GLOSSARY OF DESIGN MANAGEMENT DEFINITIONS

Accidental Discovery	New designs ideas and developments resulting from unexpected insights, which can be obtained either internal or external to the organization.
Action Centric Model	The action-centric perspective is a label given to a collection of interrelated concepts, which are antithetical to the rational model. It posits that 1.Designers use creativity and emotion to generate design candidates, 2.The design process is improvised, 3.No Universal sequence of stages is apparent analysis, design and implementation are contemporary and inextricably linked The action-centric perspective is a based on an empiricist philosophy and broadly consistent with the agile approach and a methodical development. Substantial empirical evidence supports the veracity of this perspective in describing the actions of real designers.
Active monitoring	Monitoring of a Configuration Item or an IT Service that uses automated regular checks to discover the current status
Aerodynamic Design	A design that uses the shapes which derives from aerodynamics, science that studies the penetration of the air it can be defined as aerodynamic. In the period between 1930 and 1950, aerodynamic design was used to characterize the style of some automobiles. Subsequently it was applied to numerous typologies of objects to communicate the idea of movement. A design that has some aerodynamic elements may, depending on the way in which these come into a relation with the other elements and with one another, define different moods and feelings. Constructiveness, intellectual dynamism, and pragmatism are among those that are preferred by the public and by the designers.

	In a more generic and wider way, in mass production, aerodynamic styling is applied to a wide range of products as a significant of modernity; these are radios, telephones, computers, stationary items, household appliances, furniture, trainers, and many others.
Affinity Diagram	A diagrammatic method of capturing, analyzing, and organizing lots of ideas, elements, activities, etc., that together represent or influence an overall category, such as a process or issue. The brainstorming method is central to structuring an affinity diagram and POST-IT or sticky notes are commonly used as a way of generating and organizing data. Commonly used in brainstorming solutions during the Improve stage of DMAIC.
Agreed service time	A synonym for Service Hours, commonly used in formal calculations of Availability.
Analytical Modeling	It refers to a technique that uses mathematical models to predict the behavior of a Configuration Item or IT Service. Analytical Models are commonly used in Capacity Management and Availability Management.
Analyzer	A firm that follows an imitative innovation strategy, where the goal is to get to market with an equivalent or slightly better product very quickly once someone else opens up the market, rather than to be first to market with new products or technologies. Sometimes called an imitator or a fast follower.

Anthropomorphic	Design aspect that relates with the human look in design the term anthropomorphic can be used to describe the appearance of an object in relation to its resemblance to the human body, or part of it. This resemblance determines what is the top, the bottom, the front, the back, and the sides of the object. The look of an object is instinctively related, by those who are watching it, to the look of the human body. Whether one is looking at a precious modern abstract sculpture or at an ordinary ironing tool, the interpretation of what is seen varies according to the directional reading parameters used by the watcher. As an illustrative example an iron, if seen from behind while presupposing that that is the front, has a look, which is different from the one, which appears using the opposite reading parameter. The reading parameter either may be free or determined by the way in which the object has been conceived to be used. The look of an object is not necessarily put into relation with the completely human body by the watcher. Sometimes it is read in relation with a part of it like arm, hand, face and so on. . The study of the anthropomorphic characteristics of a creation can be used in many field among which are product design, painting, sculpture, web design, and graphic design.
Anticipatory Failure Determination (AFD)	A failure analysis method. In this process, developers start from a particular failure of interest as the intended consequence and try to devise ways to assure that the failure always happens reliably. Then the developers use that information to develop ways to better identify steps to avoid the failure.

Appearance Prototype	An appearance prototype, or appearance model, is a physical representation of an object that closely simulates the look of a production product. An appearance prototype typically does not function the way a production product would. Instead, moving parts don't actually move, and production materials are simulated with wood, foam, clay or other prototyping materials. Appearance prototypes can be relatively simple, consisting of solid chunks of foam finished and painted to look like the real thing, or they can be more sophisticated, simulating weight, balance, and material properties. Usually, appearance prototypes are 'for show' and are not handled excessively. They are often paired with proof-of-concept prototypes early in product development programs. Product development group often provides clients with appearance prototypes for use in trade shows, focus groups, and internal reviews. These prototypes are often critical components in the design decision-making process.
Attribute Testing	A quantitative market research technique in which respondents are asked to rate a detailed list of product or category attributes on one or more types of scales such as relative importance, current performance, current satisfaction with a particular product or service, for the purpose of ascertaining customer preferences for some attributes over others, to help guide the design and development process. Great care and rigor should be taken in the development of the list of attributes, and it must be neither too long for the respondent to answer comfortably or too short such that it lumps too many ideas together at too high a level.
Awareness	It refers to a measure of the percent of target customers who are aware that the new product exists. Awareness is variously defined, including recall of brand, recognition of brand, recall of key features or positioning.

Blueprint	The blueprint is an operational tool that describes the nature and the characteristics of the service interaction in enough detail to verify, implement, and maintain it. It is based on a graphical technique that displays the process functions above and below the line of visibility to the customer all the touch points and the back-stage processes are documented and aligned to the user experience.
BOM	BOM is a list of the raw materials, sub-assemblies, intermediate assemblies, sub-components, components, parts and the quantities of each needed to manufacture a final product.
Brand Design Management	In market and brand focused companies the design management focus lies mainly on brand design management. It can be distinguished into corporate brand management and product brand management. In this perspective of design management, the brand is the core, which results in a strong focus on the brand experience, customer touch points, and reliability, recognition, and trust relations. The design, like all brand elements, is strongly driven by the brand vision and strategy.
Brand Development Index (BDI)	A measure of the relative strength of brands sales in a geographic area. Computationally, BDI is the percent of total national brand sales that occur in an area divided by the percent of U.S. Households that reside in that area.
Breadboard	A proof of concept modeling technique that represents how a product will work, but not how a product will look.

Business Design Management	Business design management deals with the newly emerging field of integrating design thinking into management. In organization and management theory, design thinking forms part of the architecture / design / anthropology (A/D/A) paradigm, which characterizes innovative, human-centered enterprises. This paradigm also focuses on a collaborative and iterative style of work and an adductive mode of thinking, compared to practices associated with the more traditional mathematics / economics / psychology (M/E/P) management paradigm. Since 2006, the term business design is trademarked by the Rothmans school of management; they define business design as the application of design thinking principles to business practice. The designedly way of problem-solving is an integrative way of thinking that is characterized through a deep understanding of the user, creative resolution of tensions, collaborative prototyping and continuous modification and enhancement of ideas and solutions. This approach to problem solving can be applied to all components of business and its management is what business design management is about.
Business Service	An IT Service that directly supports a Business Process, as opposed to an Infrastructure Service, which is used internally by the IT Service Provider and is not usually visible to the Business. The term Business Service is also used to mean a Service that is delivered to Business Customers by Business Units. For example delivery of financial services to Customers of a bank, or goods to the Customers of a retail store. Successful delivery of Business Services often depends on one or more IT Services.
Cannibalization	That portion of the demand for a new product that comes from the erosion of the demand for (sales of) a current product the firm markets.
Category Development Index (CDI)	A measure of the relative strength of a category's sales in a geographic area. Computationally, it is the percent of total national category sales that occur in an area divided by the percent of U.S. Households in that area.
CATIA	CATIA is the acronym for Computer Aided Three-dimensional Interactive Application. From large OEMs and their supply chains to the mid-size market, thousands of companies of all sizes across many

	industries around the world have already opted for CATIA's virtual design capabilities to imagine and engineer excellence products, from the simplest to the most complex. As DS's pioneer brand and a leader in 3D product creation solutions, CATIA enables true collaborative design and engineering across disciplines, and encourages innovation amongst professionals in business, education, research, as well as consumers.
Clock Speed	The evolution rate of different industries. High clock speed industries, like electronics, see multiple generations of products within short time periods, perhaps even within 12 months. In low clock speed industries, like the chemical industry, a generation of products may last as long as 5 or even 10 years. It is believed that high clock speed industries can be used to understand the dynamics of change that will affect all industries, much as fruit flies are used to understand the dynamics of genetic change in a speeded-up genetic environment, due to their short life spans.
Cloud Computing	Cloud computing has been defined as the use of a collection of distributed services, applications, information and infrastructure comprised of pools of computer, network, information and storage resources. These components can be rapidly orchestrated, provisioned, implemented, and decommissioned using an on-demand utility-like model of allocation and consumption. Cloud service delivery models are software as a service (SAAS), platform as a service (PAAS) and infrastructure as a service (IAAS).
Co-Design	Co-design is a philosophy in the American pragmatist tradition, which argues that all people have different ideals and perspectives and that any design process, needs to deal with this. Co-design traces its roots to Immanuel Kant, who in the critique of the pure reason observed that to put a question one has to have some information or knowledge. Kant called this a priori knowledge. Therefore, the concept of objectivity is regarded to be difficult or even meaningless. William James suggested that the criteria for truth should be useful, which a cornerstone in co-design is thinking. In co-design there is an understanding that all human artifacts are designed and with a purpose. In co-design one tries to include those perspectives that are related to the design in the process. It is generally recognized that the quality of design increases if the stakeholder's interests are

	considered in the design process. Co-design is a development of systems thinking, which according to c. West churchman begins when first you view the world through the eyes of another. Designers have been moving increasingly closer to the future users of what they design and the next new thing in the changing landscape of design research has become co-designing with your users. However, co-designing is actually not new at all, having taken distinctly different paths in the US and in Europe. The evolution from a user-centered approach to co-designing is changing the roles of the designer, the researcher, and the person formerly known as the 'user'. The implications of this shift for the education of designers and researchers are enormous. The evolution in design research from a user-centered approach to co-designing is changing the landscape of design practice as well, creating new domains of collective creativity. This evolution will support a transformation toward more sustainable ways of living in the future. Designers interpret, and apply user generated evidence and insights to co-create sustainable relationships and concurrently advance systems thinking and workplace information literacy.
Cognitive Modeling	A method for producing a computational model for how individuals solve problems and perform tasks, which is based on psychological principles. The modeling process outlines the steps a person goes through in solving a particular problem or completing a task, which allows one to predict the time it will take or the types of errors an individual may make. Cognitive models are frequently used to determine ways to improve a user interface to minimize interaction errors or time by anticipating user behavior.
Cognitive Walkthrough	Once a model of the steps or tasks a person must go through to complete a task is constructed, an expert can role-play the part of a user to cognitively walk through. The user is expected experience. Results from this walk-through can help make human-product interfaces more intuitive and increase product usability.

Color Study	A color study is an exercise in which a product, interface, room, etc. Is shown in a variety of color scheme options. This is a comparative process, intended to enable the client or designer to select color schemes appropriate for the use of the product being created. Within the realm of product design and product development, color studies can be vitally important. The wrong color scheme can make a product seem awkward or out of place in its target market, while the right colors can increase sales. Product development group, often provide clients with color studies in the form of product renderings or sketches. Organizations also leverage our own knowledge of color theory, and product development experience, to make color scheme recommendations based on the client's goals.
Component failure	(Service Design) A technique that helps to identify the impact of CI failure on IT Services. A matrix is created with IT Services on one edge and CIs on the other. This enables the identification of critical CIs (that could cause the failure of multiple IT Services) and of fragile IT Services (that have multiple Single Points of Failure).
Computer-Enhanced Creativity	Using specially designed computer software that aids in the process of recording, recalling and reconstructing ideas to speed up the new product development process.
Concept Generation	The processes by which new concepts, or product ideas, are generated. Sometimes also called idea generation or ideation.
Concept Optimization	A research approach that evaluates how specific product benefits or features contribute to a concept is overall appeal to consumers. Results are used to select from the options investigated to construct the most appealing concept from the consumer ís perspective.
Concept Screening	The evaluation of potential new product concepts during the discovery phase of a product development project. Potential concepts are evaluated for their fit with business strategy, technical feasibility, manufacturability, and potential for financial success.

Concept Statement	A verbal or pictorial statement of a concept that is prepared for presentation to consumers to get their reaction prior to development.
Concept Study Activity	It refers to set of product development tasks in which a concept is given enough examination to determine if there are substantial unknowns about the market, technology, or production process.
Concept Testing	The process by which a concept statement is presented to consumers for their reactions. These reactions can either be used to permit the developer to estimate the sales value of the concept or to make changes to the concept to enhance its potential sales value.
Conjoint Analysis	Conjoint analysis is a market research technique in which respondents are systematically presented with a rotating set of product descriptions, each of which contains a rotating set of attributes and levels of those attributes. By asking respondents to choose their preferred product and/or to indicate their degree of preference from within each set of options, conjoint analysis can determine the relative contribution to overall preference of each variable and each level. The two key advantages of conjoint analysis over other methods of determining importance are 1) the variables and levels can be either continuous (e.g. Weight) or discreet (e.g. Color), and 2) it is just about the only valid market research method for evaluating the role of price, i.e. How much someone would pay for a given feature
Constructive Interaction	The constructive interaction is a method based on the observation of a user during his service experience. The user is asked to think out loud while performing a given set of tasks, so that the evaluators could listen to and record his thoughts. If this kind of evaluation takes place with two users interacting with the system simultaneously, the inspectors could obtain a more natural way of thinking aloud and results that are more effective.
Consumer Panels	Specially recruited groups of consumers whose longitudinal category purchases are recorded via the scanner systems at stores.

Context	The world the service belongs to. The context is the specific frame in which the service takes place. Exploring and defining the context means setting the project boundaries in terms of limits but also opportunities.
Context Panorama	The context panorama is a visualization of the first service ideas that is produced in order to feed the creative process and orient the following design activities. Each basic idea is visualized through a simple image (one or more than one if necessary). The pictures are presented together with some keywords that support the desired understanding of the message
Contextual Inquiry	A structured qualitative market research method that uses a combination of techniques from anthropology and journalism. Contextual inquiry is a customer needs discovery process that observes and interviews users of products in their actual environment.
Controlled Store Testing	A method of test marketing where specialized companies are employed to handle product distribution and auditing rather than using the company is normal sales force.
Convergent Thinking	A technique generally performed late in the initial phase of idea generation to help funnel the high volume of ideas created through divergent thinking into a small group or single idea on which more effort and analysis will be focused.
Core Benefit Proposition (CBP)	The central benefit or purpose for which a consumer buys a product. The CBP may come from either the physical good or service, or it may come from augmented dimensions of the product. (see also value proposition)
Corporate Brand Design Management	Brand and market focused organizations are concerned with the expression and perception of corporate brand. Corporate design management implements, develops, and maintains the corporate identity or brand. This type of brand management is strongly anchored in the organization to control and influence corporate design activities, the design program play the role of a quality program within many fields of the organization (internal branding). It is strongly linked to strategy, corporate culture, product development, marketing, organizational structure, and technological development. A creative culture, knowledge sharing processes, a strong vision, design leadership, and good work relations support the work of corporate brand management.

Corporate Design	A corporate design is the official graphical design of the logo and name of a company or institution used on letterheads, envelopes, forms, folders, brochures, etc. The house style is created in such a way that all the elements are arranged in a distinctive design and pattern. This includes defining the ink pantones should be used in the coloring, and what typefaces. Governments may have corporate designs as well. On June 2, 1999, the German federal cabinet introduced a corporate design for the flag of Germany The term corporate design is ambiguous and is not the name of a specific design profession. Instead, corporate is used here as an adjective. Corporations do have special design needs based on their behaviors. They communicate their mission, objectives, needs, and product information -- with users, clients, or members; with suppliers, distributors, service providers; with the surrounding community and the media; with financial institutions and other corporations, and with the state. They create, acquire, modify, organize, and distribute large amounts of information and raw data, as well as goods and services. (Sometimes the goods or services are themselves information. For example, the yellow pages, or the New York times.) A designer whose client is a corporation will include the logo and other elements of the corporate brand as a way to standardize and unify all communication between company and audience, whether in print or online. Scenarios that include human-computer interactions take place through software and hardware user interfaces that are also branded and designed with the corporate culture in mind. (examples of user scenarios update the web site, transfer funds, document procedures, control security, operate machinery, plan projects, conduct virtual meetings, check inventory, fill an order, or ship a product.) These interactions are increasingly taking place through web sites, through mobile devices and at dedicated terminals, and may include sound, video, animation and user feedback mechanisms. A well informed designer will create designs

	that can be adapted to all of these applications.
Creative Brief	A creative brief is a document used by creative professionals and agencies to develop creative deliverables visual design, copy, advertising, web sites, etc. The document is usually developed by the requestor (in most cases a marketing team member) and approved by the creative team of designers, writers, and project managers. In some cases, the project's creative brief may need creative director approval before work will commence. The creative brief, consisting of a series of simple questions asked by the creative team and answered by the requestor, becomes the guidepost for the development of the creative deliverable. As with many strategic documents, if the project goes off track referring back to this mutually agreed upon document to see where the divergence began is helpful. Creative briefs can come in many flavors and are usually tailored to the agency or group that is developing the creative deliverable. They know which questions (and answers) are of paramount importance to them in order to deliver a high-quality creative execution. **A Creative Brief May Contain** Background — what is the background of the project? Why is it being done? Target audience — what do they already think about this subject? Is there anything that should be avoided? Objectives — what is to be accomplished? How will this be measured and success understood? Single message — what is the one thing to tell the audience. What is the single thing they should remember about the offering? How will they believe what we say? Mandatory elements - mandatory elements such as the

	client's logo, address, and phone number and so forth. Deliverables — what is to be used to give the audience the message? What is the best way or place to reach this audience? Timeline — how soon is this needed? When is it expected to be done? How many rounds (revisions) will this project undergo? Budget — how much can be spent to get this developed? Is there any budget needed to publish/flight the creative? Approvals — who needs to give the okay.
Creative Session	A creative session is a meeting specifically for exploring new creative territory within a chosen subject matter. Typically, a creative session will include many activities such as brainstorming, problem analysis, and dissection, brain sketching, and reverse brainstorming. At product development group, we often start projects by inviting the client to join us for a half-day or full-day creative session. We have found that this approach helps to jumpstart programs by getting all the requirements and opportunities on the table before the product design and development process begins.
Creativity	An arbitrary harmony, an expected astonishment, a habitual revelation, a familiar surprise, a generous selfishness, an unexpected certainty, a formable stubbornness, a vital triviality, a disciplined freedom, an intoxicating steadiness, a repeated initiation, a difficult delight, a predictable gamble, an ephemeral solidity, a unifying difference, a demanding satisfier, a miraculous expectation, and accustomed amazement. (George M. Prince, the practice of creativity, 1970) creativity is the ability to produce work that is both novel and appropriate.
Cross-Functional Team	A team consisting of representatives from the various functions involved in product development, usually including members from all key functions required to deliver a successful product, typically including marketing, engineering, manufacturing/operations, finance, purchasing,

	customer support, and quality. The team is empowered by the departments to represent each function is perspective in the development process.
Crossing The Chasm	Making the transition to a mainstream market from an early market dominated by a few visionary customers (sometimes also called ***innovators or lead adopters***). This concept typically applies to the adoption of new, market creating technology-based products and services.
Customer Perceived Value (CPV)	The result of the customer is evaluation of all the benefits and all the costs of an offering as compared to that customer is perceived alternative. It is the basis on which customers decide to buy things.
Customer Value Added Ratio	The ratio of WWPF (worth what paid for) for your products to WWPF for your competitors products. A ratio above 1 indicates superior value compared to your competitors.
Decision Screens	Sets of criteria that are applied as checklists or screens at new product decision points. The criteria may vary by stage in the process.
Defenders	Firms that stake out a product turf and protect it by whatever means, not necessarily through developing new products.
Delphi Processes	A technique that uses iterative rounds of consensus development across a group of experts to arrive at a forecast of the most probable outcome for some future state.
Derivative Product	A new product based on changes to an existing product that modifies, refines, or improves some product features without affecting the basic product architecture or platform.

Design For Asia, DFA	When designing a product for manufacture in Asia, it is critical to develop the design direction sufficiently enough to ensure that design intent is captured correctly. If you send very early concept sketches to an Asian manufacturer, you will likely be surprised with what you get back. Design for ASIA (OR DFA) level design is required in order to ensure that design direction and quality control is maintained. For commodity products, it is practically a requirement to manufacture in Asia because the market wants the lowest price. Organizations product development group has developed an approach that provides you better project results when outsourcing in Asia. In DFA method, we take the prototype and design process only up to the point where engineering direction is clearly established but the final engineering details are executed by an Asian manufacturer. By balancing our design process for these types of programs, we are able to save you significant development costs, while maintaining control of your development program.
Design For Excellence (DFX)	The systematic consideration of all relevant life cycle factors, such as manufacturability, reliability, maintainability, affordability, testability, etc., in the design and development process.
Design For Maintainability (DFMT)	The systematic consideration of maintainability issues over the product is projected life cycle in the design and development process.
Design For Manufacturability (DFM)	The systematic consideration of manufacturing issues in the design and development process, facilitating the fabrication of the product is components and their assembly into the overall product.
Design For The Environment (DFE)	The systematic consideration of environmental safety and health issues over the product is projected life cycle in the design and development process.
Design Leadership	Design leadership leads from creation of a vision to changes, innovations, and implementation of creative solutions. It stimulates communication and collaboration through motivation, sets purpose and future direction to achieve

	long-term objectives.
Design Of Experiments (DOE)	A statistical method for evaluating multiple product and process design parameters simultaneously rather than one parameter at a time.
Design Strategy	Design strategy is a discipline, which helps firms determine what to make and do, why do it and how to innovate contextually, both immediately and over the long term. This process involves the interplay between design and business strategy, forming a systematic approach integrating holistic-thinking, research methods used to inform business strategy and strategic planning which provides a context for design. While not always required, design strategy often uses social research methods to help ground the results and mitigate the risk of any course of action. The approach has proved useful for companies in a variety of strategic scenarios. Design strategy can play an integral role in helping to resolve the following common problems Promoting the adoption of a technology (example Toyota designing the hybrid Prius to resemble the conservative echo instead of making the Prius look high-tech and adventuresome)[verification needed] identifying the most important questions that a company's products and services should address (example John Rheinfrank of fitch design showed Kodak that its disposable cameras didn't exist to replace traditional cameras, but instead to meet specific needs, like weddings, underwater photography and others)[verification needed] Translating insights into actionable solutions (example jump associates helped target turn an understanding of college students into a dorm room line designed by Todd Oldham) Prioritizing the order in which a portfolio of products and services should be launched (example apple inc. Laid out the IPod ITunes ecosystem slowly over time, rather than launching all of its pieces at once)[verification needed] connecting design efforts to an organization's business strategy (example Hewlett-Packard's global design division

	is focused most intently on designs that simplify technology experiences. This leads to lower manufacturing costs at a time when CEO Mark Hurd is pushing for cost-cutting.)[verification needed] integrating design as a fundamental aspect of strategic brand intent (example tom hardy, design strategist , developed the core brand-design principle balance of reason & feeling for Samsung electronics, together with rational and emotional attributes, to guide design language within a comprehensive brand-design program that inspired differentiation and elevated the company's global image.
Design Thinking	A discipline uses the designer's sensibility and methods to match people's needs with what is technologically feasible and what a viable business strategy can convert into customer value and market opportunity. Leaders now look to innovation as a principal source of differentiation and competitive advantage; they would do well to incorporate design thinking into all phases of the process.
Design To Cost	A development methodology that treats costs as an independent design parameter, rather than an outcome. Cost objectives are established based on customer affordability and competitive constraints.
Design Validation	Product tests to ensure that the product or service conforms to defined user needs and requirements. These may be performed on working prototypes or using computer simulations of the finished product.
Development Change Order (DCO)	A document used to implement changes during product development. It spells out the desired change, the reason for the change and the consequences to time to market, development cost, and to the cost of producing the final product. It gets attached to the project is charter as an addendum.
DFSS	Commonly used abbreviation in Six Sigma activities and communications, it means Design For Six Sigma, and describes the method of using tools, training, measurements, and verification so that products and processes are designed at the outset to meet Six Sigma requirements. A more specific version is DMADV Define, Measure, Analyze, Design, and Verify. Both DFSS and DMAVD are concerned with, and emphasize the importance of, using Six Sigma principles in product/process design, not just for remedial improvements - rather advocating that prevention is better than cure. Thus,

	if Six Sigma capability is built into new organizational systems and products when they are designed, so performance will be better, and the need for Six Sigma remedial effort will be reduced.
Digital Mock-Up	An electronic model of the product created with a solids modeling program. Mock ups can be used to check for interface interferences and component incompatibilities. Using a digital mock-up can be less expensive than building physical prototypes.
Discontinuous Innovation	Previously unknown products that establish new consumption patterns and behavior changes. Examples include microwave ovens and the cellular phones.
Discourse	Discourse refers to the totality of codified linguistic usages attached to a given type of social practice. (e.g. Legal discourse, medical discourse, religious discourse.) According to the power theory of Michel Foucault and the local knowledge discourse of Clifford Geertz, designers need an appropriate structure, which is design power or ability to drive social innovation process. Relatively, the construction of knowledge platforms and organizational design is much more important than the actual design outputs. Design will use a more tensional structural form and social identity power (innovation networks, design networks, social networks, etc.) To participate in community social innovation, making web-based and sustainable harmonious community possible.
Discrete Choice Experiment	A quantitative market research tool used to model and predict customer-buying decisions.
Distributed Governance	The social business hive mind makes decisions and receives continuous reinforcement through business interactions; a social inclination resides within a company's culture and tempers planning, decision-making, and work output. Employees approach works with a social and collaborative mindset; customers expect participation and engagement; suppliers anticipate optimized and efficient process towards common goals.

Divergent Thinking	Technique performed early in the initial phase of idea generation that expands thinking processes to generate record and recall a high volume of new or interesting ideas.
DMADV	An alternative/substitute abbreviation to DFSS (Design For Six Sigma), and like DFSS DMADV is central to Six Sigma initiatives. DMADV more specifically describes a method comprising linked steps; Define, Measure, Analyze, Design, Verify, for ensuring that products and processes are designed at the outset to meet Six Sigma requirements.
DMAIC/DMAICT	Define, Measure, Analyze Improve, Control, more recently extended to DMAICT by others in the Six Sigma consulting, and training communities, to Transfer (transfer best practice and thereby share learning).
Ecological Design	Ecological design was defined by Sim Van Der Ryn and Stuart Cowan as any form of design that minimizes environmentally destructive impacts by integrating itself with living processes. Ecological design is an integrative, ecologically responsible design discipline. It helps connect scattered efforts in green architecture, sustainable agriculture, ecological engineering, ecological restoration, and other fields. Ecological design is both a profoundly hopeful vision and a pragmatic tool. By placing ecology in the foreground of design, it provides specific ways of minimizing energy and material use, reducing pollution, preserving habitat, restoring ecosystems, inventing landscapes, and fostering community, health and beauty. Ecological design provides a new way of thinking about human interventions into the natural world by going beyond many streams of environmentalism, which often merely call for a minimization of human impacts on the natural world. Ecological design thus can be defined as a careful and deliberate form of human intervention with the natural environment that attempts to improve natural conditions or reverse environmentally destructive impacts.

Ecosystem	A robust, integrated network of nodes and connections when thinking of a business as a social ecosystem, it consists of a network of independent nodes and their interconnections. Internal departments, customer segments, and local area networks can all be thought of as independent nodes at the micro level. At a higher level, businesses function as part of a system comprised of dozens, hundreds, or even thousands of smaller ecosystems. Addressing the business as a series of interconnected, yet independent nodes is vital to an effective business design.
Empathic Design	A 5-step method for uncovering customer needs and sparking ideas for new concepts. The method involves going to a customer is work site, watching as he or she performs functions associated with the customer needs your firm wants to solve, and then debriefing the customer about what they did, why they did those things, the problems they encountered as they were trying to perform the function, and what worked well. By spending time with customers, the team develops empathy for the problems customers encounter trying to perform their daily tasks. See also customer site visits.
Engineering Design	A function in the product creation process where a good or service is configured and specific form is decided.
Envisioning	Represent the service idea using techniques that illustrate all the components of the service, including physical elements, interaction modalities, logical links, and temporal sequences. Envisioning is the process of imagining what might be, of previewing the service solution, of making its future features more tangible by translating them in visual interpretations or representations. The tools that are used for envisioning, allow people to show, externalize and share their minds, making the ideas visible in order to understand and explain them better. The hardest aspect concerning envisioning during a process of service design is that there is often the need to communicate both the inner mechanism of the process and the immaterial components of the experience (which are per se difficult to represent) to several actors who are not supposed to be familiar with any technical

	language or representation technique. In this sense the use and the development of adequate visual tools is a great opportunity but also a (SFIDA) for designers.
Ethnography	A descriptive, qualitative market research methodology for studying the customer in relation to his or her environment. Researchers spend time in the field observing customers and their environment to acquire a deep understanding of the lifestyles or cultures as a basis for better understanding their needs and problems.
Evidencing	The methodology called evidencing, pioneered by the UK firm live work, involves creating objects and images exploring the way a proposed design innovation will feel and work through its touch points Evidencing means taking the ideas and animates them as tangible evidence of the future. This kind of archeology of the future enables the designers to make early qualitative judgments about the implication of the design solution they're conceiving.
Excursion	An idea generation technique to force discontinuities into the idea set. Excursions consist of three generic steps 1. Step away from the task; 2. Generate disconnected or irrelevant material; 3. Force a connection back to the task.
Extrusion	A manufacturing process that utilizes a softened billet of material that is forced through a shape (or die) to allow for a continuous form, much like spaghetti.

Failure Mode Effects Analysis (F Mea)	A technique used at the development stage to determine the different ways in which a product may fail, and evaluating the consequences of each type of failure.
Flexible Gate	A permissive or permeable gate in a stage-gate™ process that is less rigid than the traditional "go-stop-recycle" gate. Flexible gates are useful in shortening time-to-market. A permissive gate is one where the next stage is authorized although some work in the almost-completed stage has not yet been finished. A permeable gate is one where some work in a subsequent stage is authorized before a substantial amount of work in the prior stage is completed. (Robert G. Cooper, JPIM, 1994)
Functional Pipeline Management	Optimizing the flow of projects through all functional areas in the context of the company is priorities.
Functional Schematic	A schematic drawing that is made up of all of the functional elements in a product. It shows the product is functions as well as how material, energy, and signal flow through the product.
Fuzzy Front End	It refers to the messy getting started, period of product development, when the product concept is still very fuzzy. Preceding the more formal product development process, it generally consists of three tasks strategic planning, concept generation, and, especially, pre-technical evaluation. These activities are often chaotic, unpredictable, and unstructured. In comparison, the subsequent new product development process is typically structured, predictable, and formal, with prescribed sets of activities, questions to be answered, and decisions to be made.
Fuzzy Gates	Fuzzy gates are conditional or situational, rather than full go decisions. Their purpose is to try to balance timely decisions and risk management. Conditional go decisions are go, subject to a task being successfully completed by a future, but specified, date. Situational gates have some criteria that must be met for all projects, and others that are only required for some projects. For example, a new-to-the world product may have distribution feasibility criteria that a line extension will not have. (R.G. Cooper, JPIM, 1994) (see also flexible gates)

Game Design Pyramid	The pyramid is metaphor for a good game design one that will withstand the test of time. where in the (gaming) world it is located what the base of the pyramid is used for how to measure its height what defines its capstone what the centerline running through it represents what the outer skin of the pyramid represents why a smooth pyramid shape is important what fills the space inside it how its inside is organized and structured
Games	Activities that could have educational, social, or entertaining aim. The game is based on the objective that the participants have to reach through the game itself and on a set of rules determining what players can or cannot do during the game.
Gamma / In-Market Testing	Not to be confused with test marketing (which is an overall determination of marketability and financial viability), the in-market test is an evaluation of the product itself and its marketing plan through placement of the product in a field setting. Another way of thinking about this is to view it as an in-market test using a real distribution channel in a constrained geographic area or two, for a specific period, with advertising, promotion, and all associated elements of the marketing plan working. In addition to an evaluation of the features and benefits of the product, the components of the marketing plan are tested in a real world environment to make sure they deliver the desired results. The key element being evaluated is the synergy of the product and the marketing plan, not the individual components. The market test should deliver a more accurate forecast of dollar and unit sales volume, as opposed to the approximate range estimates produced earlier in the discovery phase. It should also produce diagnostic information on any facet of the proposed launch that may need adjustment, be it product, communications, packaging, positioning, or any other

	element of the launch plan.
Gamma Test	A product use test in which the developers measure the extent to which the item meets the needs of the target customers, solves the problems(s) targeted during development, and leaves the customer satisfied.
Garage Bill Scheduling	A scheduling tool that details every task, no matter how small, that must be completed to achieve a deliverable.
Gate	The point at which a management decision is made to allow the product development project to proceed to the next stage, to recycle back into the current stage to better complete some of the tasks, or to terminate. The number of gates varies by company.
Gatekeepers	The group of managers who serve as advisors, decision-makers, and investors in a stage-gate™ process. Using established business criteria, this multifunctional group reviews new product opportunities and project progress, and allocates resources accordingly at each gate. This group is also commonly called a product approval committee or portfolio management team.
Graphic Design	Graphic design is a creative process – most often involving a client and a designer and usually completed in conjunction with producers of form (i.e., printers, programmers, signmakers, etc.) – undertaken in order to convey a specific message (or messages) to a targeted audience. The term "graphic design" can also refer to a number of artistic and professional disciplines that focus on visual communication and presentation. The field as a whole is also often referred to as Visual Communication or Communication Design. Various methods are used to create and combine words,

	symbols, and images to create a visual representation of ideas and messages. A graphic designer may use typography, visual arts and page layout techniques to produce the final result. Graphic design often refers to both the process (designing) by which the communication is created and the products (designs) which are generated. Common uses of graphic design include identity (logos and branding), web sites, publications (magazines, newspapers, and books), advertisements, and product packaging. For example, a product package might include a logo or other artwork, organized text and pure design elements such as shapes and color, which unify the piece. Composition is one of the most important features of graphic design, especially when using pre-existing materials or diverse elements.
Heuristic Evaluations	The heuristic evaluation is a method of inspection of the service usability based on a predefined set of criteria that the evaluators follow during the analysis. One or more experts who use the heuristics as a guide should carry on this evaluation. It gives a quick feedback and a lot of good suggestions for the improvement of the whole project.
Hive Mind	A primary social calibration as social tools and functionality are adopted more widely, it becomes less important for businesses to use traditional methods to force collaboration in the workplace, e.g. Panoptic cubicle arrangements. Employees are entering the workforce socially engaged and used to collaborating. The social business hive mind is a new kind of corporate culture whereby all participants move together towards common goals. Physicists refer to this as synchronous lateral excitation.
Hoshin Planning	Loosely translated, Hoshin means "compass." It signifies setting direction and alignment of resources to long-range goals, and is a strategic planning process. Kanri means "management". Kanri signifies managing to long-range goals. Together, Hoshin Kanri helps an organization set direction and manage for results. The Hoshin plan for a bank, for

	example, can be built in a synergistic and dynamic fashion along with the business architecture, with each deliverable being tied together along the way. Hoshin planning is a process used to formulate and execute breakthrough strategy to achieve long-term customer, associate and shareholder goals. A Hoshin plan documents an organization's strategy and 12-month performance plan. Here are key items to include with each process. Deploying Objectives •Set key metrics and measurement (at the executive level). •Choose a balance of financial, customer and operations metrics that drive strategic objectives. •Limit the number of key metrics - the idea is to focus everyone on the critical few. •Agree in advance on an operational definition for each of the key metrics. •Agree in advance on how the measures will be taken, aggregated and reported. •Set a stretch target for each of the key metrics •Assign a financial analyst (or more than one if organization is large) to validate all project reports, measurement plans and measurement methods. •Link all performance bonuses to financially validated progress on the metrics. •Review performance weekly. Cascading the Objectives (Each Level Repeats This Process) •Identify the key processes at the highest level of the organization (Level 1). •Use "House of Quality"-type matrix to identify the correlation between each process and the key metrics. •Develop correlation metrics in advance (e.g., high = 6, medium = 4, low = 2). •Identify the key metrics at Level 2 that drive the Level 1 metrics.

	•Play "catch ball" with Level 1 on the feasibility of the stretch targets. •Agree on Level 2 targets for their key metrics. •Use the metrics methodology above to develop measurement plan for Level 2. •Repeat this cascading process for Level 3 and on through the organization. Selecting Key Projects •Make sure key projects tie to the Hoshin Plan. •Demonstrate how potential project results will drive one of more of the Level 1 key metrics. Use financial analyst to help with this. •Do not use "cost avoidance" as a legitimate reason to undertake a project. Projects should clearly demonstrate net income savings, productivity improvement, or customer delight. •Using metrics methodology above, develop a measurement plan to be included in the project. •Hold executive-level project reviews at least monthly to go over progress toward targets. •Focus review presentation on the measurable progress. Make sure they are financially "blessed" beforehand. •Audit performance to metrics for three quarters after project close to ensure repeatability. •Declare a win and move on.
Hunting For Hunting Grounds	A structured methodology for completing the fuzzy front end of new product development
Hunting Ground	A discontinuity in technology or the market that opens up a new product development opportunity.
Idea Exchange	A divergent thinking technique that provides a structure for building on different ideas in a quiet, non-judgmental setting that encourages reflection.

Idea Generation (Ideation)	All of those activities and processes that lead to creating broad sets of solutions to consumer problems. These techniques may be used in the early stages of product development to generate initial product concepts, in the intermediate stages for overcoming implementation issues, in the later stages for planning launch and in the post-mortem stage to better understand success and failure in the marketplace.
Idea Merit Index	An internal metric used to rank new product ideas.
Implicit Product Requirement	What the customer expects in a product, but does not ask for, and may not even be able to articulate.
Individual Depth Interviews (Idi's)	A qualitative market research technique in which a skilled moderator conducts an open-ended, in-depth, guided conversation with an individual respondent (as opposed to in a (focus) group format). Such an interview can be used to understand the respondents thought processes, motivations, current behaviors, preferences, opinions, and desires.
Industrial Design (ID)	The expression industrial design refers to the design of products that have been thought to be mass-produced by the factories through technological industrial procedures The discipline of industrial design is applicable to a comprehensive range of production fields that includes both engineering and non-engineering areas. Many products of industrial design feature a combination of forms, and engineering elements Industrial design takes into consideration and generates trends about ideological or sociological themes. Among the most important ones are those which are linked to the concepts of usability, manufacturability, planned breaking, and planned out-of-fashion.
Information Acceleration	A concept testing method employing virtual reality. In it, a virtual buying environment is created that simulates the information available (product, societal, political, and technological) in a real purchase situation at some time several years or more into the future.
Information Needs Analysis.	The identification of the data management requirements necessary to meet the needs of a business or

	organization.
Information Specialists	**Roles and responsibilities** Uses social media as a set of digital tools used for a wide range of information dissemination purposes. Explores social media as communication as culture. Has familiarity with the range of social media spaces. Evaluates the role of social media in society in general and information services in particular. Uses of social tools and identify strategies for their effective implementation. Use of social tools and identify strategies for their effective implementation
Injection Molding	A process that utilizes melted plastics injected into steel or aluminum molds which ultimately result in finished production parts.
In-Licensed	The acquisition from external sources of novel product concepts or technologies for inclusion in the aggregate NPD portfolio.
Innovation Engine	The creative activities and people that actually think of new ideas. It represents the synthesis phase when someone first recognizes that customer and market opportunities can be translated into new product ideas.
Innovation Steering Committee	The senior management team or a subset of it responsible for gaining alignment on the strategic and financial goals for new product development, as well as setting expectations for portfolio and development teams.
Innovation Strategy	The firm is positioning for developing new technologies and products. One categorization divides firms into prospectors (those who lead in technology, product and market development, and commercialization, even though an individual product may not lead to profits), analyzers (fast followers, or imitators, who let the prospectors lead, but have a product development process organized to imitate and commercialize quickly any new product a prospector has put on the market), defenders (those who stake out a product turf and protect it by whatever means, not necessarily through developing new products), and reactors

	(those who have no coherent innovation strategy)
Innovation-Based Culture	A corporate culture where senior management teams and employees work habitually to reinforce best practices that systematically and continuously churn out valued new products to customers.
Innovative Problem Solving	Methods that combine rigorous problem definition, pattern-breaking generation of ideas, and action planning that results in new, unique, and unexpected solutions.
Integrated Architecture	A product architecture in which most or all of the functional elements map into a single or very small number of chunks. It is difficult to subdivide an integrally designed product into partially functioning components.
Integrated Product Development (IPD)	A philosophy that systematically employs an integrated team effort from multiple functional disciplines to develop effectively and efficiently new products that satisfy customer needs.
Interaction	The response experience in which both the user and the organization are engaged in a mutually affecting experience. Defining the interaction modalities means identify the touch points and their generic features and then detail each choice in terms of visual interface, devices involved, staff behaviors and activities, architecture of the information and of the space.
Intrapreneur	The large-firm equivalent of an entrepreneur. Someone who develops new enterprises within the confines of a large corporation.

Invention Development	The process of turning ideas into inventions is a trial-and-error process that involves sketching, prototyping, and brainstorming. Companies help accelerate process by offering design and engineering insight to invention. They help to convert idea into presentable design renderings and prototypes so that you can present idea professionally to licensing targets and distributors.
Italian Design	Industrial design starts in Italy in the period between the first world war and the second world war with the foundation of the two-yearly exhibition Biennale Di Monza in 1930, and the three yearly one, Triennale Di Milano in 1933. The creation of the first industrial design prototype is an electric train from a project of the director of the exhibition. In the same period, the first helicopters are produced. Two main design streams start. The engineering one will deal with issues related to the increase of consumerism. The architectural one will deal mostly with the creative process. After the second world war there is an increase in mass production and consequently the population become familiar with mass produced industrial design products. In 1950 industrial designers and artisans begin to focus on the relations between form and function according to the rules of "good design", movement which will be criticized by many designers in 1960. It is not much the movement on itself to be criticized, but the use of the expression "good design" for being too elusive and therefore not appropriate to define the complex relationships between form, look, feel, weight, volume, and function of an object. Towards the end of 1960, a new industrial design movement tries to remove boundaries and restrictions and develops the relations between form and function in a more articulate way. Among the most important aims of the movement is an attempt to create a style that

	disregards social classes. At the museum of modern art of New York (MOMA) an exhibition called "Italy" will represent the most important moment of the adaptation of the industrial design sector during which creations come out in a wide range of different colors and shapes. In 1981 after a period of idleness that lasted for a decade, the Memphis movement, initiated by the Italian architect Ettore Sottsass, start to take place. The movement will work on some characteristic themes of the period between 1960 and 1980 by redeveloping and redefining them. To the research to widen, the spectrum of product functionality Ettore Sottsass adds a vision of ecological issues. The wider section of the Italian industrial design is furniture and its complements in which Italy is world leader. Other fields include lighting design, automobile design and yacht design related subjects.
KANO Model	A Model developed by Noriaki Kano that is used to help understand Customer preferences. The Kano Model considers Attributes of an IT Service grouped into areas such as Basic Factors, Excitement Factors, Performance Factors etc.
Kepner & Tregoe Analysis	A structured approach to Problem solving. The Problem is analyzed in terms of what, where, when and extent. Possible causes are identified. The most probable cause is tested. The true cause is verified.
Line Extension	A form of derivative product that adds or modifies features without significantly changing the product functionality.
M Curve	An illustration of the volume of ideas generated over a given amount of time. The illustration often looks like two arches from the letter m.
Manufacturing Design	The process of determining the manufacturing process that will be used to make a new product.
Manufacturing Test Specification And Procedure	Documents prepared by development and manufacturing personnel that describe the performance specifications of a component, subassembly, or system that will be met during the manufacturing process, and that describe the procedure by which the specifications will be assessed.

Mating Part	A general reference to one of two parts that join together.
Matrix Converger	A convergent thinking tool that uses a matrix to help synthesize data into key concepts with numbered ratings.
Metafilter	Collecting diverse data sets As social businesses filter the tidal wave of information produced, they distill meaning from the qualitative and quantitative data emitted from their various nodes. Existing business intelligence tools help to create fairly orderly operating data sets, working in tandem with applications focused on parsing user-generated content that help make sense of unstructured data sets. APIS make two-way integration with public data sources increasingly seamless.
Mock Up	The mock up is a model, an illustration, or a collage describing an idea. At the beginning of the design process, the mock up is mainly made with photomontages, created with photos of existing situations, products or services combined with other elements. During the next phases the mock up get more and more realistic, till they become real prototypes representing the main features of the project.
Models	Objects that represent other objects. In the design practice, models are preliminary works or constructions that serves as plans from which the final service is to be made. Such a work or construction is mainly used to testing and perfecting the final solution.
Mood Board	A mood board is a visual composition of pictures and materials that propose an atmosphere by giving the generic perception of it. The mood board helps in the elicitation of some values the service has that are difficult to be described by words. The use of a visual representation fixes univocally the perception of the service inside the team.
Morphological Analysis	A matrix tool that breaks a product down by needs met and technology components, allowing for targeted analysis and idea creation.

Mutuality	Mutuality means building a working relationship, which is of mutual benefit to both businesses. And it requires having an understanding of the inner workings of each other's organization that goes beyond the project at hand. To get the best from the business relationship, both agencies and clients need to delve deeper into each other's businesses than they are generally comfortable with. Many disagreements over fee negotiation, scheduling, and resources come from clients not understanding the business model and processes of their agency
Narratives	The narrative is a collection of events that tells a story, which may be true or not, placed in particular order and recounted through telling, representing or writing. A narrative has a sequence in which the events are told and has a narrator telling the story.
Needs Statement	Summary of consumer needs and wants, described in customer terms, to be addressed by a new product.
Network Diagram	A graphical diagram with boxes connected by lines that shows the sequence of development activities and the interrelationship of each task with another. Often used in conjunction with a Gantt chart.
New Product Development (NPD)	The overall process of strategy, organization, concept generation, product and marketing plan creation and evaluation, and commercialization of a new product. Also frequently referred to just as "product development."
New Product Development Process (NPD Process)	A disciplined and defined set of tasks and steps that describe the normal means by which a company repetitively converts embryonic ideas into salable products or services.
New Product Development Professional	A new product development professional is certified by the PDMA as having mastered the body of knowledge in new product development, as proven by performance on the certification test. To qualify for the NPDP certification examination, a candidate must hold a bachelor's or higher university degree (or an equivalent degree) from an accredited institution and have spent a minimum of two years working in the new product development field.
New Product Introduction	The launch or commercialization of a new product into the marketplace. Takes place at the end of a successful product

(NPI)	development project.
Nominal Group Process	A brainstorming process in which members of a group first write their ideas out individually, and then participate in group discussion about each idea.
Non-Product Advantage	Elements of the marketing mix that create competitive advantage other than the product itself. These elements can include marketing communications, distribution, company reputation, technical support, and associated services.
Outstanding Corporate Innovator Award	Outstanding corporate innovator award an annual PDMA award given to firms acknowledged through a formal vetting process as being outstanding innovators. The basic requirements for receiving this award, which is given yearly by the PDMA, are 1. Sustained success in launching new products over a five-year time frame; 2. Significant company growth from new product success; 3. A defined new product development process, that can be described to others; 4. Distinctive innovative characteristics and intangibles.
Participatory Design	Participatory design a democratic approach to design that does not simply make potential users the subjects of user testing, but empowers them to be a part of the design and decision-making process.
Patterns	Patterns are a collection of shared thoughts, insights, and observations gathered through their work and the world around them.
Perceptual Mapping	Perceptual mapping a quantitative market research tool used to understand how customers think of current and future products. Perceptual maps are visual representations of the positions that sets of products hold in consumers' minds.
Philosophy Of Design	Philosophy of design is the study of assumptions, foundations, and implications of design. The field is defined by an interest in a set of problems, or an interest in central or foundational concerns in design. In addition to these central problems for design as a whole, many philosophers of design consider these problems as they apply to particular disciplines (e.g. Philosophy of art). Although most practitioners are philosophers, several prominent designers and artists have contributed to the field.

Pilot Gate Meeting	Pilot gate meeting a trial, informal gate meeting usually held at the launch of a stage-gate™ process to test the design of the process and familiarize participants with the stage-gate™ process.
Pipeline (Product Pipeline)	Pipeline (product pipeline) the scheduled stream of products in development for release to the market.
Pipeline Alignment	Pipeline alignment the balancing of project demand with resource supply.
Pipeline Inventory	Production of a new product that has not yet been sold to end consumers, but which exists within the distribution chain.
Pipeline Loading	Pipeline loading the volume and time phasing of new products in various stages of development within an organization.
Pipeline Management	A process that integrates product strategy, project management, and functional management to optimize the cross-project management of all development-related activities.
Pipeline Management Enabling Tools	Pipeline management enabling tools the decision-assistance and data-handling tools that aid managing the pipeline. The decision-assistance tools allow the pipeline team to systematically perform trade-offs without losing sight of priorities. The data-handling tools deal with the vast amount of information needed to analyze project priorities, understand resource and skill set loads, and perform pipeline analysis.
Pipeline Management Process	Pipeline management process consists of three elements; pipeline management teams, a structured methodology and enabling tools.
Pipeline Management Teams	Pipeline management teams the teams of people at the strategic, project and functional levels responsible for resolving pipeline issues.
Poka Yoke,	Poka Yoke, also called mistake proofing, is a simple method to prevent defects from occurring in your business processes. Learn from these three poka yoke examples. It was a Japanese manufacturing engineer named Shigeo Shingo who developed the concept that revolutionized the

	quality profession in Japan. Originally called "fool proofing" and later changed to "mistake proofing" and "fail safing" so employees weren't offended, poka yoke (pronounced "POH-KAH YOH-KAY") translates into English as to avoid (yokeru) inadvertent errors (poka). The result is a business that wastes less energy, time and resources doing things wrong in the future. Poka yoke is one of the main components of Shingo's Zero Quality Control (ZQC) system -- the idea being to produce zero defective products. One way this was achieved is through the use of poka yoke; a bunch of small devices that are used to either detect or prevent defects from occurring in the first place. These poka yoke methods are simple ways to help achieve zero defects.
Portfolio	Portfolio commonly referred to as a set of projects or products that a company is investing in and making strategic trade-offs against. (see also project portfolio and product portfolio)
Portfolio Criteria	The set of criteria against which the business judges both proposed and currently active product development projects to create a balanced and diverse mix of ongoing efforts.
Portfolio Management	A business process by which a business unit decides on the mix of active projects, staffing and dollar budget allocated to each project currently being undertaken. See also pipeline management.
Portfolio Map	A chart or graph, which graphically displays the relative scalar strength and weakness of a portfolio of products, or competitors in two orthogonal dimensions of customer value or other parameters. Typical portfolio maps include "price vs. Performance", newness to company vs. Newness to market; risk vs. Return.
Portfolio Rollout Scenarios	Portfolio rollout scenarios hypothetical illustrations of the number and magnitude of new products that would need to be launched over a certain period to reach the desired financial goals; accounts for success/failure rates and considers company and competitive benchmarks.

Portfolio Team	Portfolio team a short-term, cross-functional, high-powered team focused on shaping the concepts and business cases for a portfolio of new product concepts within a market, category, brand or business to be launched over a 2-5 year time period, depending on the pace of the industry.
Process centric	Process centric is PLM strategy to provide solutions enabling customers to develop products according to their industry-specific business processes. A process centric strategy incorporates product design processes (Design Centric) with the simulation of other stages in product lifecycle as well as industry-specific business processes.
Product Brand Design Management	The focus of product brand management lies not on the corporate, but on the single product or product family. Product design management is linked to R&D, marketing and brand management and is present in the fast moving consumer goods (FMCG) industry. It is responsible for the visual expressions of the individual product brand, with its diverse customer–brand touch points and the execution of the brand through design.
Product Degradation	When a product, system or design slides into defective operation a little at a time, while providing many opportunities to take corrective preventative action or protect against the worst consequences of failure before it happens. The opposite is catastrophic failure.
Product Design Management	In product focused companies the design management focus lies mainly on product design management, including strong interactions with product design, product marketing, R&D, and new product development. This perspective of design management is mainly focused on the aesthetic, semiotic, and ergonomic aspects of the product to express the product qualities and manages diverse product groups and product design platforms.
Product Development Engine	Product development engine the systematic set of corporate competencies, principles, processes, practices, tools, methods, and skills which combine to define the "how" of an organization's ability to drive high value products to the market in a competitive timely manner.
Product Development Portfolio	Product development portfolio the collection of new product concepts and projects that are within the firm is ability to develop, are most attractive to the firm is customers and deliver short- and long-term corporate objectives, spreading

	risk and diversifying investments.
Product Discontinuation	Product discontinuation a product or service that is withdrawn or removed from the market because it no longer provides an economic, strategic, or competitive advantage in the firm is portfolio of offerings.
Product Discontinuation Timeline	Product discontinuation timeline the process and timeframe in which a product is carefully withdrawn from the marketplace. The product may be discontinued immediately after the decision is made, or it may take a year or more to implement the discontinuation timeline, depending on the nature and conditions of the market and product.
Product Innovation Charter (PIC)	Product innovation charter (PIC) a critical strategic document, the product innovation charter (PIC) is the heart of any organized effort to commercialize a new product. It contains the reasons the project has been started, the goals, objectives, guidelines, and boundaries of the project. It is the "who, what, where, when, and why" of the product development project. In the discovery phase, the charter may contain assumptions about market preferences, customer needs, and sales and profit potential. As the project enters the development phase, these assumptions are challenged through prototype development and in-market testing. While business needs and market conditions can and will change as the project progresses, one must resist the strong tendency for projects to wander off as the development work takes place. The PIC must be constantly referenced during the development phase to make sure it is still valid, that the project is still within the defined arena, and that the opportunity envisioned in the discovery phase still exists.
Prospectors	Firms that lead in technology, product and market development and commercialization, even though an individual product may not lead to profits. Their general goal is to be first to market with any particular innovation.
Psychographics	Characteristics of consumers that, rather than being purely demographic, measure their attitudes, interests, opinions, and lifestyles.
Pull-Through	The revenue created when a new product or service positively impacts the sales of other, existing products or

	services (the obverse of cannibalization).
Q-Sorts	A process for sorting and ranking complex issues.
Qualitative Cluster Analysis	An individual- or group-based process using informed intuition for clustering and connecting data points.
Quality-By-Design	The process used to design quality into the product, service, or process from the inception of product development.
Reactors	Firms that have no coherent innovation strategy. They only develop new products when absolutely forced to by the competitive situation.
Realization Gap	The time between first perception of a need and the launch of a product that fills that need.
Relay-Race Process	A staged product development process in which first one function completes a set of tasks, then passes the information they generates sequentially to another function, which in turn completes the next set of tasks and then passes everything along to the next function. Multifunctional teamwork is largely absent in these types of product development processes, which may also be called phase review or baton-passing processes.
Render	Process that industrial designers use to visualize their ideas by putting their thoughts on paper with any number of combinations of color markers, pencils and highlighters, or computer visualization software.
Reposition	To change the position of the product in the minds of customers, either on failure of the original positioning or to react to changes in the marketplace. Most frequently accomplished through changing the marketing mix rather than redeveloping the product.
Resource Matrix	An array that shows the percentage of each non-managerial personal time that is to be devoted to each of the current projects in the firm is portfolio.
Return On Ideas	Reflects the potential value of an idea.
Rigid Gate	A review point in a stage-gate process at which all the prior stage is work and deliverables must be complete before work in the next stage can commence.

Rugby Process	A product development process in which stages are partially or heavily overlapped rather than sequential with crisp demarcations between one stage and its successor.
Scandinavian	In the aftermath of world war ii, designers from each region seemed to answer the call of modernity and innovation with a unique voice. The postwar Scandinavian movement, though kindred in spirit with the other design advances around the world, adapted the emerging technologies and materials in a uniquely northern European fashion.
Scanner Test Markets	Special test markets that provide retail point-of-sale scanner data from panels of consumers to help assess the product is performance. First widely applied in the supermarket industry.
Scenario Analysis	A tool for envisioning alternate futures so that a strategy can be formulated to respond to future opportunities and challenges.
Service Design Management	Service design management deals with the newly emerging field of service design. It is the activity of planning and organizing people, infrastructure, communication, and material components of a service, for improving its quality, the interaction between service provider, customers, and the customer's experience. The increasing importance and size of the service sector, both in terms of people employed and economic importance, requires services to be accurately designed in order for service providers to remain competitive and to continue to attract customers. Design management focuses traditionally on the design and development of manufactured products. Service design managers can use many theoretical and methodological approaches from product design management. Systematic and strategic management of service design helps the business to gain competitive advantages and to conquer new markets. Companies that pro-actively identify the interests of their customers open up new and profitable opportunities if they develop service offerings that create good and pleasant experiences for the customer.
Service Design Package	Document(s) defining all aspects of an IT Service and its Requirements through each stage of its Lifecycle. A Service Design Package is produced for each new IT Service, major Change, or IT Service Retirement.

Service Failure Analysis	An Activity that identifies underlying causes of one or more IT Service interruptions. SFA identifies opportunities to improve the IT Service Provider's Processes and tools, and not just the IT Infrastructure. SFA is a time constrained, project-like activity, rather than an ongoing process of analysis.
Service Image	A unique picture that is able to give in one shot an immediate idea of the main features of the service concept is called service image or service picture. The services images are aimed at supporting the dialogue with the stakeholders, bringing them envision the service, but also at supporting the discussion around concepts, facilitating a quick elicitation of the prominent aspects of every ideas and the comparison between them.
Simulated Test Market	A form of quantitative market research and pre-test marketing in which consumers are exposed to new products and to their claims in a staged advertising and purchase situation. Output of the test is an early forecast of expected sales or market share, based on mathematical forecasting models, management assumptions, and input of specific measurements from the simulation.
Social Business Design	Social business design is a holistic, comprehensive business architecture that helps an organization improves value exchange among constituents. The social business design framework consists of four mutually exclusive, collectively exhaustive archetypes # ecosystem # hive mind # dynamic signal # metafilter every business contains these archetypes; however, the extent to which they are dynamic and socially calibrated can typically be improved. Social business design provides insight to help measure and manage these areas to produce improved and emergent outcomes.

Social Design	Social design has many definitions and the term is put to very different uses across the globe. Some definitions exist within the design world and refers to design in its traditional sense, meaning the shaping of products and services. Other definitions refer to social design as the creation of social reality; design of the social world.
Social Interaction Design	Social interaction design is a practice within the discipline of interaction design. Social interaction designers are interaction designers with a specialized focus on the social dimensions of artifact-mediated social activity. Social interaction design deals with the development of socio-technical practices in a user-centric approach. Social interaction design (SXD) is a niche specialization in the structuring and design of social media with an emphasis on social practices. Social media of course have ui, design elements, form pages, search, directories and navigation schemes, and many of the components that have defined web design. Social interaction design is an approach to web 2.0 and social media that address the social interface, the interaction of web site with data/information where users provide the content, and interactions are social. All of these individual actions and contributions together produce the content, which is to say, produce the experience also, that defines and becomes the identity of a social media service. User participation produces mediated social practices.
Social Taboos	Social taboos suppress discussion of many details about life bodily functions, sexual problems, and other socially stigmatizing conditions. Discomfort with these topics compromises our health and short-circuits our quality of life by keeping important information in the dark. Taboos also create social isolation. When forced to navigate forbidden areas, people often find that they have little information and are reluctant to experiment or explore. From a business perspective, this may translate into untapped opportunities — “ugly ducklings” that aren’t sexy on the outside, but are extremely rewarding if tapped in the right way.
Staged Product Development	The set of product development tasks commencing when it is believed there are no major unknowns and that result in initial production of salable product, carried out in stages.

Activity	
Stage-Gate Process	A widely employed product development process that divides the effort into distinct time-sequenced stages separated by management decision gates. Multifunctional teams must successfully complete a prescribed set of related cross-functional tasks in each stage prior to obtaining management approval to proceed to the next stage of product development. The framework of the stage-gate™ process includes workflow and decision-flow paths and defines the supporting systems and practices necessary to ensure the processes ongoing smooth operation.
Stop-Light Voting	A convergent thinking technique by which participants vote their idea preferences using colored adhesive dots. Also called preference voting.
Strategic Balance	Balancing the portfolio of development projects along one or more of many dimensions such as focus versus diversification, short versus long term, high versus low risk, extending platforms versus development of new platforms.
Strategic Design management	Business managers and leaders now recognize the importance of design and design thinking in formulating business strategies and implementation of integrated management decisions. Particularly, the consumer-driven businesses perceive the role of design thinking as significant in developing and delivering innovative products and processes. Strategic design management is concerned with integrative and collaborative business management requiring a new breed of managers who are skilled at working with a wide range of multi-disciplinary inputs and diverse team members in order to achieve holistic and sustainable business solutions. Specific Areas include as user research, branding, retail design and management, new product development, environmental design, and social development.
Sustainable Design	Sustainable design (also called environmental design, environmentally sustainable design, environmentally conscious design, etc.) Is the philosophy of designing physical objects, the built environment, and services to comply with the principles of economic, social, and

	ecological sustainability?
Sustainable Design Principles	While the practical application varies among disciplines, some common principles are as follows Low-impact materials choose non-toxic, sustainably produced or recycled materials which require little energy to process energy efficiency use manufacturing processes and produce products which require less energy Quality and durability Longer-Lasting and better-functioning products will have to be replaced less frequently, reducing the impacts of producing replacements Design for Reuse and Recycling Products, Processes, And Systems Should Be Designed For Performance In A Commercial 'afterlife'. Design impact measures for total carbon footprint and life cycle assessment for any resource used are increasingly required and available. Many are complex, but some give quick and accurate whole-earth estimates of impacts. One measure estimates any spending as consuming an average economic share of global energy use of 8,000btu per dollar and producing co2 at the average rate of 0.57 kg of co2 per dollar (1995 dollars us) from doe figures. Sustainable design standards and project design guides are also increasingly available and are vigorously being developed by a wide array of private organizations and individuals. There is also a large body of new methods emerging from the rapid development of what has become known as 'sustainability science' promoted by a wide variety of educational and governmental institutions. Biomimicry Redesigning industrial systems on biological lines ... Enabling the constant reuse of materials in continuous closed cycles..." service substitution shifting the mode of consumption from personal ownership of products to provision of services which provide similar functions, e.g., from a private

	automobile to a car sharing service. Such a system promotes minimal resource use per unit of consumption (e.g., per trip driven). Renewability materials should come from nearby (local or bioregional), sustainably managed renewable sources that can be composted when their usefulness has been exhausted. Robust eco-design robust design principles are applied to the design of a pollution sources).
Technology Stage Gate (TSG)	A process for managing the technology development efforts when there is high uncertainty and risk. The process brings a structured methodology for managing new technology development without thwarting the creativity needed in this early stage of product development. It is specifically intended to manage high-risk technology development projects when there is uncertainty and risk that the technology discovery may never occur and therefore the ultimate desired product characteristics might never be achieved.
Terms	**Definitions**
The Rational Model	Simon, Pahl, and Beitz independently developed the rational model. It posits that, @ Designers attempt to optimize a design candidate for known constraints and objectives, @ The design process is plan-driven, @ The design process is understood in terms of a discrete sequence of stages. The rational model is based on a rationalist philosophy and underlies the waterfall model, systems development life cycle and much of the engineering design literature.
Think Links	Stimuli used in divergent thinking to help participants make new connections using seemingly unrelated concepts from a list of people, places, or things.
Think-Tank	Environments, frequently isolated from normal organizational activities, created by management to generate

	new ideas or approaches to solving organizational problems.
Thought Organizers	Tools that help categorize information associated with ideas such that the ideas can be placed into groups that can be more easily compared or evaluated.
Tolerance Design	Tolerances should be determined in product or process development. They should be established in order that the products or processes may be assembled easily, and so that they can perform their required function with minimum adjustment. Properly designed specifications can reduce the DPMO. A too-tight tolerance specification can ensure functional requirements, but it is not cost effective. A too-loose tolerance specification will bring low assembly process, but frequent rework would likely be required to maintain performance. Two different methods can be used to determine tolerance specifications. One is a conventional method that depends upon designers' experiences and perception. The other one is a loss function method that is based on cost of poor quality. The loss function method also is called method of tolerance optimization. Here is how these two methods work on a simple gasket placement issue.
Tree Diagram	Pictorial representation of how a broad aim is broken down into detailed actions, and which belong to named individuals or departments. A mapping technique that promotes creative thinking towards detailed causes and effects and accountabilities. Helps to avoid tendencies for activities and accountabilities to be left too vague.
TRIZ	The acronym for the theory of inventive problem solving, which is a Russian, systematic method of solving problems and creating multiple-alternative solutions. It is based on an analysis and codification of technology solutions from millions of patents. The method enhances creativity by getting individuals to think beyond their own experience and to reach across disciplines to solve problems using solutions from other areas of science.
Uncertainty Range	The spread between the high (best case) and low (worst case) values in a business assumption.

Urban Design Management	Urban design management involves mediation among a range of self-interested stakeholders involved in the production of the built environment. Urban design management offers prescriptive advice for practitioners trying to organize city planning activities in a way that will increase sustainability by increasing satisfaction levels.
Usability Testing	Usability testing is a technique used to evaluate a product by testing it on users. This can be seen as an irreplaceable usability practice, since it gives direct input on how real users use the system this is in contrast with usability inspection methods where experts use different methods to evaluate a user interface without involving users. Usability testing focuses on measuring a human-made product's capacity to meet its intended purpose. Examples of products that commonly benefit from usability testing are foods, consumer products, web sites or web applications, computer interfaces, documents, and devices. Usability testing measures the usability, or ease of use, of a specific object or set of objects, whereas general human-computer interaction studies attempt to formulate universal principles.
Use-Centered Design	Use-centered design is a design philosophy in which the focus is on the goals and tasks associated with the use of certain technology, in contrast to "user-centered design approach, where the focus is on the needs, wants, and limitations of the end user of the designed artifact. Use-centered design was first coined by John Flach and Cynthia Dominguez. Use-centered design- integrating the user, instrument, and goal. Ergonomics in design,

User Experience Design	User experience design (UXD) is a subset of the field of experience design that pertains to the creation of the architecture and interaction models that affect user experience of a device or system. The scope of the field is directed at affecting "all aspects of the user's interaction with the product how it is perceived, learned, and used." as with the fields mentioned above, user experience design is a highly multi-disciplinary field, incorporating aspects of psychology, anthropology, sociology, computer science, graphic design, industrial design and cognitive science. Depending on the purpose of the product, UX may also involve content design disciplines such as communication design, instructional design, or game design. The subject matter of the content may also warrant collaboration with a subject matter expert (SME) on planning the UX from various backgrounds in business, government, or private groups. the design user experience design incorporates most or all of the above disciplines to positively impact the overall experience a person has with a particular interactive system, and its provider. User experience design most frequently defines a sequence of interactions between a user (individual person) and a system, virtual or physical, designed to meet or support user needs and goals, primarily, while satisfying systems requirements and organizational objectives. Typical outputs include Site Audit (Usability study of existing assets) Flows and Navigation Maps User Stories or Scenarios Persona (Fictitious users to act out the Scenarios) Site Maps and Content Inventory Wireframes (Screen Blueprints or Storyboards) Prototypes (For interactive or in-the-mind simulation) Written Specifications (Describing the behavior or design) Graphic Mockups (precise visual of the expected end result)

User Interface Design	User interface design or user interface engineering is the design of computers, appliances, machines, mobile communication devices, software applications, and websites with the focus on the user's experience and interaction. The goal of user interface design is to make the user's interaction as simple and efficient as possible, in terms of accomplishing user goals—what is often called user-centered design. Good user interface design facilitates finishing the task without drawing unnecessary attention to it. Graphic design may be utilized to support its usability. The design process must balance technical functionality and visual elements (e.g., mental model) to create a system that is not only operational but also usable and adaptable to changing user needs. Interface design is involved in a wide range of projects from computer systems, to cars, to commercial planes; all of these projects involve much of the same basic human interactions yet also require some unique skills and knowledge. As a result, designers tend to specialize in certain types of projects and have skills centered around their expertise, whether that be software design, user research, web design, or industrial design.
Virtual Customer	A set of web-based market research methods for gathering voice-of-the-customer data in all phases of product development
Virtual Design	Virtual Design can refer to the design of virtual networks, the design of virtual machines, or even generalized design software that operates in a virtual environment. An understanding of virtual design is essential to enabling effective security for virtual environments. Similarly, virtual design applications can facilitate the creation of new security technologies for virtual computing.
Virtual Product Development	Paperless product development. All design and analysis is computer-based.

Web User Experience Roles	**Roles and responsibilities** As the web evolves into a platform for the delivery of rich multimedia content, responsible to work in new ways to visualize, search, mash-up, and explore diverse sources of social, scientific, cultural, linguistic, and geographic data for the website. Uses web user experience as a deployment-driven approach to the design and evaluation of new interface concepts that can transform online experiences. Implement UX design for the web; refer to everything that fashions user experience, interface design, information architecture, usability, and product design that encompasses the presentation, interaction, and organization of online services. Has understanding and designing a user's experience from start to finish, not just what a website looks like or how it functions. , the responsibility includes trying to define and understand the end-user audience, focusing on behavioral traits rather than marketing criteria
Whole Product	A product definition concept that emphasizes delivering all aspects of a product which are required for it to deliver its full value. This would include training materials, support systems, cables, how to recipes, additional hardware/software, standards and procedures, implementation, applications consulting - any constitutive elements necessary to assure the customer will have a successful experience and achieve at least minimum required value from the product. Often elements of the whole product are provided via alliances with others. This term is most often used in the context of planning high technology products.
Workflow Design Team	Functional contributors who work together to create and execute the work-flow component of a stage-gate™ system. They decide how the firmís stage-gate™ process will be structured, what tasks it will include, what decision points will be include d and who is involved at all points.
Worth What Paid For (Wwpf)	The quantitative evaluation by a person in your customer segment of the question "considering the products and services that your vendor offers, are they worth what you

	paid for them?"