

COUNTRY: KOREA

SCORE: 72.2 | RANK: 12/24

Korea has a strong commitment to the promotion of the digital economy, and its laws and standards are generally based on international models. Korea scored well in the IT readiness and broadband deployment section of the scorecard.

Although Korea has a personal data protection law in place, it imposes complex and inflexible notice and consent requirements, which effect data flows that are paramount for cloud computing.

Korea’s strong intellectual property laws facilitate the development and use of cloud computing services. However, the implementation and enforcement of these laws could be improved in some instances. Korea’s cybercrime law does not cover the full range of relevant issues.

Korea is an active proponent of free trade and interoperability and is a member of the World Trade Organization (WTO) Agreement on Government Procurement. However, one current area of concern is that Korea imposes a national encryption standard for the procurement of information technology (IT) security devices and related equipment, when a suitable international encryption standard is available.

In addition, some IT products that have already passed international Common Criteria for Information Technology Security Evaluation are required to undergo additional local testing in Korea.

Overall, Korea’s position in the Scorecard rankings remains unchanged from 2016.

# KOREA	RESPONSE	EXPLANATORY TEXT
DATA PRIVACY (SCORE: 9.5/12.5 RANK: 11/24)		
1. Is a data protection law or regulation in place?	✓	South Korea’s privacy law is contained in the Personal Information Protection Act (PIPA) 2011, a comprehensive omnibus data protection law. PIPA was amended in 2013, 2014, and 2015. A set of standards titled the Standards of Personal Security Measures came into effect in in 2015. These standards support the PIPA and are intended to address any gaps or shortcomings in the Act.
2. What is the scope and coverage of the data protection law or regulation?	Comprehensive	The Personal Information Protection Act (PIPA) 2011 is comprehensive legislation, covering all sectors.
3. Is a data protection authority in place?	✓	The privacy regulatory structure in Korea is complex, and the main enforcement agency is the Ministry of the Interior and Safety <www.mois.go.kr>.
4. What is the nature of the data protection authority?	Other government official	The privacy regulatory structure in Korea is complex and several agencies play important roles in regulation. The main enforcement agency is the Ministry of the Interior and Safety <www.mois.go.kr>. In addition, the privacy center within the Korea Internet and Security Agency (KISA) <privacy.kisa.or.kr> plays a role in setting guidelines and standards. Complaints handling is managed by the Personal Information Dispute Mediation Committee (KOPICO) <kopico.go.kr/main/main.do>. General policy oversight is provided by the Personal Information Protection Commission (PIPC) <www.pipc.go.kr>.
5. Is the data protection authority enforcing the data protection law or regulation in an effective and transparent manner?	✓	Enforcement of the Korean privacy law is reported to have increased significantly since a major data breach in 2014 (involving a disclosure of a large database of credit card data). A wide range of civil and criminal penalties and sanctions are available. In January 2017 the Personal Information Protection Commission (PIPC) <www.pipc.go.kr> announced that its enforcement work would focus on ensuring “damage remediation in the case of any incident.” This commitment is contained in the Third Basic Plan for Personal Information Protection, which sets targets for 2018–2020.

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6. Is the data protection law or regulation compatible with globally recognized frameworks that facilitate international data transfers?	APEC framework & EU framework	The key privacy principles are based on a mix of the EU Directive and the Organisation for Economic Co-operation and Development (OECD) guidelines, with some variations. The concept of data handlers in the Standards of Personal Security Measures reflects the concept of data controllers in the EU Directive. In January 2017 the European Commission announced that it would start discussions with Korea as the first step in considering whether Korea would be granted "adequacy" status under the EU Directive. If granted, this would allow personal data to be transferred to Korea without further conditions. Korea is a member of Asia Pacific Economic Cooperation (APEC), and the law complies with the APEC Privacy Framework. In January 2017 Korea applied to be a formal participant in the APEC Cross-border Privacy Rules scheme (CBPRs) <www.cbprs.org>.
7. Are data controllers free from registration requirements?	✓	There are no registration requirements in Korean privacy law.
8. Are there cross-border data transfer requirements in place?	Detailed requirements	Korea has complex cross-border transfer requirements in place. They are scattered across several pieces of legislation, including the: <ul style="list-style-type: none"> • Personal Information Protection Act (PIPA) 2011; • Act on Promotion of Information and Communications Network Utilization and Information Protection (Network Act) 2001 (as amended 2016); and • Use and Protection of Credit Information Act (UPCIA) 2013. The rules differ slightly depending on the nature of the transfer. Generally, organizations may transfer personal data outside of South Korea provided that reasonable steps have been taken to safeguard the personal data to be transferred, but there are also specific rules in place on notice and consent for each type of transfer.
9. Are cross-border data transfers free from arbitrary, unjustifiable, or disproportionate restrictions, such as national or sector-specific data or server localization requirements?	ⓘ	Korea has complex notice and consent provisions in place for cross-border data transfers. The legal basis for transfers relies heavily on prior consent, and Korean law lacks the flexible alternative mechanisms available in many jurisdictions.
10. Is there a personal data breach notification law or regulation?	✓	The main data breach notification requirements are set out in Personal Information Protection Act (PIPA) 2011. Additional data breach notification requirements are also contained in the Act on Promotion of Information and Communications Network Utilization and Information Protection (APICNUIP) 2001 (as amended 2016), although these requirements have a focus on sharing security vulnerability information. The Act on the Development of Cloud Computing and Protection of Users 2015 (Korean Cloud Act) also contains a specific provision on data breach notification for cloud service providers (Article 25). This provision mirrors the general requirements in PIPA but requires additional reporting to the relevant Minister for cloud services: the Minister for Science, ICT, and Future Planning.
11. Are personal data breach notification requirements transparent, risk-based, and not overly prescriptive?	ⓘ	Where a breach occurs, the organization must notify data subjects immediately. There are risks that this may be an impractical standard that may interfere with prioritizing analysis and mitigation efforts. If the number of affected data subjects exceeds 10,000, the organization also must inform the regulatory authorities. This approach may not always reflect the seriousness of the incident and the risk of harm to data subjects.
12. Is an independent private right of action available for breaches of data privacy?	✓	In the event that a user suffers damage from the service provider violating the information protection provisions, the user may claim compensation from the provider. In this case, the provider will be held responsible if it fails to prove the non-existence of an intention to infringe, or the absence of negligence causing such violations. Claims for damages may be filed with the Personal Information Dispute Mediation Committee (KOPICO) <www.kopico.go.kr/main/main.do>.
SECURITY (SCORE: 7.5/12.5 RANK: 15/24)		
1. Is there a national cybersecurity strategy in place?	✓	The National Cyber Security Master Plan was produced by the Korean Communications Commission in 2011 <ccdcoe.org/sites/default/files/strategy/KOR_NCSS_2011.pdf>. It is a limited defense-focused plan that grants additional powers to the National Intelligence Agency <www.nis.go.kr> and Ministries. The government has also established the National Cyber-Security Center <eng.nis.go.kr/EID/1_7_1.do> and Korea is expected to develop a new cybersecurity strategy in the near future.

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2. Is the national cybersecurity strategy current, comprehensive, and inclusive?	1	The strategy is not comprehensive and is out of date. The government has established the National Cyber-Security Center, and Korea is expected to develop and implement further cyber-security measures in the near future <eng.nis.go.kr/EID/1_7_1.do>.
3. Are there laws or appropriate guidance containing general security requirements for cloud service providers?	1	There is no general security requirement in Korean law. However, for organizations covered by the privacy legislation, there is a requirement to take necessary technological and managerial safeguards to secure the information to ensure it is not lost, stolen, leaked, altered, or damaged. In addition, the Act on Promotion of Information and Communications Network Utilization and Information Protection 2001 (as amended 2016) stipulates, among others: <ul style="list-style-type: none"> • Protective measures to secure the safety of the information network and the reliability of information (Article 45); • Protection of agglomerated information and telecommunications facilities (Article 46); • Security check for information protection (Article 46-3); • Certification of information protection and management system (Article 47); and, • Analysis of cause of infringement incidents for prevention of expansion of damages (Article 48-4). Finally, Article 23- 2 (Enhancement of Reliability) of the Act on the Development of Cloud Computing and Protection of Users 2015, states that the Minister of Science, ICT, and Future Planning shall determine and publicly notify the standards for the quality and performance of cloud computing services and the standards for the protection of information (including managerial, physical, technical measures for protection) and may recommend cloud computing service providers to observe the standards.
4. Are laws or guidance on security requirements transparent, risk-based, and not overly prescriptive?	1	Security requirements are not comprehensive (in that not all organizations are covered by the more detailed security provisions in the Network Act). In addition, security requirements tend to be overly prescriptive and restrictive and not risk-based and outcomes-oriented.
5. Are there laws or appropriate guidance containing specific security audit requirements for cloud service providers that take account of international practice?	1	There are no specific laws or appropriate codes containing security audit requirements. However, Article 47 of the Act on Promotion of Information and Communications Network Utilization and Information Protection (Network Act) 2001 (as amended 2016) covers certification of information protection and management systems and may be interpreted as an audit requirement for some organizations.

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6. Are international security standards, certification, and testing recognized as meeting local requirements?	❗	<p>Korea is a Certificate Authorizing Member (the highest level) of the Common Criteria Recognition Agreement (CCRA) <www.commoncriteriaportal.org>.</p> <p>Since 2011, the Korean Government has imposed additional security verification requirements for international Common Criteria-certified information security products that are procured by Korean Government agencies. However, no such requirement is applied to locally certified products. In 2014, the Korean Government extended similar security-conformity testing requirements to international Common Criteria-certified networking products for all central government agencies. The government is expected to further extend the policy to all public organizations, local governments, and other government-related agencies, such as educational institutions.</p> <p>Korea is a member of CCRA and therefore should recognize international certification from accredited laboratories and should not impose further requirements for certified products. The additional requirements are not consistent with the spirit of CCRA, which is to "eliminate the burden of duplicating evaluation of IT products and protection profiles." To make matters worse, a separate conformity testing is required for each government agency, even if it is the same product that has been procured and verified for another government agency.</p> <p>This discriminatory application of security testing in public procurements to only international information security products also appears inconsistent with Korea's international commitments to national treatment and non-discrimination, including the US-Korea Free Trade Agreement.</p> <p>Although the Korean Government has indicated that it intends to change the policy, it has yet to issue any formal correction in writing. This has resulted in confusion as to what the applicable requirements are.</p> <p>The National Intelligence Service (NIS) <nis.go.kr> operates the Korea IT Security Evaluation and Certification Scheme (KECS) <itscc.kr>. Specific certifications are not set out in laws or regulations but are sometimes required in defense- and intelligence-related procurement. In 2017 a local testing center opened that uses international security standards <english.msip.go.kr/english/msipContents/contents.do?mld=Mjc0>.</p>
CYBERCRIME (SCORE: 8/12.5 RANK: 20/24)		
1. Are cybercrime laws or regulations in place?	✓	<p>The Act on Promotion of Information and Communication Network Utilization and Information Protection 2001, as amended 2016 (Network Act) contains some relevant cybercrime provisions.</p> <p>Article 48(1) prohibits access of information and telecommunication network without authority to access or beyond the authority to access.</p> <p>Article 49 prohibits:</p> <p>Inflicting damages to the information of another person which is processed, stored and transmitted by means of telecommunication network;</p> <p>(ii) Infringing on, theft or disclosure of secret of another person</p>
2. Are cybercrime laws or regulations consistent with the Budapest Convention on Cybercrime?	✗	<p>There are a limited range of relevant cybercrime offenses in Korea, and they are not closely aligned with the Convention on Cybercrime.</p>
3. Do local laws and policies on law enforcement access to data avoid technology-specific mandates or other barriers to the supply of security products and services?	❗	<p>Article 14 (2) of the Framework Act on Electronic Commerce 2002 (amended 2009) states:</p> <p>"The Government may restrict the use of encryption technology where it is deemed necessary for national security, etc., and take any necessary measures to gain access to the original of encoded information or encryption technology."</p> <p>Law enforcement requests for access to personal information are common, and on some occasions the requests have appeared to be partly politically motivated. For example, during a high-profile political scandal in Korea in 2016, the government requested law enforcement authorities to investigate messaging services that were being used to criticize the government. Korea's largest messaging service responded by deleting message data after just three days. The issue of law enforcement access to private communications in Korea is therefore a highly controversial issue.</p> <p>There are some emerging proposals in Korea for mandating specific security technology, but they have not yet been implemented.</p>
4. Are arrangements in place for the cross-border exchange of data for law enforcement purposes that are transparent and fair?	✓	<p>Korea has a large number of Mutual Legal Assistance Treaties (MLATs) in place (73 as of June 2017). Korea also uses a range of other bilateral and regional cooperation arrangements, including Memoranda of Understanding (MOU) between investigatory authorities <www.spo.go.kr/eng/public/activities/activities03.jsp>.</p>

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INTELLECTUAL PROPERTY RIGHTS (SCORE: 10.8/12.5 RANK: 5/24)		
1. Are copyright laws or regulations in place that are consistent with international standards to protect cloud service providers?	✓	Korea has implemented international standards in its intellectual property laws. Copyright "safe harbor" protection for intermediaries such as cloud service providers is contained in Article 102 of the Korean Copyright Act 2003.
2. Are copyright laws or regulations effectively enforced and implemented?	ⓘ	Korea generally has an active copyright enforcement regime in place. However, in recent years the use of criminal enforcement against enterprises illegally using unlicensed software has fallen sharply, leading to concerns about the effective enforcement of copyright in Korea. Civil enforcement against such infringement has also been of limited effectiveness, with courts reluctant to issue preliminary injunctions, and difficulties enforcing evidence preservation orders. Civil damage awards are often too low to adequately compensate rights holders. An intellectual property "safe harbor" is in place for cloud service providers. The approach is slightly different from other "safe harbors" because it can be used to either waive or reduce liability if the intermediary was unaware of the infringement.
3. Is there clear legal protection against misappropriation of trade secrets?	✓	The Unfair Competition Prevention and Trade Secret Protection Act 2001 (as amended 2011) provides specific and detailed protection for trade secrets in Korea.
4. Is the law or regulation on trade secrets effectively enforced?	✓	In 2012 Korea established the Trade Secret Protection Center <www.tradesecret.or.kr>, a specialized organization to help protect corporate trade secrets. Korea also has a Trade Secret Certification Service in place, which helps to encrypt and time-stamp trade secrets for use in future disputes over ownership.
5. Is there clear legal protection against the circumvention of Technological Protection Measures?	✓	Korean copyright law has been amended to provide protection for technological measures that control access to works (in 2003), and technological measures that protect copyright (in 2011).
6. Are laws or regulations on the circumvention of Technological Protection Measures effectively enforced?	✓	Korea has effective processes in place for taking enforcement action against the developers and distributors of circumvention devices.
7. Are there clear legal protections in place for software-implemented inventions?	✓	In Korea, software-enabled and computer-related inventions can be granted patent protection under the Korean Patent Act. The legislation is complemented by Examination Guidelines for Computer-Related Inventions 2014, issued by the Korean Intellectual Property Office (KIPO) <www.kipo.go.kr>.
8. Are laws or regulations on the protection of software-implemented inventions effectively implemented?	✓	The Examination Guidelines for Computer-Related Inventions, 2014, allow protection for computer-implemented inventions under four categories: (a) apparatus (device); (b) process (method); (c) computer-readable medium (e.g., a disc); and (d) computer program stored on a medium (added in July 2014).
STANDARDS AND INTERNATIONAL HARMONIZATION (SCORE: 9/12.5 RANK: 16/24)		
1. Is there a regulatory body responsible for standards development for the country?	✓	The Korean Agency for Technology and Standards (KATS) <www.kats.go.kr> is a non-governmental agency that manages the development of standards in Korea. It also promotes adoption international standards. The Korean Standards Information Center <standard.go.kr> publishes and promotes standards.
2. Are international standards favored over domestic standards?	ⓘ	Korea adopts a mix of national standards and international standards, and there are some examples of ICT standards where the national standard has received priority. One current area of concern is that Korea imposes a national encryption standard for the procurement of ICT security devices and related equipment, when a suitable international encryption standard is available. In addition, some ICT products that have already passed international Common Criteria for Information Technology Security Evaluation are required to undergo additional local testing in Korea. The Act on the Development of Cloud Computing and Protection of Users 2015 (Korean Cloud Act) gives the Minister the power to adopt standards for cloud computing (e.g., cloud computing security standards). As of June 2017, it is unclear whether Korea will adopt local or international standards under that legislation.
3. Does the government participate in international standards setting process?	✓	Korea participates in relevant International Standards Organization (ISO) and International Electrotechnical Commission (IEC) standard setting processes and is a full member of the ISO. Korea is a participant in the top-level ICT standards committee (JTC-1) <www.iso.org/isoiec-jtc-1.html>.

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4. Are e-commerce laws or regulations in place?	✓	The Framework Act on Electronic Commerce 2002 (amended in 2009) contains comprehensive coverage of e-commerce.
5. What international instruments are the e-commerce laws or regulations based on?	UN Convention on E-Contracting	The Framework Act on Electronic Commerce 2002 (amended in 2009) reflects the key provisions of the Model Law on E-Commerce. Korea is also a signatory to the UN Convention on Electronic Contracting.
6. Is there a law or regulation that gives electronic signatures clear legal weight?	✓	The Digital Signature Act 1999 (amended in March 2017) recognizes and enforces electronic signatures. Authorized electronic signatures require certificates issued by a government-licensed certification authority. However, simple electronic signatures do not have such requirement. The Digital Signature Act provides that licensed certification authorities must meet the designated capital, facility, and manpower requirements.
7. Are cloud service providers free from mandatory filtering or censoring?	✗	Internet content is specifically regulated by the Telecommunication Business Act 1991 as amended by the Act on Promotion of Information and Communications Network Utilization and Information Protection (Network Act) 2001 (as amended 2016). The law prohibits the posting of illegal content, including material that infringes upon public interests and social order, specifically obscenity, defamation, violence or cruelty, and incitement to gambling. These rules are administered by the Korean Communications Standards Commission (KCSC) <www.kocsc.or.kr>. The Korean Internet Safety Commission (KISCOM) <www.kiscom.co.kr> regulates and issues ISP take down orders for restricted content.
PROMOTING FREE TRADE (SCORE: 7.5/12.5 RANK: 13/24)		
1. Is a national strategy or platform in place to promote the development of cloud services and products?	✓	The Ministry of Science, ICT, and Future Planning (MSIP) launched the K-ICT Cloud Computing Development Plan in late 2015 <english.msip.go.kr/english/msipContents/contentsView.do?catelid=msse44&artid=1289190>. The plan includes a government target of expanding the cloud usage rate in Korea from 3% (in 2015) up to 30% by 2018. There is also a commitment to creating new cloud computing markets to bolster the industry. The Act on the Development of Cloud Computing and Protection of Users 2015 (Korean Cloud Act) also contains sections on promotion of the cloud computing market, including a commitment to international interoperability, and some limited provisions on competition between large and small cloud vendors.
2. Are there any laws or policies in place that implement technology neutrality in government?	✗	Korea has not implemented a formal policy on technology neutrality in government procurement.
3. Are cloud computing services able to operate free from laws or policies that either mandate or give preference to the use of certain products, services, standards, or technologies?	✗	Korea imposes a national encryption standard for the procurement of ICT security devices and related equipment, even though a suitable international encryption standard is available.
4. Are cloud computing services able to operate free from laws, procurement policies, or licensing rules that discriminate based on the nationality of the vendor, developer, or service provider?	✓	No preferences are granted to domestic suppliers that are relevant to cloud services and products. The Act on the Development of Cloud Computing and Protection of Users 2015 (Korean Cloud Act) does contain some high-level provisions on the promotion of fair competition between large cloud vendors and smaller cloud vendors (e.g., a prohibition on unfair contract terms).
5. Has the country signed and implemented international agreements that ensure the procurement of cloud services is free from discrimination?	📌	Korea is a full member of the World Trade Organization (WTO) plurilateral Agreement on Government Procurement <www.wto.org/english/tratop_e/gproc_e/gp_gpa_e.htm>.
6. Are services delivered by cloud providers free from tariffs and other trade barriers?	✓	There are no tariffs or other trade barriers in Korea that are likely to have an effect on cloud services and products.
7. Are cloud computing services able to operate free from laws or policies that impose data localization requirements?	✓	The Act on the Development of Cloud Computing and Protection of Users 2015 (Korean Cloud Act) gives the Minister the power to adopt standards for cloud computing (e.g., cloud computing security standards). At this stage it is unclear whether Korea will adopt local or international standards under that legislation. There is some concern that the standards may act as de facto data localization requirements, but as of June 2017 there are no requirements in place. Korea also imposes some data localization requirements regarding mapping information, but the effect of these requirements is very minor and is unlikely to act as a barrier to cloud computing.

# KOREA	RESPONSE	EXPLANATORY TEXT
IT READINESS, BROADBAND DEPLOYMENT (SCORE: 19.9/25 RANK: 3/24)		
1. Is there a National Broadband Plan?	Successive information master plans have resulted in ubiquitous high-speed broadband with extensive FttH/B infrastructure. A number of ICT strategies now focus on developing the ICT ecosystem.	In 2009 the Korea Communications Commission (KCC) announced the development of the UBcN (Ultra Broadband Convergence Network) <eng.kcc.go.kr/user.do?mode=view&page=E02010500&dc=E02010500&boardId=1051&cp=1&boardSeq=15661> with the goal to upgrade the national network to offer 1 Gbit/s service by 2012. In January 2014, Korea announced it will invest \$1.7 billion into developing a 5G mobile broadband network, with a target of a fully commercial service operating by 2020. Now that Korea has ubiquitous broadband in place, the Ministry of Science, ICT and Future Planning is leveraging the widespread availability of broadband to develop strategies for investing in innovation. This includes projects to facilitate start-ups and in Internet of Things (IoT) and investment in cultural economy technologies such as virtual reality (VR).
2. Is the National Broadband Plan being effectively implemented?	✔	South Korea has the world's highest number of broadband services per capita. After two decades of national informatization master plans, by 2015 around 95% of households were broadband subscribers. More than 60% of broadband subscribers used FttH or apartment LANs, with the remainder accessing predominantly cable.
3. Are there laws or policies that regulate "net neutrality"?	Limited regulation	Korea has issued several guidelines that explicitly address net neutrality. For example, Guidelines on Regulation of Internet Access Service Traffic were issued by the Ministry for Science, ICT and Future Planning (MSIP) in December 2013, and further updated in 2014. The Guidelines state: <ul style="list-style-type: none"> • The Guidelines apply to Internet access services • Service Providers must take appropriate measures to promote network upgradability in tandem with corresponding increases in Internet traffic and • Traffic management must be implemented only on a limited basis and within a reasonable scope.
4. Base Indicators		
4.1. Population (millions) (2015) • Total for all countries in this scorecard: 4,700 million	50	In 2015, the population of Korea increased by 0.5%. [International Telecommunication Union (ITU), World Telecommunication/ ICT Indicators Database (Dec. 2016) <www.itu.int/en/ITU-D/Statistics/Pages/publications/wtid.aspx>]
4.2. Urban Population (%) (2015) • Average for all countries in this scorecard: 73%	82%	In 2015, the urban population of Korea increased by 0.1%. [World Bank, Data Catalog, Indicators, Urban Population (Jan. 2017) <data.worldbank.org/indicator/SP.URB.TOTL.IN.ZS>]
4.3. Number of Households (millions) (2015) • Total for all countries in this scorecard: 1,249 million	19	In 2015, the number of households in Korea increased by 0.5%. [International Telecommunication Union (ITU), World Telecommunication/ ICT Indicators Database (Dec. 2016) <www.itu.int/en/ITU-D/Statistics/Pages/publications/wtid.aspx>]
4.4. Population Density (people per square km) (2015) • Average for all countries in this scorecard: 471	519	In 2015, the population density of Korea increased by 0.4%. [World Bank, Data Catalog, Indicators, Population Density (Jan. 2017) <data.worldbank.org/indicator/EN.POP.DNST>]
4.5. Per Capita GDP (US\$ 2015) • Average for all countries in this scorecard: US\$ 22,649	\$27,222	In 2015, the per capita GDP for Korea increased by 2.6% to US\$ 27,222. This was below the five-year compound annual growth rate (CAGR) from 2010–2015 of 4.2%. This ranks Korea 10th for value of per capita GDP and 4th for growth (CAGR) for this indicator in this scorecard. [World Bank, Data Catalog, Indicators: GDP Per Capita, Current US\$ (Jan. 2017) <data.worldbank.org/indicator/NY.GDP.PCAP.CD> and GDP Growth, Annual % (Jan. 2017) <data.worldbank.org/indicator/NY.GDP.MKTP.KD.ZG>]
4.6. ICT Service Exports (billions of US\$) (2015) • Total for all countries in this scorecard: US\$ 978 billion	\$23	In 2015, the value of ICT service exports for Korea decreased by 4.8% to US\$ 22.81 billion. This was below the five-year compound annual growth rate (CAGR) from 2010–2015 of 12.5%. This ranks Korea 12th for value of ICT service exports and 4th for growth (CAGR) for this indicator in this scorecard. [World Bank, Data Catalog, Indicators: ICT Service Exports US\$ (Jan. 2017) <data.worldbank.org/indicator/BX.GSR.CCIS.CD>]

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<p>4.7. Personal Computers (% of households) (2015)</p> <ul style="list-style-type: none"> Average for all countries in this scorecard: 63% 	77%	<p>In 2015, 77.1% of households in Korea had personal computers. This is a decrease of -1.5% since 2014 and ranks Korea 40th out of 236 countries surveyed. The growth from 2014 is below the five-year compound annual growth rate (CAGR) from 2010 to 2015 of -1.2%.</p> <p>This ranks Korea 10th for the number of personal computers (as a % of households) and 24th for growth (CAGR) for this indicator in this scorecard.</p> <p>[International Telecommunication Union (ITU), World Telecommunication/ ICT Indicators Database (Dec. 2016) <www.itu.int/en/ITU-D/Statistics/Pages/publications/wtid.aspx>]</p>
5. IT and Network Readiness Indicators		
<p>5.1. ITU ICT Development Index (IDI) (2016)</p> <p>(score is out of 10 and covers 175 countries)</p> <ul style="list-style-type: none"> Average for all countries in this scorecard: 6.58 	8.84	<p>Korea's ITU ICT Development Index (IDI) for 2016 is 8.84 (out of 10), resulting in a rank of 1st (out of 175 economies). The 2016 IDI for Korea increased by 0.7%, and the IDI ranking has remained the same since 2015.</p> <p>This ranks Korea 1st in the ITU ICT Development Index and 24th for growth (CAGR) for this indicator in this scorecard.</p> <p>[International Telecommunication Union (ITU), Measuring the Information Society (Dec. 2016) <www.itu.int/net4/ITU-D/idi/2016>]</p>
<p>5.2. World Economic Forum Networked Readiness Index (NRI) (2016)</p> <p>(score is out of 7 and covers 139 countries)</p> <ul style="list-style-type: none"> Average for all countries in this scorecard: 4.77 	5.57	<p>Korea has a Networked Readiness Index (NRI) score of 5.57 (out of 7), resulting in a rank of 13th (out of 139 economies) and a rank of 11th (out of 32) in the High income: OECD grouping of economies. The 2016 NRI for Korea increased by 0.8% and declined by 1 place from a rank of 12th since 2015.</p> <p>This ranks Korea 5th in the ITU ICT Development Index and 19th for growth (CAGR) for this indicator in this scorecard.</p> <p>[World Economic Forum, Global Information Technology Report (2016) <reports.weforum.org/global-information-technology-report-2016>]</p>
6. Internet Users and International Bandwidth		
<p>6.1. Internet Users (millions) (2015)</p> <ul style="list-style-type: none"> Total for all countries in this scorecard: 2,330 million 	45	<p>[International Telecommunication Union (ITU), World Telecommunication/ ICT Indicators Database (Dec. 2016) <www.itu.int/en/ITU-D/Statistics/Pages/publications/wtid.aspx>]</p>
<p>6.2. Internet Users (% of population) (2015)</p> <ul style="list-style-type: none"> Average for all countries in this scorecard: 67% 	90%	<p>In 2015, 90% of the population in Korea used the Internet, resulting in a ranking of 19th out of 236 countries surveyed by the ITU. This is an increase of 2.4% since 2014 and is above the five-year compound annual growth rate (CAGR) from 2010–2015 of 1.4%.</p> <p>This ranks Korea 3rd in the proportion of the population using the Internet and 22nd for growth (CAGR) for this indicator in this scorecard.</p> <p>[International Telecommunication Union (ITU), World Telecommunication/ ICT Indicators Database (Dec. 2016) <www.itu.int/en/ITU-D/Statistics/Pages/publications/wtid.aspx>]</p> <p>Note: There may be some variations as to how countries calculate this. Some countries base this upon all or part of the population — such as between 16 and 72 years of age.</p>
<p>6.3. International Internet Bandwidth (total gigabits per second (Gbps) per country) (2015)</p> <ul style="list-style-type: none"> Total for all countries in this scorecard: 117,736 Gbps 	2,091	<p>Korea has increased its international Internet bandwidth by 11% since 2014 to 2,091 Gbps and is ranked 22 out of 236 countries surveyed by the ITU. The growth from 2014 is below the five-year compound annual growth rate (CAGR) from 2009–2014 of 34.3%.</p> <p>This ranks Korea 16th for total international Internet bandwidth and 9th for growth (CAGR) for this indicator in this scorecard.</p> <p>[International Telecommunication Union (ITU), World Telecommunication/ ICT Indicators Database (Dec. 2016) <www.itu.int/en/ITU-D/Statistics/Pages/publications/wtid.aspx>]</p>
<p>6.4. International Internet Bandwidth (bits per second (bps) per Internet user) (2015)</p> <ul style="list-style-type: none"> Average for all countries in this scorecard: 97,747 bps 	46,894	<p>The international Internet bandwidth (per Internet user) of Korea has increased by 8% since 2014. The growth from 2014 is below the five-year compound annual growth rate (CAGR) from 2010–2015 of 31.8%.</p> <p>This ranks Korea 15th for international Internet bandwidth per user and 6th for growth (CAGR) for this indicator in this scorecard.</p> <p>[International Telecommunication Union (ITU), World Telecommunication/ ICT Indicators Database (Dec. 2016) <www.itu.int/en/ITU-D/Statistics/Pages/publications/wtid.aspx>]</p>

# KOREA	RESPONSE	EXPLANATORY TEXT
7. Fixed Broadband		
7.1. Fixed Broadband Subscriptions (millions) (2015) • Total for all countries in this scorecard: 697 million	20	<p>Korea has increased the number of fixed broadband subscribers by 4% since 2014 to 20.02 million, and is ranked 9th out of 236 countries surveyed by the ITU. The growth from 2014 is above the five-year compound annual growth rate (CAGR) from 2010–2015 of 3.1%.</p> <p>This ranks Korea 9th for the number of fixed broadband subscriptions and 21st for growth (CAGR) for this indicator in this scorecard.</p> <p>[International Telecommunication Union (ITU), World Telecommunication/ ICT Indicators Database (Dec. 2016) <www.itu.int/en/ITU-D/Statistics/Pages/publications/wtid.aspx>]</p>
7.2. Fixed Broadband Subscriptions (% of households) (2015) • Average for all countries in this scorecard: 63%	104%	<p>[International Telecommunication Union (ITU), World Telecommunication/ ICT Indicators Database (Dec. 2016) <www.itu.int/en/ITU-D/Statistics/Pages/publications/wtid.aspx>]</p> <p>Note: This may be skewed by business usage in some countries.</p>
7.3. Fixed Broadband Subscriptions (% of population) (2015) • Average for all countries in this scorecard: 21%	40%	<p>Korea has increased its fixed broadband subscriptions (as a % of the population) by 3.8% since 2014, which is above the five-year compound annual growth rate (CAGR) from 2010–2015 of 2.6%. This ranks Korea 12th out of 236 countries surveyed by the ITU.</p> <p>This ranks Korea 2nd for the number of fixed broadband subscriptions (as a % of the population) and 22nd for growth (CAGR) for this indicator in this scorecard.</p> <p>[International Telecommunication Union (ITU), World Telecommunication/ ICT Indicators Database (Dec. 2016) <www.itu.int/en/ITU-D/Statistics/Pages/publications/wtid.aspx>]</p> <p>The OECD figures below present a breakdown of the type of fixed broadband connections in Korea as of June 2016.</p> <p>In the OECD, Korea was ranked 5th (out of 35) for fixed broadband subscribers as a percentage of population [OECD Broadband Subscribers (Feb. 2017) <www.oecd.org/sti/broadband>]</p> <ul style="list-style-type: none"> • DSL: 2.6% • Cable: 8.4% • Fiber/LAN: 29.1% • Satellite: 0.0% • Fixed wireless: 0.0% <p>Total: 40.1% (20.3 million subscriptions) and significantly above the OECD average total for June 2016 of 29.8%.</p> <p>This reflects a continued decrease in DSL and cable subscriptions and an increase in fiber connections.</p> <p>The fixed broadband growth for the June 2015–2016 period was 2.27% (ranked 27 out of 35 for growth), below the OECD average growth of 3.42%.</p> <p>In Korea, fiber makes up 72.5% of fixed broadband subscriptions (ranked 2 out of 35), significantly above the OECD average of 20.1%. Japan and Korea dominate the share of fiber connections in the OECD, with each having almost twice the level of penetration of any other country in the OECD. The growth in fiber subscriptions for the June 2015–2016 period was 9.0% (ranking Korea 30 out of 35 for growth) and below the OECD average of 15.94%.</p> <p>Note: From July 2015 OECD adjusted its definitions of fixed and mobile broadband by transferring the categories Satellite and Fixed Wireless from Mobile to Fixed Broadband.</p> <p>Note: Fiber subscriptions data includes FttH, FttP, and FttB, and excludes FTTC.</p> <p>Note: There may be minor variations in the ITU and OECD subscriber totals due to definition or timing differences.</p>
7.4. Fixed Broadband Subscriptions (% of Internet users) (2015) • Average for all countries in this scorecard: 29%	45%	<p>[International Telecommunication Union (ITU), World Telecommunication/ ICT Indicators Database (Dec. 2016) <www.itu.int/en/ITU-D/Statistics/Pages/publications/wtid.aspx>]</p>

# KOREA	RESPONSE	EXPLANATORY TEXT
7.5. Average Broadband Data Connection Speed (total megabits per second (Mbps) per country) (Q1 2017) <ul style="list-style-type: none"> Average for all countries in this scorecard: 12 Mbps Average peak for all countries in this scorecard: 70 Mbps 	29	<p>In Korea the Q1 2017 average broadband data connection speed was 28.55 Mbps and is ranked 1st out of 239 countries measured by Akamai.</p> <p>This ranks Korea 1st for average broadband data connection speed in this scorecard.</p> <p>Additional connection metrics for Q1 2017 in Korea include:</p> <ul style="list-style-type: none"> Average peak broadband connection speed: 121.03 Mbps (ranked 6th globally and 2nd in this scorecard) Above 4 Mbps: 98% (ranked 4th globally and 1st in this scorecard) Above 10 Mbps: 85% (ranked 1st globally and 1st in this scorecard) Above 15 Mbps: 69% (ranked 1st globally and 1st in this scorecard) Above 25 Mbps: 40% (ranked 1st globally and 1st in this scorecard) <p>[Akamai, The State of the Internet (1st Quarter, 2017) <www.akamai.com/us/en/about/our-thinking/state-of-the-internet-report/>]</p>
8. Fiber-to-the-home/building (FttX)		
8.1. Fiber-to-the-home/building (FttX) Internet Subscriptions (millions) (2015) <ul style="list-style-type: none"> Total for all countries in this scorecard: 258 million 	14.3	<p>Korea has increased the number of FttX subscribers by 9% since 2014 to 14.275 million, and is ranked 4th out of 236 countries surveyed by the ITU.</p> <p>This ranks Korea 4th for the number of FttX subscriptions and 18th for growth (from 2014) for this indicator in this scorecard.</p> <p>[International Telecommunication Union (ITU), World Telecommunication/ ICT Indicators Database (Dec. 2016) <www.itu.int/en/ITU-D/Statistics/Pages/publications/wtid.aspx>]</p>
8.2. Proportion of Fiber-to-the-home/building (FttX) Internet Subscriptions (% of households) (2015) <ul style="list-style-type: none"> Average for all countries in this scorecard: 18% 	73.8%	<p>Korea has increased the proportion of FttX subscribers to households by 9% (since 2014) to 73.83%.</p> <p>This ranks Korea 2nd for the proportion of FttX subscriptions to households and 18th for growth (from 2014) for this indicator in this scorecard.</p> <p>[International Telecommunication Union (ITU), World Telecommunication/ ICT Indicators Database (Dec. 2016) <www.itu.int/en/ITU-D/Statistics/Pages/publications/wtid.aspx>]</p> <p>Note: This may be skewed by business usage in some countries.</p>
8.3. Proportion of Fiber-to-the-home/building (FttX) Internet Subscriptions (% of fixed broadband subscriptions) (2015) <ul style="list-style-type: none"> Average for all countries in this scorecard: 23% 	71.3%	<p>Korea has increased the proportion of FttX subscribers to fixed broadband subscribers by 9% (since 2014) to 71.29%.</p> <p>This ranks Korea 2nd for the proportion of FttX subscriptions to fixed broadband subscriptions and 18th for growth (from 2014) for this indicator in this scorecard.</p> <p>[International Telecommunication Union (ITU), World Telecommunication/ ICT Indicators Database (Dec. 2016) <www.itu.int/en/ITU-D/Statistics/Pages/publications/wtid.aspx>]</p>
9. Mobile Broadband		
9.1. Mobile Cellular Subscriptions (millions) (2015) <ul style="list-style-type: none"> Total for all countries in this scorecard: 4,823 million 	59	<p>In 2015, Korea increased the number of mobile cellular subscriptions by 2.9% since 2014, which is below the five-year compound annual growth rate (CAGR) from 2010–2015 of 3%. Korea is ranked 25th out of 236 countries surveyed by the ITU. The number of subscriptions account for 118% of the population.</p> <p>This ranks Korea 18th for the number of mobile cellular subscriptions and 14th for growth (CAGR) for this indicator in this scorecard.</p> <p>[International Telecommunication Union (ITU), World Telecommunication/ ICT Indicators Database (Dec. 2016) <www.itu.int/en/ITU-D/Statistics/Pages/publications/wtid.aspx>]</p> <p>Note: This figure may be inflated due to multiple subscriptions per head of population, but excludes dedicated mobile broadband devices (such as 3G data cards, tablets, etc.).</p>
9.2. Number of Active Mobile Broadband Subscriptions (millions) (2015) <ul style="list-style-type: none"> Total for all countries in this scorecard: 2,506 million 	55	<p>In 2015, Korea has increased the number of active mobile broadband subscriptions by 2%, which is below the five-year compound annual growth rate (CAGR) from 2010–2015 of 2.9%. Korea is ranked 12th out of 236 countries surveyed by the ITU.</p> <p>This ranks Korea 12th for the number of active mobile broadband subscriptions and 23rd for growth (CAGR) for this indicator in this scorecard.</p> <p>[International Telecommunication Union (ITU), World Telecommunication/ ICT Indicators Database (Dec. 2016) <www.itu.int/en/ITU-D/Statistics/Pages/publications/wtid.aspx>]</p>

# KOREA	RESPONSE	EXPLANATORY TEXT
<p>9.3. Active Mobile Broadband Subscriptions (% of population) (2015)</p> <ul style="list-style-type: none"> Average for all countries in this scorecard: 77% 	110%	<p>Korea has increased the number of active mobile broadband subscriptions (as a % of the population) by 1% since 2014, which is below the five-year compound annual growth rate (CAGR) from 2010–2015 of 2.3%. Korea is ranked 17th out of 236 countries surveyed by the ITU.</p> <p>This ranks Korea 5th for the number of active mobile broadband subscriptions (as a % of the population) and 24th for growth (CAGR) for this indicator in this scorecard.</p> <p>[International Telecommunication Union (ITU), World Telecommunication/ICT Indicators Database (Dec. 2016) <www.itu.int/en/ITU-D/Statistics/Pages/publications/wtid.aspx>]</p> <p>Note: This refers to the sum of standard mobile broadband and dedicated mobile broadband subscriptions to the public Internet. It covers actual subscribers, not potential subscribers, even though the latter may have broadband enabled-handsets.</p> <p>The OECD figures below present a breakdown of the type of mobile broadband connections in Korea as of June 2016.</p> <p>In the OECD, Korea was ranked 8th (out of 35) for mobile wireless broadband subscribers as a percentage of population [OECD Broadband Subscribers (Feb. 2017) <www.oecd.org/sti/broadband/>]</p> <ul style="list-style-type: none"> Standard mobile broadband subscriptions: 107.6% Dedicated mobile data subscriptions: 1.5% <p>Total: 109% (55.2 million subscriptions and accounting for 4.5% of all OECD subscriptions of 1.21 billion) and above the OECD average total for June 2016 of 95.1%.</p> <p>Mobile broadband growth in Korea for the June 2015–2016 period was 2.35% (ranked 32 out of 35 for growth), well below the OECD average growth of 10.7%.</p> <p>Note: From July 2015 OECD adjusted its definitions of fixed and mobile broadband by transferring the categories Satellite and Fixed Wireless from Mobile to Fixed Broadband.</p> <p>Note: The OECD wireless broadband figure includes both data and voice subscriptions (referred to as Standard Mobile Broadband) and data-only subscriptions (referred to as Dedicated Mobile Data).</p> <p>Note: The OECD figures include mobile data subscriptions, which are not as consistently reported in the ITU indicators.</p>
<p>9.4. Average Mobile Data Connection Speed (total megabits per second (Mbps) per country) (Q1 2017)</p> <ul style="list-style-type: none"> Average for all countries in this scorecard: 11 Mbps 	12	<p>In Korea the Q1 2017 average mobile data connection speed was 11.8 Mbps and is ranked 27th out of 70 countries measured by Akamai.</p> <p>This ranks Korea 9th for average mobile data connection speed in this scorecard.</p> <p>[Akamai, The State of the Internet (1st Quarter, 2017) <www.akamai.com/us/en/about/our-thinking/state-of-the-internet-report/>]</p>