

## Global ICT

### India ICT industry major issues and Implications for a domestic company

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#### 1. Overview

India, which is located in South Asia and has the world's second-largest population of about 1.366.42 million, is a special strategic partnership with Korea and a new It is a key country in the Southern Policy. In addition, based on the Korea-India Comprehensive Economic Partnership Agreement (CEPA), which took effect in January 2010, A long-term basis for revitalizing the trade/exchange of cotton has been laid. In particular, since the inauguration of Prime Minister Narendra Modi in 2014, India has In 2015, the 'Digital India' initiative was launched to achieve national development through the transformation of the hair economy and digital innovation. △ Digital infrastructure as a public service for all citizens, △ Demand-based governance and services, △ Citizens' digital A three-pronged strategy of strengthening rights was established.

Since then, 'India Stack', a project to digitize fingerprints and iris information of all Indians, has been carried out to digitize the city. 'Smart City Mission' with a vision, 'Startup India' to create a sustainable innovation ecosystem in India (Startup India) and the 'National Digital Health Mission (NDHM)' that pursues digitalization in the health sector. We are actively working to accelerate the adoption and application.

The COVID-19 pandemic, which has been ongoing from March 2021 to the present, is a global trend that is urging countries around the world to accelerate digital transformation. became crazy In India, which was promoting economic growth in India with a big vision of moving to a digital economy, the pandemic An unprecedented long lockdown due to

The issue has become more prominent, and as a result, many challenges have to be addressed in the future. post coro  
In preparation for this era, the Indian government will complement these vulnerabilities and strengthen digital policies and initiatives in various fields.  
In this paper, the major issues of the Indian ICT industry, which are emerging in the era of the pandemic, will be examined by major sector.  
We would like to open it up and draw implications as a domestic company.

## 2. Major issues by sector

### A. Communication

India's mobile market is the second largest in the world after China, with about 1.198.5 million users as of May 2021  
appeared to be particles.

Through the 'National Digital Communications Policy 2018', the Indian government has  
Presenting the strategic goal of raising new contribution to 8% of GDP, while promoting foreign investment  
Attracting \$100 billion (approximately KRW 120 trillion) of investment in the digital communication sector, creating innovation-led startups, and expanding the IoT ecosystem  
A plan has been proposed by Zhang et al. In addition, through 'BharatNet', a project to expand the distribution of Internet in rural areas,  
By December 2017, the optical internet network was completed in 100,000 village councils, and in the second phase, 250,000  
There is a plan to additionally build it in the Gae Village Council. Despite the efforts of the Indian government, it is still

Low connectivity and accessibility issues have been continuously pointed out. As of May 2021, the communication density (tele-  
density) is at the level of 60.22%, which is significantly lower than that of 141.62% in urban areas, which is a question about the current Indian telecommunication market.  
It is a problem and conversely, it is approaching as a potential opportunity factor in the future.

In addition, 5G is one of the major issues in the current Indian telecommunication market. Currently in India, negotiations for 5G spectrum auction  
The process is ongoing and is expected to be completed by early 2022.

is predicted to be In addition, 5G subscribers in India will reach 300 million by 2026, accounting for 27% of all mobile subscribers.  
It is expected to reach 5 million people. In addition, in May 2021, the Ministry of Telecommunications (DoT) of India  
Excluding China's Huawei and ZTE, there are six  
As it was announced that it would conduct a monthly pilot service project, Korea will become a huge Indian 5G communication equipment market in the future.  
It is expected that there will be an opportunity to preoccupy the In addition, various application industries to be established after the commercialization of 5G  
This is an area that national corporations should pay attention to.

### B. Medical field

The prolonged pandemic has made the health sector a new national security field in many countries.  
The importance of non-face-to-face medical services has been emphasized, and the importance of digitalization in the health sector has been further emphasized.  
have. In particular, India ranked second in the world (as of December '21) in the number of confirmed cases of coronavirus, but it has a weak health system and low

Due to access to medical care, there is growing criticism that it should be improved.

In August 2020, the Indian government ID issuance, △ DigiDoctor,

△ Electronic Medical Record,

△ “National Digital

Health Mission (National Digital Health Mission, hereafter referred to as NDHM)' was announced. NDHM is India

It is overseen by the Ministry of Health and Family Welfare (MoHFW).

India's National Health Authority (NHA) is in charge of implementation. NDHM is the future insurance claim platform (Health Claims  
Platform), telemedicine, and online pharmacies (e-pharmacy) are expected to expand its scope. In particular,

In the issuance of digital health IDs for all citizens, the existing digital identification card, Aadhaar, will be used.

In terms of promoting innovative digitalization, the consistent and strong will of the Indian government for digital policy can be seen.

According to the BCG-FICC joint report in October 2020, through the implementation of the NDHM, about 1.5 trillion rupees in the Indian healthcare sector will be provided in 10 years (Approximately 23 trillion KRW) of economic value is expected to be created, and the growth of startups in related fields and investment contracts for them

The successful implementation of the NDHM accelerates the coverage of universal health care services in India.

It is possible to improve quality and reduce costs,

It is expected that it will lead to the development of related industries and create an innovative digital health ecosystem in India.

### C.Education

To prevent the spread of Corona, India implemented a nationwide lockdown at the end of March 2020. All educational institutions across the country

As a result, the transition to distance education was promoted, and about 250 million school-age students suffered setbacks in their education.

In order to minimize the educational gap, the Indian government has launched an online education platform led by the Indian Ministry of Education and Labor (MHRD).

Efforts have been made to strengthen not only Diksha and Swayam, but also the eBasta project, which is a textbook in the form of an e-book.

All. While private and urban schools in India have adapted relatively well to the new distance education method, national and public schools, especially

Educational institutions in suburban areas have many difficulties in transitioning from traditional face-to-face teaching methods to an online ecosystem.

In fact, according to UDISE 2019-2020 data, 78% of all schools in India are online.

They do not have a net facility, and more than 61% do not have a computer facility.

In the wake of the corona crisis, the issue of inequality in education in India has come to the fore more and more.

It should be solved with online education suitable for the era of hair

The voices are getting louder and louder.

India's edutech market is the second largest in the world, and the Indian government's various policies for

It is attracting attention as an area with high growth potential and high investment expectations. Innovative digital technology in many startups in India recently

It provides online education programs using

has grown into an edutech company that

Byju can be seen as a representative example.

D. Due to the start-up pandemic in emerging technology fields such as the Internet of Things , non-face-to-face life is increasing, especially in IoT

Demand for various technologies using the Internet (IoT) is increasing. According to the Indian Data Protection Commission (DSCI), in particular,

Investment in the provincial IoT market is expected to increase from \$5 billion in 2019 to \$15 billion in 2021,

Thanks to the government's 'Make in India' policy to promote the manufacturing industry, industrial IoT (IIoT)

It appears to have been adopted in a significant part of the year. In addition, the Indian government is pushing for 100 smart

Smart City Mission in implementing that aims to build a city in the IoT-based systems and solutions vital Bar,

Investment and growth in this field are expected to continue.

The growth of the emerging technology sector includes continued growth in India and

There are startups that are expanding. India has the third largest startup ecosystem after the US and China.

It has a growth rate of 12-15%. India's technology ecosystem is based on deep tech in the existing IT-BTM business model.

It can be said that it is evolving into a digital innovation model based on Currently, there are about 12,500 tech startups in India.

In 2020 alone, a total of \$3.5 billion was invested. The number of unicorn companies produced in India is also 38 as of 2020

, and the Government of India is committed to providing

It has announced a plan to increase the number of unicorn companies to 95. As a factor that allowed the innovation ecosystem in India to grow, innovation was

In addition to retaining the young population and outstanding technical talents,

There are strong support measures from the Indian government for

The potential of Indian tech startups has led to an influx of venture capital from around the world. Among them, Japan

In 2016, it started investing in Indian tech startups, and the accumulated investment amount is 9.2 billion dollars by May 2021.

In particular, it appeared that the largest investment was in the fields of fintech, healthcare, and mobility.

### 3. Conclusion and Implications

As we have seen earlier, the Indian government has developed a vision for the development of Korea through the transition to a digital society and economy under the inauguration of the

It is an unprecedented, long-term

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Continuing to strengthen policies and initiatives that will further accelerate digital transformation in all sectors of society and economy in the face of a pandemic expected to do

In particular, the problem of low communication connectivity in suburban areas, where vulnerabilities were exposed during the pandemic, and reform through digitalization of the health

Objects that naturally increase in demand due to non-face-to-face life, as well as major issues such as necessity and the need to strengthen online education

Growth in emerging technology fields such as the Internet is expected to gain more momentum.

Meanwhile, looking at the current status of intergovernmental ICT cooperation between Korea and India, the Ministry of Science and ICT in 2019

A “Private-Private Cooperative 5G Delegation” made up of the Association has been sent to the National Reform Commission of India (NITI Aayog), and in October 2020

The Korea-India Research and Innovation Center was opened in New Delhi, India, led by the Ministry of Science and ICT.

It can be said that this is a part that shows expectations for the expansion of cooperation between the two countries in the field of technology and ICT innovation.

In addition, in January 2021, the Korean government announced the 3rd International Development Cooperation

A joint master plan was announced, and India was added to 27 key partner countries for the 3rd period (2021-2025). This is the persistence of aid effect.

This can be seen as a result of considering diplomatic relations with partner countries, especially the New Southern Policy. In 2021, it was only 18.06 billion won.

India's ODA budget has doubled to 3.554 billion won in 2022 (based on the required amount), and this includes a paid loan (India)

Nagpur-Mumbai Expressway ITS Construction

Project/ A total of KRW 192.1 billion for 2022-2027) is the main, and as for grant aid, KOICA's capacity building project for small and medium-sized enterprises in India (2020-2022, total 28.73 billion) is the largest. India, which had significantly lower ODA support compared to other countries,

It has been selected as a key partner country and is expected to carry out various grant/grant aid projects including the ICT sector in the future.

From this point of view, it is expected that it will be easier for Korean-related companies to enter the market.

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