concealing the Management origins of money that has been obtained illegally through banks and other businesses to make it seem as if the money has been obtained legally. Typically, the Money Laundering involves the conversion of cash-based proceeds into account-based forms of money. Reference Definition by Int-comp.org: Money Laundering is the generic term used to describe the process by which criminals disguise the original ownership and control of the proceeds of criminal conduct by making such proceeds appear to have derived from a legitimate source. The processes by which criminally derived property may be laundered are extensive. Though criminal money may be successfully laundered without the assistance of the financial sector, the reality is that hundreds of billions of dollars of criminally derived money is laundered through financial institutions, annually. The nature of the services and products offered by the financial services industry (namely managing, controlling and possessing money and property belonging to others) means that it is vulnerable to abuse by money launderers. Monitoring Monitoring is the assessment or observation of the actual Management performances and progresses comparing with baselines and plans, and evaluation of the actual status and performance to ensure the project goals and targets can be met. The Project Monitoring is to review the project reports, interview project members, examine quality and completeness of output. Monomer A Monomer is a single molecule that is obtained by refining Engineering petroleum, usually found naturally in oil or can be easily manufactured through simple chemical processes. The Monomer is capable of combining with a number of other molecules to form a polymer. A Monopoly is a company or organisation who is a single seller Monopoly **Business** in the market or has the complete control of the supply of particular goods or services. **Monte Carlo Risk** Monte Carlo Risk Analysis is an approach to performing risk Management **Analysis** analysis with uncertain input data to generate the range of outcomes with a confidence measure for each outcome on any project or business using the Monte Carlo Technique (Monte Carlo Analysis or Monte Carlo Method) and Monte Carlo Simulation method. **Monte Carlo** Monte Carlo Simulation (or Probability Simulation) is a Management Simulation (or statistical technique used to understand the impact of risk and uncertainty that uses in fields from particle physics to **Probability** engineering, finance, project management, cost, and other Simulation) forecasting models. (Refer to the Monte Carlo Technique

(Monte Carlo Analysis or Monte Carlo or Method))

Monte Carlo Technique (Monte Carlo Analysis or Monte Carlo Method) Monte Carlo Technique (Monte Carlo Analysis or Monte Carlo Method) is a simulation technique using random sampling of variables in the approximate evaluation to obtain numerical results: optimisation, numerical integration, and a probability distribution.

Management

Reference Definition by Quantmleap.com: Monte Carlo Analysis involves determining the impact of the identified risks by running simulations to identify the range of possible outcomes for a number of scenarios. A random sampling is performed by using uncertain risk variable inputs to generate the range of outcomes with a confidence measure for each outcome. This is typically done by establishing a mathematical model and then running simulations using this model to estimate the impact of project risks. This technique helps in forecasting the likely outcome of an event and thereby helps in making informed project decisions.

Monument

A Monument is a structure or building (e.g. statue, etc.) that is the base point or honours a person or event.

General

Moral Hazard

Moral Hazard describes behaviour when a situation in which one party gets involved in a risky event knowing that it is protected against the risk and the other party will incur the cost because some people might ignore the moral implications of their decisions instead of doing what is right. The concept of moral hazard comes from the insurance industry who is a way to transfer risk to somebody else.

Business

Motivation

Motivation is a process of stimulating member's actions to continually interest and commit to make a best effort to accomplish the goals. The Motivation can be created or encouraged by sharing reasons and goals; compensation; recognition; satisfaction, etc. It is one of the most important management tool for success in work that creates willingness amongst the employees and perform in the best of their abilities.

Management

MOU (Memorandum of Understanding)

Memorandum of Understanding (MOU) is a formal agreement document between two or more parties. The MOU is a nonbinding and not a legal agreement but a formal agreement and indicates the intention of common business interest, outline of terms and conditions, individual roles and responsibilities, and the establishment of a business relationship to be continued and likely result in a legal agreement or contract in due course.

Management Business

Reference Definition by Businessdictionary.com: Memoranda of understanding are generally recognized as binding, even if no legal claim could be based on the rights and obligations laid down in them. To be legally operative, a memorandum of understanding must (1) identify the contracting parties, (2) spell out the subject matter of the agreement and its objectives, (3) summarize the essential terms of the agreement, and (4) must be signed by the contracting parties. Also called letter of intent.

WORD **DEFINITION CATEGORY** MR (Material A Material Requisition (MR) is a procurement document Engineering Requisition) prepared and developed by engineering disciplines that uses to request materials for technical supplying or manufacturing requirements: data sheet, quantity, applicable code and specifications, etc. Related Definitions in the Project: The Procurement **MSD** (Material A Material Selection Diagram (MSD) is an engineering drawing Engineering Selection Diagram) which shows material selection information and specification of the piping and equipment in a process and utility facility. A Material Selection is a step in the process of designing any physical object, the main goal of material selection is to minimize cost while meeting product performance goals. Systematic selection of the best material for a given application begins with properties and costs of candidate materials. The MSD is normally developed from simplified Process Flow Diagrams (PFDs) by Process Engineer, Material Engineer and the metallurgist of project. The Material Engineer uses the Material Selection Diagram to assign a line class and specification to each line on the Piping and Instrumentation Diagram (P&ID) or Process Engineering Flow Scheme (PEFS). **MSDS** (Material A Material Safety Data Sheet (MSDS) is a document contains **HSE** Safety Data Sheet) information of a potential hazards of a chemical substance, and on safe working procedures when handling chemical products. Reference Definition by Businessdictionary.com: A Material Safety Data Sheet (MSDS) identifies the manufacturer of the material (with name, address, phone, and fax number) and includes (1) chemical identity, (2) hazardous ingredients, (3) physical and chemical properties, (4) fire and explosion data, (5) reactivity data, (6) health hazards data, (7) exposure limits data, (8) precautions for safe storage and handling, (9) need for protective gear, and (10) spill control, clean-up, and disposal procedures. Mandated by the US Occupational Safety and Health Administration (OSHA), it is used also in many other countries in one form or the other. Called chemical safety data sheet (CSDS) in Europe. MTO (Material Take-Material Take-Off (MTO) is an action of counting of the bulk Engineering material pieces and parts that identifies commodities from Off) drawings and records the material and quantities required for the fabrication or for construction. Name Plate (or A Name Plate (or Nameplate) is a piece of metal or plastic tag Engineering attached to a machine or appliance that identifies and displays Nameplate) information such as brand name, serial number, voltage, power ratings under specified conditions, and other manufacturer supplied data. **Natural Capital** Natural Capital is the world's stocks of natural assets providing **Business** natural resource inputs and environmental services for economic production including geology, soil, air, water and all living things.

WORD **DEFINITION CATEGORY Natural Disaster** Natural Disaster is any catastrophic event that is naturally occurring physical phenomena caused either by rapid or slow onset events of the earth. The Natural Disaster can be: earthquakes, landslides, tsunamis and volcanic activity as the geophysical processes; floods; extreme temperatures: drought and wildfires; cyclones or typhoons and storms; disease epidemics and insect or animal plagues, etc. The severity of a disaster is measured in lives lost, economic loss, and the ability of the population to rebuild. Events that occur in unpopulated areas are not considered disasters. (Refer to the Human Made Disaster) NDT (Non A Non Destructive Testing (NDT) is a examination or testing Quality **Destructive Testing)** work process using a science and industrial technology to verify a work performance of production and evaluate and analysis a property, component of material and system without any damage or destroy of the product or property. The ASNT (The American Society for Nondestructive Testing) stated that test method names often refer to the type of penetrating medium or the equipment used to perform that test. Current NDT methods are: Acoustic Emission Testing (AE), Electromagnetic Testing (ET), Guided Wave Testing (GW), Ground Penetrating Radar (GPR), Laser Testing Methods (LM), Leak Testing (LT), Magnetic Flux Leakage (MFL), Microwave Testing, Liquid Penetrant Testing (PT), Magnetic Particle Testing (MT), Neutron Radiographic Testing (NR), Radiographic Testing (RT), Thermal/Infrared Testing (IR), Ultrasonic Testing (UT), Vibration Analysis (VA) and Visual Testing (VT). **Near Miss** A Near Miss (or Near Accident) is a situation that is almost HSE happen an accident or incident. Any Near Miss event which had the potential to cause injury or damage or loss, but which was avoided. Negotiation Negotiation is 1) a process of discussion (negotiate) between Management two or more people or parties in order to reach an agreement; 2) a contract made other than the original proposal. Network A Network is 1) a system that consists of many similar things; Management 2) an arrangement of intersecting horizontal and vertical lines that are connected together to allow movement or communication between the parts. (e.g. Computer Network, Communication Network, Social Network, Network Drawing, Network Schedule, Electrical Network, etc.) **Network Schedule** A Network Schedule (Scheduling) is a graphical display of Controls logical order of activities and a method of scheduling work process where various related events are programmed into a sequential network on the basis of starting and finishing dates. The Network Scheduling shows the project critical path (sequential activities have zero float). Often called as a CPM (Critical Path Method) Schedule. Related Definitions in the Project: The Project Schedule

WORD	DEFINITION	CATEGORY
NG (Natural Gas)	Natural Gas (NG) is a mixture of gaseous hydrocarbons occurring naturally and obtained from underground in atmosphere that is deep inside the earth near other solid or liquid hydrocarbons like coal and crude oil usually be some condensate and/or oil associated with the gas. The NG consists of mainly methane (CH4), and nitrogen, carbon dioxide, etc., and it can be thought of as the last product of a chain of cracking reactions. The Natural Gas is used for a fuel and other chemical industry.	Substance
NGL (Natural Gas Liquid)	Natural Gas Liquid (NGL) is the hydrocarbon gases in natural that is separated from the gas as liquids through the process of absorption, condensation, adsorption, or other methods in gas processing. Generally, composed exclusively of carbon and hydrogen, and ethane or propane and heavier hydrocarbons, used as inputs for petrochemical plants, fuels for heating and cooking, and blended into vehicle fuel.	Subsance
Non-associated Gas (or Nonassociated Gas)	Non-associated Gas (or Nonassociated Gas) is a gaseous phase of the petroleum that is found in a reservoir which contains no crude oil or any known source of liquid petroleum. (Also, called as the Dry Gas; Refer to the Associated Gas)	Substance
Non-conformance (NC)	Non-conformance (NC, or non-conformity) is a failure to meet a requirement which is the need, expectation, or obligation. The NC is a deficiency in characteristic, documentation, or procedure of the quality including work process through finding physical defects, test failures, incorrect or inadequate documentation, or deviation from testing and inspection.	Quality
Norm	A Norm is an accepted and agreed standard formal rule that is a set of standards from the average or median achievement of a common society. The Construction Norm is the labour productivity that is the number of labour effort hours required to complete a defined construction activity. The Social Norm is the unwritten understanding and rule that provides an expected idea of how to behave of members of a society.	Construction
Not to Exceed (NTE) Contract	A Not to Exceed (NTE) Contract is a type of contract that is allowed a contractor issue bills to an owner, or spend up to the portion of estimated price for specific work scope. The contractor's commitments and expenditures for this work scope are limited to this value. This type of contract or agreement can be used before reaching a final agreement on contract terms and conditions. Related Definitions in the Project: The Project Contract	Management
NPV (Net Present Value)	Net Present Value (NPV) is the difference between the present value of all cash inflows from an investment or project and the present value of all cash outflows required to obtain the investment or to finance the project at a given discount rate. The formula for NPV = (Cash inflows from investment) – (Cash outflows or costs of investment) Related Definitions in the Project: The Economic Reviews	Business

WORD **DEFINITION CATEGORY OBS** (Organisation An Organisation Breakdown Structure (OBS) is the hierarchical Management Breakdown arrangement of the organisation of necessary resources to perform a job or project. The OBS is a breakdown of all human Structure) and material resources to identify and organise the resources and organizational responsibilities with carrying out activities associated with the project. Related Definitions in the Project: The Work Breakdown Structure (WBS) **Occupational Illness** Occupational Illness is an abnormal health condition or disorder HSE that is caused or aggravated by exposure to environmental factors associated with employment, including chemical, physical, biological and ergonomic factors. The reportable diseases and associated hazards are: Carpal Tunnel Syndrome; Cramp of the hand or forearm; Occupational dermatitis; Hand Arm Vibration Syndrome; Occupational asthma; Tendonitis or tenosynovitis. **Occupational Injury** An Occupational Injury is any personal injury, disease or death HSE including a cut, fracture, sprain, amputation, etc., or any fatality, which results from a work related activity or from an exposure involving a single incident in the work environment, such as deafness from explosion, one-time chemical exposure, back disorder from a slip or trip, insect or snake bite. Common causes of Industrial Occupational Injury are poor ergonomics, manual handling of heavy loads, misuse or failure of equipment, exposure to general hazards, inadequate safety training and clothing. An Original Equipment Manufacturer (OEM) is a manufacturing **OEM (Original Procurement Equipment** company that produces or constructs the components or Manufacturer) equipment based on the original production process. Office Automation Office Automation (OA) is an integration of all information Management functions in an office that is able to the automation of the (OA) information processing and communication tasks in an organisation. The OA is the collective hardware, software and processes that creates, stores, edits and processes office information to accomplish tasks. Offsite Facility An Offsite Facility is the individual processing units that is a part Engineering of a plant, and usually considered the most important features. but the functioning of the offsite facilities are often as critical as the process units themselves. The Offsite Facilities consist of Firewater System; Flare System; Flushing Oil; Interconnecting Piping; Loading/ Unloading; Tankage & Storage (Atmospheric, Pressure and Refrigerated); Waste Water Treatment, and Environmental Treatment Units, etc. (Refer to the Utility Facility, U&O (Utility & Offsite))

WORD	DEFINITION	CATEGORY
Oil and Gas Business	Oil and Gas Business consists of an oil and gas exploration (onshore or offshore wells) and extraction; gathering (oil and gas separation) and transporting (compressing and boosting); refining (separation), treatment (upgrading and purification), production (petrochemical or chemical plant); and transporting (pipelines) and storing (tankage and terminal). The Oil and Gas Business is divided into two business area as an upstream and downstream business, divided at the point of, normally, oil and gas is separated and pre-treated (removal of water, salt and sulphur, etc.)	Management
Oil Reserves	Oil Reserves are an estimate of the amount of crude oil located in a particular economic region that can be technically recovered and financially feasible at the present price of oil. Proven Oil Reserves are a reasonable certainty of being recoverable under existing economic and political conditions, with existing technology. Reserves amounts for world total: 1,726,685 millions of barrels (MMbbl) - U.S. EIA (2017)	Management
Oil Sand	Oil Sand is the various types of sand and rock material that have some crude bitumen, heavy hydrocarbon residues. (Refer to the Bituminous Sand)	Substance
	Reference Definition by Ucsusa.org: Tar sands (also known as oil sands) are a mixture of mostly sand, clay, water, and a thick, molasses-like substance called bitumen. Bitumen is made of hydrocarbons, the same molecules in liquid oil, and is used to produce gasoline and other petroleum products.	
Oil Shale (or Shale Oil)	Oil Shale (or Shale Oil) is a type of crude oil (unconventional oil) that is trapped in sedimentary rock (shale soil layer), and contains solid bituminous materials (Called as the Kerogen).	Substance
On Demand Bond (or Unconditional Bond)	An On Demand Bond (or Unconditional Bond) is provided by a bank, where the bond is payable to the client simply on his demand, and usually without the client having to provide the bank any evidence or details of the contractor's failure to perform unless the demand is fraudulent. (Opposite of the Conditional Bond)	Business Controls
On Demand Economy	On-demand Economy is a business model focused on the on- demand provision of goods and services that is accessible to everyone immediately. (Refer to the Gig Economy)	Business
	Reference Definition by Theondemandeconomy.org: The Ondemand Economy is defined as the economic activity created by digital marketplaces that fulfil consumer demand via immediate access to and convenient provisioning of goods and services. On-demand services encompass all digitally based marketplaces (primarily mobile) that offer convenient access to and/or fulfilment of goods and services. The On-Demand Companies are: Uber, Airbnb, etc.	

One Line Diagram or Single Line Diagram (SLD)

An One Line Diagram or Single Line Diagram (SLD) is a simplified graphical representation of the power system that is the interface for creating and managing the electrical networks include circuit breakers, transformers, capacitors, bus bars, and conductors. The One Line Diagram is the starting point of the power system analysis and other electrical design and engineering works that shows interlocks, inter tripping, system capacity, Voltage levels, currents, impedances, generation power levels etc. The One Line Diagram is a key deliverable document of an electrical engineering.

Engineering

Online Document Management System An Online Document Management System is a software program that manages the creation, storage and control of documents in their native file format, or some web-based document management systems are beginning to store content in the form of html to allow for better application of search capabilities such as full-text searching and stemming. (Refer to the EDMS (Electronic Document Management System)) Related Definitions in the Project: Document Review and Approval

Management

Reference Definition by Aconex.com: An Online Document Management System is using document management software that's built for construction and engineering. Effective projects start with managing information well. All organizations (owner, PM, contractor/EPC, subcontractors, etc.) on your projects need quick access to current documents including drawings, BIM models, contracts, reports, schedules, bids / tenders, and more.Reference Definition by Aconex.com: An Online Document Management System is using document management software that's built for construction and engineering. Effective projects start with managing information well. All organizations (owner, PM, contractor/EPC, subcontractors, etc.) on your projects need quick access to current documents including drawings, BIM models, contracts, reports, schedules, bids / tenders, and more.

OPEC (Organization of the Petroleum Exporting Countries)

The Organization of the Petroleum Exporting Countries (OPEC) is a permanent, intergovernmental Organization, created at the Baghdad Conference on September 10–14, 1960, by Iran, Iraq, Kuwait, Saudi Arabia and Venezuela. The five Founding Members were later joined by nine other Members: Qatar (1961); Indonesia (1962) – suspended its membership from January 2009; Libya (1962); United Arab Emirates (1967); Algeria (1969); Nigeria (1971); Ecuador (1973) – suspended its membership from December 1992-October 2007; Angola (2007) and Gabon (1975–1994). OPEC had its headquarters in Geneva, Switzerland, in the first five years of its existence. This was moved to Vienna, Austria, on September 1, 1965.

Business Management

Essential WORD **DEFINITION CATEGORY** Operability Operability is an ability that the process has the capacity and Operation flexibility to achieve a range of operating conditions safely, reliably, profitably and with good dynamic performance and product quality. The Operability ensures to keep an equipment, a system or a unit and plant in a safe and reliable functioning condition, according to pre-defined operational requirements. Related Definitions in the Project: The Operation and Maintenance Operation Operation Readiness is the process of preparing the custodians Operation Readiness of an asset under construction organisation to the client operation organisation, at the point of delivery and handover facilities, the client is fully prepared to assume ownership of the asset, accepts responsibility for performing the safe and efficient operation of that asset. The Operation Readiness is the management practices for performing pre-start-up reviews of new processes or processes that have been shut down for modification, and processes that have been administratively shut down for other reasons. These practices verify the operational readiness of a process and help to ensure that the process is safe to restart. Identifies organisational tasks, roles and responsibilities, assists with start-up and operations and maintenance, focuses on high priority risks, and analyses opportunities. Related Definitions in the Project: The Operation and Maintenance **Operational Risk** An Operational Risk is the risk of loss resulting from inadequate Management and failed internal processes people or systems or from external events. The Operational Risk includes legal risks but excludes reputational risk and is embedded in all products and activities. **Operations** Operations Readiness and Assurance (OR&A, Ops Readiness) Operation Readiness and is a systematic management approach to safety, health, Assurance (OR&A) environment, reliability, availability and asset efficiency to ensure a smooth handover from the project to the operation

Operations Readiness and Assurance (OR&A, Ops Readiness) is a systematic management approach to safety, health, environment, reliability, availability and asset efficiency to ensure a smooth handover from the project to the operation phase that is used in the oil and gas, hydrocarbon, and energy industries. The OR&A is the process of preparing the custodians of an asset under construction that is fully developed an ownership of the asset, accepts responsibility for performing the safe and efficient operation, and capable of achieving Ready to Operate status by the operational organisation at the time of handover from the Project team.

OPEX (Operational Expenditure)

The OPEX (Operational Expenditure) or OpEx is the normal ongoing expenses for running a product, business, or system that is the money a business spends on a daily basis to keep going including the cost of workers and facility expenses, such as inventory costs, marketing, payroll, equipment, rent, R&D, advertising, and insurance.

Business

WORD	DEFINITION	CATEGORY
Optimisation (or Optimization)	Optimisation (or Optimization) is an act of making something as good as possible. The Optimisation is an alternative finding or creating with the most cost effective or highest achievable performance under the given constraints, evaluate cost, schedule, quality, safety, and performance.	Management
Optimum Module Size	An Optimum Module Size and inclusions are depending on a project economics, module handling capability as well as a severity of project such as project duration, quality, safety and environmental requirement. A Module handling capacity includes a module design and engineering experience; a capacity of module fabrication shop; transportation ability for inland and ocean; accessibility at the site; module erection capacity (module installation equipment) at the site; equipment and material delivery schedule to the module fabrication shop; and skilled labour mobilisations, etc.	Construction Engineering
Ordinary Commodity	An Ordinary Commodity is 1) a material not having special properties or hazards; 2) creates increased price when the demand for the good increases.	Business
Organic Chemistry	Organic Chemistry is a scientific study of the basic organic chemical composition, structure, property, reaction of substances. The Organic Chemistry is the branch of chemistry concerned with the compounds of carbon: originally confined to compounds produced by living organisms but now extended to include man-made substances based on carbon, such as plastics, acrylonitrile, phenol, ethylene oxide, urea.	Engineering
Organisation (Organization)	An Organisation (Organization) is a team or group of people who work together for a particular purpose, such as a government department, business or project. The Organisation Structure is a framework to define the roles and responsibilities, work flow, reporting system, and decision making. There are two types of an organisation: a permanent and task force organisation. Related Definitions in the Project: The Project Organisation	Management General
OS&D (Overage, Shortage and Damage)	Overage, Shortage and Damage (OS&D) is an inspection report for the purchased material that is prepared by a buyer at the time of goods or cargo (equipment and materials) is delivered at the receiving area (mainly, construction site of warehouse), or handed over them from a supplier based on the purchasing document. Related Definitions in the Project: The Logistics Management	Procurement
Outage	An Outage is 1) a discontinuance of electric power supply, or a period of time when a service, such as electricity, is not available; 2) a space left in a container to allow for expansion during temperature changes it may undergo during shipment.	Engineering Procurement

WORD	DEFINITION	CATEGORY
Outsourcing	Outsourcing is an arrangement of the certain job functions done by an outside company instead of having an inhouse department or employee in which a company hires another company to be responsible for a planned or existing activity. Outsourcing has become a major trend in human resources over the past decade including a business process, operational, manufacturing, and facility management as well as the business core functions such as new technology development.	Management
Over Estimate	An Over Estimate (or overestimate) is the estimate to make a mistake by guessing an amount, number etc. that is too high, or will be greater, more extreme, or more important than it really is. (Opposite of the Under Estimate)	Controls
Over Target Baseline (OTB)	An Over Target Baseline (OTB) is an overrun to the contract baseline that is a new baseline for management when the original objectives cannot be met and new goals are needed for management purposes. The contract baseline is not adjusted as a result of the Over Target Baseline (OTB).	Management
Over Target Schedule (OTS)	An Over Target Schedule (OTS) is the condition where a baseline schedule is time-phased beyond the contract completion date that is the re-planned activities, milestones and associated budgets being time-phased beyond contractual delivery dates. The OTS is usually accompanied by an increase in budgets resulting in a corresponding Over Target Baseline (OTB).	Controls
Overall Plot Plan	An Overall Plot Plan (or Site Plan or Site Master Plan) is an overall plant layout shown as a top-down orientation that does not include the individual equipment and dimensions. The Overall Plot Plan is developed during a project initiation phase and a deliverable of the FEED Engineering developed by Piping & Layout discipline. (Refer to the Plot Plan)	Engineering
Overhead (OVHD) Cost	Overhead (OVHD) Cost is an indirect cost that is regular and necessary costs involved in operating a company business but not assignable to a specific task or project, such as an office building operation and maintenance; company management and supporting staff; insurance; and involved in whole company operation but cannot be applied or traced to a specific cost centre of a work or project. Related Definitions in the Project: The Project Cost	Controls
Owner's Cost	Owner's Cost is the cost that includes a land, financial cost (funding cost), owner's third party cost including engineering studies, permits, licensing fees, training, and owner corporate costs etc. Related Definitions in the Project: The Economic Reviews	Controls

Owner's Project Requirement

Owner's Project Requirement is the foundation for successful delivery of a project defined by the owner that outlines functional requirements of the expectations of the facilities and systems. The Owner's Project Requirement is the basis of all design, construction, acceptance and operational decisions are made.

Management

Reference Definition by ASHRAE: Owner's Project Requirement is a written document that details the functional requirements of a project and the expectations of how it will be used and operated. These include project goals, measurable performance criteria, cost considerations, benchmarks, success criteria, and supporting information.

Ownership

Ownership is a fact of owning property that is the ultimate and exclusive right. The Employee Ownership can be motivated employees and improved company performance, but only under certain conditions. The challenge is to make Ownership work, three terms and conditions must be clearly defined: responsibilities, accountability and authority. The effective motivation of the Employee Ownership can be identified: financial support, participation, influence awareness and fairness appraisal.

Management

P&ID (Piping & Instrument Diagram)

A Piping & Instrument Diagram (P&ID) is a schematic representation of the equipment, instrument, piping, and any miscellaneous items, with corresponding design data of a processing unit, utility system and offsite system serving a processing unit used to document the design basis and provide key process information to the other disciplines. The P&ID allows the design to progress from the Process Flow Diagram (PFD) with the standard numbering systems that facilitates the design process, manufacture, or construct and communicate information to the Client and all involved disciplines. The P&ID includes a unique plant item number for each item of equipment, valve, instrument and line. Ideally the line number should include a size, material and fluid contents identifier to enable the anyone reading the drawing to obtain this information without having to refer to other documents. Approved P&ID is the basis of HAZOP and SIL review

Engineering

Packaged Equipment

Packaged Equipment is the equipment comprised of multiple smaller equipment components that is fabricated at a shop and skid mounted which is ready for connection and use. The Packaged Equipment is expanded by mechanical engineering upon the process data to establish overall performance criteria and specific design requirements for each of the smaller equipment components. The Packaged Equipment includes chemical injection packages, product gas dehydration systems, compressors, boilers, heaters, etc.

Engineering

Packing List (Shipping List or Packing Slip)

A Packing List (Shipping List or Packing Slip) is a shipping document of a particular package or shipment that includes a type of good, size, quantity for a delivery package, and the itemized details of the package contents and cost per shipping unit (does not need to include customer pricing), etc., for the customs clearance and invoicing. The Packing List is to inform parties, including transport agencies, government authorities, and customers, about the contents of the package, usually inside an attached shipping package.

Procurement

Pareto Principle (or 80/20 Rule)

The Pareto Principle (or 80/20 Rule) is the general principle that Business specifies an unequal relationship between inputs and outputs in which the majority of influence (80%) on an outcome is exerted by a minority of input factors (20%). The Pareto Principle is the originally proposed by Vilfredo Pareto in the 19th century shown approximately 80% of the land in Italy was owned by 20% of the population. The Pareto Principle refers to the 80% of any problem is accounted for by 20% of the factors, or 80% of sales come from 20% of clients in business management. Hence, it would be wise to concentrate on the vital few rather than the trivial many.

Reference Definition by Investopedia: The principle states that 20% of the invested input is responsible for 80% of the results obtained. Put another way, 80% of consequences stem from 20% of the causes, this is also referred to as the "Pareto rule" or the "80/20 rule." This principle serves as a general reminder that the relationship between inputs and outputs is not balanced. For instance, the efforts of 20% of a corporation's staff could drive 80% of the firm's profits. In terms of personal time management, 80% of your work-related output could come from only 20% of your time at work. In Pareto's case, he used the rule to explain how 80% of the wealth is controlled by 20% of the country's population.

Part Time Employment/ Work Part Time Employment/ Work is a type of the regular employment in which working time is substantially less than normal.

Business

Particulate Matter (PM) or Particle **Pollution**

A Particulate Matter (PM) or Particle Pollution is a complex mixture of extremely small particles and liquid droplets that get into the air. The PM is any solid material composed of distinct particles or pieces, regardless of size, shape, or chemical composition suspended in air many of which are hazardous, can affect the heart and lungs and cause serious health effects. The PM consists of sulphate, nitrates, ammonia, sodium chloride, black carbon, mineral dust and water. The most health-damaging particles are those with a diameter of 10 microns or less (PM10), especially fine particles of 2.5 microns or less (PM2.5). The PM is generated from human and natural sources, with PM10 and above often coming from dust generated in the environment.

WORD	DEFINITION	CATEGORY
Partnership	A Partnership is two or more people or organisations who work together to perform a project or business. The business responsibility of the Partnership including financial and legal, fall upon each business owner depending on how the ownership is divided.	Management
Paternalistic Leadership	Paternalistic Leadership is one of the leadership or management styles that makes decisions after consult team members over issues and listen to their feedback or opinions. The Paternalistic Leadership treats members and partners as a large family (pater means father in Latin), expected loyalty and trust from the members as well as obedience. The Paternalistic Leadership is appropriate for a business with a more formal and hierarchical structure without members' creative thinking is not critical.	Management
Payback Period	A Payback Period is an investment appraisal technique that evaluate the period of time required for the return on an investment. Related Definitions in the Project: The Economic Reviews	Controls
PCS (Process Control System)	A Process Control System (PCS) is the automation system for the efficiency in flexibility, measurability, availability, safety and security in a process plant control system. The PCS is the combination activities of control engineering and process engineering disciplines that provides predictable, stable, and consistently operating of a process at the target level of performance with the normal variations.	Engineering
PE (Professional Engineer)	A Professional Engineer (PE) means an individual who has fulfilled education and experience requirements and passed rigorous exams that, under government licensure laws, permits them to offer engineering services directly to the public.	Engineering
Peak Load (or Demand)	Peak Load (or Demand) is the maximum demand (energy, etc.) or load produced or consumed by a unit in a specified time period, typically characterized as annual, daily or seasonal.	Engineering
Peer Review	Peer Review is an informal high level of the project review for the verifications by who (peer) is not directly involved in the work or project. The Peer Review is normally a high level review of the critical outputs or deliverables such as a feasibility study report, performance guarantee review, FEED Package, safety operation related document, and final submission deliverables including a technical and project execution proposal document.	Management

PEP (Project Execution Plan)

A Project Execution Plan (PEP) is one of the project baseline documents and the governing document for the project operation and management that establishes in appropriate terms what will be done to meet the project scope and contractual requirements. The PEP is to describe a project specific plan in strategic and tactical way, addressing the most effective method and maximise efficiency in the project execution, and the project specific actions complying to project goals and objectives, and the clear scope of work and other critical responsibility as agreed in the contract as well as detailed Project Risk management plan including risk items and mitigation plans which was assessed and evaluated during the proposal stage, and action plans for the project execution in accordance with the company risk management procedure. The PEP is developed by the project key participants led by the project manager. The PEP should be approved by company management prior to publishing or applying. The PEP is a live document and should be updated with current and future project plans and procedures.

Related Definitions in the Project: The Project; The Project Management

Performance

Performance is an act of performing the given activities, tasks, or works by a person, machine, or facility that is the measurable results of the activities, processes, products, services, systems and organisations, and able to achieve. The Performance is how well manage or control a given task measured against preset known standards of accuracy, completeness, cost, and time frame. The Performance is deemed to be the fulfilment of an obligation, in a manner that releases the performer from all liabilities under the contract.

Performance Guarantee

A Performance Guarantee is a guaranteed insurance for the performance of the obligations by a contractor or supplier who performs the design, manufacturing, construction, or production facilities, or supply goods or services under the contract terms and conditions. (Refer to the Performance Bond)

Performance Test

A Performance Test is a test of capacity to achieve a desired result that requires a system or plant to actually perform a task or activity, rather than individual tests or inspections referring to specific parts. The purpose of the Performance Test is to verify that the plant meets the specifications and contractual requirement.

Related Definitions in the Project: The Construction

Management

Management

Management

Construction Operation

Period Group (or Family)

A Period Group (or Family) is the columns of elements in a periodic table of chemical elements that is numbered from Group 1 to 18. International Union of Pure and Applied Chemistry (IUPAC) recommended names are: Group 1: alkali metals; Group 2: alkaline earth metals; Group 11: coinage metals; Group 15: pentels, pnictogens; Group 16: chalcogens; Group 17: halogens; Group 18: noble gases.

Science

Reference Definition by Wikipedia: In chemistry, a Period Group (also known as a family) is a column of elements in the periodic table of the chemical elements. There are 18 numbered groups in the periodic table, but the f-block columns (between groups 2 and 3) are not numbered. There are three systems of group numbering. The modern numbering group 1 to group 18 is recommended by the International Union of Pure and Applied Chemistry (IUPAC). Two earlier group number systems exist: CAS (Chemical Abstracts Service) and old IUPAC. Both use numerals (Arabic or Roman) and letters A and B. Both systems agree on the numbers.

PERT (Program Evaluation Review Technique)

Program Evaluation Review Technique (PERT) is one of the schedule control and management tools for the planning and evaluating progress of complex projects. The PERT shows graphical relations among activities, and time scale of each activities, and required total duration of the project that is to determine the time required to complete each element in terms of pessimistic, optimistic, and best guess estimates. The PERT was developed by US Navy in the 1950s. Related Definitions in the Project: The Project Schedule.

Controls

Petrochemical

A Petrochemical is any chemical substance obtained from petroleum or natural gas. It derived from ethane, propane, butane and other hydrocarbons extracted from crude oil and natural gas. Major petrochemicals are acetylene, benzene. ethane, ethylene, methane, propane, and hydrogen, from which hundreds of other chemicals are derived.

Engineering

Petroleum Chemistry

Petroleum Chemistry is obtained from crude oil and natural gas processing and made of a mixture of different hydrocarbons: hydrocarbons alkanes. aromatic and cycloalkanes, asphaltenes, etc. The Petroleum Products are fuels for vehicles, power plant and industrial and house boiler, and feed stocks for petrochemical and chemical plant.

Engineering

Petroleum Extraction

Petroleum Extraction is one of oil and gas exploration Technology technologies that is the removal process (extraction) of oil from the well reservoirs. The Petroleum Extraction can be recovered in the range of 60% of the available resources from most wells. The Petroleum Extraction can be: the Primary Extraction; Secondary Extraction; Tertiary Extraction.

PFD (Process Flow Diagram)

A Process Flow Diagram (PFD) presents the process streams and fluid flows or transfer system through equipment and connected lines including the system conditions (temperature and pressure of design and operating condition), components of fluid (physical properties), flow rates, and a short equipment specification. The PFD is generated by analysis and calculation of the chemical and physical characteristic of materials used by a process simulation program. PFD is corresponding with Heat and Material Balance document, and developed information of different operation modes such as minimum, maximum, normal, summer and winter cases in the separate table. The PFD is used for the basis of equipment datasheet, P&ID and other critical engineering and design document.

Engineering

PHA (Process Hazard Analysis)

The Process Hazard Analysis (PHA) is the foundation for HSE process safety and risk management programs that is a set of organised and systematic assessments of the potential hazards associated with an industrial process. The PHA involves the use of qualitative techniques to identify and assess the significance of hazards. The Quantitative Methods are used to help prioritized risk reduction including: Hazard and Operability Study (HAZOP), What-If Study, Fault Tree Analysis, Failure Modes and Effects Analysis (FMEA) and Major Hazard Analysis (MHA), etc.

Reference Definition by Gmigasandflame.com: A PHA is an OSHA directive that identifies safety problems and risks within a process, develops corrective actions to respond to safety issues, and pre-plans alternative emergency actions if safety systems fail. The PHA must be conducted by a diverse team that has specific expertise in the process being analysed. There are many consulting and engineering firms that also provide PHA services. PHA methodologies can include a What-If Analysis, Hazard and Operability Study (HAZOP), Failure Mode and Effects Analysis (FMEA), and a Fault Tree Analysis.

Photovoltaic (PV)

Photovoltaic (PV) means the words photo (light), and volt Energy (electricity) that is the conversion of sunlight (solar radiation) into electricity using semiconducting materials. (Refer to the Solar Cell, Solar Panel, Solar Battery, or Photovoltaic (PV) Cell)

Physical Constant

A Physical Constant is a fundamental physical quantity that is observed in nature and appearing in the basic theoretical equations of physics. It is contrasted with a mathematical constant, which has a fixed numerical value, but does not directly involve any physical measurement.

Science

Physical Hazard

Physical Hazard is the environment substances or things that HSE can harm the body without necessarily touching it. Physical Hazards include ergonomic, chemical, pressure, radiation, heat and cold stress, vibration, and noise hazards, etc.

WORD **DEFINITION CATEGORY** Physical Property is a characteristic of a substance that is **Physical Property** Engineering observed or measured without changing the composition of a substance. The measurement of the Physical Property may change the arrangement of the substance, but not the structure of its molecules. Some Physical Properties are specific for a given substance and can be used to help identify them. Physical Properties are colour, smell, freezing point, boiling point, melting point, infra-red spectrum, viscosity and density, etc. (Refer to the Chemical Property) Pie Chart (or Circle A Pie Chart (or a Circle Chart) is broken down into its Management constituent parts out of the total of 360 that is allocated Chart) proportionally to the total of each part. The Pie Chart displays data, information, and statistics with varying slice sizes, where each part shows the relative size of each value. Reference Definition by Wikipedia: A Pie Chart (or a Circle Chart) is a circular statistical graphic which is divided into slices to illustrate numerical proportion. In a pie chart, the arc length of each slice (and consequently its central angle and area), is proportional to the quantity it represents. While it is named for its resemblance to a pie which has been sliced, there are variations on the way it can be presented. The earliest known pie chart is generally credited to William Playfair's Statistical Breviary of 1801. **Pilot Test** A Pilot Test is a small-scale trial test that is an experimental test Management or series of tests to take the comment on the mechanics of the test. The Pilot Test is used to predict the behaviour and guide future actions that determines whether problems exist, and need to be addressed prior to putting the actual applications in the commercial field. PIM (Pre inspection A Pre-Inspection Meeting (PIM) is a meeting to review and Quality Meeting) setting up all the requirements of inspections, quality control in with respect to engineering, fabrication and manufacturing plans and procedures for the supply items between a buyer and supplier after a purchase order (PO) is released. The PIM is held before inspection of equipment or material carry out for mutual confirmation of necessary inspection documents such as drawing and inspection procedure, inspection item, necessity of inspection record, applied standard and code, criteria for acceptance, witness inspection item, inspection schedule and etc. **Pipe** A Pipe is a tubular sectional device made by a metal or plastic, Engineering and used to transfer a fluid (mainly, liquid or gas). A small size (diameter) of pipe is called a tube. Pipe Size A Standard Pipe Size is a pipe nominal diameter and pipe wall Engineering thickness in which a standard pipe size is defined below two ways: 1) American NPS (Nominal Pipe Size) or NB (Nominal Bore) system: A Pipe Size is specified in ANSI, ASME and API standards, and using an imperial unit, 2) European DN

(Nominal Diameter) system using a metric unit (millimetres). A standard tube size is referred to an outside diameter (OD).

WORD	DEFINITION	CATEGORY
Pipeline	A Pipeline is a long distance piping system. The Pipeline is used to transport a number of substances including natural gas, fuels, hydrogen, water, and petroleum.	Engineering
Pipeline Engineering	Pipeline Engineering is an engineering discipline, responsible for design and engineering for the long distance piping system (pipeline) effectively. Generally, a Pipeline project is executed as an independent project, and a Pipeline Engineer is covering for a project, process and piping and civil engineering matters. Related Definitions in the Project: The Engineering	Engineering
Piping Arrangement Drawing	A Piping Arrangement Drawing is the details the pipe runs and to show the interfaces with the equipment and the various other services and to identify the access allowances that is generally completed using 3D CAD systems. They are either isometric drawings, orthographic (plans and elevations) or a combination of the two. The Piping Arrangement Drawing includes the all process equipment and piping, instrument connections, with the tag numbers and major primary beams and secondary beams. (Also, called as the Piping General Arrangement Drawing or Piping Layout Drawing) The Piping Arrangement Drawing is a deliverable of the Detailed Engineering developed by Piping & Layout discipline. (Refer to the Detailed Engineering Deliverable List (Typical))	Engineering
Piping Engineering	Piping Engineering is a branch of engineering discipline (mechanical), focuses on the fluid flow mechanics: analysing the behaviour of liquids and gases, and using that knowledge in the design of the piping systems. A Piping Engineer is responsible for design and engineering for the piping components and systems including the plant layout (plot plans) development. Related Definitions in the Project: The Engineering	Engineering
Piping Material	A Piping Materialis the raw materials of manufacturing of pipes that is a variety of materials: concrete and ceramic; Plastic; Metals; special piping materials such as glass or lined pipe. The Piping Material is determined the exact chemical compositions through percentages of the permitted quantities of carbon, magnesium, nickel, etc. (e.g. ASTM standard: a carbon steel pipe can be identified with Grade A or B, a stainless-steel pipe with Grade TP304 or Grade TP321, etc.)	Engineering
Plan B	A Plan B is an alternative strategy or a contingency plan that is an action or a set of actions for doing or achieving the original preferred goals and objectives something if the original plan or method fails. The Plan B in the Brexit negotiation could be the a Norway (Norway is not a member of the EU but it is part of the EEA) Plus that the UK remaining in the European Economic Area (EEA) and joining a customs union with the EU, however the UK would have to accept free movement of people which is the breaching a previous red line laid down by the PM.	Management

WORD **DEFINITION CATEGORY** Plan-Do-Check-Act The Plan-Do-Check-Act or Adjust (PDCA) is the methodology Management of the four steps process for quality improvement (Plan/ Do/ or Adjust (PDCA) Check/ Act) that carries out systematically to achieve continuous improvement work processes to decrease failures, increase efficiency, and avoid potential risks. Reference Definition by Wikipedia: The Plan-Do-Check-Act or Adjust (PDCA) Approach is the cycle of continuous improvement work process in quality business consisting the four essential steps that should be carried out systematically to achieve continuous improvement. Another version of this PDCA cycle is OPDCA. The added "O" stands for observation or as some versions say: "Observe the current condition." This emphasis on observation and current condition has currency with the literature on lean manufacturing and the Toyota Production System. **Planning** Planning is the methodology development how to achieve the Management goals and objectives that is able to make a successful completion of the task or project through the identification of the needs and requirements. (Refer to the Project Planning) Related Definitions in the Project: The Project **Plant Operation** Plant Operation is the managing and controlling the equipment, Operation facilities, systems, or plants in industrial and manufacturing processes to produce desired products that ensures the effective implementation and efficient, safety, and reliable process operation. Related Definitions in the Project: The Operation and Maintenance **PLC (Programmable** A Programmable Logic Controller (PLC) is a graphical Engineering Logic Controller) programmed presentation in a modern programming language that is a digital computer used for automation of typically industrial electromechanical processes. The PLC was designed to replace relays in the automotive manufacturing process and has been continuously updated to achieve many DCS capability characteristics. (Refer to the Programmable Automation Controller (PAC)) **Plot Plan** A Plot Plan is a layout plan drawing that presents the intended Engineering use of a land and planned for the physical definition of a project or part of a project. The Plot Plan is a multi disciplinary

A Plot Plan is a layout plan drawing that presents the intended use of a land and planned for the physical definition of a project or part of a project. The Plot Plan is a multi disciplinary engineering output drawing which graphically show the key areas, units, equipment, and general features of the plants including buildings, utility runs, and equipment layout, the position of roads, and other constructions of an existing or proposed project site, and is a scale drawing that gives an overview (top view) of the entire plant. It also listed the true north and plant north, prevailing winds, reference point(s), horizontal references etc.

Management

WORD **DEFINITION CATEGORY**

PM (Project Manager)

A Project Manager (PM or Project Director, PD) is the person who has the overall responsibility for the successful project operation, achieving the project goals and objectives for the entire project lifecycle. The PM is responsible for development of the project goals and objectives, project organisations with the roles and responsibilities, and set up the specific project baselines including the project execution plans and key procedures with key project members in accordance with the company policy and contractual requirement ensuring the key issues of cost, time, quality and safety, and client satisfaction, and sharing with internal and external organisation. The PM is the only point of contact for the stakeholders and client communication, and may need to have: leadership; communication; fast work pace and decision making; complexity and problem solving; business acumen; planning; personal initiative knowledge and experience; independence; adaptability; tolerance for stress; client focused, and so on.

Related Definitions in the Project: The Project; The Project Management

PMC (Project Management Consultant)

A Project Management Consultant (PMC) is a professional organisation of the project management who acts on behalf of the owner in large complex multi-unit projects or series of projects, and assists the owner in minimizing costs, maximizing return on investment and timely completion of the program. The PMC brings a set of systems, procedures and methodologies for the owner consideration, and is responsible for overall planning and execution of the total program from definition through to start-up. The PMC coordinates the interfaces between the different EPC Contractors during all phases of the program.

PMI (Positive Material Identification)

Positive Material Identification (PMI) is the analysis of a metallic alloy of the materials, equipment item or component that is a fast and non-destructive test method for verifying the chemical composition of metals, and can be used in any situation where there is uncertainty about the material composition of a component at the alloy manufacturing and in-process installation. Typical methods for PMI is X-Ray Fluorescence (XRF) and Optical Emission Spectroscopy (OES).

PO (Purchase Order)

A Purchase Order (PO) is a type of agreements for the acquisition of materials, equipment, or services that is a procurement contract issued by a buyer to a seller. A PO document includes both parties signature, dates including key milestones, a purchasing specification, description of purchasing goods or services, a quantity and quality, performance, delivery timing, prices, payment conditions, and a general and special terms and conditions. Related Definitions in the Project: The Procurement

Political Risk

A Political Risk is a type of risk faced by investors, corporations, and governments that is the result of political changes or instability in a country.

Procurement

Quality

Management

Management

WORD	DEFINITION	CATEGORY
Pollutant	A Pollutant is a substance that is introduced to the environment and creates undesired negative effects. The Pollutant may cause long- or short-term damage by changing the growth rate of plant or animal species, or by interfering with human amenities, comfort, health, or property values. (Refer to the Dust, Particulate Matter (PM) or Particle Pollution)	HSE
Polymerisation (Polymerization)	Polymerisation (or Polymerization) is a process of reacting monomer molecules together in a chemical reaction to form a single large molecule as a polymer that is the polymer chains or three-dimensional networks.	Technology
Potential	Potential means 1) having high possibility of a necessary condition exists; 2) showing a capacity of further development in the future; 3) the amount of electricity (Volts) passing through an electric circuit.	Management
Potential Energy	Potential Energy is the possessed energy by an object of it's position or configuration. The objective may have the capacity for doing work as a result of its position: a gravitational potential energy, electric potential energy, magnetic potential energy; as a result of a stretched or deformation: an elastomer potential energy; and a chemical potential energy and nuclear potential energy, etc.	Engineering
Power Factor (PF)	A Power Factor (PF) is a measure of an electrical systems efficiency that is a ratio of actual power (working power) being used in AC circuit (apparent power): PF = KW/ KVA, (KVA = KW + KVAR) where, kW = Working Power (W), kVA = kilo volts times amperes, and kVAR = kilo volts times amperes, reactive. The Power Factor is a dimensionless number in the closed interval of 0 (all power is reactive power with no real power) to 1 (all power is real power with no reactive power), and the Power Factor of 1 would mean 100% of the supply is being used efficiently.	Engineering
Power of Attorney (POA)	A Power of Attorney (POA) is a legal document and a written authorization to represent or act on another's behalf to act as an agent to manage the property, financial and other affairs. The person authorising the other (called the agent or attorney in fact) is called the principal or donor. The POA can begin immediately or go into effect at some time in the future, and an appointed person (an agent or attorney in fact) is not necessarily a formal or official attorney.	Management
Power Plant	A Power Plant is an electrical power generation plant that produces electricity by converting mechanical power such as the rotation of a turbine into electrical power. In a coal-fired steam station, the combustion of coal turns water into steam and the steam in turn drives turbine generators to produce electricity. Power plants today rely either on fossil fuels, nuclear fission, or renewable sources like hydro, wind power, solar power, geothermal power, and biomass power plants.	Technology

WORD	DEFINITION	CATEGORY
PPE (Personal Protection Equipment)	Personal Protection Equipment (PPE) is all equipment and clothing that will protect persons against one or more risks to health and safety at work. The PPE includes protective clothing, safety helmets, gloves, eye protection, high-visibility clothing, safety footwear and safety harnesses or equipment designed to protect the wearer's body from injury or infection. It also includes respiratory protective equipment (RPE).	HSE
PQ (Pre- Qualification)	A Pre-Qualification (PQ) is an initial evaluation in a bidding process to develop the bidder list that proves an applicant's ability, experience, resource, etc., to complete the job as required.	Procurement
Pre-award Meeting	A Pre-award Meeting is a contract finalisation meeting holding between the completion of the proposal evaluation processes and the acceptance of an award by a client but before work commences. The Pre-award Meeting is an opportunity for the project team to meet the client and to plan the project execution.	Management
Pre-commissioning (PC)	The Pre-commissioning (PC) is one of the construction activities that involves the verification of functional operability of elements within the system to achieve a state of readiness for the Commissioning and Start-up operation. Sometimes, for the pre-commissioning of Process units requires the completion of the commissioning activities of utility facilities. The Pre-commissioning may require an energisation of equipment includes the running and entire testing of the power generation systems, testing of emergency shutdown and control systems and dynamic trials prior to commissioning and start-up operations. The Pre-Commissioning activities should be completed prior to the achievement of the Mechanical Completion Certificate (MCC). Related Definitions in the Project: The Construction	Construction
Pre-fabrication	Pre-fabrication is the practice of assembling components of a structure (steels or piping) in a factory or other manufacturing site, and transporting complete assemblies or semi-assemblies to the construction site where the structure is to be located. The term is used to distinguish this process from the more conventional construction practice of transporting the basic materials to the construction site where all assembly is carried out. The Pre-fabrication is a volumetric application or based at component level, need affect the construction process. The benefits of using pre-fabrication include: Higher quality products, Improved productivity, and Environmental benefits associated with its use.	Construction
Pre-FEED	Pre-FEED is a preliminary FEED (front end engineering and design) document that is a pre-defined design package to prove the feasibility in technical and economics. The Pre-FEED is used to a basis of the FEED deliverables or basic engineering. (Refer to the FEED (Front End Engineering and Design))	Engineering

Preservation Work

A Preservation Work is a method of protection and preventative maintenance that carries out on equipment and systems before and after use. The process begins with the application of preservatives and protection fittings by suppliers, vendors prior to delivery permitting the equipment or system to arrive at the fabrication yard or site, and by construction contractors to hand over prior to commencement of the pre-commissioning or commissioning activities.

Construction

Pressure

Pressure is 1) a strong, often threatening influence on an organisation or person; 2) an action of a continuous physical force against an object or opposing force (symbol: p or P), and an International Standard SI unit of the pressure the pascal (Pa), equivalent to one newton per meter squared ($N \cdot m^{-2}$).

Engineering

Reference Definition by Wikipedia: Pressure (symbol: p or P) is the force applied perpendicular to the surface of an object per unit area over which that force is distributed. Gauge pressure (also spelled gage pressure) is the pressure relative to the ambient pressure. Various units are used to express pressure (a unit of force divided by a unit of area): the SI unit of pressure, the pascal (Pa), for example, is one newton per square metre; similarly, the pound-force per square inch (psi) is the traditional unit of pressure in the imperial and US customary systems. Pressure may also be expressed in terms of standard atmospheric pressure; the atmosphere (atm) is equal to this pressure and the torr is defined as 1/760 of this.

Pressure Safety Valve (PSV)

A Pressure Safety Valve (PSV) or Pressure Relief Valve (PRV) is a pressure relief device which is designed automatically releases a substance when the pressure or temperature exceeds preset limits, and reclose and prevent the further flow of fluid.

Engineering

Reference Definition by Wermac.org: A Pressure Relief Valve is a safety device designed to protect a pressurized vessel or system during an overpressure event. An overpressure event refers to any condition which would cause pressure in a vessel or system to increase beyond the specified design pressure or maximum allowable working pressure (MAWP). The primary purpose of a pressure Relief Valve is protection of life and property by venting fluid from an overpressurised vessel.

Pressure Test

A Pressure Test is a test to ensure the safety, reliability, and leak tightness of pressure systems that is required for a new pressure system before use or an existing pressure system after repair or alteration. The Pressure Test can be performed as two methods: Hydrostatic and Pneumatic. A Hydrostatic test is performed by using water as the test medium, whereas a Pneumatic test uses air, nitrogen, or any non-flammable and non-toxic gas. Pressure tests must always be performed under controlled conditions, following an approved test plan, and documented in a test record. A single approved test plan may be used for several similar tests, but a separate test record is required for each.

Quality

WORD	DEFINITION	CATEGORY
Prevailing Wind	Prevailing Wind is the winds that blows most frequently and consistently across a particularly region, and predominantly from an individual direction over a particular point on the Earth's surface which are dependent upon the nature of the general circulation of the atmosphere and the latitudinal wind zones. (Also, called as the Predominant Wind Direction)	Engineering
Preventive Action	Preventive Action is the actions to reduce or eliminate the cause of potential non-conformities or the probability of specific undesirable events arising from a future occurrence. The Preventive Action process is a risk analysis and assessment of processes and systems to determine how to build in safeguards and the implementation of the proactive steps to ensure a potential non-conformity does not occur, and performing. (Refer to the Corrective Action)	Quality
Prime Contractor	A Prime Contractor is an ultimate and total responsible contractor for the completion of the works or project under the contract terms and conditions. The Prime Contractor can utilise the contractor, subcontractor, or hire people for specific parts of the work to complete the work and manage them to do the same.	Management
Pro Forma Invoice	A Pro Forma Invoice is an invoice that informs to the buyer of the terms of sale, and contains the estimated amounts or an example of prices charged. The Pro Forma Invoice will later be included in an actual invoice.	Controls
Probability	A Probability is a statistical measure of uncertainty that is the likelihood of an event or circumstance occurring. This figure is not a rigorous representation of probability, but does provide a useful comparative value.	Management

(PoF)

Probability of Failure Probability of Failure (PoF) is the measure of the likelihood that includes a confidence levelling with regard to the damage rates and mechanisms, and the effectiveness of the inspection program. The PoF is estimated both qualitatively and quantitatively as failure frequencies of different types of degradation mechanisms in the operating system. In Risk Based Inspection (RBI) analysis, the PoF exampled failure frequencies of an event per unit as ranking categories from 1 (very low) to 5 (very high). (Refer to the Consequence of Failure (CoF))

Operation

Reference Definition by Inspectioneering.com: Probability of Failure (POF) is likelihood that a piece of equipment will fail at a given time and an important part of effective risk analyses. The POF is half of the equation when determining risk as part of Risk Based Inspection (RBI) methodology. The POF, calculated together with the Consequence of Failure (COF), helps operators establish the risk level for a particular piece of equipment and set inspection intervals based on the calculated risk. POF is calculated for individual pieces of equipment by looking at the potential damage mechanisms it could be susceptible to, a general frequency of failures, and management system factors. More details on POF are provided in the American Petroleum Institute's Recommended Practice 580: Risk Based Inspection (RBI), which contains directions on developing, implementing and maintaining an effective RBI program.

Problem Solving

Problem Solving is a process of finding the solution to problem using mathematical or systematic analysis with individual's skills, knowledge, and experience. The Problem Solving work process is: 1. define the problems and the cause of problems; 2. perform the gap analysis (comparison of actual and expectations); 3. develop and generate alternatives; 4. evaluate and select the alternatives solution; and 5. implement and follow up.

Management

Related Definitions in the Project: The Decision Making

Procedure

A Procedure is a detailed work process document that explains all work activities with sequence and method in detail complying with the plan document. The Procedure include a responsibility matrix, interfaces with internal and external organisation, time line, and required tools and systems.

Management

Management

WORD **DEFINITION CATEGORY**

Process

A Process is 1) a method of producing products at a plant or a set of activities that produce a specific service or product; 2) a procedure of independent sequential activities.

Reference Definition by ISO: A Process is a set of activities that are interrelated or that interact with one another. Processes use resources to transform inputs into outputs. Processes are interconnected because the output from one process often becomes the input for another process. While processes usually transform inputs into outputs, this is not always the Sometimes inputs become outputs case. transformation. Organizational processes should be planned and carried out under controlled conditions. An effective process is one that realizes planned activities and achieves planned results.

Process Data Sheet

A Process Data Sheet (PSD) is the summarised the Engineering performance and other technical characteristics of an item, equipment, or system that relates to a single item of equipment and contains the essential process data for initiating the detail design of an item. A Process Equipment Data Sheet describes the fundamental data necessary to start discipline wide specific engineering in the mechanical, structural, piping, control systems, and electrical components. It includes the overall size, number, approximate geometry and identification of the connections, material of construction and the full range of operating conditions. The Process Data Sheet generally includes a simple diagram. (Refer to the Mechanical Data Sheet; Vendor Data Sheet)

Process Design

A Process Design is 1) the design of processes that design products produce products and services for desired physical or chemical transformation of materials. The Process Design is central to chemical engineering, and it can be considered to be the summit of that field, bringing together all of the field's components and services supply network design concept generation screening layout and preliminary flow design evaluation that determines the equipment required, workflows, and implementation requirements of a specific process; 2) in management, the Process Design is to take into account the appropriateness of the process to overall organisation objective and should deliver customer value with constant involvement of the management at various stages. In order to achieve a good process design, effective process strategy is required, which deals with a singular line items required to manufacture the end product.

Engineering

Engineering

WORD **DEFINITION CATEGORY**

Process Engineering Process Engineering is a branch of engineering disciplines, focuses on a process technology selection, configuration, integration and optimisation of the process and utility facilities. and a selection of equipment type considering the performance of production and economics with other disciplines support. The Process Engineer is responsible for the development of process design and engineering document including PFD, P&ID, Process Datasheet, etc. The Process Engineer is often to involve a collaboration of engineering and science, and a normal back ground of process engineer is a chemical enaineer.

Related Definitions in the Project: The Engineering

Process Safety

Process Safety is a disciplinary framework for managing the HSE integrity of operating systems and processes handling hazardous substances that involves making sure the facilities are well designed, safely operated and properly maintained to prevent leaks of hazardous materials. The Process Safety focuses on preventing fires, explosions and accidental chemical releases in chemical process facilities.

Reference Definition by IPIECA: Process Safety is a disciplined framework for managing the integrity of operating systems and processes handling hazardous substances by applying good design principles, engineering, and operating and maintenance practices. It deals with the prevention and control of incidents that have the potential to release hazardous materials and energy. Such incidents can result in toxic effects, fires or explosions, and could ultimately result in fatalities, injuries, property damage, loss of production or environmental damage.

Process Safety Management (PSM)

Process Safety Management (PSM) is a safety management system concerned with the safety hazards arising from process operations and is distinct from the management of conventional safety (slips, trips, falls etc). The PSM requires detailed knowledge of the chemical and process hazards associated with the operations of the plant that is a regulation by the U.S. Occupational Safety and Health Administration (OSHA)

Reference Definition by Aiche.org: **Process** Management (PSM) is a management system that is focused on prevention of, preparedness for, mitigation of, response to, and restoration from catastrophic releases of chemicals or energy from a process associated with a facility.

Process Severity

Process Severity is the indication of the degree of impact that HSE is the development or operation of a component application in a process or system. The Process Severity, higher effect on the system functionality will lead to the assignment of higher severity.

Reference Definition by Aiche.org: Process Severity is the indication of the degree of aggressiveness of the process medium on the hardware; aggressiveness would include erosion, stress, corrosion, temperature, blockage, etc. Four categories of severity are used in this book: Clean, General Industry, Moderately Severe, Severe.

🤨 The Project Definition

Process-Based Quality Management System

A Process-Based Quality Management System A Process-Based Quality Management System is a quality management system (QMS) to improve organisational efficiency and effectiveness by which organisations improves safety and quality in produced outputs.

Quality

Reference Definition by ISO: A Process-Based Quality Management System uses a process approach to manage and control how its quality policy is implemented and how its quality objectives are achieved. A process-based QMS is a network of interrelated and interconnected processes. Each process uses resources to transform inputs into outputs. Since the output of one process becomes the input of another process, processes interact and are interrelated by means of such input-output relationships. These process interactions create a single integrated process-based QMS.

Procurement Management

Procurement Management is a work process of managing and controlling the procurement activities (procurement work process: bidder list; bidding; contracting; expediting and inspection; transportation; close-out; etc.) to supply required equipment and materials or services to the project team on time, within budget and respected quality and quantity. The procurement work process is developed based on a fair and open competition. The procurement team evaluates and records a performance of suppliers (vendors) with the project team and related organisations to update company's bidder list for the future business. Responsibility of the procurement team can be extended to a whole bulk material handling work process (from the bulk material take off (MTO) to field material control)

Related Definition in the Project: Procurement; Material Management; Logistics Management

Procurement

Procurement Work Process (Cycle)

A Procurement Work Process (Cycle) is the series of work steps to procure goods (equipment or materials) or services. Identify items (grouping, to be handled together) to be purchased is the first step, and finalise bidder list with prequalification, generate a Request for Quotation (RFQ, Inquiry and Requisition), release the RFQ to approved bidders, evaluate their commercial and technical proposals, select a successful bidder (vendor or supplier or sub-contractor) through clarification and negotiation, award and make contract (release a Purchase Order (PO)), expedite and inspect supplier's work progress and performance, held an acceptance test, hand-over material or service from supplier and make a final payment, and perform an appraisal for record and close-out

Related Definitions in the Project: The Procurement

Production Cost

Production Costs are the costs that occur in the manufacturing facilities that includes the direct materials and labour, and manufacturing overhead used to manufacture products. (Called as manufacturing costs, product costs)

Business

Production Engineering

Production Engineering is an application of manufacturing techniques, engineering sciences with management and control to produce a specific product that includes activities such as design, development, implementation, operation, maintenance, and control of all processes in the manufacture of a product as well as analysis of producibility, productions processes, and systems.

Engineering

Related Definitions in the Project: The Engineering

Production Sharing Agreement (PSA)

A Production Sharing Agreement (PSA) is an agreement between a government and a resource extraction company. The PSA allows by the government to the company the right to extract and develop a natural resource under which the company bears the financial risk of exploring and extracting the resource production facilities in return for the right to export or sell a quantity of gas or oil.

Business

Reference Definition by Gas Strategies: A Production Sharing Agreement (PSA) is an agreement between an international producing company and a host government or state oil company under which the international company acts as risk-taking contractor investing in exploration and/or production facilities in return for the right to export or sell a quantity of gas or oil that may be produced from the Concession or Block. Sometimes known as a Production Sharing Contract. The terms are interchangeable and the use of one or the other depends on the country.

Productivity

Productivity is a measure of the performance rate at which a company, organisation, or individual produced products that is the relationship between the physical output of a product and the factor inputs which have used for outputs. The Productivity (efficiency or performance) is a measurement of hours or cost expended that is computed by dividing average output by the total costs incurred or resources consumed.

WORD	DEFINITION	CATEGORY
Profit Margin	A Profit Margin is a measure of profitability that is the difference between the total amount of money a company receives from sales and the total cost of producing all its products and services. The Profit Margin is the percentage of sales turning into profits, or expressed as the profit percentage of the revenue: a gross profit margin, operating profit margin, and net profit margin.	Business
Profit Sharing	Profit Sharing is an incentive arrangement plan that gives employees a share in the profits of a company under which employees regularly receive, in addition to their wages and salaries, a share on some predetermined basis, in the profits of the undertaking, the sum allocated to workers varying with the level of profits. The Profit Sharing concept was adopted at an International Congress on Profit Sharing held in Paris in 1889.	Business
Profitability Index (PI)	A Profitability Index (PI) is the investment appraisal technique that measures a ratio between the present value of future cash flows and the present value of costs for the project. Related Definitions in the Project: The Economic Reviews	Controls
Program Sustainability	Program Sustainability is the act of decreasing dependence on the ongoing commitment that should work to better ensure sustainability by creating more efficient mechanisms for funding, such as the repurposing of existing resources through improved alignment, and coordination of complementary activities and resources.	Management
Programmable Controller	A Programmable Controller is a controller which has a human interface that is used for the control of machines and manufacturing processes through the implementation of specific functions such as logic, sequencing, timing, counting, and arithmetic, to control through digital or analogue inputs and outputs, various types of machines or processes.	Engineering
Programme Management (Program Management)	Programme Management (Program Management) is a process of managing corporate multi-projects that is the coordinated management of projects and change management activities to achieve beneficial change. The Programme Management is closely related to systems engineering and industrial engineering.	Management
Programme Manager (Program Manager)	A Programme Manager (Program Manager) is a visionary leader for the overall programme and corporate multi-projects who is responsible for accomplishing a specific set of programme objectives, and completed to achieve the overall goals. (Refer to the Programme Management; Project Manager)	Management

Progress Measurementation

Progress Measurementation is a regular measurement of performance or achievement which generates reliable data on the effectiveness and efficiency of programs. The Progress Measurementation system is using the weight value (or weight factor) for the project phases and disciplines. The Progress can be calculated differently depending on the aspects of project cost, schedule, resource, or an integration of cost, schedule and resource such as work volume quantities, activity durations, budgeted cost, resource effort hours including labour hours and so on. There are many factors to account for accurate progress measurementation that is a type of measurement, an accuracy of the input data, a frequency of the collect and record, and change management, etc.

Controls

Progressive LSTK (Lump Sum Turn Key) Contract

A Progressive LSTK (Lump Sum Turn Key) Contract is a type of the contracts that splits into phases where an agreed fixed price (lump sum) for a limited scope of work or reimbursable basis at the start of the project or each phase, and convert to lump sum fixed price after the project is fully developed. The Progressive LSTK (Lump Sum Turn Key) Contract can be applied in a very large project or urgent project to reduce the overall project especially, contract parties' financial risks at the start of the project, and this increases flexibility to owner to incorporate requirements into the project until the project is fully developed.

Management

Related Definitions in the Project: The Project Contract

Related Definitions in the Project: The Project

Project

A Project means that a planned work or task is carried out under the agreed time frame, cost and resources creating committed a product or service, usually with a specific goal. The Project is unique endeavour under taking different timing, resources, procedures, and circumstances. The Project is executed by a team work and systematic operation internal and external organizations rather than individual work that is an integrated effort, planning, execution, controlling and monitoring, close-out and appraisal, and management.

Management

Project Acceptance Criteria

Project Acceptance Criteria is the quality provisions and a specified set of characteristics, descriptions of capabilities, or other useful qualities of the project results that is established the acceptability of an item in its use environment using a checklist for project team to focus on the client expectations.

Management

Reference Definition by Taskmanagementguide: The acceptance criteria should be defined in the planning phase – it is a product of collaborative efforts (interviews, discussions, negotiations and conclusions) of the project manager and project customer, so the team members clearly know what they should deliver to the customer, while the customer knows what he will get in a result of the project (he recognizes how his needs correlate with the project results). Project acceptance criteria serve as a checklist for project team to focus on the client expectations and for customer to control whether he has got everything he requested for (both at the end of the project and on certain intermediary milestones)

WORD **DEFINITION CATEGORY Project** A Project Administrator is a professional assistant with project Management Administrator duties who oversees management and performing administrative functions concerned with a project. The Project Administrator is specialized in facilitating, reporting and analysing projects under the supervision of a project manager. (e.g. calling partners, making appointments, ordering consumable supplies, preparing reports, etc.) **Project Alignment** A Project Alignment Meeting is required an agreement and Management consensus with internal/external functional organisation to Meeting develop a common understanding of the purposes and goals of the project and methods of achievement these goals and objectives among the key project participants and stakeholders. The Project Alignment Meeting should be held in the beginning of the project (project initiation phase), possibly during the project kick-off meeting. **Project Assessment** A Project Assessment for the proposal is an evaluation work Management for the Proposal process to make a decision of bid or no-bid, and to evaluate whether or not the business is profitable or beneficial for the company. The Project Assessment activity includes client's estimated budget, schedule, execution capability, key member involvement, project urgency, preferred contractor as well as underlying issues and concerns, etc. Related Definition: The Proposal Work Process A Project Baseline is a basis of contractual responsibility **Project Baseline** Management (baseline) which is clearly defined and agreed between contract parties prior to commencement of the project, and is a fundamental basis of measurement of the project completeness. The Project Baseline is a project management and control tool to help a solid understanding of the project for all internal and external project members. Related Definitions in the Project: The Project Baseline **Project Baseline** The Project Baseline Document is initially developed by a Management **Document** proposal team and further updated by a project team during the project execution. The Project Baseline Document should be prepared and developed with accurate information, and implemented from the project kick-off, however it can be started with existing materials that have been prepared for the proposal and developed for the project initiation, and should be updated as per the detailed project planning and execution under the project manager's responsibility. Practically, the Project Baseline consists of Contract Basis; Scope of Work; Project Schedule; Commercial terms and conditions; Project Execution

Plan (PEP) include Project Risk Management, and other critical

Related Definitions in the Project: The Project Baseline

specific requirements of the project.

Project Baseline Schedule

A Project Baseline Schedule can be used as a proposal document (initial developed project execution schedule for the proposal), Level 1 (Project Master Schedule) or Level 2 (Project Summary Schedule) indicating entire project time frame and contractual key milestones. The Baseline Schedule, usually Control Level Schedule (Level 3) should be developed during the project planning and early execution stage, Level 1 or Level 2 Schedule with the project key milestones roll down into the Project Control Level Schedule

Related Definitions in the Project: The Project Baseline; The Project Schedule.

Project Control

Project Control is a work process of the developing plans, measuring the actual performance, and creating reports for the project schedule, cost and resources by data gathering, status analysing, comparing actual performance with planned, and communicating with project teams to support right and effective decision making. The Project Controls need a forecasting ability, developing corrective action, and change management. Related Definitions: The Project Controls

Project Cost

Project Cost is the total funds needed to complete the project or work that consists of a Direct Cost and Indirect Cost. The Project Costs are any expenditures made or estimated to be made, or monetary obligations incurred or estimated to be incurred to complete the project which are listed in a project baseline.

Related Definitions in the Project: The Project Cost

Project Definition

A Project Definition is a clearly and concisely defined statement of the exact meaning of words, phrases, sentences or descriptions of the subject in the project business. The definition can be varied in aspects like precision or popularity, and different definitions with different purposes and focuses. The Project Definition is agreed in terms of the project language that is the essential requirement and the critical success factor for the project execution to communicate accurately with the same understanding of the meaning or terminology. Some critical project words and phrases are defined in the contract document.

Related Definitions in the Project: The Project

Project Execution

Execution is the implementation processes that is the act of doing or performing the works and activities in accordance with agreed plans and procedures to satisfy the specifications and contractual requirements. The Project Execution is the performing the project scope of works and activities in accordance with the project baselines, plans and procedures with the resource, interface, change, schedule, cost, risk, quality, safety and environment management, and other contractual requirements. The key success factors for the project execution is well defined project definitions, and roles and responsibilities, organised and building the team works, and accurate status reporting including forecast, timely decision making under the project manager's leadership within internal and external organisations. (Refer to the Key Words for Successful Project Execution)

Controls

Controls

Management

Project Financing

Project Financing is a method of long-term financing of Management infrastructure or industrial projects that is the raising of finance based upon a non-recourse or limited recourse where the borrower will be dependent on the internally generated cashflows of the project. The lender has no recourse to the project owner's other assets (non-recourse financing) but actually, the borrower's liability is strictly defined (limited recourse financing).

Business

Project Goal

A Goal is an aim or purpose supported by broad statements that is a big picture of what the organisation wants to achieve, or the final outcome to be, and having one or more objectives. The Project Goal is the project team wants to achieve related to the project needs, and simply stated, that must be achievable, measurable, specific and realistic for the project team as well as internal and external organisations including the contract parties.

Management

Project Health Check (PHC)

A Project Health Check (PHC) is a tool for the project management and control whether a project is well-managed and inherent risks are being identified and controlled in accordance with its objectives and how well it adheres to organisational processes or standards. The PHC is an independent assessment, project members including a project manager, sponsor and other project key staffs are fully involved in the day to day project operations that they can fail to recognise the true status of a project. The PHC is intended to focus on cross functional project execution issues such as cost, schedule, safety, and other KPIs including current performance and forecasting.

WORD **DEFINITION CATEGORY Project Initiation** Initiation is a formal commencement of the work by obtaining Management authorisation. The Project Initiation means that the project execution team begins the project works or activities. Establish a project organisation, project baselines and kick-off meetings with internal and external members, and define what to do; who is going to be key members; overall project scope of work (responsibility); project schedule; budget, and project goals and objectives (execution philosophy or principle) to be a basis of the Project Execution Plan (PEP) and procedures. The Project Initiation team should agree with the overall project status include risks from a proposal team or a corporate planning Related Definitions in the Project: The Project **Project Life Cycle** The Project Life Cycle is a definition of the project progressive Management work processes from the beginning to the end of the project. The Project Life Cycle consists of the project initiation, planning, implementation and execution (controlling and monitoring), and close-out activity. Project Management is the managing and controlling the **Project Management** Management project scope of work with available resources that is the systematic work processes with skills, knowledge, tools and systems, and leading resources to achieve the project goals and objectives. The work process of Project Management is Initiating, Planning, Execution (Implementation, monitoring and controlling), and Close-out to complete the project successfully through the minimisation of the risks by an efficient resource and information management, and the maximisation of the company interests. A Project Manager (or Project Director) is the person who has an overall responsibility to make decisions and oversee the project. Related Definitions in the Project: The Project; The Project Management **Project Management** Project Management Programme (Program) is the essential Management **Programme** resources for project delivery professionals leading, managing (Program) or involved in projects or programmes that is a written system or manual and defines the project key aspects such as project goals and objectives, scopes, internal and external roles and responsibilities, plans and procedures, required information, targets to achievement including anticipated completion date and commercial results, and deliverables. necessary resources and tools with kev personnel qualifications and training, risks, changes, continuous improvement as well as close-out, management review and Related Definitions in the Project: The Project Management **Project Objective** An Objective is a specific statement or performance measure Management to support the goal achievement: how to achieve the goal. A Project Objective is a specific result of outcome, measurable and with time frame that lead to achieving the project goal.

Every goal has one or more objectives in line with the goal.

Project Organisation (Organization)

A Project Organisation (Organization) defines the human infrastructure, and identifies roles and responsibilities of each positions that facilitates the coordination and implementation of project activities. One of the important decisions of project management is the form of organisational structure that the team members with a minimum missing, overlaps and conflict. The success of project depends on its organisational structure, key personnel capability, and management work process in which where decision is made. The Project Organisation can be structured as a Functional Structure Organisation, Project TF (Task force) (traditional Hierarchical) Structure Organisation, and Matrix Structure Organisation. The Project Organisation can be evaluated different options based on the project personnel environmental, company needs, assigned capabilities ensuring efficiency, productivity, operational effectiveness.

Related Definitions in the Project: The Project Organisation

Project Phase

A Project Phase is the identified stages of the project such as a planning, engineering, procurement, construction, commissioning, and hand over activity with the project management and controls. Each phase of the work is carried out a step by step as per the Project Life Cycle definitions such as initiation, planning, execution (controlling and monitoring), and close out.

Related Definition: Project, Project Management, Project Roadmap, Project Life Cycle

Project Planning

Project Planning is a methodology development process for the achievement of the project success that is required an agreement and consensus with internal and external functional organisation through the project kick-off (K/O) meeting and alignment meetings. The Project Planning activities are the establishment and development of the project organisation with roles and responsibilities; the project baselines (e.g. project execution plan (PEP); detailed project schedules; budget and cash flow; risk management plan, etc.); project procedures including reporting and progress measurementation system, and manuals with the work processes for the project progress monitoring, controlling, performance appraisal, and required tools and systems (software). Effective planning requires the resource allocation planning for all team members, developed within approximately 2 to 3 months from the project beginning, and all Planning documentation should be updated and maintained for the entire project life cycle.

Related Definitions in the Project: The Project; The Project Management

Management

Management

Project Protocol

Project Protocol is a statement of rules or formal systems for a common agreement or standard for the project development and implementation that enables different organisations to use the same procedures, specifications, and objectives. The Project Protocol document are normally, a project summary, project background and information, goal and objective, methodology and organisation, budget, schedule, project risk, and references, etc. (Refer to the Project Execution Procedure (PEP))

Management

Project Roadmap

A Project Roadmap is a framework of strategic planning for how to achieve the project objectives and goals under the Project Execution Plan (PEP) and company guidelines. The Project Roadmap is a plan document designed in a graph view, describing detailed actions with specific solutions that applies to the project initiation, planning, execution and close-out activities utilising resources. To develop the Project Roadmap: communicate company mission and vision; develop project goals and objectives; analysis any gaps; define core strategies with goal setting and implementation and regularly review and feedback.

Management

Project Screening

A Project Screening is a preliminary assessment or examination of the project suitability for the selection and application process or development methodology that evaluates or investigates a large number of project candidates to identify the opportunities to obtain an idea of whether the additional time and efforts consuming for further business case development is reasonable. The Project Screening may conduct by different procedures and methods to compare the strengths and weaknesses.

Management

Controls

Project Summary Schedule (Level 2 Schedule)

A Project Summary Schedule (or Level 2 Schedule) is a high level integrated project schedule for the entire project time frame that is used for high level internal and external management reporting by summarizing to the management summary schedule (master schedule (Level 1 Schedule). The Project Summary Schedule shows the project milestones of engineering, procurement, construction and start-up activities by network logic, identifies critical path, key deliverables divided by units and system facilities includes key critical activities and units or systems. The Project Summary Schedule is developed, usually, as a summarisation of the Level 3 Project Schedule (Project Control Schedule).

Related Definitions in the Project: The Project Schedule

Project TF (Task Force) Organisation

A Project TF (Task Force) Organisation is a traditional hierarchical structure organisation that is defined by PMI as a hierarchical structure or projectized organisation. A Project Manager who is the head of all authority of the project in commercial, technical and execution in the Project TF Organisation. A corporate functional organisation such as Quality, HSE, Risk, Value, O&M, IT, Estimate, Finance, HR, Legal, Business, etc., can be assigned as project supportive staffs. The Project TF Organisation is normally applied for a medium and large size of project, and multi projects project. Related Definitions in the Project: The Project Organisation

Management

Projection

A Projection is used in relation to a time series that is a future value calculated according to predetermined changes in the assumptions of the environment.

Management

Proposal Opportunity Assessment

A Proposal Opportunity Assessment is a systematic evaluation work process to make a decision whether a company to participate a bid or not. The Proposal Opportunity Assessment includes the analysing scopes and terms and conditions; developing client, competitors' profile and critical issues of the project; assessing company's capabilities, and developing a preliminary execution plan, etc.

Management

Proprietary Information

Proprietary Information is a privately owned exclusively and controlled information, technology, or product that is usually distinctive characteristics or features, and incompatible with competing items. (e.g. copyright, patent, state of art technology (process technology), or products (catalyst), etc.)

Related Definitions in the Project: The Proposal Work Process

Management

Reference Definition by ISO: Proprietary Information is restricted to management approved internal access and protected from external access. Unauthorized access could influence Company's operational effectiveness, cause an important financial loss, provide a significant gain to a competitor, or cause a major drop in customer confidence. Information integrity is vital.

Protective System

A Protective System is the systems such as pressure vessel HSE relief valves, or the devices used to protect the power systems from faults by which the function is to prevent or mitigate the occurrence of an incident.

Provisional Acceptance (PA)

The Provisional Acceptance (PA) is a conditional acceptance by owner, usually noticed at the mechanical work is completed (Mechanical Completion (M/C)) that means an owner has accepted the project but the plant performance test is needed to have a verification or confirmation at the actual operation conditions within an agreed period. The plant is handed over to the owner when the contractor achieves the Provisional Acceptance. The Final Acceptance to be achieved after the plant performance is verified or confirmed (Performance Test) based on the agreed contractual requirement.

Related Definitions in the Project: The Construction

Construction

Essential WORD **DEFINITION CATEGORY Provisional Sum** A Provisional Sum is an amount of allowance money at the Management present time but likely to be changed that is tentatively agreed for the work to be performed. The Provisional Sum may be included in the contract as a specific contingency for the execution of work or the supply of materials or services which may be used in whole or in part or not at all based on the contract terms and conditions. The Provisional Sum is changed when the additional information is available or work definition is more clearly defined. Related Definitions in the Project: The Project Contract **PS** (Performance A Performance Standard (PS) is a management approved Management Standard) performance requirement or expectation that must be met to the company appraisal procedure at a particular level of performance. A full set of standards must be established for each critical element and included in the employee performance plan. The Performance Standard provides the employee with specific performance expectations for each major work. They are the observable behaviours and actions which explain how the job is to be done, and the results that are expected for satisfactory job performance successfully. The PS can be developed by Benchmarks against which actual performance is measured. **Public Relations** Public Relations (PR) is the practice of managing the spread of **Business** information between an individual, organisation, company, (PR) government agency, or a nonprofit organisation and the public. The PR communicates with the target audience directly or indirectly through media with an aim to create and maintain a positive image and create a strong relationship with the audience by press releases, newsletters, internet, public appearances, etc. **Public Utility** A Public Utility is an organisation that supplies and maintains General the infrastructure for the public water, gas, and electricity with the production, transmission and distribution primarily for use by the public. These may be private companies and cooperative organisations, local or regional authorities, nationalised undertakings or governmental organisations. **Pump** A Pump is a machinery equipment using the mechanical Engineering actions, such as pressure, to move or transport a fluid from one place to another. Pump Selection Guides by PumpScout.com: There are lots of pump types available, but which one is right for you?

Understanding which pump type is right for your application is critical to reduce costs and increase the life of your pump and system. We've worked with leading pump experts to put together this comprehensive guide to the most popular pump types. The individual pump types are listed in the left column and are grouped by either centrifugal pumps or positive displacement pumps.

WORD

DEFINITION CATEGORY Punch List A Punch List is a punch items list in which any listed items are Construction not conformed to contract specifications that needs to be corrected and completed to satisfy the terms of the contract. The Punch List is generated in the final phases of construction, by people from all parties walk around the site and note down any issues and deficiencies that need to be resolved before receiving final payment or handover a facility to other, usually attached to the certificate of substantial completion. These lists may be managed as simple written checklists, or in electronic form. Electronic ones are very convenient because they can be distributed to many related people and can be updated instantly, allowing everyone to see progress. This can be especially important when multiple contractors need to address the same issue. Related Definitions in the Project: The Construction A Purchase Requisition (or PO Requisition) is the completed Procurement **Purchase** Requisition (or PO procurement document that is updated and modified repulsion Requisition) document after bidder's proposal reviewed, clarified and negotiated for the purchase order (PO) including specifications, quantities, and the time frame, etc. The PO Requisition authorises a vendor or supplier to proceed works based on this document. Related Definitions in the Project: The Procurement Present Value (PV) is the current value or present discounted **PV (Present Value) Business** value that is the value of an expected future income stream determined as of the date of valuation. Related Definitions in the Project: The Economic Reviews **QA** (Quality Quality Assurance (QA) is a work process to make sure that a Quality Assurance) produced good or working results are fully meet the quality requirement. The Quality Assurance System is a preventive and proactive work process through establishment of plan and procedures and auditing it's implementation, and monitoring and controlling of a corrective action requirement. **QC (Quality Control)** Quality Control (QC) is a work process of checking and Quality inspection for goods or results (outputs/ outcomes) of activity or work quality against the standards. (Refer to the Quality Assurance (QA)) **QRA** (Quantitative A Quantitative Risk Assessment (QRA) is the systematic HSE Risk Assessment) development of the safety and risk management tool through engineering, procurement, construction and operation for oil, gas, chemical and petrochemical plants. The QRA is the identifying risks and evaluating possible accidental events (frequency and fatality), and calculation of the risks for leaks and explosions of the plant. Qualification A Qualification is 1) an official requirement or official record of Management performance, experience, ability including education and certificate, etc. of a particular work or job; 2) a condition that must be fulfilled before a right can be acquired.

WORD **DEFINITION CATEGORY Qualitative Analysis** Qualitative Analysis is to measure its quality rather than Management quantity that uses unquantifiable information, such as leadership, experiences, coordination and cooperation skills, relationship, strength, etc. described feelings, thoughts, perceptions, and recommendations can be used to understand motivations. The Qualitative Analysis in chemical analysis is the determination of the chemical composition of a substance or mixture of a sample. Quality Quality is the totality of features and characteristics of a product Quality or service that is a degree of excellence of a good or result of work or activity, highest standard on its ability to satisfy stated. Reference Definition by ISO: The Quality of an object can be determined by comparing a set of inherent characteristics against a set of requirements. If those characteristics meet all requirements, high or excellent quality is achieved but if those characteristics do not meet all requirements, a low or poor level of quality is achieved. So, the quality of an object depends on a set of characteristics and a set of requirements and how well the former complies with the latter. **Quality Management** Quality Management is the management activities of the Quality performing organisation that determines quality policies. objectives, and responsibilities including quality planning, quality control (QC), quality assurance (QA), and quality improvement to make sure that an organisation, product or service is consistent, and the company does things to a high standard. **Quality Management** The Quality Management System (QMS) is a system operation Quality System (QMS) by an organisation with a company quality policy, plan, procedures and standards to achieve the company goals and objectives in the quality. Reference Definition by ISO: Quality Management System (QMS) defined that a Quality Management System (QMS) is a set of interrelated or interacting elements that organizations use to formulate quality policies and quality objectives and to establish the processes that are needed to ensure that policies are followed and objectives are achieved. These elements include structures, programs, practices, procedures, plans, responsibilities. roles. relationships. contracts. agreements, documents, records, methods, tools, techniques, technologies, and resources.

Quality Objective

A Quality Objective is the company quality goals that intends to achieve the value of products, services and processes. The Quality Objective is a basic quality management process to establish a set of quality objectives.

Quality

Reference Definition defined by ISO: Quality objectives are based on or derived from an organization's quality policy and must be consistent with it. They are usually formulated at all relevant levels within the organization and for all relevant functions. The adjective quality applies to objects and refers to the degree to which a set of inherent characteristics fulfils a set of requirements; and an object is any entity that is either conceivable or perceivable. Therefore, a quality objective can be set for any kind of object.

Quality of Life (QOL)

The Quality of Life (QOL) is the level of human welfare (wellbeing) measured by social indicators, such as enjoyment, comfort, and health in life rather than an income and production.

Quality

Reference Definition by CDC.gov: Quality of Life (QOL) is a broad multidimensional concept that usually includes subjective evaluations of both positive and negative aspects of life. What makes it challenging to measure is that, although the term "quality of life" has meaning for nearly everyone and every academic discipline, individuals and groups can define it differently. Although health is one of the important domains of overall quality of life, there are other domains as well: for instance, jobs, housing, schools, the neighbourhood. Aspects of culture, values, and spirituality are also key aspects of overall quality of life that add to the complexity of its measurement.

Quality Surveillance

Quality Surveillance is the continuing monitoring of all aspects of production processes that is a planned and scheduled manner without impeding product delivery. The Quality Surveillance is based on performance and risk to maintain the efficiency and quality of the processes.

Quality

Quality System

A Quality System is an organisational structure including responsibilities, procedures, processes, and resources for an implementation of company quality management that will ensure an efficient and effective method of producing a desired product.

Quality

Quantity Survey (QS)

A Quantity Survey (QS) is a professional working in the Construction construction industry concerned with construction costs of the materials and work needed. The Quantity Surveyor manages all costs relating to projects, from the initial calculations to the final figures. A Quantity Surveyor may work for either the client or the contractor, working in an office or on site who can involve in a project from the start, preparing estimates and costs of the work. When the project is in progress, quantity surveyors keep track of any variations to the contract that may affect costs and create reports to show profitability. A Professional Quantity Surveyor has a detailed and comprehensive knowledge of construction and construction methods, as well as the laws relating to construction projects and accounting, in order to provide cost and financial advice.

Questionnaire

A Questionnaire is a list of questions that creates for the purposes of a survey or sequence of subjects from the information.

Management

R&R (Role and Responsibility)

A Role and Responsibility (R&R) is a matrix chart identifying functional areas and relationships between the contract Work Breakdown Structure (WBS) elements and the functions (control account) or people (members) in the organisations assigned responsibility for ensuring their accomplishment in order to deliver a successful end product or service. Related Definitions in the Project: The Work Breakdown

Structure (WBS).

Management

RAM (Reliability, Availability and Maintainability) Study

A Reliability, Availability and Maintainability (RAM) Study is an asset performance analysis to predict the performance of the production system and to provide a basis for production efficiency and production optimisation for both existing and future assets are designed and operated. The RAM Study techniques can be applied at engineering design, construction and operational stage, it may support the conceptual selection process, FEED and detailed design decisions. The RAM analysis, simulations are used to calculate availability figures for a technical system, both equipment reliability and maintainability. The most important feature of a RAM analysis is the input information such as capabilities, failure rates, consequences of failures, spare parts availability, mobilisation times, supplies of utilities and resources, planned maintenance periods and system operating rules, etc.

Operation

RAS (Required At Site)

A Required At Site (RAS) date is the date in which the project equipment and materials should be delivered to the site in order for the project schedule to be maintained.

Controls

Raw Material

A Raw Material is a basic substance in its natural condition, such as air, water, oil or steel, etc., before it has been processed for use.

Substance

RBI (Risk-Based Inspection)

Risk-Based Inspection (RBI) is a systematic risk assessment and management methodology that involves quantitative assessment of the probability of failure (PoF) and the consequence of failure (CoF) associated with each equipment item such as pressure vessels, heat exchangers and piping systems in a process unit to determine inspection strategies for equipment. (Opposed to the Condition-Based Inspection (CBI)).

Operation

Reference Definition by Inspectioneering.com: API RP 580: RBI (Risk-Based Inspection), Third Edition, is a recommended practice developed and published by the American Petroleum Institute (API). This RP outlines and explains the basic elements for developing, implementing and maintaining a credible risk-based inspection (RBI) program. It is a generic document on RBI that can be used as a measuring stick by which the quality of any and all RBI methods and work processes could be evaluated to determine if they meet the level of quality prescribed in the RP.

RCM (Reliability Centred Maintenance)

A Reliability Centred Maintenance (RCM) is a systematic Operation maintenance strategy that is implemented to optimise the maintenance program by a corporate level maintenance. The Reliability Centred Maintenance (RCM) will lead to increase in cost effectiveness, reliability, understanding of the level of risk, and optimising productivity of the plant.

Definition by Aiche.org: Reliability-Cantered Reference Maintenance (RCM) is a systematic analysis approach for evaluating equipment failure impacts on system performance and determining specific strategies for managing the identified equipment failures. The failure management strategies may include preventive maintenance, predictive maintenance, inspections, testing, and/or one-time changes (e.g., design improvements, operational changes).

Reaction

A Reaction is 1) a feeling, thought, or behaviour in response to a situation or event; 2) any transformation of material accompanied by a change of enthalpy. (Refers to the Chemical Reaction)

Engineering

Readiness Review

A Readiness Review is a work activity that verifies the readiness and traceability of the condition of process equipment and safety systems, the status of resourse mobilisations including qualifications of personnel conform to predefined conditions. The Readiness Review is normally conducted before each major event configuration including hardware and software and provides management with the assurance that a system is ready for conducting the next phase.

Management

Recognition

Recognition is 1) a fact of knowing because of previous knowledge or experience; 2) the action or process of agreement that is true, valid, or legal; 3) special notice or attention. Employee recognition is an acknowledgement of an individual or team's behaviour, effort and accomplishments that support the organisation's goals and values.

WORD	DEFINITION	CATEGORY
Record Drawing	Record Drawing is a complete clean set of drawings that is the as-built drawings submitted by the contractor, as a record of the work. The Record Drawing reflects how the project was built, folding the as-built revisions into the design documents, including addenda and design revisions including field design changes with stamped or otherwise marked as Record Drawing.	Engineering
Rectification Period	Rectification Period (or Defect Liability Period) is a duration in which a contractor has responsibility to rectify any defects. The Rectification Period begins after a completion certificate is released and typically for six to twelve months, and a conditional bond such as a default bond may require litigation before any payment can be obtained.	Management
Refinery	A Refinery is an industrial process of a crude treatment plant that consists of distillation (separation), conversion and treatment (purification) processes. The Refinery process is producing finished petroleum products from crude oil, unfinished oils, natural gas liquids, other hydrocarbons, and oxygenates.	Technology
Regasification	Regasification is the physical process of the reconversion of LNG (Liquefied Natural Gas) into NG (Natural Gas) suitable for pipeline transportation. The LNG Regasification is a process of converting LNG to natural gas at atmospheric temperature at -162 °C.	Science
Regulation	Regulation is an official rule or principle that is created and controlled by an official organisation and enforced by a regulatory body. (e.g. the protection of environment)	General
Reimbursable Contract	A Reimbursable Contract is a type of the contracts in which a contractor is reimbursed reasonable and allowable actual costs incurred by a contractor plus additional profits in accordance with the contract terms and conditions. (Called as the Cost plus Fee Contract) Related Definition in the Project: The Project Contract	Management
Reimbursable Cost	Reimbursable Cost is a payment provision contract that is an amount expended and reasonably incurred by a contractor to be paid by the owner or client based agreed terms and conditions such as time spent, unit price, fees, material cost, etc.	Controls
Reinsurance	Reinsurance is an insurance bought by an insurance company (Insurer) to transfer a portion of its risks to another for the large demands from its customers.	Business
Relationship (Schedule Logic)	A Relationship (Schedule Logic) is a schedule dependency between activities that can be assigned as four (4) types: Finish to Start (FS), Start to Start (SS), Finish to Finish (FF) and Start to Finish (SF) with a lead or lag duration. (Refer to the Dependency)	Controls

WORD	DEFINITION	CATEGORY
Reliability	Reliability is a high probability that performs a required function without failure, needing maintenance or replacement under all relevant conditions for a required period of time.	Operation
Reliability Engineering	Reliability Engineering is an engineering discipline for applying scientific know-how to a process, facility, or system that emphasizes dependability in the lifecycle management of a product to perform its required functions without failure. The Reliability Engineering utilises technology analysis to achieve reliability and maintenance task improvements in focuses on eliminating maintenance works, and to improve the productive capacity of critical equipment.	Operation
	Related Definition by Wikipedia: Reliability Engineering is a sub-discipline of systems engineering that emphasizes dependability in the lifecycle management of a product. Reliability describes the ability of a system or component to function under stated conditions for a specified period of time. Reliability is closely related to availability, which is typically described as the ability of a component or system to function at a specified moment or interval of time.	
Reliability Study	A Reliability Study is a systematic study for the preventive maintenance that results in the more reliable outputs and end products. The Reliability Study as a part of the maintenance strategy plan through the reliability engineering works with the design and construction of systems and materials including tests and programs to improve reliability. High reliability is achieved through design efforts, choice of materials, quality assurance efforts, and proper operation and maintenance, which add to the costs of production and product ownership.	Operation
Rely On/ Upon	Rely On/ Upon means 1) to trust or believe someone or something; 2) to need for support, help, etc.; 3) to depend on; 4) to expect (something) with confidence	General
Renewable Energy	Renewable Energy is any energy resources that is generated from natural processes, and continuously replenished or naturally and constantly regenerated over a short time scale. The Renewable Energy include sunlight, geothermal heat, wind, tides, water, and various forms of biomass. Renewable Energy does not include energy resources derived from fossil fuels, waste products from fossil sources, or inorganic sources. Renewable Energy technologies range from Solar Energy; Wind Power; Geothermal Energy; Biomass; Hydropower (or Hydroelectric Power); Tidal Energy; Wave Energy; Fusion Energy, etc.	Energy
Renewable Resource	A Renewable Resource is an organic natural resource which can be replaced or is always available naturally or practically inexhaustible.	Engineering

WORD	DEFINITION	CATEGORY
Requisition	A Requisition is a set of the procurement document that describes technical information used for the suppliers' proposal. (Refer to the Material Requisition (MR), Request for Quotation (RFQ), and Inquiry) Related Definitions in the Project: The Procurement	Engineering
Residence Time (or Retention Time)	Residence Time (or Retention Time) is a measure of how long a fluid stays in a vessel for the equilibrium state at required pressure and temperature. (e.g. a chemical reactor, a geochemical reservoir, bacteria in a culture vessel, etc.) The Retention Time is determined by dividing the liquid volume inside the vessel by the liquid flow rate.	Engineering
Resilience	Resilience means that an ability of back to the original shape, or to recover quickly from difficulties.	Engineering
Resource	Resources are 1) anything obtained from the environment to satisfy human need and want; 2) any factors required or consumed except time to accomplish an activity, typically resources are materials, labour, finance, and knowledge that are transformed to produce benefits.	Management
Resource Allocation Planning	Resource Allocation Planning is the resource management that is the assignment and distribution or scheduling of resources based on resource availability parameters. The Resource Allocation is the scheduling of activities with the resources required by those activities while taking into consideration both the resource availability and the project time. The Resource Allocation is constrained in multiple projects and organisations that may be minimum project cost or minimum project duration with the overall corporate benefits and objectives. Refer to the Resource Management)	Management
Resource Management	Resource Management is the method for the effective planning of all resources that is the distribution or scheduling of resources based on resource availability parameters. The resources are finance, material, labour, skill and knowledge, and procedures, and the Resource Management includes planning, allocating and scheduling of resources to tasks, which has an impact on schedules and costs as well as performance include work safety and quality. (Refer to the Resource Allocation Planning)	Management
Responsibility	Responsibility is 1) a personal charge with performing work necessary to fulfil the requirements of a position which can be delegated; 2) a state or fact of having a duty to deal with things or of having control over someone.	Management
Responsibility Assignment Matrix (RAM)	A Responsibility Assignment Matrix (RAM) is the participation by various roles in an organisation to complete tasks used in clarifying roles and responsibilities for a project or business: Who will do What? The RAM is a chart showing the relationship between the contract Work Breakdown Structure (WBS) elements and the organizations assigned responsibility (OBS) for ensuring their accomplishment. Also, called as the RACI (Responsible, Accountable, Consulted, and Informed).	Management

WORD	DEFINITION	CATEGORY
Restructuring	Restructuring is the process of changing the structure of organising a company, business, or system in a new way to make it operate more effectively.	Management
Retention Bond	A Retention Bond is a type of performance bond that protects the risk of the contractor's failure to perform the contract after the contractor finishes work or project. It is an agreement between a contractor and client by a third party known as a bond provider which acts as a guarantor. The Bond agreement states that in return for the client not holding cash retention, the bond provider will undertake to pay the client up to the amount that they would have had by way of cash retention should the contractor fail to carry out the works or remedy defects. Retention monies are normally viewed as a security for the cost of rectifying defective works.	Management
Retrofit	A Retrofit is the process of modifying a machine or equipment with a part, component, or accessory that was not included originally to improve its performance. (Refer to the Revamping)	Construction
Revamping	Revamping is the act of improving, modifying, or re-structuring a process or plant in order to obtain increased productivity and/or capacity.	Operation
Revision Policy	A Revision Policy is a company standard policy that is the stage in the writing or updating document or policies. The Revision Policy includes when releasing a revised document, a responsible person or organisation determines which category of revision was occurred and become available revision history.	Management
Rework	Rework is 1) to change a piece of writing in order to make it more suitable for a particular purpose; 2) a process required to correct defects or nonconforming item prior to the specified requirement or time including repair, replacement, etc. (Also, called as a redo work)	Quality
RFI (Request for Information)	Request for Information (RFI) is a formal project communication process that is used to collect information or clarify the detailed requirements on the specifications, drawings, and other project document to the relevant party (information originator or client) with an agreed standard format and procedure during the execution phase. The RFI response is the formal clarification and can be a supplement information of the project basis, and a part of the contract requirements after agreed among related parties.	Management

WORD	DEFINITION	CATEGORY
RFID (Radio Frequency Identification)	Radio Frequency Identification (RFID) is a wireless system comprised of two components: tags and readers that uses electromagnetic fields to automatically identify and track tags attached to objects.	Technology
	Reference Definition by Internetofthingsagenda.techtarget.com: Radio Frequency Identification (RFID) is a technology that incorporates the use of electromagnetic or electrostatic coupling in the radio frequency (RF) portion of the electromagnetic spectrum to uniquely identify an object, animal, or person. RFID is coming into increasing use in industry as an alternative to the bar code. The advantage of RFID is that it does not require direct contact or line-of-sight scanning. An RFID system consists of three components: an antenna and transceiver (often combined into one reader) and a transponder (the tag).	
RFQ (Request for Quotation)	A Request for Quotation (RFQ) is the bidding document for procurement process that is to invite suppliers into a bidding process for the specific products or services, normally consisted of an Inquiry (non-technical) and Requisition (technical) document. Related Definitions in the Project: The Procurement	Procurement
RFSU (Ready for Start-up)	Ready for Start-up (RFSU) is a phase of construction and operation in which a plant or facility is a mechanically completed and fully commissioned. The RFSU is ready to introduce the feed stock for the operation. Related Definitions in the Project: The Construction	Operation
Rigging Plan	A Rigging Plan is developed for a heavy and tall equipment erection procedure and method. The basic idea behind a rigging plan is to have control and establish safety precautions before the process is completed. It is also an important planning process that will identify all hazard situations that might be found during the lifting process.	Construction

WORD **DEFINITION CATEGORY** Risk A Risk is a possibility of negative impact happening, and an Management unknown event or a situation of uncertainty. Reference Definition by ISO: According to ISO 9000, risk is the "effect of uncertainty on an expected result" and an effect is a positive or negative deviation from what is expected. The following two paragraphs will explain what this means. This definition recognizes that all of us operate in an uncertain world. Whenever we try to achieve something, there's always the chance that things will not go according to plan. Sometimes we get positive results and sometimes we get negative results and occasionally we get both. Because of this, we need to reduce uncertainty as much as possible. Uncertainty (or lack of certainty) is a state or condition that involves a deficiency of information and leads to inadequate or incomplete knowledge or understanding. In the context of risk management, uncertainty exists whenever the knowledge or understanding of an event, consequence, or likelihood is inadequate or incomplete. While this definition argues that risk can be positive as well as negative, a note acknowledges that "the term risk is sometimes used when there is only the possibility of negative consequences". Related Definitions in the Project: The Risk Management Risk Acceptance is a taking risk with a possible opportunity. A **Risk Acceptance** Management probability of occurrence of an acceptance risk is a low and an impact is low too. Related Definitions in the Project: The Risk Management **Risk Assessment** A Risk Assessment is a work process of an analysis and Management examining the risk items in terms of the probability of failure (PoF) and their consequences of failure (CoF) and impacts. Related Definitions in the Project: The Risk Management **Risk Based** Risk Based Approach is a quantitative risk assessment Management methodology that takes the appropriate mitigation measures by **Approach** identifying risks and mitigated in accordance with the adequate policies and procedures in place, and provides a certain level of protection in the risk. Related Definitions in the Project: The Risk Management **Risk Classification** A Risk Classification (or Risk Response) is a risk treatment Management work process by an occurrence and impact. The Risk can be classified as a Risk Avoidance (High probability and high impact), an Acceptance (Taking, Retention, and Unidentified Risk, Low probability and low impact), a Mitigation (Sharing, Contingency provision, High probability and low impact), and a Risk Transfer (Financing or Insurance, Low probability and high impact). Related Definitions in the Project: The Risk Management **Risk Hedging** Risk Hedging is a strategy for reducing exposure to the risks. Management Related Definitions in the Project: The Risk Management

WORD	DEFINITION	CATEGORY
Risk Management	Risk Management is a work process to eliminate or minimise potential impact such as loss money, extend schedule, or less performance caused by the risks or uncertainties. The Risk Management work process is the risk identification, assessment and analysis (probability, consequence, and impact), treatment classification (risk response), prioritisation, reporting, monitoring and controlling. A method of risk treatment classification (hedging) is an Avoidance (not to take: High probability and high impact); a Transfer (Financing, Insurance: Low probability and high impact); a Mitigation (Sharing, Contingency provision: High probability and low impact), and an Acceptance (Taking, Retention, and Unidentified Risk: Low probability and low impact) Related Definitions in the Project: The Risk Management	Management
Risk Management Program (RMP) Rule	The Risk Management Program (RMP) Rule is the EPA's accidental release prevention Rule, used for the extremely hazardous substances handling facilities to develop a risk management plan. The RPM Rule requires: identifies the potential effects of a chemical accident; identifies steps the facility is taking to prevent an accident; spells out emergency response procedures should an accident occurs, to prepare and implement a risk management plan.	Management
Risk Mitigation	Risk Mitigation is a systematic reduction approach of the harmful or bad situations that can reduce a risk impact, loss money, extend schedule, or less performance, etc. The Risk Mitigation is applied for the high probability and low impact risks. Related Definitions in the Project: The Risk Management	Management
Risk Sharing	Risk Sharing is a risk management method: Risk Mitigation that is the agreed distribution of risk with other parties. Related Definitions in the Project: The Risk Management	Management
Roadmap	A Roadmap is a strategic plan for how to achieve goals with the core strategic plans and implementations to create a direction for growth. (Refer to the Project Roadmap)	Management

ROI (Return On Investment)

Return On Investment (ROI) is a profitability measure that is the evaluation of the business performance by dividing net profit by net worth. A high ROI means the investment gains compare favorably to investment cost.

Business

Related Definitions in the Project: The Economic Reviews ROI: Set refinery profitability goals (June 2019, HP) - Johnson, A., Johnson, E., Graham Corp.; Lieberman, N., Process Improvement Engineering - While the ultimate purpose of operating a refinery is to produce gasoline, diesel or asphalt, key objectives include improving return on investment (ROI), net profitability and cash flow. Great strides have been made in improving plant efficiency and productivity by implementing online, interactive computer controls. Key segments of refineries have been upgraded, such as vacuum tower steam ejectors and vacuum condensers. Tower resid stripping trays have also been replaced with new types of structured packing. But has this improved profitability or cash flow? How can the first-line management level know that its cash flow or ROI has been improved? ... (more about ...)

ROM (Rough Order of Magnitude)

A Rough Order of Magnitude (ROM) estimate is an approximate estimate used for an initial planning purpose that is performed by an experienced cost estimator with limited information or applying factors, ratios, and escalation to the known cost.

Controls

Related Definitions in the Project: The Cost Estimate (Estimation)

Root Cause

A Root Cause is the reason for non-conformance or system failures that led to an unsafe act or condition resulting in a non-conformance or an incident. The Root Cause should be permanently eliminated through process improvement to prevent an undesirable outcome.

Management

Root Cause Analysis (RCA)

The Root Cause Analysis (RCA) is a method of problem solving used for identifying the root causes of faults or problems. The RCA is the tools, and techniques used to uncover causes of problems to help identify what, how, and why an event occurred so that steps can be taken to prevent future occurrences. The RCA is all fundamentally connected by three basic questions: What's the problem? Why did it happen? and What will be done to prevent it?

Quality

Rule of Law (or Law and Order)

The Rule of Law (or Law and Order) is a principle of the constitution in which the law applies equally to all and that the law is certain.

Management

Reference Definition by Oxford English Dictionary: The authority and influence of law in society, especially when viewed as a constraint on individual and institutional behavior; (hence) the principle whereby all members of a society (including those in government) are considered equally subject to publicly disclosed legal codes and processes.

WORD **DEFINITION CATEGORY Rule-Based System** A Rule-Based System is 1) the action or behaviour in which a Management person follows remembered or written rules; 2) in computer system, provides an answer to a problem in place of a human expert as a way to store and manipulate knowledge to interpret information in a useful way. The Rule-Based System is also used in AI (artificial intelligence) programming and systems. S Curve S Curve is a progress control tool and method of scheduling Controls that shows the growth of a variable (progress) in terms of another variable (time). A display of cumulative progress (or costs, labour hours or other quantities) plotted against time. The name derives from the S-like shape of the curve, flatter at the beginning of the project and the end of the project, and steeper in the middle, which is typical of most projects. The beginning represents a slow and low progress performance, but accelerated after the project operation system is ready, while the end represents a deceleration as the low efficiency of work. Safeguard Safeguard is 1) a measure taken to protect from harm or risk; Engineering 2) in trading, importer's right to impose temporary import restrictions to help protect its domestic industry; 3) in Engineering, systems or administrative controls designed to prevent the causes or mitigate the consequences of deviations (e.g. process alarms, interlocks, procedures) Safety Layer A Safety Layer is an independent protective system of a specific hazard that has its own level of risk reduction. The each Safety Layer must be protected and not affected from a failure of any other protective layers. Reference Definition by Aiche.org: Safety Layer is a system or subsystem that is considered adequate to protect against a specific hazard. The safety layer; cannot be compromised by the failure of another safety layer, is totally independent of any other protective layers, may be a non-control alternative (e.g., chemical, mechanical), may be an administrative procedure, may require diverse hardware and software packages, must be approved according to company policy and procedures, must have acceptable reliability, and must meet proper equipment classification. Safety System A Safety System is the criteria and techniques to optimise HSE safety to limit or terminate an incident sequence that supports program risk management in the application of engineering and management principles. **Safety Valve** A Safety Valve is a guick opening valve used for fast relief at Engineering the excessive pressure that acts as a fail-safe in a thermalhydraulics plant. (Refer to the Pressure Relief Valve (or Pressure Safety Valve (PSV)) SAT (Site A Site Acceptance Test (SAT) is performed at the site when the Quality system is installed at the permanent operation position. The **Acceptance Test)** SAT is to test and check functionalities with other interfaces at the site.

WORD	DEFINITION	CATEGORY
SCADA (Supervisory Control and Data Acquisition)	A Supervisory Control and Data Acquisition (SCADA) is a computerised monitoring and controlling system by coded signals with data acquisition system for a remote electrical equipment and system such as a substation, transmission and distribution network elements.	Engineering
Schedule Buffer	Schedule Buffer is a time of duration added to a project individual activity or the entire project schedule that protects the due dates of scheduled tasks and projects from the impact of uncertainty and variation to a deliverable placed on a schedule. The Schedule Buffer is used in combination with time constraints in the project schedule to create some flexibility. (Refer to the Float (or Slack))	Controls
Schedule Control and Management	Schedule Control and Management is a work process to control and manage the timely completion of the project including schedule development, progress measurementation and reporting, completion date forecasting and trouble shooting supporting.	Management
Schedule Revision	A Schedule Revision is a change or updating a schedule including the network logics, resources, or dates that can be a part of or an entire schedule.	Controls
Schedule Risk Assessment	A Schedule Risk Assessment is the statistical techniques to identify and quantify schedule risks of the technical, resources, or programmatic, etc. The Schedule Risk Assessment is the connection of the risk information of project activities including the sensitivity information of individual project and the potential impact of uncertainty on the final project duration and cost.	Controls
Scheduling	Scheduling is to develop the schedule by the evaluation activities of starting and finishing plan with each activity's duration, predecessor and successor activities, activity relationships (Schedule Logic), required resources, and target completion date. The Resource availability and cost usually are the critical considerations. Related Definitions in the Project: The Project Schedule	Controls
Scope	Scope is a definition of the works to be done that is documented by a contract with details which the company is committed. (Refer to the Scope Management and Scope of Work (SOW))	Management
Scope Change	A Scope Change is a deviation from the project scope originally agreed to in the contract that can be either added to or deleted the scope of work from the original scope. A contract change order is needed to alter the project scope. (Refer to the Scope Management)	Management

WORD **DEFINITION CATEGORY Scope Management** Scope Management is a work process of the project scope of Management work management and control that is ensuring the performance the project requirements specified in the contract. The Scope of Work includes not only for a contractor and an owner but also a third party studies, reviews and approvals. The Scope Management techniques allow project managers to allocate the right amount and quality of work necessary to the project internal and external organisation to complete the project. The Scope Management also requires the scope of work change management and control in accordance with the project change management procedure during the project execution until the project is the successfully handed over to the client. Scope of Facility A Scope of Facility (SOF) is mainly tangible assets, and a part Management of the Scope of Work (SOW). The baseline document of SOF (SOF) is the brief overview of the project facilities to be designed and constructed under the contact, and clearly define the capacities plants or units and technology including process performance and utility consumption. Major critical equipment and equipment list can be added, and owner's providing items should be listed. Related Definitions in the Project: The Project Baseline Scope of Service A Scope of Service (SOS) is an effort service (intangible) based Management (SOS) on experience and knowledge. The baseline document of SOS is a brief overview of the services to be provided including specific major activities in project management, engineering, procurement service and construction management services, and so on. The SOS baseline document can be specified estimated resources amount and mobilisation plan. (Refer to the Scope of Work (SOW)) Related Definitions in the Project: The Project Baseline Scope of Work A Scope of Work (SOW) is a contractor to provide works Management (SOW) (tangible and/or intangible) against the owner's compensations based on the contract and related terms and conditions. The SOW can be further detailed as Scope of Facility (SOF, hardware) and Scope of Service (SOS, software). Related Definitions in the Project: The Project Definition Screening A Screening is a preliminary assessment of the suitability for a Management particular process that evaluates, investigates, or identifies a

large number of subjects.

Scrum (Software Development)

Scrum (Software Development) is an agile framework within which people can address complex adaptive problems, while productively and creatively delivering products of the highest possible value that is for developing, delivering, and sustaining complex products, with an initial emphasis on software development, although it has been used in other fields including research, sales, marketing and advanced technologies.

Management

Reference Definition by Agilemethodology.org: Scrum is the most popular way of introducing Agility due to its simplicity and flexibility. Because of this popularity, many organizations claim to be "doing Scrum" but aren't doing anything close to Scrum's actual definition. Scrum emphasizes empirical feedback, team self management, and striving to build properly tested product increments within short iterations. Doing Scrum as it's actually defined usually comes into conflict with existing habits at established non-Agile organizations. Scrum has only three roles: Product Owner, Team, and Scrum Master. These are described in detail by the Scrum Training Series. The responsibilities of the traditional project manager role are split up among these three Scrum roles. Scrum has five meetings: Backlog Grooming (aka Backlog Refinement), Sprint Planning, Daily Scrum (aka 15-minute stand-up), the Sprint Review Meeting, and the Sprint Retrospective Meeting.

Security Plan

A Security Plan is a documented formal plan that describes a plan for security issues and related events or processes including security assessment, security risks management, mitigation options, and aligns with priorities and objectives.

HSE

Security Risk

A Security Risk is any event to cause danger or difficulty against HSE outside or others that could result in harm to people, organizational assets, personal interest of individuals.

Reference Definition by Aiche.org: A Security Risk is a potential for damage to, or loss of, an asset. Risk, in the context of chemical process security, is the potential for the intentional event outcome to be realized. Typical examples include an intentional release of hazardous materials from containment, the theft of chemicals that could later be used as weapons, the contamination of chemicals that may later harm the public, the economic costs of the damage, or disruption of the chemical process or other nearby critical infrastructure. Therefore, risk is an expression of the likelihood (LAS) that a specific vulnerability (V) of a particular attractive target (AT) will be exploited by a defined threat (T) to cause a given consequence (C).

Self-Employment

Self-Employment is the state of working for oneself rather than an employer including independent contractor or one-person operation enterprise.

Business

WORD	DEFINITION	CATEGORY
Serious Injury	Serious Injury including death is defined as a personal injury that covers the injury resulting in a person being detained in hospital as an in-patient. (e.g. Fatal injury, death occurs within thirty consecutive 24-hour time periods from the time of the crash)	HSE
	Reference Definition by Ache.org: Serious Injury is the classification for an occupational injury which includes: (a) all disabling work injuries and (b) non-disabling work injuries as follows: (1) eye injuries requiring treatment by a physician, (2) fractures, (3) injuries requiring hospitalization, (4) loss of consciousness, (5) injuries requiring treatment by a doctor and (6) injuries requiring restriction of motion or work, or assignment to another job.	
Service Agreement	A Service Contract is a written agreement between a service provider and customer that outlines the terms of a particular service between the two parties.	Management
Severity	Severity is a fact or condition of being extremely difficult that is the maximum credible consequences or effects, assuming no safeguards are in place.	HSE
Shale Gas	Shale Gas is a natural gas that is existed in fracture porosity, within the ultra low permeability shale formations. The Shale Gas may also be the source rock for other gas reservoirs. (Refer to the Tight Gas; Oil Shale (or Shale Oil))	Substance
Shutdown (S/D)	A Shutdown (S/D) is an act of stopping the operation or activity of a business, plant for a temporary period of time.	Operation
SI (International System) Unit	The International System (SI) of Unit was created the decimal Metric System at the time of the French Revolution and the subsequent deposition of two platinum standards representing the metre and the kilogram, on 22 June 1799, in the Archives de la République in Paris can be seen as the first step in the development of the present International System (SI) of Units. The SI Units are Time: second (s); Length: metre (m); Mass: kilogram (kg); Force: newton (N); Temperature: degree Celsius (°C); Absolute temperature: kelvin (K). (Refer to the English Unit) Reference Information: https://physics.nist.gov/cuu/Units/units.html	Engineering
SIL (Safety Integrity Level)	The Safety Integrity Level (SIL) is a measure of safety system performance or probability of failure on demand that is a relative level of risk-reduction provided by a safety function, or to specify a target level of risk reduction. The SIL level is allocated to the SIF (Safety Instrumented Function) for specifying the safety integrity requirements to be achieved by the SIS (Safety Instrumented System) and applies to an entire system. The SIL is the four discreet integrity levels (SIL 1 - 4), the higher the SIL level, the higher the associated safety level that as the SIL level increases, typically the cost and complexity of the system also increase.	HSE

WORD	DEFINITION	CATEGORY
SIMOPS (Simultaneous Operations)	Simultaneous Operations (SIMOPS) are described as the potential clash of activities which could interfere an undesired event or set of circumstances. The SIMOPS is two or more simultaneous construction and operation works at the same location such as the construction activities and operation productions required the appropriate management and controls for effective use of resources and to minimise risk.	Operation
Simulation	A Simulation is a model of a set of problems or events that is used to assess the current, or predict the future, performance of a business process to improve the business processes through the use of mathematical, statistical and other analytical methods. The Process Simulation is used for the design, development, analysis, and optimisation of technical processes.	Engineering
SIS (Safety Instrumented System)	A Safety Instrumented System (SIS) is the set of hardware and software controls for the critical process systems that is designed to prevent or mitigate hazardous events by taking the process to a safe state when predetermined conditions are violated. The SIS can be one or more SIF (Safety Instrumented Function).	Engineering
	Reference Definition by Aiche.org: Safety Instrumented System (SIS) is a separate and independent combination of sensors, logic solvers, final elements, and support systems that are designed and managed to achieve a specified safety integrity level. A SIS may implement one or more Safety Instrumented Functions (SIFs).	
Site Investigation	Site Investigation is a geotechnical and topographical assessment of the ground conditions of the site and analysis of the engineering and environmental considerations related to the project construction and operations. The Site Investigation is depend on the site utilisation plan (e.g. plant layout) and site specific circumstances such as the anticipated geology, previous use of the site and the construction plans.	Construction

Construction

WORD DEFINITION CATEGORY

Site Manager (Construction Manager)

A Site Manager (or Construction Manager) is an overall responsible person for the project construction management at the construction site. The Site Manager is required to keep within the timescale and budget of a project, and manage any delays or problems encountered on site during a construction project. Also involved in the role is the managing of quality control, health and safety (HSE), etc., and ensures that drawing and materials are delivered on time and that construction resources such as construction subcontractor, construction equipment and tools, and required procedures, construction utilities, and so on are available on the work. The Site Manager is responsible for the dealing with inquiries and communication with consultants, clients, engineers, inspectors, and the public for the construction activities. The Site Manager involves the project initiation and planning stage as a home office construction planning before site activities are commenced, and is responsible for managing communications between all parties involved in the site development of the project.

Related Definitions in the Project: The Construction

Site Preparation

Site Preparation is the activities of the demolition of buildings and other structures, clearing sites that includes grading, landscaping, and constructing roads and siding of an area of ground where anything previously located has been cleared to make the project site free of obstruction.

Construction

Construction

Skid Mounted Construction

Skid Mounted Construction is the assembling equipment and materials at point of manufacture on the permanent frame or structure that is a popular erection method and one of the most efficient and cost effective ways of construction. The Skid Mounted Constructioncan be advantaged including lower construction costs and shorter construction duration, improved site safety and quality, and single point manufacture and construction responsibility, etc. The Skid Mounted Equipment can then be easily and securely transported and used as a unit. Individual skids can contain complete process systems and multiple process skids can be combined to create larger process systems or entire portable plants.

Related Definitions in the Project: The Modularisation (Modularization)

Smart Grid

A Smart Grid is an intelligent electric power system that consists of controls, computers, automation, and new technologies and equipment working together with the electrical grid system (a network of transmission lines, substations, transformers and more that deliver electricity from the power plant to end users) to respond digitally to our quickly changing electric demand. The Smart Grid system allows two-way communication of electricity data, and enable real time data collection concerning electricity supply and demand during the transmission and distribution process.

Engineering

SNG (Synthetic Natural Gas)

Synthetic Natural Gas (SNG) is the mixture or produced petroleum hydrocarbon gases which physical properties are similar to the natural gas.

Substance

Essential WORD **DEFINITION CATEGORY** SOC (Social A Social Overhead Capital (SOC) is the basic facilities and **Business Overhead Capital)** services needed for the communities and societies that is the social capital mainly owned by the government. The SOC is the public infrastructures including the transportation (roads), education and health (schools, public libraries, and hospitals), communications and utilities (telephones, water, electricity), etc. The SOC term can be used as the economic overhead facilities and economic infrastructure. Solar Cell, Solar A Solar Cell, Solar Panel, Solar Battery, or Photovoltaic (PV) Energy Panel. Solar Battery. Cell is an electrical device that captures the sunlight and or Photovoltaic (PV) converts the light energy into electricity directly by the photovoltaic (PV) effect, which is a physical and chemical Cell phenomenon. Solar Cells are made up of silicon that can supply energy to anything that is powered by batteries or electrical power. Electricity is produced when radiant energy from the sun strikes the solar cell, causing the electrons to move around. The action of the electrons starts an electric current. Solar Cells are the building blocks of photovoltaic modules, otherwise known as solar panels. Related Definitions in the Project: The Solar Energy Solar Energy is a renewable resource that is free and supplies Solar Energy Energy unlimited without pollution or damage the environment, and many technologies can be applied directly for use in homes, businesses, schools, and hospitals. The Solar Energy is an electromagnetic energy transmitted from the sun (solar radiation). Some Solar Energy technologies include solar heating, concentrated solar power (CSP), and solar architecture, and photovoltaic (PV) cells and panels. The potential of Solar Energy is 20,000 times more power than what is needed to supply the entire world, the surface of the earth receives 120,000 terawatts of solar radiation (sunlight). Related Definitions in the Project: The Solar Energy; Renewable Energy Solution as a Service (SaaS) is related to software as a service Solution as a Management that is enterprise solutions for things such as email, forums, Service (SaaS) instant messengers and self-service models for interacting with online businesses including a platform business. The SaaS terminology comes from laaS (Infrastructure as a Service), PaaS (Platform as a Service), SaaS (Software as a Service or Solution as a Service), and next up will be XaaS (Everything as a Service) **SOP** (Standard Standard Operating Procedure (SOP) is a written procedure to Management Operating help workers carry out complex routine operations. The SOP Procedure) provides the repetitive uses as practices intended to achieve efficiency, quality output and uniformity of performance. Many companies rely on standard operating procedures to help

Sour Crude

Sour Crude Oil is defined as a greater than 0.5% sulphur in the Substance form of the Hydrogen Sulphide (H2S).

ensure consistency and quality in products.

WORD **DEFINITION CATEGORY Sour Gas** Sour Gas is the associated natural gas containing a high level Substance of Carbon Dioxide (CO2) or Hydrogen Sulphide (H2S), which are corrosive in the presence of water. Reference Definition by Petropedia.com: Sour Gas is natural gas which contains significant amounts of Hydrogen Sulphide. This is the reason why it is sometimes known as "Hydrogen Sulphide gas". It is flammable, colourless, and toxic at extremely low concentrations. It is heavier than air. Sour Gas smells like "rotten eggs" and can be harmful to several systems of the body, affecting mostly the nervous and the respiratory systems. It irritates the eyes, nose, throat, and lungs; it also causes nausea and headaches. In extreme cases, it can affect the respiratory centre located in the brain, leading to death. **Spare Parts** Spare Parts Optimisation studies studies are the various Operation **Optimisation** approaches for the determination of the optimal stock levels to minimise the risks associated with spare parts stockouts, and the costs associated with holding inventory. The Spare Parts Optimisation is composed of repairable or not, relatively expensive, and highly reliable components as well as the minimisation of costs, maximisation of equipment availability, and the achievement of a desired stock reliability. Special Terms and Special Terms and Conditions are the rules, provisions, **Procurement Conditions** requirements, specifications, and standards for a specific project that is an integral part of an agreement or contract. The Special Terms and Conditions is a specific definition of the legal relationships and responsibilities of the parties to the contract and how the contract is to be administered. (Refer to the Terms and Conditions (Ts & Cs); General Terms and Conditions) Specialisation (Specialization) Agreement is an agreement **Specialisation Business** (Specialization) between the multiple businesses to specialise in the production Agreement of the specific range of goods or services in order to realize the product specific economies. SPI (Schedule SPI (Schedule Performance Index) is the ratio of work Controls Performance Index) performed to work scheduled: SPI (Schedule Performance Index) = EV/ PV (if SPI < 1 means the Project is behind schedule), where PV (Planned Value); planned complete work at the time of analysis; EV (Earned Value): values accomplished at the time of analysis. Related Definitions in the Project: The EVM (Earned Value Management). A Statistical Quality Control (SQC) is an application of statistical **SQC** (Statistical Quality **Quality Control)** methods in the monitoring and maintaining of the quality of products and services. The Statistical Quality Control (SQC) is used to the quality control since 1930s.

WORD **DEFINITION CATEGORY** Staging Staging is the activity or practice of presenting the performance Construction in construction or operation. The Staging Area is the designated area where supplies and construction equipment are positioned for access to a construction site. Reference Definition by Aiche.org: Staging means assembling, testing, and operating a process control system in a controlled environment prior to plant implementation according to a test plan to ensure that it performs properly and meets all requirements of the functional specification. Staging is performed after the standard vendor system acceptance test has been conducted and is done under the end user's supervision to thoroughly exercise all essential control system function. Stakeholder A Stakeholder is a person, group or organisation who can affect Management or is affected by the business or project operation and achievement. The Stakeholder can be an employee, investor, customer, owner including a government, community, supplier, contractor, etc. Stakeholder Stakeholder Management is the systematic identification and Management implementation of actions designed to engage with Management stakeholders that is to identify all people or organisations impacted by the project, analysing stakeholder expectations and impact on the project, and developing appropriate management strategies for effectively engaging stakeholders in project decisions and execution. Stand Alone System A Stand Alone System is an independent system that can be Engineering used or operated individually or independently, and is not connected to a main system such as an electric transmission and distribution network. **Standard Condition** Standard Conditions are the condition specified in a series of Engineering scientific tests for experimental measurements to allow comparisons between different sets of data; IUPAC: a) Standard Temperature and Pressure (STP): Standard Conditions for Gases - Temperature, 273.15 K (0 °C) and pressure of 10⁵ pascals (100 kPa, 1 bar); b) Standard Ambient Temperature and Pressure (SATP) as a temperature of 298.15 K (25 °C, 77 °F) and an absolute pressure of exactly 100 kPa (1 bar). NIST: Normal Temperature and Pressure (NTP): uses a temperature of 20 °C (293.15 K, 68 °F) and an absolute pressure of 101.325 kPa (14.696 psi, 1 atm). The International Standard (IS) Metric: Conditions for natural gas and similar fluids are 288.15 K (59.00 °F, 15.00 °C) and 101.325 kPa.

WORD	DEFINITION	CATEGORY
Standard Specification	A Standard Specification is a set of the specifications for an item, material, component, system or service that is defined precisely and established with a standardisation process to be used for the business, engineering, procurement, construction, operation and maintenance.	Engineering
Standardisation (Standardization)	Standardisation (Standardization) is a process of designing, developing and implementing commercial and technical standards to maximise compatibility, interoperability, safety, repeatability, or quality. The Standardisation in an industry business, is a set of agreed formulations, publications, and implementation of guidelines, rules, and specifications for common and repeated use, aimed at achieving optimum degree of order or uniformity for routine maintenance material such as motors, instrument gauges, electrical parts and consumable materials (e.g. gaskets, bolts and nuts, etc.)	Management
Standby Letter of Credit (L/C)	A Standby Letter of Credit (L/C) is a type of the formal Letter of Credit (L/C). The Standby Letter of Credit (L/C) is the demand to pay must be in conformity with the terms and conditions of the Letter of Credit and presented prior to the expiration date, in the event that the contracting company cannot pay or perform a committed obligation to that third party.	Procurement
Start up	Start-up is the plant operation activities that commences on the date of initial operation after achieved the construction works and commissioning activities, and continues until the acceptable production capacity and quality are achieved (commercial operation start).	Operation
Startup (Company)	A Startup (Company) is an entrepreneurial venture company that is a newly starting and working to solve a business. The Startup is typically technology oriented, or fast growing business and has high growth potential return on investment (ROI), while the financial solution is not obvious and success is not guaranteed. The Startup is usually a small business (Sole trader or limited company), or with partnerships (e.g. Incubators provide guidance and advice; Accelerators provides structured curriculum in a short period; Angel investors or venture capital (VC), etc.) business model.	Business
State of the Art (or Best Available Technology)	State of the Art (or Best Available Technology) is the most recent development of the product or technology using the highest level of technique or scientific achievement in a process, facility or of method of operation. The State of the Art terminology has been used since 1910, and has become both a common term in advertising and marketing.	Business
Stationary Equipment	Stationary Equipment is a type of equipment that remains in one location such as a tank, drum, vessel, etc., and does not include a moving part or machine.	Engineering
Steady State	A Steady State is the condition reached equilibrium that the properties of a system are not change the temperature within the system in time: not net flow of matter or energy, no phase changes and no unbalanced potentials within the system.	Science

WORD	DEFINITION	CATEGORY
Stewardship	Stewardship is an activity or job of protecting and being responsible planning and management of the organisation and resources.	Management
Stick Built	A Stick Built is a traditional construction method. The Stick Build construction process is erected and installed the delivered equipment and materials piece by piece at the site as supplier's original manufacturing condition with minor additional works, dress-up, spool prefabrication.	Construction
Stock	A Stock is 1) a total amount of goods kept or available in a shop for use, sale or distribution; 2) a type of security that signifies ownership in a corporation and represents a claim on part of the corporation's assets and earnings. The Stock (or Share) can be defined a common and preferred held by a company, organisation or individual.	Business
STP (Standard Temperature and Pressure)	Standard Temperature and Pressure (STP) is the nominal conditions of temperature and pressure in the atmosphere at sea level that is important to physicists, chemists, engineers, and pilots and navigators. Standard temperature is defined as zero degrees Celsius (0 °C), which translates to 32 degrees Fahrenheit (32 °F) or 273.15 degrees kelvin (273.15 °K). This is essentially the freezing point of pure water at sea level, in air at standard pressure. Standard pressure supports 760 millimetres in a mercurial barometer (760 mmHg). This is about 29.9 inches of mercury, and represents approximately 14.7 pounds per inch (14.7 lb/in2). Imagine a column of air measuring one inch square, extending straight up into space beyond the atmosphere. The air in such a column would weigh about 14.7 pounds.	Engineering
Strategy	Strategy is a method or plan for achieving success in situations such as war, politics, business, industry, or sport, or the skill of planning for the achievement of goals or solution problems usually over a long period of time.	Management
Strength	Strength is 1) an ability or a capacity of an object or substance to withstand or resist force or pressure; 2) resource, technology, management, capital, or other advantage in business. (Refer to the SWOT)	Management
Stress Management	Stress Management is a method of limiting stress and its effects that is a part of a health benefits aimed at controlling and reducing a person's levels of stress.	HSE
Structural Engineering	Structural Engineering is a part of the civil engineering that is the science and art of design and practical engineering dealing with the analysis and design of structures that support or resist loads of all type of stationary structures with economy and elegance including buildings, bridges, frameworks, and other structures. Related Definitions in the Project: The Engineering	Engineering

WORD	DEFINITION	CATEGORY
Structural Load Analysis	Structural Load Analysis is the verifying process of the loads on physical structures and its members including fitness that analyses the internal forces (axial force, shear force, moment), stress, strain, deflection, etc. in a structure under applied load conditions. The Structural Loads are generally classified: 1) Dead Load (DL) - structure's self weight and generally remain constant during the structure's life; 2) Live Load (LL) - e.g. traffic loads, etc. may vary; 3) Environmental loads, such as Wind load (WL), Snow load (SL), Earthquake load, Thermal load, etc.	Engineering
Subcontractor	A Subcontractor is a company or individual performing work to carry out or deliver services, labour or materials as part under a contractor management that is an agreement or arrangement in which any person of each parties do not stand in the relationship of an employer and employee.	Management
Subject to Contract	A Subject to Contract is any content of the contract or agreement that is a pre-agreed, conditionally agreed, or pending law suit for example before the contract is finalised. (Refer to the Without Prejudice)	Management
Subscription Business	Subscription Business is the new business model in which traditional pay-per-product (or service) companies are moving toward subscription-based business models: a customer pays a recurring price at regular intervals for access to a product or service. Companies provide software (Saas), books, media & entertainment (HBO, Netflix), and car makers, also start up as recurring revenue subscription businesses. The model was pioneered by publishers of books and periodicals in the 17th century, and is now used by many businesses areas including the innovations around the Internet of things (IoT).	Business
Substation	A Substation is a place that allows a set of equipment reducing the high voltage of electrical power for suitable supply to consumers. The Substation contains the power conversion equipment (e.g. transformers, circuit breakers, distribution system, etc.) to transform voltage from high to low, or the reverse.	Engineering
Subsystem	A Subsystem is a self-contained system within a system, unit or plant. The Subsystem is used to break down a turnover system or package into manageable by a single organisation and commissionable units in order to optimise the project cost and schedule of the commissioning process.	Operation
Success Story	A Success Story is an account of the achievement of success by a person or an organisation. The Success Story is a great successful performance, often unexpectedly or in spite of unfavourable conditions, often by making a lot of money.	Management
Successor (Activity)	A Successor is an activity relation and dependency in a network sequence schedule. Successor activity (follower) comes after a particular activity (basis) in a continuity to complete task or work. Related Definitions in the Project: The Project Schedule	Controls

WORD	DEFINITION	CATEGORY
Supplier Credit	Supplier Credit is a financing arrangement under which an exporter extends credit to the buyer that occurs when the supplier accepts instalment payments for the selling. Normally the importer can pay a portion of the value and signs a promissory note to pay the rest on receipt of the goods and on acknowledging acceptance. The importer's bank is called the presenting bank and the exporter's bank is called the remitting bank.	Business
Supply and Demand	Supply and Demand is an economic model of price determination in a market. In the market, the amount which is wanted by customers and the amount of a product which is available, and Market prices depend on levels of supply and demand and the relationship between the availability of goods and services. These levels rise and fall according to a number of factors, and can have a big impact on the success of a business.	Business
Supply Chain (SC)	A Supply Chain (SC) is to cover the entire physical process of procurement work from obtaining the raw materials through all process steps until the final product are delivered, installed and tested at the site. The Supply Chain includes a source of raw material, fabrication or manufacture, logistics, expediting and inspection, end-user, and so on. Related Definitions in the Project: The Procurement	Procurement
Supply Chain Management (SCM)	Supply Chain Management (SCM) is managing and controlling the supply chains (e.g. a source of raw material, fabrication or manufacture, logistics, expediting and inspection, end-user, and so on) effectively and efficiently to support the project and future business requirement. Related Definitions in the Project: The Procurement	Procurement
Surety Bond	A Surety Bond is an agreement among three parties: a contractor (principal), owner (obligee) and surety (guarantor, bank or insurance company or bonding company) that guarantees the payment to owner by surety when the contractor fails his obligation.	Management
Surveillance	Surveillance is a careful watching or close observation of a person, activity or place that ensures the adequate levels of systems.	General
Sustainability	Sustainability is an ability to continue over a long period of time for the endurance of business and work processes systems. The Sustainability maintains under a continuous development or growth, and meeting the needs of the present without compromising an ability of future. The Business Sustainability is a management and coordination with an external and internal organisational demand and to ensure the continuous marketable products (technology and demand), resources, social and ethical responsibilities and management capabilities.	Management

WORD	DEFINITION	CATEGORY
SV (Schedule Variance)	Schedule Variance (SV) is the schedule performance analysis on a program that is the mathematical difference between the scheduled completion of an activity and the actual completion of that activity. The SV (Schedule Variance) = EV (Earned Value) - PV (Plannd Value). A positive value means a favourable condition, while a negative value is unfavourable.	Controls
SWOT (Strengths, Weaknesses, Opportunities and Threats)	SWOT (Strengths, Weaknesses, Opportunities and Threats) is a systematic risk analysis method that consists of Strengths, Weaknesses, Opportunities and Threats.	Management
Symbol and Legend	A Symbol and Legend is the detailed explanation of contents on a map or drawing that uses symbols (simplified shape) and short descriptions of meaning.	Engineering
Syngas (Synthesis Gas)	Syngas (Synthesis gas) is a synthesis fuel gas mixture consisting of hydrogen and carbon monoxide, produced from methane or other hydrocarbons and steam.	Substance
System	System is 1) a set of connected things or facilities that operate together; 2) an organised and creative structured method or procedure for a specific activity that is defined as a set of interrelated or interacting elements. (e.g. management system)	Management
System Evaluation	System Evaluation is an assessment process of the complete system performance that is compared with its requirements, and determines the possibilities for growth and improvement.	Engineering
Systematic	Systematic means relating to an agreed or well-organised set of plan or procedure, or a methodical plan or procedure. The Systematic is opposite of random or individual.	Management
Systemic Risk	A Systemic Risk is an inability risk of one organisation or procedure to meet its obligations. The Systemic Risk causes by interlinkages within the organisation or system that can be prevented by the risk breakdowns of an entire system rather than simply the failure of individual parts.	Management
Systems Engineering	Systems Engineering is an application of structured engineering methodologies who provides the design and creation of complex systems. The Systems Engineering focuses on the design and management of complicated engineering projects, across a wide range of engineering specialties, and a combination of technical and project management skills required to complete multidisciplinary projects. (e.g. Modelling, Simulation, and P&ID development, etc.) Related Definitions in the Project: The Engineering	Engineering
Tagged Item	A Tagged Item is all equipment and major electrical and instrumentation items, except bulk material that has a specific tag number and treated individually for the tracking and tracing purposes. (Refer to the Engineered Item)	Engineering

WORD	DEFINITION	CATEGORY
TAM (Turnaround Maintenance)	Turnaround Maintenance (TAM) is a scheduled and periodic shutdown (total or partial) of a plant that means the daily plant operations are completely stopped during the turnaround maintenance work. The TAM (Turnaround Maintenance) performs the maintenance related activities: cleaning, inspection, repair, and replacement by a shift operation. The plant turnaround work is an important role in maintaining consistent productive capacity, and normally performed by outside contractors by every scheduled at least 1 ~ 4 years in advance. Related Definitions: The Operation and Maintenance	Operation
Tangible Asset	A Tangible Asset is any assets that has in a physical form and the value can be easily measured. The Tangible Asset includes cash, equipment, machinery, plant, property anything that has long-term physical existence. Related Definition: Intangible Asset; Tangible Fixed Asset	Business
Tariff	A Tariff is 1) a term and condition of taxes or charges for the import or export goods or services; 2) a schedule of rates or charges offered by a common carrier or utility: fares, freight charges, prices, rates, etc. Related Definitions in the Project: The Logistics Management	Procurement
Task Analysis	Task Analysis is a human error analysis method that is the process of breaking the tasks and resources down into smaller, more manageable components to reach optimisation in future task performance through making improvement decisions. The Task Analysis requires reviewing past historical data to analyse effects of certain decisions or events, and evaluating a task performance within a given scenario or environment. The Task Analysis involves determining the detailed performance required of resources and determining the effects of environmental conditions and other unexpected events.	Management
Task Force (TF)	A Task Force (TF) is a group of formation organised by temporary group of people to perform the activity or work for a specific task or project, or to solve a problem that requires a multi-disciplinary approach. The TF definition is originally, introduced by the United States Navy. Related Definition: Project TF (Task Force) Organisation	Management
Tax Credit	A Tax Credit is the reduced tax amount from the tax liability that reduces the actual amount of tax owed. The Tax Credit is based on the reduced actual amount of taxable income or the amount of monetary taxes. (Refer to the Tax Exemption; Tax Deduction)	Business
Tax Deduction	A Tax Deduction is subtracted a portion of taxable income amount that may be excluded from taxation when certain conditions are satisfied. (Refer to the Tax Exemption; Tax Credit)	Business

WORD	DEFINITION	CATEGORY
Tax Exemption	A Tax Exemption is an amount of monetary exemption that can be excluded all or partial income or profits before the tax is calculated. The Tax Exemption is various in the taxable incomes, and certain individuals and organisations are completely exempt from paying taxes. (Refer to the Tax Deduction; Tax Credit)	Business
TBE (Technical Bid Evaluation)	Technical Bid Evaluation (TBE) is an evaluation and examination of bidders or subcontractors' technical bid document or proposals. The TBE assesses the technical capability including quality, experience, compliance with specifications, operating cost, and performance penalties to meet the project requirement as well as execution capability. Related Definitions in the Project: The Procurement	Procurement
TCE, tce (Tonne of Coal Equivalent)	The Tonne of Coal Equivalent (TCE, tce) is the unit of energy that is generated by burning one metric ton of coal. The TCE is a value of approximately 27 MMBtu or 29.39 GJ, equivalent to burning 5.2 bbls (700 kGs) of oil, 890 m^3 of natural gas. (Refer to the TOE, toe (Tonne of Oil Equivalent))	Engineering
Team Work (Teamwork)	Team Work (Teamwork) is the cooperative effort of an organisation with a group of people or team members in order to achieve a common goal. The Teamwork is to create and build the teaming synergy through consensus project goals and objectives; establish open mind communication culture and timely share project information for effective communication; build up a unified team and engage team members; and trust each other.	Management
Technical Assurance	Technical Assurance is the prevention process of errors and mistakes that is the technical integrity of a product, process, or system and the appropriate technology is being applied and monitored and maintained.	Management
Template	A Template is used as a pattern for producing other similar work that is a shaped piece of rigid material (model or sample) or format of document.	Construction
Temporary Facility Plan	A Temporary Facility Plan is a planning activity of the construction that is developed by a home office construction team prior to the commencement of the site work based on the construction schedule and resources mobilisation plan. The Temporary Facility Plan includes the locations and dimensions of temporary facilities (buildings, utilities, and offsites) including layouts and details, equipment and material storage area (warehouse and laydown yard), and access and haul routes, roads of ingress and egress to the safety and construction fenced areas, and identifying construction entrances, trash dumpsters, sanitary facilities, worker parking areas, and any areas which may need to be paved, etc. Related Definitions in the Project: The Construction	Construction

WORD **DEFINITION CATEGORY** Terms and Terms and Conditions (Ts & Cs) is the details of rules that Management applies to a particular contract. The Ts & Cs is the contractual Conditions (Ts & Cs) conditions applicable to an agreement, contract including the purchase orders (POs) for goods and services. (Refer to the General Ters and Conditions; Special Terms and Conditions) **Test** A Test is the determination or verification of the capability of an item confirms the specified requirements and the acceptability for further work or activity proceeding. The Test is an examination, assessment or evaluation to check, measure and find out the ability, capability, suitability of the specific requirements, quality performance of work and the reliability of work process. ThePD Map (The ThePD Map (The Project Definition Map) is a concept of Management **Project Definition** definition representing a keyword definition with relations including basis, input and output information as well as relevant Map) definitions and knowledge that is demonstrated by graphical tool. (Refer to the PD Maps) **Thermal Energy** Thermal Energy is 1) the energy possessed by an object or Science system due to the movement of particles within the object or the system; 2) the energy developed through the use of heat energy that is transferred spontaneously from a hotter to a colder system or body. The Thermal Energy is the kinetic energy measured in joules, watt-hours, or in electron-volts that exchanges between two bodies. **Three Dimensional** A Three Dimensional (3D) Model is the graphic and image that Engineering (3D) Model represents any three-dimensional surface of an object, used for engineering and manufacturing to digital animation. The process involves connecting a set of points with various geometric data such as lines and curved surfaces with the goal of creating a wide frame model that represents a threedimensional object. The Three Dimensional (3D) Model is popular in entertainment ventures, medicine and engineering, and can be created automatically or manually. (Refer to the Three Dimensional (3D) Printer) TIC (Total The Total Investment Cost (TIC) consists of capital cost (EPC Controls cost), working capital, and owner's costs includes land, financial **Investment Cost)** cost, and operational costs, etc. Related Definitions in the Project: The Economic Reviews **Tidal Power or Tidal** Tidal Power or Tidal Energy is a form of hydropower that Engineering Energy converts the energy of the tides into electricity or other useful forms of energy. The Tidal Power or Tidal Energy is the power available from the rise and fall of ocean tides on the principal of a dam or barrage that captures water in a basin at the peak of a tidal flow, then directs the water through a hydroelectric turbine as the tide ebbs. Related Definitions in the Project: The Renewable Energy

WORD	DEFINITION	CATEGORY
Timely	Timely means happening at the best possible moment	Management
	Reference Definition by Aiche.org: Timely shall mean the following: the resolution or implementation of recommendations, action items, and other follow-up activities are promptly determined, performed, or conducted. This means that they are completed in a reasonable time period given the complexity of the actions or activities decided upon and their difficulty of implementation, and that the timing should be evaluated on a case-by-case basis.	
Title Block	A Title Block contains all the information necessary of the primary drawing identification and the verification of validity that is located in the lower right corner of the drawing format. The Title Block displays information about the project, as well as information about individual item, such as company name, drawing number, part number and name, originator and approver name, scale of the drawing, revision number, dates, and other information.	Engineering
To-do List	A To-do List is a categorized list of tasks that needs to be done or completed, typically organised in order of priority within a certain portion of constraints such as time, cost and labour.	Management
Top Management	Top Management is a final decision maker and hold a total responsibility within organisation who manages and controls the organisation or business. The Top Management provides goals, objectives, and strategies, guidelines, resources, and delegate authorities to the organisation members.	Management
Topographic Survey	A Topographic Survey is to identify and define the contours of the ground and existing features on the surface of the earth. The Topographic Survey requires the bench marks to which ground contours are related, information regarding surface and underground facilities.	Construction
Total Float (TF)	Total Float (TF) is the total amount of time can be delayed that is a difference between an early finish and late finish for the critical path activities. (Refer to the Float)	Controls
TPI (Third Party Inspection)	Third Party Inspection (TPI) is the inspection and testing activities by the third party that is conducted with the purpose of certifying the compliance of purchased products or services to the international standard, code and customer technical specifications during and or after manufacturing. The Third Party Inspection people or company provides technical control, testing and inspection, assessment and approval services who must not be involved in design, procurement, fabrication, construction and installation.	Quality

WORD **DEFINITION CATEGORY TQC (Total Quality** Total Quality Control (TQC) is the practice quality control that is Quality Control) to develop, design, produce and service a quality product from design to delivery which is most economical, useful and always satisfactory to the consumer. The Total Quality Control is the application of quality management principles to all areas of business that approaches to the long-term business success with continuous improvement in all aspects of an organisation as a standard process. **Traceability** Traceability is the ability to discover information about where Quality and how a product was made including the history, distribution, location, and application of products, parts, materials, and services that is documented and recorded identification. The Traceability system records and follows the trail from suppliers and are processed and ultimately distributed as final products and services. Tracking and Tracking and Tracing is the process of determining the current Procurement Tracing physical locations with related information of goods using GPS technology during the distribution and logistics: previous, current and next location. Reference Definition by www.mbaskool.com: Tracking and Tracing is a process during logistics or distribution of goods, where the goods which are being transported are monitored as per their locations, i.e. previous, current & next location. In appropriation and logistics of numerous sorts of items, track and follow or following and following, concerns a procedure of deciding the present and past areas (and other data) of an one of a kind thing or property. **Transparency** Transparency is 1) the characteristic of being easy to see Management through; 2) an openness situation of an organisation or public with regard to sharing information in which the objectives of policy, economic framework, decisions, data and information related to monetary and financial policies, and the terms are provided to the public in a comprehensible, accessible, and timely manner, and the quality of being done in business and financial activities are in an openness of an organisation with regard to sharing information way without secrets, so that all relevant activities are trusted as fair and honest. **Treaty** A Treaty is a written agreement or arrangement between two or Management more countries, or international agencies that is intended to establish a relationship governed by International Law. (e.g. the United Nations made by negotiation and formally approved and signed by their leaders; the Lisbon Treaty - Article 50) **Trend Analysis** Trend Analysis is the technical analysis of time series data **Business** comparing the same item over a significantly long period that is the practice of collecting information, analysing, and defining to spot a pattern. The Trend Analysis is used to predict future events or to estimate uncertain events in the past that is based on the idea that what has happened in the past gives traders an idea of what will happen in the future.

WORD	DEFINITION	CATEGORY
Turnaround	Turnaround is 1) a process of making something (such as a plant) ready for use again; 2) financial recovery of a company that has been performing poorly; 3) a scheduled shutdown period when planned inspection, testing, and preventive maintenance, as well as corrective maintenance such as modifications, replacements, or repairs is performed. Related Definitions in the Project: The Operation and Maintenance	Operation
Turnover	Turnover means 1) an amount of annual sales; 2) replace employees with new people; 3) hand over responsibility to other. (Also, called as the Hand Over)	Management
Type of Cost plus Fee Contract	A Type of Cost plus Fee Contract can be defined as: Cost plus Fixed Fee (CPFF); Cost plus Incentive Fee (CPIF); Cost plus Award Fee (CPAF); Cost plus Percentage of Cost; Cost Plus with Guaranteed Maximum Price (GMP); Cost Plus with Guaranteed Maximum Price and Incentive; and Cost plus Fixed Fee with agreement for sharing any cost savings contract. Related Definitions in the Project: The Project Contract	Management
Type of Schedule	A Type of Schedule in development techniques is a Milestone Schedule; Bar Chart or Gantt Chart; PERT (Program Evaluation Review Technique: to determine the time required to complete each element in terms of pessimistic, optimistic, and best guess estimates); Network or CPM (Critical Path Method), and Detailed Report Schedule (e.g. document issue schedule (deliverables), material delivery schedule, construction heavy equipment mobilisation schedule. etc.). Related Definition: Project Schedule	Controls
U&O (Utility and Offsite)	U&O (Utilities & Offsites) is the supporting facilities consists of utility facilities (air systems; water systems; fuel systems; power generation; steam generation, etc.), and offsite facilities (firewater system; flare system; interconnecting piping; loading/unloading; tankage & storage; waste water treatment, etc). The U&O facilities are typically constitute 20 ~ 50 percent of an entire project cost. (Refer to the Utility Facility; Offsite Facility)	Engineering
Unincorporated Enterprise	An Unincorporated Enterprise is the method of owner's business activities that is usually sole proprietor or partnership company which is not incorporated as a legal entity separate from the owner.	Business
Unit	A Unit is 1) a physical quantity of a defined and adopted substance used as a standard measurement; 2) a standard used for comparison in measurement and exchange; 3) a single complete production system or facility.	Engineering
Unit Labour Cost (ULC)	Unit Labour Cost (ULC) is the ratio of labour costs to labour productivity that measures the average cost of labour per unit of output.	Controls

WORD **DEFINITION CATEGORY**

Unit Price Contract

A Unit Price Contract is a type of contract based on estimated quantities of items and unit prices (rates: hourly rates, rate per unit work volume, etc.). In general, the contractor's overhead and profit is included in the rate. The final price of the project is depending on the total quantities needed to carry out and complete the work. The Unit Price Contract is only suitable for well-known resources involved project but unknown quantities at the time of the contract which will be defined when the design and engineering or construction work is completed. Related Definition in the Project: The Project Contract

Management

UPS (Uninterruptible Power Supply)

Uninterruptible Power Supply (UPS) is an electrical device for Engineering an emergency power supply to critical loads that provides power automatically, without delay or transients, continuous uninterruptible service. (e.g. batteries)

Reference Definition by aiche.org: Uninterruptible Power Supply (UPS) is a power supply that employs automatic switching of main power supply from primary to secondary (usually battery and/or diesel generator) upon failure of the primary. A means of providing uninterrupted power to critical instrumentation for a limited period of time even in the event of a plant power failure. Usually accomplished by an inverter, transfer switch and batteries. Alternatives means may include motor generators. A type of power supply that can provide electrical power even when line power is lost. An inverter (AC from DC batteries) which provides a bumpless transition of power to the process control system in the event of plant power failure. The UPS will supply for a limited period (e.g., 15 minutes).

Upstream Business

An Upstream Business Area is from an exploration, transportation up to the downstream facilities through oil and gas separation and purification facilities, and also compression or boosting stations. (Refer to the Upstream, Midstream and Downstream)

Business

Upstream, Midstream and **Downstream**

Upstream, Midstream and Downstream are three major components in an oil and gas business. Upstream is from an exploration, transportation up to downstream facilities through oil and gas separation and purification facilities. Midstream is the storage and transports products by a pipeline, rail, barge, oil tanker or truck. Downstream consists of from receiving facilities of oil or gas and treatment, upgrading and producing of the final products, the downstream plants are a refinery, petrochemical, chemical plant and products distributions.

Business

WORD	DEFINITION	CATEGORY
Utility Facility	A Utility Facility is the support facilities that is any privately, publicly, or cooperatively owned line, facility, or system for producing, transmitting, or distributing communications, power, electricity, light, heat, gas, oil, crude products, water, steam, waste, storm water, including any fire or police signal system or street lighting system, which directly or indirectly serves the public. In refinery and petrochemical plant, the Utility Facilities are: Air Systems (Air Separation Unit (ASU), Nitrogen, Instrument and Plant Air); Water System (Cooling Water, BFW, Plant Service Water, Potable Water, Demineralized Water and Condensate); Fuel Systems; Power Generation; Steam Generation, etc.	Engineering
UV (Ultraviolet)	(Refer to the Offsite Facility, U&O (Utility and Offsite)) Ultraviolet (UV) is the sunlight that is an electromagnetic radiation with a wavelength from 10 nm to 400 nm, shorter wavelength than visible light (light purple) end of the range of colours and can be seen by humans, but longer than X-rays. Most of the UV radiation is absorbed by the ozone molecules in the upper atmosphere, but a potentially dangerous amount passes through the ozone hole to cause cataracts, skin cancer, suppression of the immune system, leaf damage, and reduced yields in some crops.	HSE
Vacuum	A Vacuum is a volume containing little to no matter or a region with a gaseous pressure much less than atmospheric pressure. The Vacuum can be created by removing air from a space using a vacuum pump or by reducing the pressure using a fast flow of fluid, as in Bernoulli's principle.	Engineering
Vacuum Distillation	Vacuum Distillation is one of the refinery processes that is a method of distillation performed under reduced pressure which lowers the boiling temperature of the liquid being distilled. The Vacuum Distillation technique separates compounds based on differences in boiling points without cracking or decomposition of the charge stock.	Technology
Validation	Validation is an assurance process of checking and evaluation of the products, services or systems. The Validation confirms the requirement, and is acceptable or approved by the user that can be carried out under realistic use conditions or within a simulated use environment. (Refer to the Verification)	Management
Valuation	Valuation is the estimating process of the current market value of an asset or a thing to buy or sell. The Valuation includes: time specific; applicable negotiation range; exchange rates used to convert foreign currency denominated assets; tariff condition (CIF or FOB); market prices, face or nominal value; payment and transaction method and procedure; liability, etc. The company Valuation can be carried out when business reorganisations, expropriations, and mergers and acquisitions (M&A).	Business Management

WORD

CATEGORY

Value Chain A Value Chain is a set of activities that a firm operating in a **Business** specific industry performs in order to deliver a valuable product or service adding values through various processes to end users. The Value Chain includes activities such as design, production, marketing, distribution and support to the final consumer. The Value Chain model developed by Michael Porter used to describe the process by which businesses receive raw materials, add value to the raw materials through various processes to create a finished product, and then sell that end product to customers in 1985, Competitive Advantage: Creating and Sustaining Superior Performance. The Global Value Chain Initiative is particularly interested in understanding value chains that are divided among multiple firms and spread across wide swaths of geographic space, hence the term Global Value Chain (GVC). Valve A Valve is a fitting device that regulates, directs or controls the Engineering flow of a fluid (gas, liquid, fluidized solid, or slurry) by opening, closing, or partially obstructing various directions. The Valve types are: ball, butterfly, check, diaphragm, flap, gate, globe, plug, pinch, shut off, and pressure relief (PSV), control valves etc., and it consists of body, bonnet, trim (internal elements), actuator, and packing. Variable A Variable is a quantity or condition that is subject to change at General the different situation and can usually be measured. Variance at Variance at Completion (VAC) is a key performance indicator in Controls Completion (VAC) Earned Value Project Management that shows the difference between the Budget at Completion (BAC) and the Estimate at Completion (EAC): VAC = BAC - EAC. The VAC is calculated at any level from the control account up to the total contract that represents the amount of expected overrun (negative VAC) or underrun (positive VAC). During the project execution before the project is completed, the Forecasting Estimate to Completion (ETC) as the Budget at Completion (BAC) can be used for the Variance at Completion (VAC). Related Definition in the Project: EVM (Earned Value Management) **Variation** A Variation is a slight difference or change from the usual Management arrangement, or agreed contract condition. The Variation work is proceeded in accordance with a contract such as a Change Management Procedure. **Vendor Data Sheet** A Vendor Data Sheet is a document developed by a Vendor or **Procurement** Manufacturer that is summarised the performance and other technical characteristics of a product used for the fabrication and operation of the equipment. The Vendor Data Sheet is developed based on the project specification and data sheet which was provided by purchaser. The Vendor Data Sheet is a base of the equipment inspection prior to a shipment.

DEFINITION

WORD	DEFINITION	CATEGORY
Vendor Information	Vendor Information is a vendor (manufacturer or supplier) generated and supplied information of their fabricated or manufactured goods based on the project specification which was included in the RFQ (Request for Quotation) package. The Vendor Information includes data sheets, specifications, procedures, and drawings, etc. (Also, called as the Vendor Print; Vendor Drawing)	Procurement
Vendor List	A Vendor List is a selected or contracted suppliers list for a project or company. Additional goods or materials can be purchased or supplied from the Vendor List without any further technical qualification work process and can be used for the standardisation.	Procurement
Verification	Verification is a process of checking or evaluating to increase confidence by which the given data or document is correct and represents accurate information as for the basis of further development works. The Verification is required confirmation by objective evidences such as specified requirements, regulatory and technical standards in engineering and quality management system. The Verification can be carried out through reviewing, test and inspections and alternative calculations before use.	Management
VOC (Voice of the Customer)	The Voice of the Customer (VOC) is a process used to capture the requirements and feedback from the customer that is proactive and constantly innovative to capture the changing requirements of the customers with time. The VOC is a product and service development technique that produces a detailed set of customer wants and needs which are organised, prioritized and satisfaction with current alternatives. The VOC programmes aim to gather and analyse customer insights, and enable to take action in order to improve customer experience and deliver positive business outcomes to the organisation that is important outputs and benefits for product developers.	Management
VOC (Volatile Organic Compound)	Volatile Organic Compounds (VOC) is any organic (carbon containing) compounds that have a high vapour pressure at ordinary room temperature. Many VOCs are human-made chemicals that contribute significantly to smog production and certain health problems.	Substance
Volatility	Volatility is 1) a tendency of a substance to evaporate rapidly of liquid or solid substance into a gas; 2) passing off suddenly and unexpectedly become violent or angry.	Science
Voltage Drop	Voltage Drop is the amount of voltage loss that is reduced as electric current moves through the passive elements all or part of the circuit due to impedance. The Voltage Drop across the internal resistance of the source such as conductors, contacts, and connectors, and simply the arithmetical difference between a higher voltage and a lower one.	Engineering

WORD	DEFINITION	CATEGORY
VT (Visual Testing) or (VI) Visual Inspection	Visual Testing (VT) or Visual Inspection (VI) is the versatile testing method used human senses with any non-specialised inspection equipment. The Visual Testing (VT) or Visual Inspection (VI) is commonly required by standards and one of most important NDT methods. The VT or VI can reveal surface defects of any industrial products during manufacturing process or during the service as well as required prior performing other NDT. (Refer to the NDT (Non Destructive Testing))	Quality
Waiver	Wavier is an act or instance of giving up one's rights or claims that have time limits and extensions have to be justified.	Management
Warehouse	A Warehouse is a planned space that is a large building where raw materials or manufactured goods are stored prior to their usage or distribution for sale. Related Definitions in the Project: The Logistics Management	Procurement
Warranty	A Warranty is a written promise made by a company in the contract: to repair or replace the product that develops a fault within a particular period of time, or to re-do a piece of work or service again. (Refer to the Warrant)	Management
Waste Management	Waste Management is the activities to prevent the waste production through the process modification, reuse and recycling. The Waste Management include wastes: collection, transport, treatment and disposal of waste; control, monitoring and regulation of the production, collection, transport, treatment and disposal, etc.	HSE
Water Treatment	Water Treatment is a process of making water suitable for applications or returning to natural states that depends on the applications to meet the water quality criteria for the intended use such as water source and usage. The Water Treatment involves science, engineering, business including mechanical, physical, biological, and chemical methods that removes contaminants or reduces their concentration so that the water becomes fit for its desired end use. (Refer to the Water Purification; Waste Water Treatment)	Technology

WORD **DEFINITION CATEGORY WBS (Work** A Work Breakdown Structure (WBS) is an outline and Controls Breakdown hierarchical divisions of the project scope of work that is defined, planned, managed, and controlled through subdividing Structure) the project scope of work into manageable segments by the structured organisation resources. The WBS is a task oriented and detailed breakdown by the code structure for tasks: a key project deliverable (team work with the elements of scope); responsibility; schedule and cost covering the entire project scope of work into manageable sections. (e.g. units, systems, disciplines, deliverables, etc.). The Work Breakdown Structure (WBS) initiates the work activities (deliverables) responsibility matrix, the Organisational Breakdown Structure (OBS) initiates a team organisation (resources) base responsibility matrix, and a resource based Cost Breakdown Structure (CBS) is the costs allocated to the lowest level of the WBS. Related Definitions in the Project: Work Breakdown Structure (WBS) Wear and Tear Wear and Tear is the damage that happens from ordinary use Management including general physical deterioration from age and weathering. Weight Value Weight Value (or Weight Factor) is the basis of the overall Controls progress calculation process used to determine the weight of each phase in the project. It is measured based on the distribution of weight values and obtained through multiplying the weight value of each task in the project. The Weight Value (or Weight Factor) is based on the resources mobilisations such as cost, duration, effort-hour, etc. Welding Welding is a way of joining two or more pieces of metals or Construction thermoplastics to make them act as a single piece, usually through the application of heat. The Welding technique was discovered during efforts to manipulate iron into useful shapes in the 1st Century. The Welding types are: MIG welding; Arc welding; TIG welding; Plasma Arc welding; Electron Beam and Laser welding; Gas welding, etc. What-If Analysis (or What-if Analysis (or sensitivity analysis) is a brainstorming Management Sensitivity Analysis) technique that is used to determine the effects how projected performance is affected by changes in the assumptions of the predicting alternative outcomes. The What-if Analysis (or sensitivity analysis) is to assess their effect on the final outcomes from the key quantitative assumptions and computations are changed systematically. The What if Analysis can be used to compare different scenarios including the scenario-based hazard evaluation.

WORD	DEFINITION	CATEGORY
Wind Power or Wind Energy	Wind Power or Wind Energy is the use of wind (air flow) to generate mechanical power or electricity through wind turbine. The mechanical Wind Power or Wind Energy can be used for boat; grinding grain or pumping water; generating electricity by converting this mechanical power into electricity power, but requires extensive areal coverage to produce significant amounts of electrical energy. Related Definitions in the Project: The Wind Power or Wind Energy; The Renewable Energy	Energy
Winning Strategy	A Winning Strategy is a detailed plan for achieving success in the situation. The proposal Winning Strategy is influence and affect the client's selection process by focusing on client needs; differentiation from previous and competitors; company's best value with highlight strength, mitigate weakness, neutralize competitor's strength and focus competitor's weakness. Sun Tzu (544-496 BC), the author of The Art of War said "If you know the enemy and know yourself, you need not fear the result of a hundred battles. If you know yourself but not the enemy, for every victory gained you will also suffer a defeat. If you know neither the enemy nor yourself, you will succumb in every battle."	Management
Wireless Network	A Wireless Network is the computer or power supply networks without a cable connection that uses data or power transfers between network nodes at different equipment locations. The Wireless Network basis is the radio waves that uses connecting devices such as laptops and mobile phones to the Internet (LAN, Wi-Fi), mobile phone networks, wireless local area networks (WLANs), wireless sensor networks, and terrestrial microwave networks, and so on.	Technology
Without Prejudice	Without Prejudice is a term used by solicitors in negotiations over disputes where an offer is made in an attempt to avoid going to court. The Without Prejudice can be disclosed as an evidence, if the case go to a court and no offer or facts stated that is often misused by businesses during negotiations when they actually mean subject to contract.	General
Witness	A Witness is 1) a person who has facts related directly or indirectly to the accident or incident; 2) to see something happen or to be present at an event.	Quality
Work Instruction	A Work Instruction is a documented detailed work procedure that is more detailed of a procedure document for a specific work, task or activity within the organisation.	Management

WORD **DEFINITION CATEGORY** Work Package (WP) A Work Package (WP) is a group of related items that is a Controls logical subdivision of control accounts which is a measurable Construction and controllable unit of the system within the total scope of work. The Work Package can be a simple task, activity, group of works, or total project work that is developed based on the Work Breakdown Structure (WBS). The Work Package is defined as a lowest level that is to plan, measure progress, calculate earned values, and distinguish from others, single responsible organisation, assigns budget and limited duration, target to start and finish date. **Work Permit** A Work Permit is 1) an official document that gives permission Construction to a non-citizen or foreign to work in a country; 2) allow to do construction activities at the site (hot or cold work permit, etc.) **Work Process** A Work Process is a written document of the standard Management procedures of how to handle or perform a work. The Work Process defines required tools, systems, and resources as well as an organisational role and responsibility. **Workforce (or Work** Workforce (or Work Force) is the group of people who work in Management a company, industry, or country as employees and contractors Force) at a facility. In general, the Workforce are operators, maintenance people, and other employees or contractors people at the construction site who are not in a management, supervisory or technical role. Workload Analysis Workload Analysis is a process of designing of the effective Management organisation, manning and business plan that assesses an existing operation and predicts the future operation plans, and evaluates the impact of organisational changes based on experience and historical data. The Workload Analysis used to predict and plan for future works and business, and skills requirements. **Worst Case** Worst Case Consequence is a concept in risk management that Management Consequence is the most conservative estimate of the consequences of the 27/8/41 most severe accident identified. The Worst Case Consequence is usually used to define low probability-high consequences outcomes with the maximum negative consequences (fatalities, environmental pollution, material loss). (e.g. The largest quantity of a hazardous substance from a single vessel or process line failure that is released to the most vulnerable area in such a way (all at once or continuous) as to have the maximum effect on the public or employees in that area.) A Worst Case Scenario (WCS) is a risk management concept Management **Worst Case** Scenario (WCS) for potential disasters that considers the most severe possible outcome, unpleasant or serious thing that could happen in a situation. The WCS requires at the initial strategic planning stage to evaluate projected occurrences, to analyse the impacts, and to develop the contingency plans if the event or situation actually occurs. (Refer to the Worst Possible Incident)

WORD	DEFINITION	CATEGORY
Yield	A Yield is the net present rate of return on an investment that supplies or produces positively such as a profit, an amount of food or information. The Yield in chemistry is to as reaction yield, is the amount of product obtained in a chemical reaction.	Engineering
Zero Energy Building (ZEB)	A Zero Energy Building (ZEB) is a building with greatly reduced energy needs through efficiency gains or the amount of renewable energy created on the site. The ZEB produces as much energy such as renewable solar or geothermal energies that is approximately equal to the total amount of energy used by the building on an annual basis, meaning the zero net energy consumption. The ZEB reduces the greenhouse gas emissions and conserve energy. In the EU and USA, buildings account for 40% of total energy use.	Energy
Zero Sum Game	A Zero Sum Game is a game, economic, and decision theory in which a net change in wealth or benefit is zero: gain by one party is equivalent to other party's (ies') loss (the winner takes all the stakes provided by the losers so that the algebraic sum of gains at any stage is zero). The Zero Sum Game is a mathematical framework for analysing the decision making processes and strategies of adversaries. (e.g. Gambling, Financial Options and Futures market, and Contract parties)	Management