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GLOSSARY OF TERMINOLOGY IN ORGANIZATION AND MANAGEMENT
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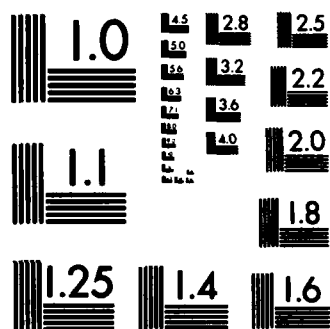
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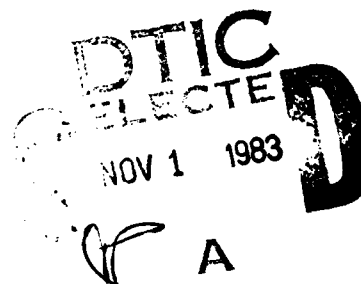
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GLOSSARY OF TERMINOLOGY
IN
ORGANIZATION AND MANAGEMENT OF CONSTRUCTION

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WITH ASSISTANCE OF
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W65 COMMISSION IN
ORGANIZATION AND MANAGEMENT OF CONSTRUCTION

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DEPARTMENT OF THE ARMY
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FOREWORD

The Working Commission W-65, Organization and Management of Construction, consists of experts who are performing and applying research "To develop effectiveness calculations and techniques for evaluating singularly and collectively various organizational forms utilized in planning, architecture, engineering, construction and for traditional and industrialized construction." A major aspect of this program is to effect the transfer of the research into professional practice; a vital mechanism in this transfer is the clarification of the terms used in the profession of the organization and management of construction through the world. This Glossary presents terminology which has been reviewed by the W-65 whose members represent twenty-two countries.

The Glossary is the joint-effort of Professor R. Pilcher, University of Manchester, Institute of Technology, Manchester, ENGLAND, and Dr. V. Diepeveen, Stichting Bouresearch, Weena 740 Postbus 20740, Rotterdam, The Netherlands. These experts undertook the extremely challenging tasks of organizing the first edition and incorporating the comments provided by the Commission. The Glossary will be updated periodically. Thus, additional comments are welcomed; please submit these to the Coordinator, W-65. Additional copies of this Glossary can be obtained by requesting Agency Accession Number A _____ from the National Technical Information Service, 5285 Port Royal Road, Springfield, VA 22161, USA.

Information on W-65 may be attained by contacting the Coordinator at the US Army Construction Engineering Research Laboratory, P.O. Box 4005, Champaign, IL 61820, USA. Information on CIB can be obtained by contacting the Secretary General, CIB, Postbus 20740, Weena 704, Rotterdam, The Netherlands.

1 November 1983
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GLOSSARY OF TERMS:

Accounting	Principles and techniques used in establishing, maintaining, recording and analyzing financial transactions.
Administration	Area of management concerned with interpretation of policy and its translation into effective executive action.
Architect	A person qualified and authorized by the regulatory authority to design buildings, prepare plans and monitor construction.
Architect's brief (USA: program)	The collection and collation of all the relevant information on user requirements, time and cost criteria for the execution of a commission.
Bid (tender)	See Tender.
Bill of qualities	Description of quantities of construction work to which an estimator applies prices when estimating total cost in preparation for a tender (bid).
Bond	
bid	A bond given to guarantee entry into a contract.
performance	A bond given to guarantee the performance of a contract.
Budget	A quantitative interpretation (manpower, money, resources, and space) or target (sales, production) arising from a plan for a defined period of time to attain a given objective.
Builder	Entrepreneur who undertakes to construct a building on a pre-arranged contractual basis.
Builder's merchant	A firm that supplies building materials. (Also known as a building/material supplier.)

Building

element

A component produced by supplying industries and used by builders or: a major component common to many buildings which usually fulfills a similar function irrespective of its design, specification or construction.

services engineer

An engineer concerned with the human, scientific, technical and economic aspects of the design, construction and maintenance of all the engineering elements and services associated with the built environment, other than its structure.

trade

Firms that supply building materials (builder's merchant); the collection of firms undertaking building projects or the supply of building materials, labor and/or plant; one of the labor trades involved in the construction of buildings.

Capital

authorized

The share capital which a company is authorized to issue according to its articles of association.

issued

That part of a company's share capital which is available through payment for shares.

working

That part of a company's capital which is circulating or in use rather than invested in fixed assets.

Capital turnover

The amount of business transacted during a given period of time compared to the firm's capital.

Clerk of works

The person appointed by the client whose duty it is to inspect on his behalf the construction of buildings and other works for conformance with the contract documents. (See also Resident Engineer.)

Client

See Employer.

Consortium

A grouping of firms specializing in various aspects of the design and construction of projects to carry out jointly an undertaking through one composite organization while still retaining their individual identities.

Construction

activity	The process of creating a project or part of a project by the employment of construction resources.
costs	All costs that arise from the resources used in the construction of a construction project excluding the costs of the land.
duration	The estimated or actual time required for the completion of a construction activity or project.
firm	See Contractor.
industry	All parties in the industry engaged in designing, executing and maintaining buildings including those supplying materials.
management	The creation of conditions to bring about the optimum use of all resources available to an undertaking in men, methods, materials and money.
manager	The person or firm responsible for the construction of a construction project.
materials	All materials, elements and components used for the construction of projects that are incorporated in the final constructed product.
method	The mode of carrying out a construction process to arrive at a finished element, operation or product.
process	The designing and construction of a project from the conception of the project in a client's mind to its completion for commissioning and use.

Contract

construction	An agreement entered into for the construction, repair, renovation or restoration of a building or work.
firm price	A contract that sets the total amount payable thereunder.
project	An enterprise involving a number of inter-related construction activities.

Consulting Engineer	A person qualified and authorized by the regulatory authorities to design engineering works and to supervise their erection.
Contingency	Any unforeseen, possible, or chance occurrence, e.g., design changes, etc., identified through risk analysis or experience.
Contractor	A person or organization which, as a party to a contract, is responsible for the organization, management, and execution of that construction comprised in the contract with the employer.
general	A firm which usually carries out the major trades in construction of brickwork and masonry, excavating, concrete work and carpentry.
main	A firm that concludes a contract with an employer making use of the services of sub-contractors to build the project of the contract.
nominated sub-	A sub-contractor nominated by the employer to execute work or to supply and fix materials or goods under or through the direction of or the coordination of the main contractor.
sub	A construction firm that is not an independent party in the contract with the employer but is under contract directly to the main-contractor.
Control, budgetary	The process of comparing actual costs with predicted results with the objective of correcting unwanted deviations.
Cost	
accounting	Keeping and analyzing cost records and data.
allocation	The allocation of costs to cost centers such as products or different parts of a project.
analysis	Analytical technique involving a monetary assessment of total costs and revenues for a project with the object of identifying and quantifying as many tangible costs and benefits as possible.
budgeting	See Budget.

center	An identified group of operations for which costs are collected, being the responsibility of a specified manager whose performance can then be measured.
code	A series of alphanumeric symbols used to identify a cost activity, a cost center or a cost group.
control	The process of controlling the cost of a project within a predetermined sum throughout its various stages from inception to completion.
direct	Costs directly attributable to the production of a particular element or product, or part of a project or activity.
fixed	Costs, the total of which is fixed irrespective of the level of business activity and production.
forecasting	The preparation of budget for certain activities and the prediction of likely future trends.
group	One or more activities or operations grouped for the purpose of cost collation.
indirect	Cost not directly attributable to the production of a particular element, product or part of a project or activity but nonetheless part of the total cost.
in use	The sum of the annual equivalent of initial capital costs plus annual costs including maintenance.
labor	Direct cost for manpower used in a specific production process.
material	Direct costs of materials used in a specific production process.
overhead	See indirect costs.
overrun	An increase in the time or cost of a completed project compared to that originally specified in the project brief.
planning	A method of controlling the cost of a project within a predetermined sum during the design process.

site	Overhead costs incurred at a construction site which cannot be attributed to specific parts of a building project.
variable	Costs which vary directly with the level of business activity and production.
Cost-benefit analysis	Any technique intended to relate the economic benefits of a solution to the cost incurred in providing the solution.
Depreciation	An accounting device which distributes the monetary value (less salvage value) of a tangible asset over the estimated years of productive or useful life. It is a process of allocation, not evaluation.
Design	The process of inventing, exploring and evaluating the alternative solutions in the creation of a project and arriving at the most acceptable one in the light of the criteria set out in the brief.
costs	The total cost of the design process.
final	The fully detailed project as constructed; the design on which the drawings for construction are based.
sketch	Preliminary design arrangements to assist in a selection from alternatives and determine feasibility of different arrangements.
Discounted cash flow	Accounting/management technique for comparing the return on investment in projects of broadly similar financial risk but dissimilar future cash flows.
Drawings	The design arrangements detailing one project to be constructed (see Design).
working	See Design final.
Employer	The one who contracts with an individual or organization under a construction contract. (See also Client or Owner.)
Equipment/plant	All mechanical plant and machines used as a means of production on a building site.
Estimate	An initial estimate of cost for a project based on preliminary information before detailed designs are prepared.

elemental	An estimate broken down in the estimates of cost for major components, common to most buildings, which usually fulfill similar functions.
approximate	Method of approximate estimating in which the known cost of a similar type project is taken as a basis and adjusted for variations in quantity, constructional methods and materials.
Feasibility study	An initial study of a project, or method of operation, in outline form to determine the physical and economic feasibility.
Financial plan	The planning of financial means to be used by the management of a firm.
Foreman	The person appointed by the contractor, in a supervisory role, as his representative on site for the whole or part of the work.
Functional analysis	Descriptive analysis of the different functions in a firm with descriptions of the tasks of the different members of staff.
Industrialization	All activities to rationalize production, such as mechanization, centralization, coordination, specialization and standardization.
Job-discussion	Consultation of management with labor force on the execution of tasks, efficiency, work planning, work methods, etc., by way of democratization of management decisions and avoidance of jurisdictional disputes.
Job-specification	A detailed statement of the physical and mental activities demanded in a specific job, sometimes including qualifications, experience and personal qualities required to perform a job.
Joint venture	Collaboration between two or more construction or design firms for a certain project or market (see Consortium).
Liquidity planning	Planning of the extent to which a firm needs access to cash or can realize some of its assets for cash without appreciable loss in value, often denoting a firm's ability to meet short-term financial obligations in cash or its equivalent.

Management	<p>(a) Effective utilization and coordination of resources such as capital, plant, materials, and labor to achieve defined objectives with maximum efficiency.</p> <p>(b) People responsible for directing and running an organization or project.</p>
development	Planning the experience and further training of members of management so as to develop their potential and equip them for jobs through promotion.
information	Information for management decision-making.
project	Management of the building project in a firm through all stages of development.
style	Approach adopted by management in exercising authority, encouraging participation in decision-making, motivating staff, delegating authority, communication information and maintaining control.
technique	A means used by management, to define and assist with the solution of a problem.
Manager	Executive responsible for controlling and coordinating the work of others.
site	A manager responsible for managing all work carried out within the project site. (See also Construction Manager.)
contracts	A manager appointed by a contractor to be responsible for managing a number of site contracts.
project	See Project manager.
Man-hour	A unit of resources equivalent to the production in terms of money, quantity, ect., of one man in one hour.
Margin (mark-up)	The sum of money added to the total direct costs and overheads for a construction project to cover risks, finance and profit.

Marketing

Creative management function which promotes business and employment by assessing needs of the end user of products or services, initiates research and development, and produces products and services which can be profitably provided to satisfy market requirements.

costs

The costs which are connected in a business with the marketing function.

organization

The place of marketing in the organization of a business also organizing for marketing.

planning

Process of deciding the markets on which the business will operate, deciding with which products, including the forecasting of market and sales, defining the methods of promotion and assessing the manpower, manufacturing and financial resources required.

Market research

Research to provide information for management to make decisions on marketing.

analysis

Identifying and evaluating all the relevant factors which affect a company's current or potential market.

development

Creating of new markets for a company.

information system

System used by a company to describe its market experiences to enable management to execute its marketing programs.

penetration

Proportion, usually expressed as a percentage, of the actual market volume that is met by a particular company or product of a particular sector or its current market.

sector

Segment of the market chosen for absorbing products or services of the company.

Materials management

The creation of conditions to bring about the optimum use of all materials available for the construction of a project to ensure availability at the right time and control of inventory.

Mechanization

The process of substitution of machinery for manpower.

Method study	The systematic recording and critical examination of way of doing things in order to make improvement.
Network planning	Planning construction work using a network as the basis.
Nominated supplier	A specialist merchant tradesman nominated by the employer to supply materials or goods to the main contractor on the project.
Organization	Sub-division and delegation of the overall tasks by allocating responsibility and authority to carry out defined work and by defining the relationships that should exist between different functions and positions.
chart	A graphic representation of an organization.
formal	The planned or established structure of an enterprise or project to achieve specified objectives.
informal	A supplementary structure within an enterprise having no formal descriptive chart but designed to achieve specified objectives.
matrix	A formal two-dimensional organization structure in which specialists are accountable both to a functional head and a project leader.
Organogram	Plan of the organization of the firm, listing permanent functions in the firm with the names of the staff members and their representatives.
Owner	See Employer.
Payments, interim	Payments made by the client to the contractor at intervals defined in the contract. Also known as progress payments.
Performance specification	Specification which sets down criteria of an article or arrangement but does not describe how it is to be designed (or built) to any degree.
Planning	The process of establishing the sequence and relationship of a series of operations prior to construction work commencing.
Plans	See Drawings.

corporate	Long-term financial planning involving all departments of a company in the context of assumptions about developments in the market environment, etc., and therefore, the desirable development of new products and new areas of business.
long-term	Planning for 4-6 years.
short-term	Planning for a future up to 1 year.
Prefabrication	The process of construction, or manufacturing whole or elements of buildings prior to their erection at the site of the works.
Price	Sum of money asked for a product or service at a particular time in a particular market. To be distinguished from the cost to the producer and from the value to the purchaser.
policy	The firm's view of the relationship that should exist between its prices and those of its competitors.
Product development	Creating and investigating ideas for new or improved products to be added to or to replace existing products and implementing the program of research and development required to produce the new or improved products.
Product management	Management functions with primary authority and responsibility for the planning, direction, and control of all phases of a product's current existence.
Production	
factors	Men, materials, machines and money required to produce a finished project.
method	The organization and management of production factors in which to achieve a finished product.
process	The entire operation of producing finished construction works after completion of the design process.
Productivity	The rate and efficiency of production usually measured by the ratio of input to output.

Program	An expression of a plan related to time and to the resources required.
Progress	
analysis	Breakdown of a project in identifiable components so that it is possible to control the process of construction.
control	The process of measuring actual progress against predicted planning and scheduling.
lead/coordinator/ manager	The individual concerned with optimizing and coordinating resources in project management.
management	Arrangement of management techniques to coordinate resources and specialisms as effectively as possible in preparing, running and completing a project.
organization	Combined action of different groups to produce a project; formal relationship between those groups.
preparation	Planning of a project.
Project	Combination of activities of different specialized groups, directed at a nonrepetitive result with a clear beginning and end.
documentation	Systematic arrangement of information about a project during the course of the process.
manager	The person or firm responsible for the planning, coordination and controlling of a project from inception to completion.
brief	The project embodiment of the selected option for the fulfillment of a stated requirement for a facility or works.
Resident Engineer	The site representative of the Engineer responsible for issuing instructions and drawings to the contractor's representative.
Resource	
aggregation	The summation of the requirements for each resource during any time period.

allocation	The general technique of scheduling activities and the resources by those activities, so that predetermined constraints of resource availability and/or project duration are not exceeded.
Scheduling	The process of determining the start and finish dates of an activity, work package or component subject to constraints of time and/or resources.
Site works	All work carried out within the site of a construction project.
Specialization	Limitation of contractors to construct only a certain type of project or to be engaged in certain types of activities.
Specification	Describes in detail the work to be executed, the character and quality of the materials and workmanship and any special responsibilities of the contractor not covered by the conditions of contract.
Staff planning	Management activity establishing positions and deciding about duties.
Standardization	Introducing standard dimensions and quality of construction components enabling the construction of projects with products from different suppliers on the market.
Tender (bid)	An offer to execute at a given rate or price a complete project consisting of specified works.
list	The list of contractor's names from which tenders are sought.
lump sum	A tender at a fixed price to which a contractor undertakes to carry out all the work specified on the drawings and in the contract documents.
negotiated	A tender obtained by negotiation with a single firm of contractors.
open	A tender received as a result of advertising for competitive tenders.
package deal	See turn-key tender.
public	See open tender.

restricted	A tender received by invitation only from a list of selected firms.
selected	See restricted tender.
turn-key	A tender for the design and construction of a complete project from client's brief to the completion of commissioning.
valid	A proposal or offer that meets all the requirements of the invitation to tender.
Time study	A work measurement technique designed to establish the time for a qualified worker to carry out specific elements under specified conditions at a defined rate of working, recorded by direct observation of the times, using a time-measuring device and the ratings for individual elements.
Turnover	The amount of construction activity of a firm during a given period of time measured in financial terms.
Value analysis	Technique for questioning design, production and marketing of existing products to ensure that operation at each stage is as economic as possible. Overall aim of technique is to enhance the product's value and/or reduce its cost.
Variation	An alteration or modification of the design, quality, or quantity of the works as shown in the contract.
Vertical integration	Acquisition, amalgamation or reorganization of a number of formerly separate companies which extend activities "back" towards supply of raw materials, components, etc., and/or "forward" to various elements in the production, marketing and distributing chain.

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