# SK Telecom's

Digital Inclusion

Progress Report

2016

SK telecom

1. Status of Digital Divide

The Republic of Korea leads the IDI (ICT Development Index, measured by ITU) rankings for both 2010 and 2015, with an IDI value which has risen from 8.64 to 8.93. In terms of basic Internet access, Korea is showing a faster progress compared to other nations. It is not a simple quantitative approach to raise the network access rate, but more like a qualitative approach to address the digital divide by understanding the different access needs between different social classes, expanding access to the higher-quality Internet and offering IoT and more personalized services.
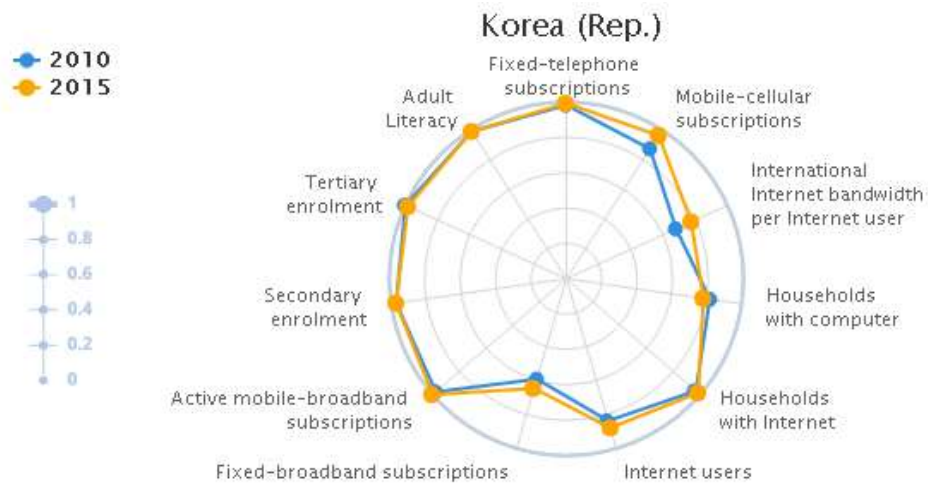
According to the 2015 IDI survey, the major digital divide issues of Korea include relative shortage of infrastructure such as the number of households with a computer and fixed-line Internet subscription. The average Internet bandwidth for users is also low compared to the quantitative subscription rate of the Internet. To address these issues, SK Telecom is (1) expanding physical access to high-quality networks for better accessibility, (2) reducing the accessibility gap of the economically vulnerable people through service innovation for better affordability, (3) developing and deploying innovative services to expand the IoT-based digital access for better availability, and (4) enhancing the quality of life through ICT by providing education on a sustained basis for higher acceptability.

2. Progress on our strategies

SK Telecom's expansion of service accessibility lays the groundwork for providing even more convenient mobile telecommunications services by securing and maintaining the absolute number of subscribers and expanding telecommunications devices. It consists of promoting digital inclusion for disadvantaged groups including low-income individuals and senior citizens. Digital inclusion efforts can potentially lead to the growth of the subscriber base and average revenue per user (ARPU). This may not only have a positive impact on SK Telecom's future revenue, but from a social standpoint, it improves the quality of individual lives.

(1) Accessibility

The rate of LTE subscribers is an indicator for mobile internet access. In 2016, the ratio of SK Telecom's LTE subscribers was recorded as 71.2%, a 4.9%p increase compared to 66.3% last year. As SK Telecom continues to improve access to service by expanding the use of wearable and 2nd devices, the company anticipates that access to service will continue to grow in the future as well.

Access to Service				
	2014	2015	2016	2020
Total Subscribers	28,610	28,626	29,595	-
LTE Subscribers (in thousand)	16,740	18,980	21,078	-
LTE Subscribers Rate (%)	58.5	66.3%	71.2%	>80%(E)

Network Reach in Korea				
	2013	2014	2015	2016
CDMA (2G)	99%	99%	99%	99%
WCDMA (3G)	99%	99%	99%	99%
LTE (4G)	99%	99%	99%	99%

In 2016, to provide standard telecommunications services to low-income individuals and residents of sparsely populated areas, universal loss of services compensation was 14.9 billion won, a decreased level from last year. To expand service accessibility, new base stations are being installed in places such as remote mountainous areas, hiking trails and island areas. In 2016, 3,195 base stations were installed in remote mountainous regions, 217 in hiking trails and 237 in island areas.

	2013	2014	2015	2016
Universal Loss of Service Compensation	16.9	17.9	18.1	14.9

(2) Affordability

In the interest of digital inclusion, SK Telecom continues to increase access to service by offering rate reductions for disadvantaged groups. In 2016, the total amount of rate reductions for disabled and low-income individuals was KRW 190,412 million, the scale of which is being maintained at a steady level.

(in KRW mn)	2013	2014	2015	2016
Total Rate Reduction for the Disadvantaged	211,617	196,806	188,453	190,412
- Disabled	138,443	128,422	122,462	123,187
- Low-income Group	62,891	58,299	56,058	57,068
- Veterans	10,105	9,931	9,800	10,032
- Miscellaneous	178	154	133	125

(3) Availability

SK Telecom is in the process of completing the nation-wide IoT hybrid network, and creating an IoT ecosystem in collaboration with Daegu City, KEPCO(Korea Electric Power Corporation), Korea University and etc. The number of IoT circuits recorded 2,032,710 in 2016, increasing 23.3% against the previous year. SK Telecom completed the nation-wide network in 2016 and will further exert its efforts to spread the benefits of new ICT, leveraging the new IoT network for wider communities such as farmers, traditional markets and fishermen.

	2013	2014	2015	2016
IoT circuits	1,007,780	1,262,655	1,648,173	2,032,710

(4) Acceptability

To improve access to service through education, programs to resolve the digital divide for disadvantaged groups, such as mobile phone education for senior citizens, mobile phone usage education for North Korean defectors and multicultural families as well as IT challenge contests for disabled youths are being carried out. In response to the rapidly changing and continuously developing ICT technology, SK telecom is in the process of reorganizing its training program.

	2013	2014	2015	2016
Smartphone education for the digital divides	905	1,020	906	454
Smart Robot S/W Education businesses (Direct)	0	0	0	248
Smart Robot S/W Education businesses (Indirect)	0	0	2,200	2,800
ICT Challenge	121	132	114	104

3. Business Cases

(1) Education on how to use smartphone for the disadvantaged (2007~)

SK Telecom is narrowing down the digital divide by teaching how to use smartphones to the senior citizens, children of multicultural families and North Korean defectors to increase their ICT utilization.

- In 2016, provided education on 454 senior citizens in 30 institutes of the Korea Association of Senior Welfare Centers

(2) Education support initiative (2013~)

SK Telecom is participating in the low-income family education initiative organized by the Ministry of Education.

- Donated PCs and provided support for high-speed Internet subscription cost to students of low-income families
- Offered free Wi-Fi devices for homes and vouchers to use customized contents (online library, online training)

(3) Smart robot and education contents support (2014~)

It is rolling out an initiative named 'Robots to Share Creative Happiness' which supports smart robots and educational contents in partnership with small and medium-sized robot companies.

- Plans to expand the program to 2,400 children in 80 Community Children's Centers across the nation
- Plans to expand participating students to 11,500

(4) Traveling ICT museum, T.um Mobile (2014~)

T.um Mobile is a traveling ICT exhibition museum for students and residents in small or mid-sized cities who have relatively little access to cutting-edge ICT services.

- Pre-schoolers, primary/secondary students in underserved areas, senior citizens, children at orphanages to participate in the government events, etc.
- 6 sessions held and 106,400 people attended in 2016

(5) Digital access for the physically/mentally challenged (1999~)

SK Telecom has held the 'IT Challenge for Youths with Challenges' since 1999, which is attended by students of special education schools where participants can enhance their abilities to utilize various ICTs. The contest is recognized for motivating youths with physical/mental challenges to stand on their own. The Company is also participating in the contents development and service expansion of 'Happiness Library' for visually challenged people, which provide voice services to read books and magazines. SKT employees have been participating in this initiative, volunteering to record their voices.

- 104 students from 26 special schools participated in the IT challenge in 2016

- 4,680 annual app users visit Happiness Library for 1.51mn times in 2016

(6) Traditional market revitalization project (2012~)

SK Telecom is helping to boost the competitiveness of traditional markets by leveraging ICT to find the optimum solutions. It is providing ICT-based marketing solutions to Joonggok Jeil and Incheon Shinki traditional markets, and the smart delivery services to Shinyoung, Hwagok Joongang, Mok3dong traditional markets.

- Revitalization projects for 5 markets with a total of 6 promotional events and another event to promote the smart delivery system

- Supported for participation in the traditional market exhibition

(7) Smart local food system support (2013~)

SK Telecom is facilitating the farming communities by building a direct transaction system for local food. The system, designed to manage production and distribution of agricultural products, is expected to bring economic benefits to target areas including Gimpo, Pocheon, Yangpyeong and Sejong city. Farmers can provide fresh produce to consumers by simplifying the distribution stages and be guaranteed stable income.

- 6 areas including Wanju, Gimpo, Pocheon, Yangpyeong, Sejong city

- Approximately 2,500 households received support or participated in the system

- SK Telecom paid 50% of the total system cost and 40% of the operation cost