Most figures in this report are converted from KRW into USD based on yearly average exchange rates. But growth rates (e.g. CAGR and YoY growth rate) are calculated based on KRW to prevent any distortion caused by changes in exchange rates.
INDUSTRY OVERVIEW

Definition of the Industry

The network equipment industry provides systems to enable the sending and receiving of a wide range of information, including voice and data. The industry is largely divided into wired and wireless communication devices.

- Wired communication devices (WCD) include wired telephones, switchboards, transmission and network equipment; wireless communication devices (WICD) include mobile phones, wireless transmitters and receivers, base station equipment and repeaters for radio communication.

- With the expansion of mobile businesses, the WCD market is shrinking, while the WICD market is steadily growing worldwide.

Wearable device, a future growth engine, is classified as wireless communication equipment if it can be connected to a smartphone or has a telecommunications function.

- Virtual and augmented reality (VR, AR) devices are emerging as promising items. Without a clear international industrial classification standard, however, they are classified differently according to their usage (e.g. electronic devices, video equipment or glasses).

The network equipment industry is closely tied to the development of communication services, its primary source of demand, and directly affected by the variation of network service, status of investments in equipment, etc.

- Currently, the 4G LTE mobile network service is spreading around the globe, and mobile/convergence/smart solutions are growing; changes in their service and trends are translating into growth in the ICT industry.

- Furthermore, next-generation paradigms in ICT service including mobile payment and financial technology (or Fintech), big data, the Internet of Things (IoT), virtual reality (VR), and artificial intelligence (AI) are providing new momentum for the growth of the network equipment market.

The smartphone is a key item in the network equipment industry. It is crucial for smartphone businesses to secure the competitiveness in software segments and create an industrial ecosystem encompassing content, platforms, networks, and devices.

- The latest technologies—semiconductors, displays, electronic parts, and materials—are integrated to produce smartphones, which is why the industry has strong impacts across a broad spectrum of industries.

- In addition, the smartphone sector requires continuous investments in research and development for its short technological and production cycles.
**Status of the Industry**

**Status of the Global Market**

The growth of the global ICT market has remained sluggish, due to the saturation of advanced markets and lackluster investments in the 4G mobile services. The global market is expected to grow at an annual rate of 2% from 2015 to 2020 to reach USD 3.87 trillion by 2020.

- Specifically, the growth of network and server equipment was relatively high, while that of PC and mobile voice services was significantly stagnant from 2014 to 2016.
- Software, IT services and data mobile communications are expected to show a comparatively high growth by 2020.

**Status and Prospects of the Global ICT Market**

The global mobile phone market is expected to slow down by 2020 due to its already high penetration rate. However, the market will start to rebound after 2020 when 5G mobile communication service is commercialized and IoT services are expanded.

- The global mobile phone penetration rate reached 98.6% in 2015. The global smartphone penetration rate was close to 70%. In particular, China showed a remarkably high level of penetration of over 90%.
- The global ICT market continues to grow on the back of the growing mobile communication markets and a surging demand for smartphones in emerging countries.

![Trend and Prospects of the Global Mobile Phone Production](image1)

![Prospects for the Global Wearable Device Market Size](image2)
Status of the Korean Market

The Korean mobile phone market is on the decline due to rising demand for smartphones and falling demand for feature phones.

- On the other hand, the Korean smartphone market has experienced a rapid growth since the domestic launch of the first smartphone in November 2009. Recently however, the market started to slow down because of high smartphone penetration rates.

- Korea's mobile phone penetration rate recorded 119% in the second half of 2015. In addition, the country's average smartphone replacement cycle is 1.3 years, the fastest among OECD member countries. The smartphone penetration rate exceeded 91% in March 2016.

Status of the Korean Mobile Phone Market in Production

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Mobile Phone</td>
<td>22,602</td>
<td>23,105</td>
<td>25,494</td>
<td>22,949</td>
<td>17,871</td>
<td>19,251</td>
<td>-3.6</td>
<td></td>
</tr>
<tr>
<td>(Smartphone)</td>
<td>145</td>
<td>7,146</td>
<td>20,409</td>
<td>20,150</td>
<td>21,370</td>
<td>17,038</td>
<td>21,1</td>
<td></td>
</tr>
</tbody>
</table>

Source: Gartner

In 2014, the Korean communication service market saw the launch of the world's first broadband LTE-A service, which is 3 times faster than the previous LTE-A. It also began LTE-A Pro services in the end of 2016, which is 13 times faster than the previous LTE service.

- The Korean data service market is rapidly growing, with the country boasting the fastest growing smartphone penetration rate in the world. Korea's mobile communication market is likely to be valued at around USD 36.5 billion as of 2017.

Status of the Korean IoT Subscribers

<table>
<thead>
<tr>
<th>Category</th>
<th>2014.12</th>
<th>2015.6</th>
<th>2015.12</th>
<th>2016.6</th>
<th>Rate of Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fleet Management</td>
<td>661</td>
<td>710</td>
<td>759</td>
<td>1,082</td>
<td>14.7</td>
</tr>
<tr>
<td>Remote Monitoring</td>
<td>1,454</td>
<td>1,656</td>
<td>1,789</td>
<td>1,784</td>
<td>23.0</td>
</tr>
<tr>
<td>Wireless Payment</td>
<td>585</td>
<td>594</td>
<td>602</td>
<td>648</td>
<td>2.8</td>
</tr>
<tr>
<td>Tablet PC</td>
<td>576</td>
<td>564</td>
<td>558</td>
<td>561</td>
<td>-3.2</td>
</tr>
<tr>
<td>Wearable</td>
<td>50</td>
<td>201</td>
<td>364</td>
<td>611</td>
<td>623.8</td>
</tr>
<tr>
<td>Other IoT devices</td>
<td>138</td>
<td>165</td>
<td>205</td>
<td>1,885</td>
<td>48.2</td>
</tr>
<tr>
<td>Total</td>
<td>3,466</td>
<td>3,891</td>
<td>4,276</td>
<td>4,826</td>
<td>23.4</td>
</tr>
</tbody>
</table>

Source: Ministry of Science, ICT and Future Planning

The domestic Internet of Things (IoT) market is experiencing fast-paced growth, supported by increasing demand for fleet management and remote monitoring such as location-based service (LBS) and telematics.

- In the first half of 2016, the number of IoT subscribers soared by 42.5% year on year to 4.82 million.
- In addition, the wearable-related IoT market more than doubled over the year in June 2016, although the market size is still small.
Production Trends of the Korean Network Equipment Industry

<table>
<thead>
<tr>
<th>Category</th>
<th>Production (2015)</th>
<th>Rate of Change (Year-on-Year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>All network devices</td>
<td>61,231</td>
<td>65,421</td>
</tr>
<tr>
<td>a. Wired network devices</td>
<td>13,937</td>
<td>12,679</td>
</tr>
<tr>
<td>b. Wireless network devices</td>
<td>47,294</td>
<td>52,742</td>
</tr>
<tr>
<td>l. Mobile Phone</td>
<td>41,154</td>
<td>45,977</td>
</tr>
<tr>
<td>l. Smartphone</td>
<td>28,456</td>
<td>32,612</td>
</tr>
<tr>
<td>l. Parts for mobile phones</td>
<td>8,015</td>
<td>10,619</td>
</tr>
<tr>
<td>l. Others</td>
<td>4,683</td>
<td>2,746</td>
</tr>
</tbody>
</table>

Source: Korea Association for ICT Promotion (KAIT)
Note: YoY are calculated based on KRW

Exports of the Korean network equipment industry continues to grow since 2012 despite intensified competition among major firms, along with falling demand led by the global economic slowdown and the saturation of the smartphone market.

- This is attributed to the upswing in exports of smartphone components that offset the trend of sluggish exports of completed products.

Import/Export Trends in the Korean Network Equipment Industry

Status of the Foreign Direct Investment (FDI)

Direct investments by foreigners in the Korean network equipment industry have dwindled due to the recent global economic slowdown and heightened uncertainties, but they still account for about 3-4% of the entire FDI in the manufacturing industry in terms of amount.

- Major cases include a joint venture by LG and Ericsson, a global network equipment manufacturer. Adding to that, Korean firms are enhancing cooperation with global market players such as Nokia, Intel and Verizon with regards to the 5G mobile communication.
- South Korea boasts a top-tier network infrastructure. It has successfully commercialized the LTE-A solution, followed by broadband LTE-A for the first time in the world. The country is characterized by its rapid innovation in IT solutions.
- In the second half of 2016, Korea launched the LTE-A Pro service, one stage prior to the 5G service. The country also successfully demonstrated 5G technology in the 2016 Mobile World Congress (MWC) and showcased the 5G repeater technology for the first time in the world in October 2016.
- In addition, Korean mobile service providers started to build nationwide LTE-based IoT networks in preparation for expanded IoT services.

With the aim of commercializing the 5G mobile network service for the first time globally by around 2020, the government has been expanding its investments in mobile communication solutions since 2014.

- The Korean government has been implementing its plans to develop the mobile communication industry. Specifically, it plans to make joint investments of over KRW 1 trillion (USD 833 million) with the private sector to launch the 5G pilot network service at the PyeongChang 2018 Winter Games Olympics and commercialize it for the first time globally by 2020.

Trend of Foreign Investments in the Korean Network Equipment Industry

Source: Ministry of Trade, Industry and Energy, based on notification
Note: The network equipment industry includes broadcasting devices due to the limitations of related statistics
Standing of the Industry

The Korean network equipment industry has been growing, largely driven by the mobile phone, core parts (including mobile semiconductor and display), and mobile communication sector. The industry has been promptly responding to the need for new technologies and market demand.

- It successfully commercialized CDMA for the first time globally in the 1990s. It has made progress since then, including the adoption of Wireless Broadband (WiBro) as an international technological standard in the 2000s and the first commercialization of 4G LTE-A in 2013.
- Korea also has secured competitiveness in the global premium smartphone market.

The production and added values of the Korean network equipment industry account for 4.6% and 5.7% of the total production and added values, respectively, of the country’s manufacturing industry.

- As of 2014, 1,229 companies were in the network equipment industry, taking up 1.8% of the total manufacturing sector. In 2015, the industry’s export value recorded about USD 31.8 billion, 5.5% of which was mobile phones (USD 29 billion).

<table>
<thead>
<tr>
<th>Industry</th>
<th>Number of Companies</th>
<th>Value Added (USD billion)</th>
<th>Production (USD billion)</th>
<th>Trade Value (USD billion)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Export</td>
<td>Import</td>
<td>Trade Balance</td>
</tr>
<tr>
<td>Total</td>
<td>1,229</td>
<td>24.92 (1.8)</td>
<td>62.78 (4.6)</td>
<td>31.8 (6.0)</td>
</tr>
<tr>
<td>Wired Communication Equipment</td>
<td>245</td>
<td>0.67 (0.2)</td>
<td>1.93 (0.1)</td>
<td>0.67 (0.1)</td>
</tr>
<tr>
<td>Wireless Communication Equipment</td>
<td>984</td>
<td>24.25 (1.4)</td>
<td>60.85 (4.5)</td>
<td>31.1 (5.9)</td>
</tr>
<tr>
<td>(Mobile Phone)</td>
<td>422</td>
<td>21.18 (0.6)</td>
<td>51.53 (3.8)</td>
<td>29 (5.5)</td>
</tr>
</tbody>
</table>

Source: Korean Statistical Information Service (KOSIS), Korean Association for ICT promotion (KAIT)

Note: Based on sales volume

Despite the increased production of cellular phones in overseas operations, the Korean network equipment industry ranks third globally in terms of production of wireless network devices.

- Major IT companies such as Samsung Electronics and LG Electronics have significantly expanded the smartphone production in Vietnam, making the country the fourth largest manufacturer of wireless communication equipment in the world.

Korea maintains the top position in the mobile telecommunication device sector including smartphones. The country is rapidly enhancing its technological competitiveness in the equipment and platform fields.

- Korea has secured world-class competitiveness in the memory, display, and AP sectors, although there is room for improvement in communication parts such as baseband modems and RF chips.
- While Korea has gained a dominant position in LTE patents and commercialization, its competitiveness in the original technology and platform sector is generally low.
Prospect for the Industry

With the goal of commercialization of the 5G mobile communication services by 2020, the Korean government is expanding its support to proactively secure both core and original technologies in the 5G communication area. It is also gearing up efforts to attract investments and establish an infrastructure for the successful commercialization of 5G services.

The Korean government is eager to establish an industrial infrastructure, launch pilot projects and develop core technologies and services for the commercialization of 5G services. Against this backdrop, it is expected that 5G mobile communication services along with services based on 5G technology (e.g. virtual reality and holograms) and the IoT market will make remarkable progress.

- The Korean government set up the Master Plan for Building the Internet of Things in 2014. It also unveiled new strategies in 2015 to nurture top 9 K-ICT sectors, including 5G, smart device, and IoT.

G20 Internet of Things Development Opportunity Index Ranking

1. United States
2. South Korea
3. United Kingdom
4. Australia
5. Japan

Source: IDC 2016
Note: The European Union is counted as a single entity in the G20 and is not included in the ranking

- The deployment of low power wide-area (LPWA) networks in Korea in the first half of 2016 will accelerate the commercialization of Long Range (LoRa) technology in unlicensed spectrum and the LTE-based Narrowband (NB) IoT by the first half of 2017. AI-based voice recognition services will also be launched.

Korea has great growth potential in core parts and related software fields, including core sensors and communication chip sets, for which the country’s competitiveness is relatively weak.

- The Korean government plans to invest extensively in efforts to secure future competitiveness and the localization of core parts integral to smart devices.

As the world demands a new service environment for cloud computing, big data and social media, there is a movement to establish the Internet Data Center (IDC). Korea is arguably the best location for it.

- Korea has the world’s best-in-class network infrastructure for IDC and high-quality human resources. It offers a relatively low risk of natural disasters, low electricity rates and policies to support the establishment of a global data center.

- Furthermore, as the hub of Northeast Asia—one that connects Japan, China and other countries with underwater optic fiber cables—Korea is the best location for a data center.

- Encouraged by this, in 2011, Japan’s Softbank established the Global Data Center in Gimhae. The Busan Global Cloud Data Center also has a number of global companies from Japan.

- In January 2016, Amazon Web Service (AWS) built a data center in Korea for cloud services. IBM opened a cloud data center in Pangyo in August 2016. In addition, MS announced its plan to establish a cloud data center in Busan by 2019.

Korea has the world’s best-in-class IT infrastructure, global IT players including Samsung and LG Electronics, and high-quality human resources. It also boasts outstanding accessibility to all locations across Asia.
Locations of Network Equipment Businesses

As for the locations of network equipment businesses, the capital area has IT and parts/materials clusters; Gumi and Daegu (Seongseo) have regional clusters; and Sejong has the High-tech Industrial Complex.

**Daegu/Gyeongsangbuk-do**

There is an industrial belt of mobile devices, including cellular phones and their parts, around Gumi and Daegu.

The Samsung Electronics’ smartphone factory and its small and medium sized partner companies are located in Gumi, while its smartphone parts and system equipment companies are in Daegu.

- The mobile phone production lines of Samsung and small and medium sized subcontractors are located in Gumi, and cellular phone parts and system equipment manufacturers are in Daegu.
- The mobile phone factories of Samsung Electronics in Gumi have decreased production since 2010 mainly due to the company’s overseas expansion, but it is still the nation’s largest producer, with an annual production volume of 30 million sets.

Daegu has many IT corporations in Sengseo Industrial Complexes 1 to 4 (for common items), Complex 5 (for advanced solutions), Daegu Science Park, and Technopolis.

**Capital Area**

Industrial clusters in the capital area are largely divided into Seoul (IT), Banwol/Sihwa (electronic components) and Namdong (intelligence fusion parts). The Seoul Digital Industrial Complex has about 9,400 enterprises clustered, with ICT firms accounting for nearly 25%.

With regard to mobile phones, Pyeongtaek and Gimpo have LG Electronics’ (annual production: about 35 million) and Pantech’s plants and their parts providers, respectively.

Seongnam, Anyang and Seoul are home to a number of small and medium sized network equipment manufacturers.

In addition, the capital area has an advanced industrial R&D cluster formed around Pangyo, Gwanggyo and Suwon, which deals with the world’s top tier semiconductor, display, mobile sets, and fusion S/W solutions.
- Pangyo Techno Valley, an advanced innovation oriented cluster focusing on IT, BT, CT, NT and fusion technologies, is currently in operation; a global R&D center has also been operated since 2012.
- The headquarters of a global tech firm, Samsung Electronics, is located in Suwon. Currently, the company is building the world’s largest semiconductor plant in Pyeongtaek to be opened in the first half of 2017.

Sejong

Sejong Tech Valley, an advanced industrial complex to nurture high-tech industries including IT convergence, BT and ET, has been under construction in South Korea’s administrative capital, Sejong since 2013.
- With its excellent accessibility to the capital city, Sejong Tech Valley will provide a premier environment for corporate growth. As a cluster that involves industries, universities and research institutes, it has been expanding opportunities for both Korean and foreign companies to relocate their businesses in the area.

Status of Korean ICT Clusters
The Korean government set up the "Future Growth Engine Implementation Plans" to nurture industries including 5G mobile communication, wearable smart devices, intelligent semiconductor, IoT and big data.

**5G mobile communication** Become the first country to commercialize the 5G mobile communication technology by 2020.
- Secure world-class R&D technologies, explore and proactively develop 5G core services, lay the foundation for a smart mobile ecosystem, enhance global cooperation and collaboration, and pursue the strategic standardization of 5G technologies.
- Has a goal of developing major products including mobile 3D video services and terminals as well as 5G mobile communication base station equipment.

**Smart wearables** Lead the global creative/emotional smart wearable device market by 2020.
- Develop major devices and core parts in high demand, support the transformation of creative ideas into products, nurture global companies, and establish the foundation for sustainable industrial ecosystem.

**Intelligent IoT** Expand the Korean intelligent IoT's market size to KRW 30 trillion.
- Develop advanced technologies as a global first mover and implement related demonstration projects, improve the IT infrastructure through enhanced cooperation with relevant organizations, foster professionals, and revise laws, regulations and institutions to promote the IoT sector.

**Big data** Join the ranks of the top three big data industries by 2020.
- Secure the core technologies for each stage, promote national demonstration projects, nurture international talent, expand the use of big data and create the distribution market, and revise laws, regulations and institutions to revitalize the industry.

The early establishment of future-oriented networks and an industrial ecosystem will make Korea become an ICT powerhouse and lead the Internet-integrated global economy.

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**Top 9 National Strategic Projects**

In August 2016, the Korean government set up the “Top 9 National Strategic Projects” to explore new growth engines and improve people’s life in response to the upcoming Fourth Industrial Revolution.
- The five agendas to explore new growth engines include artificial intelligence (AI), augmented/virtual reality (AR/VR), self-driving cars, lightweight materials, and smart cities. The four agendas to improve people’s lives include precision medicine, biopharmaceuticals, carbon technology and particulate pollution.

<table>
<thead>
<tr>
<th>VISION</th>
<th>Goal</th>
<th>Build the world’s most advanced Hyper-connected Network*</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. Faster Network</strong></td>
<td>- Promote the sustained advancement of the network.</td>
<td></td>
</tr>
<tr>
<td><strong>3. More Creative and Diverse Services</strong></td>
<td>- Facilitate a variety of network-based services.</td>
<td></td>
</tr>
<tr>
<td><strong>4. More Competitive Network Industry</strong></td>
<td>- Lay the foundation for industrial growth</td>
<td></td>
</tr>
</tbody>
</table>

**Artificial intelligence** Promote a variety of AI-related projects in order to narrow the technological gaps between Korea and other advanced countries, foster the domestic AI industry, and ultimately lead the global market.
- Develop common platforms, element technologies, and the next-generation AI technologies in collaboration with the private sector, as well as launch AI-related services first in the public sector to create private demand for new technology.

**Virtual reality** Develop technologies related to virtual and augmented reality (VR/AR) and promote the convergence with other industries such as games and content.
- Develop core, original technologies to create a VR platform, improve the functions of existing VR platforms, establish 3D AR platforms, create technologies involving multisensory interactions, and produce ultralight and high performing devices.

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19 Sectors Designated as Future Growth Engines

<table>
<thead>
<tr>
<th>Future Industries</th>
<th>Mainstay Industries</th>
<th>Public Welfare and Energy Industries</th>
<th>Basic Industries</th>
</tr>
</thead>
<tbody>
<tr>
<td>3. Realistic Content</td>
<td>8. 5G Mobile Communication</td>
<td>12. Smart Disaster Safety Management System</td>
<td>17. Internet of Things (IoT)</td>
</tr>
</tbody>
</table>
The Korean network equipment industry has generally focused on expensive premium products, and they are relatively more expensive compared to those of China, but it is improving these days.

- The Korean mobile phone market is characterized by high demand for the latest premium smartphones and high average selling prices (ASP) compared to the US and Japan.
- Meanwhile, the low-end smartphone market has been on the rise since 2014, thanks to the launch of mobile virtual network operator (MVNO) services and the development of mid and low-end smartphones.
- Korea is the fastest expanding market in the world in terms of mobile communication services and smartphone penetration rates, and is home to a large number of early adopters.

**Trend and Prospects of Average Selling Prices (ASP) of Mobile Phones by Country**

<table>
<thead>
<tr>
<th>Country</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>2016(e)</th>
<th>2017(p)</th>
<th>2018(p)</th>
<th>2019(p)</th>
<th>2020(p)</th>
</tr>
</thead>
<tbody>
<tr>
<td>China</td>
<td>384.7</td>
<td>400.7</td>
<td>397.1</td>
<td>392.2</td>
<td>386.1</td>
<td>380.5</td>
<td>381.5</td>
<td>381.5</td>
</tr>
<tr>
<td>Germany</td>
<td>343</td>
<td>302.6</td>
<td>290.5</td>
<td>282.7</td>
<td>275.6</td>
<td>267.5</td>
<td>262.2</td>
<td></td>
</tr>
<tr>
<td>Japan</td>
<td>157.7</td>
<td>149.9</td>
<td>152.5</td>
<td>151.3</td>
<td>151.5</td>
<td>151.2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>US</td>
<td>122.1</td>
<td>140.9</td>
<td>157.7</td>
<td>149.9</td>
<td>152.5</td>
<td>151.3</td>
<td>151.5</td>
<td>151.2</td>
</tr>
</tbody>
</table>

Source: Gartner (March 2016)

Note: Based on low, middle-end, and premium mobile phones.

The proportion of the total cost of the Korean network equipment industry to its sales was usually about 70%. However, it started to decline in 2012, which is supported by enhanced price competitiveness and the economy of scale.

- The network equipment industry is characterized by its rapid technological innovation and short life cycles of products. The industry is suffering from an increasing cost burden with the need for massive R&D investments in new technologies and products.
- In the Korean network equipment industry, the share of cellular phones is very high. As the proportion of overseas production continues to rise, the industry has seen improvements in its price competitiveness and total cost to sales.
The proportion of material cost is relatively high in the cost structure of the Korean network equipment industry. This is attributed to the relatively higher cost of parts driven by the network device manufacturer’s premium quality-seeking strategies.

The mobile phone sector, one of the industry’s flagship businesses, has seen the improvement in the cost structure and profitability, which is backed by the expansion of overseas production and collective efforts of companies to enhance cost competitiveness.

Korea continues to make investments in the R&D sector of promising new technologies, where Korea can tap into its superb research talent.

As of 2015, the number of Korean full-time equivalent (FTE) researchers was the fifth largest in the world. This is equivalent to 13.2 in every 1,000 working-age people, which is higher than that of the US, Japan, and China.
NOKIA Solutions and Networks Korea

NOKIA Solutions and Networks Korea (NSN Korea), founded in January 2007, is a global communication equipment and system company in the network, communication, and mobile sectors.

- NSN Korea is a medium-sized company with 209 employees and is located in Seoul. It collaborates with three Korean mobile service providers: SK Telecom, KT, and LGU+.

NSN Korea is leading the global 4G LTE market. In the R&D process of new equipment, NSN Korea focuses on the problems that users have encountered and actively prepares for any possible issues that may occur in network operations.

- In addition, NSN Korea seeks to provide excellent equipment and solutions. Drawing on the experiences in Korea, it is supporting NOKIA foreign branches in improving the quality of LTE networks.
- NOKIA is reshuffling its businesses to center around the next-generation network technologies such as 5G mobile communication and IoT.

NSN Korea has joined the 5G forum of Korea and has been playing a key role in leading the 5G technology and standards.

- The public and private sectors in Korea are making joint investments to implement the world’s first 5G mobile communication trial service during the PyeongChang 2018 Winter Olympics and to commercialize 5G service in 2020. As part of their efforts, the 5G forum that engages industries, universities, research institutes, and governments has been in operation since 2012.
- NSN Korea signed an MoU with Korea’s LGU+ to develop a new 5G network technology and is conducting a joint research project on LTE-A and 5G networks.
- In collaboration with SK Telecom, NSN Korea successfully demonstrated the EPC virtualization solution (network function virtualization and NFV) in 2013 for the first time in the country.
Cisco Korea

Since its foundation in 1994, Cisco Korea has provided the network systems, security solutions, data centers, and mobile and wireless services for IoT and cloud computing.

- As a leading global network system and solution company, Cisco has its Korean regional offices in Busan, Daejeon, Gwangju and Daegu. In 2013, the company opened the smart city solution development center (GCoE) in Songdo, Incheon.

Cisco Korea is working closely together with mobile service providers to materialize the 5G mobile communication technology in Korea, a large scale for global 5G mobile communication technologies.

- In June 2016, Cisco Korea signed an MoU regarding the next-generation network technology development and business cooperation with SK C&C.

- Adding to its rapid growth of the mobile communication industry, Korea has recently developed 5G core technology and has been expanding investments in 5G infrastructure. As such, Korea is expected to be the first country to commercialize 5G mobile communication.

In addition, Cisco seeks to provide technical support for Korean communication service providers that are focusing on the IoT sector.

- Cisco and SK Telecom signed an MoU in early 2016 for cooperation in the IoT sector. The two companies are also collaborating in creating a IoT based smart city infrastructure in Busan.

- In 2011, KT and Cisco announced their strategies to converge the communication and IT sectors. Since then, the two firms have been joining hands to lead the global market.

Ericsson-LG

Ericsson-LG is a wired/wireless network device and network solution developer jointly founded in July of 2010 by LG Electronics and Sweden’s Ericsson, with the latter owning 75% of the joint venture.

- The headquarters of Ericsson-LG is located in Seoul, and its R&D center in Anyang has about 750 employees who are each responsible for critical duties.

The Ericsson-LG R&D Center develops various types of wired/wireless network equipment and voice/data systems for corporate communication. The company has been committed to making active investments for the preemptive development of broadband mobile networking solutions.

- In particular, it is seeking efficient collaboration with Ericsson-LG’s R&D Center in Anyang and Ericsson R&D for the development of next-generation products.

Ericsson-LG was launched through its acquisition of LG-Nortel, established in 2005, and it has been leading the 2G, 3G and corporate communication market through its investment in Korea.

- In 2006, the company released, for the first time in the world, a handset-based HSDPA network and a high-speed wireless network jointly with SKT and KTF.

- In 2008, the company became the first major network equipment manufacturer to set up the Network Equipment Education Center in Seoul to foster technical professionals.

Ericsson-LG started to supply the LTE equipment to SKT and LGU+ in 2011. Since 2013, the company has supported the LTE-A services of the three Korean mobile service providers.

Today, Ericsson-LG is pursuing a large scale R&D investment project for the development and commercialization of 5G mobile communication solutions with other Korean mobile network operators.

- Ericsson-LG has been maintaining close relations with Ericsson, the world’s top network equipment provider, expanding its partnership for the development of next-generation network equipment and service technology, including LTE.

World-class IT corporations consider Korea to have the world’s best network infrastructure, with its network technologies and infrastructures growing rapidly. As such, it is the best destination for R&D investment.

- In particular, the nation offers optimal conditions for investment in next-generation mobile communication and advanced fusion devices as a test-bed for new mobile network terminals and advanced equipment.

- In addition, the country has many of the global mobile network operators and IT leaders and allows for the use of competitive R&D professionals.

- Korea, which is adjacent to China, the largest independent consumer market, boasts an outstanding geographic advantage: access to anywhere in Asia.
List of Major Companies in the Network Equipment Industry

<table>
<thead>
<tr>
<th>Company</th>
<th>Main Item</th>
<th>Website</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Samsung Electronics</td>
<td>Mobile telecommunication devices, base stations, communication equipment including exchange office equipment, semiconductor, TV, PC, etc.</td>
<td><a href="http://www.samsung.com/sec">www.samsung.com/sec</a></td>
<td>Suwon-si, Gyeonggi-do</td>
</tr>
<tr>
<td>LG Electronics</td>
<td>Mobile telecommunication devices, network equipment including switchboards, transmitters, TV, PC, etc.</td>
<td><a href="http://www.lge.com">www.lge.com</a></td>
<td>Yeongdeungpo-gu, Seoul</td>
</tr>
<tr>
<td>Samsung Display</td>
<td>LCD, flat panel displays, etc.</td>
<td><a href="http://www.samsungdisplay.com">www.samsungdisplay.com</a></td>
<td>Yongin-si, Gyeonggi-do</td>
</tr>
<tr>
<td>Samsung SDI</td>
<td>Lithium-ion secondary batteries, batteries for vehicles, etc.</td>
<td><a href="http://www.samsungsdido.kr">www.samsungsdido.kr</a></td>
<td>Yongin-si, Gyeonggi-do</td>
</tr>
<tr>
<td>LG Display</td>
<td>Liquid crystal display (TFT-LCD)</td>
<td><a href="http://www.lgdisplay.com">www.lgdisplay.com</a></td>
<td>Anyang-si, Gyeonggi-do</td>
</tr>
<tr>
<td>LG Chem.</td>
<td>Lithium-ion secondary batteries, polarizers, PVC, synthetic resins, industrial goods, etc.</td>
<td><a href="http://www.lgchem.co.kr">www.lgchem.co.kr</a></td>
<td>Yeongdeungpo-gu, Seoul</td>
</tr>
<tr>
<td>Samsung Electro-Mechanics</td>
<td>Video/voice and network equipment, modules, printed circuit boards, multi-layer ceramic capacitors, high-frequency filters, crystal oscillators, chip inductors, etc.</td>
<td><a href="http://www.sem.samsung.co.kr">www.sem.samsung.co.kr</a></td>
<td>Suwon-si, Gyeonggi-do</td>
</tr>
<tr>
<td>LG Innotek</td>
<td>LED, camera modules, PCB, photo masks, mobile routers, etc.</td>
<td><a href="http://www.lginnotek.com">www.lginnotek.com</a></td>
<td>Jung-gu, Seoul</td>
</tr>
<tr>
<td>SK Telesys</td>
<td>Optical repeaters, wired/wireless transmission equipment, FEMTO, etc.</td>
<td><a href="http://www.sktelesys.com">www.sktelesys.com</a></td>
<td>Jung-gu, Seoul</td>
</tr>
<tr>
<td>Pantech</td>
<td>Portable network devices, IoT devices, etc.</td>
<td><a href="http://www.pantech.co.kr">www.pantech.co.kr</a></td>
<td>Mapo-gu, Seoul</td>
</tr>
<tr>
<td>Ericsson-LG</td>
<td>Wired/wireless switchboards, transmission equipment, PBX, electronic exchangers for network systems, etc.</td>
<td><a href="http://www.ericssonlg.co.kr">www.ericssonlg.co.kr</a></td>
<td>Anyang-si, Gyeonggi-do</td>
</tr>
<tr>
<td>Elentec</td>
<td>Battery packs, remote controls, PCB ass’y, chargers, motors, etc.</td>
<td><a href="http://www.elentec.co.kr">www.elentec.co.kr</a></td>
<td>Suwon-si, Gyeonggi-do</td>
</tr>
<tr>
<td>SMAC</td>
<td>Touch screens, touch modules, mobile modules, etc.</td>
<td><a href="http://www.s-mac.co.kr">www.s-mac.co.kr</a></td>
<td>Hwaseong-si, Gyeonggi-do</td>
</tr>
<tr>
<td>INTOPS</td>
<td>Parts of mobile network devices, including cases and antennas</td>
<td><a href="http://www.intops.co.kr">www.intops.co.kr</a></td>
<td>Anyang-si, Gyeonggi-do</td>
</tr>
<tr>
<td>NSN Korea</td>
<td>Network systems and equipment, etc.</td>
<td><a href="http://www.nsn.com">www.nsn.com</a></td>
<td>Gangnam-gu, Seoul</td>
</tr>
<tr>
<td>Ace Technology</td>
<td>Antennas, etc.</td>
<td><a href="http://www.acetteq.co.kr">www.acetteq.co.kr</a></td>
<td>Nandong-gu, Incheon</td>
</tr>
<tr>
<td>S-Connect</td>
<td>Metals, mobile phone parts, etc.</td>
<td><a href="http://www.s-connect.co.kr">www.s-connect.co.kr</a></td>
<td>Gwangju-si, Gyeonggi-do</td>
</tr>
<tr>
<td>SITECH</td>
<td>Wireless communication equipment (mobile phone parts), etc.</td>
<td><a href="http://www.sitech87.co.kr">www.sitech87.co.kr</a></td>
<td>Dalseo-gu, Daegu</td>
</tr>
<tr>
<td>Company</td>
<td>Main Item</td>
<td>Website</td>
<td>Location</td>
</tr>
<tr>
<td>-------------------------</td>
<td>---------------------------------------------------------------------------</td>
<td>------------------------------</td>
<td>---------------------</td>
</tr>
<tr>
<td>DK UIL</td>
<td>Keypads and subsidiary materials for network devices, waterproof parts, circuit modules, switches, liquid crystal connectors, etc.</td>
<td><a href="http://www.dkul.com">www.dkul.com</a></td>
<td>Paju-si, Gyeonggi-do</td>
</tr>
<tr>
<td>RF Tech</td>
<td>Mobile telecommunication handsets, chargers, hands-free kits, electronic parts, etc.</td>
<td><a href="http://www.rftech.co.kr">www.rftech.co.kr</a></td>
<td>Yongin-si, Gyeonggi-do</td>
</tr>
<tr>
<td>FRTek</td>
<td>Repeaters for mobile communication, etc.</td>
<td><a href="http://www.frtek.co.kr">www.frtek.co.kr</a></td>
<td>Anyang-si, Gyeonggi-do</td>
</tr>
<tr>
<td>KMW</td>
<td>Wired/wireless communication equipment, mobile communication parts, network repeaters, etc.</td>
<td><a href="http://www.kmw.co.kr">www.kmw.co.kr</a></td>
<td>Hwaseong-si, Gyeonggi-do</td>
</tr>
<tr>
<td>Solid</td>
<td>Optical repeaters for mobile communication, optical communication equipment, etc.</td>
<td><a href="http://www.solid.co.kr">www.solid.co.kr</a></td>
<td>Seongnam-si, Gyeonggi-do</td>
</tr>
<tr>
<td>Ubiquoss</td>
<td>Switches, FTTH, wired/wireless networking solutions, etc.</td>
<td><a href="http://www.ubiquoss.co.kr">www.ubiquoss.co.kr</a></td>
<td>Seongnam-si, Gyeonggi-do</td>
</tr>
<tr>
<td>Jangwon Tech</td>
<td>Mobile phone cases and parts, camera/laptop/LED parts, etc.</td>
<td><a href="http://www.jangwontech.co.kr">www.jangwontech.co.kr</a></td>
<td>Gumi-si, Gyeongsan-gu</td>
</tr>
<tr>
<td>Ericsson-LG Enterprise</td>
<td>Electronic exchangers, IP telephones, digital phones, Ethernet switches, etc.</td>
<td><a href="http://www.ericssonlg-enterprise.co.kr">www.ericssonlg-enterprise.co.kr</a></td>
<td>Anyang-si, Gyeonggi-do</td>
</tr>
<tr>
<td>DASAN Networks</td>
<td>Network equipment, backhaul equipment, solutions, etc.</td>
<td><a href="http://www.dasannetworks.com">www.dasannetworks.com</a></td>
<td>Seongnam-si, Gyeonggi-do</td>
</tr>
<tr>
<td>Commax</td>
<td>Video phones, amplifiers, speakers, intercoms, door phones, switchboards, etc.</td>
<td><a href="http://www.commax.com">www.commax.com</a></td>
<td>Seongnam-si, Gyeonggi-do</td>
</tr>
<tr>
<td>SunTel</td>
<td>Mobile phone parts including touch pads, etc.</td>
<td><a href="http://www.suntel.com">www.suntel.com</a></td>
<td>Cheongwon-gun, Chungcheongbuk-do</td>
</tr>
<tr>
<td>Mercury</td>
<td>Switchboards, networking systems, fiber cables, etc.</td>
<td><a href="http://www.mercury.co.kr">www.mercury.co.kr</a></td>
<td>Seo-gu, Incheon</td>
</tr>
<tr>
<td>Telti</td>
<td>Wireless network equipment, IoT modules, software, etc.</td>
<td><a href="http://www.telti.com">www.telti.com</a></td>
<td>Yeongdeungpo-gu, Seoul</td>
</tr>
<tr>
<td>Mobase</td>
<td>Mobile phone cases, etc.</td>
<td><a href="http://www.mobase.com">www.mobase.com</a></td>
<td>Buyeo-gu, Incheon</td>
</tr>
<tr>
<td>Dayou Plus</td>
<td>Wired/wireless communication equipment, optical communication devices, etc.</td>
<td><a href="http://www.dayounetworks.com">www.dayounetworks.com</a></td>
<td>Seongnam-si, Gyeonggi-do</td>
</tr>
<tr>
<td>Taeyang C&amp;L</td>
<td>Mobile phone touch panel windows, LCD cover, color seats, electronic parts, etc.</td>
<td><a href="http://www.tyardo.com">www.tyardo.com</a></td>
<td>Dalseo-gu, Daegu</td>
</tr>
<tr>
<td>Fine Digital</td>
<td>Navigators, black boxes, mobile network systems, etc.</td>
<td><a href="http://www.fineline.com">www.fineline.com</a></td>
<td>Seongnam-si, Gyeonggi-do</td>
</tr>
<tr>
<td>IL YA</td>
<td>Mobile phone parts, molds, etc.</td>
<td><a href="http://www.ilya.com">www.ilya.com</a></td>
<td>Namdong-gu, Incheon</td>
</tr>
<tr>
<td>Peopleworks</td>
<td>Power amplifiers for mobile communication, repeaters, and communication parts, etc.</td>
<td><a href="http://www.peopleworks.co.kr">www.peopleworks.co.kr</a></td>
<td>Gumi-si, Gyeongsan-gu</td>
</tr>
<tr>
<td>Samwoode Mrs</td>
<td>Mobile phone cases, etc.</td>
<td><a href="http://www.crucialms.com">www.crucialms.com</a></td>
<td>Dalseo-gu, Daegu</td>
</tr>
<tr>
<td>HFR</td>
<td>Wireless-access RF equipment such as repeaters, wireless network performance management systems, optical transmission systems, etc.</td>
<td><a href="http://www.hfrnet.com">www.hfrnet.com</a></td>
<td>Seongnam-si, Gyeonggi-do</td>
</tr>
<tr>
<td>Coweaver</td>
<td>Wavelength division multiplexing systems, multi-service optical communication systems, networking equipment including voice multiplexing</td>
<td><a href="http://www.coweaver.co.kr">www.coweaver.co.kr</a></td>
<td>Mapo-gu, Seoul</td>
</tr>
</tbody>
</table>
List of Major Associations in the Network Equipment Industry

<table>
<thead>
<tr>
<th>Association</th>
<th>Website</th>
<th>Main Roles</th>
</tr>
</thead>
<tbody>
<tr>
<td>Korea Electronics Association</td>
<td><a href="http://www.gokeao.org">www.gokeao.org</a></td>
<td>- Deal with and improve all types of regulations including patent disputes and environmental and trade regulations; respond to international commerce issues such as FTAs.</td>
</tr>
<tr>
<td>- Conduct IT statistics survey/trend analyses, provide support for international standards and support for the training of professionals, hold the Korea Electronics Seminar (KES), support overseas marketing activities.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Support the establishment of a foundation for promoting a future new growth engine industry, plan and implement the government’s policies and projects, establish cooperation system and network with on/offshore organizations, etc.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Support policies for the growth of broadcasting and network industry, expedite the fusion and establish the growth foundation of broadcasting and network.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Implement broadcasting and communication network revamp projects and support the establishment of next-generation infrastructures, promote the broadcasting and network service and foster a user protection environment.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Conduct statistics survey and trend analyses.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Korea Association for ICT Promotion</td>
<td><a href="http://www.kai.or.kr">www.kai.or.kr</a></td>
<td>- Conduct the R&amp;D of mobile devices, technology support and marketing.</td>
</tr>
<tr>
<td>- Perform international standard tests and give approval to mobile devices (internationally certified projects).</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Undertake projects regarding the R&amp;D of mobile devices, technology support and marketing.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Develop mobile fusion solutions, establish service road maps, train professionals, etc.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Support the establishment of a foundation for promoting a future new growth engine industry, plan and implement the government’s policies and projects, establish cooperation system and network with on/offshore organizations, etc.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Support the research and formulation of policies regarding the information and communications technology industry, evaluate and support the projects as well as promote the spread of R &amp; D performance, technical transfer, and technology commercialization.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Make agreements on technology development projects in the information and communications technology industry, evaluate and support the projects as well as promote the spread of R &amp; D performance, technical transfer, and technology commercialization.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Foster professionals and create the research base of the information and communications technology.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Support the establishment of a foundation for promoting a future new growth engine industry, plan and implement the government’s policies and projects, establish cooperation system and network with on/offshore organizations, etc.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Electronics and Telecommunications Research Institute</td>
<td><a href="http://www.etri.re.kr">www.etri.re.kr</a></td>
<td>- Develop and supply original industrial technologies for convergence related to IT, electronics, broadcasting and achievements.</td>
</tr>
<tr>
<td>- Support the development and research of technologies and enterprises in areas including parts/materials, energy display, system semiconductor, IT media and convergence industries.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Networking policies, future convergence, broadcasting/electromagnetic wave policy research, broadcasting and network policy research, etc.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Korea Information Society Development Institute</td>
<td><a href="http://www.kisd.re.kr">www.kisd.re.kr</a></td>
<td>- Support the development and research of technologies and enterprises in areas including parts/materials, energy display, system semiconductor, IT media and convergence industries.</td>
</tr>
<tr>
<td>- Networking policies, future convergence, broadcasting/electromagnetic wave policy research, broadcasting and network policy research, etc.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Relations with Other Industries

As the importance of the IoT sector is growing, industries are likely to focus on the concept of “openness” rather than “closure” in expanding and operating ecosystems.

The rising convergence of the IoT-based ICT industry and other industries provides opportunities for tech firms to create new markets. The trend also promotes the entry of other industries into the IoT market.

- Artificial intelligence technologies will be increasingly utilized in a variety of sectors from the voice and image recognition area to the automobile, robot and medicine fields.

As the IoT technology will be used for a broad spectrum of businesses, the new sector will promote entrepreneurship and stimulate the growth of existing startups.

Major companies in the mobile communication service sector, which is on the demand side of the communication equipment business, include SK Telecom, KT, and LGU+ as well as mobile network operators (MNOs) and mobile virtual network operators (MVNOs).

List of major companies in the mobile communication service sector

<table>
<thead>
<tr>
<th>Company</th>
<th>Main Items</th>
<th>Website</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>SK Telecom</td>
<td>Wired/wireless communication, mobile communication services, mobile phones, IoT, etc.</td>
<td><a href="http://www.sktelecom.com">www.sktelecom.com</a></td>
<td>Jung-gu, Seoul</td>
</tr>
<tr>
<td>KT</td>
<td>Wired/wireless communication, mobile communication services, IoT, etc.</td>
<td><a href="http://www.kt.co.kr">www.kt.co.kr</a></td>
<td>Seongnam-si, Gyeonggi-do</td>
</tr>
<tr>
<td>LGU+</td>
<td>Wired/wireless communication, mobile communication services, IoT, etc.</td>
<td><a href="http://www.uplus.co.kr">www.uplus.co.kr</a></td>
<td>Yongsan-gu, Seoul</td>
</tr>
<tr>
<td>SK Telink</td>
<td>Mobile virtual network operator (MVNO), etc.</td>
<td><a href="http://www.sktelecom.com">www.sktelecom.com</a></td>
<td>Jung-gu, Seoul</td>
</tr>
<tr>
<td>UNICOMZ</td>
<td>Mobile virtual network operator (MVNO), etc.</td>
<td><a href="http://www.mobing.co.kr">www.mobing.co.kr</a></td>
<td>Gunpo-si, Gyeonggi-do</td>
</tr>
<tr>
<td>CJ HelloVision</td>
<td>Mobile virtual network operator (MVNO), etc.</td>
<td><a href="http://www.cjhelovision.com">www.cjhelovision.com</a></td>
<td>Yangcheon-gu, Seoul</td>
</tr>
<tr>
<td>Annexe Telecom</td>
<td>Mobile virtual network operator (MVNO), etc.</td>
<td><a href="http://www.annexetel.com">www.annexetel.com</a></td>
<td>Gangnam-gu, Seoul</td>
</tr>
<tr>
<td>Winnerstel</td>
<td>Mobile virtual network operator (MVNO), etc.</td>
<td><a href="http://www.winnerstel.co.kr">www.winnerstel.co.kr</a></td>
<td>Jung-gu, Seoul</td>
</tr>
<tr>
<td>Space Net</td>
<td>Mobile virtual network operator (MVNO), etc.</td>
<td><a href="http://www.freet.co.kr">www.freet.co.kr</a></td>
<td>Seongdong-gu, Seoul</td>
</tr>
<tr>
<td>EyesVision</td>
<td>Mobile virtual network operator (MVNO), etc.</td>
<td><a href="http://www.eyesvision.com">www.eyesvision.com</a></td>
<td>Yeongdeungpo-gu, Seoul</td>
</tr>
<tr>
<td>Egmobile</td>
<td>Mobile virtual network operator (MVNO), etc.</td>
<td><a href="http://www.egmobile.co.kr">www.egmobile.co.kr</a></td>
<td>Jongno-gu, Seoul</td>
</tr>
<tr>
<td>Merchant Korea</td>
<td>Mobile virtual network operator (MVNO), etc.</td>
<td><a href="http://www.mymvno.co.kr">www.mymvno.co.kr</a></td>
<td>Yongsan-gu, Seoul</td>
</tr>
<tr>
<td>Free Telecom</td>
<td>Mobile virtual network operator (MVNO), etc.</td>
<td><a href="http://www.freectel.com">www.freectel.com</a></td>
<td>Seongdong-gu, Seoul</td>
</tr>
<tr>
<td>Korea Cable Telecom</td>
<td>Mobile virtual network operator (MVNO), etc.</td>
<td><a href="http://www.kctel.com">www.kctel.com</a></td>
<td>Jung-gu, Seoul</td>
</tr>
</tbody>
</table>

Major associations in the mobile communication sector

<table>
<thead>
<tr>
<th>Organization</th>
<th>Website</th>
<th>Main Roles</th>
</tr>
</thead>
</table>
| Telecommunications Technology Association         | www.tta.or.kr         | - Establish, revise and spread the domestic standards of the ICT industry encompassing networks, ICT convergence, information protection, SW, broadcasting, and radio wave/mobile communication.  
- Develop the domestic and overseas certification and testing model of ICT products.  
- Promote international collaboration for the standardization, testing and certification of ICT products and services.  
- Provide education programs to foster professionals in the ICT standardization, testing and certification field.  
- Support small- and medium-sized companies to improve their competitiveness. |
| Korea Telecommunications Operators Association    | www.ktoa.or.kr        | - Make investments to boost the communication services and IT industry.  
- Lay the foundation for public services with regards to broadcasting communication.  
- Conduct research on industry trends and policy issues.  
- Provide broadcasting communication services and launch campaigns to improve the quality of services. |
| KMVNO                                             | www.kmvon.or.kr       | - Improve policies and systems to reinvigorate the domestic MVNO market.  
- Implement MVNO-related projects entrusted by the government.  
- Provide communication services to the public and improve the quality of services.  
- Conduct research on the direction for industrial development.  
- Carry out joint business projects with relevant organizations and research institutes. |
INVEST KOREA'S GLOBAL NETWORK

Supporting foreign investors worldwide

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E-mail ikonline@kotra.or.kr
Homepage www.investkorea.org

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New York, USA
Tel (212) 826-0900 E-mail kotraNY@hotmail.com
Los Angeles, USA
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Chicago, USA
Tel (312) 644-4523 E-mail info@kotrachicago.com
Dallas, USA
Tel (972) 243-9100 E-mail info@kotradallas.com
Washington D.C., USA
Tel (202) 837-7919 E-mail washington@kotra.or.kr

EUROPE
Frankfurt, Germany
Tel (49-69) 2429-300 E-mail info@kotrafk.de
Amsterdam, Netherlands
Tel (31-20) 754-6903 E-mail info@kotra.nl
Milan, Italy
Tel (39-62) 754-5813 E-mail kotramil@kotra.it
Zurich, Switzerland
Tel (41-44) 202-1232 E-mail info@kotra.ch
Stockholm, Sweden
Tel (46-8) 30-4000 E-mail stockholm@kotra.se
Copenhagen, Denmark
Tel (45) 3437-7221 E-mail info@kotra.dk
Amsterdam, Netherlands
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