

**I-KOREA 4.0**

# 5G Policy in Korea

Ministry of Science and ICT



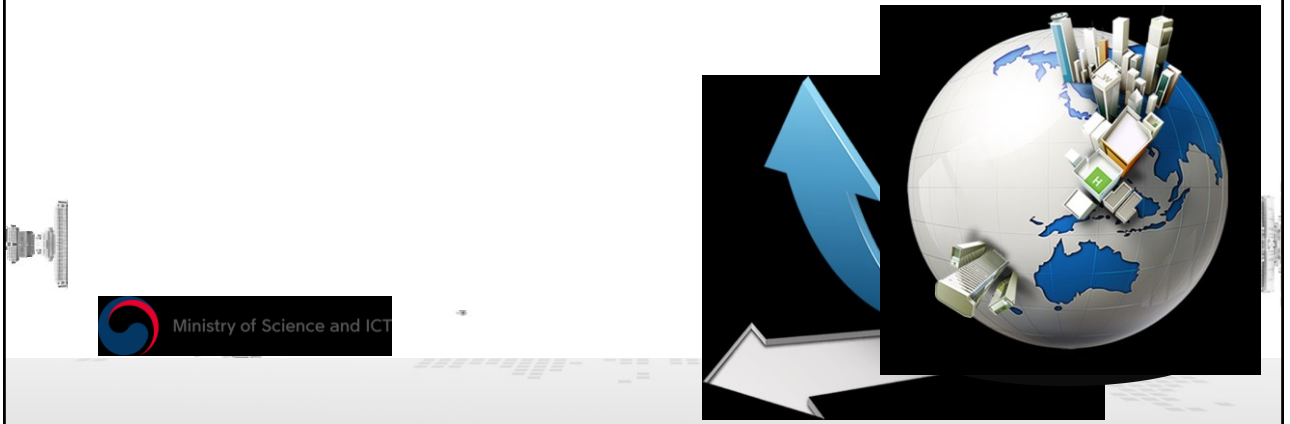
Ministry of Science

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- Relationship between the Fourth Industrial Revolution and 5G
- Status of 5G commercialization
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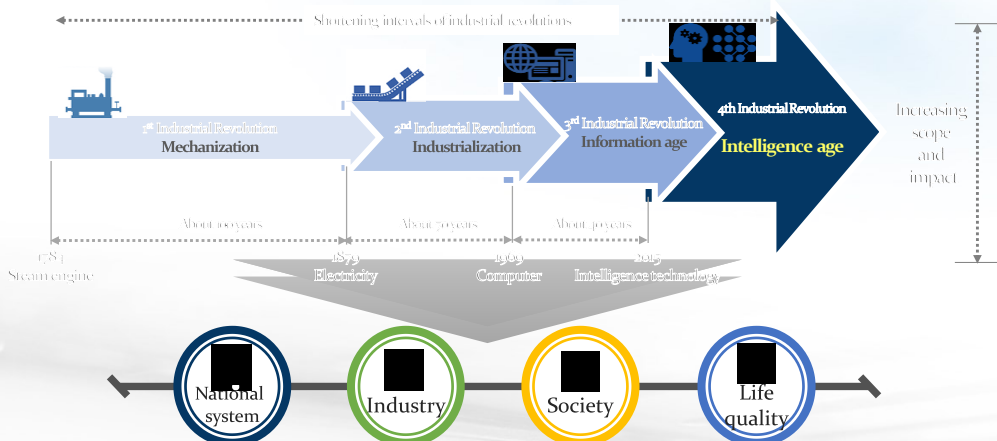


# Relationship between the Fourth Industrial Revolution and 5G



## Meaning of the 4th Industrial Revolution


The **Intelligence** Revolution based on hyper-connectivity driven by digital technologies including AI and Big Data









**Innovative changes** across the national system, industry, society and quality of life

※ Source : Revised "Future of Korean-style Fourth Industrial Revolution"

## Changes likely to be created by the 4th Industrial Revolution






 <b>Economy</b>	<b>Industrial structure</b>		Data, the source of competitiveness Platform-based competition
 <b>Society</b>	<b>Employment structure</b>		Automation of simple, repetitive work Enhanced values of creative, emotional work
 <b>Life</b>	<b>Life of the people</b>		More convenient life vs. Adverse effects such as polarization, information leakage

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## Technological factors determining the 4th Industrial Revolution

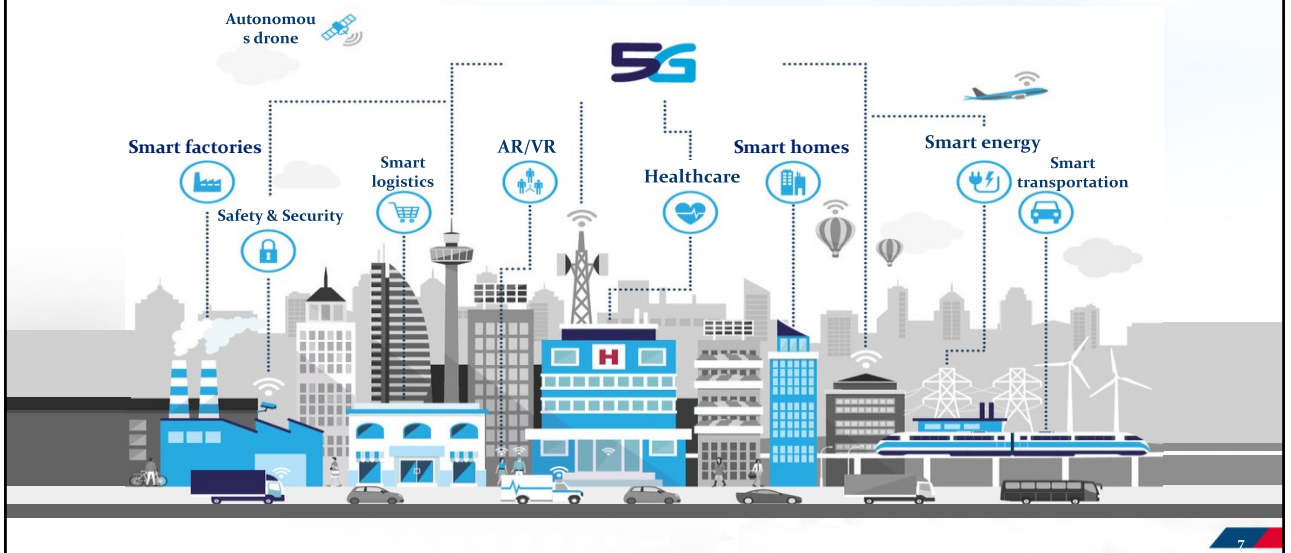
**D·N·A as the key factor to controls the velocity and ripple effect of 4<sup>th</sup> Industrial Revolution**

BIG DATA <b>DATA</b>	New energy source of the 4 <sup>th</sup> IR era <b>Big Data</b>	
NETWORK	Key infrastructure for 4 <sup>th</sup> IR	 Creates value based on hyper-connectivity, intelligence
AI	New services with AI	

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# 5G = Key infrastructure for the 4th Industrial Revolution

'5G' will make all industries smart



## Services made possible through 5G

**Ultra-high Speed**  
(20 times faster than 4G)

- 4K/8K UHD broadcast
- Hologram
- Virtual reality/Augmented reality

**Capable environment**

- Densely populated
- Moving in high speed

**Ultra-low Latency**  
(1/10 of 4G)

- Real-time communication & Tactile Internet
- Remote control of robots in real time

- Autonomous vehicle
- Drone control

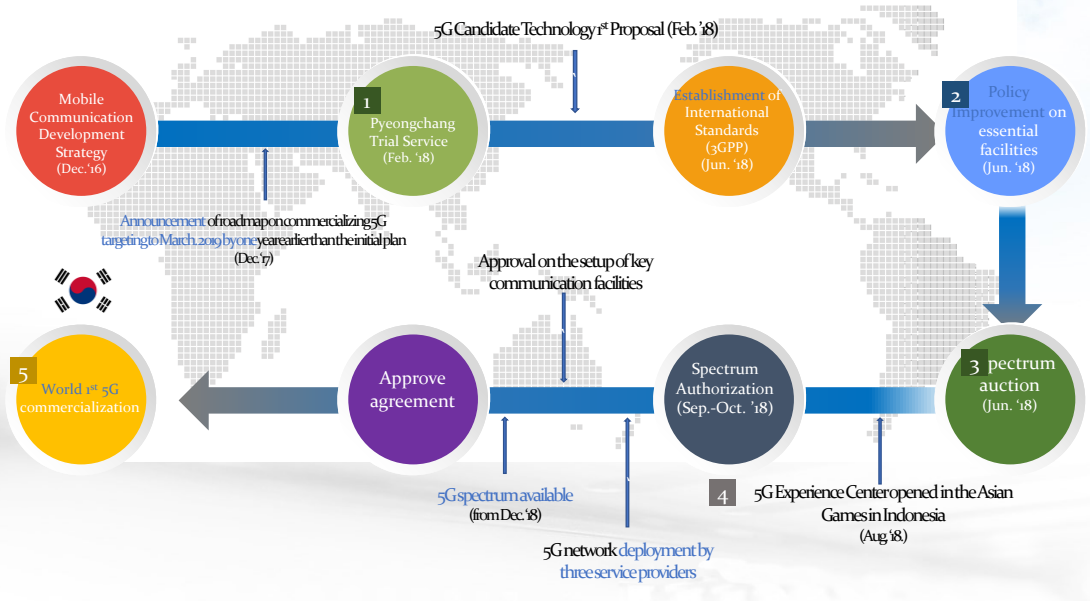
**Hyper-connectivity**  
(10 times faster compared to 4G)

- Remote surveillance and control of facility/environment
- Smart buildings/cities
- IoT of Things

# Status of 5G Commercialization

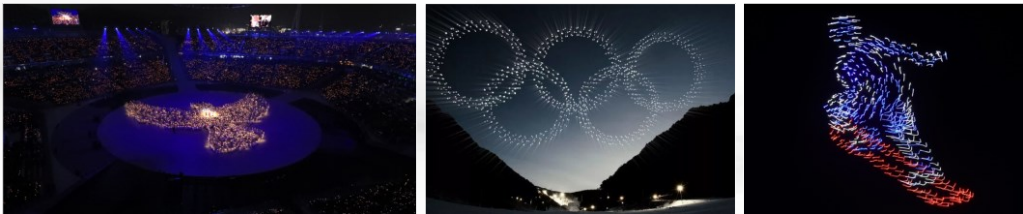


## 5G Roadmap





# 1 PyeongChang 5G showcase (1/3)



# 1 PyeongChang 5G showcase(2/3)

## Service

### Olympic Game Service

#### Sync View



- Bobsled
- TV live Broadcasting

#### Time Slice



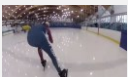
- Figure Skating
- Short Track
- Olympic Theater
- Provide service experience with

#### Omni View



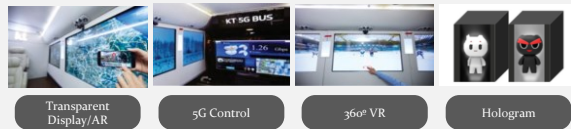
- Cross-country skiing
- "Omni View" App service provide
- Olympic experience zone
- 5G terminal service experience

#### 360° VR



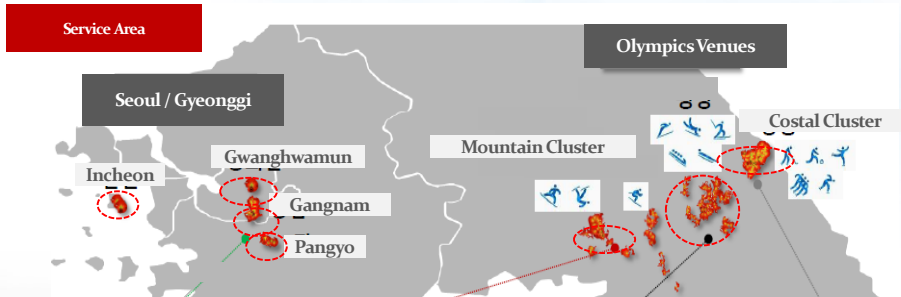
- Cross-country skiing
- Short Track
- Olympic Park Scene
- Olympic Theater
- Experience zone provided

### 5G based Connected Car



# 1 PyeongChang 5G showcase(3/3)

## Network

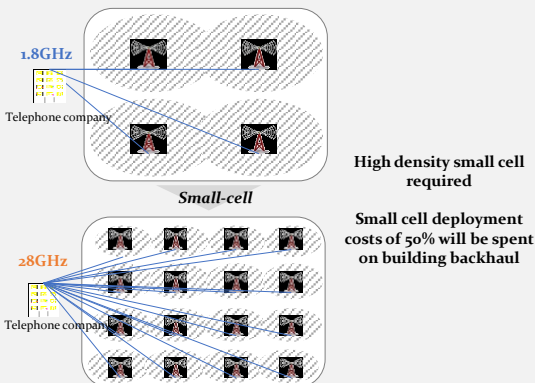


- KT built a pre-standard 5G network operating in 28 GHz band with global vendors for Winter Olympics, and recorded peak speeds of up to 3.5 Gbps on a 5G Samsung tablet using the network.

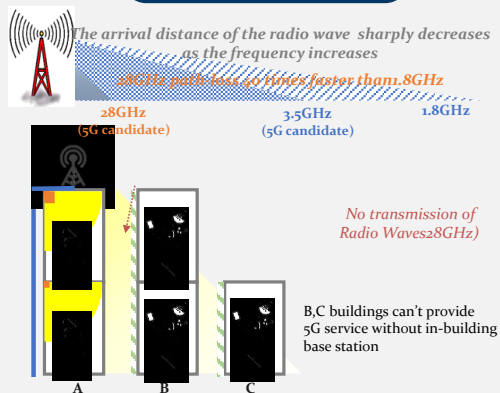
# 2 Joint development & use on 5G network

## Effective implementation of 5G network & Prevention of overlapping investment for essential facility

### 5G Network build characteristics

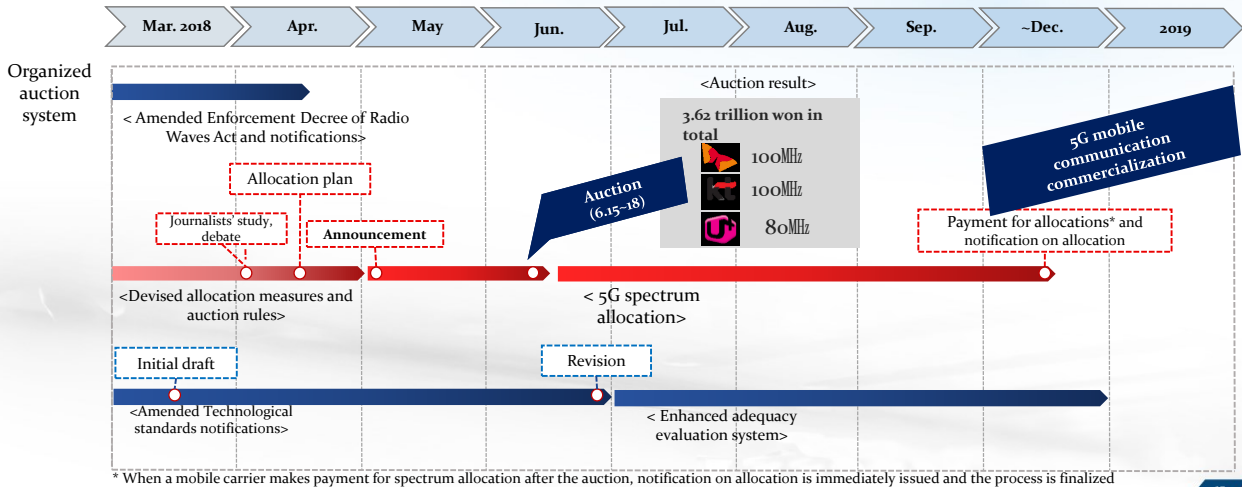


### 5G Frequency characteristic



### 3 5G spectrum auction

- » Set up and announced the Basic Allocation Plan which brought forward the supply of 5G spectrum by more than 1 year (-Apr. '18), and held the **auctions** (Jun. '18)
- » Amended technological standards(-Jun. '18), enhanced Adequacy Evaluation System (-2H '18)



### 4 5G Experience Center in the Asian Games held in Indonesia

Watched various sports games (badminton, women's basketball, golf) through 5G services  
 (Different positions/scenes/angles can be selected in viewing the games based on 5G technology)





### 5 Launch 5G Commercial Service (1/2)

**Launch Mobile Router-based B2B 5G Commercial Service (2018.12.1)**  
(5G Smart phone service will be started in 2019)

#### 5G Mobile Router



#### Launch 5G Commercial Service



SKT



KT



LGU+

### 5 Launch 5G Commercial Service (2/2)

#### First B2B customer by each carrier

SKT



Myunghwa-Factory(Smart Factory)

KT



5G robot Rota

LGU+



LS M tron(5G remote control tractor)

#### 5G Smartphone video call demonstration



5G Smartphone Video Call  
Will be launched in 2019

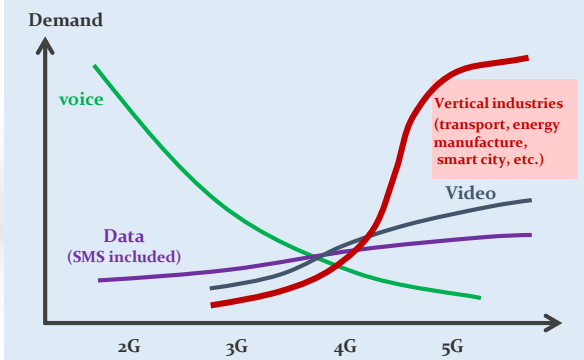
# Key Implementation Tasks for 5G Commercialization



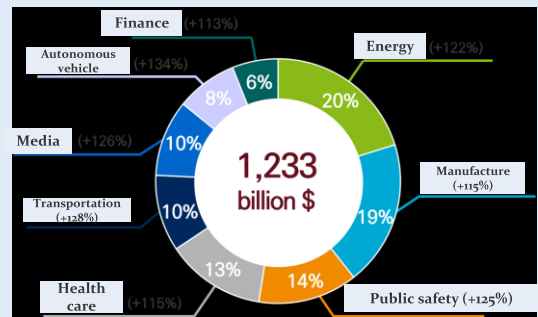
## 5G Convergence service concept & Global Market

**Saturation of the traditional mobile service market, Attention to new 5G service market for vertical industries**

5G convergence service concept

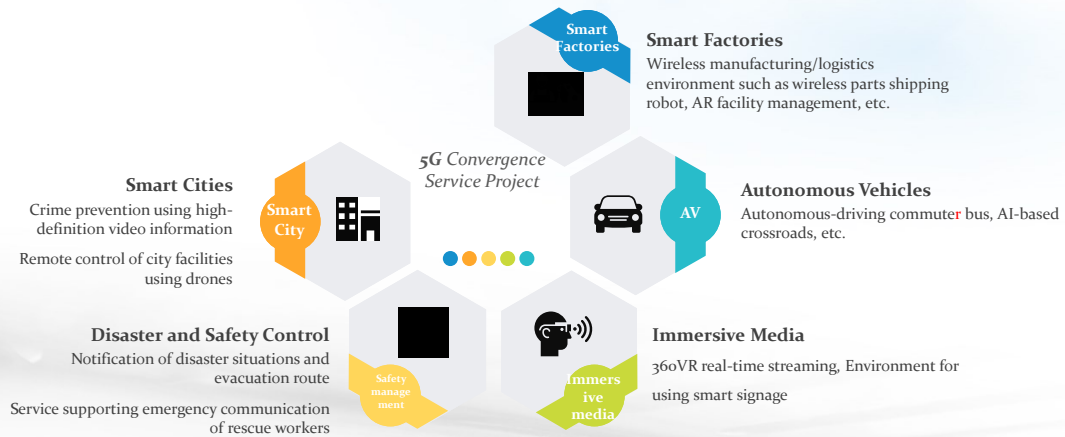


Global Market

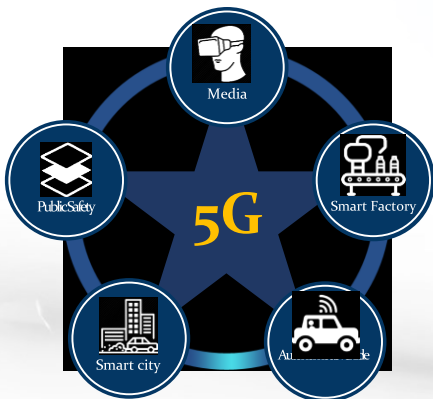


※ Ref. : The 5G business potential, Ericsson with A.D. Little(2017)

## 5G convergence service project (1/2)



## 5G convergence service project (2/2)



✓ Support government contribution of 80 million(USD) 2018~2020

✓ 5G convergence service promotion field selection ('17.2Q~4Q)

✓ 5G convergence service business announcement & implementation  
Agency selection and agreement ('18.1Q~2Q)

1<sup>st</sup> year(2018)

- Target service verification & trial
- Target service concept design

2<sup>nd</sup> year(2019)

- Target service started trial service
- Target service component technology

3<sup>rd</sup> year(2020)

- Target service performance & diffusion
- Target service verification & trial

