



DIGITAL TRANSFORMATION IN UZBEKISTAN AND MANAGERIAL DIMENSIONS FOR BUSINESSES

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ABSTRACT

This study analyzes the progress of digital transformation in Uzbekistan between 2020 and early 2025, with a particular focus on the institutional mechanisms that support this process and the managerial implications for companies. The research relies on official strategy documents, UNDP's Digital Economy of Uzbekistan (2025), DataReportal's Digital 2025: Uzbekistan, ICT sector statistics, and IT Park reports. The findings show that by January 2025 Internet penetration had reached approximately 89 percent of the population, or 32.7 million users. Exports of ICT services by IT Park residents grew to 344 million US dollars in 2023, while the ICT sector accounted for 2.1 percent of GDP and employed around 87,800 people. These achievements demonstrate significant progress in connectivity, sectoral development, and international market integration. At the same time, challenges remain, including shortages of skilled specialists, uneven regional development, limited digital literacy in rural areas, and gaps in digital infrastructure and content. The study concludes that companies can strengthen their position in this environment by establishing formal governance structures for digital initiatives, applying measurable maturity indicators, investing in workforce development, and pursuing export-oriented ICT service models.

INTRODUCTION

Over the past five years, Uzbekistan has stepped up efforts to integrate digital technologies at both governmental and business levels through its Digital Uzbekistan – 2030 Strategy [1]. This government roadmap sets out the priorities: expanding e-government, improving telecommunications infrastructure, digital skills training, and



growing ICT exports. Such strategic direction has coincided with improved national indicators of digital adoption and ICT sector performance.

By early 2025, Uzbekistan's Internet penetration rate stood at approximately 89%, with about 32.7 million users out of a population of ~36.7 million. Mobile broadband connectivity (3G/4G/5G) is increasingly common. Meanwhile, IRL Internet speeds have improved significantly year-on-year. Within the ICT sector, exports via IT Park rose from around US\$140 million in 2022 to US\$344 million in 2023, signalling strong growth [2]. However, gaps remain — in human capital, regional access, infrastructure for advanced technologies and content, and in achieving competitive global positioning beyond raw volume of exports.

This article addresses two central questions: What institutional and managerial mechanisms have underpinned Uzbekistan's progress in digital transformation from 2020 to 2025? And what business practices are necessary for companies to succeed in this evolving digital environment?

METHODS

The research is based on a mixed-methods approach that combines qualitative and quantitative analysis. At the first stage, document and policy analysis was carried out, focusing on the strategic framework of Digital Uzbekistan-2030 as well as presidential decrees, government programs, and regulatory measures adopted in the period 2020–2025. This provided an institutional background and allowed for identification of the state's priorities in the field of digitalization.

At the second stage, the study turned to empirical statistical data in order to capture measurable outcomes of digital transformation. Key sources included DataReportal's Digital 2025: Uzbekistan, which provides indicators of Internet penetration, mobile subscriptions, and broadband speeds, and UNDP's report Digital Economy of Uzbekistan [3], which offers figures on the ICT sector's contribution to GDP, the number of companies, and employment. In addition, public reports of IT Park were examined to evaluate export performance and the dynamics of resident companies.

The third stage of analysis involved a comparative perspective, placing Uzbekistan's progress in the context of international benchmarks. Indicators such as the UN E-Government Development Index (EGDI), the E-Participation Index, and the Network Readiness Index were used to trace changes in global positioning and to highlight the strengths and weaknesses of Uzbekistan relative to other countries.

Finally, the empirical results and comparative findings were synthesized with a focus on managerial implications. This step aimed to translate the observed macro-level changes into insights relevant for companies: the need for structured digital governance, the development of organizational capabilities, the design of measurable performance metrics, and the strategic alignment of human resources with digital transformation priorities.

RESULTS

By early 2025, the trajectory of digital transformation in Uzbekistan demonstrates a combination of measurable progress and persistent structural challenges. The most visible achievements are observed in digital adoption and connectivity. According to



DataReportal, the number of Internet users in the country reached approximately 32.7 million, which corresponds to 89 percent of the total population. Mobile connections accounted for about 33.9 million subscriptions, or 92.2 percent of the population [4]. The quality of access also improved: median mobile download speeds increased to 37.8 Mbps, while fixed broadband speeds reached 79.1 Mbps [5]. These dynamics reflect both large-scale investments in telecommunications infrastructure and the growing demand for digital services among citizens.

The ICT sector has become an increasingly significant component of the national economy. UNDP (2025) estimates the contribution of the ICT industry to GDP at 2.1 percent in 2023. The number of ICT-related enterprises exceeded 10,500, with nearly 2,500 of them operating as residents of IT Park. The institutionalization of this park has created a platform for entrepreneurship and the development of export-oriented business models [6].

Export performance illustrates the acceleration of digital transformation in economic terms. The exports of ICT services by IT Park residents grew from approximately 140 million US dollars in 2022 to 344 million US dollars in 2023, thus more than doubling within a year. This growth was accompanied by the expansion of the workforce: ICT employment increased to nearly 87,800 people, indicating the sector's rising role in job creation and professional specialization [7].

Institutional developments also reinforce these trends. The implementation of Digital Uzbekistan-2030 has been supported by large-scale state investments in infrastructure. Government initiatives include the construction of new base stations, the expansion of the fiber-optic backbone, and the establishment of data centers, including those designed to support artificial intelligence solutions. At the same time, the scope of e-government platforms has been broadened, with additional digital services integrated into the national portal my.gov.uz. These measures provide the backbone for the diffusion of digital technologies across public administration and the economy.

Despite notable progress, several challenges remain unresolved. Regional disparities between urban and rural areas continue to limit equitable access to high-quality digital services. The digital literacy gap, particularly outside large cities, constrains the effectiveness of new platforms and services. Furthermore, the shortage of skilled ICT professionals, especially at the middle and senior levels, hinders the sector's ability to maintain rapid growth. Finally, the competitiveness of ICT exports requires strengthening, since a significant portion of current contracts is concentrated in a limited number of markets.

DISCUSSION

The results suggest that Uzbekistan's progress in digital transformation is substantial and multi-dimensional. The central strategy (Digital Uzbekistan – 2030) acts as a critical blueprint, aligning policy, regulation, and investment. Key institutional levers — the establishment and growth of IT Park, investment in telecommunications infrastructure, regulatory frameworks facilitating e-government — amplify this progress.

For businesses, this environment presents both opportunity and challenge. Companies that are successful tend to adopt structured governance for digital initiatives



(e.g. digital transformation offices or equivalent), explicitly measure digital maturity and ROI on digital projects, and align their operations with national strategic priorities (export markets, tech hubs). Talent acquisition remains a core bottleneck; companies that partner with educational institutions, invest in training programs, and develop internal pipelines appear to fare better.

Another point is that speed of adoption of technologies (mobile broadband, fixed broadband, AI-oriented infrastructure) must be matched with ensuring content, service quality, and user skills, particularly outside urban centers. Export growth must be coupled with competitiveness — in terms of quality, security, IP protection, and service standards — rather than purely volume.

CONCLUSION

From 2020 to early 2025, Uzbekistan has made significant strides in digital transformation. High Internet penetration, rapid growth of the ICT sector, expanded exports from IT Park, and substantial institutional and infrastructural investments mark this progress. Yet, to sustain and deepen transformation, focus must shift to closing regional, skills, and content gaps; ensuring quality and competitiveness of exported ICT services; and establishing strong internal governance structures for companies.

For businesses, key implications include instituting formal digital transformation leadership and oversight, developing measurable digital maturity metrics, investing in talent and education partnerships, and aligning strategic initiatives with national infrastructure and export priorities. Taken together, these measures can help companies not only adapt but also become engines of growth within Uzbekistan's digital economy.

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