The Role of Virtual Collaboration as Drivers for Innovation in New Product Development Process (Case Study: Yammer usage as Medium of Virtual Collaboration between Headquarters with branches in PT XYZ)

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Abstract

The theme of This paper is the role of virtual collaboration process in organization . Business environment that constantly changing and high level of intensive competition force organizations to continously creating sustainable values in to gain competitive advantage. For large organizations with wide range of networks there are geographical limitations that restrict the process of collaboration in organization. Advances in technology enable and facilitate the organization to collaborate virtually. From the perspective of dynamic capabilities, virtual collaboration conceptualized as the dynamic changes in the organization's ability to identify, integrate, and apply knowledge assets as learning materials to meet the competitive demands. Here, Virtual collaboration enables the process of communication and coordination within organization, support oragnization learning proces and also trigger innovation. At the end, Virtual Collaboration support decision making processes and process improvemet internally. Results of the analysis in this paper suggests that engagement, transparency and horizontal nature of the communication process that can encourage new organizational learning but, can be done only for new business portfolio. In addition, cultural factors, also limits the success of virtual collaboration as means for information distribution at lower levels of the organization.

Keywords

Background

The challenge that faced by organizations nowadays is to find a way to constantly adapt with the quick change of business environment. Globalization, technological developments and lifestyle changes make customers need become more and more fragmented and drive the market to keep changing drastically. Thus, the organization needs to be agile and continuously adapt with the ever changing business environment. However, it is not enough to just having a good adaptability in order to survive in this environment. Friedman (2005, in Lee, Olson dan Trimi, 2012) said thatorganization should countinously maintain their competitive advantage constantly to become the leader of the market.

Sustainable competitive advantage can only be generated if the organization has the capability to strategically manage its resources in order to generate "added value", which is unique, distinctive, and difficult to imitate (Teece, 1976, 1980; Dierickx and Cool, 1898, in Chen, Lee

and Lay,2009) by competitors. Product development, process of strategic decision making, and the execution of strategic alliances are the examples of dynamic capability (Eisenhardt and Martin, 2000).

Dynamic capabilities are obtained by the organization, through its organizational learning process. This process is one of the organization's mechanism in generating new knowledges. As the result, its organizational learning orientation has significant implications to the organization's ability to innovate and compete (Hughes et al, 2007; Paladino, 2008; Kohli and Jaworski, 1990, Westerlund and Rajala, 2009).

The organization needs to effectively manage its learning process to produce organizational knowledge. This knowledge is defined as an important part of the organization's resources, because it has the ability to generate and manage the company's competitive advantages (Grant, 1996; Kogut and Zander, 1996; Nonaka and Takeuchi, 1995, in Heidecke and Andrea, 2008).

Nowadays, the main sources of organization's competitive advantage has been shifted from "financial resources" to "knowledge and information resources". One of the powerful point of knowledge that can be used by the organization for its development process is the individual information and experiences of its workers. But these individual information and experiences will only be a tacit knowledge (implicit) if those information and experiences are not properly handled, exchanged and distributed.

In order to have the knowledge be exchanged, Individuals within the organization needs to collaborate with each others. Berg (2006, in Proctor, 2013) explained that the company can get the useful and important knowledge by networking and doing the collaboration

process. The important key of organization's knowledge production is the company transparancy and access. Here, collaboration through open discussion and communication among individual employees through knowledge sharing will help the formation of knowledge that are essential for the creation organizations creativity or innovation. Eisenhardt and Martin also (2000) argue that in collaboration process, individual will shared and exchange their experiences with other previous co-workers that in the end will influence product development process.In collaboration process, accumulation of experiences and the ability to develop something is shared among organization members. Taatila et al (2006) stated that the idea of innovation is created from social networks that focused on knowledge networks development among employee within the organization. Thus, the idea of innovation is created by individuals who share and collaborate with others (Stahle et al, 2004, in Antikainen, Makipaa and Ahonen, 2010). This interaction leads to the formation of creativity. Creativity is defined as the ability to produce something new (original, not yet exist before)and suitable with organization's needs (Sternberg and Lubart, 1999).

Research Questions

This paper uses resource based view approach and the dynamic capabilities approach. resource based view approach examine on how the company leverages organizational knowledge as an asset. Dynamic capabilities approach describe how knowledge as organization asset can be integrated through virtual collaborative process to drive innovation creation processes in the organization (Thrift, 2006). The organization is expected to continuously enrich themselves with new knowledge outside the organization (Broring and Herzog, 2008).

The research results of Indonesian Internet Service Provider Association (APJII) in collaboration with PusKakom of University of Indonesia stated that during the year 2014, there were 88.1 million Internet users in Indonesia, This number increase 16.2 million from 71.9 million from the previous year.(http://inet.detik.com/read/2015/03/26/132012/2870293/398/pengguna-internet-indonesia-tembus-881-juta). In other words, the internet penetration in Indonesia reached 34.9% of the total population. No wonder if now, the Internet became one of the mediums used by the company to carry out the process of organizational learning. also through the medium of the Internet is all employees in the organization can be connected to each other and discuss work-related issues.

The key of successful of e-collaboration or virtual collaboration lies on employee's social skills during the working process interaction on daily basis. employee's social skills within the organization encourages organization to seek out and share informations systematically (Phang et al, 2009, in Liao and Chou, 2011). Social skills will facilitate individuals in virtual collaboration process to achieve common goals (Preece, 2001). Therefore, specifically, this paper seeks to answer the following questions as listed below:

1. How does the knowledge (both external and internal) exchanged in the discussion process of new product development?

2. How does virtual collaboration can encourage the process of coordination and communication in new product development process?

3. How does virtual collaboration can lead to learning process in the new product development process?

4. How does virtual collaboration can lead to innovation process in new product development process?

Literature Review

Research Review

Luc Cassivi, Pierre Hadaya, Elisabeth Lefebvre and Louis A. Lefebvre (in Jane, Ballesteros, Melendez, 2008), from Canada, wrote article that entitled, *"The role of collaboration in the innovation process, relational, and products in the supply chain."* In this article, the authors analyze the strategic impact of collaborative action tactical and efficiency of virtual collaboration tools in the innovation process are interlinked with each other from the perspective of the upstream (ie, order processing) and downstream (ie, demand management, customer service) in the company of industrial equipment. They found that collaborative action be tactical rather than strategic. they also show that there is an influence process of collaboration on product innovation.

Angel Meroño-Cer And Soto- Pedro Acosta, and Carolina Lopez-Nicolas (in Jane, Ballesteros, Melendez, 2008) wrote article that entitled *"How technology affects collaborative innovation in SMEs?"* They studied the impact of technology on the collaborative innovation at the firm level by conducting a survey to medium-sized businesses in Spain. After dividing into three forms of collaborative technology collaboration which are; e-information, e-communication and e-workflow. The study shows how the only e-information (which supports cooperation group sharing systems such as databases and documents management) that have a significant impact on innovation. This article also shows the indirect effects of the innovations brought about by e-information. Where there are control variables of virtual collaboration medium that affect the results of innovation. Adoption of new technologies ultimately improve both the process and the results of innovation in the organization.

Finally, Umer Farooq, Craig H. Ganie, and John M. Carroll (PennInternational sylvania, USA, (in Jane, Ballesteros, Melendez, 2008) contributed wrote virtual collaboration article that entitled, *"Designing for computer-supported creativity to work."* In this study, the authors developed a set equipment that can enhance the creativity of the work based on the results of an extensive review of the literature on individuals, dyads, and creativity of the group. Result also shown that another organization's enabler like support for divergent and convergent thinking, the development of common goals, and reflexivity (which includes reflection, planning and action by Members of the group) will also become success factor in organization creativity development. They then describe a working prototype to illustrate the design needs to support the process of scientific creativity, effectiveness and consequences of the use of such equipment in scientific collaboration. They also present how their contribution fits into a broader research program to investigate the creativity in the process of computer based collaboration,. The article underlines the importance of the organization to try newest technology systems to increase performance of individuals and groups (West et al., 2006) and techniques to achieve collective goals (Mark, 2005).

Conceptual Definition

Virtual Collaboration

Parallel with Grant (1996, in Chen, Lee dan Lay, 2009) definition regarding the coordination mechanism within the organization, virtual collaboration in this paper is conceptualized as a mechanism of coordination between individuals, individual with group, and also communication between groups within and/or outside of the organization. Kock, Davison, Wazlawick, and Ocker (2001) defines virtual collaboration as a collaboration between individuals involved in a particular job using technology (p. 1). This definition includes various types of systems, ranging from computer-mediated communication, through a group decision supported system, and for Web-based collaboration (Kock & Nosek, 2005).

Support of informaation technology systems in virtual collaboration process enables organizations to conduct cross site collaboration between virtual teams. Organizational structures that become more horizontal and the emergence of team work based units have become more common that supported by advances in technology, have formed the concept of virtual community as a form of organization of work units (Bell & Kozlowski, 2002, pages 14-15, in Heidecke and Andrea, 2008).

Virtual teams are characterize with dispersed location of the team members and / or geographically organizations (Townsend, DeMarie, & Hendrickson, 1998, p. 18). The emergence of the team is closely linked to globalization (Zakaria, Amelinckx, & Wilemon, 2004, p. 15) and the related economic development, such as deregulation, outsourcing and / or offshoring (Cascio & Shurygailo, 2003, p. 362). Furthermore, increasing the percentage of job knowledge, work preferences change, and especially the (technological) development of virtual workspace itself causes teamwork process become more virtual (Cascio & Shurygailo, 2003, p 362;. DeSanctis & Poole, 1994, pp. 121-122).

Therefore, by using the appropriate technology, the effectiveness of virtual teams can be improved (Bell & Kozlowski, 2002, pp 23-25;. Hayward, 2001, in Heidecke and Andrea, 2008). However, the introduction of collaborative technologies not only improve collaboration (Susman,

Gray, Perry, & Blair, 2003, p. 145). A holistic approach, involving strategy, process, technology, and culture becomes an important key for virtual collaboration (Mayrhofer & Back, 2004, pp. 35-36, in Heidecke and Andrea, 2008).

Virtual Collaboration as Work Mechanism Coordination

The effectiveness of coordination of work between face-to-face communication with virtual communication is still on debated today. On the one hand, theory of media richness (Daft & Lengel, 1986), found that face to face communication richer (the ability to change the understanding of information in the time interval) than virtual communication. On the other hand, theories such as media synchronicity (Dennis & Valacich, 1999, in Lior, 2007) proposes that the importance of the media's ability depends on the characteristics of the situation.Therefore, "the richest medium"and the best medium is medium that able to provide a set of capabilities required by the situation: the individual, the tasks, and the social contexts in which they interact Dennis & Valacich 1999, p. 3, in Lior, 2007). Nevertheless, the general similarity that shared among researchers is that virtual collaboration is an effective vehicle for information sharing and knowledge sharing that goes beyond traditional limitations of time and space.In current time being, Internet allows this form of virtual collaboration to provide significantly greater range and richness of services (Evans and Wurster, 2000, in Lior, 2007). Therefore, compared to the traditional coordination mechanisms, virtual collaboration is mechanisms of group coordinating with broader capabilities that enabling and facilitating virtual working groups, giving the company an additional degree of freedom in developing and managing

knowledgesharing mechanisms that are essential to the process of organizational innovation.

Virtual Collaboration as Dynamic Capabilities

In a dynamic business environment, rapid changes in technology also drive organization to change their strategy faster than before. In this kind condition, virtual collaboration plays a very strategic role for organization to develop and adaptwith new strategy faster.

Dynamic capabilities perspective that is an extension of resourcebased view perspective (RBV), seeks to address answer to the dynamic change in market (Eisenhardt & Martin, 2000). From the standpoint of Resource Based View (RVB), the answer to how the organization is able to produce superior resources and sustainable characteristic is obtained through Dynamic Capability (Teece, Pisano et al. 1997; Teece 2007, in Lior, 2007). According Helfat et al (2007), the dynamic capability is the ability of an organization to deliberately continuously to create, empower and modify its strategic resources continously . Furthermore, according Zahra et al (2006, in Capeda and Dusya, 2007), dynamic capabilities is the company's ability to continually reconfigure their resources and operational activities so that appropriate or keep in accordance with the change of dynamic environment. When changes occur in the business environment, resource companies must evolve to enable new and innovative forms of competitive advantages continously.

By adopting process approach, the dynamic capability perspective argues that the dynamic capability is more to be driving mechanism that enableprocess of organization's resources development continuously and sustainably and also align with changes in the organization's strategy.

Dynamic capability is defined as "the company's ability to integrate, build, and reconfigure their internal and external competencies to address rapid change in dynamic environment (Teece et al., 1997, pp.516). Therefore, these capabilities are very important in highspeed business environment, where change can quickly erode the value of strategic resources that previously have been a source of competitive advantage of organization.

Dynamic capability, therefore, is a changeoriented competencies that enable the company to reconfigure and move their resources to meet the demands of a competitive environment (Zahra and George, 2002; Zhu & Kraemer, 2002, in Capeda and Dusya, 2007). By looking at knowledge resources as a strategic asset andvirtual collaboration as a dynamic capabilities, together it will trigger knowledge sharing process within internal organization that eventually will encourage the process of organizational innovation.

In a business environment that rapidly changing, knowledge assets that generally allows organizations to have a competitive advantage is rapidly losing its relevance, so that in order to maintain their competitive advantage keep exists and sustainable, organizations must always have to continuously renew theirdistribution process of new knowledges that is original and implicit (tacit knowledge). The frequency of the renewal process should be in line with the changing environment. The faster the environment changes occur then the sooner the organization needs to renew their knowledge resources and dynamic capabilities.In this situation, virtual collaboration becomes strategic that will bridge the innovation process organization as the organization's efforts to create sustainable competitive advantages.

The Organization's Role in Sustainable Competitive Virtual Collaboration.

Teece et al. (1997) describe the organizational process consit of three roles: (1) coordination / integration (a static concept), (2) ability to learn (dynamic concept), and (3) reconfiguration (transformational concept). Building on this framework, the following illustrates the process of coordination, learning, and innovation as the three organization's role of virtual collaboration.

Coordination

The main functional role of virtual collaboration is to facilitate coordination among individuals, groups, and organizations. Malone and Crowston (1994, in Fink, 2007), defines coordination as relationship between activities (page. 90). Coordinationdescribe process of communication and group decisionmaking as the two processes that are important in coordination process. Collaborative Technology then, usually designed to facilitate communication and decision making process and therefore enables companies to manage dependencies between activities that are more efficient and effective, maintenance good relationship of interdependence that occurs inside or outside of the organization.

Learning

Virtual collaboration can serve as a mechanism to facilitate learning, both individuals and organizations that are important in various process of knowledge creation and sharing. Kogut and Zander (1996) seen the company as an organization that representsocial knowledge of coordination and learning process.

According to Teece et al. (1997), learning is a social and collective process and a

form of contributing results of people understanding of complex issues. Collaborative technologies allows individuals to gain new insights by providing a space of interaction between members of an organization (Alavi & Leidner, 2001). Although individual skills to learn is important, these skills are highly dependent on how individuals can use it to increase their skills to obtain collective learning through collaborative mechanisms.

Huysman, Creemers, and Derksen (1998) argues that all the problems of organizational learning (filtered, egocentric, unbalanced, or autonomous learning) is caused by limited access to information. Therefore, Internet technology enables organizations to increase collaboration capabilities through a learning process more efficient and effective (Alavi & Leidner, 2001; Huysman et al., 1998). Argyris and Schon (1978), Scott (2000, in Fink, 2007) showed that virtual collaboration facilitates both the lower level and a higher level of organization to do the learning. At a lower level, virtual collaboration allows individuals to obtain feedback quickly and improve efficiency because it becomes a catalyst to stimulate the learning process of repeated practice becomes more efficient and fast.

Innovation

Innovation can be defined as the underlying mechanism of organizational knowledge assets ability to constantly maintain its competitive advantages. Knowledge can provide companies with a competitive advantage because it through knowledge utilization, company is able to introduce innovations in processes, products, and services (Nonaka et al., 2000). Here, knowledge is considered as a key asset that becomes the foundation or basis of the development of the organization (Grant, Fuller, 1995) and creating superior value

(Kogut, 1993). Organizational innovation can be seen as the result of a combination of new knowledge and existing knowledge of organization (Kogut, Zander, 1992). Organizations that are able to adapt is an organization that can combine all the resources of its knowledge, wheather the source of knowledge come from outside or from within the organization.

Nonaka (1991) introduced the concept of Organizational As a producer of knowledge or Knowledge Creating Company where the core of company's business is to produce innovation continuously (p. 96). Collaborative technologies play a significant role in creating business innovation (Eden & Ackermann, 2001) . Wheeler (2000) proposed the concept of net-enabled business inovation cycles (NEBIC) as a form of implementation of dynamic capability in order to understand how digital networks grow through business innovation.

Knowledge utilization process as source of innovation can be divided into three stages; (1) The first stage, involve organization process of scanning and searching for external knowledges that beneficial to innovation process, (2) the next stage, involve identification process of external knowledge and the process how to distribute the knowledge within organization and make it new assets for organization's internal knowledges, (3) Finally, at the end, organization must integrate and elaborate all sourcesorganization's knowledge as source of value added creation process.

The role of collaboration in business innovation also correlate with many researchs of absorptive capability in organization. Cohen and Levinthal (1990) showed that the absorption of a company enables organizations to recognize, assimilate, and apply the new information that is based on organization's knowledge

that is important to improve innovation capabilities.

Virtual collaboration is platform for interaction and learning, in which through it, organization enable to create opportunities that come from integration process of new external knowledge with existing knowledge assets within the organization. Virtual collaboration increases the probability of external knowledge to be identified, assimilated and implemented to facilitate innovation process. Hargadon and Sutton (1997) noted that the ideas of one group is very likely to solve problems in others workgroups, but it only can be happen if there is a connection between existing solutions and issues thatfacilitate boundaries obstacle between them (p. 716).

Picture 1. Role of Virtual Collaboration in the Dynamic Business Environment (Fink, Lior, 2007)
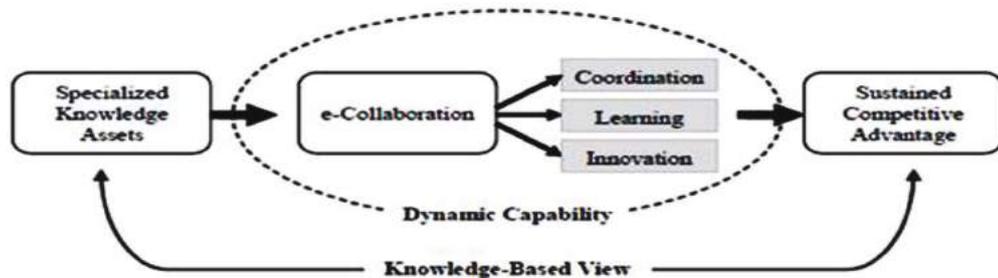
McMillan and Chavis's Information Exchange Building Block in Virtual Communication (1986)

Picture 2. Stages in Communications Virtual Information Exchange
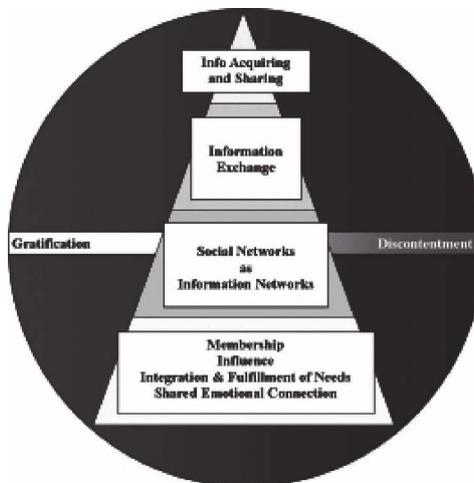
According to McMillan and Chavis (in Hersberger, 2007), relationships between members of the virtual community consists of stages like the picture above. Where the first foundation is the fundamental foundation that will build interaction between members. The first foundation that must be exist is in order to create information exchange in virtual communication are; (1) Membership, (2) Effects of informations (3) integration and fulfillment of needs, (4) interconnected emotional connection.

The second foundation consist of t Social Networks as Information Networks. Here the concept of bond's strength in the network becomes important to be studied in order to understanding of social relations or information within networks (Scott, 2000; Garton et al, 1997, in Hersberger, Murray and Rioux, 2006). Marsden and Champbell (1984, in Hersberger, Murray and Rioux, 2006) examines the concept of proximity (emotional intensity) as the best indicators to measure the strength of the relationship and it is developed from the time duration and intensity of communication that happen within the community.

The third foundation is information exchange. Gusfield (1975) , McMillan and Chavis (1986) stated that common interest will encourage the development of good relationship, either in face to face or virtual communities and this relationship is constantly changing dynamicly. Crickman (1976, in Hersberger, Murray and Rioux, 2006) states, there are 4 (four)psychology elements that at least must be exist for better quality development of information exchange, which are :

a. Individuals need reasons to join a community and feel comfortable to interact in it.

b. Individuals need to join a common interest groups. And if there any desire to left the group, the process should be easy.

c. Individuals have a lot of time to communicate

d. Individuals will be easier to communicate with new people who share the same common interest.

The fourth foundation is information sharing. Rioux (2005) introduced the concept of Information Acquiring and Sharing (IA & S), which refers to a set combination of behavior and the process

by which an individual:

a. Storing the information'sneed from other individuals cognitively

b. Conduct a recall of information needs

c. Make associations between the information needed by the need to request or share information with other individuals.

d. Sharing information if needed and necesssary.

Research Methodology

Research Design

Problem solving identification that exist within the organization is one of the main focus of scientific research design development(Hevner et al., 2004, p. 77, in Hyett, Kenny and Swift, 2014). In this case, researcher used a qualitative approach in form of case studies.Case study is the investigation and analysis of single or collective cases that are meant to capture the complexity of research object (Stake, 1995, in Baxter and Jack, 2008). Qualitative case study, as described by Stake (1995), combines elements of naturalistic, holistic, ethnography, phenomenology, and biographical research methods (the stake, 1995,in Baxter and Jack, 2008). Case study methodology linking relationship within and among casses into development of core values, intentions that particularistic, descriptive and heuristic(Merriam, 2009, p. 46, in Baxter and Jack, 2008)

Case Studies is one of the research method that combines individual and or group interviews with technical analysis and observation records. Case studies allow researchers to explore individual or organization, via a complex intervention, relationships, community, or program (Yin, 2003) and supports further deconstruction and reconstruction of various phenomenas

In this paper, researcher using an explanatory Case Study approach . Explanatory case study is used when researcher attempt to answer questions to clarify the causal relationship in a reallife phenomena (cases) which too complex to be described via surveys or experimental strategy. In this paper, the unit of analysis of this research is a virtual collaborative process (Utilization of Yammer) in the process of new product development products in the finance company PT XYZ.

Data Collection done by using several methods like triangulation research strategy, which means using different types of materials, theories, methods and research in the same study (Brewer and Hunter, 1989; Denzin, 1978, in Elman, 1995).

The primary source data consists of openended questions (open questions) that were asked by the researcher through virtual meetings with Yammer users in one New Product Development Group. These questions have been asker to people with different positions, ranging from the director, the head of divisions, operations manager, chief level at branch and staff from various divisions. Secondary data sources use data of Yammer penetration within the organization.

Description of Cases PT XYZ

XYZ is a finance company established since 1997. In terms of shareholders, 70% of PT XYZ owned by Japannese Company Shareholders, 20% by Japannese Motorcycle Manufacture and 10% owned by Indonesian Local Venture Capital. Until now, PT XYZ has 250 service offices across the country the number of employees reached 10,000 personnel.

PT XYZ Vission and Mission

• Vission: Being a leading and reliable financing company for customers, business partners and society

• Mission: Providing the best financial solutions to improve the way of people's lives.

Since established in 1997, XYZ only focus financing on one of well known Japannese motorcycle manufacture. But in line with the decline in product motorcycle's market absorption, since 2013, PT XYZ actively diversifying their types of business financing.

History of Yammer (*Social Enterprise Network*)

Yammer is an enterprise social network which aims to simultaneously connect the individual members of the company, facilitates organizations to conduct business conversation virtually, allowing organizations to exchange business data in one integrated application. Yammer allows communication and collaboration among employees. Yammer also facilitate the accessibility of members within company because it can be accessed through a web browser or mobile device. By then, members can communicate and collaborate with other colleagues anywhere, anytime.

Founded on September 8, 2008 by David O. Sacks, one of the founders Pay pal (online payment gateway). In April 2010, CEO of Yammer, David O Sack stated that Yammer revenue growth doubled each quarter. In September 2010, Yammer services can be used by 3 million the use in 80,000 companies worldwide, including 80 percent companies that use Yammer belonging to the Fortune 500. During this period, Yammer 2.0 launched with a new feature described as "Facebook for Business".

On June 12, 2012, Yammer bought by Microsoft for $ 1.2 Billion dollars in cash. Continuing the process of this acquisition, Microsoft Yammer integrates with

Microsoft Office division with Sack's involvement as a professional expert in the team. July 24, 2014, Microsoft stated that Yammer development team moved to Office 365 and Sack announced his retirement from Microsoft and Yammer.

In Indonesia, Yammer get introduces in 3rd June2013 by Microsoft Indonesia along withintroduction of others collaboration tools like Microsoft Lync, SharePoint, and platform productivity cloud-based Yammer and Office 365 from a laptop and Windows Phone, so all workers accessed the application and stay connected and work from places such as cafes, offices client, exhibitions, even on the bus whenever and wherever, through the campaign of "office Out-of-office" or "office OOF" with physically not present at the office. In PT XYZ, Yammer has been introduced by the IT Division to all management since mid2014 and began seriously implemented since early 2015.

Data Analysis

Statistics of Data Usage Yammer in PT XYZ

For XYZ itself, Yammer introduced in mid 2014 and began actively promoted and internalized to the organization at the beginning of 2015. Here, all members of the company are encouraged to be actively involved in the discussion of all things in the context of organizational communication. Starting from the policy announcement, dissemination SOP (Standard Operating Procedure), the discussions related to the development of new products, to discussions about hobbies. Here with, researcher attach the results of statistical analysis using Yammer in PT XYZ (Source: https://www.Yammer.com/bussan.co.id/analytics?sort=7) as follows:

**Picture 3 . Yammer Accesibility (as per 12 September 2015)**
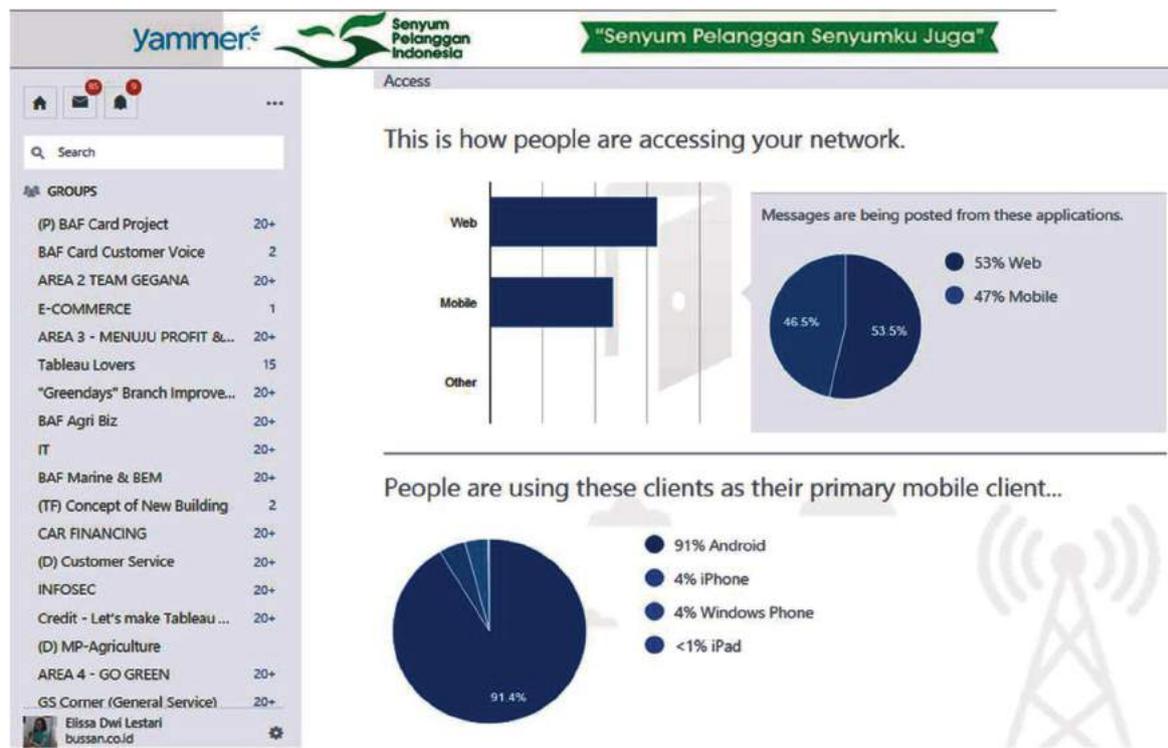
From the figure above we can see that 53% of employees access Yammer via the website and the others 47% access via Yammer application on the smartphone. From 47% of employees who access Yammer via smartphone, 91% are downloading Yammer through the Android platform and the others 9% download Yammer through iOS and Microsoft platforms.

Picture 4 . Growth of Yammer's members (as per 12 September 2015)

Picture 5 .Growth of Yammer's members (as per 12 September 2015)
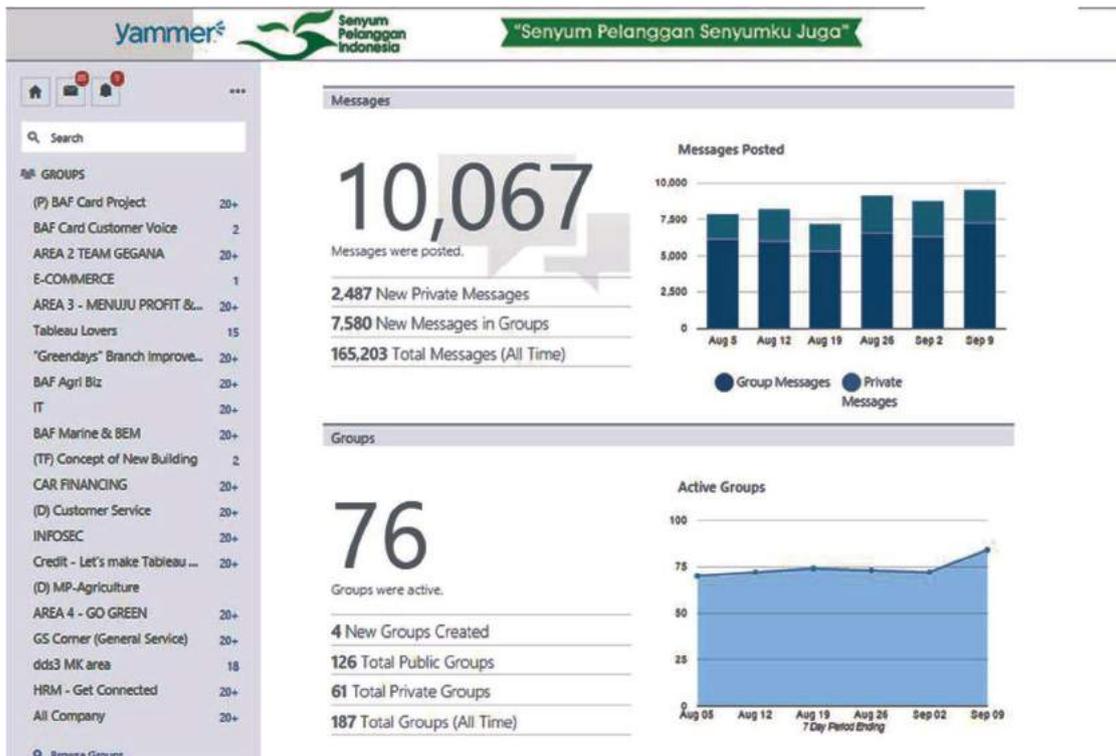
Picture 6 . Kind of Engagements InYammer (As per 12 September 2015)

Image above shows that in the seven days backward period, Yammer membership increase o 67 new employees and become 2,420 user members as per 12 September 2015, in other words within nine months of Yammer usage penetration has reached 20% of PT XYZ total employees. Information messagingincreased and become 10.067 and the number of files uploaded increase by 2,936 with the total number of files uploaded in total become 52.285 Yammer's file. From the total number of the file, 32.289 files has been read by all members. The files here can be images (photo survey results of consumers, photos transaction, photo dealers and others branches activities, such as discussions, activities services in branches, and photos of other activities), file Meeting, video tutorials for branches, programs modules and Powerpoint for discussion media with the branches.

In terms of member's engagement (employee's involvement in Yammer usage is indicated by posting message (Comments) activities, upload photos, 1,818 members out of of 2,420 total members have given sign likes at the message. We can conclude that approximately 75% of active members participating in Yammer (grew 3.4% within a week).

One of the most common forms of participation done in Yammer is discussion. Discussion between the head office, headquarters with branches or branches with other branches. Yammer facilitate the discussion by providing development of group discussion. In Yammer, members able to create a group with a specific interest and each member has the right to join any public groups that suitable with their interests. Majority ofgroup creation in Yameer are made based on work purposes, whether it create based on project, group of discussion within internal division or department or even group of discussion based on area coordination.

In term of number of total groups. There are 187 groups created in Yammer, out of that 126 or 67% are public groups or and the rest are private groups. What differentiate public groups with private groups is scheme of approval permission for join the group. For a public group, all members can immediately join while on private groups, members must obtain the approval from admin group to join. 74 out of 187 existing groups are considering active groups.

Informant's Interviews

IIn this case study, researcher conductinterviews with 4 informants that represent all levels position within the organization. Level of Informants range from the director level until field staff level in the branch office. Selection of informants from various levels, can allow the process of triangulation and validation of Yammer's usage as a form of virtual collaboration at PT XYZ. Herewith, researcher attached all informant's background that chosen for this case study:

Table 1. Research Informants Description

Informants	Position	Informants Description
MS	Director of Customer Service and Business Development, Director of Credit, Director of Corporate Planning, and Director of Operation and Develpment	MS is a Japanese director who supervise several divisions in the leasing company PT XYZ. He is responsible in Development of new finance business portfolio beyond the core business. He began working at XYZ for 9 years. He also encourages the use of Yammer in XYZ. MS started actively using Yammer since the beginning of January 2015
AB	Division Head of Customer Service and Business Development, Division Head of Marketing Planning and Communication	AB is the division head with Indonesian nationality whosupervise two divisions. AB lead for new product development division that responsible to develop newfinancing products beside motorcycle product financing. AB has worked at XYZ for 9 years. AB actively using Yammer since the beginning of January 2015
AI	Area Marketing Manager (AMM) for Surabaya Area	AI is a Area Marketing Manager who led the marketing and sales in Surabaya, Sidoarjo, Gresik, Mojokerto, and Lombok Area. AI leads all business portfolio, ranging from a portfolio of two-wheel motorcycle financing and also other new product finacing . AI has been worked at PT XYZ for 15 years. AI actively using Yammer since the beginning of 2015.
DS	Customer Service Partner	DS is one of the branch staff who deal with the development of new business in the Kudus branch. DS responsibility is to develop a multipurpose financing portfolio (electronic and others) in the Kudus branch. DS has worked at XYZ for 10 years. DS began actively using Yammer since the beginning of April 2015 when the branch will start a new business.

Case Study Results

Virtual Collaboration for Coordination - A Case Study Results

Value added of virtual collaboration within the organization is the ability of technology that can facilitate members to connect and to communicate one to anotherswithin the organization. Virtual collaboration facilitate communication of individuals and groups within an organization and also communication between groups across the organization. Malone and Crowston (1994) defines coordination as relationship maintenance activity between interdependence actors across the organization. Coordination process begins with good organizational communication processes. Good communication process will accelerate time for decisionmaking process.

Virtual coordination and communication between groups at XYZ company is facilitated by the groupsmaking process on Yammer. Groups creation in Yammer facilitate oordination and communication of informations keep well diffused among the group members. In Stage of McMillan and Chavis (1986)Information Exchange, the formation of the group entered the third phase or stage of integration and fulfillment of needs. Groups creation in Yammer enable employees to choose and join with groups that have the same goals and interests with them, in order to create accelerationof learning process. For example, a branch office that wants to expand a new business can join a group that affiliated with the theme of the new business, become part of the group, ask questions or learn about a business process that occurs through the conversations that occur in groups.

One of the important key of communication of Yammer usage in PT XYZ isactive participation and transparency culture. Participation enables all members to express their opinions, put forward new ideas, which could replied or respond by other members. While transparency means that no information is concealed, as proposed by the MS as follows:

"One important key is The engagement and transparent. Company can create group based person, based sections and can also based ondivisions.But, If the group is too strong, it tend to be negative nurture culture of create and to fix something. Yammer can be one of the tools to work for the company rather than for the part of the department or part of division."

Another important key to create effective coordination is by developing horinzontal lines of communication. In Yammer, since the communication structure is open (anyone can read and access) and realtime (internet based), actions that are considered less responsive or less co-operative will create a negative perception, this process then trigger the speed to respond significantly in Yammer compared with communication via email, On the other hand, Kim (2001) stated that most members of the virtual community will provide assistance in the virtual community to have this personal satisfaction because it can contribute to the community and an ego boost to improve the well being imaging within the community.

Furthermore, the mechanism hashtag (#) to create a campaign program for the company and at (@) which refers to direct communication to colleagues will accelerate the escalation and decisionmaking to the highest level so as to accelerate the response in the decision making process as expressed by the AB and AI as follows:

"The picture we can create a borderless communications. Did not look at someone postion. Can easily know what kind of

phenomena that emerge on the lowest level. So that with Yammer, we have twoway of communication can be happen"

"Yammer is important for our business process and operation. So I can take actions in Yammer. In terms speed of processing. The response is faster than email. And it can be known directly by the management. If there something wrong, member can upload their problems in Yammer instead of email to get more quick response."

But from interviews result, researcher found that degree of organization openness is defined differently in the respective levels. At the top level, the expectations of organizational communication carried to be flat or horizontal. However, at lower levels there are still limitations of culture, habits and organizational structure. As noted by AB and AI as follows;

"But in organization view point, Yammer's challenge is cultural. Our culture stillvery related on the structure. What is written on Yammer might still write with full consideration and respect of the structure. Whether, What is written is will hurtothers feelings in front of his/her boss or friends. Whether the message will get approval from direct superiors, direct supervisor agreement or not "

Barriers for transparent communication can comes from team members's shyness to express their opinions. This awkward feeling arise as a form of horizontal organization in virtual collaboration. Therefore, all levels of the organization can discuss as equals in a virtual forum. For the lower levels, there is a feeling shy or embarrassed if what they reveal in the forum do not seem useful, as expressed by DS reinforced by AI as follows:

"I don't want to be careless with my posting. So every time I posted something I always thing about it carefully: will my post give benefit for my colleague when

they read it? I don't want to post something that unnecessary"

"They (refer to staff member) won't never post something outside XYZ new product activities, may be they are afraid..hmm to be precise they are embrrased , Javanese people have strong pakewuh (shyness culture). Almost every back office only gave respon when they would gave inspirative post such as I have done this. They are still awkward."

Virtual Collaboration for Learning Process - Case Study Results

The learning process is one of the key mechanisms to produce new knowledge and often a depiction of a collaborative relationship that exists between individuals within groups (Mohr and Sengupta, 2002). As a result, the orientation of organizational learning has significant implications for the level of innovation and competitiveness of the organization (Hughes et al, 2007, Paladino, 2008; Kohli and Jaworski, 1990). Further, Paladino (2008) revealed that it is important for organizations to continuously learn to improve and update their operational processes and the resources. Results of the learning process is to increase the organization's ability to adapt to changes in the business environment (Sinkula et al, 1997; Calantone et al, 2002).

Yammer as companies's virtual communities can increase work productivity in achieving the company's goals as it can act as the building block foundation of building a learning organization. Yammer facilitate a space for members to exchange informations and knowledges between the group members. For the case of XYZ company, Yammer act as platform that gather informations and knowledges about phenomena which occur within and outside the enterprise environment that have relevance to the business.

Yammer allow the sharing of knowledge and experience in the virtual community. Further in learning environments that are collaborative such as Yammer, employees are expected to actively search for informations, engage in discussions, discuss the answers, make input and answering other members questions (Vermann, 2000).

Yammer as a medium of organizations learning helped increase the dynamic capabilities of the company by providing platform for company's leader as well as the branches partner to provide a source of experience, learning resources and solution of the problems that occur between head quarter office with branch offices through the method of discussion and information sharing. Organization then should be able absorsed valuable informations and make it as learning materials for growing.

The organization's ability to learn is called the Absorptive Capacity or Absorption Organization (Cogen and Levinthal, 1990, p 128) that, if supported by the collaboration capabilities of the organization will create process efficiency internally. Yammer utilization supported by accessibility technologies accelerate the distribution and dissemination of knowledge in the organization. This is in line with the objective of utilizing Yammer delivered by MS as Business Development Director and Corporate Planning Director as follows:

"Yammer as one of the tools to work with the whole company not for one of company's part, not for the department, not for division. That one. For example if we want to create new business, this is one way to expand since we have many branch office. To expand new businesss we have to share success image from one branch to aanother branch. Usually we only use presentation. If we have success branch,

we use their presentation and give it to other branch but it will not be useful if we only send materials. With Yammer, since the beginning of trail, I am sure it can be share to all branches. What that means? It makes socialization easier. They will know all obstacle, why the branches success? How the become success. Since Yammer Is live, it makes easy to be socialized. So when we talk about new business just use social media."

In the case of XYZ company all speakers agreed that through virtual collaboration then Yammer can be a source of knowledge. A library of organization knowledge in which each member can share their knowledge (upload and sharing), storage resource if done in a structured knowledge as revealed by AB ,Head of Business Development Division as follows:

"In Several projects. I saw Yammer usage depend on how we set up the usage in the beginning process. If from the beginning we teach others member that useful information as basic knowledge for learning can be found here ,updated on Yammer and when it becomes habit thet will know where they can find knowledge… so we need new color, new team have to bring changes, for learning I think Yammer is like library. It can be seen as Company big Library, where people can looks through it, the key is simple, all member have to be eager to read, to search. Another important key is to have the information well structured so it will be convioniet for everyone to learn."

"Coordination and learn.. I think we can see the the success story from PT XYZ new products. Is Learn to discuss about coordination. Why new business, is that because in new business, we are talking about credit committee discussion process between central office/headquarters and branch."

Related to the distribution of knowledge. When each members sharing each other about their target achievement, the process of sharing will motivate each team members to enrich ideas and creativity among members so at the end it can support the achievement of common goal as suggested by DS :

"For example in other branches. If it's about job description. Especially if I look at the success of other branches that can reach high earning. What they do? How they do it so they get those earning? It is a proof that Yammer has positif side than negative side. The positive side of it that we can learn a lot from it, conduct more discussion. Everyone can use it, from BOD to regular staff like I am, everyone can contribute to give insight and no one will turn us down. But at the other side, if we see another branches success ..i think, O.. my God... We are not capable ..some kind of feeling is apearing Bu. Even sometimes, we too emberrased to post something. But, Once again the positive side we can learn and be motivate to be more success.. .. I have Bu. I already contact person in charge in Suarabya 1, Denpasar branch , purwokerto branch, and I share my experience with those branch through privat eYammer, yes , I do it several time"

Yammer as a information channel helps companies become dynamic as it help companies to: (1) environmental sensing or do market analysis faster. Yammer allow competitive conditions that occur can be immediately known by all companies and even by the company leader, (2) from the information obtained in the field, the company can seizing or make strategic changes to adjust the needs of the company, (3) Reconfiguration of process or creating better workflow.

In terms of organizational learning, there are differentiating variables that influence the effectiveness of the use of Yammer for learning, which is business portfolio variable. For a new product portfolio, it is easier for members to communicate, express opinions and seek information through Yammer. This is possible because since the beginning of all members are encouraged to utilize Yammer as a means of communication and information. This is in contrast with the financing portfolio of core business, since its establishment, in 1997 until now, the lines of communication already "familiar" through the medium of limited communication done in groups as expressed by the AB and amplified by the AI as follows:

"..... But if for old things. Old products. They usually used e-mail, phone, fuel, it quiet difficult to change those practice"

".... But there are still some contradictions. Although Pake X has stated that the marketing updates and sales no longer need to be done in group X. The branch activity and area is presented in the respective area of operation. But for several things which related to marketing can not be delivered to the operation such as about….."

Virtual Collaboration for Innovation - Case Study Results

The organization's ability to innovate depends on organization's ability to utilize all of its resources (Peteraf, 1993; Wernerfelt, 1984), includes the ability to learn from one another (Al-Kwifi, Ahmed, 2013; Inkpen and Crossan, 1995; Jones and Macpherson, 2006).

For Yammer, the technology allows XYZ company to conduct the learning process that is important for organizations such as raised by Turbull et al (1996), which stated that technology facilitate resource development through interaction between individuals in the network.

The innovation process in this case study is defined as the process of repair and

accelerating faster decision making as a better value. Here the process of innovation undertaken by PT XYZ emphasis on the process of learning by doing or learning by improving the efficiency of processes for the achievement of organizational goals, such as those raised by MS as follows:

"The second are Information sharing and discussion. These are second step. Oir company already reach at the beginning of stage two.. so the third step are decision making and corrective action. What is decision making? How Yammer affect decision making process? As an example usually we have to bring a document to our boss and ask their their approval, by doing that we always use a lot of paper but with Yammer the decision making process will be more transparent and fair. Another example is service process by staff. Let say CS staff in Jakarta have a good idea then he share it on Yammer and the same time CS at Surabaya can read and may be try to implement it at Surabaya Branch. Surveyor do the same thing. If one surveyor have an idea about service , he share it on Yammer, other Surveyor from other branch could replicate it and by sharing the knowledge , the surveyor has improved the process. Further I am thinking if all process already transparent and fair, do we still need SOP? SOP for process. An example when a surveyor visit consument and he tell all the things he know and have discussion with customer. Is it right thing to do? We will see the result. If this approach effective then we need SOP or guidance about surveyor checklist. We need to record our success and failure so the process could be transparent. .

We have to compare what success is for surveyor A, surveyor B and surveyor C then we have to analyse it. Once again do we still need SOP ? We should minimaze SOP usage because sometimes SOP quiet disturbing. I'm always say this SOP syndrome. Sometimes SOP disturb new invention process. Once again we have to minimize SOP usage, thingking about it again why since the beginning we need SOP? We also have to review is the SOP up to date?

"Efectivity can be define as profit because there is purpose behind it, our purpose is MVV (Mission, Vision, Values) and profit. For unstructured data such as social media. Sometimes is useless to search for number but you have to imagine, forward we can use data. As an example if one brach success and other unsuccess, we can examine their traffic, may be conversation if they have strong engagement. Strong connection. If one branch unsuccess may be it because their do not like to post and by seen it we can see the communication process inside the branch. Bad communication lead to unsuccess branch. It just one example how we use data. Another example is text mining but it have positive and negative side. We can take one branch as sample , we analyse it, when branch A talk about marketing division in another branch , our CS can get picture about branch character , that is the next step. If all employee use Yammer and all communication use Yammer if they find Yammer is easy to use."

Overall virtual collaborative role in the product development process can be described as follows

Table 2. Virtual Collaboration Role in PT XYZ New Product Development

| Virtual Collaboration Role	High Level of Organization	Middle Level of Organization	Low Level of Organization	Barriers
Cordination and Communication Within Organization	1. Engagement (participation) and transparency 2. More horizontal and level less discussion.	1. Engagement (participation) and transparency 2. Facilitator	1. Update activity 2. Update Process Development	• Shyness Culture
Organizational Learning Innovation Process	1. Decision making and Business Process Review	1. Effeciency of business process and operational.	1. Inspiring Success Story from others branches.	• Type of business portfolio

Conclusion

In virtual collaboration, members of the organization use information technology to connect and relate with each other, as members need assistance and collaboration with other members to achieve the goal. In the context Yammers utilization as company's social media, Yammer facilitates collaboration process by providing a space for people to connect with each other, to facilitate the process of communication and discussion, share and obtain relevantinformation to enrich their employment needs.

Input information obtained, whether the information comes from within or outside the organization will be used as a source of knowledge and will be reconfigured through virtual collaboration. Sharing and discussion process enables organizational learning and acceleraate the innovation processes and also make correction easily done, as illustrated below,

Picture 7. Virtual Collaboration Role in New Product Developemnt
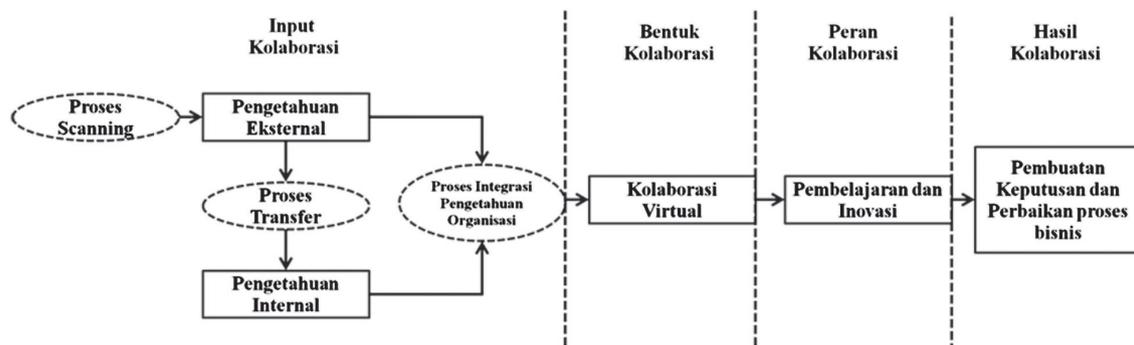
Through Yammer, organization has also become increasingly organic, where relationships distance between structure becomes increasingly unclear and horizontal.When the relationship created in the virtual community become more horizontal then the communication and coordination pattern will also become partipative. Here virtual collaboration using Yammer as organization's social media enable the creation of fun and enjoyable communication so that members from all levels comfortable to contribute.

One of company XYZ constraints while implementing Yammer for collaboration is accessibility for all members of staff. There is only 20% of organization members who joined the Yammer. Moreover high degree on reticent culture or "ewuh pakewuh" (shyness) especially at bottom level staff makes the process of duffusion of information and discussion

still not running optimally. In addition to cultural, business portfolio also affect the effectiveness of Yammer as a collaboration tool virtual. In the portfolio of the existing financing business, for a dozen years, the organization's members have become accustomed to communicate through the media that are two-way and exclusively such asthe utilization of group messenger like BBM, email and telephone. The usage of these kind of media is considered more convenient since in the existing financing business portfolio have policies that are considered as sensitive policy.

Recommendation

Although, there is a positive correlation between an individual's participation in a virtual community with business process improvement in company XYZ. Yammer 's roles as a source of knowledge and organizational learning are still too broad to get a generalization circumstances that occur in a corporate environment. Because of Yammer 's nature that high in accessibility then individual will tend to only share good events on Yammer so the real condition especially condition that related to threat in the industry as well as internal problems that currently exist will be covered in order to get high in individual valuation in the eyes of members of the group.

In order to success, companies should find a method of sharing or honest discussion (not only good news but upload Also bad news come first) so that the codification of the experience and knowledge gained from the field can be used as a valid source for changing organizational experience and become dynamic. Furthermore, the company XYZ will also need to apply consistent use of Yammer as a means of virtual collaboration at all businesses portfolio to encourage achievement of continuous improvement process.

Note on Contributor

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