

Decision Stomach: A Conceptual Framework of Teamwork for Adopting Change

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ABSTRACT

This paper purposes to develop a system approach to team decision making by clarifying the concept of different team based decision-making approaches. This research is a qualitative study considered over different published research paper and books relating to type of team concepts, organizational changes, and information systems. Purposive sampling technique has been used with a focus on the narrative data, to produce the result of this study, all drew from secondary sources. The findings of this research presented the major verdicts of researchers and practitioners on the need that the ‘information’ required for different decision making in the organization must to ‘make the best’ for expected outcome from team process. In specific, this research is a pedestal for theorizing the conceptual framework for optimally fronting the new opportunities and challenges regarding changes with the use of team process. The value of this research is a conceptual framework for teaming up the human and the information systems components intended to bring efficiency over decisions in organizations. Decision making is more systematically presented to retreat from the traditional approach to team decision making. The proposed approach was contrasted to different team concepts and developed as a systematic decision-making approach named as Decision Stomach. The approach is expected to reduce the team process loss and thereby help enhancing the team performance.

Keywords- *Changes, Decisions, Team, Information Systems, Team process.*

1. INTRODUCTION

Effective decision making to different issues is critically important for organizations in the emerging complex structure of the business environment. Usually, changes are inevitable and management of it is a vital factor for organizations’ success (Ćirić and Raković 2010). It’s been always difficult to achieve the effective decisions, because it critically depends upon a well sync between the decision

styles of senior leaders and the structure of the organizations (Vasilescu 2011). Besides, business world has become more complex due to rapid globalization and dynamic economic transformation as to knowledge economy (Drucker, 1969; Romer 1990), digital economy (Tapscott 1997), new economy (Atkinson 1998), network economy (Kelly 1997) information economy (Acs 1999; Eshun 2009). etc. Plus, dynamic changes are happening to customers’ needs (Salvendy 2001), buying patterns (Bowersox, 2011), delivery patterns (Howard 2013), manufacturers’ strategies (Rho, Yu, Chang & Chung 2013), and to environments (Collyer, Warren, Hemsley and Stevens 2010). Internally, organizations’ cultures (Hatch 2011), and structures are changing to new forms (Lin and Lu 2005).

To counter this evolving challenge, analysts and academics have suggested many approaches like Quality circles (Deming 1962), Action team (Devine 2002), ad-hoc committees and other similar team approaches (Jones, Louis, McBride and Ronald 1987). However, team with right problem-solving ability can be ineffective because of a wrong problem-solving approach (Isaksen, Dorval and Treffinger 1994; Scott 2007). Therefore, the organizations should ensure the right combination of individuals in composing a team (McClough and Rogelberg 2003). Research on team approach to decision making and problem solving has been expanding its fields by exploring new areas of implication and evolving explanations. However, regarding change, team approach can be viewed as an important way, both for change initiating (Burke and Noumair 2015), and change accommodating (Al-Abdulkarim, Atkinson and Bench-Capon 2016). For example, for a change at hand ‘team’ would be perfect for collecting internal ideas and explaining other employees about why this change is needed (Benson and Popis 1997). Again, for a change to accommodate an organization requires the members of delivery team, change recipients, and change leaders to teaming up together (Campbell 2014). Thus, the team decision effectiveness in

organizational change can bring immense success. Virtually, the concept of constructing team was popularized in the late 20th century by theorists in business, particularly during 1924-1932 at the Hawthorne studies in western electric factory. According to academics and researchers, to have effective decision, influence and managing, the organizations usually entail surveillance for the teams (Lyon 2007). During success with better surveillance, the members of the team develop a fad but afterwards become distressed (Kornblum 2007).

In the emerging opportunity to expand operation across countries, once an organization launched, it wants to grow and continue for a longer-term. But it has been difficult for organizations to reach their growth goals for number of reasons. For example, after a promising initial growth, organizations such as Apple Computer, People Express, L.A.-Gear, and K-Mart have experienced difficulties and decline because of emerging competitiveness (Flamholtz and Randle 1998). In many of such of changing competitive challenges, the use of teams in different issues has expanded dramatically (Cohen and Bailey 1997), and in last two decades, the researchers have developed and designed different types of team such as empowered teams (Orsburn, Moran, Musselwhite, and Zenger 1990; Wellins, Byham and Wilson 1991), cross-functional project teams (Parker 1994), executive teams (Nadler and Ancona 1992), multidisciplinary team (Ferrell, Betty and Coyle 2006) etc. Also, researchers as Kathleen and colleagues found significant interaction effects of top-management team and market stage on the organization's growth (Kathleen, Eisenhardt and Schoonhoven 1990). The sense of mutual commitment is also helpful for organization to have ambitious and longer-term goal (Sujan, Barton, Weitz and Mita 1988). Gordon wrote in the article "Work Teams: How far they have come?"- 82% of companies which have 100 or more employees informed that they use teams (Gordon 1992).

In this research, the focus on this review is studying different types of teams engaged in decision making and problem solving in organization. Particularly this research included the study of teams that are affianced in new product development, delivery of products and services, product improvements, product sales and strategic decision making facing the changes in potential inputs. In the backdrop of this, there are three principal objectives. First, to understand the use of team approach in decision making and problem solving for business operations. Second, to understand value of teams in identification and initiation of change efforts in organization. Third, to propose a systematic approach of team process, facing the changes. To help understanding the issues, review of different

theoretical and conceptual articles is conducted. Purposively 10 commonly used team approaches were selected to have insights into teamwork, team performance and team decision phenomena. Website visits and computer search of current contents, businesses, and indexes with different keywords as changes, group performance, teamwork, decision, problem, and strategic decision are conducted to be helped in defining and clarifying the key concepts.

2. REVIEW AND DISCUSSION

The review and discussion of literature in this study includes 21 research works published during last two decades in different journals covering three key areas: (a) different team types, (b) change needs and (c) information systems. The other major issues covered were: change in market, customer orders, material supply, production attempts, environmental implications, information acquisition and its use and target business outputs.

2.1 General Methodology and Selection of Papers

The amount of literature on teams, changes and information acquisition and use are growing rapidly. For the present study, 21 journals were selected that can be considered as major journals within the areas understudy. From these journals, randomly 31 papers were identified with the keywords- team types and use of team for change in abstract plus one or more words including information, process loss, supply chain, and information systems. In the selection process, abstracts were assessed on the criteria that, whether these papers really fitted with the research objectives; that is, did the papers report use of team in initiation or accommodation of change, on the way to reach the usual business objectives of organizations —and if not, they were rejected. The distribution of these papers across the 21 journals is shown in Table-1.

Table 1: Articles Reviewed

Name of the Journal	No. of Article
Business Strategy and the Environment	1
Decision Support Systems	1
European Journal of Economics & Business Stud.	1
Frontiers in Neuroscience	1
Human Resource Management Review	1
Industrial Marketing Management	1
Information Systems Management	1
Intl. Business & Economics Research Journal	1
Intl. Journal of Information Management	1
Intl. Journal of Mkt. and Business Communication	1
Intl. Journal of Operations and Production Mgt.	1
Intl. Journal of Production Economics	1
Intl. Journal of Production Research	1

Intl. Journal of Productivity and Quality Mgt.	1
Journal of Cleaner Production	1
Journal of Environmental Mgt.	1
Leadership in Health Sciences	1
Organization Development Journal	1
Russian Journal of Economics	1
Supply Chain Management: An Intl. Journal	1
The Intl. Journal of Human Resource Mgt.	1
Total Counts	21

3. KEY TEAM CONCEPTS AND USES

In defining team, Katzenbach and Smith wrote- “it is a small group who hold themselves mutually accountable for common purpose, goals, and approach, with necessary complementary skills” (Katzenbach and Smith 2005). Kreitner, Kinicki and Colein in their work in 2009 have also regarded team as the group of persons with complementary skills (Kreitner, Kinicki and Cole 2009). There are also multiple definitions, such as- it is the collection of interdependent individuals (Cohen and Bailey 1997), persons who render collaborated evaluation judgments and decisions (Patton 1994), collection of complementary members (Parker 1996), cooperative approach to achieve extraordinary results (Scarnati 2001), persons with different qualities (Greenberg 1996; Robbins 1997), and many other definitions by researchers since its popularization in 20th century. Team is commonly defined as the interdependent small group of people who are aimed to contribute towards a common goal (Gündüz 2008).

In the late 19th century, work organizations started to take different forms as external subcontracting, large-scale plants, domestic producers and self-employed category (Alder 2003). By the end of this century, organizations started increased focus on team building and group decision making (Cappelli, Bassi, Katz, Knoke, Osterman and Useem 1997). In this paper, we review into 10 commonly used types of teams in today’s organizations: (1) quality circles, (2) ad hoc/ special focus teams, (3) self-managed work teams, (4) cross functional teams, (5) action teams, (6) virtual teams, (7) multi-disciplinary teams, (8) project teams, (9) crew, and, (10) trans-national teams.

Quality Circle is pioneered by the Japanese in 1962, and it is a small group of employees doing related or similar work who meet regularly to identify, analyze, and solve work related problems for improving the organizational performance (Ross and William 1982; Ishikawa 1985; Deming 1993; Hutchins, 1999). Quality circle is such a strategic tool which improves the production process by adding value and by amputation of wastage (Nemer and Vieira 2018). It is such an effective teamwork which can

reduce resistance to change and promote innovations. Participative management approach, good industrial relations and middle managers support are some of the prerequisites for effective use of quality circle (Gregerman 1984).

Ad hoc/ special focus team is composed to serve one specific purpose and it ends with the completion of the purpose. It is such a team setting, that requires the teammates working together to attain a common goal (Genter, Agmon and Stone 2011). Ad hoc team is non-generalizable, because its’ members exhibit behavior and signifies solution to specific problem. Organizations generally use it to encounter the problems under special changed situations and the accomplishment of the team vitally depends on the nature of problem, the teammate’s capabilities and the environment in which it operates. Specially to include as example, ad-hoc team can be used in assisting the sales force working a new geographic location (Mullins and Panagopoulos 2018).

In *Self-managed work team*, a group of people combine their effort to complete a common goal and are accountable for all or most aspects of their effort. To create freedom and responsibility for efficient completion of tasks, it uses clear boundaries. This approach also signifies that, leader doesn’t operate with positional authority (Blanchard 2005). Members in a self-managed team are cross-trained and having four basic competencies: professional, methodological, social and self-competency are critically important for them (Kauffeld, 2006). Since they aren’t led by any formal person or manager, they should provide with a mission statement and a set of rules, or a charter should be created to support the team in decision making (Rouse 2005). With self-managed team it has been expected that, it will help the organization cutting the costs and therefore customer will be more satisfied (Wilke, Lisa Rossum and Wouter Dirk Have 2018).

Cross functional team is basically aimed to enhance success (Brown, Eisenhardt, 1995). It comprises members from different expertise, usually from different functional departments of an organization who work together to serve a common goal (Krajewski and Ritzman 2005). The organizations use it for covering the development motives and adopting strategic flexibility (Gutierrez-Gutierrez, Barrales-Molina and Kaynak 2018). For example- new complex product design, engineering, system delivery, marketing and sales, strategy formulation, and management development (Rocine 1994). A high performing cross functional team should include seven basics: a common and compelling purpose, empowerment, open communication, flexibility, accountability, appreciation and teammates’ morale (Blanchard, Kenneth,

Carew, and Parisi 1990). Role conflict and poor commitment in a cross functional team significantly impede its effectiveness.

Action team mostly focuses on the manufacture of products and services with extensive specialization and coordination (Devine 2002). It signifies the teammates' individual desire to success in completing the group goal and executes repeatable brief performances. It is more than an association of persons who are devoted towards a certain interest (Lvonne 2013). Usually, action teams are constituted to meet suddenly appeared purpose in a time constrained and high stakes condition (Grossman and Feitosa 2018).

Virtual team works towards a common undertaking in which the teammates are spatially separated (Driskell, Radtke, and Salas 2003). In the 1990s organizations started to adopt global teamwork approaches as virtual teams, because of swift diffusion of internet and virtual work environment (Davidson and Tay 2003). Since face-to-face interaction is hard for virtual teammates, trust becomes the basic requirement for it (Jarvenpaa, Knoll and Leidner 1998). The virtual teammates usually are geographically dispersed and work with strong web links across time and organizational boundaries (Jessica, 2000; Powell, Piccoli, and Ives 2004; Ebrahim, Ahmed and Taha 2009). Thus, it become more useful, in the emerging form of organizations going e-based to ensure more effective response to change (Singh and Waddell 2004). To organizations over the world, virtual team has been considered as one of the great means of managing business globally (Maes and Weldy 2018).

In a *Multi-disciplinary team* each member is accountable to his or her discipline for only what he or she does (Rothberg, 1981; Melvin, 1989). Teammates in it usually work sequentially and pool their expertise to serve a common goal or to solve a problem at hand (Gunten, Ferris, Portenoy and Glajchen 2001). Specifically, this type of team is constituted to initiate changes and innovation within the organization (Schoorl, Kievit, Oomes and Bartels 2017).

Project teams are usually composed to yield non-repetitive outcomes. In organizations they are expected to deliver business solutions and innovation within certain time-frame (Olaisen and Revang 2017). Its' teammates are pulled from different disciplines and functional units and are aimed to present one-time outputs such as- a new product or service, new plants or a new information system (Mankin, Cohen and Bikson 1996). In 1998, The Ontario Public Service (OPS) established a service quality standard. Under this, the Ministry of Transportation (MTO) was initially asked to ensure respond in writing to

any correspondence within 15 working days from date of receipt. But MTO was failed to do so. Then, a *project team* was created with teammates ranging from Assistant Deputy Ministers and Directors to staffs across MTO. The team worked to monitor the turnaround time of correspondence to Minister, Deputy Minister, Assistant Deputy Ministers, and Directors. Within five months the team dived the correspondence turnaround time for Ministers from 36.24 days to 9.45 days on an average (Strus 2002).

Trans-national team enables the companies to extend their products and operations in international marketplace. It includes the managers and specialists as teammates and their expertise are judiciously blended to influence international business opportunities (Snow, Sneel, Davision, and Hambrick 1996). In the international domain, the members of the transnational teams have work across varying time and space which are very difficult to align within predetermined time-frame (Butler, Minbaeva, Mäkelä, Maloney, Nardon, Paunova and Zimmermann 2018).

A *crew* is a group of people with special technical skills who work together on a task or project. In a crew, the teammates individually contribute to perform a work or to serve a specific purpose. Members in crews shares work together to prevent negative impacts in simultaneous task performance (Dorneich, Passinger, Hamblin, Keinrath, Vašek, Whitlow and Beekhuizen 2017).

However, organizations use certain type of teams to serve their purposes, those best fit with the team structure, organizations type, environments and requirements for expected outcomes. For example- *General Mills* with considerable success had become able to introduce several new products through a team performance comprising the Director of sales and the Director of advertising at (Lewis, Holloway, and Hancock 1964).

4. THE EVOLVING CHANGE

During 80th decade the cost of business operations particularly the cost of selling and sales related functions such as sales calls, sales reps, telemarketing, direct sales, demonstration, advertisement etc. was continued to higher (Byrnes and Mujtaba 2008). Those costs increased 81% from 1980 to 1985 (Kern 1986), and average cost of sales calls increased 5% from 1998 to 1999 (Sales and Marketing Management Magazine Survey 1999). Now, it's not enough for manufacturers to develop and retain capability. They must be conscious about the different attributes of their suppliers, distributors and the customers (Ali and Rokonzaman 2013). For such emerging change and to ensure profitability and survival, organizations

require to initiate product improvements, new product development, new way of sales and delivery, and strategic decision making.

Now a days, customers expect quickest responses from the business concerns. Once they place an order- expect to know the order status immediately. For example, to this concern, a company's ability to cope with change vitally depends upon how much it is efficient to carry out customer responses (Imaoka 2012). In recent years, companies are resorting on electronic systems for reliable performance in customer responses (Won Lee, Kwon and Severance 2007). At the backend, achieving an uninterrupted material supply capability is crucial for manufacturers (Tracey and Vonderembse 2000). Also, companies over the world need to achieve high flexibility toward the changing market, such as through shale production (Medvedev, 2015). Plus, in this evolving edge of going greener, manufacturers are seeking for new suppliers for continual improvements, reduction of wastage and for ensuring longer-term mutual benefits (Sroufe, 2006). Also, with such emerging changes academics and researchers laid lots of attention to the environmental issues (Dyllick and Hockerts 2002; Teece 2010). In a research in 2002, Baumann and colleagues enormously emphasized on environmental improvements from the making to market of products (Baumann, Boons and Bragd 2002).

With the evolving challenge of accommodating such changes, information system integration has been appeared as a great solution. For instance, in a research Shaw and colleagues wrote that, to attain notable marketing outputs companies are using data mining tools which excerpt critical knowledge on customer-buying pattern (Shaw, Subramaniam, Tan and Welge 2001). In their research in 2017, Tarafdar and colleague stated that, a company's information systems capability is an important factor in achieving supply chain agility to meet the ever-changing customers' need (Tarafdar and Qrunfleh 2017). For quality improvements, companies need integration of information systems to ensure high availability and access to information. They should be also more carious in keeping quality teams (Vinothkumar and Kumar 2018). In creating competitive advantage and becoming able to well-versed more about the competitors, researchers also suggested to concentrate on information system integration (Olszak and Kisielnicki 2018).

In a research in 2018 Prajogo and colleagues stated that, information system integration impact the internal operational performance and thus enhances the overall

business outputs of the organization (Prajogo, Toy, Bhattacharya, Oke and Cheng 2018).

However, with a focus on data-based decision making, and concentration on the customers' needs, many organizations are focusing on team efforts to ensure collaborative solutions to different business issues (Strus 2002). Drucker, in Wall Street Journal stated that, giant companies such as- Ford Motor Company, General Motors, and P&G have launched team approaches during 1980s to design new models and new products (Druker 1992). From a recent research by Domingues and colleagues, it appeared that, to cope up with changes, team effort has become extensively significant (Domingues, Lozano, Ceulemans and Ramos 2017). Thus, the team-based management systems for organizational effectiveness is gradually becoming widespread.

5. THE REVIEW SUMMARY

This section included the summary of the discussions in section three and four. To achieve the conceptual model, which is the research objective, the summary of the findings into the selected paper understudy are presented as follows:

In the 1990s organizations started to adopt teamwork approaches to a greater extent because of swift diffusion of internet and dynamic work environment. Organizations generally use it to encounter the problems under special changed situations and the accomplishment of the team vitally depends on the nature of problem, the teammate's capabilities and the environment in which it operates. However, organizations use certain type of teams to serve their purposes, those best fit with the team structure, organizations type, environments and requirements for expected outcomes. Participative approach, extensive communication and middle managers' support are some of the prerequisites for effective use of teams. Thus, it become more useful, in the emerging form of organizations going e-based, to ensure more effective response to change. Since they aren't led by any formal person or manager, they should provide with a mission statement and a set of rules, or a charter should be created to support the team in decision making. However, with a focus on data-based decision making, and concentration on the customers' needs, many organizations are focusing on team efforts to ensure collaborative solutions to different business issues. Thus, the team-based management systems for organizational effectiveness is gradually becoming widespread. It is effective teamwork which could reduce resistance to changes and promote innovations.

6. THE RESEARCH FRAMEWORK

Regarding the performance of the team, in 1987, Driskell, Salas, and Hogan proposed a model of team effectiveness which emphasizes on the group members' individual characteristics, group level factors, and the task environment factors as the inputs (Driskell, Radtke and Salas 2003). They concluded that, through a strong group interaction process these inputs lead to produce superlative group performance for predetermined purposes. This model basically focuses on process loss and process gain. One example of process loss is the reduced team performance caused by social loafing (Latane, Williams and Harkins 1979). With this, there may be the poor engagements of team members, resulting to produce poor results than the combined potentials of the team. Again, with team efforts people can produce superlative results. Because, team provides the opportunity to combine efforts. However, for a team to be successful there must have- an unambiguous and engaging direction, a supportive enactment state comprising required knowledge and skills, an appropriate team design, supportive organizational context, and expert process assistance (Hackman 1983).

To be more specific, this research used the I-P-O framework (Hackman 1987; Ilgen, Hollenbeck, Johnson and Jundt 2005) as the theory guide, which is basically a system theory. Besides, Steiner's formula (1972) was used to guide the concept of process loss and process gain in the model. Plus, the VRIO frame work (Barney 1991) guided the value view of integrating information system component with human component in a team. As a whole, the structure and purpose of different approaches provided the insinuations to form the groundwork for the proposed framework in this paper, which is as under.

7. THE DECISION STOMACH

We define Decision Stomach as- 'the incorporation of human intelligence and technological knowhow, targeted to produce superlative solution towards a common goal'. We also convey it as a system approach to problem solution and team decision making regarding different organizational issues such as- product improvements, product development, sales and delivery of products, workplace improvements and strategic decisions. In most of the team setting, the teammate's responsibility ends with the attainment of the encoded goal. An organization must expend more time and loose the portion of investment to compose new teams to address different types of its purposes. Sometimes it trapped in dilemma regarding selecting the most appropriate team approach to a specific problem or purpose. The design of the proposed approach will provide the features of a standing tool of problem solving and decision making, and, thus reduce the

risks of forming new and separate teams for existing and forthcoming problems.

In this paper, we include two essential parts to form the Decision Stomach- (1) The Data Administrator, and (2) The Community Intellect.

The *data administrator* is thought-out to contribute the tech roles in the Decision Stomach. It consists of five elements, namely- Imbiber, Data Hub, Constellater, Data Sill, and Compost Bin, which contribute to the Decision Stomach as following:

Imbibing: It is the first function in a Decision Stomach. A technological tool called "imbiber" characterized with artificial neural network (ANN) will act here to obtain data inputs on different variables of markets, manufacturers, suppliers, orders processing and the environments. While these data will come from different IT based systems; such as- marketing information systems, transaction processing systems, inventory management systems, competitive information systems etc.

Excavating: In this step the data will be stored in a "data hub" excavated through the imbiber using support vector machines (SVMs) and the Law of superposition that is in time sequence, with oldest on the bottom and youngest on the top.

Constellating: A "Constellater" based on the concept of Knowledge Discovery in Database (KDD) is thought-out in the Decision Stomach to maximize process gain and minimize process loss. It facilitates in what kind of data needed to be searched from the data hub, where a large volume of data is excavated and in what form is the result of the search represented. It also stores the searched items into two basic data-banks, namely- "data sill" and "compost bin".

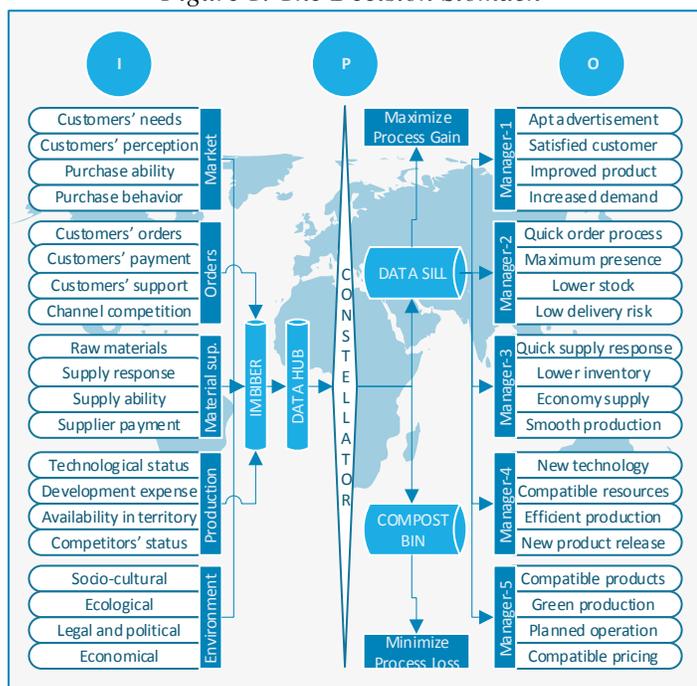
The *data sill* will help reducing statistical over-fitting and data fishing by the human elements in the Decision Stomach, as it excavates only the usable and efficient data required for a certain decision to be made.

The *compost bin* excavates no, or less significant data required for a certain decision which helps reducing data overload and thus saves time and costs and most significantly the deciders' dilemma in decision making. When these data may become a big resource for future use.

The *community intellect* will contribute in incorporating the human intelligence in the Decision Stomach. It is the collection of functional managers. Usually, the functional managers hold expert knowledge in their respective fields. When, they need efficiently presented data and information to take certain decision to take, or problem to solve. With an interactive information support in the

proposed Decision Stomach they will be able to produce different alternative solutions to a specific problem and finally take the decision. The community intellect will also hold the characteristics of *quality circle* and *self-managed team* to ensure the quality of operations by continuous monitoring and self-motivation. But their roles will be not ended with a specific purpose served like *ad hoc teams*. The intellect is expected to enhance the success potential as like *cross functional team*, which leads to perform efficiently in new and complex product design, engineering, system delivery, marketing and sales, strategy formulation, and management development.

Figure 1: The Decision Stomach



As the Decision Stomach contains the up to date data in the data hub through an interconnected group of artificial neurons, and process data using a connectionist approach to computation, the community intellect with multidisciplinary expertise can be able to attain the feature of *action team* to facilitate the individual desire of developing products and services. The tech elements of the proposed Decision Stomach are expected to be useful in virtual participation of the human elements in decision making with geographically separated locations.

8. CONCLUSION AND FARTHER RESEARCH

Organizations often suffer for the imperfect decisions facing the changes. Also, business decision makers are always worried about efficient dealing with changing time and costs. Due to the emerging development in world market and economic transformation, no pause is expected either in product improvement, product/ service design,

supply, manufacturing, distribution, sales, innovation or any business operation. Conferring continuous, goal oriented and in time information to decision makers is very crucial for decision making with minimum process loss, and maximum process gain. When research showed a team should include those people having knowledge and confidence, and high tolerance to ambiguity (Fay and Lüthmann 2004). The current paper is aimed to signify the efficient dealing with the information resources. It offers a system approach that incorporated the human intelligence and the competence of information technology. The *data administrator* in the proposed decision stomach will confer decision making bases for a *community intellect* to ensure selection of best alternative for a problem at hand.

The paper is also expected to ground a new horizon in further research with the emergence of increasing efficiency in environments, those need in-time and frequent decisions. Also, this paper presents conceptualization of a firm's problem solving, and decision-making capabilities; facing the changes in different factors in the entire environment and makes the following theoretical developments.

First, previous research on teams were related to the task based; and the teams' functions concluded with once the task have been completed (Ju and Cushman 1995). When, this research intends to use teams as the stable entities in organizations to face changes more dynamically.

Second, traditionally teams need pre-specified goals to avoid conflicts over functional concerns (Swamidass 2002). The current research is expected to provide a base for self-led problem identification and in-time data-based problem solutions through a self-directed team (Baird, 2013), consisting of human element and information systems resources.

Third, teams require effective sharing to avoid conflicts. But, for human component, sharing depends on how they shape their interests (Azarbayjani, 2007). There may have either self-interest, group interests, and/or, organizational interests (Bock, Zmud, Kim and Lee 2005). This research is a base for automated need identification during changes, which is expected to shape best the interest of the human components in a team.

Thus, it is expected that, this paper will provide a base for theorizing the use of IS supported teamwork facing the changes.

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