

The Delphi Group Presents

# The Language Of Knowledge

A glossary of terms associated with Knowledge Management technologies and solutions.

**Agents** (Agent Technology) → Software programs that transparently execute procedures to support gathering, delivering, categorizing, profiling information or notifying the Knowledge Seeker about the existence of or changes in an area of interest.

**Asynchronous Communication** → The ability of two or more individuals in a distributed workforce to accomplish work from different places/different time modes by using a process intermediary. Knowledge Management tools can perform the work of bridging time and space. In the Asynchronous Communication model, the process has intelligence to understand the rules and monitoring parameters that must be captured and conveyed to process participants.

Asynchronous Communication results in a significant reduction in time to resolution since one individual is not waiting for another to perform linear steps in a process. In traditional electronic communications, this is not possible since the process intermediary (e-mail or voice mail, typically) contains no intelligence by which to monitor the work process or communicate its status and prospective impact on other activities.

**Business Operating System** (BOS) → An environment that represents the vast warehouses of knowledge of an organization—the way a business is run, the way people and information come together to add value to a business process. A BOS is a repository comprised of a common operating environment, a business process library, and enterprise workflow. The BOS is expressed through a consistent standardized desktop metaphor.

A BOS provides:

- a comprehensive work environment;
- a self-service, reflective desktop;
- a re-usable library-based repository of business objects;
- an open desktop that integrates the business process with any application;
- a constant and consistent interface allowing a process-centric view;

- a clear focus on Process Functionality rather than applications (i.e., word processing, spread sheets, databases);
- a repository for the corporate processes memory.

**Cephalic** → The approach to decision-making found in command-and-control organizations that route decisions through a central brain or "head."

**CKO** → See *Knowledge Leadership*.

**Cognition** → The ability to synthesize diverse sources of information in making a decision. The aspect of Knowledge Management solutions used to facilitate decision making. As part of a Knowledge Map, Cognition is the application of knowledge which has been exchanged through Intermediation, Externalization, and Internalization.

**Community of Practice** → Communities that form within an organization where people assume roles based on their abilities and skills instead of titles and hierarchical stature. Also referred to as Community of Interest.

**Competency Management** → The ability to use Knowledge Management to consistently facilitate the formation of new ideas, products, and services that support the Core Competency of the organization.

**Concept-based Search** → A form of content-based indexing, search and retrieval in which the search engine possesses a level of intelligence regarding semantics and lexicons. In such a system, Internalization and Externalization can be achieved at a conceptual level, providing results far beyond that of word-based queries.

**Concept-to-Cash** → The time required to bring a new idea from inception/conception to market. See *Knowledge Chain*.

**Content Mapping** → The process of identifying and organizing a high level description of the meaning contained in a collection of electronic documents. Content Maps are usually rendered as hierarchical "outlines", but many kinds of more suggestive displays are available through graphical visualization techniques. Content Maps are used to facilitate the comprehension of the Knowledge Base.

**Context Sensitivity** → The ability of a Knowledge Management system to provide insight that takes into consideration the contextual nature of a user's request based on history, associations, and subject matter experience.

**Contribution Monitoring and Valuation** → A method for analyzing the relative value of an individual's knowledge-supporting activities in a Knowledge Management system, utilizing a variety of metrics, which could include the following electronically-based approaches:

- numbers of contributions to knowledge forums;
- numbers of successful problem resolutions associated with an individual's contributions;
- amount of message traffic targeted to take advantage of an individual's expertise, etc.

Contribution Valuation need not be technology-based or limited to these specific examples, but it must be grounded in agreed-upon Knowledge Management metrics.

**Core Competency** → The over-riding value statement of an organization. Core Competency differs from product and market competency in that an organization's Core Competency outlives (by a significant margin) product lifecycles and market swings. AT&T's Core Competency, for example, is connecting people, not telecommunications.

**Core Rigidity** → Opposite of Core Competency. Defining any Core Competency too narrowly may turn it into a Core Rigidity. Core Rigidities are unquestioned assumptions about an organization's products, policies, or positioning which lead to complacency and inhibit new innovation.

**Corporate Amnesia** → The loss of collective experience, embedded Tacit Knowledge, and accumulated skills, usually through excessive downsizing and layoffs.

**Corporate Instinct** → A company's collective "sixth sense". Corporate Instinct enables a company to respond instantaneously to market opportunities, customer needs, and competitive maneuvers.

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**Corporate Memory** → An unquestioned tacit or explicit understanding of an organization's people, process, or products. Corporations, like individuals, remember the past, including long-standing processes and procedures, along with corporate traditions and values. Memory is strategically important, but it can also become a serious liability if it inhibits an organization from adjusting quickly to its changing environment.

**Customer Capital** → Customer Capital refers to the value, usually not reflected in accounting systems other than as goodwill, which results from the relationships an organization has built with its customers. One of three forms of Intellectual Capital as defined by Edvinsson and Stewart. *See Structural Capital and Human Capital.*

**Decephalization** → An organization's ability to sense the need for change in its markets and to collaborate in key decisions with its extremities (e.g. employees, customers) and not just its head (command-and-control management). *See Cephalic.*

**Digital Nervous System** → The computing infrastructure (desktops, servers, networks, and software) used to inform and support the decision-making processes of an organization. Knowledge Management may be part of a Digital Nervous System.

**Dilemma of Incentivization** → A phenomenon or paradox that arises out of the structural imbalance between Knowledge Seekers and Knowledge Providers. The Knowledge Provider, while able to provide knowledge, typically has little or no incentive to do so. The Knowledge Seeker is highly incentivized to receive the knowledge, but is unable to do so without the cooperation of the Knowledge Provider. *See Dilemma of Organization.*

**Dilemma of Organization (Structure)** → A phenomenon or paradox that arises out of the asymmetry between Knowledge Seekers and Knowledge Providers relative to knowledge content. The Knowledge Provider is well equipped to provide structure to the knowledge, but typically does not know the context in which it might be used later. The Knowledge Seeker is intimately familiar with the context of the required knowledge, but does not understand the knowledge in sufficient depth to organize it or appreciate its structure. *See Dilemma of Incentivization.*

**Disintermediation** → The elimination of middle layers of management control and other internal or external intermediaries. The benefit is a faster execution of the Knowledge Chain.

**Discontinuity of Knowledge** → A phenomenon that occurs when experienced knowledge workers move from one position to another position (inside or outside of an organization) without having adequate time or Knowledge Management facilities to transfer their Tacit Knowledge to co-workers.

**Document Management** → A software system based on an underlying database, in which unstructured objects (i.e. documents) are indexed and tracked. Document Management systems monitor security, log access to files, and maintain a history of file content. If used to track paper documents, maintenance of content is not provided. Within a Knowledge Management system, Document Management can provide an automated approach to Externalization and Internalization. In more advanced systems, user profiles can be maintained as an object. In these cases, the owners of Tacit Knowledge are tracked and made available as a known resource through user queries via Electronic Yellow Pages.

**Effective Engagement** → The process by which prospects and customers interact with an organization (customer support, sales, etc.) in a manner that allows for increased customer satisfaction and increased organizational opportunity. Usually facilitated by the use of coaching, problem resolution, or a knowledge-base system.

**Electronic Yellow Pages** → An online listing of personnel, their competencies and their contact information. Within a Knowledge Management environment, the Yellow Pages are prefaced with a profile of each user's experiences and areas of expertise. Queries on the profiles will result in a list of known individuals that should possess expert Tacit Knowledge on the query's subject matter. In a heuristic Electronic Yellow Pages the system can infer competencies by observing an individual's behaviors and work product.

**Enterprise-wide Information Systems** → A tool of Corporate Instinct. These systems provide a comprehensive overview of the business and the industry in which the organization competes. An example of such a system is a comprehensive data warehouse.

**Explicit Knowledge** → One of the two types of knowledge, whose taxonomy was most notably espoused by Michael Polanyi. Explicit Knowledge is knowledge that is easily codified and conveyed to others. *See Tacit Knowledge.*

**External Awareness** → The fourth component of the Knowledge Chain, which represents an organization's ability to understand the market's perceived value of its products and services as well as the changing directions and requirements of its markets. When coupled with Internal Awareness, External Awareness can lead to the discovery of successful new markets. *See Knowledge Chain.*

**Externalization** → The transfer of knowledge from the minds of its holders to an external repository in the most efficient way possible. Externalization tools help build Knowledge Maps. They capture and organize incoming bodies of Explicit Knowledge and create clusters of bodies of knowledge.

**External Responsiveness** → The third component of the Knowledge Chain, which emphasizes the perpetual ability to meet the market on its own terms—even when the market cannot articulate these. It is a level of responsiveness to environmental conditions that is significantly faster and based on better connections between resources and markets. *See Knowledge Chain.*

**Federation** → A form of organizational structure where the value chain is loosely organized as an alliance of independent but reliant organizations or Work Cells in lieu of departments or divisions within a single enterprise.

**Free Agency** → The lowest level of granularity in a free market work force. Free Agents are effectively organizations of one, which come together temporarily to form project-based alliances.

**Generative Learning** → The additional learning that often accompanies adaptive learning when there is a gap in understanding. Generative Learning involves rethinking and redesigning mental models and changing the routes by which individuals adapt to move past where they are to where they aspire to be.

**Heuristic Software** → A software solution that learns about its users and the knowledge they possess, by monitoring the user's interaction with the system. Thus, over time, its ability to provide users with relevant knowledge should improve. *See Suggestive Software.*

**Human Capital** → The collective value of an organization's know-how. Human Capital refers to the value, usually not reflected in accounting systems, which results from the investment an organization must make to recreate the knowledge in its employees. One of three forms of Intellectual Capital as defined by Edvinsson and Stewart. *See Structural Capital and Customer Capital.*

**Increasing Returns (Theory of)** → Economic theory created by a group of economists (prominently, Brian Arthur and Paul Romer) which proposes that the emerging information economy, with its shift of value from raw materials and manufactured goods to information itself, requires a new economic model, based on the dynamic of increasing returns of scale. The primary example is the software market, where successful producers (prominently Microsoft) have increasing returns to scale (each new unit of output returns incrementally more profit than the last) because of variable costs approaching zero in volume production, as well as “network externalities,” and “lock in.” In contrast, in the classical economy, businesses faced inevitably decreasing returns to scale, as increasingly larger plants eventually reached a point where marginal increases in production required marginal increases in cost.

**Instinct** → The spontaneous application of acquired and latent intelligence to unknown situations within an unspecified context.

**Intellectual Capital** → Intellectual Capital can be segmented into three sub-categories: Human Capital, Structural Capital, Customer Capital. Although acknowledged as valuable in most organizations, these assets are not measured and accounted for in an organization’s financial statements other than as goodwill. Many believe these assets form the basis for most equity market valuations of an organization.

**Intermediation** → The brokerage function which brings together Knowledge Seekers (questions) with Knowledge Providers (answers). Intermediation technologies facilitate the connections between people and the communication of knowledge between Seeker and Provider. One example is that of an Electronic Yellow Pages. One of four key Knowledge Management functions. See *Knowledge Mapping, Externalization, Internalization, and Cognition*.

**Internal Awareness** → The first component of the Knowledge Chain, which represents an organization’s collective understanding of its strengths and weaknesses across structural silos and functional boundaries. Internal Awareness is not only having your house in order, but also knowing what order your house is in. See *Knowledge Chain*.

**Internalization** → The transfer of Explicit Knowledge from an external repository (temporary or permanent) to an individual, in the most useful and efficient way possible. There are two aspects to Internalization: extraction and filtering. One of four key Knowledge Management functions. See *Knowledge Mapping, Externalization, Internalization, and Cognition*.

**Internal Responsiveness** → The second component of the Knowledge Chain, which represents an organization’s ability to instantly organize skills based on an unfiltered assessment of its resources and external market demands and opportunities. See *Knowledge Chain*.

**KM<sup>2</sup>** → The premier methodology for conducting a Knowledge Audit. KM<sup>2</sup> exposes and defines: an organization’s propensity for Knowledge Management; the value of knowledge; its ability and speed in traversing the knowledge cycle; and the current sources of knowledge. KM<sup>2</sup> analysis also uncovers pockets of deviance from the organizational norm, thereby identifying key opportunities that can be leveraged within the organization, and key obstacles that must be overcome.

**KQML** → The Knowledge Query and Manipulation Language, is a language and protocol for exchanging information and knowledge. It is part of the ARPA Knowledge Sharing Effort aimed at developing techniques and a methodology for building large-scale, sharable and reusable knowledge bases. KQML is a message format and a message-handling protocol to support run-time knowledge sharing among agents. KQML can be used as a language through which an application program interacts with an intelligent system or through which two or more intelligent systems share knowledge in support of cooperative problem solving. Information on KQML can be found on the world-wide-web at <http://www.cs.umbc.edu/kqml/>. [Definition excerpted from [www.cs.umbc.edu](http://www.cs.umbc.edu)]

**Knowledge Architect** → See *Knowledge Leadership*.

**Knowledge Audit** → An assessment of an organization’s current achievements in Knowledge Management, its current Knowledge Ecology, and the mapping of available Tacit and Explicit Knowledge resources. See *KM<sup>2</sup>*.

**Knowledge Base** → Typically used to describe any collection of information which also includes contextual or experiential references to other Metadata.

**Knowledge Bazaar** (Info Souk, etc.) → A form of Knowledge Market in which sellers are essentially undifferentiated and buyers assume all quality and serviceability risks. See *Knowledge Market*.

**Knowledge Broker** → A person, organization, or process which identifies intersections between Knowledge Seekers (Buyers) and Knowledge Providers (Sellers) and creates a vehicle for linking the two.

**Knowledge Chain** → Corporate Instinct, stems from the flow of knowledge through four definitive stages in this chain: Internal Awareness, Internal Responsiveness, External Awareness, and External Responsiveness.

**Knowledge Concierge** → A title adopted by some organizations for individuals who have the responsibility of facilitating the transfer of knowledge across communities of practice. See *Knowledge Broker*.

**Knowledge Ecology** → The component of Knowledge Management that focuses on human factors: namely, the study of personal work habits, values, and organizational culture.

**Knowledge Engineer** → See *Knowledge Leadership*.

**Knowing Enterprise** → An enlightened organization that uses its instinct and accompanying self-awareness; an enterprise that has intimate, constantly renewed knowledge about itself, its capabilities, resources, and opportunities.

**Knowledge Guild** → A descriptive term for an organized group of suppliers of a specific kind of knowledge. Knowledge Guilds guarantee a level of quality in business interactions with their members. This guarantee differentiates guild members from others who might be active in “selling” similar knowledge in a Knowledge Bazaar.

**Knowledge Half-life** → The point at which the acquisition of new knowledge is more cost-effective and offers greater returns than the maintenance of existing knowledge.

**Knowledge Leadership (Types of)** → Knowledge Leadership represents a broad category of positions and responsibilities, from individuals who literally fall into the de facto position of Knowledge Manager with no change in title, formal responsibilities or compensation to very well compensated senior executives who are recruited specifically for the role of CKO. Although no taxonomy could possibly set forth all of the titles and responsibilities included under Knowledge Leadership, the following typify the general categories you are likely to encounter today:

- The Chief Knowledge Officer is responsible for enterprise-wide coordination of all Knowledge Leadership. The CKO typically is chartered by the CEO and is often (but not always) part of IT. The CKO’s focus is the practice of Knowledge Leadership, usually solo performer role with no immediate LOB responsibility. Before a culture of knowledge sharing, incentives, and the basic precepts of Knowledge Leadership have been acknowledged by the enterprise, the CKO is powerless.

- The Knowledge Analyst collects, organizes, and disseminates knowledge, usually on-demand. They provide Knowledge Leadership by becoming walking repositories of best practices, a library of how knowledge is and needs to be shared across an organization. There is a risk that these individuals become so valuable to their immediate constituency that they are not able to move laterally to other parts of the organization where their skills are equally needed.
- The Knowledge Engineer converts explicit knowledge to instructions and programs systems and codified applications. Effectively, the better Knowledge Engineers codify knowledge, the harder it is for the organization to change when their environment demands it.
- The Knowledge Manager coordinates the efforts of engineers, architects, and analysts. The Knowledge Manager is most often required in large organizations where the number of discrete knowledge-sharing processes risk fragmentation and isolation. The risk in having Knowledge Managers is that fiefdoms (albeit large ones) may begin to form around the success of each manager's domain.
- The Knowledge Steward provides minimal, ongoing support to knowledge users in the form of expertise in the tools, practices and methods of Knowledge Leadership. The Steward is usually an individual who has fallen into the role of helping others better understand and leverage the power of new technologies and practices in managing knowledge. The term Steward seemed to resonate best among participants in The Delphi Group's Knowledge Leadership study because it conveys responsibility and a willingness to guide others yet it is also non-intrusive and the near antithesis of ownership.

**Knowledge Management** → The leveraging of collective wisdom to increase responsiveness and innovation.

**Knowledge Manager** → See *Knowledge Leadership*.

**Knowledge Mapping** (Knowledge Taxonomy) → A process which provides an organization with a picture of the specific knowledge it requires in order to support its business processes.

**Knowledge Market** (Knowledge Bazaar, Info Souk, etc.) → An online gathering place where owners of intellectual property can barter, sell and otherwise exchange their intellectual property for value. Such markets may be undifferentiated, e.g. Knowledge Bazaars; organized through Knowledge Brokers; or modulated through the instrument of the Knowledge Guild.

**Knowledge Provider/Seller** → An individual that possesses knowledge of value to other individuals.

**Knowledge Seeker/Buyer** → An individual that needs to access knowledge held by another individual or stored in a repository.

**Knowledge Steward** → See *Knowledge Leadership*.

**Knowledge Topology** → A framework that segments Knowledge Management into four key categories: Intermediation, Externalization, Internalization, and Cognition.

**Learning Organization** → An organization with the necessary practices, culture, and systems to promote the continuous sharing of experience and lessons learned. Popularized by Senge. Knowledge Management systems seek to identify through Knowledge Mapping, and to implement through Competency Management, the kinds of specific organizational and individual learning that must take place if the business is to build and maintain the required competencies to compete effectively.

**Linguistic Analysis** → A form of concept-based retrieval in which semantic networks, lexicons and parsers are used to determine the overall subject matter of a body of text.

**Matrix Organization** → The synthesis of central control and decentralization structures within a single organization. A Matrix Organization is typically organized around task forces or teams consisting of functional members.

**Metadata** → Data which provides context or otherwise describes information in order to make it more valuable as part of a Knowledge Management system. Metadata is most often used to connect information in relevant ways to people, process, or product.

**Metaskills** → The basic tool of generative learning; these skills are aimed at ensuring three things: skills adaptability, autonomous decision-making, and an emotional aptitude for change.

**Organized Abandonment** → The process by which new innovations replace current products before the current product is out of its profit zone. See *Profit Zone*.

**Perpetual Organization** → An organization that is without any permanent structure; it takes on whatever form is suitable for current conditions and market demands.

**Personalization** → Retrieving and structuring knowledge to best meet the preferences and skill set of the Knowledge Seeker.

**Process Asset** → A set of rules and instructions about a particular process set forth in a methodical and reusable manner.

**Process Knowledge** → The collection of Tacit and Explicit Knowledge relating to the effective execution of a process. The creation of a Process Asset that ultimately contributes to Core Competency must include the instinctive, Tacit Knowledge that contributes to the success of that process. This Tacit Knowledge can be reduced to a set of rules or converted to Explicit Knowledge and added to the Knowledge Base. This Process Knowledge can then be managed more effectively and contribute to a living Knowledge Chain of competitive assets which are easily modified as customers and markets change.

**Profiling** → The creation of chronicles that track user interest levels and areas of expertise. In an automated approach, profiles are created by monitoring each user's work submitted, work reviewed, and query habits. Profiling is used to feed agent technology, user sensitivity systems, and document management systems.

**Profit Zone** → The period of time during which a product's profitability is realized. Knowledge Management should provide the practices and culture by which an organization can consistently maintain overlapping product cycles, thereby never falling out of the Profit Zone. See *Organized Abandonment*.

**Response/Stimuli Matrix** → A Knowledge Management model which plots where memory and knowledge are best used. The matrix indicates that memory is an appropriate vehicle for responding in planned ways to anticipate stimuli. Knowledge is an appropriate vehicle for responding in unplanned ways to surprise stimuli.

**Return-on-Time (ROT)** → A metric for assessing quickly if a Knowledge Chain is working. Since instinct reduces the time required to go through this cycle, it increases a company's velocity and return-on-time. Specifically:  $((P/100)*(sY/nY))$ , where P = percent of profit, sY = sustained years, nY = number of years.

**Semantic Analysis** (Semiotics) → The analysis of meaning in text. In the context of Knowledge Management software, a set of analysis programs which identify concepts in documents and their relative importance to the subject of the document and to each other. These utilities form the basis for accurate search and knowledge discovery. See *Concept-based Search*.

**Socialization** → Bringing together of individuals with similar interests. The purpose of Communities of Practice and Communities of Interest is to create a vehicle to promote the discovery and sustenance of Tacit Knowledge by encouraging socialization among individuals with similar knowledge and interests.

**Solution Brokers** → A new class of solution provider. Solution Brokers offer a fully integrated solution for most business applications, integrating the component technology with the existing hardware infrastructure, significantly minimizing the risk factors associated with the technology integration.

**Structural Capital** → One of three forms of Intellectual Capital as defined by Edvinsson and Stewart. Structural Capital refers to the value, usually not reflected in accounting systems other than as goodwill, which results from products, systems, or services an organization has built. These may survive the absence of Human Capital for a period of time (i.e. the brand equity of a popular product), but will soon result in a Core Rigidity without the infusion of Human Capital. *See Structural Capital and Human Capital.*

**Suggestive Software** → Software that is able to deduce a user's knowledge needs and suggest knowledge associations that the user is not able to make.

**Tacit Knowledge** → One of two type of knowledge, whose taxonomy was most notably espoused by Michael Polanyi. Tacit Knowledge is experiential know-how based on clues, hunches, instinct, and personal insights; distinct from formal, Explicit Knowledge.

**Touch Points** → The priority areas for the application of Knowledge Management; typically: interactions with customers, interactions with suppliers and interactions with employees. Each Touch Point represents an area of potential process or quality improvement and competitive advantage. Touch Points represent areas where human interaction is often most intense.

**User Sensitivity** → The ability of an online system to track and manage the experience and preferences of a user, and to use this knowledge to tailor the delivery of knowledge to that user. Through User Sensitivity approaches, the level of communication within a Knowledge Management system is heightened.

**Velocity of Innovation** → The rate at which an organization is able to conceive of and introduce new product to market. Innovation is driven by business markets that are battling time to beat their competitors to the next product innovation. The automation of the innovation cycle and resulting decline in time to market is the 21st century equivalent of the automation of production cycles in manufacturing during the better part of the 20th century. *See Return on Time and Concept to Cash.*

**Virtual Organization** → A company "without walls" and without many permanent employees; it relies on contractual relationships with suppliers, distributors, and a contingent workforce.

**Virtual Team** → A recombinant structure for work that pulls people and resources together quickly to solve a particular internal or external problem.

**Visualization** → The ability to visualize a process in intimate detail, capturing parameters about the process that can be used for interpretation, analysis, and discussion. Visualization ideally depicts the process and helps to analyze it. It creates a corporate memory of the process, provides data for analyzing the process, and creates a dynamic framework for a collaborative reengineering of the process.

**Work Cell** → A collection of roles within an organization that crosses functional barriers; individuals in these cells are distinguished by their flexibility and adaptability.

**Workflow** → One of the tools used for the creation of process assets—a proactive toolset for the analysis, compression, and automation of business activities.



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