

Knowledge Management & Business Intelligence for making best decisions

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Abstract— The purpose of this paper is to provide an analysis of how the use of business intelligence for knowledge management can lead to the right decision and consequently to create value in the company. In fact, business intelligence plays a major role in knowledge management.

Keywords— knowledge management, business intelligence, making decisions, watch behaviour, influence, protection.

I. INTRODUCTION

Competition leads firms to create a suitable value in order to increase or at least to maintain their market share. Otherwise companies may risk to be confronted to crisis and to lose the economic war. In this context of perpetual changes and to avoid getting into a dead end, knowledge management combined with business intelligence will be the insurance of the survival of any company. It will be the key to help firms reducing the complexity of the environment, making best decisions and as a result creating value.

To make strategic decision, company ought to have the appropriate information which arrives through the awareness behaviour. Awareness represents the basis of a business intelligence approach. Subsequently, the knowledge management process insures the transformation of the collected data into useful information to enhance skills and to enrich experiences. As a result, we notice that business intelligence combined with knowledge management leads to relevant decision. In fact, business intelligence is realized through three main activities which are the awareness activity, the protection activity and the Influence activity. These activities prepare, support and continue the process of knowledge management to rich finally the expected result by taking the best decision.

This paper aims to show how the use of business intelligence for knowledge management is the basis of making the right decision. It will explain how the awareness activity is preparing the knowledge management, how the protection activity is accompanying the knowledge management and how the influence activity is crowning the knowledge management process.

II. CONCEPTS DEFINITION

Before studying the connection between the business intelligence and the knowledge management, we have to define these two concepts.

“Knowledge management is the explicit and systematic management of vital knowledge and its associated processes of creating, gathering, organizing, diffusion, use and exploitation. It requires turning personal knowledge into corporate knowledge that can be widely shared throughout an organization and appropriately applied.”(Skyrme, 1997 cited by De Brun, 2005, p5)

Indeed, “knowledge management is a conscious strategy of getting the right knowledge to the right people at the right time and helping people share and put information into action in ways that will improve organizational performance” (Goel,Rana,Rastogi, 2010, p2).

Also, “Knowledge management is a key approach to solving current problems such competitiveness and the need to innovate” (Mentzas, 2004 quoted by Wickramasinghe 2006, p559).

Concerning the business intelligence we refer to the definition made by Martre report (1994), which states that business intelligence is a set of coordinated actions of research, treatment and distribution of information in order to use it by economic actors. It's required in order to develop and implement a coherent strategy and tactics necessary to achieve the objectives set by the company in order to improve its position in its competitive environment.

Moreover, Massé and Thibaut (2001) argue that to adopt business intelligence behaviour, it's imperative to put yourself in the place of others to see what you represent for them, to predict their reactions and to understand their appreciation and perceptions. It's essential to ask ourselves” if I were them, what would I do? ". Also, it's very important to get into the heads of others: “If I were them, what would I do?”

Here we can notice the concept of guidance because business intelligence controls the direction of knowledge by pushing it into reactive and proactive actions. Business intelligence fosters a spirit of conquest powered by knowledge.

Besides, Massé and Thibaut (2001) consider that with the multiplication of signals, business intelligence is a process that involves sorting all the collected information and to select those that are relevant. After that, it's necessary to disseminate, to treat and exploit them by discussing and improving them inside organization.

“Both business intelligence (BI) and knowledge management (KM) have been promoted as enhancing decision-making and ultimately improving business value” (Vinekar, Teng & Chennamaneni, 2009, p 143)

At this stage, we will study the connection between the knowledge management and each activity of business intelligence.

III. HOW AWARENESS IS PREPARING THE KNOWLEDGE MANAGEMENT

As maintained by Massé and Thibaut (2001), with all this signals, business intelligence is a process that involves sorting all the collected information and identify those that are relevant, to disseminate, to treat or exploit them, by discussing within the organization. Moreover, Larivet and Brouard (2007) argue that awareness aims to anticipate threats and opportunities in order to reduce uncertainties in making decision in a world that is characterized by constant change. Awareness is powered by the cycle of information which consists on identifying needs, collection, analysis and dissemination of the information. We can find an evident similarity with the definition of knowledge management process as stated by Albert (1998) cited by Anand and Singh (2011) “KM process is the process of collecting, organizing, classifying and disseminating information throughout an organization, so as to make it purposeful to those who need it”. (Anand and Singh, 2011, p 933)

These practices are impregnated by the art of war as can be seen with Sun Tzu (1772), who considers that it’s imperative to take advantage of everything we see, everything we hear, neglects nothing to acquire new knowledge to realize our objective. This leads us to say that for centuries, knowledge is acquired through a business intelligence process, especially through the awareness behavior.

As stated by Massé and Thibaut (2001), information is somewhere, but rarely where it is needed, the awaken function will be used to organize the collection, the selection and the dissemination of information treated in order to facilitate strategic decisions of the firm. So that, we must emphasize the importance of vigilance which allows employee to perceive warning signs of possible changes in order to react rapidly to preserve the viability of the firm. The awareness is used to locate and discover all kinds of information and weak signals that can be useful in the present or in the future. Thanks to the awareness behaviour, the receiver will have everything he needs to create knowledge through his intelligence, skill and experience.

Larivet and Brouard (2007) argue that the awareness is a process by which an organization listens to its environment to decide and act in the pursuit of its objectives. In fact, the company must always be vigilant and on the lookout for any information before their competitors in order to ensure a sustainable competitive advantage. The information presents the fuel of any decisions. Beside the information that a company may find it can also detect weak signals that could make a difference in the future.

It is essential to have the right information at the right time possessed by the right person to make the best decision with the lower cost. If one element is not checked the decision made by the firm will be subjective. This neglect can lead the firm to lose a great opportunity that another firm could seize which will generate a substantial loss to the company.

As maintained by Bellon (2002), business intelligence seeks to detect weak signals given by customers and competitors in order to anticipate the future evolutions. In fact, through business intelligence, company attempts to understand the environment in his several sides political, economical, social, technological, ecological and legal in order to act better and make a better decision. This information should be obtained legally.

Due to the networking, company will be able to collect information and knowledge. In fact, as maintained by Marcon and Moinet (2000) quoted by Phanael (2008), the network is the ideal instrument for low signal treatment and for the noise from an intention. Network and strategy are always present in the definition of business intelligence.

In order to create knowledge within the company and manage this knowledge, business intelligence is required through the awareness activity, which means that the awareness behaviour prepares and enhances necessarily the knowledge management.

According to Frioui (2006), the awareness generates three possible actions: flexibility, responsiveness and innovation. Flexibility is the ability to adjust existing systems, the reactivity is the ability to be ready for any opportunity, and innovation is to create a product or service that generate added value. Reason why the awareness behaviour presents the only way that makes information arrives to the company in order to be exploited and turned into knowledge. This knowledge is developed through different data which has found meaning in a specific time because every decision requires the mixture of information and expertise, combined these two elements contribute to an optimal decision.

In fact, with the awareness behaviour, Knowledge will be nourished which improves skills and as a consequence promotes innovation and flexibility within the company. That’s why competitiveness requires the awareness of employees. So business intelligence approach combined with knowledge management contributes to the efficiency and effectiveness of the firm and consequently its performance.

IV. HOW THE INFLUENCE IS CROWNING THE KNOWLEDGE MANAGEMENT

According to Larivet and Brouard (2007) the influence function aims to modify the environment through informational pressures. The discouragement of rival firms consists on scrambling their intelligence system to mislead or paralyze them. From here, we can understand the major role played by the employees in a company.

Indeed, employees are supposed to use their knowledge to influence the different stakeholders.

as maintained by Bianchi in the manual of business intelligence (2012), the influence Actions are a deliberately

activities using all means, information, signals and interpretations, whose purpose is to create, maintain or change the behavior of a person, group or organization in order to achieve the objectives or to defend the interest of its author, this use of power and / or authority.

This capital of knowledge is formed and enriched by awareness activity and will be used to influence others. For example, the traditional channels of advertising can influence the receptor through a marketing strategy playing on the text, the color and the images. Also, a company can react if it notice that there is a threat coming from a substitute products or from competitors by circulating a message that states the existence of a competitive advantage compared to the alternative products. In fact, several actions of manipulation are done now through social networks such as facebook, twitter or blogs, etc. Moreover, company can use its knowledge to influence suppliers and push them to offer a lower cost.

As maintained by Eric Dacheux quoted by Leonetti (2008), a persuasive communication is a communication whose primary purpose is to persuade and to cause a change in thinking or in behavior, in the direction advocated by the author of this communication. Leonetti (2008) argues that each firm can influence others by a prestigious image of itself in order to raise their submission. The firm can also influence by propagating speech which must be convincing to build the support of others that's why the influence remains an indirect strategy.

In fact, influence is a planned action which starts with collecting information, transforming it into knowledge, choosing a target and spreading the message by all the possible channels in order to influence or even manipulate people. A successful influence action must convince the targeted population and in the same time avoid that they feel manipulated. The receiver of the message should feel that he is the master of his choice. This reveals the importance of a successful combination of economic intelligence approach to the process of knowledge management.

According to Leonetti (2008), knowledge is the material for the new economy and it's a factor of competitive advantage. It can even be used in a subversive approach which involves the destabilization by information.

Firms should preserve their production capacity as well as their reputation and expertise. In some circumstances, it will find itself obliged to use influence actions. Indeed, as stated by Breillat (2004) the influence is the ability to anticipate events by modifying the course by lobbying, by local and international influence or by the counter influence.

Knowledge is created in order to make a difference. To achieve this goal, the business intelligence crowns the knowledge management process by the influence and counter influence actions. Currently, influence occupies a major role in order to face this harsh competition because it's based on conviction. Besides, as maintained by Alain Juillet quoted by Leonetti (2008), the manipulation of information is the result of influence strategies and conducted by realistic, proactive and devoted actors in order to preserve their economic and

industrial interests. In consequence, knowledge is used to persuade stakeholders due to the influence activity of a business intelligence approach.

V. HOW PROTECTION IS ACCOMPANYING THE KNOWLEDGE MANAGEMENT

It is undeniable that protection has a major role in the continuity of the firm. In fact, every company has the obligation to supervise its wealth in terms of knowledge.

To be the first to unearth information, the first to innovate, the first to have a competitive advantage is far from being sufficient. Each company should know how to maintain and preserve this advantage otherwise it will be stolen by competitors. For this reason, the first golden rule is to protect its sensitive information. Each company must keep the knowledge hidden from competitors. As long as the secret that has contributed to the success of a company whether in terms of price or quality remains hidden it will keep its place ahead of competitors. As maintained by CETISME program members (2003), all firms have important information that must be protected. In case of loss or disclosure of such information, the consequences can be severe for the firms, particularly in terms of image, lower turnover and loss of market share.

Firms must secure its premises, control the entrance to the company and protect the stored information, but also it's imperative that firm sensitizes its staff to be aware of the importance of their knowledge and that they should always be careful not to fall into the trap that a competitor can make because competitors give significant interest for the knowledge and the ideas of employees. So, it's not sufficient to protect only the written information whether on paper or in computers. That's why external threats should be taken into consideration, it consist mainly on hacking or on industrial espionage. According to Larivet and Brouard (2007), the function of protection is used to protect information held or issued by the company, including their appropriation by competitors. On the other hand, the company must inform its employees of the penalties that such action of disclosure may cause.

Also, CETISME program members (2003) argue that each company has the duty to protect its staff and to ensure the security of information that affects their lives. According to them, there are studies which have shown that staff is sometimes responsible for more than half of the incidents of leaks of information. The company must constantly remember that dissatisfied employees can easily leave the company and work for a competitor. In this case, the knowledge will be employed by that competitor. In order to protect its intangible assets, each company must guarantee the satisfaction of the staff to ensure that such incidents will never happen. Being satisfied, the employee will ensure that the company remains viable to guarantee his career progress and his stability. As a result, it's crucial that the protection activity which stem from the BI approach accompanies knowledge management process in the firm.

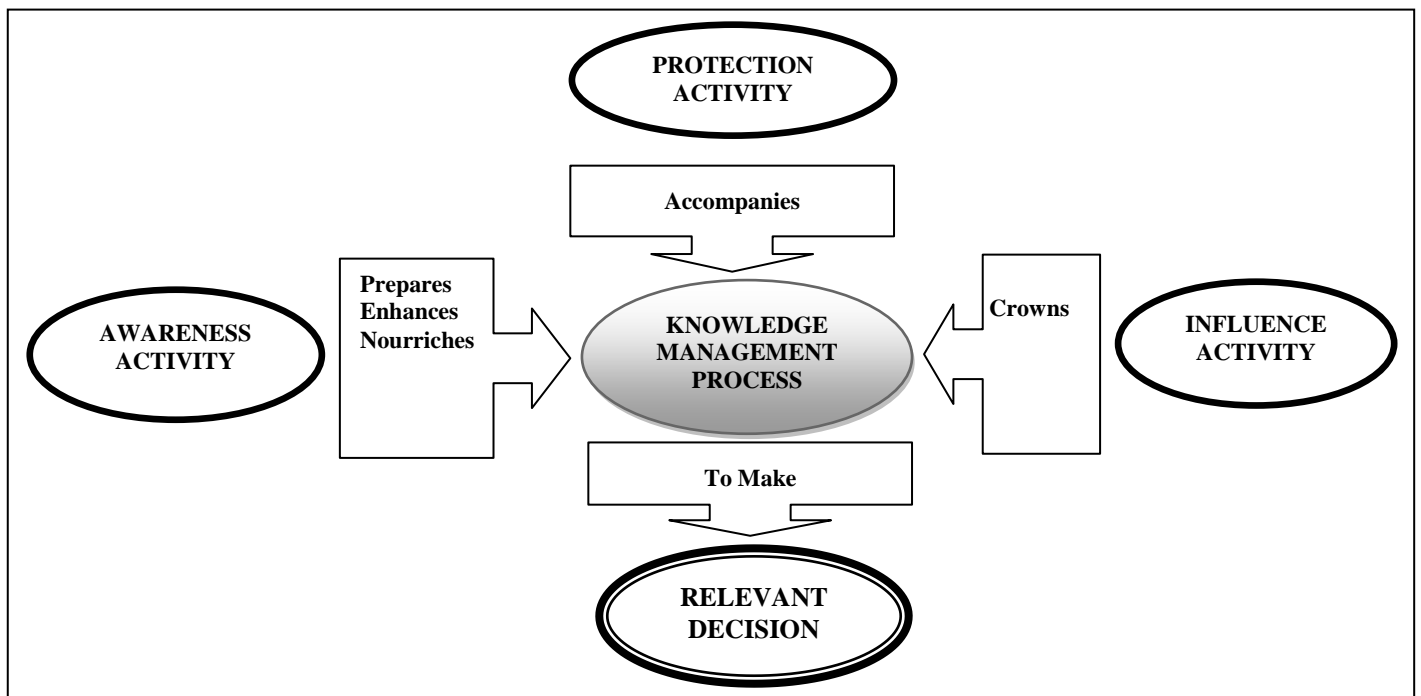


Figure1: Our perception of the connection between Business Intelligence & Knowledge Management.

VI. CONCLUSION

In the current context of globalization, with all the competitors that are more and more aggressive, the ability of a firm to understand its environment in order to anticipate the changes represents a primordial factor of success.

This success depends on a business intelligence approach which is impregnated by the good practices of knowledge management. Each company should have a competitive spirit thinking that if it is second in the market it should be the first, and if it is first it should at all costs maintain its rank but in a legal way and not to fall in economic espionage.

In the light of this analysis, it is clear that nowadays, every company must adopt a business intelligence approach that is based on knowledge. Because knowledge is prepared and nourished by the awareness activity, protected by the protection activity and finally used by the influence activity in order to persuade or even manipulate the stakeholders and to make a relevant decision.

With this successful conjunction between the knowledge management and the business intelligence, every company can ensure its viability and outpace its competitors.

However, the success of each firm depends largely on its human factor. For this reason, it's crucial to emphasize the importance of the sensitization of employees to the business intelligence approach in order to achieve the desired goals. In fact, each action or reaction of each employee emerges from a

distinct behavior which depends on a variety of explanatory factors. As a consequence, it will be very useful to grant an importance to the quality of the staff and sensitize them in order to optimize the human performance in the adoption of knowledge management process impregnated by business intelligence approach.

REFERENCES

- [1] Albescu, F., Pugna, I., Paraschiv, D., (2008), "Business Intelligence & Knowledge Management – Technological Support for Strategic Management in the Knowledge Based Economy, Academy of Economic Studies, Bucharest, România Revista *Informatica Economică*, nr. 4, pp.1-8.
- [2] Apurva, A., Singh, D., (2011), "Understanding Knowledge Management: a literature review", *International Journal of Engineering Science and Technology (IJEST)*, Vol. 3 No. 2, pp.926-939.
- [3] Algorta, M; Zeballos, F., (2011), "Human resource and knowledge management: best practices identification", *Measuring Business Excellence*, Vol. 15 Iss: 4 pp. 71 – 80
- [4] Bellon, B., (2002),., quelques fondements de l'intelligence économique, centre de recherches ADIS, pp.1-20.
- [5] Breillat, J., (2004),., modèle AFDIE, pp.1-4.
- [6] Boumard, P., (1997), Conceptions françaises et anglo- saxonnes des affrontements économiques, séminaire CFR à l'école polytechnique, pp.1-19.
- [7] Callot, P., (2006), intelligence économique et PME : le paradigme de l'intelligence perceptuelle, la Revue des sciences de gestion, direction et gestion n°218-stratégie, vol.41, pp.61-71.
- [8] Cody, F; Kreulen, T; Krishna, V; Spangler, S, (2002), "The integration of business intelligence and knowledge management", *IBM Systems Journal*,; 41, 4; ABI/INFORM Global, pp 679- 713.
- [9] De Brún, C., (2005), NHS National Library for Health: Knowledge Management Specialist Library, 68 pages.

- [10] Dugage, M., (2008), « organisation 2.0 : Le knowledge management nouvelle génération », Eyrolles editions d'organisation, collection stratégie, 263p.
- [11] Elias, N; Wright, A, (2008), "Using Knowledge Management Systems to Manage Knowledge Resource Risks", (Advances in Management Accounting, Volume 15), pp. 195 -227.
- [12] Fahmi, I; Vivien, R., (2010), "Unpacking Knowledge Management: Management Fad or Real Business Practice?" Enterprise Risk Management, Vol. 2, No. 1: E2, 16 p.
- [13] Filemon, A., Uriarte, JR., (2008), "Introduction to Knowledge Management", supported by National Academy of Science and Technoogy, ASEAN Foundation, 179p
- [14] Frioui, M., (2006), «Le cadre institutionnel et la problématique managériale. Cas vivants de management », Yamama, 164p.
- [15] Gaha, C; Mansour, N., (2004), « Le management des connaissances : la structure et la stratégie des ressources humaines comme leviers d'exploitation et d'exploration », *Gestion*; Summer; 29, 2, 19p.
- [16] Goel, A; Rana, G;Rastogi, R , (2010), "Knowledge Management as a Process to Develop Sustainable Competitive Advantage", South Asian Journal of Management;; 17, 3; 13pg.
- [17] Harbulot, C. et al., (2012), Manuel de l'intelligence économique, collection Major, éditions PUF, 408p.
- [18] Herschel, R., Jones, N., (2005), "Knowledge management and business intelligence: the importance of integration", Journal of Knowledge Management, Vol. 9 No. 4, pp. 45-55.
- [19] Jakobiak, F., (2004), l'intelligence économique, la comprendre, l'implanter, l'utiliser, Éditions d'Organisation, pp.1-16.
- [20] Larivet, S., Brouard, F., (2007), stratégies des PME et pratiques d'intelligence économique et de veille stratégique, communication soumise à l'académie de l'entrepreneuriat, pp.19.
- [21] Leonetti, X., (2008), « Etat, entreprises, intelligence économique, quel rôle pour la puissance publique ? » Thèse pour le doctorat en droit, 553p.
- [22] Lowendahl, R; Revang, O; Fosstenlokken, M., (2001), "Knowledge and value creation in professional service firms: A framework for analysis", Human Relations; 54, 7, 21pg.
- [23] Martre, H., (1994), « intelligence économique et stratégie des entreprises », Commissariat général du plan, la documentation française ,167p
- [24] Massé, G., Thibaut, F., (2001), « intelligence économique : un guide pour une économie de l'intelligence », édition de Boeck université, 359p.
- [25] McCampbell, S; Moorhead, C; Howard, G. (1999), "Knowledge management: the new challenge for the 21st century", Journal of Knowledge Management, Vol. 3 Iss: 3 pp. 172 – 179.
- [26] Phanael, D (2008), intelligence économique et réseau: quelle configuration est mobilisée par les 'PME-PMI' ? systèmes d'information et management, N°3, vol.13, p.p 11-21.
- [27] Sun tzu., (1772)., « l'art de la guerre », 73p.
- [28] Vorakulpipat, C; Rezgui, Y., (2008), "Value creation: the future of knowledge management", The Knowledge Engineering Review, Vol. 23:3, 283–294.
- [29] Vinekar, V., Teng, J., Chennamaneni, A., (2009), "The Interaction of Business Intelligence and Knowledge Management in Organizational Decision-Making", *Journal of International Technology and Information Management, Volume 18, Number 2, pp 143-159.*
- [30] Wickramasinghe, N., (2006), « Knowledge creation: a meta-framework », *Int. J. Innovation and Learning, Vol. 3, No. 5, pp558-573.*
- [31] Wickramasinghe, N., (2003), "Do we practise what we preach? Are knowledge management systems in practice truly reflective of knowledge management systems in theory.", *Business Process Management Journal*; 9, 3; 22 pg.
- [32] Intelligence économique et stratégique, les systèmes d'information au cœur de la démarche mars 2003, cigref p131.
- [33] Guide européen de bonne pratique de gestion des connaissances, chapitre 4 : gestion des connaissances & mesure, Mars 2004, p43
- [34] Intelligence économique: un guide pour débutants et praticiens, CETISME, 2003, 97p.