

A grayscale background image showing a hand holding a smartphone. Numerous envelope icons of varying sizes are floating in the air around the phone, suggesting digital communication or data flow.

SK telecom's Approach to Creative Economy Innovation

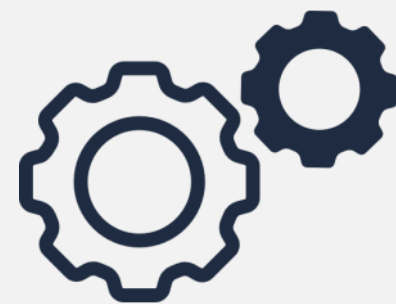
Kang-Won Lee, Ph.D.
SVP of R&D

New Innovation Paradigm

- The 4th Industrial Revolution is around the corner.
 - Mass production → Mass customization
 - Value-driven industry

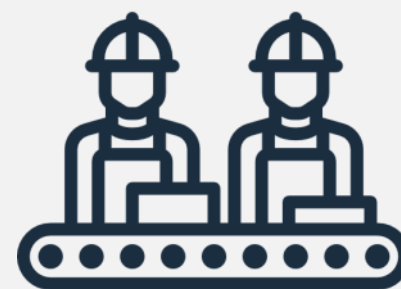
1st

Water and steam power is used to create mechanical production facilities.



2nd

Electricity lets us create a division of labor and mass production.



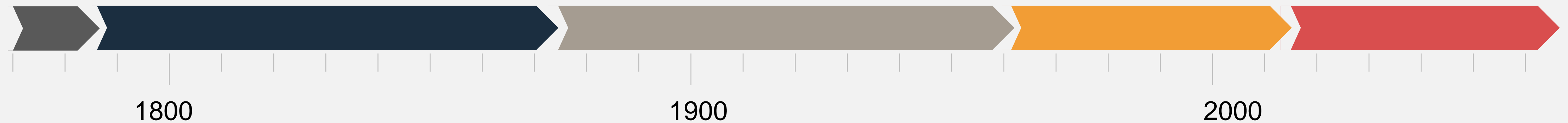
3rd

IT systems automate production lines further.



4th

IoT and cloud technologies automate complex tasks.

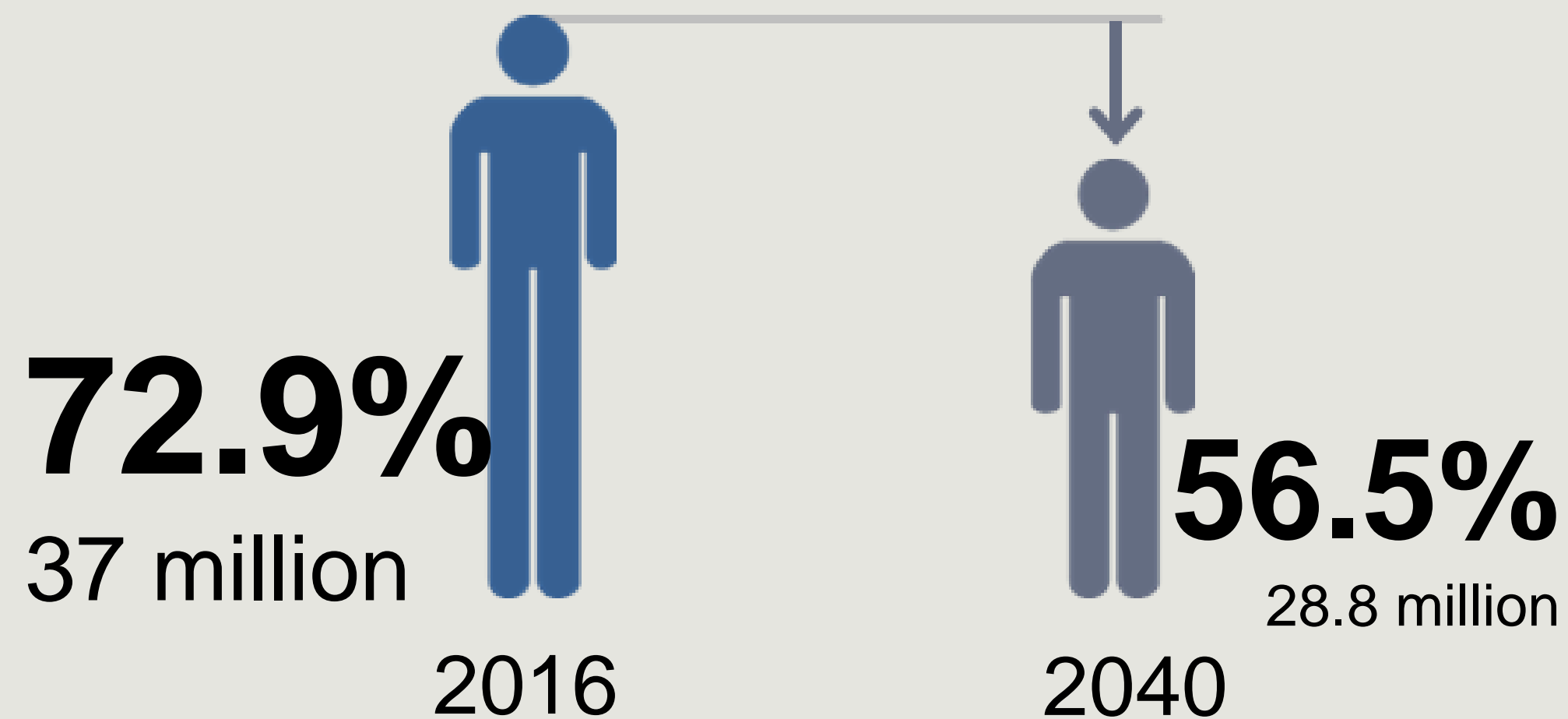


Social Trend

- Korea's productive population is decreasing, while the youth unemployment rate is increasing.

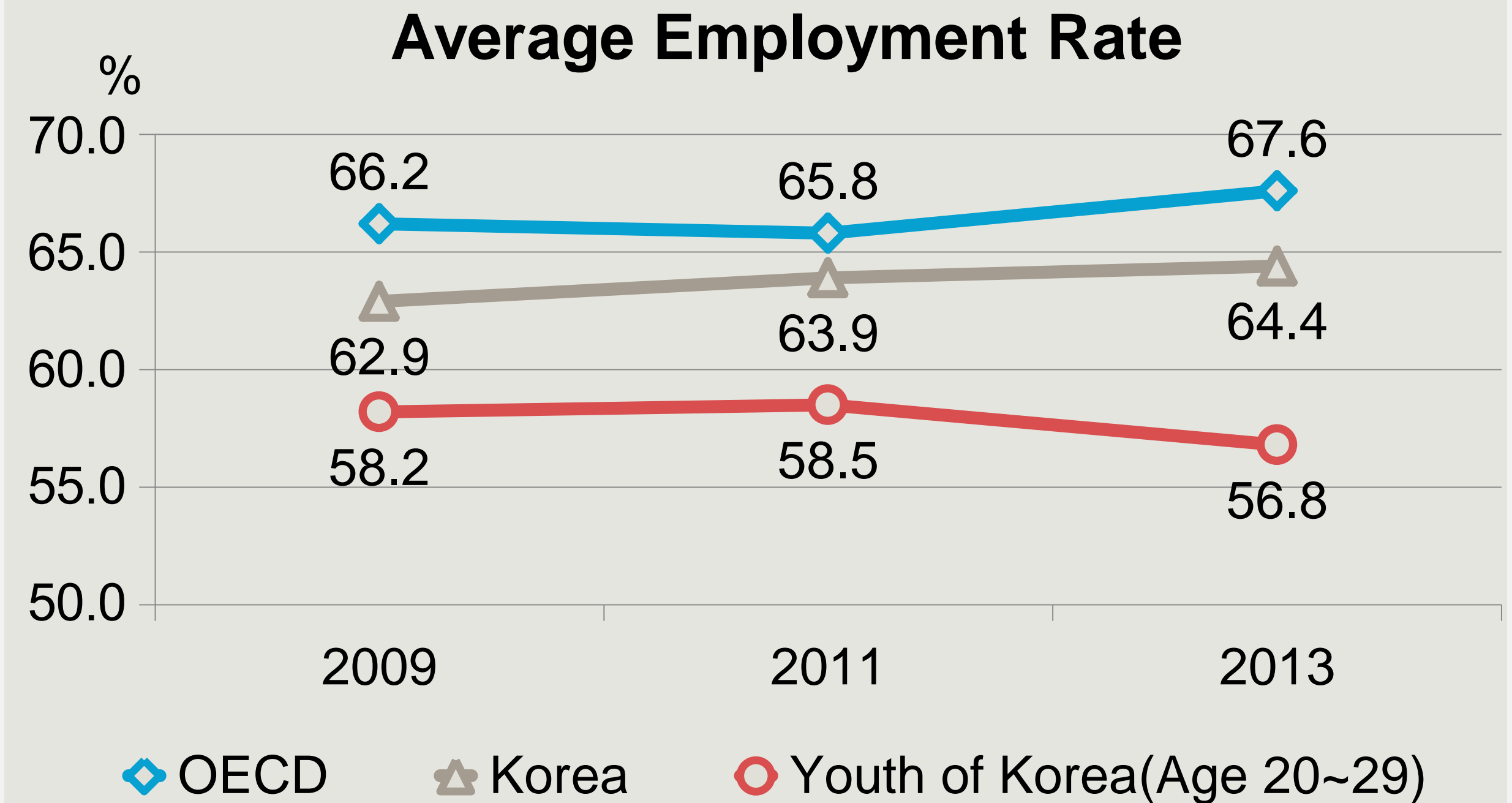
1

Decreasing productive population



2

Growth without employment



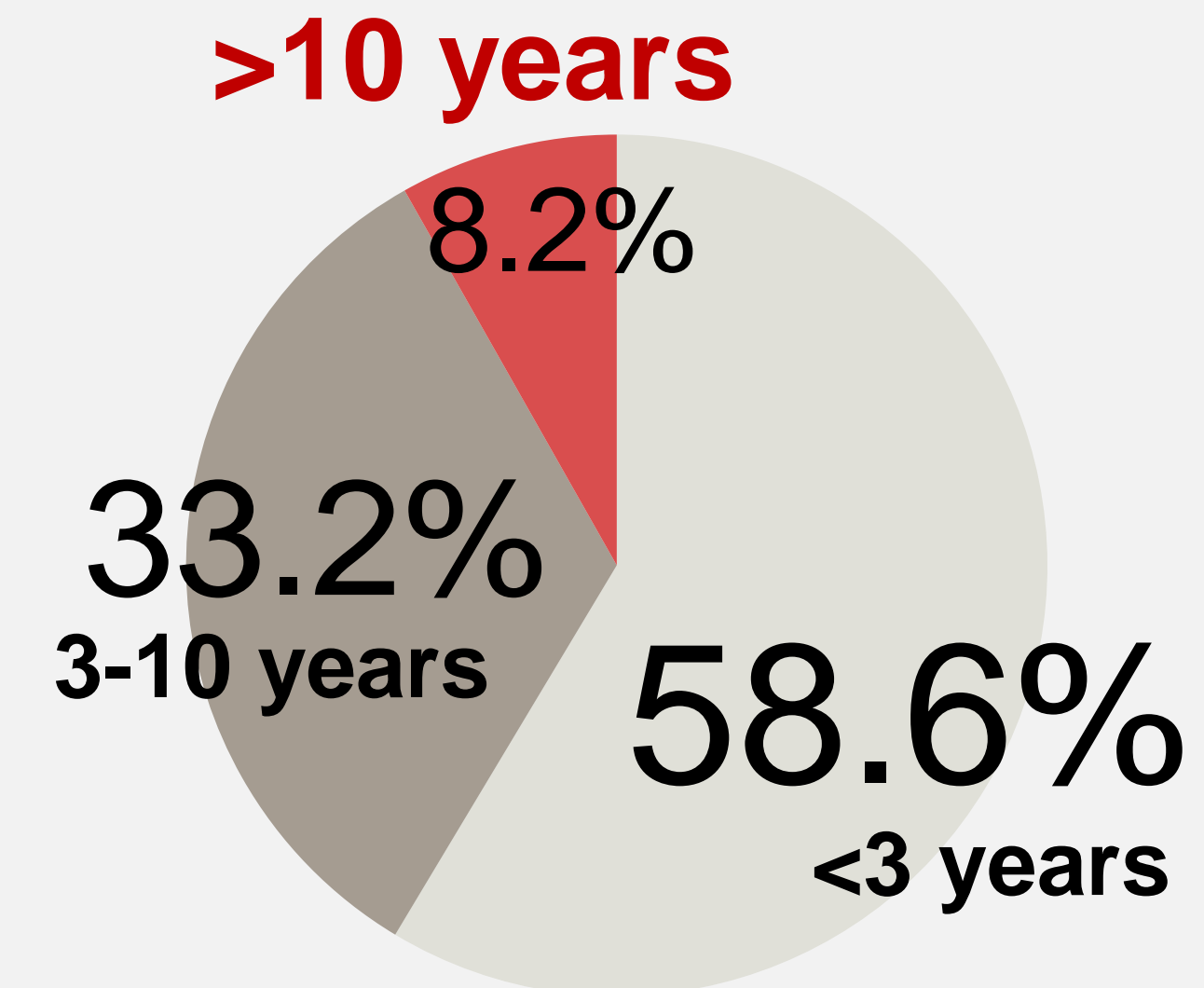
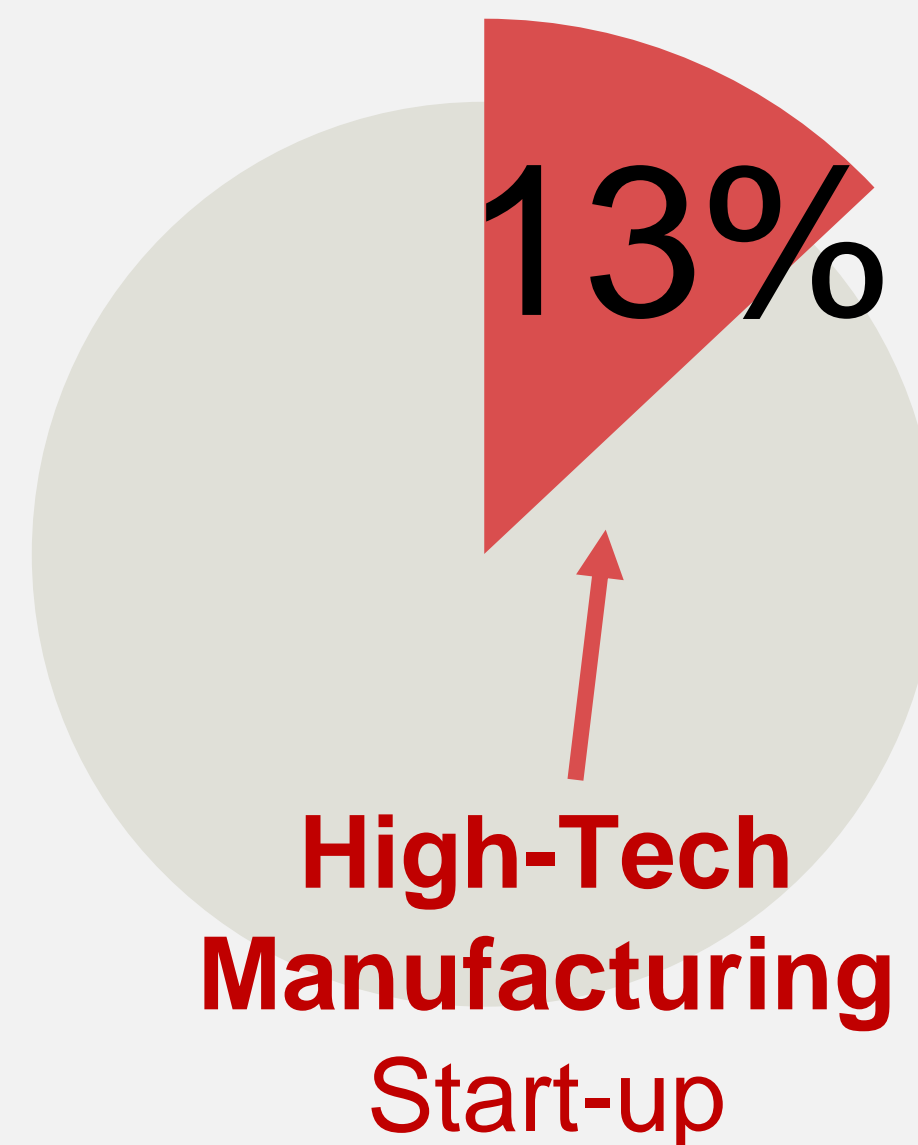
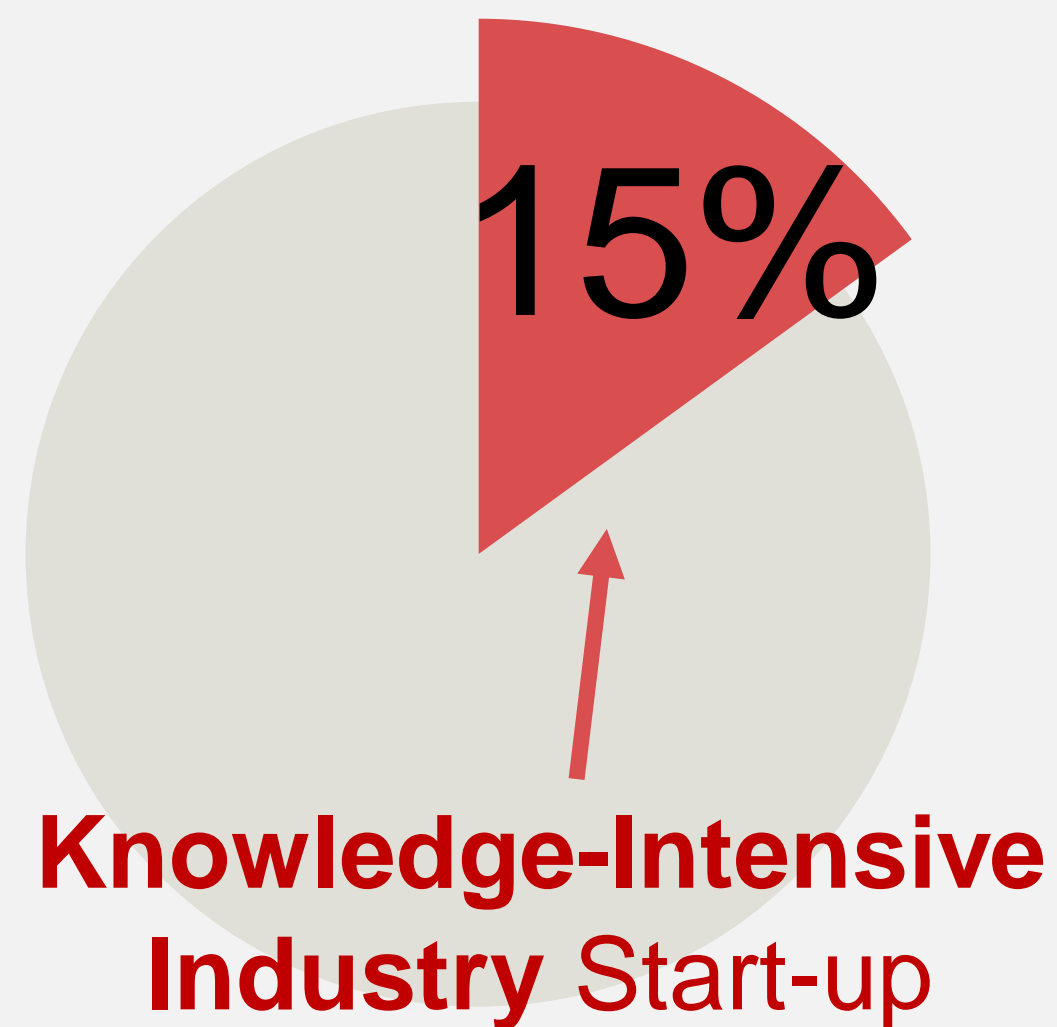
Source: Statistics Korea, Ministry of Employment and Labor

Start-up Ecosystem

- Only 0.03% of small business manage to become midsize business in Korea

1 Low percentage of high value-added industry start-up

2 Most start-ups only last less than 3 years



Creative Economy Innovation in Korea

- In the past, the economy policies are led by the government
- Now, the government drives the creative economy together with the private sector

1

CCEI (Center for Creative Economy Innovation in Korea)
led by **various economic agents**

CCEI is a nationwide and regional business creation environment, provided with resources from conglomerates, local governments, and regional organizations

- Started in September 2014
- 18 centers in major cities and provinces
- SK, Samsung, Hyundai, LG, etc.

2

New Growth Engines & Platforms
to enhance the competency of the
private sector

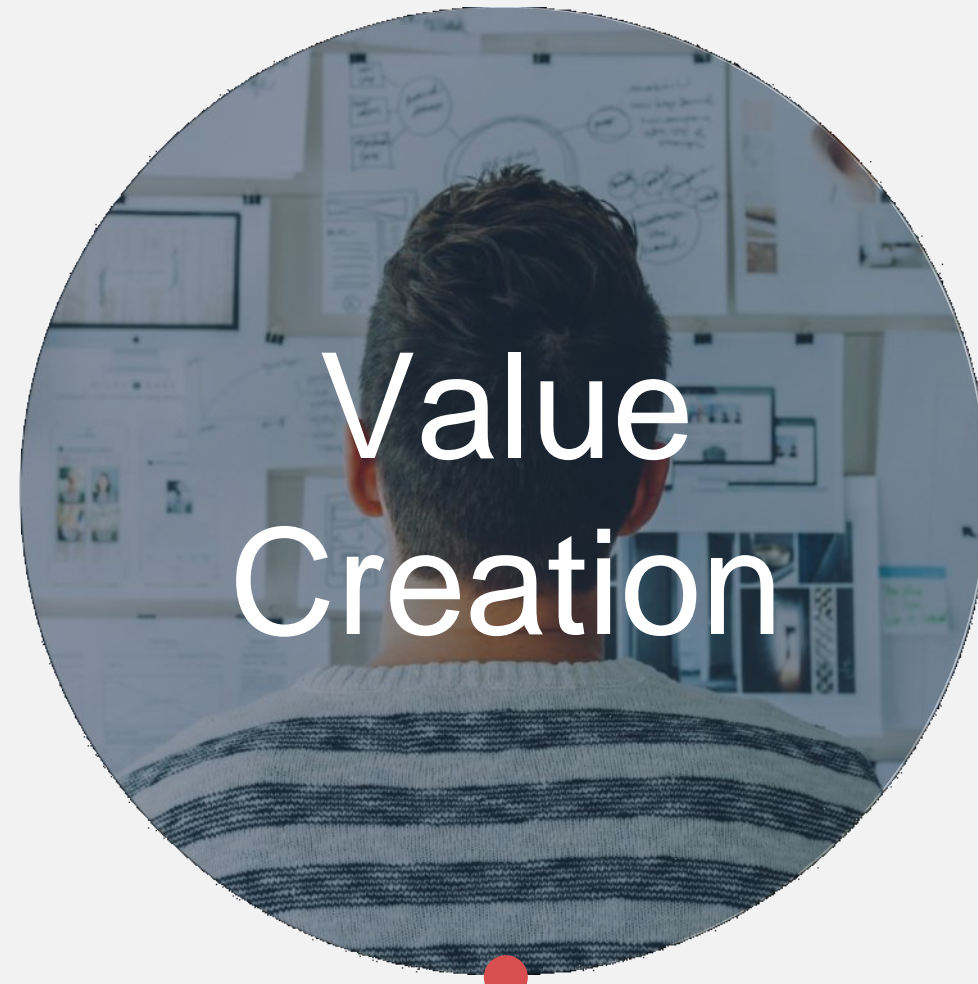
14 New Growth Engines

- 5G mobile communications
- Smart cars
- Marine plants at the seabed
- vertical takeoff and landing unmanned aerial vehicles
- Intelligent robot production
- Wearable smart device
- Tangible/Immersive Contents
- Smart bio-production systems
- Virtual training system
- Customized care and wellness
- Disaster safety management system
- Hybrid renewable energy
- DC transmission and distribution
- Supercritical CO2 generation

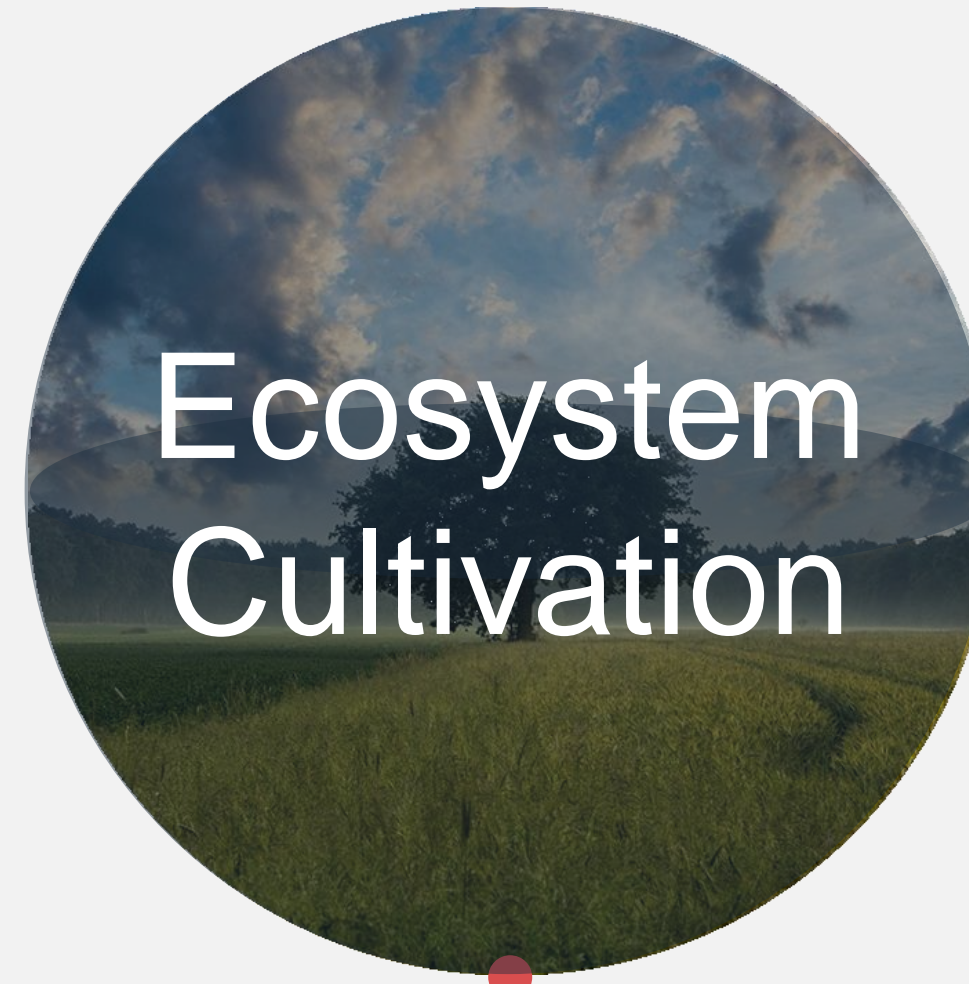
5 New Growth Platforms

- Intelligent semiconductor
- Convergence materials
- Intelligent Internet of Things
- Big data
- Advanced materials processing system

SK telecom's Approaches



- DAEJEON CCEI
- SEJONG CCEI



- 5G Global Innovation Center
- T developers
- T open lab



- BUSAN
Open Smart City

CCEI (Center for Creative Economy Innovation in Korea)



DAEJEON CCEI

- Specialized services and resources to **ICT and S/W related startups**
- Incubation and globalization support



SEJONG CCEI

- Revitalization of **local farms by ICT**
- Enhancement of productivity and distribution

Success Stories of CCEI

1



Awarded 2015 Grand Prix
at UNESCO Netexplo with **'TEGWAY'**
(Flexible thermo-electric element)

2



Entered Silicon Valley in 2015
with mobile video SNS platform **'Sero'**
(Video making & sharing platform)

3

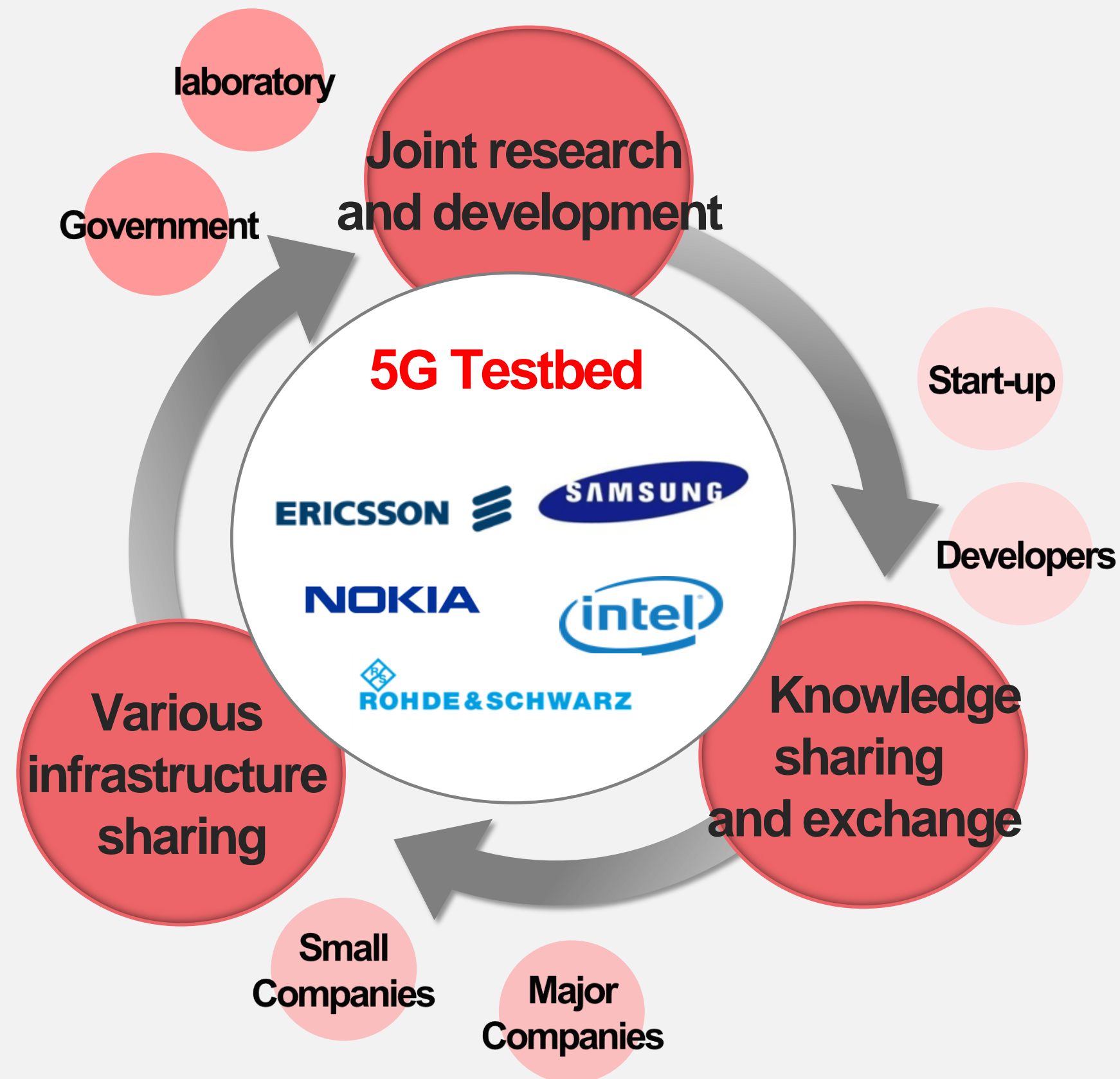


Support for global entry of 12
start-ups in MWC Shanghai
2016

Wisejet and Ezbelle funded
by China Unicom

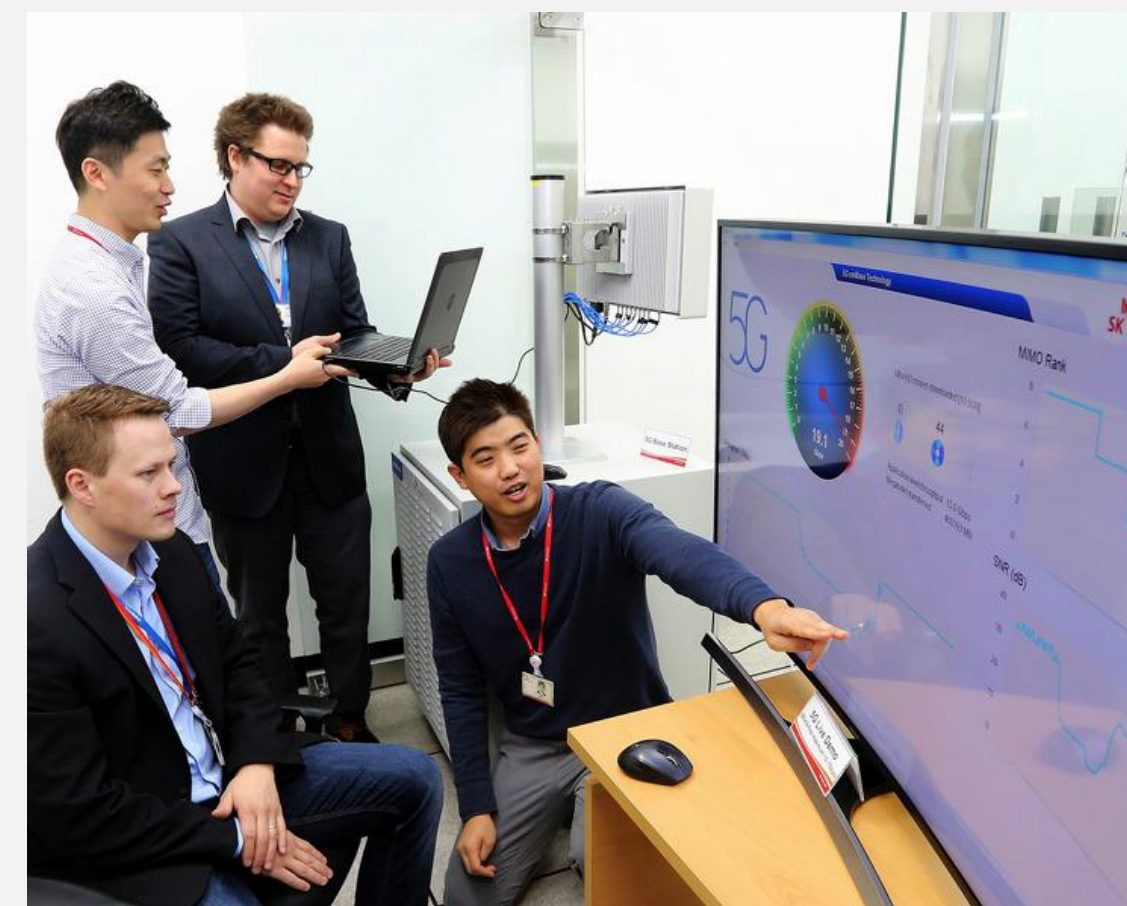
5G Global Innovation Center

- 5G Innovation = 5G Technology + Future Services + Ecosystem



Virtual Experience Room

Future service development for the innovation of new experiences (VR/AR, Table Top Display, Robot, etc.)

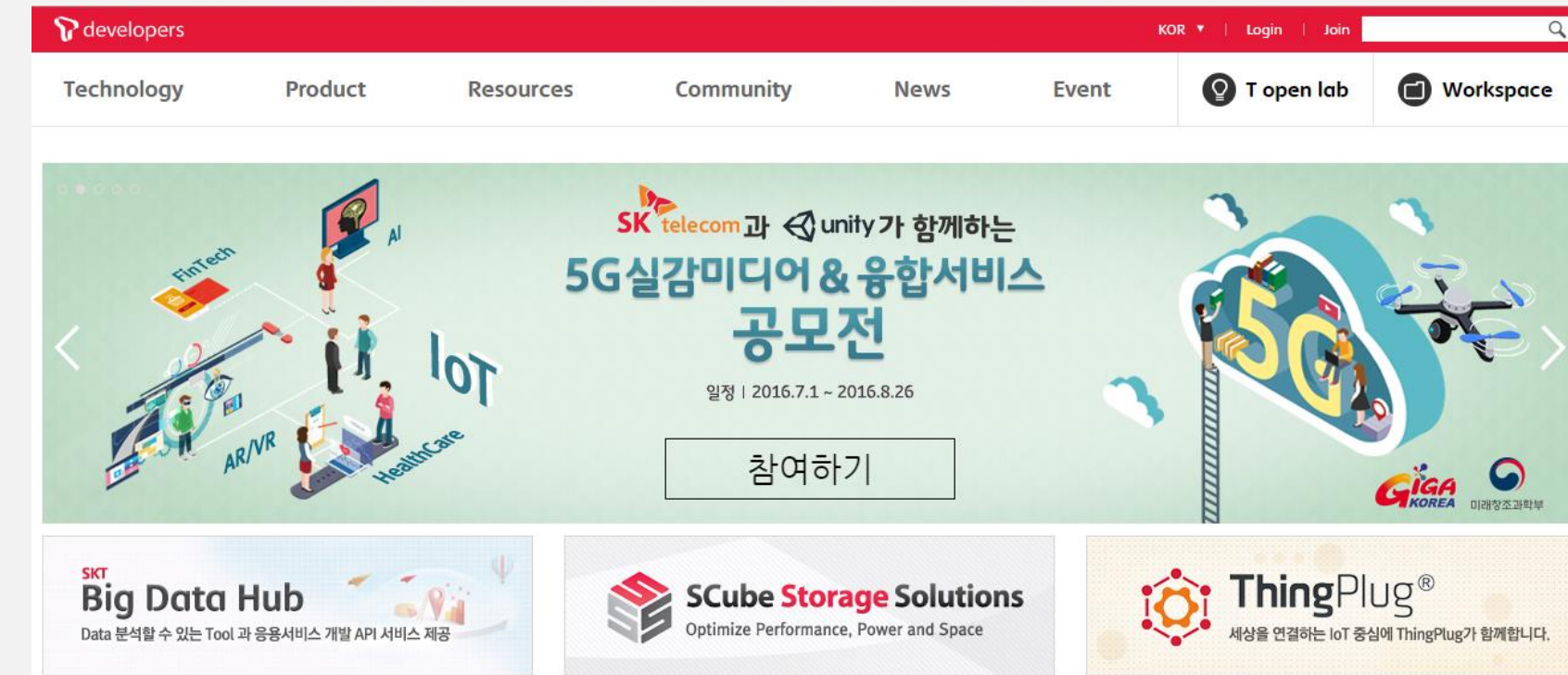


5G Testbed

R&D foundation for 5G core technology & future service development (mmWave, Massive MIMO, etc.)

T developers

- SK telecom Online Center for Developers
- Sharing SK telecom's technologies, products, services
- <https://developers.sktelecom.com>



Technologies & Products



SONA (SDDC Network Virtualization)

This is a technology to virtualize data center network, and thus to enable virtual exclusive network configuration between virtual machines for every cloud using customer.



T-ROS (SDDC Operation Platform)

This is a data center management platform offering the functions necessary in data center management, such as integrated resource management, automatic software distribution, operation automation and resource monitoring.



AFMedia

- System architecture optimized for media service and
- Ultra-high performance with all-flash storage and o
- Ultra-small footprint (32 SSDs in 2U)
- Ultra-low power consumption with Intel Enterprise



AFCeph

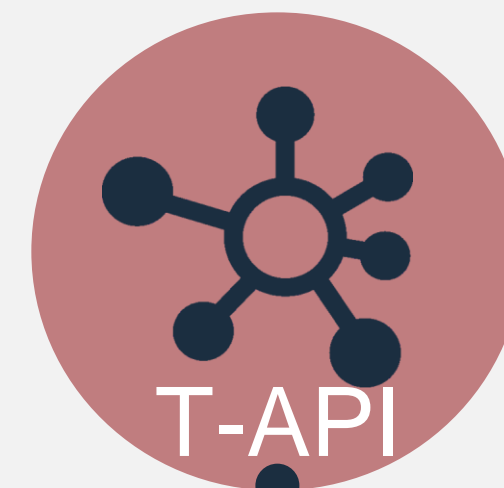
- Flash optimized scale-out storage system providing
- Ultra-high performance to multi-users with S/W and
- Operator friendly and easy to use management too



NVDrive

- Global top performance enterprise NVMe Card & S
- Seq R/W: 4.0/2.5 GB/s, IOPS Random 4KB R/W: 1,0
- Capacity: 3.2TB (Raw 4TB, MLC), 6.4TB (Raw 8TB, "

Services



API services of SK telecom's core assets (geo-fence, billing, etc.)



Backend cloud service for mobile application development and operation



Provides various development tools for web/mobile service (user behavior analytics)

T open lab

- New cooperation model for Open R&D
- Opened in June 2012 at SK Telecom Bundang office



Business
Development
Program

R&D Infrastructure
(Test Room, LTE
Devices, Spectrum
Analyzer, etc.)

Community for
Developers
- T dev forum
- T hackathon

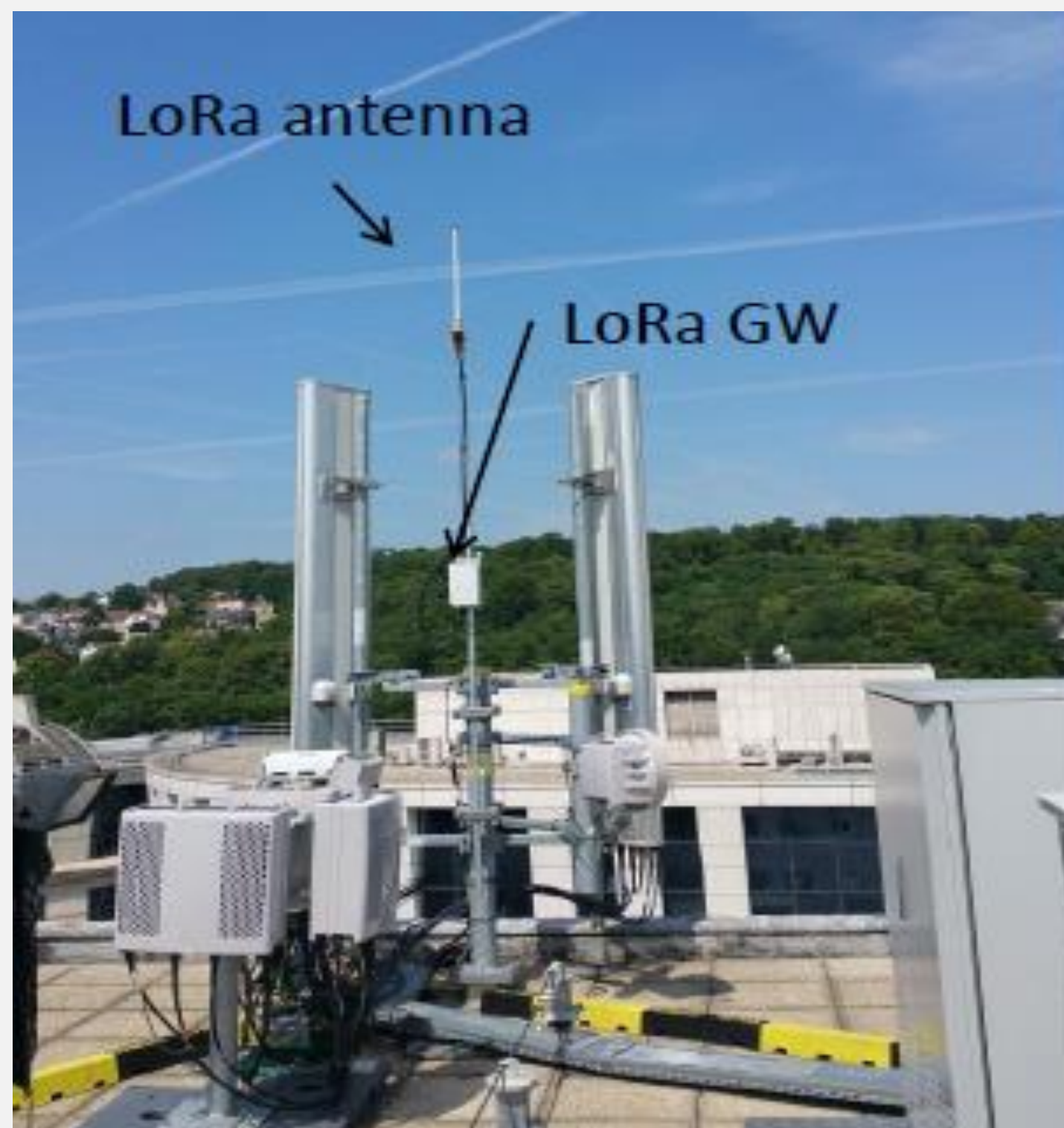
Global Smart City Testbed in Haeundae, Busan

- Open platform test bed for new technology
- SK telecom and City of Busan leads the consortium with Ministry of Science, ICT and Future Planning

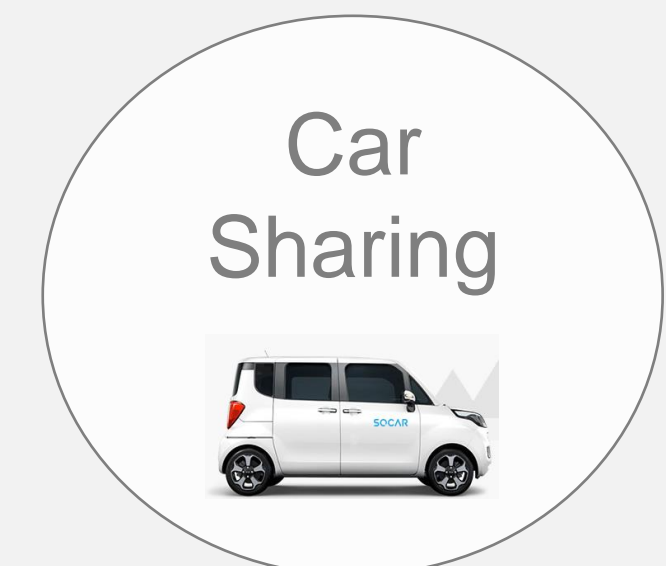


Nationwide IoT Network

- Word-first IoT Dedicated Network
- Playground for start-ups, personal developers, SMB



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Partner for New Possibilities

This is SK telecom's vision for new paradigm