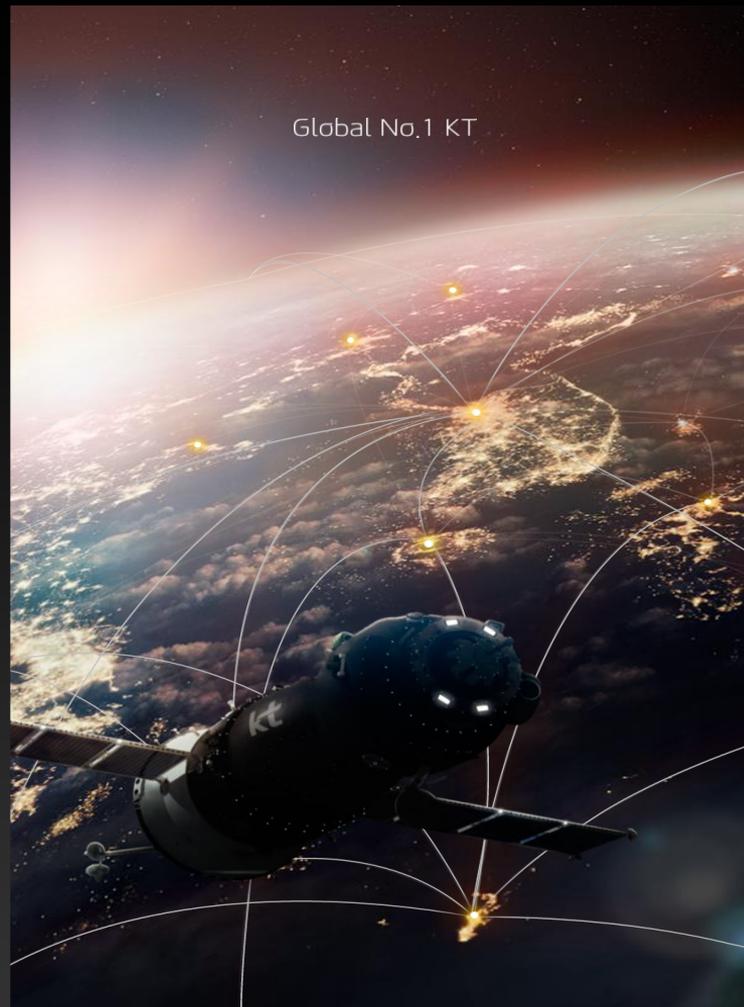


LPWA Business of KT

Progress & Use Cases

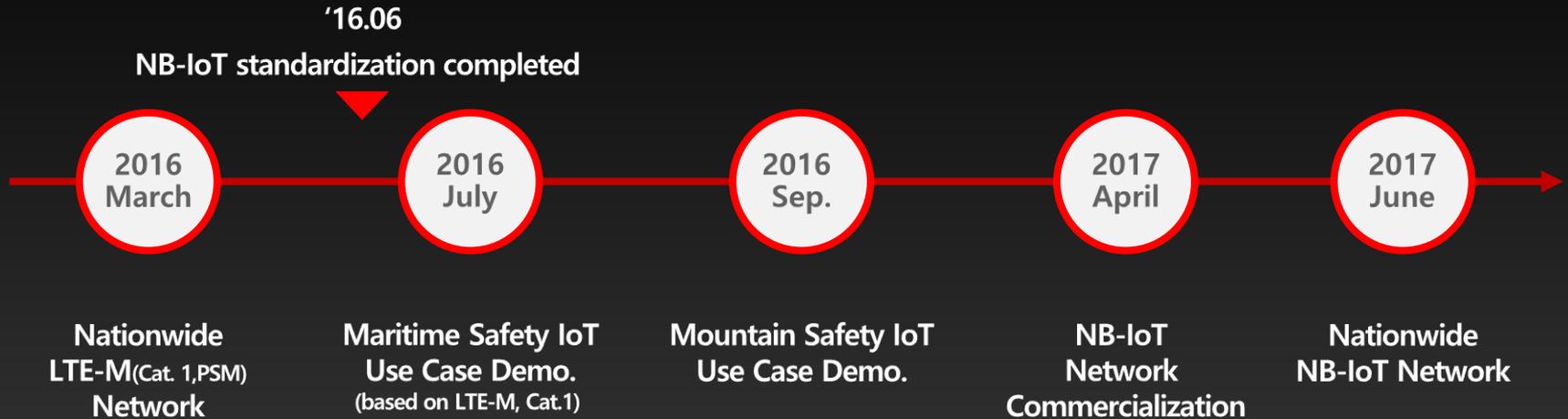
June-Keun Kim, SVP
Head of GiGA IoT Business Unit



01 KT LPWA Business: based on 3GPP standards

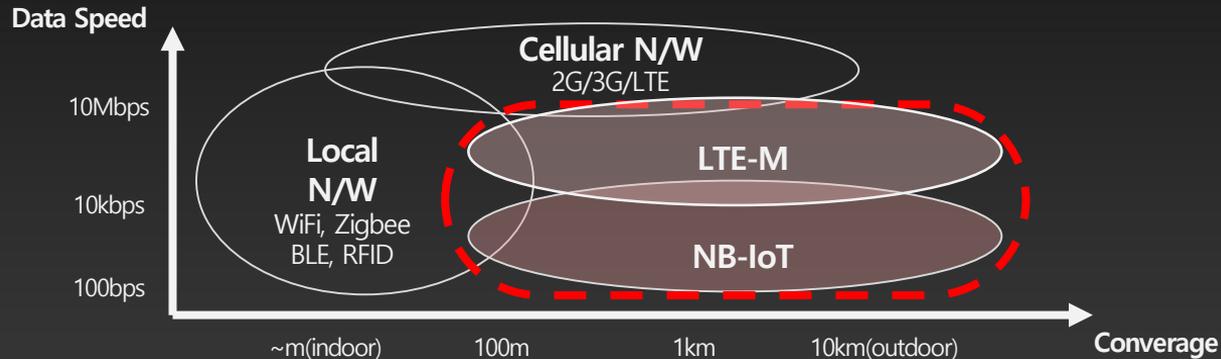
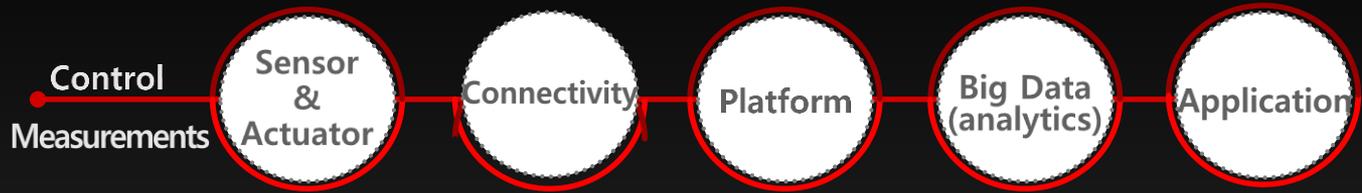
Commercialized LTE-M(cat.1, PSM) Network nationwide on March 2016

Plan to deploy the nationwide NB-IoT network on 2017 1H



02 KT LPWA Business: Total Solution

Not only offer LPWA connectivity but also consider packaging platform/data analytics, and apps with connectivity



03 **KT LPWA Business: Public Safety**

As the national company, KT has focused on applying public safety, first

The LPWA Use Case

- LTE-M(Cat.1 PSM): Maritime Safety
- LTE-M(Cat.1 PSM): Cold chain for blood box transportation Commercial service
- NB-IoT: Mountain Safety Field Test
- NB-IoT: Air Quality Monitoring Commercialization ready



Hansung Telegraphy Ministry:
The predecessor, of KT (1885.09)



Korea Telecommunication Authority
(1981.12)



Celebrating 130 year of Korea
telecommunication history (2015)

04 Use Case 1: Maritime Safety IoT

Demonstrated Maritime Safety IoT based on LTE-M(cat.1) and LTE Marine on July 2016

Maritime Accident

As-Is

- Weak cell signal area
- Rescue time limited
- Unable to check out victims' status/location



Tracking the location

Collecting real-time information of Wearer

Supporting integrated control center

05 Use Case 1: Maritime Safety IoT



06 Use Case 2: Cold Chain Management System for Blood box

Enabled to keep blood safely and fresh to the hospital

Launched on November 2016 (based on LTE-M(cat.1, PSM))

Cold Chain Management

Main Function

- Tracking the location
- Collecting real-time information
- Supporting control center

Current Status

- Nationwide Service available



07 Use Case 3: Mountain Safety IoT

Succeeded in mountain safety IoT solution pilot, which is the first NB-IoT service demonstration in the world. (2016.09)

Mountain Accident

As-Is

- Rescue time limited
- Unable to identify victims' status/location



NB-IoT Module

Tracking the location

Collecting real-time information of Wearer

Supporting integrated control center

08 Use Case 3: Mountain Safety IoT



09 Use Case 4: Air Quality Monitoring

Air Pollution

As-Is

- Air pollution(ex. fine dust) getting worse
- The sensors are located too high to monitor



Utilize the existing KT Infra



Underground air quality monitoring possible



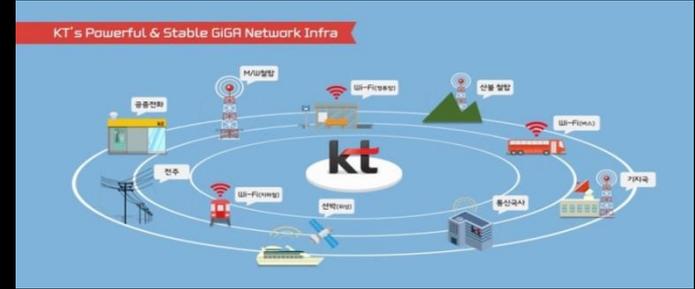
10 Use Case 4: Air Quality Monitoring

Spreading cooperation with various partners
NB-IoT application is under consideration

Partnership from Private to Public



apartment/buildings



Cooperation with local government (ex. province & city)

11 Use Case 4: Air Quality Monitoring

KT'S SMART AIR QUALITY SYSTEM

LOG
SETTINGS

INDIVIDUAL
ERRORS ONLY



MAP VER. 1.09.16



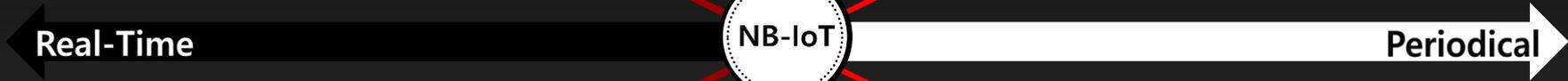
12 Future Plan



- Public Safety
- Asset Tracking
- Kids/Senior Care



- Water/Gas/Power Metering



- Building Automation
- Home Automation
- Theme Park Management



- Home Appliances
- Environment Control
- Gas leakage Monitoring

Thank you

