

KT 『GiGA Island』 initiative

Creating Value Beyond Connectivity

The paradigm is shifting from connectivity to the value and opportunities created by connectivity, which could help ease social problems such as inequalities in education between rural and urban areas in both developing and developed countries. Korea Telecom (KT) announced its *GiGAtopia Strategy* in May 2014, linking a GiGA-speed fixed network with mobile broadband in five major industrial fields: media, energy, safety, healthcare and transportation. By upgrading the existing network of 100Mbps to 1 Gbps and creating new opportunities for the ICT industry, this strategy provides entirely new services.

Indeed high-speed, affordable connectivity to the internet is a foundation stone of modern society, offering widely recognized economic and social benefits. Even in rural areas, the steady march of connectivity among population is slowly but surely transforming local society with new ways of accessing services and information. Especially wide spread of wifi offers the prospects of new services and our approach to development. Under the long-term goal of connecting every corner, KT has been broadening wifi coverage in rural area for increasing connectivity and facilitating ICT driven programs. For some isolated islands in Korea, KT has introduced 'Wifi bridge', an AP *optimized for high and stable traffic on long distance*, as a transmission networks and numbers of 'Public wifi' AP for the residents' daily lives.

The GiGA Island Project stands as the best example of KT's innovation of rural communication by connecting islands to the mainland through advanced networks and ICT solutions. The project aims to improve fundamental quality of life of local communities in terms of education, healthcare, safety, productivity and more. Such a GiGA speed fixed and mobile broadband makes communication with the outside world possible at any given situation and allows people to confirm the safety of their families through videophone at a refugee shelter. For people who feel isolated and insecure away from the mainland, GiGA Island forms a 'connected community' to help people lead a safe and comfortable life on the island.

Box 1: GiGA Island Project

What was the motivation to launch the GiGA Island?

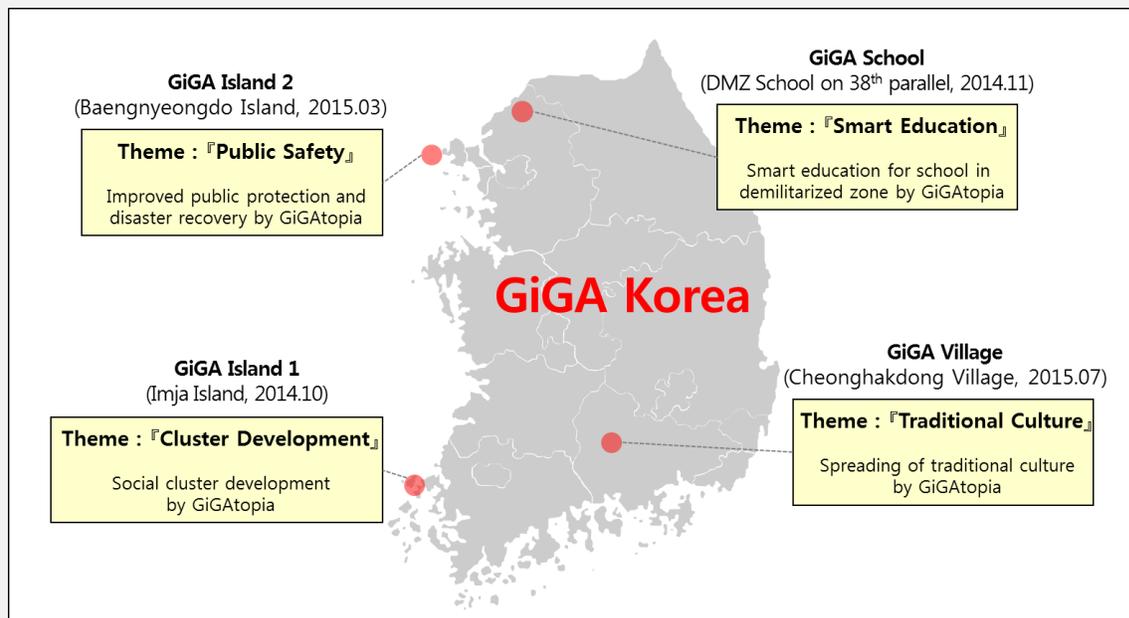
The GiGA Island Project is based on cooperation between KT, local government and residents to facilitate ICT infrastructure and solutions to help solve local problems. The GiGA Island Project aims to:

- allocate limited resources more efficiently with the help of ICT solutions;
- meet the Corporate and Social Values of KT;
- improve the infrastructure of remote islands; and
- to create a new market to KT's business.

How could the GiGA Island model be spread to other countries?

The concept of the GiGA Island project as a universal social platform based on collaboration between local operators, ICT solution providers and local government can be applied elsewhere. With its tailored solutions, local government authorities and communities can benefit from the enhanced lifestyles in the areas critical to their daily lives.

Figure: Progress in the GiGA Island Project



Source: KT.

The GiGA Island project was first launched in October 2014 on Imja-do Island, one of many islands surrounding the Korean Peninsula. The GiGA network has helped upgrade the overall quality of lifestyle on Imja-do Island in various ways:

- Education : Children can enjoy exchanges with foreign teachers in Seoul 350km away via a video conferencing system



- Culture : Residents can listen via a direct link-up to cultural lectures from a culture center 66km away in Mokpo;



- Healthcare : The elderly can receive health check-ups via mobile devices and send the results to medical institutions;



- Farming : Farmers can check on their crops' condition in real-time from outside the island and control their facilities;



- Media : People can facilitate UHD contents for things like screening movies in the village hall.



Box 2 lists some of the exciting applications that have been made possible since the launch of the GiGA Island Project.

Box 2: Applications made possible by the GiGA Island Project

- 1) **Smart Farming:** Mr. and Mrs. Na own a greenhouse that must be permanently monitored, and watered and ventilated at regular intervals. After the 'Smart Farming system' was installed, they can now manage the greenhouse remotely through a smartphone app that allows them to control the temperature, humidity, and ventilation. Broccoli productivity has gone up by 20%. Mr. and Mrs. Na are now free from locational constraints, as they can now monitor his site without actually going there via Close Circuit TV (CCTV). Their lives have become more convenient and safer.

- 2) **Dream School Mentoring:** Jimin, a Korean-vietnamese child, comes from a low-income family, and used to be very shy and lagging behind her peers in school. After joining a global mentoring program with a Vietnamese teacher, she started to have something special of her own, as her knowledge of Vietnam was unique, and now she feels more confident around her peers. This experience has impacted her mindset.
- 3) **GiGA Cultural Center:** The residents of Imja Island previously had to travel more than 2 hours to take classes. The GiGA Cultural Center has now opened on the island, enabling people to take classes more easily.

Source: 15 January 2015 Interviews for Maeil Business Newspaper, Rep. of Korea.

Another GiGA Island was established on Baengnyeong-do Island towards the north of the Korean Peninsula in March 2015. KT established a triple network system comprising high-performance Microwave, satellite, and LTE-Advanced networks. These GiGA speed fixed and mobile broadband makes communication with the outside world much easier.

KT's GiGA Island has a significant meaning for the following reasons.

- Enabled access to super-fast and high quality broadband services by fixed and mobile networks in all places including island areas
- Improved the overall quality of life for residents on the island in the fields of education, medicine, culture and others to be on par with the social life of a city
- Presented a low cost, highly efficient ICT-based regional development paradigm to the local government
- Assisted local government and military with tactical communication for PPDR (Public Protection and Disaster recovery) and surveillance in the borderland region
- Improved the productivity and more business opportunities in ICT convergence market in the public sector for corporates

In accordance with Sustainable Development Goals (SDGs) which UN recently published as a Post-2015 development strategy, GiGA island has well demonstrated the benefits of connectivity and ICT convergence in rural areas demonstrated empowering women, ensuring healthy lives, and providing better quality education. In a view of public-private collaboration, GiGA island initiative is working as a social platform driven by ICT technology. Different kinds of social services could be provided based on advanced rural communication technology. It is a momentum to help innovative across society as a whole.