UDC 330

# THE REPUBLIC OF KOREA`S DIGITAL TRANSFORMATION

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Presently, a fundamental change in the way we live, work and related to one another can be represented by The Fourth Industrial Revolution.[1] The Fourth Industrial Revolution, a term coined by Klaus Schwab, founder and executive chairman of the World Economic Forum, delineated breakthroughs, such as artificial intelligence (AI), robotics, the internet of things (IOT), autonomous vehicles, 3D printing, nanotechnology, biotechnology, materials science, energy storage and quantum computing as an infant, who will `grow up` and enhance in a fusion of technologies across the physical, digital and biological worlds. Therefore, in order to improve accessibility, facilitate better information exchange worldwide and enhance information preservation digitalization is no longer limited to geographical boundaries.

Today, the process of digitalization affects all countries of the world. In addition, each country independently determines the priorities of digital development. More than 15 countries are currently implementing national digitalization programs. China, Singapore, New Zealand, South Korea and Denmark are the leading countries in the digitalization of national economies. China traditionally brings together in its program "Internet plus" digital industry, Canada created the ICT hub in Toronto, Singapore forms a "smart economy", which is the driver of ICT, South Korea in the "Creative economy" focuses on the development of human capital, entrepreneurship and the dissemination of advances in ICT, and Denmark pays special attention to the digitalization of the public sector. [2]

Also, in terms of the current level of digitalization, Kazakhstan is also a catching-up country in the e-intensity rating of the international consulting company «The Boston Consulting Group». To overcome the status of catching-up requires the presence in the program of revolutionary, breakthrough measures in all areas of digitalization on the agenda of the world. For instance, Minister of information and communications Dauren Abayev signed a Memorandum of cooperation in November 2016 within the framework of the «E-government 3.0» forum and representatives of South Korea. Dauren Abayev promised that over time the quality of services provided by the electronic government of Kazakhstan will only improve. most importantly, we will look at Korea's experience, how to work and where to invest, what needs to be improved. Due to this, we will save quite a lot of budget money.[3]

Korea has a well-earned reputation as a global information and communication technology (ICT) leader, and it's not hard to see why. Home to world-leading electronics and ICT companies

such as Samsung, LG, SK, and KT — Korea's economic growth is digitally delivered. While every country prepares to encounter the changes that humankind has never experienced before, South Korea started an office administration in the 1970s. During the 1980s, the advanced countries of Europe and North America began to invest heavily in information and communications technologies, with a view to moving forward from an industrial economy to an information society.

According to this global momentum of digital transformation, Korea established the 'Act on Expansion of Dissemination and Promotion of Utilization of Information System' and began to computerize major government functions such as administration, finance, and national security. [4] In the 1990s, the United States announced its Information Superhighway Plan, with other OECD countries such as Japan launching similar projects following suit. Korea also participated earnestly in this trend. It completely overhauled its digitalization implementation structure and related laws shifting its focus from basic computerization to a world's knowledge and information powerhouse in the 21st century. To achieve this new status, the Informatization Promotion Fund was created to ensure a stable funding mechanism. Priority was given to building a high-speed communication network, which formed the fundamental infrastructure of informatization. At the same time, e-Government projects were also aggressively pursued as a strategic tool to enhance the overall capacity of the government.

*1. Building the Fundamental Infrastructure for Digitalization*

The Korean government made an agenda of informatization as one of its key national objectives and thus rebuilt the national informatization promotion system in the 1990s.

- In August 1995, the legal basis for promoting informatization on a national scale was created in terms of the legislation of the Framework Act on Informatization Promotion.
- The government established the Ministry of Information and Communication to take full control over all functions regarding informatization and IT industry. In this context, demand and supply in the information society was efficiently balanced and pursued.
- The government also established the Informatization Promotion Committee (chaired by the Prime Minister and included other ministers among its members) to supervise the government's informatization policies and strategies across all areas of government.
- Establishing a mid/long-term framework plan on national informatization which guided each ministry to set up individual plans that resulted in systematic informatization in the government.
- Since the first such framework plan was drawn up in 1996, the Korean government has formulated new visions and strategies of informatization in terms of revising the plan in five- year intervals to reflect the global trend of informatization and innovate its national informatization paradigm.

*2. Building a National Informatization Infrastructure*

From 1987, the Korean government started computerizing national data in important areas such as resident registration, real-estate registration, and finance, as part of its efforts to lay the groundwork for informatization at the national level.

- By computerizing the nation's administrative data and information ,the data base computerization project laid the cornerstone for today's system of e-Government, which electronically connects different government agencies.

*National Database Computerization Project (1987~1996)*

- A total of USD 5,536 million was invested to computerize data in five key sectors: administration, finance, education/research, defense, and national security.
- The project was implemented based on a financing method o'f settlement after investment', in which the private entity in charge of the respective area made the expenditure first and the government reimbursed them later.

In the 1990s, when the United States and some European countries rushed to establish their own high-speed information/communications infrastructure, the Korean government also advanced to the next step, sparing no effort to build its own high-speed network as a form of new social infrastructure necessary for the development of a 21st century information society.

For example, in 1995, the government finalized its Comprehensive Plan for Construction of KII (Korea Information Infrastructure) to build a nationwide optical network and a high-speed transmission network and completed the network construction at a cost of USD 40 billion in 2005. In January 2019, Michelle Jamrisko, Lee J Miller and Wei Lu, journalists from Bloomberg technology dropped out an article about the World`s most innovative countries. [5] According to the article, we can see that South Korea has been retaining the 1st place as the all-around most innovative country in the world since 2015. It is cited: «Although South extended its winning streak, its lead narrowed in part because of lower scores in patent activity». However, in high-tech density the country gained 4 points, which demonstrates that Seoul remains as the `city of the future`, with the South Korea government and its chaebols (large conglomerates including Samsung, LG, and Hyundai) leading the way in supporting the country's digital transformation.

The most noteworthy IT achievement that Korea has made in recent years is the fact that South Korea has achieved the commercialization and localization of major digital technologies, such as CDMA, DRAM, and TDX, for the first time in the world.

Furthermore, mobile communication terminals have grown to be a strategically important term of exports, taking up approximately 8% of the total national exports, and become high-quality, high-end products in the world`s market.

In addition, the number of domestic users of mobile communication services has reached 34 million; the majority of them are subscribers of digital communications. The number is close to 73% of the overall distribution rate, and more than the half of are wireless Internet subscribers. One out of every two Korean citizens (59%) is using the Internet, and 73% of the households are subscribers of VHS Internet.

Also, Korea boasts of the world`s best information infrastructure: the Korean government has created a world-class service infrastructure to be an electronic government and established a VHS information communication network connecting 144 major cities across the nation in 2000. This was the world`s achievement of this kind.

In conclusion, despite the setbacks, Korea's top ranking in the IDI is indisputable and, by any standard, reflects remarkable success. Based on this accomplishment, this work has aimed to shed light on the country's objectives, strategies and approaches, which have resulted in the creation of a holistic digital governance program that supports efficient resource management and public service for its citizens. We have focused on the critical governance elements of an e-Government initiative as well as the complex technology and infrastructure elements. Above all, throughout this enormous undertaking, Korea has maintained extraordinary commitment (as evidenced by decades of involvement by the political leadership and the participation of a highly digitally-engaged citizenry) and strong resilience (apparent in its never-ending ability to chip away at problems until they were solved). It is with this spirit that we commend Korea and express our gratitude for sharing its experience with countries around the world.

**Literature**

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