

## Chapter 3

# Cloud in Digital Government: Problems and Perspectives in the Case of Azerbaijan

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### **ABSTRACT**

*The development and widespread use of cloud technologies promises a number of economic prospects at the local, regional, and global levels. Cloud technologies have numerous advantages in terms of management, storage, and exchange of information resources in the virtual space for the public and private sector, citizens, and general users. The chapter provides an overview of the research conducted in the field of cloud technologies in Azerbaijan. The results show that the studies are mostly devoted to the infrastructure issues of cloud technologies, to the research of the conceptual bases of the creation of the government cloud, to the issues of security and personal data protection, as well as to the implementation of measures for the development of the economy of cloud technologies. The international experience in the field of government cloud was studied, and the realization of this concept and the results to be achieved were analysed. Necessary measures for the formation and development of the cloud technologies economy at the government level have been indicated.*

### **INTRODUCTION**

The rapid development of the Internet has led to the emergence of new services. The Internet creates an environment of interpersonal communication and satisfies people's information needs (Ali et al., 2021). Recently, the Internet has begun to meet people's computing needs. Due to the technology called "cloud computing", access to software, databases, and other services is obtained through various devices. Cloud computing is able to further expand the capabilities of information technologies, eliminating a number of technical and economic barriers. Eliminating those barriers will enable millions of specialists to make

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new contributions to the information technology market, and billions of users to benefit from these opportunities (Gourisaria et al., 2020).

According to experts' predictions, cloud technologies will have a significant impact on society and the economy as one of the most important turning technologies in the next 20 years. The rapid growth of data processing, storage, and transmission capabilities lays the foundation for the economics of cloud technologies.

The development and widespread use of cloud technologies promises a number of economic prospects at the macro and micro levels. Therefore, cloud services are considered one of the main, prospective segments of the information economy and its leading direction, the Internet economy. That is why a number of leading countries of the world allocate a special place to cloud technologies in their national strategies and programs for the development of the information society, information and communications technology (ICT), information economy, or the Internet (Mahmudov, 2014; Government Cloud Concept, 2019; Ali et al., 2021).

Azerbaijan's perspective of the telecommunications sector until 2025 consists of strengthening the country's telecommunications and information technology infrastructure, expanding the services provided in this field, and encouraging all sides to use these services. As a continuation of this vision, one of the main priorities is to become a leading technology-based country in the region as a result of the wide application of services used in everyday life in the period after 2025. For this purpose, it is planned to develop high-speed broadband infrastructure with wide coverage in the country. To achieve this goal, it is planned to achieve the following three strategic goals (ICT Roadmap, 2016):

- Improvement of management structures and strengthening of ICT.
- Increasing productivity and operational efficiency in the activities of business entities.
- Digitization of government and social environment.

At the same time, the regulatory and legal framework will be improved in order to develop communication links, form a stable telecommunication infrastructure, expand the use of the Internet and encourage the participation of the private sector. For this purpose, the regulator will manage issues such as transparent and efficient national frequency allocation, effective management of the national frequency spectrum, effective organization of relations between market subjects and further increase of the competitive environment, stimulation of investments in the telecommunications sector, control of service quality and protection of consumers' interests. the establishment of the institution will be considered.

ICT is considered an important component of a developed economy with high performance. The ICT sector includes a wide range of manufacturing and service sectors, including the telecommunications industry. By creating conditions for communication and information exchange between business subjects and consumers, ICT has a supporting role in the development of society, government and economy.

The large-scale application of ICT has a significant impact on the creation of new jobs and productivity growth. Especially in developing countries, the application of ICT has become an important factor in driving growth in GDP (ICT Roadmap, 2016). ICT has a multiplier effect in creating new jobs. International experience shows that each new job created in ICT stimulates the creation of 2-4 new jobs in other sectors of the economy. Wages for new jobs created in this sector are higher than the average wage. It should be noted that there is a noticeable increase in productivity in industries where ICT is applied, and SMEs that use the most advanced technologies develop faster.

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