From a Cloudy View towards a More Structured Approach for Business Process Related Concepts

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Abstract: In today's information era, one of the greatest areas of confusion is the terminology used to name abstract business process concepts which are mostly unclear, blurred and ambiguous among people. This study attempts to remedy the problem of the often-occurring issue of terminology confusion in business process domain. Following a nested approach, from mission to event, the work firstly defines essential terms used in the area of research in order to create a common understanding. The paper then formalizes the relations between the terms represented within a consolidated class diagram. Therefore, the study aims to contribute the body of knowledge in this area especially for people from practice by consolidating all relevant terms and providing a meta-model from a consistent point of view.

1 CHALLENGE OF CONCEPTS

In today's information era, one of the greatest areas of confusion is the terminology used to name abstract business process related concepts which can be unclear, blurred and ambiguous (Alter 2001; Harmon 2007; Jeston and Nelis 2014; Josey 2012; Parry, Newnes and Huang 2011; Winniforda et asl., 2009). In an environment where concepts do not imply same meaning for everyone, expecting people to attach shared points is meaningless. Furthermore, people commonly create their own definitions and use them in their ways. At the end of the day, they are not only unable to communicate properly but also, even worse, misunderstand each other. Thus, the concepts which have blurred relations, and are used in arguable contexts keep producing imperfect and deficient results, unable to cover expectations.

All these factors have set off and led to this study. This study attempts to remedy the problem of the often-occurring issue of cloudy-defined terminology in the business process domain. The term "business process" is used as defined by Sheer, and Nüttgens (2000) as "a procedure relevant for adding value to an organization". Attached to this meaning, following a nested approach, from mission to event, the work defines comprehensive and essential terms used in the area of the research in order to create a vocabulary-like reference model with enriched contents for a common understanding. The course of the study starts with the identifications of the related concepts and their descriptions, and goes through presenting a consolidated class diagram for these interdependent, cascading, and related concepts formalizing the relations between the terms.

2 RELATED WORK

One of the major goals in every discipline is to define and categorize terms, concepts, and phenomenon of the field in order to create a common language and to advance knowledge in the discipline (Kishore, Sharman & Ramesh 2004). As a result, there is a wealth of research providing their definitions on this subject that points out a part of this study. Some examples include ArchiMate, BMM, BPMN, CBM, EBA, ARIS, EPC, and EBMM, listed by Glissman and Sanz (2009).

The attempt of studies in literatures on business process area fall into one of the two domains: information system or business context. Bart, Bontis and Taggar (2001), Collins and Porras (1996), Duncan (1999), Gupta, Gollakota and Srinivasan (2007), Hitt, Ireland and Hoskisson (2013), Johnson and Scholes (2002), and Thompson and Strickland (2003) are some examples covering the business side of this study, while Alter (2001), Kishore, Sharman

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and Ramesh (2004), Pflaeging (2014), Sheer, and Nüttgens (2000), Weber (1999), and Weske (2007) examine information system deeply, not at meaningful or understandable level for business managers. However, from a strategic business viewpoint, business process works must be easy to understand so that they can be used as a platform for communication with business people (Green and Rosemann, 2000), for many of the phenomena are enacted by a human rather than a machine (Curtis, Kellner and Over, 1992). Different from them, this work does not hold a purpose of creating a new process modelling notation or a deep and heavy weight content. Preferably, the main purpose is to revisit business process centric terms from a broader spectrum and refresh the link between information system or business context. Thus, one of the distinguishing advantages of this study, over the others, is to provide a ground to see a comprehensive list of the related concepts all together in one picture and their links to each other from a single and consistent point of view. The other works have a focus on relatively narrow areas. While this study discusses 19 concepts, the maximum coverage of the rest examined is 40% of terms discussed in this study.

Another advantageous side of this study is the class diagram provided with relevant attributes, relations and classification of layers. Similarly, Weske (2007) also defines relatively narrow set of terms, with the perspective of information system only and provides a similar usage of class diagrams but relatively simple with less attributes of class diagrams notations. The class diagram can be regarded as ontology, but in a language with limited expressiveness. The rest of ontology models as a mean which is over-specified are not preferred in this study. Instead of defining the entities from scratch, resulting to add a new proposal to the universe of business process area, the study rather prefers to focus on adding clarity to the field. Briefly, this manuscript does not hold the purpose of finding a new definition of the terms but the best ones instead.

The study outlines its own scope by process centric thinking. Among the process, human, and technology dimensions, only the process dimension has been examined. The human is the primary impact on emerging of these concepts. On the other hand, the human part independently is a separate and huge study subject. Technology is a means which serves to provide alternative methods and acceleration for processes; it does not produce a variation by itself in this context. What remains is the main subject of this study: process and its related concepts. This scope is also regarded as a criterion in selecting for the set of concepts the paper covers. This process thinking, which is isolated from people and technology that is hard to understand for majority of people, is believed as a way of keeping the study more focused and more understandable.

3 IDENTIFYING, DEFINING AND CLARIFYING CONCEPTS

In identifying the concepts, a complete and general list is targeted. Being general here means free of sector and size of organizations. Completeness on the other hand is for covering all relevant and comprehensive entities of business process field serving for the objective of this study. It is believed that a primary list of the business process terms can be reached from IT related reference models for IT can be regarded as a kind of representation of real (business) world in another platform. This relation also requires and provides a strong link between business and IT. ITIL (Information Technology Infrastructure Library) and COBIT (Control Objectives for Information and Related Technology) have domination in information technology with its integrated standards worldwide and are de-facto frameworks. They deliver a generic process model that represents all the processes normally found in IT functions, and provide a common reference model understandable to IT and business managers. Both COBIT and ITIL are free of sector, size and integrate good practices to ensure that any enterprise's IT supports the business objectives. Therefore, the list was achieved by a throughout scanning in ITIL v3 glossary. COBIT v4.1 framework glossary was used for possible extensions (coloured in a red line in the figure.1).

The concepts were selected in a nested approach. Mission statement was selected for the starting point as organizations should start with setting a mission first and foremost. All the other including processes exist to realize it. On these nested links starting from the concept of mission and going on node by node, if any new concept is encountered in the description text of the current concept (node), the next node in the glossary was selected according to that. By this way, the nested links were crawled until reaching all dead nodes that do not include any new term to go further with. Only one way direction (from-top-to-bottom) was used to keep the study within reasonable bounds with a consideration of that there can be many terms unrelated to the context which contains, let's say, the word of process in their descriptions. Thinking

process at the core and adhering to the scope of the study, the terms related to human/organization side (such as organization, role, manager, customer and so on), the terms related to a specific technology (such as IT infrastructure, configuration management database, and so on), and the terms related to a specific method (such as brainstorming, balanced scorecard and so on) were omitted. The full list of items excluded by this way includes senior management, organization, resource, role, responsibility, customer, team, person, configuration item, IT infrastructure, requirement, standard, target and methodology. Instead of devoting a dedicated title, the terms of target, methodology, requirement and standard were mentioned in proper places of the corresponding titles. The final map of targeted concepts was reached as the following:

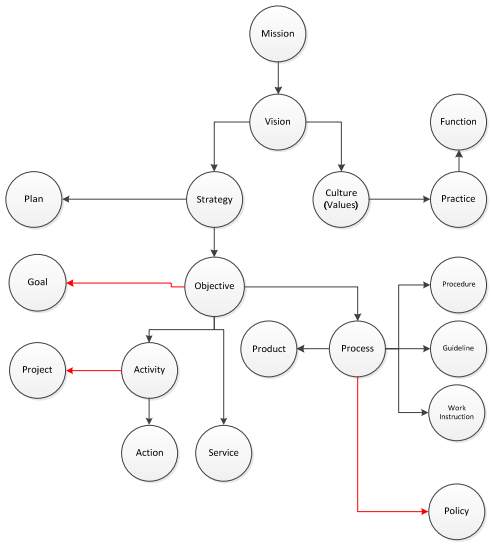

Figure 1: Map of the concepts.

In the description phase of the concepts, to reach proper and common definitions, additional to COBIT and ITIL resources, a literature review was performed for possible extensions. Thus, a systematic literature review was used as the method for getting the complete spectrum of available definitions. The fruitful resources obtained were scanned by a single, holistic and integrated point of view of the researcher until a consensus of resources for the particular term was reached. And the best and proper descriptions according to the researcher's point of view were selected and used in the study. Thus the descriptions were clarified, intensified, and enriched. Moreover, various methods were applied in order to make the content more understandable. One of the methods used is the aspect of "who", "what", "where", "when", "why" and "how" questions to helps us understand and properly define the concepts. "Why", "what" and "how" questions are used to determine the positions and precedence of the concepts. As another method, various analogies related to the human were made, for the human is the creator of all these concepts as he causes to emerge them in organizations. And all creators bestow their own essence to what they create, and make them similar to themselves. The most typical example of this is technology. Technology is indeed a regeneration process of the human. Products created are getting more similar to the human. Technologic products which can speak, reason, understand, see, and be touched as the human does are just like a copy of the human behaviours. Organizations created by the human similarly behave like a human: grow, evolve, change, and become deformed and complicated. This indeed feeds both the problem addressed in this study and a solution to it. Using the solution side, the study goes to the origin of the subject and aims to bring the content up to a more familiar and coherent level.

3.1 Mission

Let's go back to the beginning when the organization desires to exist to produce the values necessary to answer its demands and needs (which are listed by Maslow (1943) and expanded later on by other researchers). The mission statement addresses this reason of existing (Gupta et al. 2007). Dictionaries state that, "mission relates to that aspect for which an individual has been or seems to have been sent into the world". For organizations, a mission statement explains why an organization exists by the description of the overall purpose and intentions of the organization (Office of Government Commerce 2007).

The purpose mentioned sits at the core of organizations; that is it inspires and stimulates changes and progress on the way. When it stops existing, moving also stops. This is why mission sits near and next to the organization and is for yesterday, today and tomorrow, different from vision which is for tomorrow only. The concept of purpose, itself, is not a target position or a destination point for the future or a course to be taken. Whereas an organization might reach a goal or achieve a strategy, it pursues but does not reach a purpose which makes a mission like a guiding star on the horizon (Collins and Porras, 1996) lasting at least long years with no change. If a mission shows an end, it creates a point at which the organization may complete its mission. This means to determine a point to finish its doing of business. However, weirdly this result may be

intended, because the needs which produce the mission may have a limited life. Determining a limited life to the mission may enable many organizations to pull out of the market before bankruptcy or at a good point on the curve.

A well-conceived mission statement provides a basis for many other features of the organization. Different from vision, mission considers social matters and its social oriented dimension divulges the intention of organization for the society in terms of products and services (Gupta et al., 2007). These products and services provide an input for determination of processes and functions of the organization. Mission also establishes individuality of organizations (Duncan, 1999) by reflecting corporate identity and image of organization (Gupta et al., 2007). This side of mission statement serves for business definitions of organizations that specify the customers to serve, the business area and the scope in which the organization intends to compete (Ireland and Hitt, 1992). And it reflects corporate philosophy and character (Gupta et al. 2007). Similarly, philosophy and character, in this context, provide a baseline for core values of organization. Besides, mission statements influence organization's policies by this way.

The mission statement gives some clue about the scope of business, core functions to operate, customers, products and technology, but not a direct answer for the question of "what a particular organization is". Business definition must clearly define identity of organizations as a part of it. Furthermore, it defines what an organization stands for, its business area, its scope, and its targeted customers, by defining two features: (1) Focus of business which is defined in terms of the type of core functions the organization performs (2) Features that specifies how the organization differentiates itself from others (Hitt et al., 2013).

3.2 Vision

The mission statement answers the question of "why" (the organization exists), and business definition defines "what it is" and its environment. Nevertheless, they are not enough to make an organization move without a vision. A vision statement clearly illuminates the direction in which the organization is headed (Gupta et al., 2007), provides guidance about what the organization aspires to become, to achieve, and to create in the distant future (Thompson and Strickland, 2003) for its mission. Whereas it may seem unreal to actually attain it even in the long term; yet, it provides a direction and aspiration to move and energy to strive and exert to achieve it (Gupta et al., 2007). By articulating the future position of an organization, it points the destination and creates a voltage difference between today and tomorrow. However, it does not draw the course to be taken. Therefore, it is away from addressing the questions of "how" or the implementation details. Instead, vision influences strategic planning in this way. While vision states "where" (want to be), strategy, at some level, defines "how" (to head there) in the current environment.

3.3 Core Values

Some resources (such as by Thompson and Strickland (2003), Collins and Porras, (1996)) include core values into vision. Yet, vision puts the organization into motion by addressing the destination it aims to be in the future. Core values, on the other hand, do not function as an impulsion, but a static reference point. So, core values are discussed as a different subject in this study.

By definition, core values are organization's timeless character (Collins and Porras, 1996). It is derived from mission statement and aids in differentiating the organization from others (Gupta et al., 2007). Core values are determined according to the value the organization attributes both to customers and its own personnel. It includes guidance on expected behavior, business principles, ethics and deeply held values of organization (Gupta et al. 2007). It defines organization culture. They are basic, essential, central, enduring, steady, often un-stated tenets and serves as standards to weigh actions and decisions (Gupta et al., 2007). While an organization must continually adapt to its environment, and its practices and strategies should change continually, core values should remain fixed (Collins and Porras, 1996). It is a need to develop policies to ensure that the organization's values are accepted and penetrated to the heart and mind of each employee (Hitt et al., 2013).

3.4 Goal and Objective

Goal and objective both are about moving forward. However they are different in the meaning and usage. First of all, for their meaning, think of a touchable "object" for objective and "go" for goal. Goal has the power of defining a destination, changing the direction to move toward this destination, changing the mindset to adjust to and support the new direction (InvestorWords, 2014). It provides a big picture for actions toward the achievement of the organization's

mission and vision (Gupta et al., 2007). This usually makes goal at strategic level and general, not easily obtainable in the short term, which creates the necessity to develop specific tactics that break big goals down to a series of specific action steps. In this case, setting objectives and linking them with goals to accomplish them is a must. It is like a divide-and-conquer strategy aiding in delineating goals. Objectives are a series of smaller and specific targets that need to be hit in order to achieve a goal. As a result, objectives are positioned at tactical and operational levels, and in short-terms in their nature. Objectives must be supported by well-designed plans (Gupta et al., 2007), and thus objectives become something that can be planned to achieve.

A plan specifies results to achieve, resources to obtain it, within a time frame, as objectives should do the same. This time-based, concrete, and specific attributes of objectives make them measurable parameters for monitoring and evaluating performance. Objectives can thus apply to system, process, activity, project, product, or service. Through this way, all these form a hierarchy. It begins with broad statement of mission and vision, takes form in goals, and ends with specific objectives at the lower level (Gupta et al., 2007). Processes, plans and projects run for these objectives to reach.

3.5 Strategy

Together, vision, mission and business definition provide the foundation organizations need to choose and implement one or more strategies (Hitt et al. 2013). Organizations must create a strategy intended to achieve the vision and thus to fulfil the organization's mission. By definition, strategy is an overall plan for deploying resources to establish a favourable position (Thompson and Strickland, 2003) and to set a direction for the organization towards the overall vision. Besides this internal dimension, strategy has an environmental dimension as Thompson, and Strickland (2003) pointed out: "A company's strategy consists of the combination of competitive moves and business approaches that managers employ to please customers and compete successfully and achieve organizational objectives." From this point of view strategy is a game plan and an organization is not alone in this game. Johnson and Scholes (2002 merge these two aspects of strategy as: "… the direction and scope of an organization over the long-term: which achieves advantage for the organization through its configuration of resources within a challenging environment, to meet the needs of markets and to fulfil stakeholder expectations".

After defining the strategy, it must be supported by adequate processes. Somewhat, choosing a strategy means making tradeoffs between different activities and creating a preference among these activities (Thompson and Strickland, 2003). Besides the strategy, goals and objectives should be aligned with vision and mission (Bart et al., 2001) for judging the progress and success towards defined mission, vision and strategy.

3.6 Policy

Business policy is a vital part of organizations to ensure that organization's mission, vision, and values are accepted and supported by interested parties (Pearce and Doh, 2005). Policies record decided upon business rules, guiding principle or course of action intended to influence and determine decisions, actions, and other matters to ensure consistency and compliance with the company's strategic direction (IT Governance Institute, 2007).

Policies address what the policy is and its classification, who is responsible for the execution and enforcement of the policy, and why the policy is required (Kcggroup, 2014). In addition to policy content, policies need to describe the consequences of failing to comply with the policy, the means for handling exceptions, and the manner in which compliance with the policy will be checked and measured (IT Governance Institute, 2007). Policies engrave on every part of organizations. Among them, processes/procedures are governed by policies that ensure consistent and appropriate development and implementation of processes, standards, roles (a set of responsibilities), activities etc. (Office of Government Commerce 2007).

3.7 Practice

In this hierarchy, none of vision, mission strategy, policy, goal, and objective is a manner of action. Yet, an organization is expected to take actions by which it exercises its practices. A practice is a way of working or a way in which work must be done to fulfil needs and requirements and can include activities, actions, processes, functions, and guidelines (Office of Government Commerce 2007).

3.8 Function

Functions are core activities supporting organization's existence. In other words, a function is a discrete activity organization wants to pay attention (e.g. by putting energy into, structurally committing

resources to) in order to meet its business objectives (Josey, 2012). A business function can therefore be positioned as a grouping of internal behaviour based on a certain criteria like location, communication, required skills, shared resources and shared knowledge (Josey, 2012). So, a department within an enterprise is not a function rather a function is core of business activities carried out by a certain department.

A function is internal and limited with the boundary based dimension in the organization. To deliver a value to customer, it must break away conventional wisdom and the constraints of organizational boundaries and should be broad and cross functional in scope (Hammer, 1990). Function also means to view from top to down. In this direction, there are specialization, narrowing, deepening, and an end which is static and unchanging. Yet the customer is not on this side. S/he waits at the end of horizontal way. So, the process provides value to the customer by intersecting with the functions vertically and using different functions on the horizontal. This means that, processes are built according to concern of creating value with elastic limits.

3.9 Process

A business process is a way delivering a service or product to a customer, or partial products or partial services that are used as part of a service or product for a customer (Josey, 2012). It does this by relating activities. It takes inputs from a number of sources, including other processes, manipulates the inputs, and produces outputs. Processes may cross functional areas to connect those points, probably, of different departments.

Processes have clear business reasons for existing (IT Governance Institute, 2007). Processes should be a function of strategy, vision and mission by producing sustainable success. By doing this, goals and objectives of organizations are elaborated in process by defining what value processes create, in what quality and performance. Validation of the creation of this value shall be performed in a way production of the value throughout the organization is assured.

As a complex dynamic system, business process represents an organic view because of the human factors as a part of it. This human factor is the weakest link for ensuring the sustainability of the process. People are involved in decisions. Leaving the decisions up to the people involved may have unsustainable consequences. It is likely that in the absence of clear guidelines, the decisions taken by different people will be different. This will create inconsistent experiences for the customers and bring down quality. That is why there are policies and procedures (methods and rules) built according to the policies. Procedure comes to ensure process activities are delivered in an effective, efficient and consistent manner serving for the common objectives.

The process, in general sense, is an element which answers the question “how”, not in detail, by relating activities to produce a service or a product for customers. When it comes to each activity in a process, procedure comes in to detail the “how”, by providing practical information for the execution. Yet, the “who” in a process/procedure should be a role, not a specific person. It means there is still a need of specifying the “who” to a person. A business role can be assigned to a business actor by tasks therefore the practice becomes actually an applicable form.

3.10 Procedure, Work Instruction, and Guidance

A process is abstract, and the power of it comes from its abstraction. It describes the essentials of the purpose, structure, rationale, roles and timing, leaving plenty of implementation freedom (Bart et al., 2001), enabling a wide range of its applications to be tailored by procedures. A process tells “what” is necessary to be done and the “how” part of it can be tailored and elaborated in one or more procedures that describe the means (formed by using method, methodology and mechanism) of what is needed to be done, when and by whom (Muller, 2011).

Even though procedures are part of processes, the “why” in a procedure has often disappeared, replaced by practical information for the execution (Muller, 2011). However, without understanding of the thinking behind the procedure (the “why” part), procedures can be meaningless. The process should convey this rationale behind to procedures (Muller, 2011).

Similar concepts to procedures are workflow, work instruction and guidance. Weske (2007) defines workflow well as “the automation of a business process, in whole or in part, during which documents, information, or tasks are passed from one participant to another for action, according to a set of procedural rules”. Work instruction is created if very detailed instructions are needed (Office of Government Commerce 2007). It includes detailed instructions that specify exactly what steps to follow with more detail than a procedure (Office of Government

Commerce 2007). Guidance, on the other hand, recommends describing best practices of what should be done. Different from procedures and work instructions, compliance to a guideline is not normally enforced (Office of Government Commerce 2007). With a combination of underlying procedures, work instructions, and guidance, the process will become more controlled and consistent. The common point of them is that they assure the standard way of doing. It is likely that in the absence of them, the decisions taken by different people will be different. In the light of this view, one of the good example delineating relations between policy, process and procedure are provided by Kcggroup. com (2010) as below:

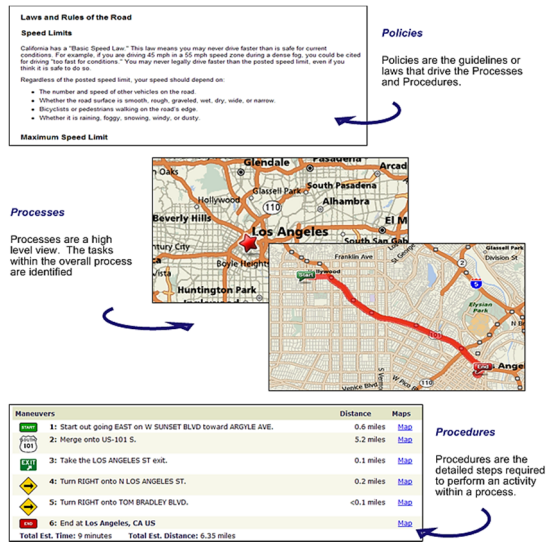

Figure 2: Relations between policy, process and procedure.

3.11 Service and Product

A business service represents the added value to customers by facilitating outcomes customers want to achieve without the ownership of specific costs and risks (Office of Government Commerce 2007; Josey 2012). While business functions and business processes describe the inner way of working, a business service hides implementation details and describes the parts of business processes and functions that are externally visible and usable (Josey, 2012). A service is realized by one or more business functions or processes and a business function can realize multiple business services (Josey, 2012). From the customer point of view, it is enough to know a certain service is being offered and how the consumer must use the service (Josey, 2012).

While the thinking has shifted from a pure service or pure product focus to a combination or product-service system (Parry et al., 2011), the difference whether the outputs of the process are a service or a product shall change the approach to the corresponding process. As stated by Parry et al. (2011), service is an act rather than a thing, products are tangible but service is not and value of experience of customer is more significant for a service than a product. For example, the gaps between expectation and the perception of the service and product may vary significantly. To exemplify, imagine two people who can easily have different perceptions for same service (Bowen and Ford, 2002). Different from products, even the same person may have different opinions about the service experience at different times (Bowen and Ford, 2002). With all these aspects, the differences between products and services should affect process approach and design.

3.12 Activity

Activity is a set of actions designed to achieve a particular result and usually defined as part of processes or plans, and documented in procedures (Office of Government Commerce, 2007). Every activity is part of a business function (Josey, 2012). A process combines a chain of activities each of which is part of business functions (Josey, 2012). A single process will not always belong to a single business function: a business function will almost always consist of multiple activities and process steps and a process will often be realized by multiple business functions (Josey, 2012).

3.13 Action

Activity consists of actions and events. Whereas an activity is like a movie, event is like a picture in it. In contrast to activity, event/action is in a form atomic and non-decomposable granulation meaning that it cannot be interrupted (Dennis et al., 2005). From a practical perspective, events take zero time. The main difference between event and action is that an event is an occurrence at information level without a sentient force causing it to occur. An action, on the other hand, is an occurrence caused by a sentient force with knowledge at DIKW (data, information, knowledge, and wisdom) Pyramid. While an event is usually stationary, an action is regarded as an event requiring a reaction.

3.14 Plan

Plan is an intended future course of action which describes, prioritizes and schedules various activities

and resource allocation aimed at achieving specific goal(s) or objective(s) within a specific timeframe (Business Dictionary, 2014; Gupta et al., 2007). It explains in detail what needs to be done, how, when, and by whom (Business Dictionary, 2014). Plan consists of tasks that are feasibly the smallest unit of work into which the activity can be broken down.

3.15 Project

Projects include a structured set of activities, a temporary organization, with people and other assets required to achieve an objective or other outcome based on an agreed-upon schedule and budget (IT Governance Institute, 2007). A project is a set of certain changes (delta) that are designated to change as-is capabilities of people, processes or technology of an organization. Program, on the other hand, consists of a number of projects and activities that are planned and managed together to achieve an overall set of related objectives and other outcomes (Office of Government Commerce, 2007).

4 CLASS DIAGRAM OF THE CONCEPTS

After the detailed description of each concept, this class diagram presents the big picture to illustrate these interdependent, cascading, and related concepts. Each class has an attribute list, the classification of strategic, tactical and operational level, information of abstraction (boxes in italic text) or whether being in executable form and its relations with other concepts in terms of name of relations and the numbers of possible objects that can be related. All attributes and relations can be driven from the definition part of the terms mentioned above. The remaining is the number representation on the connections such 1-1 and n-1. All notation of classic class diagram is not fully used, kept at appropriate level for this study.

Because of the nature of this structure, concepts change less frequently and in fewer amounts upward. From top to bottom, it follows a more concrete, more specific, more applicable, more changeable, and more granular way; which at the bottom takes an atomic form.

Strategic, tactic and operational hierarchy is not only a positioning effort but also an elaboration method. For instance, an operational act is expected to serve for a strategic target and vice versa a strategy must be elaborated and supported at operational level.

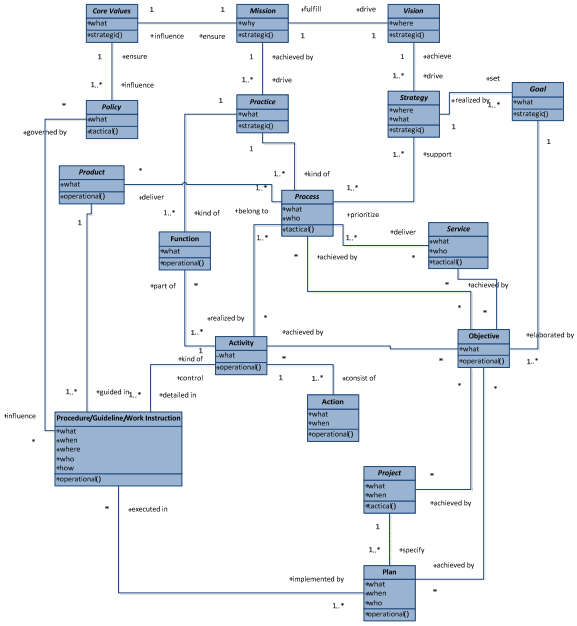

Figure 3: Class diagram of the concept.

This expectation necessitates such a mechanism in which each element at the operational level (procedure, work instruction, tasks etc.) must either include "what", "when", "where", "how", "who", optional but critically better "why" dimensions or acquire them by inheritance from an upper level in order to be comprehensive. Hence, the first question to ask before everything is "why". While all other questions feed the information and knowledge, the "why" question feeds the conscious. If someone in the bottom knows the answer of the question "why" then s/he becomes conscious. Consciousness increases the urge to embrace. This way, different and probably better ways to serve can be captured at the point where "the subject is best known by the person who performs it." Although having information/ knowledge to apply work seems enough, consciousness enables a person to pass from reactive to proactive position. Otherwise, this distinction between "thinker" (who strategize, steer, control, decide, and thus who has the "why") and "doer" (who execute, obey, follow) (Pflaeging, 2014) adds a layer producing a disconnection between the parts of diagram.

Achieving to manage effects of a change across the diagram up and down which occurs in any part of the diagram as a result of the dynamism of time and how to penetrate the change through the elements of the diagram is an important issue.

In this structure effectiveness and efficiency are distributed to different levels. In the picture, effectiveness shall be pursued in the levels which

directly include the question "why" and efficiency shall be pursued in the objects which answer the question "how." The conscious which designs and assesses the quality of results is at upper levels. For this reason, innovation in goals and strategy may produce effectiveness. On the other hand, let us say a change in a project or process, may improve only efficiency as the right thing in "doing the right thing" has already set before. The remaining part for the process or project is doing things right.

5 CONCLUSIONS, LIMITATIONS AND FUTURE WORK

Despite the fact that it is not easy to reach a commonly accepted reference model in this field and this study eventually is another suggestion, the contribution of the study should be sought in the method of thinking to make things simple especially for practice, in the aim connecting the two interrelated parts (business and information system) and in the class diagram illustrating the outcomes of the work in a comprehensive and simply manner.

In order to assess the value of the work, expert judgment and evaluation of practitioners who suffer from the addressed problems may consider clarity, amount of value, coverage, completeness, effectiveness and consistency of content in the study as criteria.

In any structure, the whole is greater or smaller than sum of parts of the whole because of the human factor. While conducting exercises, one must therefore have a people view. However, the human part of this whole that produces and uses all these concepts, is complex, unpredictable, exhibits uncertainty, and live and change with many parameters, remains, on its own, as a huge further study area.

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