

THE IMPORTANCE OF THE INNOVATION CLUSTER OF THE SERVICE SECTOR DURING THE TRANSITION TO THE DIGITAL ECONOMY

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Annotation

This article describes the implementation of the goals set in the development concept of the service sector of the Republic of Uzbekistan until 2030. At the same time, the relations of the service sector with other sectors and the importance of virtual clusters in the process of digitization of the national economy are shown.

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As a result of the rapid development of the field of information and communication technologies, the need for a new structure and cooperation is felt, and the innovation cluster is very suitable for this process. In contrast to the industrial cluster, the innovation cluster focuses on the creation and technological application of know-how, the wide use of knowledge and skills accumulated within the cluster companies. The innovation cluster differs from other forms of economic associations in that the cluster companies do not merge completely, but instead create a mechanism of mutual cooperation within and outside the cluster, which allows them to retain the status of a legal entity and at the same time cooperate with other enterprises. "Today, it is necessary to pay special attention to the concepts of specialization in the effective standard promoted by the European Union."¹

"Cluster initiators" are increasing year by year, as the creation of clusters is a system that provides not only the companies operating in it, but also socio-economic development. At the end of 2021, the total number of clusters in various fields in the Republic of Uzbekistan is 454 [<http://www.ima.uz/uz/>]. A cluster is a complex of enterprises connected to a single technological link, which includes the introduction of scientific achievements and the latest technologies into practical activities and the integration of education with production."² A cluster is an organizational form of combining the efforts of interested subjects (education, resources, production).³

In the conditions of informatization of the service industry, a conceptual approach to the formation of a virtual cluster is proposed, which forms a virtual space of information exchange using ICT and network structure mechanisms, regardless of the physical location of service industry entities. Clusters are considered as large associations that have a lot of infrastructure, such as industrial districts, scientific

¹ Mamatov A.A., Joraev T.T. Foreign experience of organizing clusters and setting up their activities. Scientific electronic magazine "21st century: issues of science and education". #1, 2020

² Rahmatov M.A., Zaripov B.Z. Cluster integration, innovation and economic growth. Treatise T. "Zamin Nashr" publishing house, 2018. -B.38.

³ Bazarova G.G. Creating a cluster form of regional labor market development. "Economy and Education" magazine. 2021. - B.202.

centers, technological parks and educational institutions, industrial zones, and integrate the national innovation system⁴.

There are two approaches to forming innovation clusters: open and closed clusters. Based on the analysis of cluster design issues conducted by the Russian scientist T.S. Popov and other scientists, he emphasizes that the open cluster model is fully compatible with the service sector of the post-industrial society. It allows to get ideas and financial funds from various sources, to attract employees from universities and scientific organizations and to collect ideas, to work with specialists with high motivation and interest in work results.

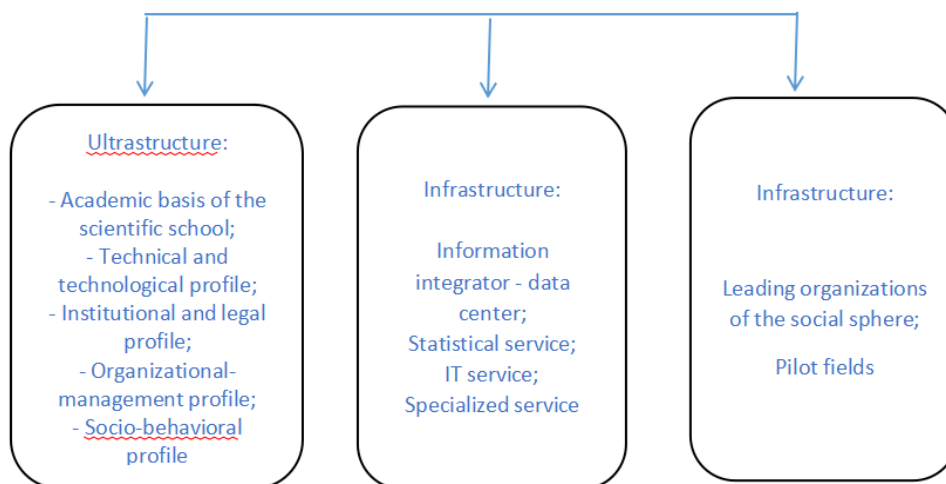


Figure 3.4. The structural structure of the virtual innovation cluster of informatization of the service sector⁵

The structure of the virtual cluster consists of three components: infrastructure, ultrastructure and infrastructure. The infrastructure consists of objects for organizing information exchange, the main of which is the information integration integrator, that is, it is the information center that implements the processes of social support in the fields of the information society.

It should be noted that an argument in favor of infrastructure virtualization is the high cost of the physical method of data exchange. This process requires a lot of labor costs, the purchase of information-carrying instruments, and the allocation of significant resources for data transportation. Virtualization of information exchange allows to significantly reduce transaction costs by automating the implementation of internal functions of this cluster.

Ultrastructure is an innovative organizer, a catalyst of development. It consists of knowledge generation objects. The virtual cluster concept corresponds to the triple helix model described by the Russian scientist G. Iskovis. The scientist says that "there is not a single example in the world where the national innovation system has worked effectively outside of the principles of the triple spiral, and there is no case where universities are not at the center of these activities."⁶

In many ways, the presence of an ultrastructure in order to overcome regional localization creates the need for cluster virtualization. Knowledge and science are a source of high value in the modern economy. The speed and breadth of knowledge dissemination becomes the determining factor of system efficiency.

⁴ Khakimov Z.A. Transformation of clusters to "industry 4.0". Magazine. Economy and education. No. 2 of 2022. -245 pages.

⁵ Based on the author's research.

⁶ Itzkowitz, G. Triple helix. Universities-enterprises-state. Innovation in action :<http://www.tusur.ru/>

The ability to attract subjects from all over the world to the virtual cluster space to participate in scientific schools, and at the same time not to bear the costs of their physical relocation, expands the possibilities and conditions of knowledge exchange and, in turn, increases the innovative potential of the cluster and creates new increases the probability of the emergence of knowledge.

Infrastructure is the facilities involved in the provision of services in the service sector, which mainly consist of pilot areas opened for the introduction of innovations developed by the leading organizations of the sector and ultrastructure. A virtual cluster has a flexible network architecture. At different stages, the number of participants may change depending on working conditions. The introduction of a new entity may change the composition of powers, but this does not affect the structural structure of the cluster system.

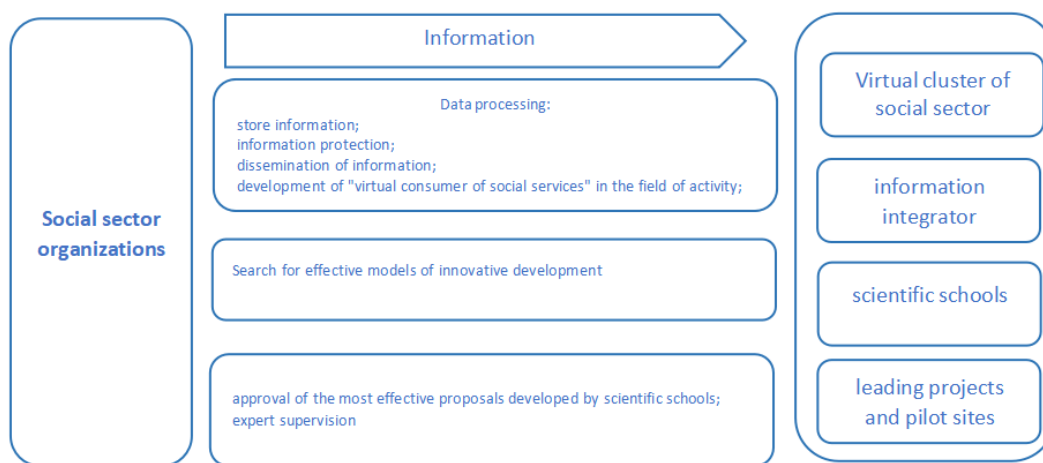


Figure 3.5 Scheme of mutual cooperation of service sector organizations and information virtual cluster⁷

Due to the creation of a virtual cluster, a single information and technological space is formed - a corporate environment of information interaction is formed. In accordance with the scheme presented in Figure 3.5, the formation of mutual cooperation between organizations of the service sector and the virtual cluster of social sector informatization will encourage the wide use of ICT in accordance with the principles of competitive-cooperative strategy and help to develop the service sector.

This system is not intended to duplicate the functionality of other service industry management systems. It will be a special filter, reorganizer and aggregator of information about the progress of information processes in the service sector, an intermediary between the elements of its external and internal environment, this is ICT. its specific characteristics are related to the increase of its role in the activity of the service sector. The proposed scheme of partnership between the state and society is a mechanism for creating social loyalty.

List of used literature.

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⁷ Based on the author's research.

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