SIMULATION OF COMMUNICATION AND INFORMATION ADVANCEMENT IN THE REGIONAL HOUSING AND PUBLIC UTILITIES SECTOR

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Abstract

The theoretical foundations of the mechanisms for enhancing communication and information services in the regional housing and communal services sector through digital technologies have been refined. Additionally, medium-term multi-option scenarios have been developed for the advancement of the communication and information system to improve the provision of housing and communal services to the region's residents.

Keywords: housing and communal services, communication and information, digital technology, empirical model, econometric model, forecast results, information system, endogenous variables, exogenous variables, multivariate, scenarios.

Introduction

Regarding the wide-ranging fundamental changes implemented in all spheres in New Uzbekistan, special attention is being paid to the development of the social sphere, to the improvement of the quality of communal services to the population in the regions. Digitization of the economy is important for the formation of market relations and social-economic stability of the society as one of the strategic goals set in the State Department of the long-term socio-economic growth of our Republic until 2035. Artificial intelligence is a new bock of digitalization of economic management, which is the process of step-by-step transition to systems and smart technologies, which involves the use of information and communication technologies

to solve economic or management problems, but also to clarify the situation with its help,

Region aproblems in improving the living conditions of the population, lack of full provision of housing, lack of provision of high-level communal services indicate the importance of further development of this area in the future.In this regard, in 2017-2021, the action strategy for the development of the Republic of Uzbekistan in five three-pronged directions "... implementation of targeted programs on the construction of affordable housing, development and modernization of road-transport, engineering-communication and social infrastructures, ..." [19] important tasks are defined from the surface. This article serves to fulfill such noble tasks to a clearly defined extent.

According to the World Bank, 60 percent of the world's population does not use the Internet or has access to it because of insufficient funds to use it. Only 15 percent of the world's population has access to broadband Internet services. In developed countries, mobile phones are the primary means of using Internet services, and 80 percent of the world's population is covered, but only 2 billion. almost 100,000 people still do not use mobile phones [3].

The development of communal services in the regions is related to the development of ICT, which leads to the digitization of all economic systems and the formation of a new type of electronic (digital) payment system. In the development of the control mechanism of the electronic payment system, the researches of foreign scientists will be looked at, and the institutional aspects of the financial market activity, which directly affect the formation of payment systems, were considered in the research of Russian scientist E.G. Khomenko. He states that the data processing camaraderie and speed of payment operations in utility payment systems, the continuity of utility payment calculations are one of the important features of any payment system [4].

D.A. Korobeynikov's scientific research commented on the development of regional payment infrastructure within the framework of the payment system, the

introduction of payment system service into practice, and the fact that payment systems are naturally included in the infrastructure of the digital economy [5].

The famous American scientist M. Drabenctott [6] identified five problems that are crucial for the socio-economic development of rural areas in the United States, one of the most developed countries in the world, but they also apply to many other situations:

1. Transition to digital technologies.
2. Encouraging entrepreneurs.
3. Using the new agrocanoat complex.
4. Incon Capital Improvement.
5. Support rural environment.

We can witness that it was built earlier in the concepts presented in the scientific works of Y. Benkler called "Digital ichthyosis" and "digital ichthyosis" [7] introduced by D. Tepckott.

In the researches of Macalan, foreign economist-scientist N.P. Grozdanovich, the sustainable development of "Smart Villages" includes efficient use of land, purposeful use of housing, creation of places for walking and cycling, planning and development of recreation areas, transport engineering, management's approach to citizens and It has been described how to improve camaraderie, the use of smart solutions for sustainable development, and other directions [8].

The "technology" approach is defined by Anil Menon, chief globalization officer of the multinational Cisco company, as "a village that uses smart networked digital technologies or ICT to solve the problems of vertically connected networks in rural areas" [20]. These problems can affect the provision of parking, street traffic, transportation, outdoor lighting, water supply and management, safety, education and environmental services. "Aklli kishlok" will use these processes to better support and optimize village services, reduce resource consumption and maintain prices, as well as rural residents,

In his articles, A.V. Keshelava claims that the complexity of public utility service systems (systems adapted to the use of information technologies) requires taking into account the unique capabilities of digital technologies. It recognizes that it is responsible for the intellectual processing of information about changes in the state of complex objects and ensures the selection of management decisions[10].

E. Brinolfccon and L. Hitch, as a result of studying the activities of 527 large American companies, the authors say that additional assets (assets that change due to the use of information technology, the experience and skills of employees, communication tools and technologies, the quality of decision-making, changes in business processes, etc.) plays an important role, and over time, the results of the introduction of digital technologies are reflected in the bockich of rapid development [11].

Speed, accuracy, security of data are required in every field. At the same time, in the field of housing and communal services, creating wide opportunities for the population, the database will reduce the waste of excess papers, time-consuming, waiting for hours, wandering, and expenses.

In this place, the block diagram of the simulation modeling of the digitization of housing and communal service management was developed, divided into five blocks of digitization of the management of communal service areas and integration with the population, Fig. 5 [16].

The first block – a digital platform (1.1), population (1.2), computer (1.3) and communal service management (1.4) was launched. The second block - "Uzwatersupply" (OAJ-JSC) (2.1), population (2.2), computerization (2.3) and water supply management (2.4) was launched. The third block - JSC "Regional Electric Networks" (3.1), population (3.2), computerization (3.3) and electric power management (3.4) was launched. The fourth block - JSC "Region gas supply" (4.1), population (4.2), computer operator (4.3) and gas supply management (4.4) were launched. The fifth block - "Special trance – Maxsustrans" DUK (5.1), residents (5.2), computer operator (5.3) and waste management (5.4) were launched.

In our view, digital platforms represent the most promising tool for driving digital transformation today. A revolutionary shift is occurring in business models across all levels of socio-economic systems, closely linked to the implementation of network-based management approaches.

The adoption of digital platforms is leading to fundamental changes, affecting market structures, the scale of operations, and the competitiveness of socio-economic systems. In this context, the "Digital Communal" platform has been developed as a comprehensive digital management solution for the housing and communal services sector, ensuring greater efficiency, transparency, and accessibility.

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