STAGES OF DEVELOPMENT OF THE INFORMATION AND COMMUNICATION TECHNOLOGY SERVICES SYSTEM

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Abstract: The article analyzes the main stages of development of the information and communication technology (ICT) services system and their impact on social development. The development of the ICT sector plays an important role in the digitalization of the economy, automation of management systems, and the creation of convenient electronic services for the population. The article highlights the institutional and technological directions for improving ICT services in Uzbekistan, as well as the opportunities for developing an innovative economy through the expansion of digital infrastructure.

Keywords: information and communication technologies, digital economy, infrastructure, innovation, digitalization.

Introduction

In the era of globalization and digital transformation, information and communication technologies (ICT) play an important role in the economic and social development of every country. The ICT services system contributes to increasing efficiency in such sectors as governance, education, healthcare, finance, and

production. In recent years, large-scale reforms have been implemented in Uzbekistan aimed at introducing electronic government, developing the digital economy, and modernizing internet infrastructure. Therefore, studying the stages of development of the ICT services system is of particular relevance, as this process makes it possible to enhance the country's innovative potential, expand digital infrastructure, and further improve the quality of electronic services provided to the population.

Research Methodology

In conducting this research, a number of general and specific scientific methods were effectively used. In particular, the observation method was applied to analyze practical processes in the insurance sector, while statistical and analytical data were collected to study the current situation. The obtained data were processed using methods of generalization and systematization, which made it possible to identify key trends and characteristics.

In addition, the comparative method was used to analyze the development indicators of insurance activities across different periods, as well as to compare domestic and foreign experiences. During the research process, the economic views, scientific studies, and conceptual approaches of local and foreign scholars related to insurance activities were thoroughly examined. Furthermore, existing sectoral problems, their causes, and practical solutions were analyzed based on scientific literature and practical experience.

Analysis and Discussion of Results

When considering the stages of development of the ICT services system at the global level, it can be understood as a multi-layered and interconnected process. The first stage is the creation of basic infrastructure. At this stage, countries or organizations begin to develop broadband networks, mobile communication infrastructure, cloud products, and services. According to analyses presented by the Organisation for Economic Co-operation and Development (OECD), ICT is

emphasized as a key factor for competitiveness, economic growth, and social development. At this stage, priority is given to reducing digital divides, expanding internet access, and increasing the penetration of mobile devices. Alongside the development of network infrastructure, the capacity of organizations to provide ICT services is also formed.

The second stage involves the development of a services and applications ecosystem. Once infrastructure is in place, organizations and governments begin creating ICT services such as electronic government (e-government), digital payments, distance education, and telemedicine in healthcare. In this context, ICT functions as a "general-purpose technology" (GPT). That is, after initial investments in infrastructure, services expand, and capital investments increase. At this stage, the formation of economic models and service delivery standards for ICT services becomes important, including user experience, cross-layer integration, and improvement of service quality. For example, international experience in the development of mobile payments and online government services serves as a valuable lesson for many developing countries.

The third stage is broader integration and transition to service leadership, where the ICT services system becomes a routine and integral function. At this stage, services are not only applied within existing infrastructure but are deeply integrated into enterprise operations, social systems, and public administration processes. Organizations digitize their business processes and open new market segments through services. This phase is often referred to as the "transforming" stage, during which governments and companies view ICT services as strategic tools and continue digital transformation processes. Moreover, service delivery models evolve from stand-alone solutions to coordinated ecosystem-based services, improving user experience and fostering integration among service providers, including government, private sector, and citizens.

The fourth stage is sustainable development and expansion of the services ecosystem. At this stage, countries or organizations not only provide ICT services but also develop supportive social and economic policies, legal mechanisms, cybersecurity systems, and data protection frameworks. For instance, ICT is emphasized as a tool for poverty reduction, digital inclusion, and contribution to sustainable development. At this stage, public policy, private sector investment, and the development of citizens' digital literacy play an important role. In many countries, ICT service development may be uneven across regions; therefore, political and social stability factors must also be taken into account.

Within this system of stages, complementary elements exist: infrastructure — services — integration — sustainability. At each stage, cooperation among the state, private sector, and citizens, as well as the harmonization of policy and technology, is essential. Therefore, the development of the ICT services system is an ongoing process, and each country faces its own specific conditions and challenges in the global context.

Conclusion and Recommendations

The development of the information and communication technology services system is of strategic importance for countries and organizations, requiring the alignment of technological opportunities, policy decisions, and cooperation with citizens at each stage. In conclusion, it can be stated that processes ranging from infrastructure creation to service expansion, integration, and sustainable development complement each other and form the foundation of the digital economy.

As recommendations, it is necessary to strengthen cooperation between the public and private sectors, equip citizens with digital skills, and implement systematic measures to ensure cybersecurity and data protection. At the same time, promoting innovative directions of ICT services, introducing new technologies with consideration of environmental sustainability, and reducing regional digital

disparities can enhance system effectiveness. As a result, the ICT services system will not only contribute to economic growth but also become an important tool for strengthening digital inclusion, social stability, and global competitiveness.

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