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The transformation of human needs in the digital economy

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Abstract — **This article focuses on the role of the information revolutions in the history of civilization development. The information generated by the information revolution reflects progressive consequences of society. The Internet as a result of the last information revolution explores its impact on human development. Changes in all spheres of society, possibilities of addressing a number of traditional problems, and disturbing trends are considered as a result of the Internet implementation.**

Keywords — ***internet, history, information revolution, technology.***

I.   INTRODUCTION

The information revolutions based on the way which leads people to information society have been taking place in the history of civilization. It is necessary to pay attention to the reasons, manifestations and possibilities created by these revolutions to understand the essence of this new stage of civilization because of information and knowledge of information society.

The information revolutions caused the advent of new technologies and tools in the area of recording, remembering, processing, transfer of information, in general, and transfer of information in all spheres of life, in particular, and also led to changes in the socio-political and cultural life. It is a complex process which has brought about its development. [1]

The time between information revolutions is gradually decreasing. That is why the next information revolution will happen more often. The Internet is still a virtual space for text, audio, video, and graphics. This means that the Internet cannot process information received from sight, hearing, touch, taste and smell which serve to meet the information needs. On the other hand, the Internet cannot communicate with people. Another issue is a sharp decline in the cost of data storage which is still high. It also makes extremely difficult to access to information on the massive Internet resources. Such a situation creates information asymmetries. [2] Thus, the new scientific and theoretical basis, new effects and legislation should be open for information more rapidly.

The information revolutions which occurred as a result of electricity discovery in the 17th century – telegraph, telephony and its technologies could partly address the problem of space transfer but that time problem has not been resolved because of a lack of technologies. Moreover, the information revolutions were the last ones in the 1940s. In the 1960s, the Internet was laid because there was the convergence of communication and computer technologies. [3] The idea of the Internet establishment is associated with the name of J. Licklider, an American scholar. He offered to establish a global network in the concept of the network-based thinking of 1962. The author showed that everybody could access to data and programs on the computers. Indeed, that concept was close to the mission of the modern Internet.

II.   METHODOLOGY OF RESEARCH

The last information revolution laid the foundation for a shift away from industrial society to the stage of information one. The main objective of the new millennium information society is to meet people information needs, regardless of age, religion, language, race, space and time, to create an environment of social communication between them, to carry their knowledge and ideas to the society. When people realize the objectives of information society, they are able to overcome global, socio-economic and spiritual challenges inherited for thousands of years such as poverty eradication, illiteracy, protection of the health, development of democracy, human rights and other universal human values. [4]

The future development of each country depends on its special attention to care and concern. The use of high-quality education methods is a driving force of the elaborate future workforce development. Modern education and science are independent and creative approach to use new technologies and methods of education which are able to meet the requirements of the modern world. Education methods should be chosen, taking into account variety, maintenance and quality and should be brought to the attention of people in the simplest and most effective way. [4]

III.   RESULTS OF RESEARCH

Public administration on the Internet is changing. The establishment of the electronic State is connected with optimization of services provided by the State to the population and business, with participation of all citizens in the governance of the country, with its transparency, and accountability of the public authorities to citizens. The essence of this new concept of administration is that it will be more manageable, structured, less restrictive and vertical but horizontal. Another important element of the electronic Government is an integrated application of the electronic trade system for public procurement and services. The role of the Internet technologies in the modern political processes is increasing rapidly. The modern information technologies,

especially the Internet, open the way to act for political parties and leaders. Expanding access to the Internet allows citizens and groups to get more involved in the preparation and adoption of political decisions. Political parties use both the Internet technologies as a means of political communication. Now political activities are shifted from the traditional place to the virtual space. [2] It is difficult to provide our modern life without new technologies. It is important to note the rapidly changing latest technologies and innovations in recent years, especially in the field of information and communication technologies. The area of their influence includes all the public authorities and institutions of civil society, economic and social spheres, science and education, culture and lifestyle of people as a whole. There is a need to interactively use telecommunication technologies and the Internet resources, to convey this technology to the right people at this time. One of the best technological methods is digital technology. Older digital technologies also play an important role in business, public life, and our entertainment. This is called 'managed by a finger'. [2]

The use of digital methods has an important place in the human sciences which enrich our life in the moral, cultural and cognitive way. Digital technologies are increasingly used as a tool of research in the modern human sciences. A computer analyses the great literary works and identifies the linkages between text elements. Geographical information systems have access to historical information.

Digital human technologies should take into account three directions for development:

    A.   Protection of cultural heritage;
    B.   Achieving new research possibilities with the use of new knowledge and methods;
    C.   Access to the new audience and new users;

A. Historical books are digitized and transmitted to modern readers using new technologies, which enables to be exposed to the world's largest museums and historical monuments.

B. The aim of the establishment of the new database of information and memory is to achieve new research possibilities with the help of new knowledge and methods. The database of the digital archives to avoid a waste of time greatly facilitates the people work nowadays. [3] People used to spend a lot of time in libraries but today if there are the same old search types, it is possible to provide information at a touch using the digital technology methods.

C. The third direction uses a number of interesting methods for coverage of new users. The development of modern technologies increases the number of people who are interested in this area every day. There were a lot of difficulties such as provision of documents, access to the certain institutions and etc. that led to diminishing people interest. However, there are new audience and networks nowadays because of new technologies.

IV.   DISCUSSION OF THE RESULTS

Important information is generated without the knowledge of researchers because business and Government structures are organized through the information systems which collect a workflow automatically. People use social networks, mobile phones and pay by a bank card.

A personal computer becomes an important tool of production in the Internet economy, and a personal site becomes a means of intellectual products realization. Naturally, there would be no place for private enterprise, for example, manipulation of activities, which is not connected with professional activity in economy aimed at achievement of social dividends. [1]

The essence of economic activities virtualization as a result of the Internet is that people interact with their images and symbols with the help of modern methods. Virtual relations are always in force. These relations have been developing through a sequence of telegraph, telephone, fax and Internet development. The Internet simulates not only real objects but also their activities in real time. It forms a whole new situation for the traditional economy creating a uniform virtual environment for market participants.
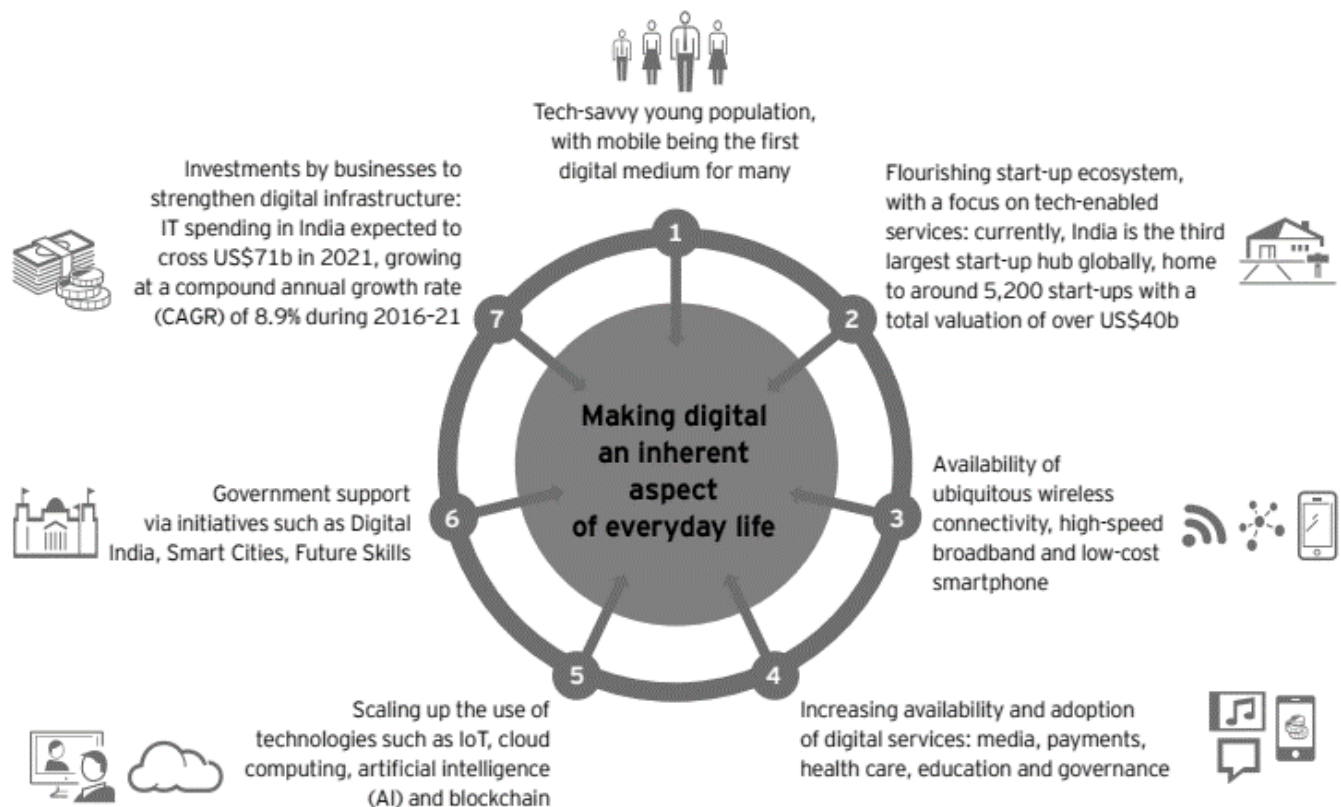
Fig 1. Making digital an inherent aspect of everyday life

Public administration on the Internet is changing. The establishment of the electronic State is connected with optimization of services provided by the State to the population and business, with participation of all citizens in the governance of the country, with its transparency, and accountability of the public authorities to citizens. The essence of this new concept of administration is that it will be more manageable, structured, less restrictive and vertical but horizontal. Another important element of the electronic Government is an integrated application of the electronic trade system for public procurement and services.

The role of the Internet technologies in the modern political processes is increasing rapidly. The modern information technologies, especially the Internet, open the way to act for political parties and leaders. Expanding access to the Internet allows citizens and groups to get more involved in the preparation and adoption of political decisions. Political parties use both the Internet technologies as a means of political communication. Now political activities are shifted from the traditional place to the virtual space. Internet addiction is a source of dangers not only for a person but also for society as a whole. It is important for people to have information culture, study information and behavior to avoid such an information situation which is in dependent on the Internet.

The Internet, social networks are a source of the next generation military technologies as the information war. The developed countries are currently considering this area as one of the most important areas of national security. The information space security is estimated, as well as the safety of land-based space, maritime and airspace because it is a military duty of the State. [4]

The Internet is a place without rules of traditions, languages, culture and religion. Economic, technological possibilities, countries with ideological resources are a serious threat to the national spiritual existence of other countries in this virtual space. According to different studies, some languages may disappear in the near future because of the Internet.

There are difficulties to identify the generally accepted policy, principles and mechanisms, and they are connected with these factors. Each State wants to be represented in the virtual space with their national moral values. A search for common ground where interests of all the countries provided on the Internet is not easy task. That is why it is difficult for the ordinary systems of national and international law to regulate the reality of the Internet. There are initiatives for action to its regulation at the international level because the Internet breaks national legislation and international law based on geographical boundaries. It is difficult to manage virtual relations with the help of real law and in some cases it is even impossible. The regulation of virtual relations requires establishment and use of new legislation, rules which are special for this area.

Deformation of a human factor is the greatest threat of the Internet. According to the use of information technologies, there is the most significant change in social and biological quality of people. That is why integration of a person is in the process as a result of these changes. [2]

Scientific development of human thinking and scientific rational lifestyle are formed as a result of the rapid information technologies development and increase in the number of urban population. A fast-developing person faces natural biological existence for social progress and rightful place in society.

The physical and biological parameters, interests, and needs are transformed. It is important to identify three main directions of human transformation.

Biological. There are cardio-vascular, oncological, immunological diseases called gene transfer, mutation and 'diseases of civilization'.

Moral and psychological. Cases of mass disorders in psychiatry, pathological consequences, misunderstanding of environment, social aggression, frustration, suicides are increasing.

Socio-cultural. There is the rapid quality development of thinking, education, profession. Change of environment, technological progress and rapid growing demand is also identified. [3]

V.   CONCLUSION

It is important to note that each of these innovations in the history of civilization brings the certain problems. But humanity always benefits from progressive innovations and deals with these problems. The Internet as a basis of the modern information and communication technologies is a phenomenon which does not have analogues in the human history. That is why technological innovations do not change humanity, taking into account the Internet, and cannot move ahead. The advantages of the Internet for humanity cover all the aspects. However, the extensive past experience and today's efforts of humanity show that people can overcome difficulties of the Internet to improve possibilities and create comfortable life.

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