

# SK Telecom 's 5G Hyper-Innovation and Beyond

Jongkwan Park (박종관)  
Head of Infra Tech, SK Telecom

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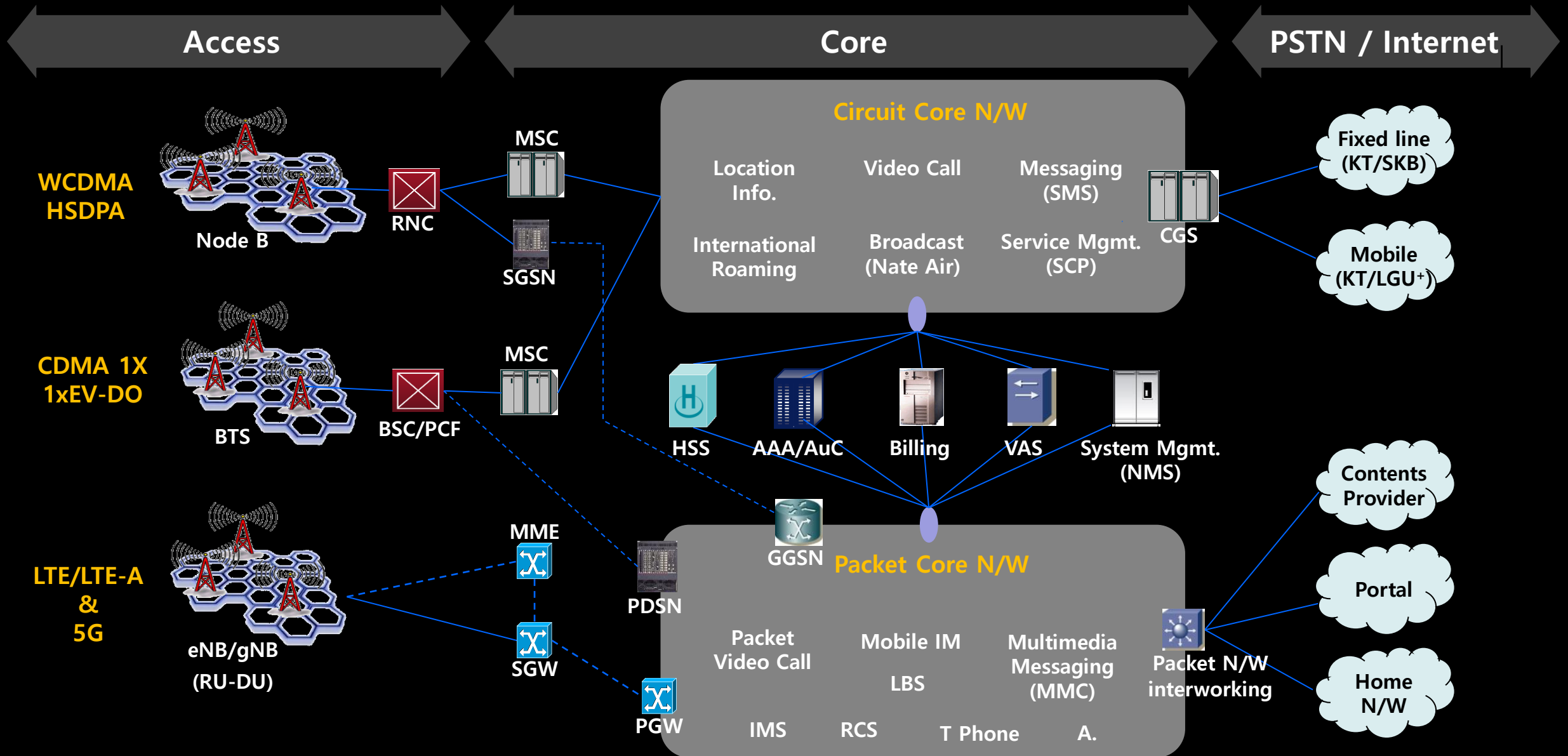
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# 5G Overview

# Overview on Mobile Communication – Overall Architecture



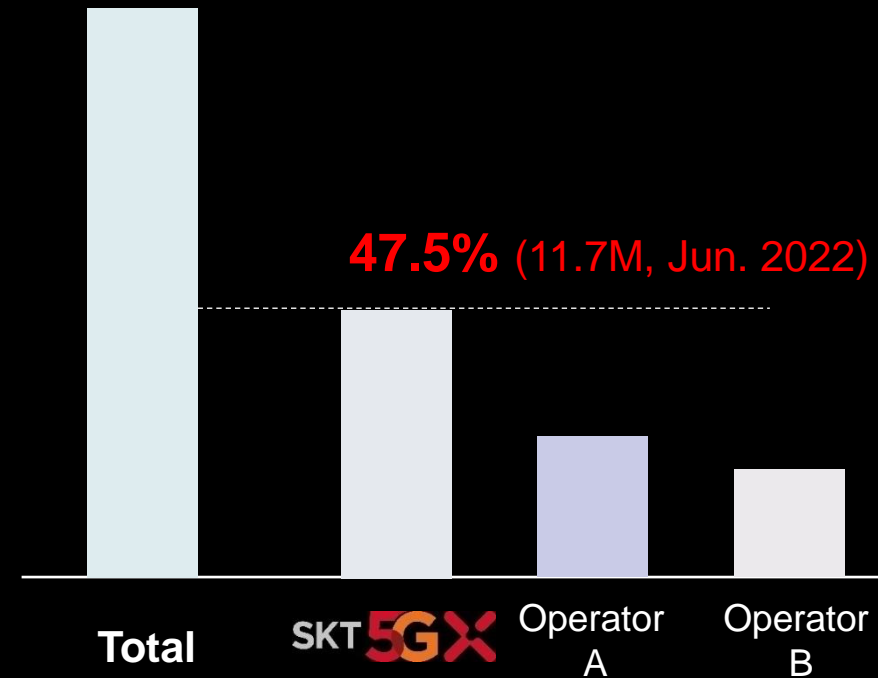


# SK Telecom is leading Korean 5G market

Market shares for 5G subscribers in Jun. 2022

**47.5%**  
**market share**

**24.6M** subscribers in Korea (Jun. 2022)



**# of SKT 5G subscribers is approaching 12M** which covers around **40%** of total mobile subscription.



# 5G Hyper-Connectivity

# SKT's 5G Hyper-Connected Network

Portfolio Ready for NSA/SA/3.5GHz/28GHz 5G Networks with MEC & Quantum-Security

On-going for 3.5GHz nationwide coverage &  
Expanding BM to vertical regions with SA<sup>Option 2</sup>/28GHz

3.5GHz NSA (B2C/B2B) / SA<sup>Option 2</sup> & 28GHz (B2B)

`18.12~ On Air & `19.4~ Smartphone 5G Service  
`20.1~ Smart Factory, Airport

Future

3.5GHz NSA / SA<sup>Option 2/4</sup>  
& 28GHz

+ B5G  
Evolution

+ Intelligence



"Service-aware 5GX Hyper-Connected Networks"

## B2C Services



## B2B Services





**Services**



# 5G Services – AR/VR

Jump AR



Jump studio

Volumetric Video Capture Studio

AR/VR technology in daily life  
to create and enjoy  
fun and new contents

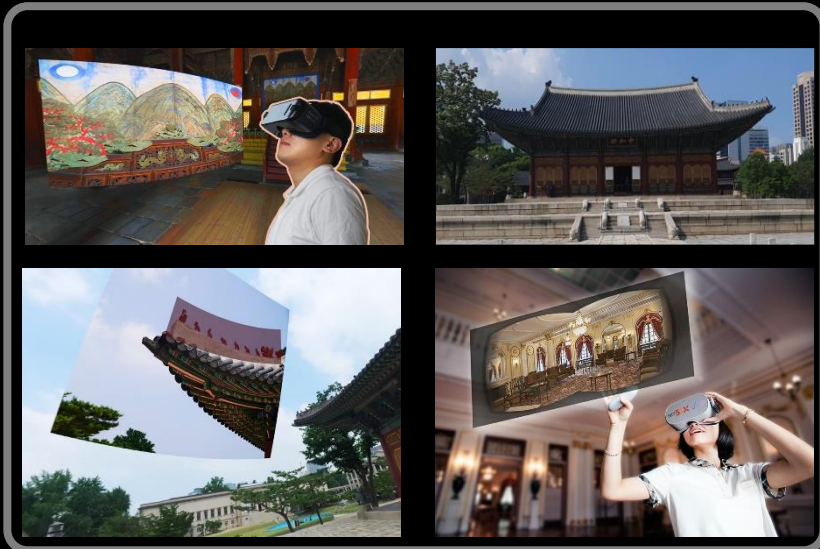
- SK Telecom begins operating Mixed Reality Capture Studio Named Jump Studio

## AR Content Zoo



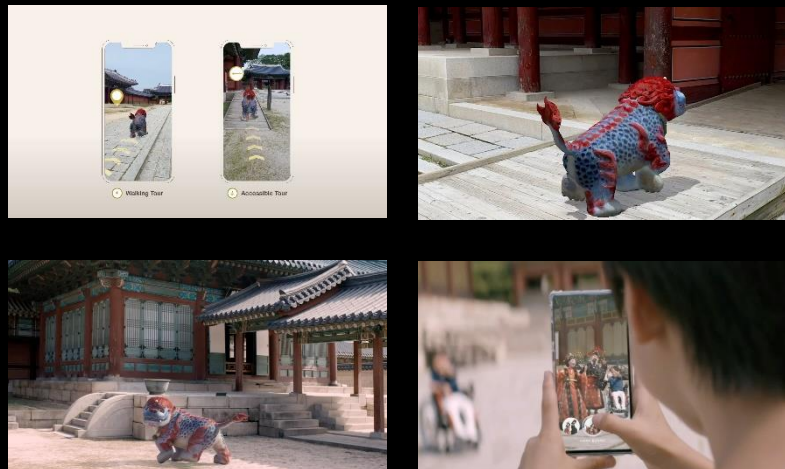
- Play with various AR characters

## VR Place Deoksugung



- Deoksugung Palace is perfectly reproduced with interactive 3D VR

## AR Service for historic Site



- Changdeok Arirang at home (Weeby Winner, 2021)

## AR Service for Independence Hall of Korea



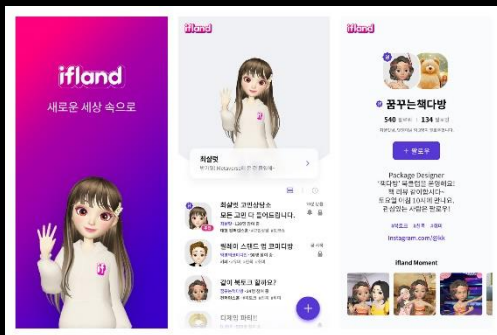
- Historical experience content using Jump AR (with/5G MEC)



# 5G Services – Metaverse

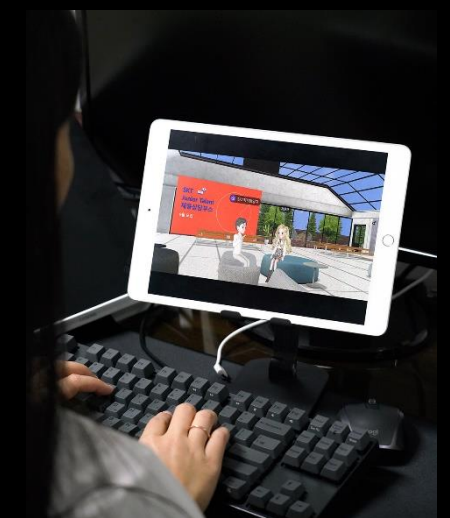
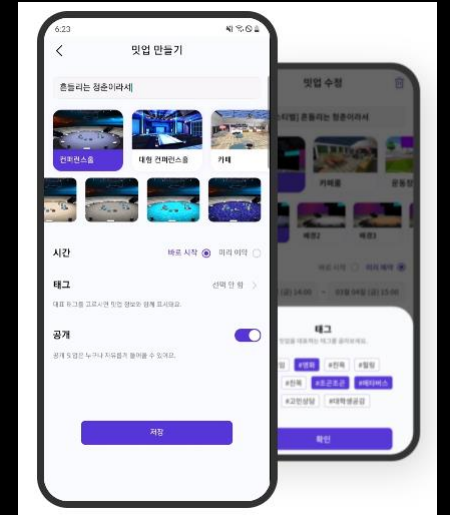


Metaverse platform to enhance user experience through diverse virtual spaces and avatars



- Transform yourself into another me in virtual reality
- Set up your own fully immersive spaces from small intimate gatherings to large events

## Metaverse Meetings



- Easily create and enjoy Metaverse meetings

# 5G Services – Cloud Game

Innovative way of game contents consumption through  
“Cloud Streaming” and “Monthly Subscription” without individual purchases

Run game contents on cloud  
platform without downloading

## Super High Speed

- High-performance/quality game streaming

## Ultra Low Latency

- Seamless play without interruption

## Massive Connectivity

- Multiple people playing simultaneously on multiple devices



**High-quality game experiences even on mobile**

More than 110 popular games provided



# 5G Services – Against COVID-19 (2/2)

## [ Teleworking ] meetUs



### Contactless video conferencing

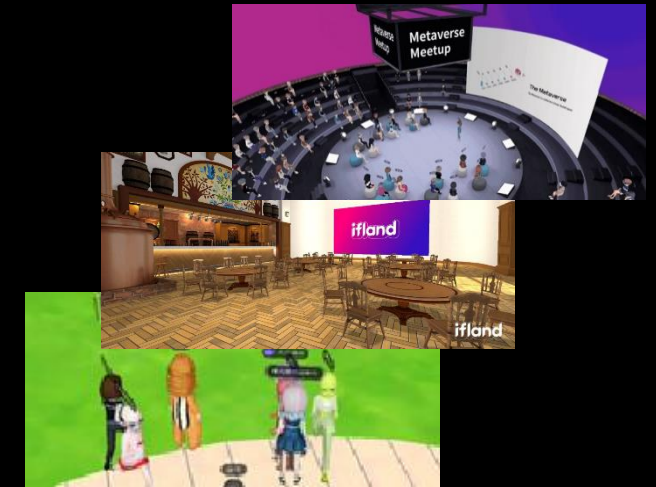
- Max. 300 participants
- Talk while looking at documents and photos together and taking notes on them
- Video call and screen sharing service on PC, smartphone, and tablet

## [ Metaverse ] ifland



### Free from social distancing restrictions

- Max. 131 participants
- Conference, Showcase, Event in ifland space



### Overcome Corona Blue by socializing

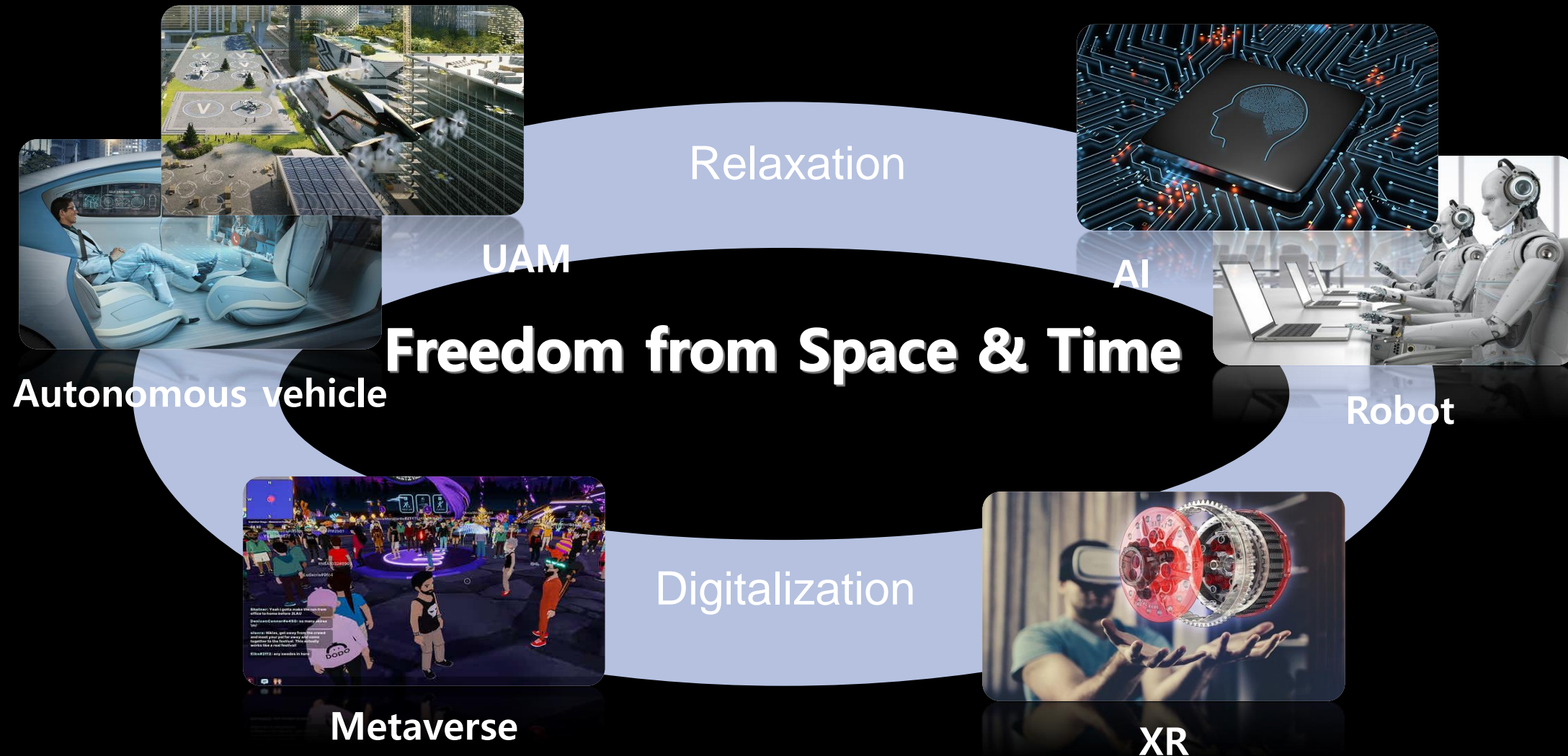
- Set up spaces where you can **fully immerse yourself in small intimate gatherings as well as large events** such as conference halls, playgrounds, cafes, pubs, and classrooms



# B5G & 6G Evolution

# Outlook for 6G Service

Accelerating freedom from the space and time by innovative device & service





# Outlook for 6G Service

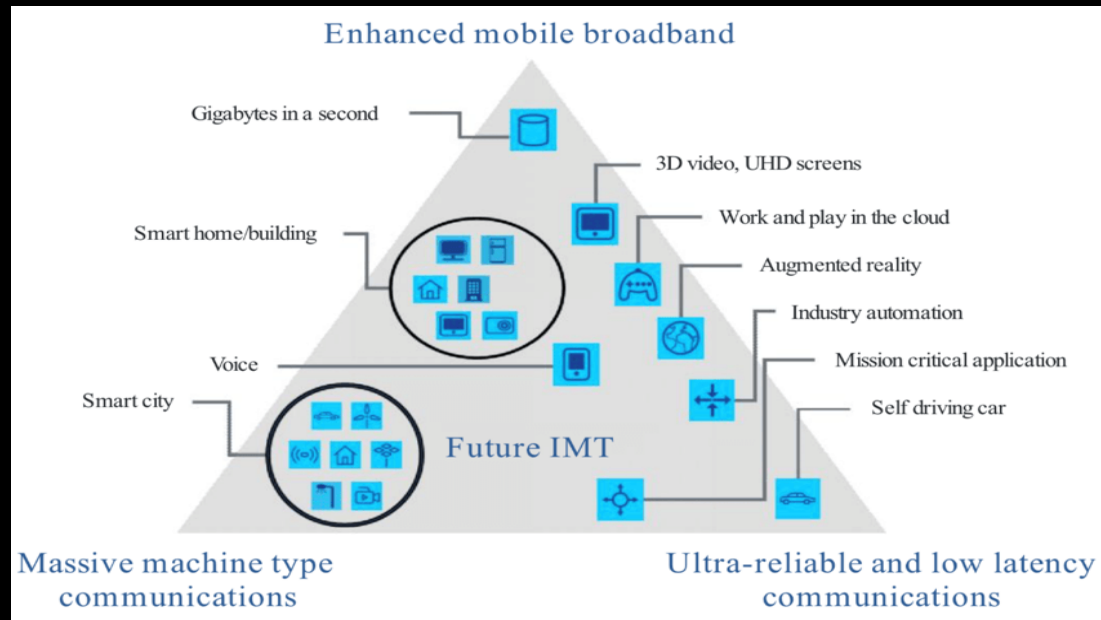
Momentum for 6G Network



A Resonance between Innovative device/service & network requirements in time will be key momentum

## eMBB

Enhanced mobile broadband



mMTC

URLLC

Super eMBB



8K UHD

Super URLLC



Edge Cloud



Remote Surgery

Super mMTC



Smart City

Intelligence



UAM

Super Immersive



Autonomous car



XR



Holography

Super Precision



Industry Automation



Space National Defense



Robot



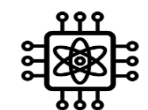
Smart home



Metaverse



Cloud Game



Quantum Computing

[Ref. : A Comprehensive Survey on 6G Networks: Applications, Core Services, Enabling Technologies, and Future Challenges, IEEE, 2021]

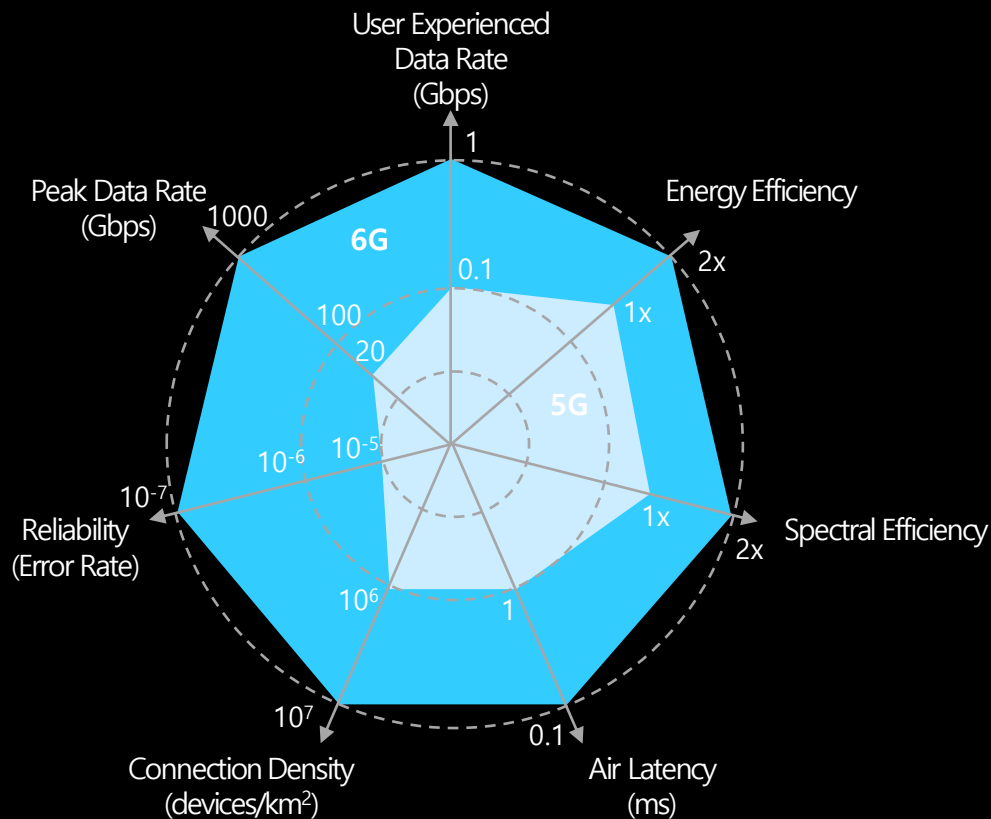
# 6G Network Requirement

Key Capabilities



5 ~ 50 multiple requirements are expected but still under discussion

## 5G vs. 6G Comparison



[Ref.: Samsung 6G Vision Whitepaper, 2020.12]

### Data Rate

**Peak 100G (x5 ~ Tbps (x50)**

**Edge 1 Gbps (x10)**

- Immersive XR
- Mobile Hologram
- Digital Replica

### Latency/Reliability

**0.1 ms (x10)**

**10<sup>-7</sup> (x100)**

- Interactive tactile internet
- Industrial automation
- Emergency response
- Remote surgery

### # Of Connection

**10 mil. (x10)**

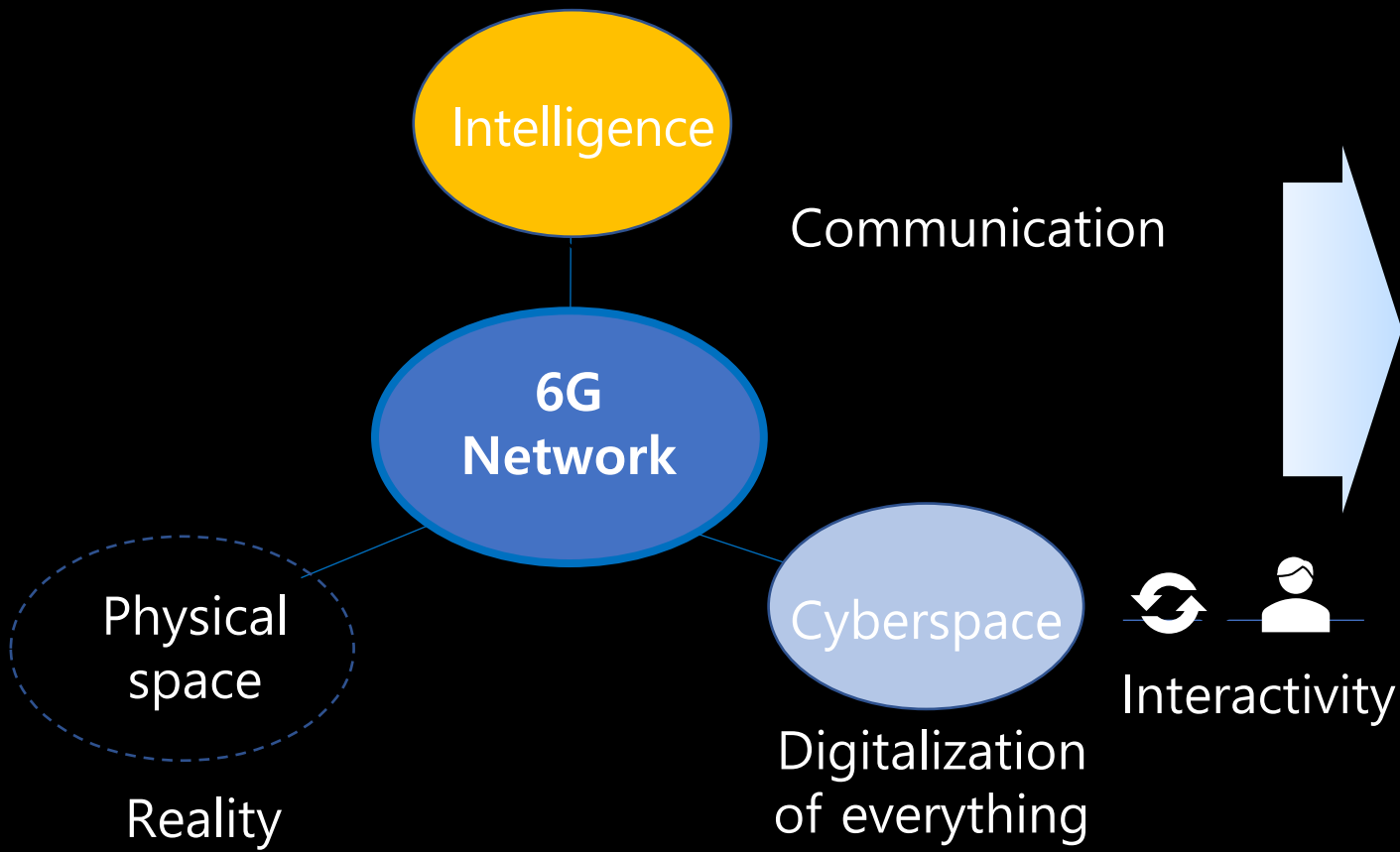
- Explosive growth of connected devices

# Technology Enabler

6G Network



6G Network will be combined with AI as well as metaverse to connect between a physical space & cyberspace



## Key value per each component

### 6G Network

- Super eMBB · URLLC · mMTC
- Super Precision
- + **3D Coverage + Reliable & Secure**

### AI

- Intelligence

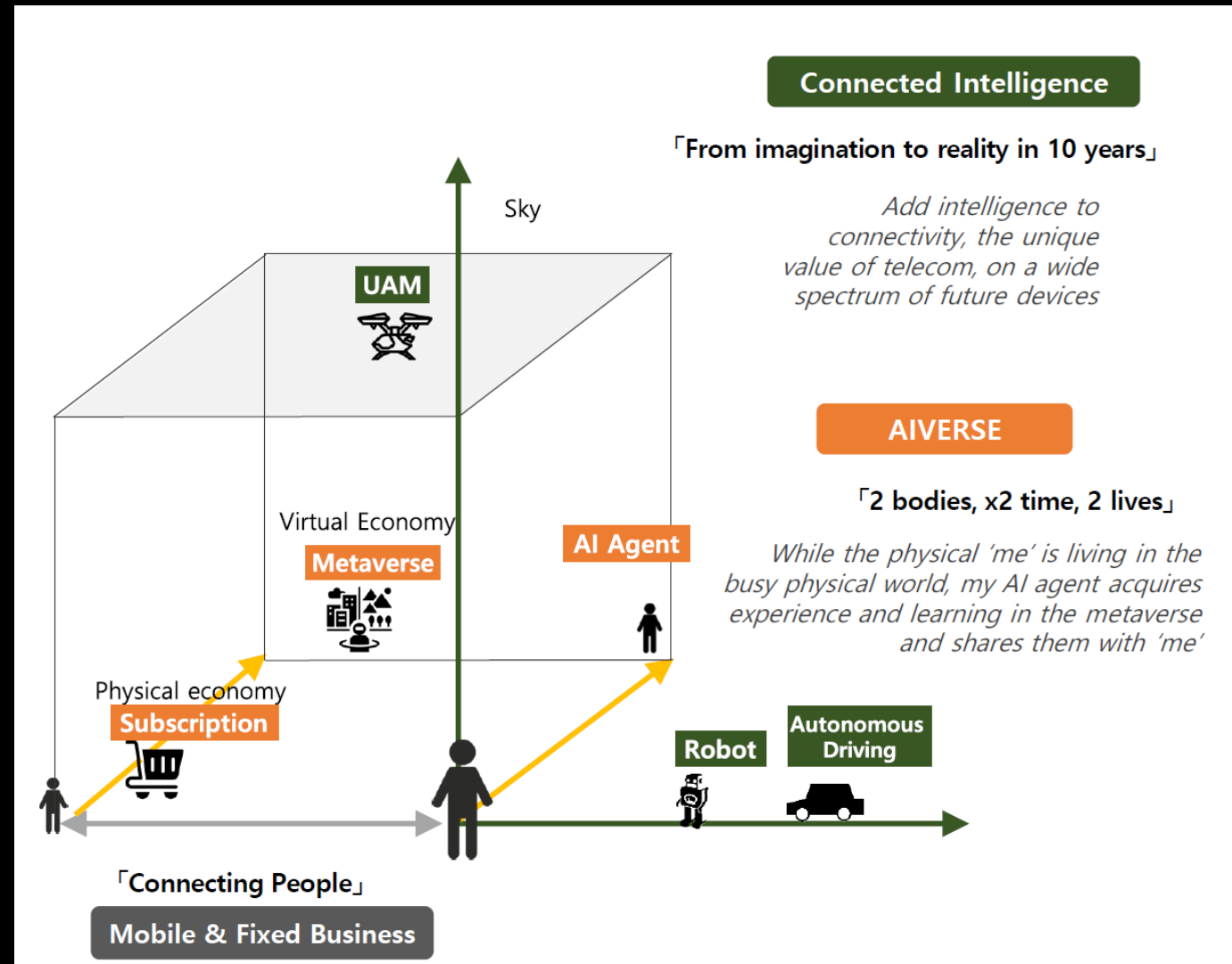
### Metaverse

- Super Immersive

# SK Telecom will...

SKT enables customers to create a **new life** by expanding **time and space**, which will be accelerating by **5G & 6G technology evolution and ecosystem expansion**

***"Leading the Era of  
Hyper-connected Intelligence  
that connects people, things, and  
society"***





# Thank You

