



Virtual Transformation

The Journey Which Will Complete the Digital Transformation

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Abstract

The term “virtual” has been associated with real-world businesses and entities in recent years. Until a few years ago, the notion of “virtual” encompassed spaces such as websites, information networks, digital libraries, etc. But today, most of the citizens' time is spent in completely virtual spaces. Stores, businesses, monetary and financial activities, leisure and entertainment, etc. are all being transferred to cyberspace. The rapid pace of joining cyberspace has created a state of disharmony and exhaustion among businesses, especially large organizations. Many of them have embarked on digital transformation and implemented some programs, however, this process does not seem to be sufficiently tailored to meet the requirements, and organizations are to see “virtual transformation” as a complementary

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action and umbrella plan to cover sparse actions on their agenda. In this article, the concept of virtual transformation and its requirements and phases are briefly explained. Attempts have been made to look into the virtual transformation from different dimensions and to identify and introduce its key actors as well. The six steps presented in this article are deemed to provide useful insights for managers on their virtual transformation journey. The content of the article also can be seen as a starting point for extensive studies on the concept of virtual transformation.

Keywords: Virtual Transformation, Digital Content, Virtual Readiness.

1. Introduction

With the emerging advances in digital transformation, the need for virtual transformation is felt more than ever. The conversion of analog and mostly traditional procedures to digital forms has taken place at an astonishing rate. Although the outbreak of Covid-19 was a major tragedy in the last few years, using e-services among citizens, even in the farthest corners of the globe, has increased remarkably. Thus, the use of services such as online education, virtual shopping, and interaction with e-government has become an integral part of the daily habits of most citizens, today. Returning to the era before the Covid-19 pandemic is hard to imagine. However, it is not yet possible to talk about a complete digital transformation. Because many countries are still far from the optimal conditions in terms of infrastructure and executive measures, as well as policy measures. The digital divide between different countries and even among different social classes continues to pose countless challenges to the international community.

Many countries have begun unprecedented efforts to build infrastructure, reform policies, empower citizens, and cooperations at regional and international scales. It is anticipated that the digitalization

train is to reach its final destination in a relatively short period, but achieving this stage will not mean the end of the digital transformation mission. Digital transformation implies the application of new technologies to facilitate the achievement of a better life. However, the successful completion of digital transformation efforts will require another and more comprehensive step, and that is “virtual transformation”, which is to be considered a complementary process to the digital transformation movement. Meanwhile, the formation of a further step to join the metaverse is to be evaluated as part of the global trend towards another transformation.

Accelerated technological developments

New technologies are bringing serious and fundamental changes to organizations and enterprises. Few thought that communication devices such as telegraphs, wired telephones, etc. would give way to newer technologies. The emergence of the Internet has divided the world into two historical periods before and after the Internet. In the pre-Internet period, most communication was done physically and with great difficulty. Access to individuals, communities, news, and communications was difficult to even within countries. With the advent of the Internet, electronic and digital communications have transformed the world into a small, connected village. The possibility of communication through emails, chats, social networks, video communication tools, etc., has brought about new developments to the communities so that most people have access to smartphones and Internet connections.

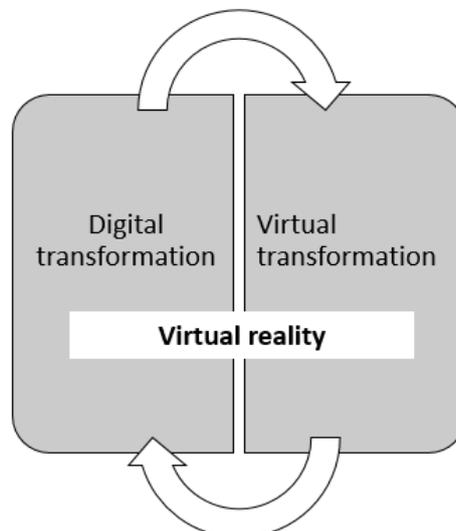


Figure 1. Virtual Reality as a mediator between digital and virtual transformation

Social networks have connected people across the world, and more and more people are connecting to different networks every day. One of the main features of social networks is the multimedia communication mode. A citizen of 2022 is now able easily to fulfill most of his/her social, educational, interactional requirements, and daily activities through the Internet. The size and variety of the content available on the Internet are unprecedented. Human understanding of the living spaces of other communities is growing at an astonishing rate. Many businesses are run on the Internet and work directly and online with their customers.

Despite all the technological advances in the digital world, perhaps it can be argued that the most important feature of the emerging Internet and social networks lies in its integration with virtual reality. Virtual reality as a combination of different technologies (audio, video, simulation, design, graphics, artificial intelligence, pedagogy, knowledge management, etc.) has made it possible to reproduce physical realities in an interactive and flexible space. Virtual reality might be considered the pinnacle of new technologies. The combination of artificial intelligence with multimedia video capabilities and increased processing capacity has contributed to the development of cyberspace. Today, talking about virtual currency, virtual education, virtual business, virtual world, etc. is now part of the daily conversation of citizens. With all these technological advances toward the virtual worlds, virtual transformation seems inevitable for today's mankind.

The concept of virtual transformation

Virtual transformation is known as the acquisition and exploitation of virtual capacities for a better life. It covers various aspects of man's life, including his personal, political, social, technological, and ecological spheres. Each of these dimensions refers to a part of the required changes in human life. From a political point of view, it is necessary to consider governance approaches, the relationship of entities, the interaction of citizens, governments,

security concepts, and so on. Policies formulated inspired by traditional life and even modernization are not fully effective for today's situation. Cyberspace requires flexible, transparent, evolutionary, and global policies and approaches to addressing the requirements and challenges of emerging functionalities. Situated at the core of the virtual transformation process, is the acceptance of the conceptual integration of functions and instruments.

From a social perspective, different social groups enter cyberspace with various types of interactions, opportunities, communication behaviors, and perceptions. For instance, ethnic-tribal interconnected interactions give way to diverse and evolving global spaces. The social classes formed as a result of industrialization and urbanization have undergone fundamental changes over the 21st century. It is expected that with the virtual transformation, the basic problems related to the invisibility of different social structures will be solved and the opportunity for achieving a more desirable social space will be provided. The presence of innovative social actors that are more in line with the characteristics of the new age is one of the characteristics of this transformation.

Although technology has always been evolving, the ongoing developments prompting the virtual revolution seem incomparable to previous developments. An outstanding feature of virtual technologies is that they are not limited to one industry, business, and environment since almost all aspects of human life have been influenced by virtual technologies. The emergence of convergence between technologies and their complementary performance together is another salient feature of virtual transformation. Besides, intelligent semantic technologies will help accelerate the transition from digital to virtual environments.

In the 21st century, the need for multi-faceted competency profiles has become more evident. People working in different businesses need to acquire basic skills based on information technology to survive. Upgrading skills, understanding new rules and regulations, and learning ethical codes related to the technological

demands of today's life are among the essential skills one should be equipped with. Individuals, as the stem cells of societies, play a decisive role in virtual transformation. Hence, it seems that virtual reality and virtual transformation are going to become indispensable parts of human life in the future.

Physical environments have been severely influenced by human's latest developments and rapid technological changes. Perhaps, adapting to the damage caused by the age of industrialization will not be easily possible in the years to come. But the virtual transformation has brought us its assets. It would mean a much greater reduction in greenhouse gas emissions, less use of fossil fuels, and a shift to clean, connected, and intelligent life. All of these developments, along with a reduction in exploiting the future generations' resources can contribute to the sustainable development of human communities.

Components of virtual transformation

Although virtual transformation has been investigated from different dimensions, its specific components are clear to a greater extent. In digital transformation, the role of some actors is prominent and decisive. It is considered a combination of government, citizens, and business cooperation. For this combination to constructively contribute to the virtual transformation, it is necessary to provide the necessary infrastructure. Technological, legal, educational, and security infrastructures are essential to the success of digital transformation. Technological infrastructure refers to high-speed Internet networks, satellite communications, creation tools, and access to related applications. In addition to technological instruments, legal infrastructure related to the activities of citizens, businesses, and property rights must be established. At present, the existing laws and regulations do not meet such needs in most societies. For example, generated data, and tools derived from intellectual activity, are not easily protected by law. On the other hand, citizens' awareness of instances of criminal activity in cyberspace is not clear.

Citizen education plays a key role in the success of new developments. Informed, skilled, and competent citizens will help advance virtual transformation. Citizen education should not be limited to formal education. Today, there are great opportunities for the development of informal and non-formal education in cyberspace. Liberalizing a wealth of scientific, educational, and multiple communication resources can help bridge the digital divide. In addition to training, it is necessary to help develop cyberspace security. Cyberspace architectures need to be revised and developed in line with new requirements. Responsive artificial intelligence should be on the agenda and appropriate and efficient guidelines for collective living in a smart environment should be developed and implemented.

Universities, NGOs, professional associations, and global movements can contribute to citizens and governments to accelerate the pace of virtual transformation. Virtual governance with a focus on citizens and the use of emerging facilities to increase welfare, health, and peaceful coexistence is a top priority. Every social, global, regional, and national entity need to be aware of and act upon its responsibility for virtual change.

Virtual transformation steps

Virtual transformation is like a journey. Successful virtual transformation requires six crucial steps, including:

- 1- Virtual positioning
- 2- Capability development
- 3- Virtual admission
- 4- Virtual identity
- 5- Virtual deployment
- 6- Virtual leadership

In the virtual positioning phase, the enterprise seeks to understand its current and desired status. To achieve realistic knowledge, it is necessary to review the situation, and foresight to find a list of key projects essential to commence the journey. The more accurate and realistic the analysis at this stage, the easier it will be to plan for change.

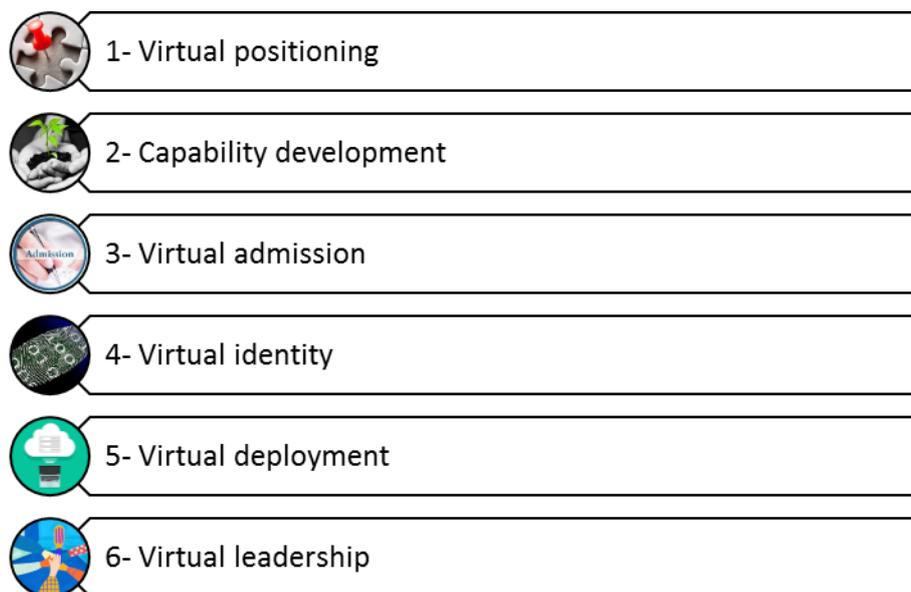


Figure 2. Virtual transformation phases

In the capability development phase, a list of core capabilities along with their subdivisions is provided to different business units in order to bridge the capability gap by adapting the required capabilities to the existing capabilities. Managers' high sensitivity to meeting and improving their competency profile is the key to the success of this stage.

In the virtual admission stage, the managers of the organization virtualize the part of the business that has already been done digitally. This stage is considered a pilot. Any positive or negative changes at this stage should be carefully considered to provide guidance for further action.

After the virtual admission stage, the business transfer takes place. Moving a business means moving the organization (enterprise) to cyberspace. At this stage, the organization's virtual identity is completed and virtual relationships are placed on the organization's agenda as a top priority. The business transfer will mean recognizing the organization's virtual presence.

The next step is to complete the transition phase. At this stage, the problems and issues that have occurred in relation to stakeholders, customers, the body of the organization, and the necessary improvements are made. The result of the transition stage is the achievement of methods and lessons learned that will be used by managers, staff, and stakeholders in the next stages.

The final stage is related to the development and role of virtual leadership. Organizations that have taken such steps carefully and successfully will be able to play a virtual leadership role at this stage. Virtual leaders are organizations that have entered the virtual life with readiness and knowledge. These organizations will bring the most productivity to themselves and their stakeholders.

Implications of *Virtual transformation*

Virtual transformation implies experiencing another life that organizations experience in a new space. Achieving this experience and living it will mean substantial changes in business model, communications, and workflow. Among the implications of the new changes are the following:

- Structural agility
- Developed communications
- High added value
- Promoting the brand value
- Digital integration
- Sustainable Development
- Developed infrastructure
- Consolidated knowledge management
- Wisdom-based management

Each of these modifications represents an evolutionary movement towards organizational excellence that can lead to the provision of quality and sustainable services and products. *Virtual*

transformation can be viewed as the driving force of sustainable coexistence of organizations, firms, and companies with the environment and stakeholders. Without virtual transformation, organizations will not be able to maintain their effectiveness and survive in the near future.

Virtual Transformation Governance

Achieving the goals pursued by *virtual transformation* requires good governance in organizations. To achieve a desirable situation, organizations need to improve their governance system in various areas, some of which are as follows:

- Improving technological efficiency
- development of communication strategies
- Protection of Knowledge assets
- Knowledge Value creation
- Continuous development of competencies
- Effective partnerships
- Improving the digital ecosystem
- Increasing business intelligence
- Concentration on customer experience

Virtual transformation governance requires the creation of a portfolio of transformation modules. An organization that seeks virtual transformation should transform all structures, regulations, training, communications, relationships, and orientations. *Virtual transformation* is not a project but a process. Completing the *virtual transformation* process requires capable managers, committed employees, a responsive structure, and a well-developed infrastructure.

Suggestions

Virtual transformation is not a choice but a necessity. In the future, only those organizations that have begun or completed their *virtual transformation* journey will be able to reap the benefits of technological advances and communications.. Therefore, organization managers and those involved in businesses and enterprises are under more pressure to adopt this change timely. The following suggestions may be helpful to managers in maximizing the benefits of virtual transformation:

- Take digitization seriously,
- Connect between traditional and digital processes,
- Think of technology only as a tool. They are not the goal but they can help to achieve the goal.
- Evaluate your current position compared to your virtual position,
- Establish a think tank and action center for *virtual transformation*,
- Do not be afraid to invest in *virtual transformation*. This is not a cost but an investment for the future,
- Continuously develop your structural and human capabilities,
- Do not forget networking,
- In establishing and developing each process, consider its virtual orientation.

Finally, it is worth mentioning that *virtual transformation* is not for tomorrow, but that all organizations are now entering their virtual world. Virtual life means the possibility of exploiting all possible capabilities in the path of sustainable development. Let's put *virtual transformation* at the top of our organization's vision.

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