

The language of business intelligence

Updated as at 18 June 2006.

[Operating as *Prior Knowledge*, Vernon Prior has conducted seminars and workshops on competitive intelligence and knowledge management throughout Asia, Australasia, the Middle East, and South America. Vernon is a Fellow of the Royal Society for the encouragement of the Arts, manufactures, and commerce (FRSA), a recipient of the SCIP Fellow's Award (FSCIP), and a SCIP Member since 1990. He is a member of the Caterpillar Club. Vernon can be contacted at 19 Greenway Court, Tewantin, Queensland 4565, Australia; Tel: +61 7 5474 0875; email: vernonprior@a1.com.au (that is, letter a, figure 1).]

Abstract is an objective and accurate condensation of a document, which can vary in length from a mere expansion or enrichment of the title to several paragraphs. Abstracts can save a great deal of time and effort and will alert you to newly published work that may otherwise be difficult to trace. At the very least, an abstract will help you to decide whether or not you need to read the original material. See also: **Bibliography, Indicative abstract, Informative abstract, Synopsis.**

Active disinformation, see **Disinformation.**

Advanced technologies, also commonly referred to by the term High technology, are those that:

- require significant expertise and **Research and development** input;
- involve a high proportion of knowledge workers;
- call for the intensive transfer and exchange of **Information**;
- result in high-value-added products.

See also: **Knowledge-base industries, Nanotechnology, Research and development, Technology.**

After Action Review (AAR) is a presentation or discussion following an event or activity by those involved with, or interested in, that event and whose purpose is to learn from it. An AAR should describe what was intended to happen, what was actually accomplished, what mistakes were made, what lessons were learned, and how participation in similar events might be improved in the future. They may be recorded in a variety of media as a form of reference for future use. Briefings and AARs (also referred to as Debriefings) are excellent learning tools and help to instill an information-sharing culture. Their effectiveness depends to a great extent on accurately identifying the most appropriate audience. See also: **Briefing, Debriefing, Intranet, Knowledge management, Report.**

Algorithm is a process or set of rules for calculating or solving problems, especially when using computers. See also: **Predictive analytics.**

Alliance is a form of cooperation between two or more independent companies in which they share risks and revenues with the aim of jointly improving their **Competitive advantage**. Alliances may include licensing, clusters, co-marketing arrangements, shared R&D, joint ventures, franchising

agreements, outsourcing partnerships, and investments. See also: **Cluster, Joint project, Joint venture, Lead-firm network, Networking, Production network, Research and development, Service network, Strategic alliance.**

Alternative outcomes analysis, see **Scenario analysis.**

Ambush marketing occurs when a company that does not directly support a specific event attempts to present itself as a marketing partner. This is usually achieved through the use of misleading advertising or promotional activities. See also **Disinformation.**

Analysis involves the examination of complex **Information** in order to ascertain its constituent elements and to more easily understand its meaning. The fundamental forms of analysis are: **Deduction, Induction, Pattern recognition, and Trend analysis.** See also: **Intelligence analysis, Predictive analytics, Scenario analysis, Synthesis.**

Analysis paralysis is a colloquial expression that implies that one's decision-making ability is severely impaired by exposure to overwhelming volumes of **Information**; it is a symptom of **Information fatigue syndrome.** See also: **Information overload.**

Annotation is a note, usually added to a **Bibliographic reference**, by way of comment, explanation, or description. It may also be referred to as a Scope note when used in a **Thesaurus.** See also: **Bibliography.**

Application service provider (ASP) manages and delivers application capabilities to multiple entities from a data centre across a wide area network (WAN).

Applied research is original work done in order to acquire new **Knowledge** with a specific, practical application in view. It is undertaken either to determine the possible uses for the findings of **Basic research** or to determine new ways of achieving some specific and predetermined objectives. See also: **Research, Research and development.**

Archie is a software tool for locating files stored on anonymous **File transfer protocol (FTP)** sites; knowledge of the exact file name or a sub-string is essential to successful retrieval.

Argument mapping, see **Visualization.**

Artificial intelligence applies to a computer system that is able to operate in a manner similar to that of human intelligence; that is, it can understand natural language and is capable of solving problems, learning, adapting, recognizing, classifying, self-improvement, and reasoning. Examples of its application include **Expert systems, Intelligent agents, Neural networks, and Robotics.** See also: **Classify, Cognitive science, Predictive analytics.**

Artilect is a neologism used to describe a computer incorporating **Artificial intelligence** and being capable of programming and improving its operations.

Assigned-term indexing involves assessing a record or **Document** and deciding on the appropriate terms to apply to it. See also: **Derived-term indexing, Enrichment, Index.**

Assumption is that which is taken as being true for the purpose of argument or action.

Asynchronous digital subscriber line (ADSL) permits high-speed data transmission on copper wire.

Asynchronous transfer mode (ATM) in telecommunications is a broadband technology that permits large volumes of voice, image, text, or video data to be transmitted simultaneously.

Authentication is the process by which an individual confirms his or her identity, usually by means of a signature, an official **Document**, a personal identification number (PIN), a **Password**, a digital certificate, or some other acceptable means. See also: **Corporate security.**

Automatic indexing uses a program to select words or phrases to identify content. It often employs several **Indexing** languages (**Classification scheme**, natural language, **Controlled vocabulary**, Standard Industry Code, Country Code).

Balanced scorecard is a performance measurement system that, in addition to financial measures, quantifies items that had previously been considered as Intangible assets, such as brand image, customers, reputation, **Human capital, Information, Innovation, and Corporate culture.** See also: **Customer relationship management, Intellectual property, Knowledge assets, Knowledge management.**

Bandwidth is a measure of the capacity of an information channel, that is, the volume of **Information** that can be transmitted over a communications link in a given time.

Basic research is work, of a general nature, conducted in order to acquire **Knowledge** of the underlying foundations of phenomena and observable facts without any obvious practical application in view. Sometimes referred to as Fundamental research. See also: **Research, Research and development.**

Benchmarking is a continuous, systematic process for evaluating and comparing an organization's activities, products, services, and work processes with those of organizations that are recognized as representing best practices for the purposes of performance improvement. A secondary purpose is to reveal useful practices or ideas that may be adopted or adapted with advantage. See also: **Reengineering, Reverse engineering.**

Bibliographic reference is the **Information** necessary to identify a **Document.** It normally includes: author; title; place of publication, publisher, and date (in the case of a book); or author; title; name of journal; volume/edition, page number(s), and date (in the case of an article). Additional details may be included for clarification. See also: **Annotation, Bibliography, Bibliometrics, Citation, Citation index, Metadata.**

Bibliography is a list of documents (for example, books, periodicals, articles, reports, and conference papers) covering a specific subject or range of subjects, arranged in some order, such as by subject, chronologically, or by author. Entries will normally incorporate the essential details and may extend to a **Notation** or an **Abstract**. See also: **Bibliographic reference, Bibliometrics, Citation, Document, Metadata**.

Bibliometrics is the application of statistical or mathematical methods to groups of bibliographic references (for example, authorship, publications, literature use) for comparison or comprehension. See also: **Bibliographic reference, Bibliography, Citation analysis, Informetrics, Webometrics**.

Bioinformation transfer is the study of the neuro-active substances that play a crucial role in intercellular **Information** transfer, and of the application of such mechanisms to medicine and **Information technology**. See also: **Cybernetics**.

Blog is a direct means for an individual to share ideas, thoughts, opinions, and **Information** concerning a particular topic with an audience, using the Web as the medium. It usually takes the form of a diary or chronological narrative initiated, and frequently updated, by the *blogger*. Its main value lies in the establishment of networks and the **Social capital** created as a result. See also: **Corporate blog, Wiki**.

Boolean algebra refers to an abstract system of symbols and operators that apply to logical problems. Boolean operators most commonly used for manipulating search terms in information retrieval include: AND, OR, NOT. Less common are: IF, NEAR, BEFORE, AFTER, THEN, EXCEPT. The results of employing Boolean operators may be illustrated using **Venn diagrams**. The term is derived from the British mathematician George Boole (1815-1864) who devised the original system. See also: **Nesting, Proximity operators**.

Bot (abbreviation of robot), see **Robots**. See also: **Crawler, Intelligent agents, Search engine, Spider**.

Brainstorming is a technique used by groups of people to overcome the widespread tendency to overlook various obvious options while solving problems or generating new ideas. The key principle is to defer judgment, achieved by insistence on first recording all suggested ideas. See also: **Lateral thinking, Synectics**.

Brief is either an abridged memory aid for presenting arguments in a legal case, or a set of instructions concerning a specific task, operation, or project. See also: **Briefing, Report**.

Briefing is the oral or written disclosure, before the event, of information or instructions concerning an operation, project, or visit. The term is derived from military practice. See also: **After action review, Debriefing, Intelligence briefing, Report**.

Browser is a client software program that is used to identify and locate various kinds of **Internet** resources. See also: **Cyberspace, World Wide Web**.

Bulletin board system (BBS) is a computerized meeting and announcement system that allows people to carry on discussions, upload and download files, and record observations and points of view without having to be simultaneously connected to the system at any given time. See also: **Internet**.

Burotics applies to the fusion of several technologies that are mainly covered by the term **Business technology**. It includes: data organization; word processing; facsimile; teletext and videotex; reproduction equipment; time registration; and business management systems. See also: **Technological fusion, Telematics**.

Business environment encompasses all those factors that affect a company's operations; and includes customers, competitors, stakeholders, suppliers, industry trends, regulations, other government activities, social and economic factors, and technological developments. Also known as Operating environment.

Business intelligence is any combination of **Data, Information, and Knowledge** concerning the **Business environment** in which a company operates that, when acted upon, will confer a significant **Competitive advantage** or enable sound decisions to be made. Thus, for practitioners, the term encompasses both **Competitive intelligence** and **Knowledge management**. Involvement in business intelligence operations will enable the organization to, among other things:

- anticipate and manage risk;
- seek **Opportunities** and new markets;
- take action before competitors;
- **Innovate**;
- exploit competitors' weaknesses;
- improve **Planning** and decision-making.

The term is also widely accepted as being concerned with **Information technology** solutions for transforming the output from large **Data** collections into so-called **Intelligence**; usually through the integration of sales, marketing, servicing, and support activities. Also loosely referred to as **Customer relationship management**, it covers such activities as **Data mining** and **Enterprise reporting**, and the associated software. Those involved in this form of business intelligence tend to regard it as simply one aspect of **Knowledge management**. Systems based on such software have replaced the term Executive information systems. See also: **Competitive intelligence, Competitor, Competitor intelligence, Intelligence analysis, Market intelligence, Technological intelligence**.

Business plan incorporates a detailed study of the current and anticipated future activities of an enterprise, and of all the factors (such as marketing, development and production, and financial aspects) that will have a bearing on those activities. Since it is also the normal mechanism for attracting investment, it should provide potential investors with the **Information** they need in order to evaluate the risks and the potential returns on investment (RoI). Often used as a generic term covering marketing, operational, strategic, tactical, and other forms of corporate plans. See also: **Planning, Venture capital**.

Business process management (BPM), see **Business process outsourcing**.

Business process outsourcing (BPO) is the long-term contractual delegation of management and operational responsibility for an IT-enabled business function, or process area, to an external services provider. BPO covers three broad areas of activity: sales, marketing, and customer care; administration and finance; operations processes (which may include materials management, procurement, distribution, or manufacturing). BPO may be partial (management or operation only) or complete (management, operation, and ownership).

Business process re-engineering (BPR), see **Re-engineering**.

Business technology refers to the integration of computer and communications technologies in support of administrative applications and procedures within an organization. See also: **Information technology**.

Business war gaming, see **War gaming**.

Cascade, see **Explode**.

Case-based reasoning is a technique for deriving solutions to problems through a reasoning process using **Artificial intelligence** to produce analogies with similar problems where solutions are already known.

Caves and commons is a colloquial term for the two main types of working area: caves represent private areas used for concentrated thinking; commons refers to open spaces designed to encourage discussion and the exchange of **Information** and ideas. See also: **Work spaces, Working environment**.

Census is an evaluation or enumeration of each and every member or unit of population under study. See also: **Demography**.

Chat room, see **Newsgroup**.

Cipher is a way of producing a **Document** whose content may be understood by the intended recipient but should be unintelligible to all others. This is usually achieved by substituting computer-generated random numbers or letters for the symbols making up the content of the document. Since the same sequence must be used to set up the system for both enciphering and deciphering, no cipher system is entirely invulnerable. See also: **Code, Steganography**.

Citation is a reference or footnote to a **Document** which contains sufficient **Information** to identify and locate the work to which it refers. It usually takes the form of a **Bibliographic reference**. See also: **Annotation, Bibliography, Citation analysis**.

Citation analysis is a specific division of **Bibliometrics** devoted to the study of citations to and from documents.

Citation index consists of a list of documents, usually arranged by author, with a list against each entry of other documents that have cited the item represented by the entry. It is based on the principle that if the searcher is aware of a **Document** that is relevant, then any document published at a later date that cites the original is also likely to be relevant. See also: **Bibliography, Citation.**

Classification scheme is an orderly arrangement of terms or classes - a class being any group of entities sharing the same characteristic(s). The major universal classification schemes are: Bliss, Colon, Dewey Decimal, Library of Congress, and Universal Decimal. See also: **Classify, Index, Keyword, Ontology, Taxonomy, Thesaurus.**

Classified information refers to military or national secrets. It is normally available to unqualified individuals only by means of clandestine human or technical (imagery or signals) **Intelligence**. See also: **Classify.**

Classify is to assemble or group items in a rational and consistent manner. It is based upon a preconceived plan, with the whole field of interest divided into categories, classes, and sub-classes. It also means to designate a **Document** as an official secret or as not available for general disclosure. See also: **Classification scheme, Classified information, Directories, Hierarchical classification, Index, Keyword, Ontology, Taxonomy, Thesaurus, Trade secret.**

Clickstreaming enables a **Web site** to monitor a user's movements while on site and when moving to other links from that site.

Closed-circuit television (cctv) is a form of cable television accessible to a limited user group. It is used especially in security systems and military establishments, and for educational purposes.

Closed proprietary information, see **Trade secret.**

Cluster consists of several enterprises that have entered into a formal, continuing association in order to pursue some activities in common and derive maximum benefit from such synergy. These shared activities may include: **Research, Development, and Innovation; Marketing**, promotion, labeling, and publication of **Trade literature**; imposing minimum standards of quality; arranging the supply of equipment, components, or materials; and sharing **Information** gathering and **Analysis**. See also: **Alliance, Joint venture, Lead-firm network, Networking, Production network, Service network, Strategic alliance, Value chain.**

Clustering is the linking together of many small computers in order to create a more powerful machine. See also: **Grid computing.**

Code is a pre-arranged system of words, letters, figures, or symbols used to represent others for secrecy or brevity. The Morse code, for example, uses a sequence of dots and dashes to represent letters and digits. See also: **Cipher, Corporate security, Password, Steganography.**

Cognitive science is the study of thinking, knowing, and intellectual reaction; of the process of comprehending, judging, remembering, and reasoning; and of the acquisition, organization, and uses of **Knowledge**. See also: **Artificial intelligence, Concept.**

Collaboration software, see **Groupware**.

Colloquium is an informal academic **Conference** or group discussion. See also: **Seminar, Symposium, Workshop**.

Combination, one of the four basic **Knowledge management** processes, is a technique for combining items of **Explicit knowledge** to form new explicit knowledge. See also: **Externalization, Internalization, and Socialization**.

Commerce is a term that usually applies to domestic trade; that is, conducted within a specific nation or territory. See also: **International trade**.

Commercialism is the imposition of business principles and full cost-accounting techniques on government enterprises.

Commercialization covers the range of activities involved in producing and **Marketing an Innovation**; or is the transformation of ideas into economic results. See also: **Diffusion, Technology transfer**.

Communication is the process whereby **Knowledge** is codified into **Information** by the transmitter, passed through a medium to a receiver, who then reconverts that information into new knowledge. See also: **Knowledge creation**.

Community of commitment, see **Community of practice**.

Community of interest is a network of people who are committed to the mutual exchange of ideas and **Information**. The focus tends to be on learning about areas of common interest, rather than on producing practical results. See also: **Community of practice**.

Community of practice (CoP) is an informal, self-organizing, interactive group that develops in response to a specific, work-related activity, subject, practice, or problem of mutual interest. Membership is determined by participation and may transcend hierarchical and organizational boundaries. It provides a means of developing best practices or solutions to problems through **Communication**, that is, through participation in the exchange of **Information** and the creation of **Knowledge**. A community of practice may use a variety of media for this purpose, including face-to-face meetings, reports, email, instant messaging, collaborative workspaces, and intranets. Communities of practice can sometimes make a major contribution to **Social capital** in organizations. A CoP may sometime be called a Community of purpose or commitment. Large, geographically dispersed communities tend to be referred to as Networks of practice. See also: **Community of interest, Electronic mail, Groupware, Intranet, Knowledge management, Networking, Report, Team**.

Community of purpose, see **Community of practice**.

Competency modeling involves identifying superior performers and creating profiles that specify their expertise, skills, personalities, values, and other attributes as a basis for general organizational improvement. See also: **Expertise profiling, Knowledge map, Mindset.**

Competitive is when a company can maintain or expand its **Market share** while making at least enough profit to induce it to stay in its existing line of business.

Competitive advantage is gained by exploiting the unique blend of activities, assets, attributes, market conditions, and relationships that differentiates an organization from its competitors. These may include: access to natural resources, specific location, or skilled workforce. See also: **Business intelligence, Competitor, Critical success factors.**

Competitive intelligence is a systematic and ethical program for gathering, analyzing, and managing **Information** about the external **Business environment** that can affect a company's plans, decisions, and operations. Although narrower in scope, it is commonly employed as a synonym for **Business intelligence.**

Competitor is any organization that offers the same, a similar, or a substitute product or service in the field of endeavor in which a company operates.

Competitor intelligence is a subdivision of **Business intelligence** that concerns the current and proposed business activities of competitors. See also: **Competitor, Strategic group analysis.**

Competitor profiling is the systematic **Analysis** of competitors in order to learn from their strengths and exploit their weaknesses. The knowledge acquired is used to gain and maintain a **Competitive advantage.** See also: **Competitor, Intelligence analysis, SWOT analysis.**

Computer-aided design (CAD) involves the use of computers in the design and engineering process. The term embraces geometric modeling, **Analysis,** testing, and drafting.

Computer-aided instruction (CAI) refers to the use of computers as teaching machines.

Computer-aided manufacturing (CAM) involves the use of computer technology in the management, control, and operation of the manufacturing process.

Computer-assisted interactive tutorial system is one in which a computer is programmed to perform the role of teacher in (normally) a one-to-one tutorial. See also: **Distance learning.**

Computer-assisted process planning involves the use of computers to generate process plans showing the sequence of operations and work stations required in manufacture.

Computer graphics refers to the use of computers to generate and display pictorial images. See also: **Visualization.**

Computer-integrated manufacturing is a term that applies when work stations are directly serviced by an automated material-handling system and controlled by a computer. The term

encompasses: CAD/CAM, **Robotics**, **Group technology**, Material requirements planning, Manufacturing resource planning, Automated storage and retrieval systems, **Computer-assisted process planning**, and Computer-aided parts programming. See also: **Computer-aided design**, **Computer-aided manufacturing**.

Concept is any unit of thought, generally expressed by a term, letter, or symbol. It may be the mental representation of beings or things, qualities, actions, locations, situations, or relations. A concept may also arise from any combination of other concepts. See also: **Cognitive science**, **Insight**, **Knowledge**, **Semantic networks**.

Concept mapping, see **Visualization**.

Conference is a general session or face-to-face group that relies on participation; often used to publicize developments in a particular field of endeavor or discipline. See also: **Colloquium**, **Seminar**, **Symposium**, **Workshop**.

Confirmation bias refers to our tendency to seek evidence that will confirm our own opinion, or ignore or devalue that which does not. See also: **Analysis**, **Intelligence analysis**.

Conjecture is to form an opinion from incomplete **Information**; to guess.

Contact management system (CMS), allows organizations and individuals to record relationships and interactions with customers and suppliers.

Content analysis describes the technique of identifying keywords and descriptors from a given **Document** in order to facilitate **Information retrieval**. See also: **Descriptor**, **Keyword**, **Indexing**.

Content management system (CMS) separates the management of content from that of its presentation. This allows segments of content to bear **Metadata** and other attributes and be handled as building blocks in putting together Web pages, thus simplifying the task of updating. See also: **Information architecture**.

Content visualization, see **Visualization**.

Contestability is the extent to which the provision of a good or service is open to alternative suppliers.

Contingency planning differs from **Scenario planning** in that it usually takes into account only one probable future event. See also: **Planning**, **War gaming**.

Controlled indexing language, see **Controlled vocabulary**.

Controlled vocabulary is an **Indexing** language; that is, a standardized - yet dynamic - set of terms and phrases authorized for use in an indexing system to describe a subject area or **Information** domain. Ideally, the terms that are used to represent subjects, and the process

whereby terms are assigned to particular documents, should be both controlled and executed by one individual. It can vary from a simple alphabetical list of terms to a complex annotated **Thesaurus**. Also known as a Controlled indexing language. See also: **Classification scheme, Classify, Content analysis, Descriptor, Document, Index, Keyword, Natural indexing language, Ontology, Taxonomy, Topic map**.

Copyright exists automatically on original literary, artistic, musical, or dramatic works and gives protection against unlicensed use. See also: **Intellectual property**.

Corporate blog is a **Blog** published by, or with the support of, an organization in order to further its aims, aspirations, or goals.

Corporate culture is the set of values, beliefs, and relationships between individuals and functions that guide the decisions of the company in order to achieve its objectives. It results in behavior that has been learned within a group or transferred between individuals over time. Also known as organizational culture. See also: **Meme, Mission statement, Social capital, Vision statement**.

Corporate governance is the framework of rules, relationships, systems, and processes within and by which authority is exercised and controlled in corporations. See also: **Stakeholder**.

Corporate intellectual assets, see **Knowledge assets**.

Corporate intelligence is a broad term covering both **Business intelligence** and **Competitive intelligence** as well as those elements that are inherent in global operations, such as **Corporate security** and **Counterintelligence**.

Corporate memory, see **Knowledge assets**.

Corporate security aims at protecting **Knowledge assets**, whether in the form of physical entities or intellectual (tangible and intangible) property. See also: **Authentication, Counterintelligence, Intellectual property, Knowledge management, Trade secret**.

Corporatization is **Privatization** coupled with the requirement that the government sector enterprise actively encourage competition from the private sector. Government ministers set policy objectives but are not involved in routine operations.

Counterintelligence refers to those activities that are concerned with identifying and counteracting the threat to security posed by hostile intelligence services or organizations, or by individuals engaged in **Espionage**, sabotage, or subversion. See also: **Corporate security, Intellectual property, Knowledge assets**.

Countertrade is the exchange of goods or services free of monetary consideration.

Crawler uses existing **Internet** search engines to carry out automatic search and retrieval of selected **Information** on behalf of a user. Also known as Web crawler. See also: **Bot, Intelligent agents, Search engine, Spider**.

Creativity refers to the act of generating new and useful ideas, or of re-evaluating or combining old ideas, to develop new and useful perspectives in order to satisfy a need. See also:

Brainstorming, Innovation, Invention, Lateral thinking, Synectics.

Critical success factors are the limited number of activities that need to succeed and be effective if company aims are to be achieved; or, are the few key areas of activity in which favorable results are absolutely necessary for a particular manager to reach his or her goals. Knowing the critical success factors helps to determine information needs. Also known as Key success factors. See also: **Competitive advantage.**

Current awareness services make available **Knowledge** of what is being done in specific fields of endeavor through **Documents** (such as notes, abstracts, clippings, email, **Selective dissemination of information**, and **Database** records) or orally (such as face-to-face or telephone conversations). See also: **Abstract, Electronic mail, Indicative abstract, Informative abstract.**

Customer relationship management (CRM) is a software-based technique designed to select and manage customers in order to maximize their long-term value to an enterprise. The term covers several aspects of customer relationships, such as: campaign management systems, call centers, interactive voice response systems, e-commerce, point-of-sale, and sales automation. The intention is to understand and anticipate the needs, preferences, and buying habits of existing and potential customers. To that end, it usually employs some form of **Data mining** designed to exploit large customer databases. Seen by some as the most important aspect of **Knowledge management**. See also: **Database, Electronic commerce.**

Cybernetics refers to the science in which communication and control systems in electronic and mechanical devices are studied and compared with those in biological systems. See also: **Artificial intelligence, Bioinformation transfer.**

Cyberspace is the notional environment in which communication over computer networks occurs. The term is currently used to describe the whole range of **Information** resources available through such networks. See also: **Browser, Internet, Network, World Wide Web.**

Cypher, see **Cipher**.

Dashboard is a **Visualization** tool that provides graphical depictions of current key performance indicators in order to enable faster response to changes in areas such as sales, customer relations, performance assessments, and inventory levels.

Data consist of unconnected facts, numbers, names, codes, symbols, dates, words, and other items of that nature that are out of context, and that only acquire meaning through association. See also: **Business intelligence, Code, Information, Knowledge.**

Data logging involves the conversion of electrical impulses from process instruments into digital **Data** to be recorded, stored, and periodically tabulated.

Data mart is a focused collection of operational **Data** that is usually confined to a specific aspect of a business. A number of stand-alone data marts are often referred to as Islands of data.

Data mining is the systematic computer **Analysis**, through the use of statistical techniques (often employing **Neural networks**), of large volumes of collected **Data** with the aim of revealing previously unidentified patterns, trends, and relationships about customers, products, services, and other activities that can lead to new and profitable business **Opportunities**. As with any **Database**, the critical aspects are to do with accurate, up-to-date content, and with the means used for locating and matching that content to user needs; that is, with the level of intellectual input. For these reasons the procedure is complex and protracted, calling for specialized expertise and imagination. Also known as Database tomography, Discovery informatics, or Knowledge discovery. Examples of data mining applications include: identifying new customers, predicting customer buying habits, confirming suitable loan applicants, revealing fraud, indicating potentially rewarding investments, managing equity portfolios, diagnosing medical problems, inventory management, and conducting certain aspects of **Marketing**. See also: **Data warehouse, Predictive analytics, Text mining, Visualization**.

Data warehouse is a repository of operational **Data** from one or more sources within an organization, together with data derived from a variety of external sources that have been arranged into meaningful **Information**, and rendered easily accessible so as to allow for effective **Analysis** or decision-making. See also: **Data mining, Predictive analytics**.

Database is a collection of interrelated **Data** stored together without harmful or unnecessary redundancy and structured in such a manner as to serve one or more applications. The data are stored so that they are independent of programs that use the data.

Database tomography, see **Data mining**.

Datasmog, see **Information overload**.

Debriefing is an alternative term for **After Action Review**. See also, **Briefing, Knowledge management**.

Deception, see **Social engineering**.

Decision diary records decisions made, together with any assumptions made and the reasoning employed. It is used to derive lessons to assist future decision-making.

Decision tree is a graphical representation of the **Analysis** of sequential decisions and their likely outcomes. See also: **Predictive analytics**.

Deduction is based on theory and logic. It involves reasoning from the general to the particular, that is, drawing specific conclusions from general premises; to infer. For example, to ascribe to one member of a class the properties generally observed in other members of that same class. In general, scientific laws are established in this way. From a number of observations, a

generalization (or law) is drawn: the greater the number of observations, the more reliable the conclusion is likely to be. See also: **Analysis, Induction, Intelligence analysis.**

Deep Web, see **Invisible Web.**

Demography is the scientific study of human communities, including size, composition, distribution, density, movement, rate of growth or decline, and other characteristics, and of the causes and consequences of changes in these factors. See also: **Census, Market intelligence, Market segmentation.**

Derived-term indexing is where the **Indexing** terms are extracted directly from the record or **Document**. See also: **Assigned-term indexing, Enrichment, Index.**

Descriptor is a term attached to a **Document** to permit its subsequent location and retrieval. See also: **Indexing.**

Design refers to the ornamental and visual aspects of an article. See also: **Intellectual property.**

Desktop conferencing, see **Video conferencing.**

Development includes those technical activities of a non-routine nature concerned with translating **Research** findings or other scientific knowledge into products, processes, materials, devices, or services. See also: **Applied research, Innovation, Research and development, Technology transfer.**

Dictionary is concerned primarily with words; with their spelling, pronunciation, and meaning, in one or more languages. Dictionaries may apply to a specific subject field, or may be restricted to abbreviations. See also: **Glossary.**

Diffusion is the process whereby new **Knowledge, Know-how**, and innovations spread from an innovating organization to other potential or actual users; or is the spread of innovations into general use. See also: **Commercialization, Creativity, Development, Extension service, Innovation, Intellectual property, Networking, Social network analysis, Technology transfer.**

Digest is a condensed version of a **Document** or topic, or of several related topics. It is similar in many respects to an **Informative abstract**. The term may also refer to a regular or occasional **Synopsis** of current literature or news. See also: **Report.**

Directories are primarily lists of names and contact details of people and organizations, together with descriptions of their projects, activities, products, and expertise arranged in a variety of ways; mainly in alphabetical, subject, or classified order. Online directories provide lists of subject headings that are arranged hierarchically, from broader to narrower terms, and are compiled by human editors. They are more suitable for browsing and easier to navigate than **Search engines**. Be aware, however, that online directory compilers usually rely on descriptions submitted by site creators. See also: **Classify, Hierarchical classification.**

Discovery informatics, see **Data mining**.

Discussion group, see **Newsgroup**.

Disinformation may be of two kinds. Active disinformation is that which is promulgated with the intention to deceive others in the expectation of benefit. It is designed to change people's perceptions of reality and persuade them to accept certain desired conclusions by the use of exaggerated, false, or misleading **Information**. Passive disinformation is when possibly detrimental information is deliberately ignored or concealed. See also: **Ambush marketing**, **Information warfare**, **Misinformation**, **Social engineering**.

Distance learning is that branch of education in which teachers and students are at remote locations rather than in direct contact. They communicate by correspondence, email, the **Internet**, radio, television, cctv, computer-assisted interactive tutorials, video-**Teleconferencing**, and so on. Also known as Distance teaching. See also: **Closed-circuit television**, **Computer-assisted interactive tutorial system**, **Educational technology**, **Electronic mail**, **Groupware**.

Distance teaching, see **Distance learning**.

Document contains recorded human **Knowledge**, in any format; or is **Information** structured in such a way as to facilitate human comprehension. See also: **Explicit knowledge**, **File**, **Report**, **Surrogate**.

Document management system is a computer-based technique for storing and retrieving documents held in a wide variety of formats or in a number of geographic locations. Many systems allow for the control and recording of changes to documents, as well as a measure of the volume of use. Also known as a Record management system. See also: **Document**.

Domain name is the unique identifier for an **Internet** site, having two or more parts separated by dots. Reading from left to right leads from the general to the specific.

Download is to retrieve **Information** from the **Internet**.

Dungeon, see **Multi-user dimension**.

Duopoly market is one in which the combined share of the top two companies is more than 73.9% of the market, and the leading company has less than 1.7 times the **Market share** of the second company.

E-commerce, see **Electronic commerce**.

Economic factors are variables in the economy that might affect the operations of a company during the period covered by the strategic plan. See also: **Strategic planning**.

Educational technology applies to the **Development**, application, and evaluation of systems and techniques for improving the process of human learning. See also: **Distance learning, Knowledge creation.**

Electronic commerce covers a range of activities under which businesses and their customers can carry out transactions electronically between computer systems. This greatly reduces costs and improves efficiency. Commonly referred to as e-commerce. See also: **Electronic commerce, Electronic funds transfer.**

Electronic funds transfer is the transfer of cash or credit from one account to another using computers and telecommunications. See also: **Electronic commerce, Information technology.**

Electronic mail refers to a system for sending messages by means of a computer system or **Network**. More popularly known as email.

Email, see **Electronic mail.**

Embodied knowledge is that **Knowledge** which is incorporated in a product although not explicitly identified. It is integral to equipment or materials; for example, the technological knowledge contained in a modern household appliance, a vehicle, or a recording device. Embodied knowledge can often be deduced through **Reverse engineering**. It is sometimes loosely referred to as **Implicit knowledge**. See also: **Knowledge.**

Enrichment is the selection and use of terms additional to those contained in the title, abstract, or text of a Document in order to facilitate or enhance its storage and retrieval. See also: **Assigned-term indexing, Indicative abstract, Informative abstract.**

Entanglement is an as yet unexplained correlation between quantum particles that were once united. The fact that they once functioned as part of a larger whole seems to build an inherent link between these particles. Changing the state of one qubit (quantum bit or particle) instantaneously changes the state of the other, no matter how far away from each other they are. Not only does entanglement make instantaneous communication possible but, because quantum particles can exist in more than one state simultaneously, it also effectively doubles the capacity of any communication channel. The phenomenon will almost certainly lead to significant developments in computing.

Enterprise information management is sometimes used in place of the more common term, **Information management.**

Enterprise information portal (EIP) is a term used to describe both the home page of an organization's **Intranet** and the intranet itself, together with its content. Users typically have access to the system from a personal starting page. See also: **Web site.**

Enterprise performance management (EPM), see **Enterprise resource planning** (ERP).

Enterprise reporting refers to large-scale **Report** generation, usually achieved through the use of so-called **Business-intelligence** software, and intended to deliver **Information** by means of the **Internet** or an **Intranet**.

Enterprise resource planning (ERP), also known as Enterprise performance management (EPM) or Professional services automation (PSA), is a software-driven technique that is intended to optimize the use and application of resources (project management) and manage mission-critical processes (such as workflows, time and expense reporting, collaboration, and **Knowledge** capture).

Enterprise systems aim to overcome problems with incompatible **Information** storage and retrieval systems by introducing a common format for databases within companies. Proprietary processes need to be tailored to meet the needs of the enterprise systems, necessitating management and structural change. See also: **Database**.

Entrepreneur is a person who has the ability to recognize **Opportunities** of benefit to an enterprise, and the will and capacity to undertake appropriate innovative action while accepting the associated risks. See also: **Innovation, Intrapreneur**.

Environmental scanning involves continuous monitoring of the whole **Business environment**, primarily in order to identify **Opportunities** and **Threats** resulting from change. See also: **SWOT analysis**.

Ergonomics is the study of the engineering aspects of the relationship between human beings and their **Working environment**.

Espionage is the use of illegal means (spying) to collect **Information**, more particularly secret or unpublished information. Offences may range from trespass and theft to treason. See also: **Counterintelligence, Knowledge assets, Trade secret**.

Executive information systems (EIS) are now commonly referred to as **Business intelligence** systems.

Exhaustivity is a measure of how completely the concepts within a **Document** have been indexed. The greater the proportion of concepts covered in the **Index**, the greater the exhaustivity. See also: **Concept, Indexing**.

Experiential modeling is a sophisticated technique for converting **Know-how** and judgment into mathematical formulae that can be used to solve complex puzzles and help to predict the future.

Experimental development involves systematic work using **Applied** or **Basic research** or practical experience for the purpose of creating new, or improving existing, materials, devices, products, processes, or services.

Expert system is a particular development of **Artificial intelligence** that helps to solve problems or make decisions through the use of a store of relevant **Information** (known as the **Knowledge**

base, and derived from one or more human experts), and a set of reasoning techniques. See also: **Knowledge engineering**.

Expertise database, see **Knowledge map**.

Expertise location service, see **Knowledge map**.

Expertise locator software, available at various levels of sophistication, may be used in the compilation of a **Knowledge map**.

Expertise profiling is a technique for identifying and classifying personal **Knowledge** and expertise for use in a **Knowledge map**. Often achieved either through manual completion of standard forms, or by inference from the content of documents produced by the individuals concerned. See also: **Classify**, **Competency modeling**, **Document**.

Explicit knowledge consists of anything that can be codified, or expressed in words, numbers, and other symbols (such as plans, marketing surveys, customer lists, specifications, manuals, instructions for assembling components, scientific formulae) and can, therefore, be easily articulated, usually in the form of documents, processes, procedures, products, and practices. See also: **Document**, **Know-how**, **Knowledge**, **Knowledge management**, **Tacit knowledge**.

Explode is a feature of some **Indexing** systems that allows the user to expand a category of terms in a hierarchy from general to specific to retrieve all documents allocated to that specific term or to any of the narrower terms relating to it. It differs from truncation in that the terms do not have to include an identical string of characters in order to be retrieved. Also known as Cascading. See also: **Classification scheme**, **Classify**, **Controlled vocabulary**, **Document**, **Hierarchical classification**, **Index**, **Notation**, **Ontology**, **Taxonomy**, **Thesaurus**, **Truncate**.

Exploratory data analysis is used to identify systemic relationships between variables when there are no (or incomplete) *a priori* expectations as to the nature of those relationships. Closely related to **Data mining**.

Extensible mark-up language (XML) allows content producers to add **Metadata** to non-text items (that is, images, audio, video) and facilitates retrieval of unstructured **Information** (an important aspect of **Knowledge management**).

Extension service provides for the direct delivery of advice to industry and business with the aim of encouraging adoption of desirable, new or transferable technologies, and the provision of relevant feedback to **Research and development** services. See also: **Diffusion**, **Technology transfer**.

Externalization is the conversion of **Tacit knowledge** to **Explicit knowledge** by means of language or **Visualization**. See also: **Combination**, **Internalization**, **Knowledge management**, **Socialization**.

Extract is a verbatim portion of a **Document** selected to represent the whole. See also: **Report**.

Extranet is that portion of an organization's **Intranet** that is accessible by selected individuals (for example, collaborators, suppliers, partners, major customers).

Facility management is a business practice that optimizes people, processes, assets, and the **Working environment** to support the delivery of the organization's commercial objectives.

Fact is that which is known to have occurred or to be true.

File is any organized and structured collection of **Information**. See also: **Document**.

File transfer protocol (FTP) is a very common method of moving files between **Internet** sites; it offers a means to **Login** to another site for the purpose of retrieving or sending files. See also: **File**.

Finger is a software tool for locating people on other **Internet** sites. It is also sometimes used to give access to non-personal **Information**, but the most common use is to verify that a person has an account at a particular site.

Firewall applies to software designed to protect internal computer networks against unauthorized access or intentional hostile intrusion. See also: **Corporate security, Counterintelligence, Network**.

Five forces industry analysis helps to assess and manage the long-term attractiveness of an industry. It is designed to explain the relationship between the five dynamic forces that affect an industry's performance; these are the:

- intensity of competitive rivalry;
- threat from new entrants;
- threat from substitutes;
- bargaining power of buyers;
- bargaining power of suppliers.

Foresight planning, see **Scenario planning**.

Freedom of information legislation requires that government agencies provide certain **Information** to the public on request while, at the same time, providing protection to commercial-in-confidence documents and other material that is likely to compromise government activities.

Frequently asked questions (FAQ) is a compilation of the most common questions, and the relevant answers, on a particular subject. It is designed to minimize the time devoted to answering commonly recurring questions.

Fundamental research, see **Basic research**.

Fuzzy logic is a software program that operates at a high level of abstraction and is able to handle conflicting demands. Typical engineering applications may be found in automatic transmission systems that are able to run more smoothly, and in subway trains that are able to start and stop

without jerking. Other applications include **Text mining** and **Case-based reasoning**. See also: **Artificial intelligence**.

Gateway may be either a **Library gateway** or a **Portal**.

Globalization is, in essence, the growth of interconnectivity that has been taking place since man moved out of Africa about 1.6 million years ago. Such increased interconnectivity has resulted in greater economic, political, and religious flows across cultures and countries. More particularly, globalization refers to the continuing economic, technological, social, and political integration of the world that followed World War II. Major benefits have been its effect on world trade (which more than doubled as a proportion of nominal world gross domestic product between 1960 and 2000) and significant reductions in the costs of shipping and communication generally. See also: **International trade**.

Glossary is a form of **Dictionary** which usually lists jargon or technical terms confined to a specific subject field, discipline, or profession. See also: **Standards**.

Graphic visualization, see **Visualization**.

Grey literature refers to material that is not formally published, such as institutional or technical reports, working papers, business documents, conference proceedings, or other documents not normally subject to editorial control or peer review. It may be widely available yet difficult to trace. **Trade literature** comes under this broad heading.

Grid computing refers to the automated sharing and coordination of the collective processing power of many widely scattered, robust computers that are not normally centrally controlled, and that are subject to open standards. Other terms employed in this context include: Autonomic computing, Data-centre virtualization, On-demand computing, Public resource computing, and Utility computing. See also: **Clustering**.

Group technology is a coding and classification technique that groups parts according to geometric or manufacturing characteristics; used to facilitate **Computer-assisted process planning**. See also: **Classify**.

Groupware refers to a broad selection of software that is designed to enable collaboration, networking, and information-sharing activities through computer networks. Sometimes referred to as Collaboration software. Groupware may be designed to execute some or any combination of the following:

- **Electronic mail**;
- meetings management;
- project management;
- **Team** scheduling;
- **Distance learning**;
- discussion groups.

See also: **Community of practice**, **Networking**, **Networks**.

Hard information is quantitative in nature and generally consists of facts, statistics, and other formally published **Information**. See also: **Fact**.

Hierarchical classification is a method of grouping in which terms are arranged from general to specific; that is, in which the structure is initially arranged in broad groups that are then successively subdivided into narrower groups. See also: **Classify, Directories, Explode**.

High technology (Hi-tech) is a popular term for **Advanced technologies**.

Holography is the creation of three-dimensional images of objects using light produced by lasers.

Home page, see **Web site**.

Horizontal organizations seek to reduce the number of layers of management and facilitate the development of flatter, more responsive and productive organizations. Teams are allocated to, and made responsible for, specific business processes. This ensures that decisions are made more quickly and in a manner more consistent with business objectives. The technique is particularly useful in multinational organizations, because it helps to link disparate and geographically dispersed operations. See also: **Team**.

Host is any computer on a **Network** that acts as a repository for services available to other computers on the network. It is quite common to have one host machine provide several services, such as the **World Wide Web** or **Usenet**.

Human capital is the combined ability, **Knowledge**, skills, expertise, competencies, know-how, and innovativeness of an organization's members to conduct a specific activity, operation, project, or task. It also includes that organization's values, culture, and philosophy. See also: **Competency modeling, Corporate culture, Expertise profiling, Innovation, Intellectual capital, Knowledge map**.

Humint is an abbreviation for human **Intelligence**; that gathered directly from people rather than from published sources; hence **Soft information**.

Hypertext is a **File** structure applied to the complex, the changing, and the indeterminate. It allows the user to make links to other documents using words or phrases that cause those documents to be retrieved. Sometimes described as a **Semantic network**, a hypertext system has three major components:

- a collection of items of **Information**;
- a **Semantic network** linking related items of information;
- tools for recording items of information, for creating links, and for searching through the system.

See also: **Document, Internet, Intranet, World Wide Web**.

HyperText markup language (HTML) is the coding language for creating **Hypertext** documents for use on the **World Wide Web**. It is very like a typesetting code, where blocks of text are surrounded by codes that indicate how it should appear. In addition, HTML allows one to specify a block of text or word that is linked to another **File** on the **Internet**. See also: **Code**.

HyperText transfer protocol (HTTP) is a system for moving **Hypertext** files across the **Internet**. See also: **File, Hypertext**.

Icons are graphical representations of computer functions or files that facilitate user recognition and selection. See also: **File**.

Implicit knowledge is that which is not directly expressed; hence, where the meaning is inferred from the context and, therefore, relies on existing knowledge. See also: **Explicit knowledge, Knowledge, Tacit knowledge**.

Index is a systematic guide to the content of one or more documents arranged in some chosen order (usually alphabetically), together with associated location elements (for example, topic description and page numbers in a book, or **File** titles and identification numbers in a filing system). See also: **Classification scheme, Document, Classify, Controlled vocabulary, Ontology, Taxonomy, Thesaurus**.

Indexing provides a means of labeling documents using freely selected keywords or phrases (natural language) or authorized descriptors from a **Taxonomy** or **Thesaurus (Controlled vocabulary)**, or any combination of those, together with some means of indicating its location in the system. See also: **Assigned-term indexing, Content analysis, Derived-term indexing, Descriptor, Document, Keyword, Ontology**.

Indicative abstract is one that describes the type of **Document**, the subjects covered, and the way in which the facts are treated (that is, what it is about). It is only intended to alert readers to the existence of a **Document** of possible relevance and help them to decide whether reference to the original is necessary. Written in the present tense and passive voice, it should discuss the article that describes the **Research**. See also: **Abstract, Fact, Informative abstract, Report, Summary, Synopsis**.

Induction is based on experience and experimentation. It involves reasoning from the particular to the general; for example, reaching a conclusion by ascribing identical properties to all members of a class of things by examining only a limited number of those things. Any conclusion must be based on a particular set of observable facts. Possible techniques include:

- illustration by example;
- enumeration of particulars and details;
- definition;
- elaboration by comparison and contrast;
- any combination of these.

See also: **Analysis, Classify, Deduction, Fact, Intelligence analysis**.

Industrial espionage, see **Espionage**.

Industry extension service, see **Extension service**.

Infoglut, see **Information overload**.

Informatics is the systematic study of **Information** and the application of **Research** methods to the study of **Information** systems and services. It deals primarily with the human aspects of information, such as its quality and value as a resource. Also referred to as Information science.

Information consists of **Data** arranged in some sort of order (for instance, by classification or rational presentation) so that they acquire meaning or reveal associations between data items. Information may also be defined as a physical surrogate of **Knowledge** (language, for instance) used for communication. See also: **Business intelligence**, **Classify**, **Document**, **File**, **Intelligence**.

Information anxiety, see **Information fatigue syndrome**.

Information architecture is concerned with the creation and organization of a **Web site**. See also: **Content management system**, **Metadata**, **Ontology**, **Taxonomy**, **Thesaurus**, **Topic map**, **Visualization**.

Information fatigue syndrome applies to the symptoms associated with **Information overload**. Also referred to as Information anxiety.

Information literacy is the ability of individuals to recognize the need for specific **Information**, and then to identify, locate, evaluate, organize, present, and effectively apply the needed information. Agreed competency standards are that an individual who is information literate should be able to:

- determine the nature and extent of needed information;
- gather the needed information effectively, efficiently, ethically, and legally;
- critically evaluate information and its sources;
- use information to accomplish a specific purpose;
- understand the economic, legal, and social issues surrounding the use of information;

Information management is the means by which an organization maximizes the efficiency with which it plans, collects, organizes, uses, controls, stores, disseminates, and disposes of its **Information**, and through which it ensures that the value of that information is identified and exploited to the maximum extent possible. The aim has often been described as getting the right information to the right person, in the right format and medium, at the right time. Sometimes referred to as: Enterprise information management, Information resources management, or **Business intelligence**, especially in connection with relevant software. See also: **Information literacy**, **Information scientist**, **Information system**, **Knowledge management**.

Information mining, see **Data mining**.

Information overload refers to the existence of, and ease of access to, bewildering amounts of **Information**; more than can be effectively absorbed or processed by an individual. Colloquially known as Infoglut or Datasmog.

Information resources management (IRM), see **Information management**.

Information science, see **Informatics, Information scientist**.

Information scientist is one whose role is to assemble and evaluate **Information** (in whatever form it happens to be and from whatever source it comes), to interpret it, and to communicate it to whoever wants it in an appropriately packaged form. See also: **Information management, Knowledge management**.

Information system refers to the applications and software that perform business functions or support key processes. Performance criteria concern the quality and functionality of the software, its flexibility, and the speed and cost of development and maintenance.

Information technology is the acquisition, processing, storage, and dissemination of vocal, pictorial, textual, or numerical **Information** using computers and telecommunications. It is mainly concerned with the flow of information through networks. Primary criteria for business performance are ease of use, reliability, and responsiveness. See also: **Mociology, Network, Technological fusion**.

Information visualization, see **Visualization**.

Information warfare consists of those actions intended to protect, exploit, corrupt, deny, or destroy **Information** or information resources in order to achieve a significant advantage, objective, or victory over a **Competitor**. See also: **Disinformation, Social engineering**.

Informative abstract is an abbreviated, objective, accurate condensation indicating work done, assumptions made, methods used, observations recorded, results obtained, and conclusions reached. Usually applying to a scientific or technical **Report** or paper, it would not normally incorporate either interpretation or comment and is written in the active voice and past tense. See also: **Abstract, Indicative abstract, Summary, Synopsis**.

Informed flexibility, see **Scenario planning**.

Informetrics is the application of mathematical and statistical techniques to a broad range of social and organizational activities in an attempt to analyze trends and developments in society and in business. The term incorporates **Bibliometrics**. See also: **Market intelligence, Predictive analytics**.

Infoviz is the colloquial expression for Information visualization. See **Visualization**.

Innovation, a major focus of **Knowledge management**, incorporates all those activities necessary to adopt or diffuse an existing **Technology**, or transform an idea or **Invention** into a problem-

solving or marketable device, process, product, service, or technique. It usually occurs as a result of the combination of **Explicit** and **Tacit Knowledge**. Sometimes referred to as Knowledge conversion. It has been shown that successful, innovative firms have certain characteristics in common; these include:

- Excellent communications (particularly with the outside world);
- A willingness to seek **Information** from the most profitable sources and share it, both internally and externally (through, say, joint ventures or licensing agreements);
- The provision of appropriate rewards for identifying and using new ideas.

See also: **Commercialization, Communication, Creativity, Development, Diffusion, Extension service, Intellectual property, Joint venture, Social network analysis, Technology transfer.**

Insight refers to the creation of a new mental model; it occurs when new information influences or changes an existing **Concept**. See also: **Knowledge**.

Intangible assets, see **Intellectual capital, Knowledge assets**. See also: **Balanced scorecard, Intellectual property**.

Integrated services digital network (ISDN) is a digital telephone network that allows users to transmit and receive computer-based **Information** and **Data** of all types.

Intellectual assets, see **Intellectual capital**.

Intellectual capital refers to the total **Knowledge** within an organization that may be converted into value, or used to produce a higher value asset. The term embodies the knowledge and expertise of employees; brands; customer information and relationships; contracts; internal processes, methods, and technologies; and **Intellectual property**. It equates, very approximately, to the difference between the book value and the market value of a company. Also referred to as Intellectual assets, Intangible assets, or Invisible assets. See also: **Human capital, Knowledge management, Structural capital**.

Intellectual property refers to the definition and recording of a novel device, product, process, or technique so that it may be bought, sold, or legally protected. The main forms of protection take the form of **Copyright**, licenses, patents, registered designs, trademarks, and trade secrets. It is that portion of **Intellectual capital** that can be protected by law. See also: **Corporate security, Counterintelligence, Design, Diffusion, Human capital, Innovation, Invention, Knowledge assets, Knowledge base, Patent, Patent specification, Registered design, Trademark, Trade secret**.

Intelligence is high-level, processed, exploitable **Information**. See also: **Business intelligence, Competitive intelligence, Intelligence analysis, Knowledge, Knowledge management, Market intelligence, Synthesis, Technological intelligence**,

Intelligence analysis is the systematic examination of any combination of relevant **Data, Information**, and existing **Knowledge** for applicability or significance, and the transformation of the results into actionable **Intelligence** that will improve **Planning** and decision-making or enable

the development of strategies that offer a sustainable **Competitive advantage**. The most profitable or beneficial **Analysis** calls for **Creativity** and **Insight**; an ability to look beyond the obvious. Sometimes referred to as Strategic analysis. See also: **Business intelligence, Competitive intelligence, Knowledge management, Strategy, Synthesis**.

Intelligence audit is an examination of an organization's current level of **Intelligence** activities with the objective of improving those operations in order to gain, and maintain, a significant **Competitive advantage**. It involves:

- identifying those people engaged in intelligence or related operations;
- locating collections of **Information** concerning the organization's **Business environment**;
- establishing a set of **Key intelligence topics** or ascertaining management intelligence needs.

Intelligence briefing may be either an oral or written presentation designed to provide accurate, impartial, and timely **Intelligence** - together with an indication of its implications and recommendations for action - in a concise and easily assimilated form. See also: **Briefing, Debriefing, Report**.

Intelligence library may be either a separate entity or housed in a **War room**. In contrast to the more usual in-house libraries, it should act as a directory, not a repository. In other words, it may contain such items as **Directories** and **Professional association** membership lists; a collection of major competitors' **Trade literature; Competitor, Market**, or country files; **Seminar** and **Conference** brochures; lists of **Internet** sources; and a **Thesaurus** or **Taxonomy** together with a **Glossary** of terms.

Intelligent agents are software programs that are capable of assisting their users by performing predefined tasks on their behalf. They may, for example, automatically, and simultaneously, monitor a number of Web sites in order to identify, filter, and collect relevant **Information**; and subsequently recognize patterns or other significant combinations of information; report the results to the user; and offer suggestions to solve a specific problem, draw inferences, or determine appropriate actions. See also: **Artificial intelligence, Search engine, Spider, Web site**.

Intelligent network is programmed to allocate a priority rating to, and the subsequent handling of, **Information** on that net.

Internalization involves the conversion of **Explicit knowledge** to **Tacit knowledge** through a learning process. See also: **Combination, Externalization, Knowledge management, Socialization**.

International trade involves exports to, and imports from, countries outside national territorial limits. See also: **Commerce, Offset arrangements**.

Internet is an international public computer **Network** based on the popular network standard TCP/IPs (**Transmission control protocol/Internet protocol suite**) with no single owner or government involvement. It provides infrastructure for **Electronic mail**, electronic bulletin boards, **File** storage, **Document** transfer, **Login** to remote computers, distributed processing of large

programs, access to the **World Wide Web**, and the handling of **Multimedia** documents. See also: **Browser, Bulletin board system, Intranet, Network.**

Internet protocol suite (IPS), see **Transmission control protocol** (TCP)

Internet relay chat (IRC) is a huge, multi-user live chat facility. Private channels may be created for multi-person **Conference** calls.

Internet service provider (ISP) is a company selling access to the **Internet**. See also: **Point-to-point protocol.**

Intranet is any dedicated, privately owned computer **Network** that is based on the same standards and protocols (TCP/IP) as the **Internet** and which provides an inexpensive publishing platform for its owner. Applications might include **Electronic mail**, electronic access to company documents (including, for example, company files or internal **Directories** and databases, debriefings or after action reviews, examples of best practice), and video communications, with the aim being to facilitate collaboration and information sharing. An intranet usually offers access to the **Internet**, suitably protected to prevent unauthorized access from outside. See also: **After action review, Database, Debriefing, Document, Enterprise information portal, Groupware, Knowledge management, Learning organization, Transmission control protocol.**

Intrapreneurship is **Entrepreneurship** conducted within a corporate environment.

Invention is the act of creating a novel device, method, product, process, or technique. See also: **Creativity, Innovation, Intellectual property, Patent, Patent specification Trade secret.**

Invisible assets, see **Intellectual capital, Intellectual property, Knowledge assets.**

Invisible Web is that portion (estimated to be between 60 and 80 per cent) of total Web content that consists of material that is not accessible by standard **Search engines**. It is usually to be found embedded within secure sites, or consists of archived material. Much of the **Information** may, however, be accessed through a **Library gateway**, a **Vortal**, or a fee-based **Database** service.

Islands of data, see **Data mart.**

Joint project involves joint activities of a non-speculative nature.

Joint venture involves two or more autonomous enterprises in operations or projects that constitute some form of partnership of a speculative or commercial nature. See also: **Alliance, Cluster, Lead-firm network, Networking, Production network, Service network, Strategic alliance.**

Journal is a **Periodical** containing items relating to scholarly **Research** or intellectual activity, or to the tools, methods and techniques employed therein.

Just-in-time knowledge is a concept for delivering **Information** to an individual at the time it is needed to perform a specific task. It may be initiated by means of a program that identifies the contents of the documents currently being produced, or contributed to, by the individual concerned. See also: **Document, Knowledge**.

Just-in-time manufacturing describes an advanced manufacturing concept designed to produce components for assembly only when they are required, thus reducing the costs associated with holding large inventories of parts, components, and raw materials. See also: **Predictive analytics**.

Key intelligence topics (KITs) are those topics identified as being of greatest significance to an organization's senior executives, and which provide purpose and direction for **Competitive intelligence** operations. Key intelligence topics are invariably derived from a series of interviews. They are then grouped into appropriate categories and allocated a priority, usually by the same, or a representative, group of people. The basic categories are:

- strategic decisions and actions (including the development of strategic plans and strategies);
- early-warning topics (for example, competitor initiatives, new technology developments, and government actions);
- descriptions of key players (including competitors, suppliers, regulators, and potential partners).

See also: **Competitor, Intelligence audit, Strategic planning**.

Key success factors, see **Critical success factors**.

Keyword is a substantive word in the title of a **Document** or a record in a **Database** that can be used to **Classify** or index content. A keyword provides access to the item when it is used as a search term. See also: **Classification scheme, Controlled vocabulary, Indexing**.

Know-how consists of accumulated practical skills or professional experience that allow tasks to be performed effectively but that is difficult to codify, express, or articulate. See also: **Implicit knowledge, Tacit knowledge**.

Knowledge is a blend of experience, values, **Information** in context, and **Insight** that forms a basis on which to build new experiences and information, or to achieve specific goals. It refers to the process of comprehending, comparing, judging, remembering, and reasoning.

Knowledge is **Data** that has been organized (by classification and rational presentation), synthesized (by selection, **Analysis**, interpretation, adaptation, or compression), and made useful (by presenting arguments, matching needs and problems, assessing advantages and disadvantages, and so on).

Knowledge is the uniquely human capability of interpreting and extracting meaning from **Information**. It may be thought of as a structured (inter-related) set of concepts in the mind. See also: **Classify, Cognitive science, Concept, Educational technology, Embodied knowledge, Explicit knowledge, Implicit knowledge, Intelligence, Know-how, Knowledge-based**

industries, Knowledge engineering, Knowledge-intensive industries, Knowledge management, Knowledge map, Meme, Tacit knowledge.

Knowledge administrator is someone who collects, stores, maintains, and retrieves the **Knowledge** that others produce.

Knowledge analyst is a person who defines the needs of an individual or group, clarifies search terms, and advises on the most appropriate sources.

Knowledge annealing is a technique in collaborative writing in which participants make small, incremental changes to a **Document** in an effort to reach a consensual expression of group aims. See also: **Refactoring**.

Knowledge archaeology is the process of rediscovering an organization's historical **Knowledge** that may have otherwise become difficult to trace.

Knowledge assets are bodies of **Knowledge** of value to an organization. They may take the form of documents, databases, individuals, or groups of people, and include records of projects or activities, knowledge maps, links to networks or communities of practice, reports, standard operating procedures, patent specifications, licenses, copyright material, taxonomies, glossaries of terms, and so on. Sometimes referred to as Corporate intellectual assets, or Corporate memory. See also: **Community of practice, Copyright, Corporate security, Counterintelligence, Database, Document, Intellectual property, Knowledge management, Knowledge map, Network, Patent, Patent specification, Report, Taxonomy.**

Knowledge base, in its traditional sense, refers to the **Data** and set of rules forming the basis of an **Expert system**. More recently it applies to the complete details of all expertise, experience, and **Knowledge** within an organization (that is, its **Intellectual capital** and **Knowledge assets**). See also: **Human capital**.

Knowledge-based industries is a term used to describe a broad spectrum of enterprises that are involved with **Advanced technologies** and are concerned with the application of recent developments in many fields, including: advanced materials, biochemistry, biotechnology, **Burotics**, genetics, **Information technology**, instrumentation, **Mechatronics**, medicine, microelectronics, microprocessors, **Nanotechnology**, and optics. See also: **Intellectual property**.

Knowledge broker is an intermediary who connects individuals to **Knowledge** providers. Also known colloquially as an *infomediary*.

Knowledge centre, see **War room**.

Knowledge conversion, see **Innovation**.

Knowledge creation is the conversion of **Data** into meaningful **Information** that allows the world to be understood in new ways. At the individual level this is known as learning. See also: **Communication, Learning organization**.

Knowledge discovery, see **Data mining**.

Knowledge economy is based on the production, distribution, and use of **Knowledge** as the main driver of growth, wealth creation, and employment across all industries. It does not rely solely on a few advanced-technology industries but is applicable to traditional industries, such as mining and agriculture. See also: **Advanced technologies**, **Research and development**.

Knowledge editor, see **Knowledge reporter**.

Knowledge engineering involves the planning, design, development, construction, and management of expert systems. See also: **Expert system**.

Knowledge integrator is an individual who possesses sufficient expertise in a specific domain to be able to determine what **Knowledge** is most valuable and to be able to synthesize it.

Knowledge-intensive industries are those industries calling for high intellectual input; they include **Information technology**, pharmaceuticals, medical and scientific instruments, machine tools, automotive, shipbuilding, finance, and education.

Knowledge management is an integrated, systematic process of identifying, collecting, storing, retrieving, and transforming **Information** and **Knowledge assets** (including previously unarticulated expertise and experience held by individuals) into **Knowledge** that is readily accessible in order to improve the performance of the organization. The means for doing so might include apprenticeship schemes and mentoring programs, briefings and debriefings, bulletin boards, databases, documents, educational and training programs, knowledge maps, meetings, networks, and visits. Performance improvements may be effected through enhanced learning, problem solving, **Strategic planning**, and decision-making. See also: **After action review**, **Briefing**, **Business intelligence**, **Classify**, **Community of practice**, **Competitive intelligence**, **Corporate culture**, **Corporate security**, **Customer relationship management**, **Database**, **Debriefing**, **Diffusion**, **Document**, **Index**, **Information literacy**, **Information management**, **Information scientist**, **Innovation**, **Intelligence**, **Knowledge creation**, **Knowledge management system**, **Knowledge map**, **Learning organization**, **Network**, **Networking**, **Patent**, **Patent specification**, **Social network analysis**, **Taxonomy**, **Thesaurus**.

Knowledge-management system usually incorporates a **Search engine**, **Data-mining** facilities, and - since **Knowledge** is primarily embodied in people - an expertise directory or location service (known as a **Knowledge map**). Content may include profiles of key people, industry trends, **Market** surveys, descriptions of current and proposed projects or activities, solutions to past problems, and discussion group facilities. The term also implies the creation of a culture and **Information** structure that promotes information sharing and **Innovation**, and places considerable emphasis on learning and personal development. See also: **Knowledge management**.

Knowledge map may be either, or a combination of aspects of both, of the following:

- a graphical display (either hierarchical, or in the form of a **Semantic network**) of the core **Knowledge**, together with the relationships between various aspects, of a subject or discipline;
- a **Directory** (incorporating identity, location, and subject expertise) of people possessing, or having access to, specific knowledge.

In the latter sense, it is a guide to, not a repository of, knowledge or expertise. A critical element is that those people whose details are incorporated must be traceable through keywords describing the area of expertise or subject knowledge. Sometimes referred to as an Expertise database or Expertise location service, it is often compiled with the aid of **Expertise locator software**. When properly compiled and maintained, it may be by far the most valuable of all **Knowledge management** tools. Colloquially known as **Yellow pages**. See also: **Keyword, Visualization**.

Knowledge mining, see **Data mining**.

Knowledge practitioner, see **Knowledge reporter**.

Knowledge reporter is an individual who is capable of identifying and extracting **Knowledge** from those who possess it, re-arranging it into a usable form, and updating and editing it as necessary. Also known as a Knowledge editor, Knowledge practitioner or Knowledge transfer expert.

Knowledge transfer expert, see **Knowledge reporter**.

Lateral thinking refers to a means of escaping from habitual mind patterns in order to solve problems or explore new ideas. Techniques include deliberate and provocative challenging of preconceptions, and rejection of yes/no thinking. See also: **Brainstorming, Creativity, Innovation, Invention, Synectics**.

Lead-firm network is usually initiated by a large firm to ensure that its suppliers can meet the quality, quantity, and timetable of delivery required by that firm. The advantage is a more reliable source of supply. The suppliers benefit through gaining access to a guaranteed **Market** and, usually, through improved management and production techniques. See also: **Alliance, Cluster, Joint venture, Networking, Production network, Service network, Strategic alliance**.

Learning, see **Knowledge creation**.

Learning organization is one that places considerable emphasis on developing strategies and techniques for sharing **Information** and creating new **Knowledge** in order to gain a competitive advantage. See also: **Knowledge creation, Knowledge management, Meme**.

Library gateway consists of a collection of databases and **Information** sources, arranged by subject, that have usually been assembled, reviewed, and recommended by specialists. See also: **Database**.

Link analysis is an **Internet** search technique that dispenses with **Keyword** searching, employing instead a complicated **Algorithm** that is based either on the number of Web pages linked to a specific site that is relevant to the search requirements, or on the number of visits to a site in a given time.

Local area network (LAN) provides facilities for communication between computer users within a specified vicinity up to a range of about ten kilometers (but usually confined to one site or one building). See also: **Network**.

Location service, see **Knowledge map**.

Logic bomb, see **Virus**.

Login is either the account name used to gain access to a computer system or the act of entering a computer system.

Machine vision involves the use of sensors (for example tv, x-ray, ir, uv, laser scan, ultrasonics) to receive signals representative of the image of a real scene, coupled with computer systems or other signal-processing devices to interpret the signals received for image content.

Magazine is a **Periodical** containing popular, pertinent, or interesting articles, written and illustrated in a less technical manner than that found in a **Journal**.

Mailing list is a system (usually automated) that allows people to send email to one address, whereupon their message is copied and sent to all other subscribers to that mailing list. It facilitates discussion among people using different kinds of email access. See also: **Electronic mail**.

Management fad is an innovative concept or technique that is promoted as a new tool for management progress and that rapidly diffuses among early adopters keen to gain a competitive advantage. When the concept is seen not to fulfill expectations, its use diminishes equally quickly; its popularity usually extending over a period of about five years. Recent examples include: Quality circles, **Total quality management**, and Business process reengineering. See also: **Diffusion, Re-engineering**.

Management reports compare actual results achieved with budgeted forecast levels and thus identify deviations from expected performance. Operational managers should present the **Information** in such a way as to encourage further **Analysis** and corrective action. See also: **Report**.

Market is a group of people or organizations that share a need for a particular product, and have the willingness and ability to use it and pay for it.

Market analysis deals with measuring and evaluating actual or potential sales of a product or service. See also: **Market, Psychographics**.

Market intelligence concerns the attitudes, opinions, behavior, and needs of individuals and organizations within the context of their economic, environmental, social, and everyday activities. See also: **Business intelligence, Demography, Informetrics, Intelligence, Market, Marketing research, Psychographics, Sample.**

Market research, see **Marketing research.**

Market segmentation is the process of dividing the **Market** into smaller groups that share one or more characteristics. See also: **Classify, Demography.**

Market share is that proportion (per cent) of the total **Market** that is using a particular organization's product. Markets may be defined as: **Duopoly, Monopoly, Niche, Oligopoly, Premium, or Unstable market.**

Marketing is the management process responsible for identifying, anticipating, and satisfying consumers' requirements profitably. See also: **Market.**

Marketing information system is one designed to collect and exploit **Information** concerning existing and potential clients. See also: **Market intelligence, Psychographics.**

Marketing mix usually refers to a selected combination of promotion, place, price, and product. See also: **Target market.**

Marketing research is the study of methods of selling and promoting a product or service; or gathering **Information** that will support a marketing campaign (such as qualitative and quantitative **Data** concerning customer preferences and behavior). See also: **Market intelligence.**

Mechatronics is the fusion of the technologies of electronics and mechanics. Examples include numerically controlled machine tools, industrial **Robots**, digital clocks, and electronic calculators. See also: **Technological fusion.**

Mega-portal is increasingly being applied to sites that once were referred to as portals, mainly because of the widespread adoption of the term **Portal** for almost any site.

Meme is an element of a culture or system of behavior that is passed from one individual to another by non-genetic means; or, more simply, that which is passed on by imitation. See also: **Corporate culture, Educational technology, Explicit knowledge, Knowledge, Learning organization, Tacit knowledge.**

Memeplex is a group of memes passed on together, for example, religions, political ideologies, or other belief systems. See also: **Meme.**

Memetic engineering refers to the manipulation of memes, as in advertising, education, or psychotherapy. See also: **Meme.**

Metadata is **Information** (in the form of a Metatag) that describes an **Internet Document** and facilitates its retrieval. It is very similar to a **Bibliographic reference**, but - where present - is often more extensive, and may include author, title, affiliation, sponsor, **Abstract**, additional keywords, language, publisher, date published, contact details, **Classification scheme**, and so on. See also: **Enrichment, Indexing, Keyword**.

Meta-indexes permit searches using several search engines simultaneously through the medium of one search request. Individual results are presented as a single list. See also: **Search engine**.

Metasearch engine is a **Search engine** that simultaneously submits a search query to a number of other search engines and produces results that may be manipulated in some way for the benefit of the searcher.

Metatag, see **Metadata**.

Micro business is a very small business employing fewer than five people.

Mindset is a state of mind that affects an individual's attitude to events and ability to make decisions. It is derived from that person's background, culture, education, upbringing, religious beliefs, and so on. A person's mindset may also be affected by conventional or received wisdom, **Corporate culture**, and by the outcome of similar or related events in the past. See also: **Competency modeling, Knowledge, Meme**.

Misinformation is erroneous **Information** that is not intended to deceive; it may result from ignorance. See also: **Disinformation**.

Mission statement defines the business in which a company competes, the company's objectives, and the approach it will take to reach those objectives. See also: **Corporate culture, Strategy, Vision statement**.

Mociology is the study of the effects of mobile information technologies on the development, structure, and functioning of human society. See also: **Information technology**.

Modeling is a technique used to assist in decision-making by producing probable results based on combinations of assumptions and 'what if' questions.

Modem (modulator-demodulator) is a device for converting **Data** to sound signals, and vice-versa, for transmission over telecommunications networks.

Monopoly market is one in which the leading company has at least 73.9% of the **Market**. See also: **Market share**.

Multimedia refers to an interactive system that integrates text, sound, and video. Typical applications are business presentations, training and education, databases, and electronic correspondence. See also: **Database**.

Multipoint competition explores the implications of a situation in which diversified companies compete against each other in several markets. See also: **Market**.

Multi-user dimension (MUD) is a multi-user simulation environment in which users can create documents with which others can interact, thus allowing a World to be built gradually and collectively. Often referred to as a Dungeon. See also: **Document**.

Nanotechnology is an advanced technology involving the fabrication and use of devices so small that the convenient unit of measurement is the nanometer (one thousand-millionth of a meter); or, is the art of manipulating and exploiting the properties of matter at a molecular level. See also: **Advanced technologies**.

Natural indexing language is based on the language used in the **Document** being indexed. Any terms that appear in the document are candidates for **Indexing**. See also: **Controlled vocabulary, Index, Ontology, Taxonomy, Thesaurus**.

Nesting is a technique for combining several search statements (invariably using the Boolean OR operator) through the use of parentheses. For example: (management OR executive) AND (training OR development). See also: **Boolean algebra**.

Network exists when two or more computers are connected together. Two or more networks constitute an **Internet**.

Network of practice is the term that usually applies to a large, geographically dispersed **Community of practice**.

Network theory, see **Social network analysis**.

Networking is the informal exchange of **Information** between individuals who have grouped together for some common purpose. Also known as a Social network. See also: **Alliance, Cluster, Community of practice, Joint venture, Lead-firm network, Production network, Professional associations, Service network, Social network analysis, Strategic alliance**.

Networking analysis, see **Social network analysis**.

Neural networks are an attempt to simulate the human brain - by employing **Artificial intelligence** software – for image analysis and pattern recognition, in locating and matching relevant **Information**, and in assessing risk. Their success depends to an enormous extent on the volume of **Data** in the **Database**. Expert human intervention is essential:

- when setting up - more specifically for determining input variables and structuring the data in a sensible and usable format (usually the most time-consuming aspects of the technique);
- for interpreting the results and identifying patterns, trends, associations, and similarities;
- in order to make appropriate decisions based on the results.

See also: **Data mining, Predictive analytics**.

Newsgroup is the name for a discussion group or chat room on **Usenet**.

Niche market is one in which a firm offers a specific product or service and does it so well that no other firm will be tempted to enter that **Market** (for instance, the market is too small, or it would be too expensive for other companies to catch up). See also: **Market share**.

Node is any single computer connected to a **Network**.

Nodes refers to the individuals or groups engaged in **Networking**. See also: **Social network analysis, Ties**.

Notation is a set of symbols, abbreviations, or codes associated with a **Classification scheme**, annotated **Thesaurus**, or **Taxonomy**, and used to facilitate the arrangement of items so classified. A notation enables the use of an **Explode** facility. See also: **Bibliography, Code, Ontology**.

Offset arrangements refer to obligatory technological activities of certain overseas suppliers. See also: **International trade**.

Oligopoly market is where the combined **Market share** of the top three companies is greater than 73.9% of the total **Market** and where the combined share of the second and third companies is greater than that of the market leader.

Ontology originally a branch of metaphysics dealing with the nature of being, the term is currently used to describe a vocabulary of terms and associated definitions or rules covering a specific domain. Thus an ontology may be regarded as a **Database** together with associated **Information** about the categories or concepts that exist in a domain, what properties they have, and how they relate to each other. See also: **Classification scheme, Classify, Concept, Controlled vocabulary, Hypertext, Index, Knowledge engineering, Semantic networks, Taxonomy, Thesaurus, Topic map**.

Open proprietary information includes **Information** gathered through **Reverse engineering** of legitimately acquired products and services, or through legally conducted **Business intelligence** operations.

Open source information is unclassified published **Information**. It includes non-proprietary **Grey literature** as well as **Information** published electronically (on the **Internet**, for example).

Operating environment, see **Business environment**.

Operational planning refers to organizational **Planning** covering the mid-term, that is, from one to two years into the future.

Operating environment, see **Business environment**.

Operations room, see **War room**.

Opportunities are favorable events or circumstances that may help a company to achieve its objectives. See also: **Entrepreneur, Intrapreneur, Opportunity analysis, SWOT analysis.**

Opportunity analysis is the identification and evaluation of potential business **Opportunities** coupled with an assessment of the organization's ability to exploit them. See also: **Entrepreneur, Intrapreneur.**

Optical computers use various combinations of lasers, holographs, and mass-storage media for such applications as optical character recognition, improved image clarity, and high-speed signal processing.

Optimization is a scientific approach to solving problems, the purpose of which is to improve on the subjective aspects of decision-making; thus improving operational efficiency. It calls for the mathematical formulation of the problem and an explicit statement of the desired objectives. The method consists of creating a mathematical model and using computational means to help choose the best schedule of actions among alternatives. See also: **Modeling.**

Organization network analysis, see **Social network analysis.**

Organizational culture, see **Corporate culture.**

Organized system is an assembly of interdependent elements and/or organized systems the physical activities of which are controlled by the interchange of **Information** so that they cooperate for a purpose.

Pareto principle was formulated by Italian statistician and economist, Vilfredo Pareto (1848 – 1923). It states that: *In any series of elements to be controlled, a selected small fraction in terms of number of elements almost always accounts for a large fraction in terms of effect.* This was subsequently developed into the 80/20 rule and applied to real-world situations in which there is a question of effectiveness versus diminishing returns on effort, expense, or time.

Parkinson's law (also known as the *Rising pyramid*) states that: *Work expands so as to fill the time available for its completion.* Proposed by C Northcote Parkinson (1958).

Passive disinformation, see **Disinformation.**

Password is a **Code** used to gain access to a secure system. It may take the form of a word or phrase, or any combination of numbers and letters (in both upper and lower case). See also: **Authentication, Corporate security.**

Patent is a government authority to an individual or organization conferring a right or title to make, import, use, offer for sale, or sell an **Invention** or discovery made in the natural world. It gives the patentee the right to take legal action against unauthorized used of the invention (known as infringement) for a fixed period. A patent cannot be granted for the following:

- an aesthetic creation, such as a literary, dramatic, or artistic work;
- a computer program;

- a discovery not made in the natural world;
- a mathematical method;
- a scheme or method for performing a mental act, playing a game, or doing business;
- a scientific theory;
- the presentation of **Information**.

See also: **Copyright, Intellectual property, Patent specification.**

Patent specification is a **Document** that describes an **Invention**. See also: **Intellectual property, Patent.**

Periodical is a publication that is issued at regular or stated intervals, such as a **Journal** or **Magazine**.

Personal mobility is the term given to recent developments in personal communications, including mobile telephones, facsimile machines, and networks; the ultimate aim being to provide each individual with one unique, universally applicable contact number. See also: **Network**.

Personalization is a search engine information retrieval technique in which results are based on the individual's past search behavior. It is the current equivalent of **Selective dissemination of Information** (SDI).

Phase-frequency analysis reveals the pervasive themes of a **Database**. See also: **Data mining**.

Phase-proximity analysis discloses the relationships among pervasive themes in a **Database**. See also: **Data mining**.

Phishing is the fraudulent use of email to persuade recipients to disclose personal information, such as bank account numbers and passwords. See also: **Corporate security, Electronic mail, Password**.

Planning is the process of synthesizing a goal or set of intentions into a sequence of steps, formalizing those steps so as to facilitate their implementation, and articulating the anticipated consequences of each stage in the process. Planning calls for logical and rational thinking. See also: **Business plan, Operational planning, Scenario planning, Strategic planning, Tactical planning**.

Point-to-point protocol (PPP) is a means whereby an individual computer communicates with an **Internet service provider** (ISP).

Portal is a **Web site** that acts as a **Gateway** to the **Internet** by providing a broad and diverse range of services, including **Search engines** or **Directories**, links, email, reference tools, forums or chat facilities, access to online shopping and banking, games, entertainment, and so on. See also: **Electronic mail, Mega-portal, Vortal**.

Portfolio analysis provides a framework to assess relative **Opportunities** and to enhance the return on investment (RoI) in a company's portfolio of businesses. It is used to optimize the allocation of available resources among strong and weak products, brands, or business units. See also: **Predictive analytics**.

Precis is an abridged, impartial version of a **Document** designed to offer clear, concise material for rapid, easy assimilation, usually to clarify obscure or involved argument. Comment, interpretation, implications, or opinion may also be included, but should be identified as such. See also: **Report**.

Precision refers to the number of relevant items retrieved as a proportion (per cent) of the total number of retrieved items in an **Information** collection. See also: **Recall**.

Predictive analytics is the use of relevant software for the **Analysis** of large data collections employing statistics, **Neural networks**, decision trees, **Visualization**, pattern-matching algorithms, **Data mining**, **Artificial intelligence**, and similar techniques (concerning, for example, the demand for products or services, customer behavior, business transactions, and market dynamics) in order to suggest decisions for optimum results. Applications include: brand management, campaign enhancement, cost reduction, customer support, fraud detection, investment, just-in-time inventory control, process improvement, product or service differentiation, and risk management. See also: **Algorithm**, **Data warehousing**, **Decision tree**, **Informetrics**, **Just-in-time manufacturing**, **Portfolio analysis**, **Product differentiation**.

Premium market is one in which the market leader has more than 41.7% of the **Market** and at least 1.7 times the share of the second company. See also: **Market share**.

Privatization is the partial or total sale of government business to the private sector. See also: **Corporatization**.

Product differentiation is that which makes a company's products different from those of its competitors. See also: **Market**, **Predictive analytics**.

Production network is formed when two or more enterprises cooperate in the production of goods by making the best use of their combined resources and skills, including people, production capability, technology, and **Information**. In this way the enterprises are able to achieve a level and range of production necessary to enter new markets. See also: **Alliances**, **Cluster**, **Joint venture**, **Lead-firm network**, **Market**, **Networking**, **Service network**, **Strategic alliance**.

Professional associations comprise groups of people concerned with a particular craft, trade, profession, or industry. See also: **Networking**.

Professional services automation (PSA), see **Enterprise resource planning** (ERP).

Proprietary information, see **Trade secret**.

Prospective hindsight is a technique for evaluating the effect a likely future event may have upon the organization. Results are achieved by comparing the probable reasons why an event may take place with the reasons why it did take place - by assuming that the event has already occurred.

Proximity operators are used in full-text searching to identify semantic or contextual relationships between words in a **Document**. They enable a searcher to specify where one term in a document must be in relation to another term: for instance, adjacent to, within a certain number of words, or in the same sentence or paragraph. See also: **Boolean algebra**.

Psychographics refers to the attempt to evaluate the purchasing intentions of consumers from a study of their emotional and psychological responses to qualitative surveys. The aim is to match standard demographic **Data** (such as age, income, marital status, socio-economic group) to more amorphous characteristics (such as values, interests, self-image). See also: **Market intelligence**.

Push technology, currently referred to as **Personalization**, is a colloquialism for **Selective Dissemination of Information** (SDI).

Recall refers to the number of relevant items retrieved as a proportion (per cent) of the total number of relevant items in an **Information** collection. See also: **Precision**.

Record management system, see **Document management system**.

Recorded knowledge, see **Explicit knowledge**.

Re-engineering is the radical redesign of business processes and organizational structure in order to achieve significant improvements in performance, such as productivity, cost reduction, cycle time, and quality. There are usually four major components:

- increasing the emphasis on customer needs;
- fundamental redesign of core processes in order to enable improvements;
- reorganization into cross-functional teams;
- rationalization of the relationships between human and other resources.

See also: **Horizontal organizations**, **Management fad**.

Refactoring applies to a form of editing in collaborative writing in which a participant restructures, summarizes, or clarifies a collection of comments, annotations, and other writings into a cohesive whole in order to optimize subsequent group discussion. See also: **Knowledge annealing**.

Registered design establishes rights on the novel, ornamental, and visual aspects of an article. See also: **Intellectual property**.

Relationship card is the generic name for a **Smart card** that performs a range of functions including both financial and personal services (such as travel bookings, health records, passport details, frequent-flyer programs, transaction records, driver's license, and social security information). See also: **Stored-value card**.

Report may be a **Document** containing the findings of an investigation or study, or offering an interpretation of facts and ideas, and usually incorporating recommendations. It may give an account of the activities of an organization over a specific period, or describe a process or operation. Very often it is produced in response to stated terms of reference, with a known audience in mind. Although producers of reports must examine essential evidence in an impartial and disinterested manner, they may express personal opinion - provided that it is a rational interpretation of **Information** set out, or referred to, in the report, and that it is identified as opinion. A report may also take the form of an oral presentation. See also: **After action review, Briefing, Debriefing, Digest, Extract, Indicative abstract, Informative abstract, Intelligence briefing, Management reports, Precis, Review, Special intelligence briefing, Summary, Synopsis.**

Request for comments (RFC) is the name for the result and the process for creating a standard on the **Internet**. New standards are proposed and published on line as a Request for comment.

Research is any activity undertaken to extend **Knowledge**. See also: **Basic research, Development, Research and development, Tactical research, Strategic research.**

Research and development (R&D) refers to systematic investigation or experimentation involving **Innovation** or technical risk, the outcome of which is either new **Knowledge** (with or without a specific practical application) or new or improved materials, products, devices, processes, or services. See also: **Advanced technologies, Applied research, Development, Invention, Research.**

Research impact assessment uses combinations of methods to ascertain the effect of **Research** on a specific field of endeavor, on allied fields, on related technologies or systems, and on operations. The main approach may be qualitative (peer review), semi-quantitative (retrospective studies), or quantitative (**Bibliometrics**).

Resource is any asset, organizational process, capability, firm attribute, **Knowledge**, or **Information** controlled by a firm that enables it to conceive of and implement strategies that improve its efficiency and effectiveness. See also: **Intellectual property, Knowledge assets, Strategy.**

Reverse engineering refers to the process of systematically examining or dismantling a competitor's product or service in order to reveal details of its design and manufacture; such as materials employed, techniques used, level of **Technology**, standard of quality, elegant solutions to problems, and so on. See also: **Benchmarking.**

Review is either a critical notice of a specific **Document** or subject that may include interpretation, offer perspective, or provide an overview and summary of progress or developments in a given subject over a specified time. See also: **Report.**

Robotics is the application of **Artificial intelligence** techniques to the design and production of **Robots**.

Robots are re-programmable, multifunctional manipulators designed to move materials, parts, tools, or specialized devices through variable programmed motions for the performance of a range of tasks. The term, often abbreviated to *Bot*, is also applied to programs that search the Web in order to gather specific **Information** on behalf of a user. See also: **Crawler, Robotics, Search engine**.

Rumor is a **Report** disseminated without known authority; an unverified statement or assertion.

Sample is a subset of a population or a group under study that is representative of the entire population. See also: **Market, Market intelligence, Marketing research**.

Scenario analysis is a systematic method of studying and articulating probable future events that may affect the organization or its operating environment. It may, for instance, be used to: forecast trends in an industry; identify probable **Competitor** strategies; evaluate the effect of emerging technologies; assess a potential merger, acquisition, or alliance. It is a useful, long-term and highly objective analytical technique, although the timing may not always be accurate. Sometimes known as Alternative outcomes analysis or ‘What if?’ analysis. See also: **Business environment, Scenario planning, Strategy**.

Scenario planning uses **Scenario analysis** in order to formulate plans or prepare appropriate responses to probable trends and events. The plans produced usually cover a range from best case to worst case probabilities. The technique allows users to explore the implications of several alternative futures and learn from mistakes without risking real-life failure. More simply described as *Informed flexibility*, it also enables users to modify their strategic direction as events unfold. Also known as Foresight planning. See also: **Contingency planning, Opportunities, Planning, Threats, War gaming**.

Schema is a term sometimes used when referring to a **Taxonomy**.

Science park is a development, within or near an institute of higher education or centre of excellence, that provides collocated advanced-technology or knowledge-based enterprises with the opportunity for **Technology transfer** from that institute, or between each other. See also: **Advanced technologies, Knowledge-based industries, Technology park**.

Scientometrics is the **Analysis** of the structure and development of scholarly communication, **Information**-seeking behavior, and government policy as they relate to the sciences.

Scope note, see **Annotation**.

Search engines are microprocessor-driven software programs capable of successfully retrieving **Information** from computer networks or databases in order to match the needs of searchers. They automatically **Index** keywords in context, usually by using **Robots**, then search those indexes for keywords that match the user’s request. Generally speaking, they are more suitable than **Directories** for conducting **Research**. Current developments may incorporate **Visualization** techniques. See also: **Bot, Crawler, Database, Keyword, Metasearch engine, Network, Spider**.

Selective dissemination of information (SDI) is a personal **Current awareness service**. It refers to a technique for directing new items of **Information**, from whatever source, to those individuals whose current interests in a particular subject are high, and who may be able to take advantage of such information. SDI is based on a user interest profile which is normally selected by the user from a list of keywords, descriptors, or indexing terms. Often referred to by the more recent term, Push technology or **Personalization**.

Semantic networks represent **Knowledge** in the form of concepts (known as nodes) and links (that indicate the relationships between concepts). A **Concept** is an abstract class or set consisting of items or things that share common features or properties. See also: **Classify, Hypertext, Knowledge map, Node, Ontology**.

Seminar is a meeting that calls for a high degree of participation; primarily used for training purposes. The leader is both a content expert and a discussion leader. May also be used about a group of experienced people who wish to share their experiences. See also: **Colloquium, Conference, Symposium, Workshop**.

Server is a computer, or software package, that provides a specific service to client software running on other computers. A single server machine may have several different server packages, thus providing many different services to clients on the **Network**.

Service network occurs when enterprises combine to enhance their competitive capabilities in supplying services. The costs associated with **Research and development**, training, **Marketing**, and initial exploration of export markets are shared by members of the network. See also: **Alliance, Cluster, Joint venture, Lead-firm network, Market, Networking, Production network, Strategic alliance**.

Simple object access protocol (SOAP) is a successor to the TCP/IP protocol. See also: **Transmission control protocol**.

Situation room, see **War room**.

Situational analysis, see **SWOT analysis**.

Small business is generally taken to be a manufacturing enterprise with fewer than 100 employees, or a non-manufacturing enterprise with fewer than 20 employees, in which owners retain independent ownership and control and make key management decisions.

Smart agents, see **Intelligent agents**.

Smart card is a plastic card, similar to a credit card, containing one or more integrated circuits for identification, **Data** storage, or special-purpose processing, used to validate personal identification numbers (PINs), authorize purchases, verify account balances, and store personal records. In some types, the memory may be updated every time the card is used. See also: **Relationship card, Stored-value card**.

Social capital represents the active connections between people; including trust, mutual understanding, shared values, and behaviors that bind together the members of groups, networks, and communities and make cooperation possible; or, comprises the norms and relations embedded in social structures that enable people to coordinate action to achieve desired goals. See also: **Corporate culture, Human capital, Meme, Networking, Structural capital, Vision statement.**

Social engineering is the use of deception, manipulation, or persuasion to obtain information by illicit means. See also: **Disinformation, Information warfare.**

Social network, see **Networking.**

Social network analysis is the mapping and measuring of links and relationships between organizations and individuals engaged in **Networking** activities. Since it provides both visual and mathematical analyses, it is a very powerful technique for evaluating mergers and acquisitions, joint ventures, and inter-company relationships. Also known as Networking analysis, Network theory, or Organization network analysis. See also: **Alliance, Analysis, Cluster, Community of Practice, Diffusion, Innovation, Joint venture, Knowledge management, Networking, Nodes, Ties, Visualization.**

Socialization is a means for acquiring **Tacit knowledge**, usually by means of a shared learning experience. See also: **Combination, Externalization, Internalization, Knowledge management.**

Soft information is essentially qualitative in nature and consists of ideas, suggestions, opinions, **Rumor**, gossip, feedback, anecdotes, speculation, and tips. It may be derived from direct observation and by scanning the mass media (newspapers, magazines, the Internet, television, and radio) but, predominantly, through networks, telephone interviews, or in other face-to-face activities. It is particularly valuable in **Intelligence** operations. See also: **Humint, Networking.**

Sonification is the transformation of **Data** and **Information** into sounds that are said to permit more rapid identification of change. Claimed advantages over **Visualization** include that it is a more natural - and largely underused - sense, it can portray large volumes of information, it can alert observers to events outside the visual field, it can holistically bring together various channels of information, and may be more reliable than existing methods for controlling computers and other technologies. Current investigations in this field include its application in stock-broking, aviation, and cancer surgery.

Spam is mass, unsolicited commercial **Electronic mail** on the **Internet.**

Special intelligence briefing is a brief **Report** that identifies a specific issue, summarizes the key supporting analyses, and recommends one or more courses of action. See also: **Analysis, Briefing, Intelligence briefing, Summary.**

Specification is a set of technical or operating requirements to be satisfied by a product, a material, or a process. See also: **Patent specification, Standards.**

Spider is a program that searches the Web in order to gather specific **Information** on behalf of a user. See also: **Bot, Crawler, Search engine**.

Spying, see **Espionage**.

Spyware is any software application that is generally installed without the knowledge or consent of the user, to obtain, use, or interfere with personal information or resources, content, or setting, for malicious or undesirable purposes.

Stakeholder is any individual or group that has a direct interest, or some level of involvement, in the success of an organization and would be affected by the outcome of any decisions. See also: **Corporate governance**.

Standard specifications, see **Standards**

Standards are of two kinds: those used in the measurement of physical units, and those (more properly referred to as standard specifications) that describe quality, size, fitness for purpose, shape, and performance of products or materials and, by extension, methods or processes. Another function of standards is to give precise meanings to the terms used in science and technology – to define the terminology, in other words. Standards are normally referred to by serial number. See also: **Glossary, Specification**.

Steganography is a technique for disguising or hiding messages; it usually applies to the encryption of a message contained within an audio or graphic file. See: **Code, Corporate security, Cipher**.

Stemming, see **Truncate**.

Stored-value card is a form of **Smart card** that replaces cash in some circumstances (for example, in payphones and computer terminals); some offer reload facilities. See also: **Relationship card**.

Strategic alliance is a collaborative agreement between two or more enterprises to mutually commit resources in order to achieve common goals or objectives, such as reducing costs, inhibiting competitors, gaining entry to new markets, supplementing critical skills or expertise, sharing the risks and costs of major projects, or acquiring access to new technology. Such an alliance may be between companies, or between a company and its customers, its suppliers, or its competitors. See also: **Alliance, Cluster, Joint venture, Lead-firm network, Market, Networking, Production network, Service network**.

Strategic analysis, see **Intelligence analysis**.

Strategic business unit is an enterprise or segment of an enterprise whose product line, **Market** environment, sales force, competitors, and customers are sufficiently different from the remainder of the company's activities that it requires its own unique marketing strategy. See also: **Marketing**.

Strategic group analysis identifies groups or clusters of businesses that adopt similar strategies and that tend to be affected by, and respond to, competitive actions and external events in similar ways. See also: **Cluster, Competitor intelligence, Strategy**.

Strategic intelligence is **Knowledge** about an organization's **Business environment** that has implications for its long-term viability and success, usually extending several years into the future.

Strategic planning is a top-down approach concerned with the long-term mission and objectives of an organization, the resources used in achieving those objectives, and the policies and guidelines that govern the acquisition, use, and disposition of those resources. It must also take into account the **Opportunities** available to the organization, and an assessment of its ability to exploit those opportunities with a view to gaining a distinct competitive advantage. See also: **Business intelligence, Contingency planning, Entrepreneur, Knowledge management, Planning, Resource, Scenario planning, Strategy, Tactical planning War gaming**.

Strategic research is mission-oriented and involves the application of established scientific **Knowledge** and methods to broad social or economic objectives, often extending over a considerable period. See also: **Innovation, Research, Tactical research**.

Strategy is the timely adoption of courses of action and the allocation of resources necessary for carrying out the basic long-term goals and objectives of an enterprise. It involves capturing **Information** from all sources, and synthesizing what is learned into a vision for the direction of the business. An organization's strategy may be represented visually by a Strategy map; a powerful communication tool. Effective strategies must take account of competitors' efforts to maximize their own performance; they are more often about being different from your competitors; for example, producing different products, or conducting different activities, or carrying out similar activities in different ways. Strategy formulation calls for **Creativity**. See also: **Balanced scorecard, Competitive intelligence, Competitor, Resource, Strategic planning, Tactics, Vision statement, Visualization**.

Strategy game, see **War gaming**.

Structural capital is the hardware, software, **Databases**, organizational structure, **Copyright**, patents, trademarks, trade secrets, and other items of that nature, that support the productivity of the **Human capital**. See also: **Intellectual property, Knowledge base, Patent, Patent specifications, Trademark**.

Subject directories or guides, see **Directories**.

Summary is a brief restatement, contained within the relevant **Document**, of salient ideas, findings, and conclusions. It is intended to assist with orientation of the reader, for ready reference, or as a record. See also: **Indicative abstract, Informative abstract, Report, Synopsis**.

Surrogate is a substitute to be used in place of a **Document**. For filing purposes, this may take the form of an index card bearing a **Bibliographic reference** and the location of the document (for

example, a numbered **File**, a specific office or department, or a named individual), or a **Database** record containing similar details. See also: **Metadata**.

Switched multi-megabit data service (SMDS) is a standard for very high-speed **Data** transfer.

SWOT analysis is the evaluation of available **Information** concerning the **Business environment** in order to identify internal strengths and weaknesses, and external **Threats** and **Opportunities**. Also known as Situational analysis and, when applied to competitors, as **Competitor profiling**.

Symposium is a meeting convened for the discussion of some particular subject. It also refers to a collection of opinions expressed, or articles contributed, by several persons on a given subject or topic. See also: **Colloquium, Conference, Seminar, Workshop**.

Synectics is a body of **Knowledge** and a series of techniques designed to induce imaginative problem-solving or creative activities. Techniques include deliberate efforts at right-brain thinking; and positive, supportive behavior. See also: **Brainstorming, Creativity, Lateral thinking**.

Synopsis may be either:

- a series of brief statements describing the content of a **Document** or section of a document (although usually only found at chapter headings in old novels and textbooks, they can be an effective retrieval tool);
- a concise **Summary** presenting the key ideas, results, an **Abstract**, illustrations, and references from a full-length article that has been refereed in the normal manner; regarded by some as the ideal format for retrieval.

See also: **Indicative abstract, Informative abstract, Report**.

Synthesis is the process of combining **Data, Information**, and existing **Knowledge** in order to produce a connected whole, such as a hypothesis, theory, or system; a **Research Report**; or the development of a **Thesaurus** or **Classification scheme**. See also: **Analysis, Business intelligence, Intelligence, Intelligence analysis**.

Tacit knowledge is the product of interaction between people, or between people and their environment. It refers to **Knowledge** that is gained only experientially and, therefore, cannot be readily articulated or explained to inexperienced parties (for example, drawing, painting, writing, **Planning**, decision-making). An individual will acquire tacit knowledge only by gathering **Information**, relating it to existing knowledge, and accumulating experience; it involves judgment, intuition, and common sense. In groups, tacit knowledge exists in the practices and relationships that develop through working together over time. The major challenges are in its recognition, sharing, and management. See also: **Corporate culture, Implicit knowledge, Know-how, Knowledge management, Meme**.

Tactical intelligence is **Knowledge** about an organization's **Business environment** that has implications for its viability and success in the immediate future. It often concerns such matters as **Marketing**, promotion, pricing and positioning.

Tactical planning is that aspect of organizational **Planning** which covers the immediate future, that is, up to about one year from the present time. See also: **Business planning, Operational planning, Scenario planning, Strategic planning**.

Tactical research involves the application of established scientific **Knowledge** and methods to the short-term solution of practical problems. See also: **Research, Strategic research**.

Tactics are the activities necessary for implementation of the **Strategy** in order to gain advantage or success.

Target market is a group of people for whom a specific **Marketing mix** is created. See also: **Market**.

Taxonomy, in its original form, refers to the science of the classification of living and extinct organisms. In modern parlance, it applies to any system or software designed to organize **Information** or **Knowledge** so that it may be more easily stored, maintained, and retrieved. It usually reflects the language and culture of a specific enterprise or industry and acts as the authority for identifying documents and the content of knowledge maps. A taxonomy is often created by reference to several thesauri, classification schemes, and indexes using a combination of human intellectual effort and specialized software.

A taxonomy offers a means of classifying documents and other items of information into hierarchical groups to make them easier to identify, locate, and retrieve. It consists of a structure (or **Thesaurus**), which embodies the terms and their relationships, and a set of applications, which provide the means to identify and locate the information. See also: **Annotation, Classification scheme, Classify, Controlled vocabulary, Corporate culture, Document, Hierarchical classification, Index, Indexing, Knowledge map, Notation, Ontology, Topic map**.

Team is a group of people nominated to carry out a specific task, and which usually disbands upon completion. Each individual's role and level of participation is clearly defined. Some or all of the members of a team may, however, subsequently develop into a **Community of practice**. Teams of seven or fewer are best suited to making considered decisions by consensus.

Technological change refers to the whole, or any part, of the process from **Invention**, through **Innovation, Technology transfer, Diffusion**, to supersession, of machines, tools, products, processes, and techniques, with the emphasis being on the sociological implications of innovation.

Technological fusion involves the merging of different areas of **Technology**; for example, **Information technology** is the combination of computer and telecommunication technologies. See also: **Burotics, Mechatronics, Telematics**.

Technological intelligence is a subdivision of **Business intelligence** covering those technical activities that are concerned with translating **Research** findings or other scientific **Knowledge** into devices, materials, products, processes, or services. See also: **Intelligence**.

Technology is the scientific study of the practical or industrial arts, or the organization of **Knowledge** for the achievement of practical purposes. See also: **Advanced technologies**.

Technology assessment aims to evaluate the social and environmental costs, the probable detrimental effects, and the potential benefits of **Technological change**.

Technology forecasting is used to analyze the potential of a **Technology** as compared to the alternatives. It helps users to determine the appropriate timing and level of investment in current and developing technologies.

Technology park is a development, usually established under government auspices, designed to accommodate enterprises engaged in the commercial application of **Advanced technologies**. It may offer ancillary services such as **Research and development** facilities, **Information** resources, office support, and access to **Marketing** expertise. See also: **Science park**.

Technology transfer involves the transfer of scientific **Knowledge** towards practical and useful applications; or the process whereby innovations find applications in fields not originally envisaged for them. See also: **Commercialization, Creativity, Development, Diffusion, Extension service, Innovation, Science park**.

Teleconferencing refers to any system that employs telecommunication links as an integral aspect of **Conference** operation.

Telematics refers to the fusion of several technologies that are mainly covered by the terms telecommunication, computer engineering, **Data** processing, data-transmission techniques, **Burotics**, and office technology. See also: **Technological fusion**.

Teletext is a **Data** broadcasting service in which pre-programmed sequences of frames of data are broadcast cyclically, and a user, equipped with a standard television receiver and a special decoder, selects the desired frames for viewing.

Teleworking is the process of enabling work to be conducted from any place at any time through the use of telecommunications links.

Text mining is a software program for extracting essential concepts and clarifying the meaning of a large volume of text. See also: **Concept, Data mining**.

Thesaurus is a list of terms, or authorized descriptors, used to provide a **Controlled vocabulary** for **Information** storage and retrieval. It shows hierarchical (broader, narrower), synonymous, and other relationships between terms and may incorporate scope notes. A thesaurus may also include a **Notation** as an aid to **Indexing**.

A thesaurus is a controlled and dynamic vocabulary of semantically and generically related terms that cover a specific domain of **Knowledge**. See also: **Annotation, Classification scheme, Classify, Descriptor, Hierarchical classification, Index, Ontology, Taxonomy, Topic map**.

Threats are unfavorable events or circumstances that may hinder the company in the achievement of its objectives. See also: **SWOT analysis**.

Ties refers to the relationships between individuals and groups engaged in **Networking**. See also: **Nodes, Social network analysis**.

Time bomb, see **Virus**.

Topic map is designed to facilitate the organization and navigation of large information collections through the use of an open (non-controlled) vocabulary covering topics, associations, and occurrences. Although sometimes used when referring to an **Ontology, Taxonomy, or Thesaurus**, it may, in fact, incorporate any combination of these. See also: **Controlled vocabulary**.

Total quality management (TQM) is a management philosophy embracing all activities through which the needs and expectations of the customer and the community, and the objectives of the organization, are satisfied in the most efficient and cost-effective way by maximizing the potential of all employees in a continuous drive for improvement. See also: **Management fad**.

Trade, see **International trade**. See also **Commerce**.

Trade literature is produced by individual companies, primarily to instruct or inform existing and potential buyers. It includes sales pamphlets, advertising brochures, promotional material, product or parts catalogues, maintenance or instruction manuals, handbooks, user guides, data sheets, and certain in-house journals or newsletters. See also: **Grey literature**.

Trade secret is **Information** (including a formula, pattern, compilation, program, device, method, technique, or process) that derives independent economic value, actual or potential, from not being generally known to, and not being readily ascertainable by proper means by, other persons who can obtain economic value from its disclosure or use, and is a subject of efforts, that are reasonable under the circumstances, to maintain its secrecy.

Or, more simply, a trade secret is anything which:

- confers a competitive advantage on its owner;
- is subject to reasonable measures to prevent its disclosure;
- is not generally known in the industry or business in which it is used or practiced.

Generally speaking, to legally qualify as a trade secret, the information supporting a new product, process, or plan must be:

- documented or readily identifiable;
- unpublished;
- disclosed on a need-to-know basis;
- known to be a secret.

See also: **Corporate security, Intellectual property, Knowledge assets**.

Trade show intelligence is the systematic collection and **Analysis** of exploitable **Information**, from any source and in any format or medium, at any event where products and services, or information about them, are openly displayed; as well as prevention of its collection by others.

Trademark is a word, name, device, sign or symbol used by manufacturers to distinguish their products from similar products made by others. See also: **Intellectual property**.

Transmission control protocol/Internet protocol suite (TCP/IP) is the suite of protocols that defines the **Internet**. Originally designed for the UNIX operating system, they are now available for every major kind of computer operating system. TCP ensures proper delivery of **Data**; IP directs **Information** through the **Network**.

Trojan is similar to a **Virus**. It usually consists of an insidious program hidden in a seemingly innocuous **File**, which is designed to infiltrate a computer system and deliberately cause damage; but it cannot propagate itself.

Truncate means to shorten a word by omitting letters from the end and, when used as a search term, effectively broadens the scope of the search. For example, *Defen**, would retrieve all words beginning with the chosen letters, such as: *Defense, Defenseless, Defend, Defendable, Defendant, Defender, Defenestration, Defense, Defensible, Defensive*. Also referred to as Stemming. See also: **Explode**.

Uniform resource locator (URL) is the standard method of allocating an address to any resource on the **Internet** that is part of the **World Wide Web**.

Unstable market is one in which the **Market** leader has less than 26.1% of the total market and every other company in the market is within 1.7 times the **Market share** of its nearest rival. An unstable market is the most attractive for a new entrant having a differentiated product.

Usenet is a worldwide system of discussion groups, with comments passed among hundreds or thousands of machines. The system is completely decentralized, with numerous discussion areas, each of which is known as a **Newsgroup**.

Value chain consists of a group of enterprises cooperating to progressively add value to a product or suite of products in response to market opportunities. See also: **Cluster**.

Value chain analysis is used to identify potential sources of a company's economic advantage in its industry. The **Analysis** examines the firm's major activities in order to understand the behavior of costs, the associated value added, and the existing and potential sources of differentiation.

Competitive advantage is gained by performing some or all of the activities at a lower cost or with greater levels of differentiation than competitors.

Value chain management involves actively managing a **Value chain** to achieve efficiencies and expand capacity in order to increase **Market share**. It usually results in any or all of the following: lower costs of doing business, reduced lead times, enhanced products or services, reduced inventory or stock holdings.

Vapourware applies to the deliberate and premature announcement of a product before it is ready for the **Market** in an attempt to discourage potential customers from considering the purchase of similar, competitors' products. Mainly applicable to software, it is a form of **Disinformation**.

Vector space modeling is a profiling and matching technique (a form of **Selective dissemination of information**) that depends upon the frequency of occurrence of words in a sample **Document**. When processed, this document forms the basis of a profile that is then used to gather matching items. Vector space modeling is more often employed in a scientific context, rather than in business; the latter presenting a fuzzier problem.

Venn diagram is a graphical representation of Boolean operators in which relationships are usually depicted in the form of overlapping circles. See also: **Boolean algebra**.

Venture capital refers to equity investment in an unlisted business offered free of collateral to an entrepreneurial enterprise having potential for high returns over the medium to long term (two to seven years). See also: **Entrepreneur, Intrapreneur**.

Venture management involves **Innovation** management together with some form of capital investment, either financial or (more usually) by a combination of time, effort, and expertise. Its aim is to encourage entrepreneurial activity by reducing areas of uncertainty in the establishment of an enterprise. See also: **Entrepreneur, Innovation, Intrapreneur, Venture capital**.

Very high-performance Backbone Network Service (vBNS) is a high-performance **Network**, developed by NASA and the US National Science Foundation, designed to supplement the **World Wide Web**.

Video conferencing provides real time video and voice communication between terminals, usually employing dedicated systems in a **Conference** room setting. May also be accomplished by using a webcam and personal computer, when it is usually known as **Desktop conferencing**.

Virtual competition, see **War gaming**.

Virtual organization is one in which members are geographically separated but who work together through online communications. See also: **Networking**.

Virus is a small program that can be transferred into a computer system and adversely affect the operation of that computer. It can also be propagated by passing from computer to computer, not unlike a biological virus, by way of networks, emails, or on a contaminated storage device. A virus attaches itself to an existing program and runs with that program, causing whatever problem it is designed to introduce. See also: **Corporate security, Electronic mail, Network, Trojan, Worm**.

Vision statement describes a desirable state that a company wishes to attain at some time in the future. Elements of mission and vision statements may be combined to describe a company's purposes, goals, aspirations, and values. See also: **Corporate culture, Meme, Mission statement, Strategy**.

Visualization of information is a technique for making visual representations of the topics or ideas contained in a body of **Information**, and of their relationships with each other. They usually take the form of maps or other graphical depictions that can be readily understood. Visualization expands the capacity of the human mind to deal with complex matters, enables users to extract **Knowledge** more efficiently, and helps them to find insights not always obvious when information is presented in traditional formats. Other terms used include: Argument mapping, Concept mapping, Content visualization, or Graphic visualization. See also: **Computer graphics, Dashboard, Knowledge map, Predictive analytics, Social network analysis, Sonification.**

Voicemail offers a means of electronically sending, receiving, and storing voice-based messages.

Vortal, an abbreviation of vertical portal, is a subject-specific **Directory** or **Database**, as opposed to the more generic **Portal**. Vortals are usually created by academics, researchers, experts, government agencies and other subject specialists; hence the material is usually of a higher quality than that found through general **Search engine** sites.

War gaming is a process, adapted from the military, in which teams or individuals, representing the company and its competitors, simulate a business situation and act out the roles of decision makers in timed phases. Comparison between the results leads to the next stage. This continues until at least one feasible **Strategy**, counter-strategy, or solution emerges. War gaming is very effective in industries undergoing high rates of change. Sometimes referred to as a Strategy game or as Virtual competition. See also: **Business environment, Competitor, Scenario planning.**

War room is an area set aside for use as an **Intelligence** or **Knowledge** centre or as a demonstration room for **Reverse engineering** purposes. Also referred to as an Operations or Situation room; it may:

- contain a variety of **Intelligence** or **Market-oriented** displays;
- act as an **Internet/Intranet/Database/Knowledge map** centre;
- be equipped as a library or a repository of **Information** collections;
- allow easy and rapid access to recent **Research** results.

Web crawler, see **Crawler**.

Web rage describes the anger or frustration provoked by slow **Internet** access.

Web site is an online collection of pages (or screens) of linked **Information** on the **World Wide Web**; usually accessed by way of a Home page. See also: **Information architecture.**

Webinar (abbreviation of Web seminar) is a presentation delivered over the Web using **Videoconferencing**.

Weblog, see **Blog**.

Webometrics is a neologism used to describe the application of **Bibliometrics** to the **Analysis** of Web sites. It may be used, for example, to measure the relative visibility of a company or organization.

Wetware is a term applied to the human aspects of computing. Also used to describe devices and computer peripherals that have been implanted in, or grafted onto, a human being.

What if? analysis, see **Scenario analysis**.

Wide area information server (WAIS) is a software package that allows the **Indexing** of huge volumes of **Information**, and then makes those indexes available for retrieval across the **Internet**, or other networks. A prominent feature is that the search results are ranked according to their relevance. See also: **Index, Network**.

Wiki (from the Hawaiian word for quickly) is a medium for collaboration that allows many people to participate in the production of Web pages; often devoted to a specific subject or field of interest. It is based upon a relatively unstructured collection of hyperlinked documents that may be edited by any number of authors but that also incorporates a mechanism for comparing the result with the pre-edited version. A wiki allows users to gather all information pertinent to a project or activity in one central location. See also: **Blogs**.

Work spaces covers both working conditions and dimensions to carry out a particular function. See also: **Caves and commons, Working environment**.

Working environment refers to the physical surroundings required for human activity or industrial processes. See also: **Caves and commons, Work spaces**.

Workshop is a meeting in which the participants are the primary resource, usually used for **Planning**, solving problems, or fact-finding. See also: **Colloquium, Conference, Seminar, Symposium**.

World wide web (www), a component of the **Internet**, is a system that enables **Information** (including text, audio, video, and graphics) to be accessed anywhere on the Internet using active text links called **Hypertext**. Users can move with ease between different computer systems or information sources on the Internet by navigating a trail of highlighted text or graphical links on the Web pages. **Data** are automatically downloaded to the **Browser** software used to navigate the Web. See also: **Web site**.

Worm is similar to a **Virus**; the difference being that it does not contain deliberately destructive instructions (although it may cause damage by overloading the system) and it does not require the presence of a host. It is usually passed over the **Internet**.

Yellow pages is the colloquial term for a **Knowledge map**.