Meta Management - Virtual Organization: a new approach in the leadership and select qualified individuals for virtual organizations with an emphasis on the role of IT

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Abstract

Recent progress in the field of information technology taken have caused the emergence of a new form of organization called virtual organizations, these organizations as a new paradigm for competitive advantage organizational plan, and respond to e-commerce requirements have been crystallized . Virtual Organization Management, which is called meta-management, a systematic approach for taking advantage of a competitive economic advantage is a virtual organization. This article reviews the definitions, dimensions of virtual organizations, virtual organization features, the basic factors in the success of virtual teams and organizations, meta - management and requirements management in virtual organizations, selecting the right people for virtual organizations, led all comprehensive role for enabling IT organizations, virtual organizations, virtual role in the twenty-first century and eventually paid the sum and pay a conclusion.

Keyword

Virtual organizations, virtual teams, leadership, selection, meta management

1. Introduction

Lypnk views and Astamps (1997) four courses each in its time a great gift for social formations and organizations have come at: the present in the first period, was formation of small social groups. In the second period cornerstone formation hierarchy in the organization was founded and developed. industry in the third period, the emergence of bureaucracy in the organization was looking for. The fourth period or develop the information-century organization boundaries (borders Developers) to create broad networks, and virtual organizations were created. RA can therefore bring about a century to create such virtual organizations and in particular to the development of ICT (computer science), he said.

During the past two decades many excellent changes in the structure of organizations has emerged and a new type of organizational structure are emerging which are called the virtual organization.

2. Definition and concept of virtual organizations

Several explanations for the virtual organization made, but the definition can well understand the virtual organization, a combination of explanations can be presented as following:

A virtual organization, an organization is defined as the number of external links is to work (Coyle & Schanarr 1995), has an internal structure of virtual teams is that according to the specific needs and goals are united and are separated (Grenier & Metes, 1995; Simous, 1995), composed of employees who are located far apart (Barner, 1996).

3. Dimensions of virtual organizations

Virtual organizations are divided into: space, time, culture and organization.

1.Spatial dimensions: the geographical distribution of staff levels in various regions refers.

2.time dimension : the amount of temporary is concerned, ie the degree to which employees are working non-simultaneous.

3.Cultural dimension: refers to the cultural diaspora the amount of workers having the organization of different countries and cultures.

organization dimension: refers to the distribution organization, the degree to which institutional processes outside the central organization have expanded. (Shin, 2004)

"Virtual being" after using these four (spatial dispersion, when, cultural, organizational) is defined, that it can be demonstrated as follows:

(Zigurs,2003)
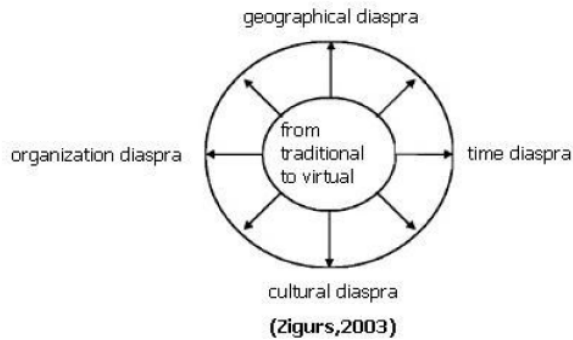
Being a virtual degree depends on the extent of an organization shall have four features (Kraut et al, 1999), a virtual organization as soon as the organization refers to the high level has to be virtual (ie, after four high level is located) and most of its employees are working far apart, and only through the electronic equipment to communicate with each other

The virtual organization and self-sufficient small units to assist communication and information systems together and bonded Union Organization huge network of small organizations, there comes to playing the big missions (Alwani, 1377) of virtual organizations face the traditional boundaries will be lost, will she mix different cultures mix and re-designed jobs will produce many tried.

The main infrastructure of all these changes in organizational structures, and developing tendency to integrate computer systems that have occurred with advances in information technology is associated. Because the main mechanism of information technology in organizations is permitted.

Literature on virtual organizations, four different approaches to express the concept of virtual organization can be seen:

1) Some virtual organization, basically an electronic or on-line organization know. Supporters of this theory as an example of this type of organization are introduced to the use and exploitation of opportunities and space electronics such as hot-disking or mobile working have been established.

2) The second approach to virtual organizations know that organizational structures based on bilateral cooperation and for sharing abilities, skills, knowledge and resources to each other or to produce certain goods or services with an opportunity to benefit from special gathering have. In these organizations rather than IT and telecommunications are an organizational feature an organizational components are essential.

3) The third approach, perhaps more than other kind of confusion is caused. This approach actually an amalgamation of two previous approaches in which the writers for the concept of virtual organization, electronic organization or on-line concept and the concept of a

temporary network of people, ideas, abilities and resources in order to gather specific goal to alone or together rather than live to work.

4) Other than outlook which takes into consideration is simply looking at the virtual organization constitutes a temporary network of companies - suppliers - customers and competitors - to help information technology (IT) with the relevant skills and costs and sharing risks and benefits and their access to markets are. Such organizational information technology can help the constraints of time, place and form of fixed organizational overcome. In this specific type of organization, every company is planning major competitive advantage of its main products such as, the main processes, etc. The main competence in their possession have.

Virtually all organizations of various independent companies that have arisen with these companies can get their competitive advantage to win the main large market opportunities in use. So, none of the companies alone can get this opportunity.
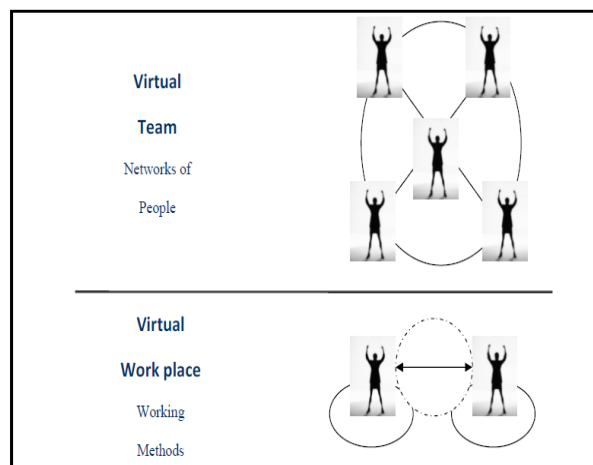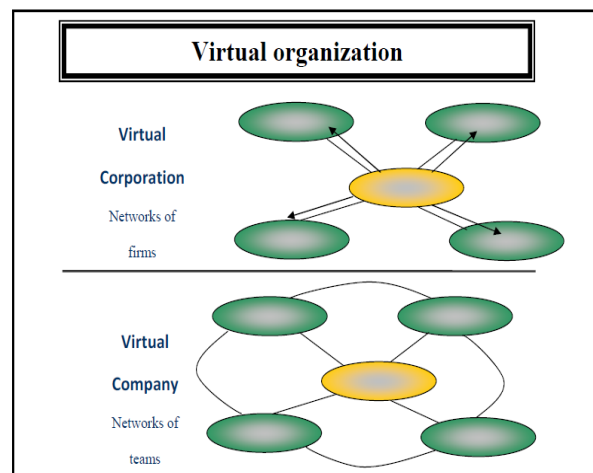
4. Emergence of virtual organizations origin:
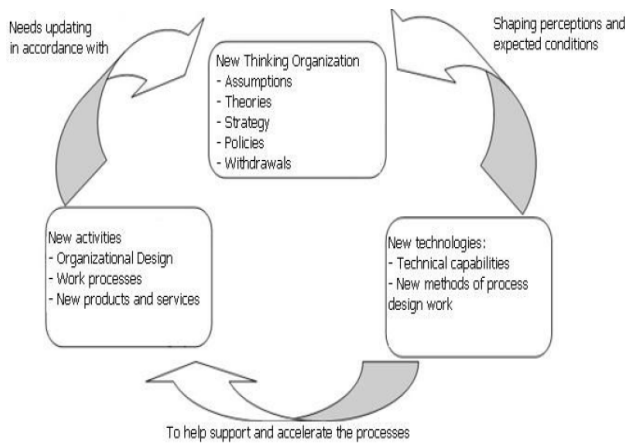
Virtual organization concept developed mainly affected by technological progress and review at the performance of organizations as Rotary and the circular has been over time. Figure Below shows effective forces behind different types of organizations allowed. These factors can include such new business, such as international trade with the structure of virtual organizations cannot implement, or new technologies such as mobile and satellite communications technology and information, or even a new strategic thinking such as the development of virtual groups and communities mentioned.

Chart 1: thoughts, new technologies and organizational methods

Characteristics of virtual organizations Many in the era of electronic commerce in virtual organizations have found the emergence of cyberspace. Means of virtual organizations that have strong IT, business units replace traditional forms of contractual relationships (alliance) and the maximum flexibility in response to market changes to provide management.

While the division of labor to improve efficiency and effectiveness of production, by altering the internal structure of the task will be designed, a virtual organization with altering the relationships between a set of tasks act (Khalil & Wang, 2002). Describing been reached to the conclusion that the virtual organization has its own characteristics that make them typical of traditional organizations are separate. In Table 1 some of these features are mentioned:

Table 1) characteristics of virtual organizations

Description	Features
This feature provides products and services based on customer refers.	Customer and the mass customization
Virtual organizations often consists of a network of organizations are. Network to a set of individuals and organizations by the proximity refers to a relationship, situation or distance are linked to each other.	A network of independent organizations
Relevant literature, virtual organizations, temporary nature of the set. However, most researchers in this field agree that virtual organizations are temporary structure.	Semi-fixed relationships
Geographical distribution organizations can be one of the main differences with other types of organizations are virtual. While other species rely on the establishment of the organization are Combined, virtual organizations using information technology to avoid this situation.	Geographical distribution
Naturally, as most organizations are weak in some areas, some areas of competence also have high quality. Thinking about the virtual organization is that there are different organizations must use quality features together, encourage each other's capabilities.	Relying on the main merit
Some researchers virtual organizations as a response to the opportunities available in the market look. When such opportunities come on the market before, virtual organizations with solutions unique and Innovative quickly to use these opportunities are shaped.	Relying on innovation
Components of teams that are virtual organizations. According to many researchers have been attracted. Communication between the teams to use technology relies.	Relying on teamwork
Partially overlapping missions of agencies participating in virtual organizations, causes that organizations outside the text of the virtual organization have activities. Agencies participating in the text that only the virtual organization are working with the mission and the mission will be complete overlapping virtual organizations.	Partially overlapping missions

Larsen and McInerney, 2002

According to the features mentioned above have virtual teams and organizations to properly manage, the factors that lead to high performance teams and organizations should be properly diagnosed and improve their steps taken. Also, it is necessary to choose a virtual team and virtual organization is carefully done. Because if members due to lack of technical skills or communication fail to cooperate with the team and organization, the organization can take advantage of the benefits of virtual teams to be. Basic characteristics of virtual network organizations, face to face communication is reduced.

But in general Tuesday following a major change, the need for more advantages for the successful performance of virtual networks will reveal:

• reduce face to face communication
• extensive use of technology
• going beyond the geographical boundaries

However, the quality of interactions in groups face to face communication use, the better, according to TIP1 theory Gras Mac2, members of these groups have a better performance

In recent years a lot of talk about information systems, flexible integration between organizational and information sources in homogeneous systems organizations in academic circles and practical, to have been made.

Remarkable advances in network technology, replacing traditional methods with information processing to the global economy by connecting live, way organizations do business with has encountered major challenges.

The main objectives of Virtual Organizations

• timely utilization of various resources available in the market to enhance quality and increase product value
• employing the specialist workforce from each class, class, nationality and expertise
• Create internal monitoring and spontaneous environment that only unambiguous, powerful, and have shared principles and trust executive and real heart comes on.

Benefits of being virtual

Virtual organizations leads to:

• the distance prevents institutions work, not work and conferences.
• Access to minimize physical disasters such as fires, bomb explosions and earthquakes or other destructive events such as strikes, because other activities in an area not focused or organization.
• The increasing emphasis on the human aspects with emphasis on the work because human and intellectual skills in the workplace decentralized physical work and services appears to minimise.
• improving productivity at the individual scale, institutional and social

1. Time, Interaction and Performance
2. Mc Grath

• Office space costs, because a wide variety of flexible workers is introduced.

• environmental benefits because fewer people are commuting to work are.

quality and greater convenience for the customer: the possibility of receiving services at any time.

Disadvantages of being virtual

• Since the boundaries between life at home, how uncertain is the possibility of increasing stress there.
• employees are socially isolated and face personal contact and stimulus to lose.
• If the employment relationship, not redesign staff scientist and valuable commitment to the organization will diminish their skills and they will sell to the highest price, thus falling over adverse effects on employee organization will succeed.

Strategy in virtual organizations Various strategies to move toward virtual organizations exist. Often movements toward virtual being as a way to reduce complexity and therefore greater flexibility in responding should be used. Legal conditions that encourage or advanced systems in the organization against the vertical barrier to such organizations are another strategy being considered as a virtual process. For example, for market development in new areas, virtual can be used to help local cultural knowledge.

However, uncertainty reduction strategies in most organizations a virtual organization is one. Virtual organization in a stable market, when a dramatic change in technology and there is not a good environment.

As observed in the following figure is a virtual organization, just unlike a hierarchical organization, when required different expertise and skills of a top side in each of these specialties have used the other hand is placed. The virtual organization skills from outside the organization or the words of the same organizations that have created virtual
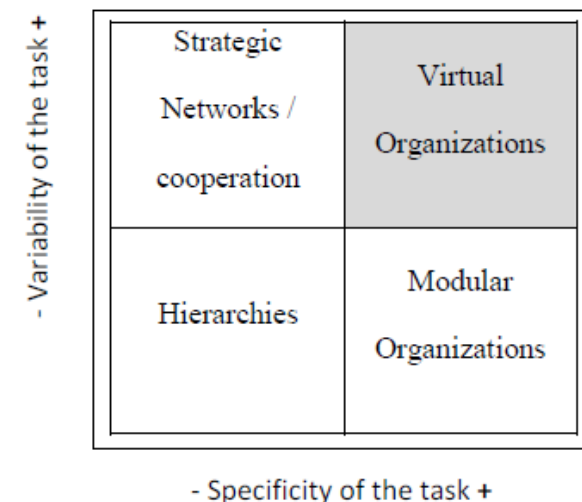
organization does business.

Technology in virtual organizations:
Development of the Internet in one hand and technology development organizations in order to manage the other hand, the frequency of the type of organization activities to earn money in international markets using virtual structures have. The major technologies today by virtual companies are used can be three categories of knowledge management, work management, ERP division that is using the Internet infrastructure to help a major formation and virtual organizations are moving.
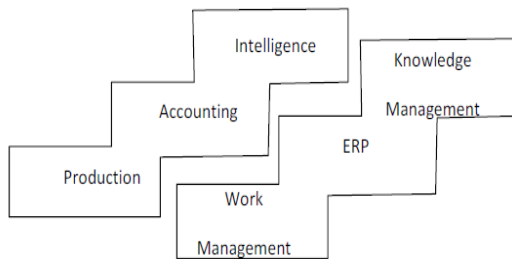
Internet (Internet):
 Incremental progress in recent years the possibility of Internet software development management and knowledge management work is there.
In the past, KM and WM software with great limitations for certain groups within a company and as a Client / Server implementation were significant. Installation costs and implement the software on each of the Private Client and protocol that each of these applications they were using the most important limitation was the use of this software.
But today, given the billions of investment on the software industry is the Internet, most applications of KM and WM used the Internet architecture and using only an ordinary Web Browser are available.
When a software feature on Internet Server is installed, the software implementation and capability of all Workstation access which are connected to the Internet is having. This is because the tools of knowledge management (KM) tools and work management (WM) in any place and by any employee of the company is available on very low cost.
This feature based on Internet technology is obtained a key and vital capabilities for virtual organizations to sue.
Role in enabling IT organizations to manage virtual
Because virtual workers away from each other and without any fixed time frame up, they deeply using electronic information technologies are dependent on (Densanctic et al, 1999). Such technologies not only allow communication between people who are in different places provide, but also a good way to help people who are among the organizations and countries are different, so they can work together. IT such variables (features and facilities) to suggest that when these variables with structural considerations, people, and functions can be combined to help design organizations accountable. This critical

technology base to create and manage virtual organizations, Communications and the ability to bring that distance, time and bridge cultures and bring them to short. IT coordination between components to facilitate interlocking, and the temporary barriers and the distance that the features of the structure of conventional and traditional organizations is to overcome and to increase flexibility. IT applications, particularly applications such as: Web-based information systems, data mining and mass-customization technology, organizational memory systems, software group, negotiation and decision support virtual organizations to adopt IT, organizational learning, coordination and organizational redesign will.
Meta-management tasks have the same direction between virtual organizations and IT companies that are available, in a context in the following chart has been placed.
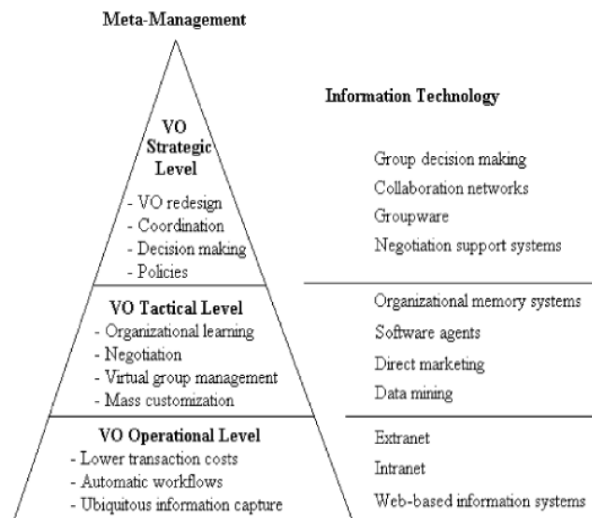
Meta-management and requirements management in virtual organizations:
Virtual organization management, or management tasks are organized into virtual meta - Management, called the virtual organization environment is inevitable. In order to manage this kind of enjoying the economic benefits of competition for virtual organizations, provides a systematic approach, and compared to traditional management that distinguishes the two are:
♣ Virtual organizations must have goals to make explicit the meta-virtual organization management, intangible goals such as community mental loyalty is not permissible.
♣ Second, Main Meta maintenance management partnership within temporary virtual organizations (1997, Mowshowitz) and compared to traditional management requires a unique functionality that is following some of them are mentioned:
1. Accept new information technology: a Virtual Organization Management core functionality learn, is accepting new IT. Information filtering (purification), studies of knowledge, and link to case examples of what

management is to manage the data accumulation in the environment are the EC ruling requires. . Software agents can help reduce the accumulation of information be used. EC support system can help users of the volume's up too much information on the Internet cope and decisions in the semi-structured network organizations to adopt and maintain networks and business processes improve.
2. Organizational learning: companies must be organized within data. Organizational knowledge in a virtual organization, when labor mobility is high and may waste away. Therefore, managers will have a reliable track record and the trustee are organized. Organizations must factor in the scheme of human knowledge as a key component of their assets to answer these challenges, and create storage and knowledge bases, enable employees to share the learning curve in the short to each other's experiences.
3. Coordination: manage virtual sub-units of virtual organizations and individuals within the Virtual Organization Management Virtual Meta is another major task. A virtual organization in terms of the custody and control of its components is difficult, have the least based on trust and guardianship act.
4. Organizational redesign: If the new virtual organization, the design is relatively easy. Employees who are comfortable in the traditional workplace. Such arrangements may be initially difficult to understand and to believe. For organizations that can create sub-units or traditional organizations trying to redesign some of their components. Use of IT in organizational design will be very difficult. (Khalil & Wang, 2002)
In summary, a new form of virtual organizations in the era of e-commerce is an organization. And requires a new

management paradigm of meta-management. The following table features a unique virtual organization management and their same directions towards management needs to tabloid shows. Select the right people for virtual organizations While recent studies considering aspects of human resources virtual organizations have begun. They instead of individual features required for the effectiveness of their employees, mainly on the effects of specific types of virtual work systems (such as far work or telecommunications) on staff morale and productivity have focused, in addition to the findings these studies have been largely contradictory. Virtual system might work are not suitable for anyone, and it seems that certain people than others to work in a virtual environment are more appropriate (Cascio, 1999) so that the important issue here is to determine the features or Virtual employees are traits which fit them with a virtual organization is. Considering the known cases, Shine (2004) model as a personal fitness models - the environment offered.
Personal fitness - Job: to adapt between individual characteristics and requirements refers to job, and there generally consistent with the knowledge, skills and abilities of employees and job requirements is concerned.
The framework of the Person- Environment Fit Framework that helps us to understand how employees can fit virtual organizations to find, and how a good fit on individual returns in the virtual organization affects.
Along with personal fitness models - Environmental Shine, Hertel et al (2005) model life cycle management of virtual teams raised in its first phase, consider the chosen people.

Table 2) characteristics of meta-management and administrative requirements

Requirements management	Meta-management features	Characteristics of virtual organizations
- Coordination - Management Group Virtual - Decision Group	Justice and equality between partners	Independent Partners
- Policies - Organizational redesign	Maintaining a temporary partner	Cooperation per se is not permanent
- Low cost - Performance Management	Explicit goals	Common interests
- Negotiation - Mass customization - Organizational learning	Beyond Knowledge Management Information Management	Sharing knowledge
- Automated workflow - Simultaneous access to information - Acceptance of new IT	Global Approach	Electronic Communications

Khalil & Wang, 2002

Chart No. 2 personal fitness models - a virtual environment for the organization represents.
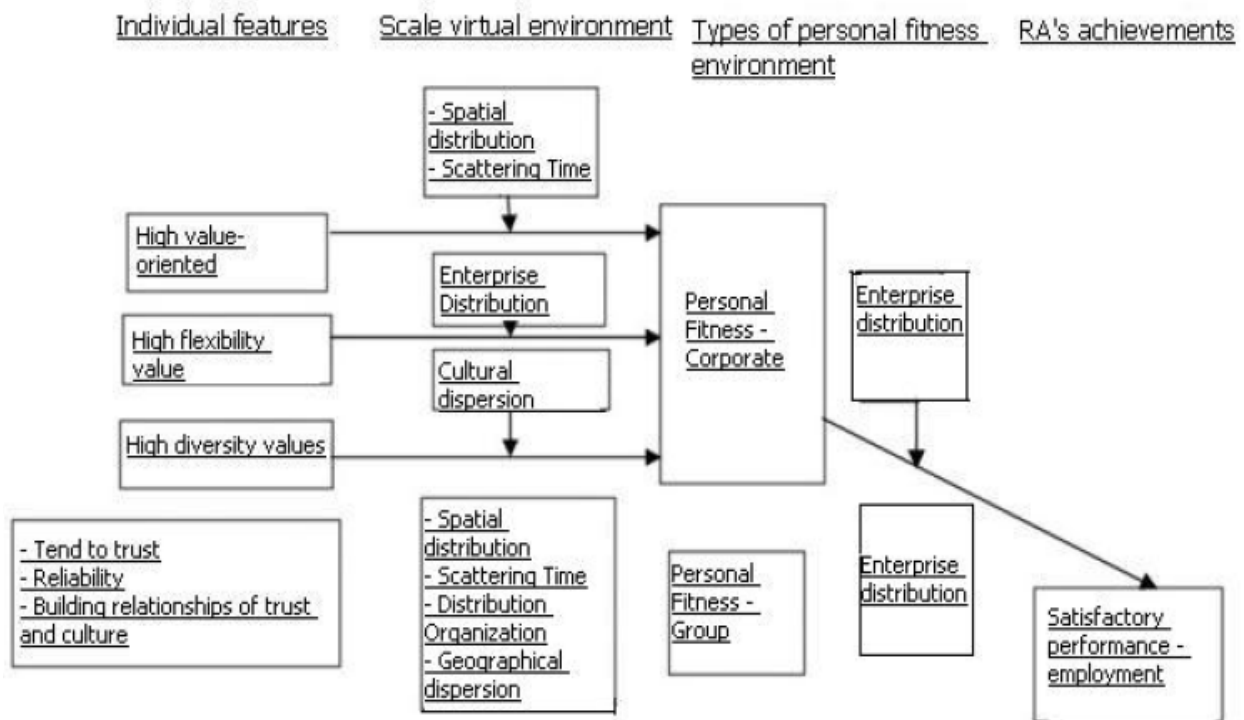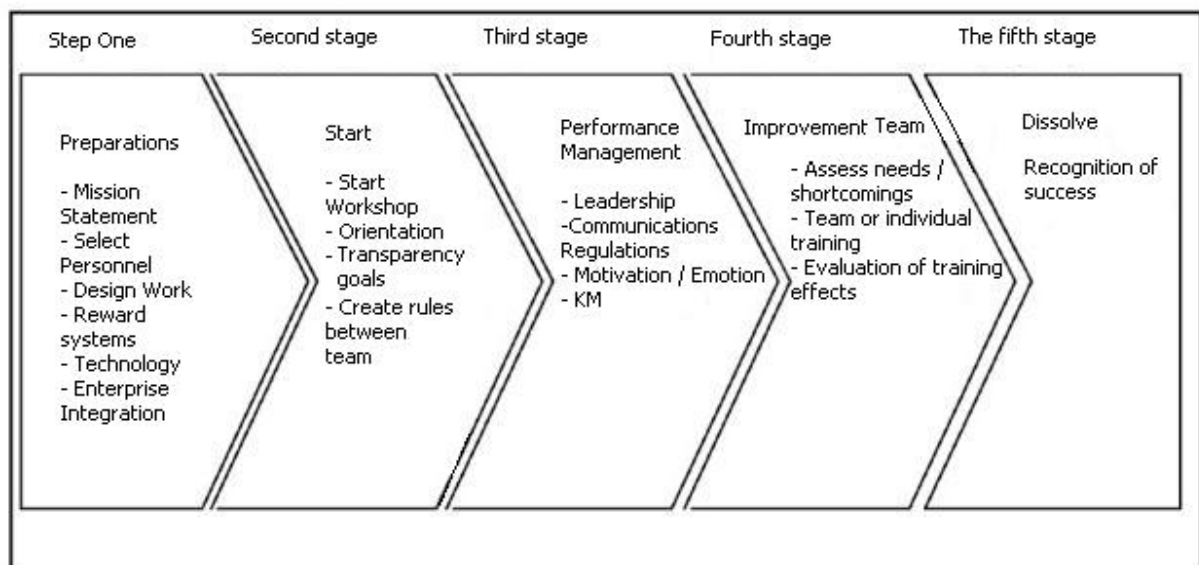

Chart 2: Model fit person - environment for virtual organizations

(Table 3) activities in key life cycle management of virtual teams.

(Hertel et al, 2005)

Hertel and colleagues argue that one of the strategic reasons for virtual teams of experts combine core competencies position is different. In these cases, the main criteria for selecting virtual team members expertise (capabilities, skills, knowledge) Technical / Professional them. Meanwhile, the general features of the team members may be considered. Such features include: general cognitive ability, task-related features (e.g. loyalty, work ethic) emotional and social characteristics associated with teamwork (e.g. emotional stability, extraversion, adaptation).

Some aspects such as consistency and loyalty in members must exist to prevent conflicts and loss of motivation is. Requires a high degree of virtual Meanwhile, relevant features are working through. Such expertise in media and new technologies, managerial skills with specific personal characteristics such as self, between cultural and interpersonal sensitivity, reliability and personal trust between (Hertel et al, 2005)

Leadership issues in virtual teams Can assume a virtual team, on which a new product in high-level work and requires leadership in the areas of process, team development, and technological choice at different times during the life cycle of their team, is, since that leadership roles can be large, a person can do a wide range of roles will be. Therefore, the role of various team members, its leaders and technology may play in virtual teams must, it seems appropriate.

Presence Leaders in virtual teams to the character and existence are various methods including their seating in the meeting place, office location, language, tone of voice, costumes and models ... Many of these are there in the virtual environment, where a new type of presence must be shaped, it can be the presence of the person called Distance or telepresence. This word means presence in the tissues around the virtual reality is used to having the experience or sense of presence in a place different from the physical location of the show. Emphasize is that when users communicate through the computer environment, how it feels.

Steuer the next round with two-person interaction Vividness and Interactivity are defined, the full definition put forward. Ability to live over a telecommunications medium to create a rich environment for the feelings, the sense of having a range of Sensory input (audio, image, touch etc) is. Popular interaction means that the amount of users can influence the shape and content of telecommunications media have. Individuals, the presence of an individual remote, and therefore, the experience will be different. Physical capabilities and technologies only starting point determines the ultimate degree of presence of remote feels a person is not. But in general we can say, if a media more alive and more interaction is possible, the probability that the presence of remote team members must experience, is more (Zigurs, 2003).

We present the concept of distance in virtual teams, meaning the extent that team members attend each other's work intensify experience, leadership in virtual teams should be experienced by members of the team, so leaders must present levels of remote show, to feel their presence and be effective. Research shows that frequent communication in virtual teams are more important than traditional teams, but stay in touch or in the presence of remote staying more than merely maintaining a constant stream of e-mail messages to team members.

Leaders must learn how the interaction of the vitality and use quality media, so their presence there and was feeling positive way, as well as a good influence for the team move forward to apply.

Difference between traditional and virtual organizations Virtual organizations due to business necessity and the incidence has now compared with traditional organizations, the most appropriate organization to develop business and trade (original, 1380: 48-47).

Many virtual organizations, their activities are financed from external resources and bring into existence a structure in which instead of the traditional tasks of each unit in the interior, foreign units are responsible for tasks (Alvani 1377: 1) Organization Traditional (Table 4) operations in the form of clear and focused business units, but the virtual organization their activities beyond time, place, culture and organization boundaries do (Assili, 1380: 48-47).

Obvious difference between these organizations with organizations in the classic manifestations of the widespread use of information technology such as internet, mail, And pervasive use of computers and computer networks know (Turban et al, 2002).

The role of virtual organizations in the twenty-first century Backwardness of Europe: Environmental Technology governments have failed as a major source of new and advanced technology development and provide traditional pharmaceutical industry market downturn and inflation still grappling prices are.

Automated techniques of drug discovery in the early 1990 using the old Chemical and Pharmaceutical was created, now grown into a clinical move.

This does not mean that productivity growth in all phases of drug discovery occurred, but represents product is that even if the amount is not too high but at least able to accelerate procedures to implement these plans. Examples include improvements in the areas of drug absorption, metabolism, toxicology, and is in Vitro methods.

The purpose of the candidates wants to develop problems, a simple method for testing other features that would reach up earlier in the process necessary, is created.

In many of these methods, the United States because America had superiority role with the company over 20 employees and having been able to triple the efficiency of European workers to provide a successful product.

Germany and France and Italy among European countries had led to inefficient methods of applying market records were compared to 1980.

There are cultural reasons for why the independent European companies and Japanese pharmaceutical companies reluctant to continue the way large corporations do not.

One of the reasons for the lack of research and development funding and increased demand is discovered. Despite the need to acknowledge that most of these companies in search of external resources and new technologies fulfill their requirements and optimize production and development is a pre-treatment.

Promote contract research organizations (CRO) is a spark to meet the needs and demands of new technology discoveries.

Creating virtual companies, most companies have been able to use external sources of biological research programs and develop their own pharmaceutical industry and outside of the traditional mode of a multinational industry to create.

Table 4) compare traditional and virtual organizations

Virtual Organization	Traditional Organization	Dimensions of organization design
Disperse	Unit	Location organizational
Foreign	Internal	boundaries
Various times	Simultaneous	Time
Multi dimensional	One-dimentional	Dimension
Multi cultural	Single culture (shared)	Culture
Very high	Very limited	Communications
Non-static and dynamic	Fixed and static	Structure

5. Conclusion

In light of technological changes in the new organizational structures that are emerging so on before there are none. Virtualization and virtual organizations have such concepts. Virtual Organization on the platform technology and information systems have been founded and the other information technology as one of the factors is considered a dynamic and productive organization.

Because virtual workers away from each other and with no fixed time frame, so they operate properly manage these employees need a new paradigm and new technology fits, since the system virtual work may not be suitable for all employees. Employees must have some special features in a virtual environment so they can effectively work. Personal characteristics of virtual organizations that have a central role include: getting value for self-government flexibility, high variety, tend to trust, reliability, features the emotional and social skills side, the virtual communication skills, background knowledge, computer literacy, ability to work independently and time management skills. Although these individual features are not comprehensive and some of them (such as domain knowledge and the skills of time management) as well as in traditional organizations have a history, we can say that these are the most prominent and most basic features needed to achieve fitness for the individual organizations allowed. However, the necessity of these features amount to a virtual employee working environment depends on being virtual.

References

[1] Omar Khalil, Shouhong Wang (2002). "Information technology enabled meta-management for virtual organizations"

[2] David Cavalla, Arachnova, St John's (1999). "The role of virtual organizations in the 21st century"

[3] Florian Kerschbaum, Philip Robinson (2009). "Security architecture for virtual organizations of business web services"

[4] Liangxiu Han (2007). "The performance model of dynamic virtual organization (VO) formations within grid computing context"

[5] Hannu Ahonen, Arlindo Gomes de Alvarenga, Attilio Provedel (2009). "Selection and scheduling in a virtual organisation environment with a service broker"

[6] Zahedi, Sadat Shams, virtual organizations, development and management, No. 15, 1382

[7]   Barner, R. (1996). "The new Millennium workplace: Seven changes that will challenge managers and workers". The Futurist, 30:14-18.

[8]   Cascio, W.F., (1999). "Virtual workplaces: Implications for organizational behavior". In C.L. Cooper & D.M. Rousseau (Eds.), Trends in organizational behavior: Vol. 6, 1-14. New York: Wiley.

[9]   Cascio, W.F., (2000). "Managing a virtual workplace", Academy of management Executive, 14: 81-90

[10] Coyle, J., & Schnarr, N. (1995). "The soft-side challenges of the virtual corporation". Human Resource Planning, 18: 41-42.

[11] Desanctis, G., Monge, P. (1999) "Introduction to the organization science" Vol. 10, No. 6, pp. 693-703

[12] Grenier, R., & Metes, G., (1995). "Going virtual: Moving into your organization into the 21st century". Englewood Cliffs, NJ: Prentice Hall.

[13] Hamilton, B. A., & Scandura, T.A. (2003). "Implications for organizational learning and development in a wired world". Organizational Dynamics, 31 (4): 388-402.

[14] Hertel, G., Geister, S. and Konardt, U. (2005). "Managing virtual teams: A review of current empirical research", Human Resource Management Review, 15, 69-95.

[15] Khalil, O. and Wang, S. (2002). "Information technology enabled meta-management for virtual organization", International Journal of production economy, 75, 127-137.

[16] Kraut, R., Steinfield, C., Chan, A. P., Butler, B., & Hoag, A. (1999). "Coordination and virtualization: The role of electronic networks and personal relationships". Organization Science, 10 (6): 722-740.

[17] Larsen, K.R.T. and McInerney, C.R. (2002) "preparing to work in the virtual organization", Information and management, 39, pp.445-456.

[18] Shin, Y. (2004). "A Person-Environment Fit model for virtual organizations", Journal of management 30 (5) 725-743.

[19] Simons, T. (1995). "Virtual reality". Inc, 17:23-24.

[20] Zigurs, I. (2003), "Leadership in virtual teams: Oxymoron or Opportunity?". Organizational Dynamics, Vol. 31, No.4, pp.339-351.