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### MODELING THE DEVELOPMENT OF COMMUNICATION AND INFORMATION PROCESSES IN THE PUBLIC FIELD

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### **Abstract**

The theoretical foundations of the mechanisms for the development of communication and information services using digital technologies in the field of housing and communal services of the region have been improved. Medium-term multi-variant scenarios for the development of the communication and information system for the provision of housing and communal services to the residents of the region have been developed.

**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

In the process of providing the life of the population of the region with high-quality communal services, modernization of communal services, new approach of communal services, new technical requirements for them, creation of smart neighborhoods such as smart cities, digitization using information and communication technologies and compliance with standards and quality standards are considered to be one of the most urgent issues of today.

One of the main directions of the present day is the implementation of increasing the level of housing and communal services with the effective use of information systems and technologies. Housing and communal services are one of the important socio-economic issues in terms of improving the living conditions of the population, improving the quality and beauty of housing, regulating the efficient use of water, gas, and electricity by the population, and improving the well-being of the population.



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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.

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, ..." [8] important tasks are defined from the surface. This article serves to fulfill such noble tasks to a clearly defined extent.

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 order to improve the digital economy in our republic in the future, our government set the task of developing the program "Digital Uzbekistan-2030". Basic principles, procedure, levels and functions of networks and regions of the development of the digital economy are defined in the document [1].

Digitization of communal services in the regions requires the search for promising organizational, economic and management relations using ICT. In our opinion, we will be able to respond to the needs and demands of the population by digitizing the listed leading utilities such as electricity, gas, water and liquor supply, and waste management services.



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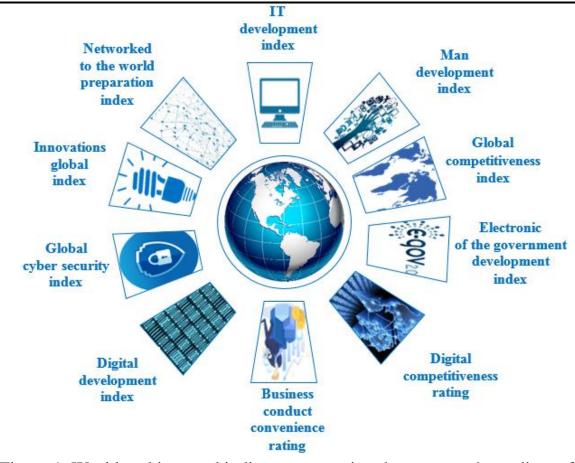


Figure 1. World rankings and indices representing the economy's readiness for digitization.

There are different views on the definition of the concept of "communal services", it is defined as "communal services are the services of improving the living conditions of citizens in their places of residence in terms of hot water supply, domestic water supply, sewerage, electricity, gas supply and drinking water supply" [3]. **Digital public services** – development of a model for assessing the camaraderie of using a digital platform is a macro level of the use of modern digital technologies, which are public services extended by public services [4]. Digital utilities have a unique internal structure (Figure 2).



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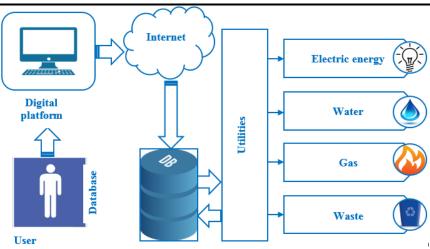


Figure 2. Digital utilities.

The transfer of utility management to a digital platform is a utility business model that provides precisely tailored utility services. The platform allows consumers and service providers to speed up communication in building a trust rating, finding counterparties, making deals and making settlements [5].

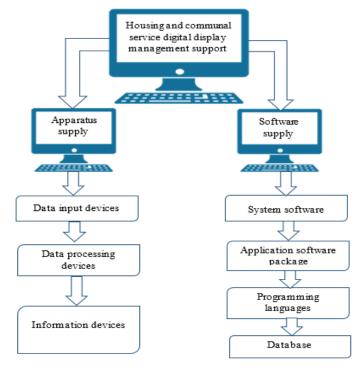


Figure 3. Information supply of digital management of housing and communal services.

As we can see from Figure 3, in the region, the provision of information communication technologies is used for data processing, data transfer, organization



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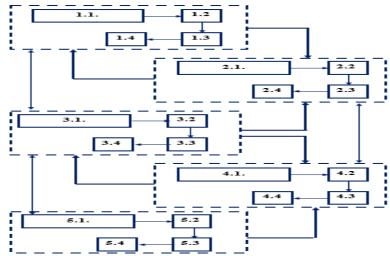
of electronic document exchange, and introduction of interactive services in the organization of the digital management system of housing and communal services [6].

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.

There is a choice of software in database development, where we can use special software tools and application packages that work with databases. Applications such as Access, DataBase, MySQL, SQL are designed for database development. For a website, web platform, Windows application or mobile applications, a database is also developed and managed using this database.

The introduction of the "Digital Communal" mobile application in the digitalization of housing and communal service management will create many conveniences for the population. If we think about the functionality of the mobile application, at first, when using the mobile application, there are special functional buttons for selecting Uzbek, Russian and English languages, and users can choose the language they want.

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, Figure 5. [7].



5 - figure. Block diagram of simulation modeling of digitization of housing and communal service management.





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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.

That's why we in order to improve the quality of communal services in the regions using ICT, an integrated "**Communal Information-Communication**" platform management model was developed [7].

In our opinion, digital platforms are the most promising vehicle for digital transformation today. There is a revolutionary change in the business models of all levels of socio-economic systems, which are connected to the implementation network management. Use of digital platforms leading to radical change, market sizes and competitiveness of socio-economic systems "Digital Communal" platform for digital management of housing and communal services was developed.

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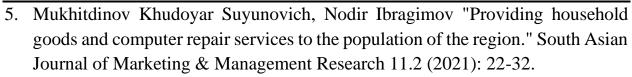
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