KT 『Global GiGA Island』 Initiative

Innovative Global CSV model is replicable and sustainable

KT presents 'Global GiGA Island' Project as the case study for World Wi-Fi Day 2017.

KT's 'Global GiGA Island' Project is a continuation and the global version of its famous domestic 'GiGA Island' Project (http://worldwifiday.com/wp-content/uploads/2016/06/KT-KT-GiGA-Island-initiative.pdf) which was presented as a case study for World Wi-Fi Day 2016, has been initiated in October 2014 in South Korea and being continued even at this moment.

As Korea's leading telecommunication company, KT seeked to share its supreme technology and years of excellent telecommunication service provsion experience with nations looking for support in the area of telecommunications on the global stage, by replicating its 'Giga Island' project, which has been previously implemented in Korea and provided access to tons of Korean citizens who previously did not have sufficient access to broadband due to their remote and desolate location. The key idea of 'GiGA Island' project was to bring social services such as education, health care, and agriculture in a hard to reach areas where government infrastructure and presence is insufficient.

In the course of search for an appropriate target nation requring such support, Bangladesh met KT's selection criteria, and KT identified Bangladesh as a desirable destination country to initiate its global version of the social project, making Bangladesh a 'Digital Bangladesh.'

The key element in transforming Bangladesh into 'Digital Bangladesh' is 'broadband' both wired and wirelss, which plays a critical role in improving the health, wealth, education, livelihood and social inclusion of people, especially in underdeveloped countries. Regardless of age, language, abilities, geographic location or economic status, the opportunities to reach communities with proper connectivity is proving to be both a catalyst for new social development model and technology innovation. Broadband is thereby creating a virtuous circle of win-win benefits for governments, communities and people, and something that KT has experties in.

In an effort to connect every corner of Bangladesh to the rest of the world, KT has been collaborating with the Government of Bangladesh, International Organization

for Migration(IOM), KOICA(Korea International Cooperation Agency) and other NGOs. KT and IOM together with the Government of Bangladesh have been setting up technology and ICT services to implement the success of GiGA Island. The scope of project is not limited only to providing the benefits of technology and high-speed internet, but encompasses building a replicable social development model.

The Bangladesh government-supported 'Global GiGA Island' Project, labelled 'Digital Island', is distinctive from Rep. of Korea's case because:
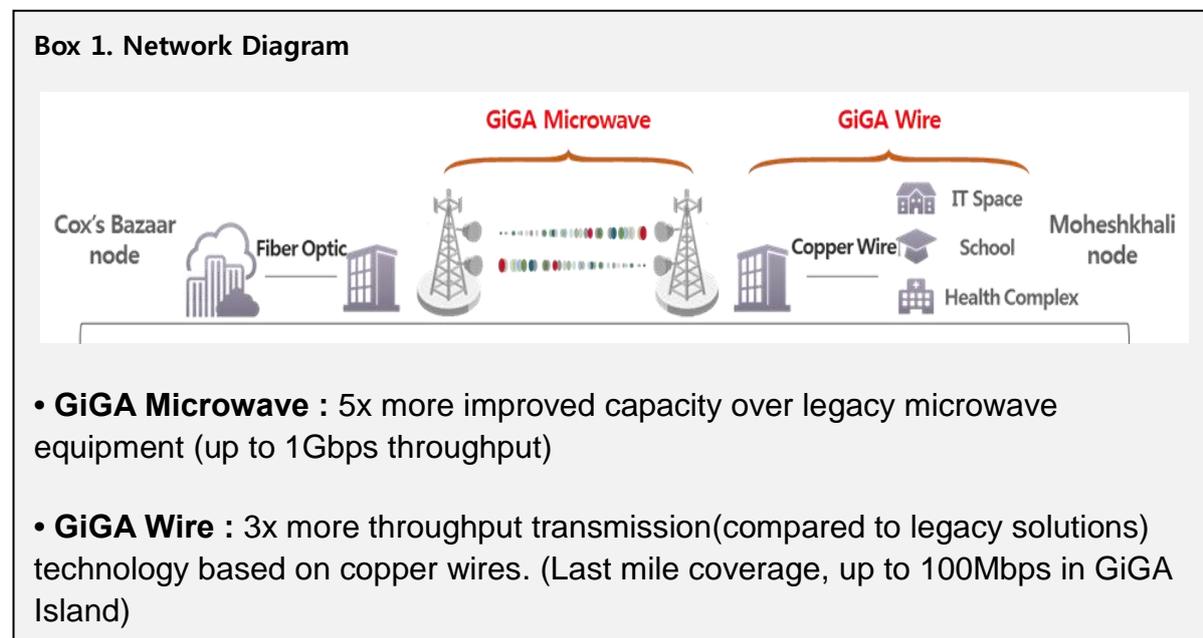
(1) It is a multi-party collaboration model involving numerous public and private sector stakeholders from both countries;

(2) It is aligned with a national development strategy, 'Digital Bangladesh' a part of 'Bangladesh's Vision 2021'.

To achieve 'Digital Bangladesh', the Government of Bangladesh believes that essential government services should be accessible through digital means to citizens in Bangladesh. While the government is making efforts to improve the quality of its services provision across the country, it requires technological advances and new partnerships to reach out to the total population of 160 million. This is particularly true for hard to reach areas where large infrastructure development is required that ranges from roads to energy lines, to connect the areas with the rest of the country. The project is therefore well aligned with the government's 'Digital Bangladesh' strategy, which good quality government services can be accessed through digital means by the population of Bangladesh. This is especially valid for hard to reach region where the service provision lags behind national averages and great achievements can be obtained through "digitally" accessing information and services such as health care and education.

For the initial project site selection within Bangladesh, KT considered several factors such as network feasibility, and societal value to satisfy relevant socio-economic needs. Moheshkhali Island, located in a geographically remote area currently offers a limited and low-quality access to services. Moheskhali Island has a total population of 321,218 and a population density of about 900 people per square kilometer. The average literacy rate amongst the population is 30% well below the national average of 50%. While Moheskhali has many public institutions such as schools and health clinics, they are poorly staffed and the quality of the teachers in schools are rarely strong enough to teach foreign languages or anything outside of the basic curriculum. The number of physicians relative to population is 11 per 20,000 people. Especially, due to health complex's limited medical service capacity and absence of female doctors, women in Moheskhlai are having trouble with reaching to the proper maternal and reproductive health care services.

By implementing this 'Global GiGA Island' project, KT planned to roll out high speed network infrastructure including the following supreme quality KT technologies:

Box 1. Network Diagram

• **GiGA Microwave :** 5x more improved capacity over legacy microwave equipment (up to 1Gbps throughput)

• **GiGA Wire :** 3x more throughput transmission(compared to legacy solutions) technology based on copper wires. (Last mile coverage, up to 100Mbps in GiGA Island)

Within three unions: Pouroshova, Boro Moheshkhali and Choto Moheshkhali. which accounts for more than 30% of total population and an ideal environment for expanding connectivity and maximizing the utilization of ICT solutions.

The ultimate goal of KT's 'GiGA Island' Project is to empower the residents of rural communities utilizing ICT technology. This project in Bangladesh is mainly focused on improving people's accessibility to public services along with community participation. In coordination with the Government of Bangladesh, KT identified four major social priorities in Moheshikhali; Education, Health, Information, and e-Commerce

In each area, this project aligned with the government's programmes: A2I, Teachers Portal, Learning & Earning, and Agriculture Information Center. By facilitating these policies, the viability and sustainability of the project will be increased. Once broadband infrastructure is built, the project will start introducing relevant ICT solutions to the targeted government facilities and provide training to the service providers to ensure they can utilize the services.

- Distance Learning
  - Establish smart classes for distance learning in twelve primary schools in partnership with 'jaago foundation', a local NGO
  - Utilize e-learning contents(Teacher's Portal) for English language and literature

- Digital Healthcare
  - Connect community health clinics through tele-medicine system
  - Utilize mobile health check up devices for diagnosing disease (eg.'Sonon'(ultrasound device), 'Yodoc'(urine analysis), 'myCheck'(blood tester))

- Access to Information
  - Set up IT education space for IT classes and information
  - Develop job information website for low skilled manual jobs

- e-Commerce
  - Set up e-Commerce platform to connect directly with consumer in partnership with KOICA
  - Activate AICC(Agriculture Information and Communication Center)&IPM(Integrated Pest/Crop Management) through connectivity

In September 2015, the UN introduced the Sustainable Development Goals for the next 15 years to the world – a 17 point plan to end poverty, combat climate change and fight injustice and inequality. Corresponding to some of the SDGs, 'Digital Island' presents how ICT can contribute to achieving the Goals. The relevant goals range from Goal 1 and 2: No Poverty & Zero Hunger, Goal 3: Good Health and Well-Being, Goal 4: Quality Education, to Goal 9: Industry Innovation and Infrastructure

There has been some significant and remarkable progress regarding this 'Global GiGA Island' project recently. As of April, 2017, KT finished installation of a fiber optic cable on Moheshkhali that now provides high speed internet to 30% of the island's population or three of the island's eight unions previously mentioned, which will act as the milestone to implement broadband-based solutions. So far, 25 facilities have been connected to high-speed internet, including 13 primary schools, 2 Madrassas, 4 community clinics, 1 health care complex, and an IT center for training. Other buildings include police and municipal office buildings.

On April 27th, 2017, in celebration of the launch of 'Global GiGA Island', a historical ceremony was held via video conference call connecting Seoul, Korea where KT HQ is located, Dhaka, Bangladesh which is the capital of the nation, and 'Global GiGA Islandutilizing broadband infrastructure and technology installed and provided by KT.

During the 'Global GiGA Island' launch ceremony, Prime Minister of Bangladesh Sheikh Hasina via video link said that

"Today's launch is one more step towards the Digital Bangladesh Vision 2021, where

we will have a prosperous and equitable middle-income Bangladesh by our golden jubilee of independence. What has been done on the Island of Moheskhali, can be replicated in other hard to reach areas of the country, so that all corners of the country can benefit from the digital revolution," said Prime Minister of Bangladesh Sheikh Hasina via video link to the 'Global GiGA Island opening ceremony' on April 27th, 2017.

Mr. Sarat Dash IOM's Director General Special Envoy for India and Bhutan & Chief of Mission for IOM Bangladesh said that

"I am grateful to the Government of Bangladesh for entrusting IOM and extending valuable support for the project since its inception. I believe, this pilot project can really set an example on how the use of technology in remote areas can really bring about social change."

KT's Chief Executive Chang-Gyu Hwang, who linked in from South Korea via the new network system said that

"This wouldn't have been possible without the support and collaboration from the Bangladesh government," and "ICT plays a prominent role in developing communities and creating better lives" concluding that "This project will be a good model for other areas in Bangladesh and even other countries that experience social and digital gap."

In addition to the infrastructure and technology side accomplishment of the project, there have been some remarkable progress in education and health as well.

In education, the project has started teaching English to about 2,000 students across 3 primary schools this month with the help of e-learning services provided by three teachers from the Jaagoo Foundation in Dhaka. Teachers and students interact with each other in real time via digital equipment that includes cameras, projectors, and a computer in a specially designated classroom. The e-learning program will extend to another 10 primary schools and 2 madrasas by July end, covering a total of about 9,000 students in the process.

In health, the project is first targeting Maternal Neonatal Child Health needs given the community's chronic female doctor staff shortage. The project has introduced portable handheld ultrasonic devices in four community clinics and the Upazila Health Complex that would allow specialist doctors in big metropolis such as Dhaka and Chittagong to diagnose complicated pregnancies and patients in real-time. This will help in time to reduce the maternal mortality rate of 18 deaths per 10,000 people every year, above the national average of 17 deaths per 10,000 people, by alerting doctors to potential complications beforehand.

The project now aims to promote e-commerce by helping farmers connect directly with consumers. And direct sales to retail customers via an e-commerce portal is expected to raise local farmers' profit significantly. Utilizing the broadband infrastructure installed by KT, various training classes provided by the Bangladesh government and its partners will be soon available to the local people in need.

Through these initiatives and many more, the project aims to ultimately reduce the social and economic gap between urban and island areas, and prevent forced migration to the cities and abroad as well as improving overall quality of lives of the targeted population.

KT and IOM hope to hand over the entire project to the local community, privately owned local enterprises, to run by the end of 2018.