

Virtual organization as a strategic tool: Past, Present and Future

Aasim Zafar, Manal Abumelha, Mashal Alharthi, Mona Jammal, Nouf Alghamdi, Shahad Khoja

Department of Information Systems,
Faculty of Computing and Information Technology,
King Abdulaziz University, Jeddah
Kingdom of Saudi Arabia.

Abstract

The continuous innovation in IT leads to VO concept. There are several reasons of this transformation such as: cope with new demands, and radical change in IT, gain competitive advantage, cost reduction, increasing performance, flexibility, and productivity, and involved suitable human skills from different places. The purpose of this paper is to highlight the VO concept, its evolution, characteristics, challenges associated with its implementation and proposed solution to compensate these difficulties, which led to the employment of virtual organization to become strategic tool in many organization. Real life examples will be shown, how it was used by organizations in past and present, and in the future.

Keywords: Virtual Organization (VO); Strategic Tool; Competitive Priorities; Telecommuting; Virtual World (VW); small- and medium-sized enterprises (SME) ; brand building.

I. INTRODUCTION

To cope with new demand, requirement and radical change in information technology world, most of the enterprises are thinking to transfer from "traditional" to "virtual" form. There are several reasons for that, such as: gain competitive advantage in global markets, flexibility, reducing the cost, increasing the performance and productivity, fulfill the requirement of new products and services with high quality, and involved suitable human skills from different places. These benefits are exceeding the organizational boundary to the society and employees [1], although there are a lot of challenges and issues related to this concept as it are mentioned below in this paper.

Virtual organization is concept that was not invented in one day, but it has been around for decade or even more. It was established in the early 1990s as demonstrate the work of Jan Hopland, Nagel and Dove, and Davidow and Malone. Grenier and Metes in (1995), Goldman in (1995) and Dunbar in (2001) viewed virtual organization as how they are structured and how they function. Other writer viewed virtual organization as new type of firm emerging from network such as Franke (2002). Writers like Osborne (2001) and Pennings (2001) discussed virtual organization as new trend that is used as strategic tool [2].

Until now, the concept of virtual organization is still fuzzy, no universal definition for it, and several definitions exist that describe VO in different ways. VO is defined as "a temporary coalition of reconfigurable, independent, networked, geographically dispersed organizations including high level trust and competencies that collaborate and share their resources and competencies in order to respond to the customer request" [3]. Also this concept can be defined in simple way as: network of people or organizations which are independent and sharing a

common project or activity through IT infrastructure, these organizations are not depend on time and geographical space [4].

II. RELATED WORK

There are several studies that discussed the VO and how it's play significant role in the organization. In [5] the authors described the VO as collaborative system that built and depend on some basic elements which are: IT, connectivity, separation, and purpose. Authors focused on VO for three fields which are: education, goods production, and banking. In first field there are several advantages of being virtual university; these advantages are: there is no limitation in the capacity or number of rooms that will control the students number, the flexibility of the study ways such as: conducting e-exam, submission of the assignments, and the digital library which has important role to the student and faculty. In the second field which is the virtual bank which gives strong benefits to customers (simplify the purchase process of services and products), also its gives advantages to the bank itself such as: entering to new and global markets, make ease of the transactions, and increasing the competition among the other banks. Finally; the virtual enterprise for goods production which is type of VO that producing the assets and materials, the main two goals from this kind is to maximize the profits and minimize the cost of locations and personnel, and to respond very quickly to customers need.

The authors in [6] stated that In the United States, the "virtual schools" term consists of full time and supplementary virtual schools, along with the virtual schools administered by an array of entities. They found that in 2012, around 275,000 students joined the full-time virtual schools in 31 states. Their aim is to identify how Ohio's virtual schools fare on student performance

measures in comparison to Ohio's traditional schools and to compare the rate of growth of Ohio's virtual schools to that of traditional schools.

The results showed that Ohio's virtual schools had grown at a faster rate than the state's traditional schools and the virtual schools experienced an average. However, during this same time period of increased student enrollment, virtual schools experienced lower student performance than their traditional counterparts. In terms of Performance Index scores, they did not find a major improvement in Ohio's virtual schools' annual mean Performance Index scores from 2007-2011.

The author in [7] describes how computer network have huge effect on business system. He presented the most papers that interest in VO like: planning and launching, VO management, VO characteristics and VO challenges. Also discussed Virtual organization Breeding Environment (VBE) concept, the main objective of VBE is to develop the preparedness to efficiently create VOs. Then a framework was proposed for solving the cost and error issues on managing IT infrastructures. IBM proposed Autonomic Computing Systems as a solution that decreases the cost of managing complex systems.

Lin (2012) discussed the impact of the virtual organization structure in the innovation management within organization for both individuals and organization level [8]. Regression analysis was conducted for 128 information and electronics companies in Taiwan, Hsinchu Science-based Industrial Park (HSIP). The questionnaires consist of two main parts: the first part of questionnaire sent to the top level manager and discussed the organization product innovation and process innovation, the second were sent to 10 employees, randomly, to measure the creativity of individual. The first part of questionnaire included 20 item of product innovation such as new products, new service, etc. the second part holds 6 item of process innovation such as new production process. The research result positively in two finding: individuals have direct effect of the organization innovation, and the second finding revealed that virtual organization has more influence than individual creativity, specifically, virtual organization structure.

In [9] the virtual training is one of the effective methods of learning and behavior change. If the virtual training has done well it will have benefits over the traditional training such as: saving time, where the participant stay in front of his/her desktop. According to result of survey done by ON24 Inc, 83 percent of HR and training professionals when asked about the benefits of virtual training, they cite "more convenient". Another benefit of virtual training is location where it can be done anywhere at any time. According to IDC over 37 percent of the global workforce will be mobile by the end of 2015. One example is TMA World which is the virtual business training company providing virtual learning solution. Another example is IHS, a global information company, which offers virtual training to its employees around the world.

The proposed work in this paper will focus on virtual organization (VOs) as strategic tool; how the organizations used it in the past as a part of the organization, in the present to allow entire organization to be virtual and they can implement the inter-organization concept, and in the

future the virtual world (VW) can be used as a tool for virtual meeting, virtual conference and trade off. It allow SMEs to have a chance for testing the program of their market before deciding to go to a foreign market by simulating the experience of the real shopping to studying the customers' behavior. Furthermore, VWs provide SMEs the ability of brand building in the foreign market, which can be used as a strategic tool for internationalization [19], and also we will discuss real life examples using it in the past, present, and how in future these organizations will get the maximum benefits from the implementation of VO in different fields.

III. STRATEGY AND STRUCTURE IN VO

Any VO especially the startup one, must build its own strategies and get all the possible benefits from virtual concept to reach their goals, mission, vision, and high profit. Firstly; they must evaluate the business environment, how it will affect their work such as: the competitive strength. Secondly; they must put in their mind the final products and services that will be delivered to their customers, did they satisfied them? So from that any VO must focus on two sides of strategies which are: Product Strategy and Competitive Priorities Strategy to reach their objectives take place in the global market, and to make the right decisions [10] [1].

In Product Strategy, it's hard to understand and recognize the customer needs, requirements, and what they expect from the organization; because in VO the customers are usually new. Also the geographic factor is playing a significant role in this complexity. So any VO needs a lot of time to understand the nature of customers' needs. In addition; when they identify their products/services, they may face some operational issues such as: manufacturing, sales, and distribution process; so maybe it's easy to get the product idea but the complexity will be on the operational issues. To overcome these issues there are two ways for product selection, firstly, the product/service itself should be creative and without complexity, that's mean it must satisfy the customer's need and meet the expectation level of the customer, also easy to manage especially in manufacturing and its related services. Secondly, the core company connection and interaction with VO's partners which will be radically involved in several operations and processes in the supply chain to ensure that the product/service is delivered [10].

In Competitive Priorities, There are four basics in this strategy which are: Cost, Quality, Time, and Flexibility. Each one considered as competitive priority; the most important is the cost, how VO delivers its products/services with lower cost i.e. affordable cost and with high quality in order to increase the market share and customer loyalty. If VO tends to reduce the cost they must fix any issues in supply chain, re-engineering or changing their processes and operations, and redesign the product [10].

In other hand, for many VO the time is competitive priority especially in the product life cycle to reach the customer before the competitors. In time-based competition there are three elements that are important: the Delivery-speed (how to satisfy the customer order quickly), Development-speed (the speed of developing new product

or version of old one; before the competitors), and On-time delivery (deliver the product promised schedule).

The final competitive priority is flexibility; how the VO can cope with the changing of customer needs and requirements in quickly and efficiently way. There are several strategies to deal with this situation such as: the variety which refers to producing product/service with diverse choices. Also the customization, which aim to produces unique product/service to each customer [10]. The VO may select one of these competitive priorities or implement more than one to use it in the designing of its structure.

Any VO wants to gain competitive advantage and take place in the global market; it must continuously update their strategies –implement the Continuous Improvement process”.

Building the right structure of the virtual organization depends mainly on the organization strategic goal, the vision of where it wants to be in the future and what the organization want to achieve. VO is not goal itself, and converting to virtual management does not mean that the tracking and controlling of function and operation has ended with it. But, as mentioned in previous definition, VO needs to see as strategic tools. Moreover, it is an option that must be considered when managers have analyzed the organization needs and VO has appear to be as a strategic tools that will fulfill its needs better than traditional one.

VO is not restricted to one unit of neither organization nor citrine function. Managers when applying virtually they need to look not just to the organization as whole but to include individual business units, process, department and functions such as supply chain, finance, etc.

After defining the goal of organization, the decisions whether to go virtual or tradition depends on two dimensions: the organization assets, and management structure. [11]

Case 1: Organizational assets are virtual in it nature and it can be managed in virtual way such as financial services that can be managed remotely.

Case 2: Organizational assets are tangible and managed virtually. This case can be found in car and computer industry. Where it pass through several production facilities in many country and managed virtually throw the corporation or supply-chain headquarter.

Case 3: Organizational assets are virtual and managed in a tangible way such as the manual work in database.

Case 4: Organizational assets are tangible and managed in a tangible way (traditional organization).

IV. CHARACTERISTICS OF VO

According to the above definitions there are several characteristics that formulate the VO. [1][2][12] reported the most notable properties that differentiate virtual organization from the traditional one as follow.

- Delocalization refers to elimination the need of particular space and capacity.

- Temporization where the inter-organizational processes and activities performed in temporal duration, so it's created for specific requirements. After these requirements are fulfilled the VO lifetime end.

- Dematerialization refers to the replacement to virtual forms of materials.

- Individualization or mass customization by delivering wide range of goods and services that are modified according to specific customer need for satisfaction.

- Non-Institutionalization where the operations are done virtually without physical presence, establishing of inter-organizational relations in such environments can be abandoned.

- There is a replacement of face-to-face communication with virtual communication in this environment.

- Synchronization allows members to interact and communicate with each other through information and communication technology (ICT) in the context of innovations with the release of time. Some companies around the world schedule or arrange their works in three shifts among different locations.

- Integrative Atomization focuses on core competences. In order to satisfying customer all atomizer and value added activities are integrated.

Malcolm Warner and Morgen Witzel (2004) put it in their path-breaking book the features that are nearly all virtual organization have in common which are: –Lack of physical structure, reliance on communication technology, mobile work, hybrid form, Boundary-less and inclusive, flexible and responsiveness”. These features or characteristics of a virtual organization mentioned before might made it difficult for the researcher to maintain a one universal definition for it [11].

V. CHALLENGES OF IMPLEMENTING VIRTUAL ORGANIZATION

VO work on dynamic environment with all features noted above. It has a lot of challenges in term of information security, people issue, and technical issue.

A. Information Security

The virtual organization is dynamic in nature as it extremely relay on the technology for its communication, and this creates security concerns. Issues can be categorized into three areas. First, all the information brought to the VO by the individuals partners must be protected. Second, all the information generated by the VO must be secured. And third, because of the properties of the virtual organization, the virtual organization's information assets should be distributed with secure way. [13].

B. People Issue

Most companies moving to a virtual organization structure will observe big decline in experience as well as the number of employees leave the company will reduced and the remaining employees will learn new functions, methods and skills as they will work with new support system with new technology. With all these changes, the organization's chiefs may not observe the gap in the process of developing of the human resource development,

but the supervisors will immediately notice this gap. In order to develop the skills required to work with new technologies and process, the supervisor design program of human resource development based on the result of gap analysis [13].

Furthermore, employee loyalty is a serious concern for security, because loyalty and concern for security of employees working for a permanent organization (traditional organization) is higher than the employee working for non-permanent organization (virtual organization). [13].

Finally in virtual teams, culture, language, and style differences may be increased because subtle tones, facial gestures, and body language cannot be used to be added to the spoken word. Members may work to their own advantage rather than the team because of the lack in relationships and trust. In addition, isolation, loneliness, and the feeling of disconnectedness can weaken energy and reduce the team commitment [13].

C. Technical Issue

The use of information and communication technology (ICT) is increased in VO, and this communication comes on different form such as email or videoconferencing and teleconferencing which result on different issues such as communication security, loss of connection, and computing infrastructure [13].

VI. VIRTUAL ORGANIZATION MANAGEMENT

There are different aspects of VO management and how these managements may become a real challenge for any organization and important to it to be success.

A. Virtual Organization planning

It include many activities such as: analyzing the business chances, choosing the perfect partners, determine great level work breakdown structure (WBS), which is setting and introduce a model for VO. The presented model should have the entire element that needed for creation [2].

After the creation of the model for VO, it will have four views: Organization that include authorities and responsibilities, Resource that used in the operations, Knowledge that show the structure among the elements in VO and the functional that show the behavior and performance among elements that included in VO. [2]

B. Security Management

The security is a big concern for any organization specially the virtual organization as it strongly depends on the network access. As the VO have members from different geographic locations, external partner, and may collaborate with competitor, all this require greater access to the information. VO has no clear boundary and work totally on the system with different infrastructure, so there are different methods and strategies to ensure the security of the VO [14]. One of the solution provided by McConnell, is to divide the security into three levels: border security, authentication and authorization. In the first level the special software protect the organization from virus, then identity of user, and in the last level the permission to access and used data [15]. The security insurance for VO is not a single step, but it is a process of

continuous monitoring of resources, data and communications [1].

C. Trust Management

Because virtual organizations has different structure and different communication structure, so it needs new communication tools for new modes of collaboration, and need trust building, as the rules for traditional organization cannot be applied, on the virtual one [16]. Trust can be defined as a psychological condition where the person has positive expectation of the other's intention [13]. Trust is having adequate confidence in a partner to adhere beneficial resources, such as knowledge and finance, to collaboration with that partner; in spite of the risk resulting from this confidence [17]. Trust is especially significant in the state of VO, so it can help to eliminate opportunistic behaviors by the partner. The lack of face-to-face contact in increases the feel of risk on relationship between partners in VO, so the trust decreases these feelings. Trust is important factor that affect participation of the individual in which must be create by management [18].

D. Competency Management

Competency are group of skills, ability and capability that have important role in selection partner in creation virtual organization The partner must have high level of experiences and also they must be expert to meet competencies and the new company will have all requirements to achieve the goals [2].

The important concerns related to competencies are to applying strength and robustness in competency management, presenting and updating approaches for dynamic competencies group. Improvement competencies can be led as a challenge in this stage [2].

VII. VO AS STRATEGIC TOOL IN THE PAST, PRESENT AND FUTURE

7.1. In The Past

In the past the using of this concept was related to part of the organization ~~part~~ "virtual"; there are several examples in the 90's such as: In [12] the author explained the implementation of VO on two different organizations in the 90s which are Security First Network Bank (SFNB) and Ernst&Young. Both of these organizations had implemented the virtual concept partially. SFNB was establishing this in Oct 1995 in USA, which was the first approved virtual bank. The aim was to gain competitive advantage, take place in the global markets, and to satisfy their customers demand. After they implemented this concept the significant part of their services could be done electronically such as: writing checks, paying bills, downloading bank account information and online-help.

SFNB protected their sensitive data by implementing security methods such as: sophisticated encryption, firewall, and their custom OS that contain several layers of security to prevent any intrusion.

On the other hand, Ernst&Young [12] applied VO concept in 1992s. They partly transformed from ~~traditional~~ "form" to "virtual" form because they wanted to

minimize the office space for audit employees and consultants whose working hours at customers' locations. So it was a waste of space. Ernst&Young decided to offer software, modems, and other IT infrastructures requirements to these employees for achieving their work online. Finally, they saved 30% of their work space.

In the past there was a success story of Servcorp started when Alf Moufarrige in 1976 was about to start his new venture, he found that the office and employees are eating from his profit and he was not able to utilize the employees occupation all the time, then he decide to share the office and employees to reduce the cost. And this was the starting idea of Servcorp, the main focus of Alf to provide office solution to enable client focus on the business without worry about the cost of establish the office with its all services. The first virtual office was created by Alf in 1980, this office provide presence support without the cost of full time office space

Another two examples are illustrated in [21]. in the beginning of 1993, the U S WEST Communications took a decision to reduce its 560 operation centers to become 26 mega centers, which resulted in eliminating 6000 jobs. To monitor the network elements and make sure of their health and send some helpful instructions to the personnel over a large scattered area, the U S WEST Communications decided to have two services assurance centers.

In 1995, an announcement by AT&T states that the company decided to eliminate 40,000 jobs in its plan for the next three years. The AT&T Company with seven Regional Bell Operating Companies (RBOC) has cut more than 20,000 jobs since 1984, these downsizing are not new for the telecommunication sector [22].

7.2. In The Present

Nowadays there are various new frameworks, methods, and standards that have been developed to ease the implementation of VO in different sectors such as: hospitals, SME, universities, and Telecommunication. In (July 24, 2014) Al Arabiya has announced that three virtual companies Axiomtelecom, Virgin mobile, and Lebara mobile established an alignment with three Saudi telecommunication companies. "Axiomtelecom" with the host service provider "Zain" company, Virgin mobile with the host service provider "STC", and "Lebara" with the host service provider "Mobily" company. The returns will benefit all parties: client, service Provider Company and the host company. Clients will benefit from the Increasing numbers of operators from three up to six, thus competing to satisfy the customer and provide distinctive services and programs. Also, expanding the options for clients of telecommunications services and information technology in the kingdom of Saudi Arabia, and double the customer care, improve services, and provide more innovation and diversity in packages. The host company will benefit 15% as they provide telecommunication tower to virtual companies. Moreover, the service provider companies will introduce their service virtually and enter the market share virtually, and with the incremented income among years, the service provider company is able to build its own towers. Clients loyalty play important role, over the years those companies was able to build strong relationships with its customers, by providing services, further able to acquire

a larger number of clients before entering the actual market.

An example of the enterprise that succeeded in using the idea of virtual organizations in Saudi Arabia, and how this enterprise has built a well-known brand before entering the actual market, is women's fashion "Lum" by Lama Taher which was established in 2010. Her designs were within her family and friends and then she expanded her project after her friends encouraged her; so she has used social media for marketing the brand "Lum" on Facebook, Twitter and Instagram where more than 250,000 people who have followed her brand's account. She used the virtually concept to study the customers' behavior and needs in Middle East to make sure that her customers are satisfied and the designs meet their expectations. She started designing within the Gulf countries, and made complete collections for this area; then she became a well-known designer in the Middle East. After that she developed her own team that consists of 15 employees who are working under her management. So the idea here was to use the virtual concept to support her enterprise, especially in the beginnings before the arrival of fame across the Middle East, so it allows her enterprise to test the marketing program before going into the global market, her designs have reached Europe countries "France and Switzerland"; also the virtually concept was used here as a tool for building the brand in the foreign market of interest before going into the real market.

Finally; she has become a famous brand name in the fashion industry due to the virtual world and that helped to open physical stores which are distributed between Riyadh, Jeddah, Dubai, Qatar, Kuwait, Oman and Bahrain. And now she is starting designing a collection for kids. To reach the internationalization and gain the customer loyalty in the future, this enterprise must implement the 3D concept in its work the customers can interact with a 3D product image and have try the "virtual product experience", so this 3D environment allow customer to have a real shopping experience without the any real life constraints, where the customer can interact and visualize the products in three-dimensions within the real time; so, customers can experience the products not only see them. In addition they may employ a virtual team to gain new skills, designs, knowledge, and experiences.

Servcorp is an example of the global virtual office provider, it provide the support and solution to the business stockholders. Servcorp has physical offices and meeting rooms with advanced communication technologies around the world to facilitate the stakeholder communications at any place. Servcorp allows the business to improve their work and allow small business to compete with lower initial cost which helps it to grow faster. Also it helps the company to eliminate the capital investment and commitment regards to establish the infrastructure for multinational corporation.

In the present Servcorp has become a global network which continues to expand. it is now providing not only office support with modern technologies but also business support from anywhere at any time.

The company is promising change in the future to reach global economy, so that the competition and enter the business has become easy for many business owners and where that small companies can avoid significant costs in setting up businesses in reality where everything became default and facilitate follow up and control the business without place or time restrictions. The virtual office become more popular with lack of space available in big city and its huge cost, so such virtual services will become a booming industry. And the corporation of such company to provide virtual services with continuous expending will cover the world and this giving the industry new meaning of presence where most of the businesses exist virtually.

Another example is for the Saudi Post Corporation (SPC), is currently undertaking a large business transformation programs. They focus on preparing the company's ten thousand employees and its over five hundred branches offices for privatization. This transformation will include an important shift in processes, culture, systems, and structure. For realizing this vision, three phases are required: First Phase for establishing a strong infrastructure, like adding a new national addresses system and electronic commerce (EC) platform for developing competitive postal services. Second phase focuses on in-sourcing and outsourcing activities to be prepared for market liberalization, reaching the Third phase, which is fully privatization of the entire postal services. For enhancing and improving the customer service, SPC requested the help of the Cisco® Internet Business Solutions Group (IBSG) to share their experience and thinking. Cisco's Networked Virtual Organization (NVO) model concentrates on beating challengers by greater collaboration with partners to apply more value added activities, faster response to needs of the customers, and fully standardizing processes and IT infrastructure. SPC now will be able to expedite the business transformation strategy. The CEO of SPC, Dr. Benton, Said that Cisco helped the SPC to determine and categorize the unified communications along with collaboration processes and applications that can be deployed on top of a converged IP infrastructure. SPC is also able to offer a highest value by linking applications like the e-payments for greater employee productivity and higher business performance.

The results from this project are: faster implementation of the transformation strategy, new additional standards in operational excellence, enhancing the delivery of postal services at lower cost, and allow the deployment of new revenues generating ways by the EC services.

7.3. In The Future

Rapid evolution in the organization life has led toward digital and virtual organization concept for many decades. Many tools, application software, storage technologies, etc., have been invented to enable the concept of virtual organization in present days. The concept of the virtual organization is expected to become a Virtual World (VW), which is a tool that can be used by the organizations to have a virtual meetings, virtual conferences, and trade off to facilitate the use and concept of virtual organization through 3-D computer simulator that simulate the environment by which the users represented by avatars.

Communication between avatars can be either by real-life scenario or fictitious and alternative scenario [23].

Virtual Worlds (VWs) allow SMEs to have a chance for testing the program of their market before deciding to go to a foreign market by simulating the experience of the real shopping to studying the customers' behavior. Furthermore, VWs provide SMEs the ability of brand building in the foreign market, which can be used as a strategic tool for internationalization, as the illustrated below [19].

A. Marketing program testing

The value expected from the products is the bound between market/culture. A product may not be accepted in all countries. A lot of organizations have to enhance and modify their products when they decide to enter a new market: the features of the product may be changed like the colors for example as well as the package, or even the name of the brand. A lot of SMEs financial resources will be required when producing a negatively expected product in a foreign market with the need to update it later, which is already limited. To reduce the previous risk, the product should be tested before it enters the market. Some researchers agree that the Internet enables the customers to have a virtual experience of the product and provides a simplified mode of reaction between customers and producers. The interface of the Virtual Reality allows the customers to interact with a 3D image of the product in real. Some studies illustrate that Virtual Reality is able to improve 'telepresence' that is the imagination of being there actually in a computer environment. The Virtual Product Experience's purpose is to enhance the expected product knowledge to the customers and to influence the attitudes toward brands and purchase intentions. Virtual experience of the product allows the consumer to have better decisions about the product value. Virtual prototype testing provides almost the equal results of performing physical prototype testing. However, it is faster and cheaper [19] [20].

Virtual Reality technology allows much behavioral information in a store to be collected, like for example the amount of time of the consumers' search and the time spent in the store. In addition, altering tests and gathering data can be done very quickly by Virtual Reality Technology [19].

B. Brand building

VW can be used by the as a tool for brand building in the foreign market before going actually into them. Nowadays, companies that want to build brand are searching for ways to convince customers to invite brands into their lives, by combining messages with entertainment. This is what VWs provide, an engaging and interactive platform for growing and creating a brand community [19].

VWs also offer a lot of customers' engagement ways and allows creative ideas to come alive. SMEs can find inexpensive creative ideas by collaboration with VW residents or by the means of brainstorming sessions with the employees. SME can increase the awareness of their brands by the use of the VWs' blogs and virtual word of mouth creatively as well as the social media [19].

In the VW, building a brand is made by each contact point with the customer and all business activities in the world well affect it. In-world brand building can be achieved by opening a store, organizing social activities / events, virtually experiencing the product, in-world campaigns, word of mouth and community blogs. Greater points of contact between the brand and the customer will lead to greater customers' awareness of the brand and the stronger the attitudes formed [19].

VIII. CONCLUSION

This paper has discussed the virtual organization (VO) and its related concepts, its evolution, challenges that are related to its implementation, characteristics, and the adoption by business industries and how did it become a strategic tool to achieve its goals in the market. Also, we discussed real life examples from Saudi Arabia and abroad to demonstrate the uses of VO by industries in past, in present and possible uses in future.

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