E-Commerce : Improving performance of Customer Knowledge Management

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ABSTRACT

Knowledge management is an increasingly important source of competitive advantage for organizations. Knowledge embedded in the organization's business processes and the employee's skills provides the firm with unique capabilities to deliver customers with a product or service. Information technology tools are useful for managing knowledge. Knowledge management software, including accounting software packages, groupware products, and document management systems enable companies to realize and access corporate knowledge that has accumulated. Customer knowledge has been increasingly recognized as a key strategic knowledge resource in organizations. This paper addresses these problems by researching knowledge management in e-commerce and identifying strategies that are currently in use. It will demonstrate how companies can benefit by adopting strategies that harness the potential of knowledge management technologies to transform their e-business activities. Further define customer knowledge management as well as provide an overview of it in e-commerce.

KEYWORDS

Customer knowledge Management, Customer Relationship Management, WAP.

INTRODUCTION

Knowledge management is a business concept, which includes concerted, coordinated, and deliberate efforts to manage the organization's knowledge through the processes of creating, structuring, disseminating and applying it to enhance organizational performance and create value. Creation of knowledge refers to actually knowing consumers and partners to practice the business strategy of Right communication and Right relationship at the Right time with the Right consumers and business partners with the Right E-Tools[14]. Sharing of knowledge refers to the tools and processes for Light Speed communication about best practices among business relationship managers inside the corporation. The knowledge management strategy of an organization is predicated on shared learning, collaboration, and the sharing of knowledge. Furthermore, it is based on the belief that significant organizational productivity improvements can be achieved through retaining and reusing knowledge across the organization. E-COMMERCE technology and strategy encompasses the processes of Knowledge Management. An organization's e-commerce and knowledge management strategies should complement each other because success in a competitive marketplace depends critically on the quality of knowledge that organizations apply to their key business processes. The e-commerce landscape contains two major parts, customer-oriented and business-oriented activities, both of which must be supported by a huge technical infrastructure. Knowledge management needs and uses a variety of technologies to provide all its necessary capabilities. Therefore, several categories of technologies will be required to provide an overall solution. The vital goal of building ebusiness strategy is to address the way of how Internet technologies can support the organization and give competitive advantages through the configuration of its available resources to meet the needs of the market and customers, as well as support the Customer Relationship Management (CRM) and Supply Chain Management (SCM) [1]. Organizational Knowledge Base is one of the essential components for building successful e-business strategy project in any firm, because it contains data, information and a set of knowledge assets about the firm. Thus, the firm must depend on and use this source as an elementary step to perform some of the strategy tasks easily and efficiently [4]. Creating e-business strategy based on four stages: 1) Initiate, 2) Diagnose, 3) Breakout, and 4) Transition [2].

The main objectives of the knowledge management environment in an e-commerce-based organization are as follows. First, to provide effective and timely access to corporate knowledge at all levels - strategic, tactical and operational. Second, to transform the diverse organizational members, with specialized skills and experience, into a knowledge work community of practices. And lastly, to enable evidence and/or knowledge based decision-making at all levels -- strategic, tactical and operational - to improve the quality and timeliness of the decisions made.

ROLE OF KNOWLEDGE MANAGEMENT IN E BUSINESS

E-business is wide term means the use of all IT capabilities in business, it does not mean only buying and selling (ecommerce) it also includes other business processes such as serving customers/suppliers and managing their relationships
In the new millennium, most companies are setting up or expanding new e-commerce systems (which is conceptualized as a subset of e-business systems), hence seeking new capabilities for managing Web-based interactions with their suppliers, partners, and customers. The primary uses of such e-commerce systems have been to provide effective coordination between (a) the purchasing operations and its suppliers; (b) the logistics and transportation providers; (c) the sales organization and wholesalers or retailers who sell their products; and (d) the customer service or support and the customers. One of the key ingredients necessary for the success of the above uses is the continuous availability, accessibility, and application of the appropriate organizational knowledge within these e-commerce systems. These include knowledge of many different types such as business processes, business rules, customer profiles, products, problem solving, and expert insights. Executives in leading organizations are increasingly recognizing that in order to maintain or gain competitive advantages, organizational knowledge needs to be managed for and integrated with their corporate e-commerce systems. Organizational knowledge, also known as the intellectual capital, is a pivotal corporate asset, and therefore, organizations require an infrastructure to create, structure, disseminate, and apply the knowledge at the right time to the right people or to the right e-commerce applications.

Organizational knowledge base means Explicit Knowledge available in the firm and tacit knowledge (e.g. Managerial Expertises, experiences which reside in the minds of its owners) should used in those stages in order to help the project stakeholders to participate and perform all e-business strategy tasks efficiently [3], [4]. Formulating new e-business strategy for any organization is a duty of high-level management (Executive Managers) [7], to allocate the required resources to carry out the project successfully. Resources are as follows: 1- Tangible Resources. E.g. Mainframe. 2- Intangible Resources. E.g. Knowledge Assets (HR). E.g. Web Designer. The most valuable required intangible resource for strategies is knowledge [7]. In e-business, knowledge also is the most strategically important resource [12], such as products’ specifications, trademarks, production and operations management expertises, customer and supplier relationships records, organization culture, policy, and reputation [6].

RELEVANCE OF KNOWLEDGE MANAGEMENT IN E-BUSINESS

There are three key points about knowledge management as relevant to the new world of e-business [9].

Knowledge management technologies can deliver the right information to the right person at the right time. This idea applies to an outdated business model. Information systems in the old industrial model mirror the notion that businesses will change incrementally in an inherently stable market, and executives can foresee change by examining the past. The new business model of the Information Age, however, is marked by fundamental, not incremental, change. Businesses can't plan long-term; instead, they must shift to a more flexible "anticipation-of-surprise" model. Thus, it's impossible to build a system that predicts who the right person at the right time even is, let alone what constitutes the right information.

Knowledge management technologies can store human intelligence and experience. Technologies such as databases and groupware applications store bits and pixels of data, but they can't store the rich schemas that people possess for making sense of data bits. Moreover, information is context-sensitive. The same assemblage of data can evoke different responses from different people. Even the same assemblage of data when reviewed by the same person at a different time or in a different context could evoke differing response in terms of decision-making and action. Hence, storing a static representation of the explicit representation of a person's knowledge -- assuming one has the willingness and the ability to part with it -- is not tantamount to storing human intelligence and experience.

Knowledge management technologies can distribute human intelligence. Again, this assumes that companies can predict the right information to distribute and the right people to distribute it to. And bypassing the distribution issue by compiling a central repository of data for people to access doesn't solve the problem either. The fact of information archived in a database doesn't ensure that people will necessarily see or use the information. Most of our knowledge management technology concentrates on efficiency and creating a consensus-oriented view. The data archived in technological 'knowledge repositories' is rational, static and without context and such systems do not account for renewal of existing knowledge and creation of new knowledge.
BENEFITS OF KM TOOLS INTO E-BUSINESS INFORMATION MANAGEMENT

KM tools are all technologies and resources that enable the knowledge transfer, generation, and codification [4]. It does not mean that all KM tools are computer-based applications; knowledge can be transferred via phone calls [10]. The following are possible benefits of KM tools for e-business information management:

Organize and Evaluate Customers’ and Suppliers’ Requirements and Relationships (Customers-Suppliers Oriented Trends)

Questionnaires as a tool for gathering data and information are one of the common methods to get information. But getting information is nothing new to organizations [12]. The classification and evaluation processes are based on all gathered information from customers, suppliers, and partners such as satisfaction, suggestions, recommendations, and requirements. Knowledge Base System (KBS) is KM tool to organize a collection of information and evaluate them in such way to be ‘knowledge’. The importance of this process is to enable the organization to respond and make correct decisions toward the customers’ or suppliers’ demands. This is the first step for organization changes ‘new strategy’[10], [11]. For example: after classifying the knowledge related to customers’ feedbacks, the organization found out that, customers do not receive up-to-date information about new products, prices, and offers. That would make the organization think about “new marketing” tool to improve the promotion, such as e-Brochures or e-Mail marketing.

Support the Decision Making Process (Forecast) KBS for existing customers and suppliers helps the organization to keep update their needs (Declarative Knowledge), as well as benefit from the internet technologies as KM tool such as search engines, also capable the organization to capture more information about the market competition, new customers’ demands, customer’s demographics, competitors, etc. (Behavioural Knowledge). Declarative and behavioral knowledge will support the decision makers (executive management) in the following benefits [8] in order to structure the organization on internet:

1. Select appropriate e-business model.(Initiate step for e-business strategy)
2. Suitable e-marketing plan.
3. Predict the size of competition after implementing e-business system as global tool for business.

Filter and Store All Organization’s Knowledge in Knowledge Repository- (Organizational Trends)

Knowledge repository stores the processed information that are captured, organized, filtered, and evaluated and save them as knowledge, as well as store all knowledge that are related with other organization’s strategies such as marketing strategy and Information System (IS) strategy [11],[13]. Knowledge repository makes the process simple for employees to save, retrieve, access, and organize all knowledge. These three benefits prepare the basic infrastructure to formulate e-business strategy, and identify where we can practically benefit from knowledge in the building process. They show KM value chain components begin from creation to storage and distribution of knowledge.

THE CONTRIBUTION OF KM IN E-BUSINESS STRATEGY STAGES

According to[5],[10] there are numbers of well-known international organization integrate KM in e-Business activities such as Sun Microsystems. As mentioned before, building e-business strategy is based on four stages as follows:

Initiate Stage

According to [2] the objectives of this stage are:
1. Outline project scope.
2. Identify project stakeholders.
3. Determine project schedule.

Project scope and schedule tasks deal with data and information nothing tangible “no deliverables”, they are about prediction and general study [10]. KM has extremely significant contribution for these two tasks because both depend on gathered data/information ‘Declarative Knowledge’ about customers and suppliers, as well as ‘Behavioral Knowledge’ about organization documents, market competition, and prediction for deliverables. All these tasks can be performed effectively by the following KM tools:

- Organizational knowledge base.
- Knowledge mining.
- Knowledge determination.

For identifying project stakeholders’ task, there is also significant role of KM. According to [3] KM is one of three key enablers to manage the relationship between stakeholders. Knowledge transfer sticks the stakeholders together and assists the creation of the value proposition. Knowledge repository has all required knowledge which enables the firm to identify the affected customers, employees, suppliers, departments, public and private sectors in the new system.

Diagnose Stage
The purpose of this stage is to find out strengths; weaknesses, opportunities, and threats (SWOT) of the current business strategy [13], which can be done by: 1) Analyzing the organization position among its competitors, and 2) Revises the current strategy in order to understand the current relationships between the organization and its suppliers and customers [2].

To analyze and assess the current organization position there are some analytical tools can be used that enable the firm to assess its position. Small-size firms can use industry analysis, medium/large-size can use supply chain analysis[1],[2],[13]. For customers’- suppliers’ relationships there is a tool called Customer/Supplier Life Cycle enable the firms to evaluate its relationships [13]. All tasks in this stage need organizational knowledge base and knowledge repository to be carried out, because they are about the current state of the organization which means no need for gathering data/information and no predictions as well for the future behaviors.

Breakout Stage

The objective of this stage is to derive a new strategy (ebreakout strategy) from the overall business strategy to match the organization goals. E-business strategy could be dependent or independent on other organization’s strategy. That is why it is recommended to understand the relationship between the proposed e-business strategy and other adopted strategies before creation [1],[3]. New e-business strategy should be ready to form based on (Diagnose Stage) the assessment of organization strategy (SWOT) and analysis of its position [2], these both are intellectual assets of the organization. The derivation process of the new strategy is duties of project manager for allocating staff, distributing tasks, identifying IT requirements, adding/deleting new features to optimize the corporate overall business strategy, satisfy SWOT deficiencies[7]. Furthermore, the responsibilities of the project manager deal directly with the human dynamics of the corporation and concerned on the required technology. In conclusion, building e-business strategy is about converting the corporation’s intellectual assets (Knowledge) into a new roadmap of what the corporation needs to do, by re-arranging the corporate business strategy based on IT infrastructure. According to [15] the main role of Chief Knowledge Officer (CKO) is to convert knowledge into valuable profit by managing and controlling the corporation’s intellectual assets.

Transition Stage

In this stage, the firm has to implement the proposed roadmap of the new strategy. Transition means that the firm will move from current state to the proposed state, this movement will be supported by new resources and capabilities [2]. In this case, it is recommended for firms to carry out gap analysis in order to avoid the changes, risks, and conflicts between the current and new strategy to understand and identify the differences between them[5]. The key role of KM in this stage is vital and valuable. KM is necessary to measure the organization’s ability for implementing the new strategy. Knowledge as intangible resource of the organization comprise of organization’s culture, policy, business processes, and HR experiences, will capable the corporation to assess itself by assessment tools (e.g. risk or change readiness analysis) to know if the corporation has the ability to cope with the changes of the new strategy, and able to alter or not, and critically determine all areas of changes in order to manage these changes.

ROLE OF CUSTOMER KNOWLEDGE IN THE E-BUSINESS ENVIRONMENT

In the current Internet-based business environment, the areas of contact points between companies and customers are expanding rapidly into cyberspace on the Web. Customer knowledge has been recognized as a critical asset for gaining a competitive advantage. Customer knowledge concerns not only customers’ needs and transactions but also decision processes and task results of a company. Customer-centric knowledge or customer knowledge is useful for CRM. Customer knowledge can be conceived as an intellectual asset to achieve the strategic goals of the organizations. Even if all the organizations have same information about customers’ trend of preferences or complaints, their responses may be diverse and the customers’ evaluations on the responses may also be different from each other. The results of the responses and the evaluations can be useful for similar situations occurred in future. Therefore, the customer knowledge should reflect those valuable results. This knowledge is expected to play an important role in satisfying the customers and retaining them.

In the Web-based environment, customer knowledge can be created from the various sources which include those outside of an organization. The knowledge sources can be divided into two categories: an integrated customer network and an information alliance network[16]. The integrated customer network contains contact points to the customers. In order to obtain effective customer knowledge, various contact points such as transaction channels and call centers are integrated into a network. Furthermore, this network should be integrated with customer databases. The information alliance network provides sources related to the customers’ credits, economic trends, or surveys on customers. This network is developed by the alliance with special information providers. Organizational decisions and resource allocations can be supported through the networks linked to suppliers and alliance organizations. Changes or development of products or services are usually made in cooperation with suppliers’ items. Accordingly, in
order for organizational decisions to be made timely, communications and information sharing should be achieved through a network linked to the suppliers. This network can provide useful information required for generating customer knowledge. Solution alliance network is required to create and use the customer knowledge that cannot be supported by suppliers. For example, a network channel between a telecommunication corporation and a bank provides sources for creating customer knowledge. Especially, in the area of e-business, strategic alliances are typically implemented by exchanging customer information and services over the Web. The companies can obtain customer knowledge required for their business from the network.

CONCLUSION

As an increasing number of organizations realize the importance of becoming more customer-centric in today's competitive economy, they are also discovering that they must deliver authentic customer knowledge across multiple organizational functions and at all customer touch points. But in such a data-rich environment the challenge is to distinguish the relevant data, convert it into knowledge and integrate this knowledge into the business processes. The purpose of this study was to provide a better understanding of how companies manage customer knowledge in the e-business environment. This research paper has also determined the contribution and key roles of knowledge management in e-business strategy, which could be main concerns for knowledge managers interested in creating effective KM systems. The innovation of information technologies in business is forced the organization to adopt new strategies to capable the real time optimization of the value chain. Building ebusiness strategy and plans should be derived from the business objectives, culture, policy, and current strategies (knowledge resources).

FUTURE SCOPE

Globally, the business model currently in equilibrium is a click and mortar one. But the way brick model is used is changing, focusing on high net worth clients and increasing number of customers-volume business being directed to the lower cost channels based on web and wap. Customer relationship management (CRM) and data warehousing and mining are the areas where there is considerable development and investment.

REFERENCES


