

Introduction to Smart City Busan



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Contents

- 01** Overview
- 02** Smart City Approach
- 03** Smart City Project
- 04** Smart City Support center
- 05** Global City-to-City Connection



Overview – Busan Metropolitan City



- Second largest city in Republic of Korea (population of 3.6 M)
- Sixth busiest container port in the world (17 M TEU per year)
- Logistics, transportation, and tourism
- First IoT-based Smart City in Korea





World's 6th-Super Port City



**Center of Maritime Finance and Derivatives
that Ranked 24th
in Global Financial Centres Index**

**Dynamic
BUSAN**



World's 9th MICE City



**World's 3rd, Asia's First
UNESCO Creative City of Film**

Smart City **BUSAN**

[Smart city leader with well-equipped ICT infrastructure and strong IT technology]



Vision of Smart City Busan

Smart Economy



Smart Life



Smart Culture



Smart Green City



- Establishing IoT-based smart city operation platform
- Promoting creative economy by boosting smart city industries
- Strengthening **Busan's** competitiveness and creating high added value in the era of global competition

4 Goals of Smart City Busan

**Establishment
transportation and
tourism infrastructure**
→ Enjoyable tour,
convenient life

**Establishment of
disaster management
system**
→ Public safety



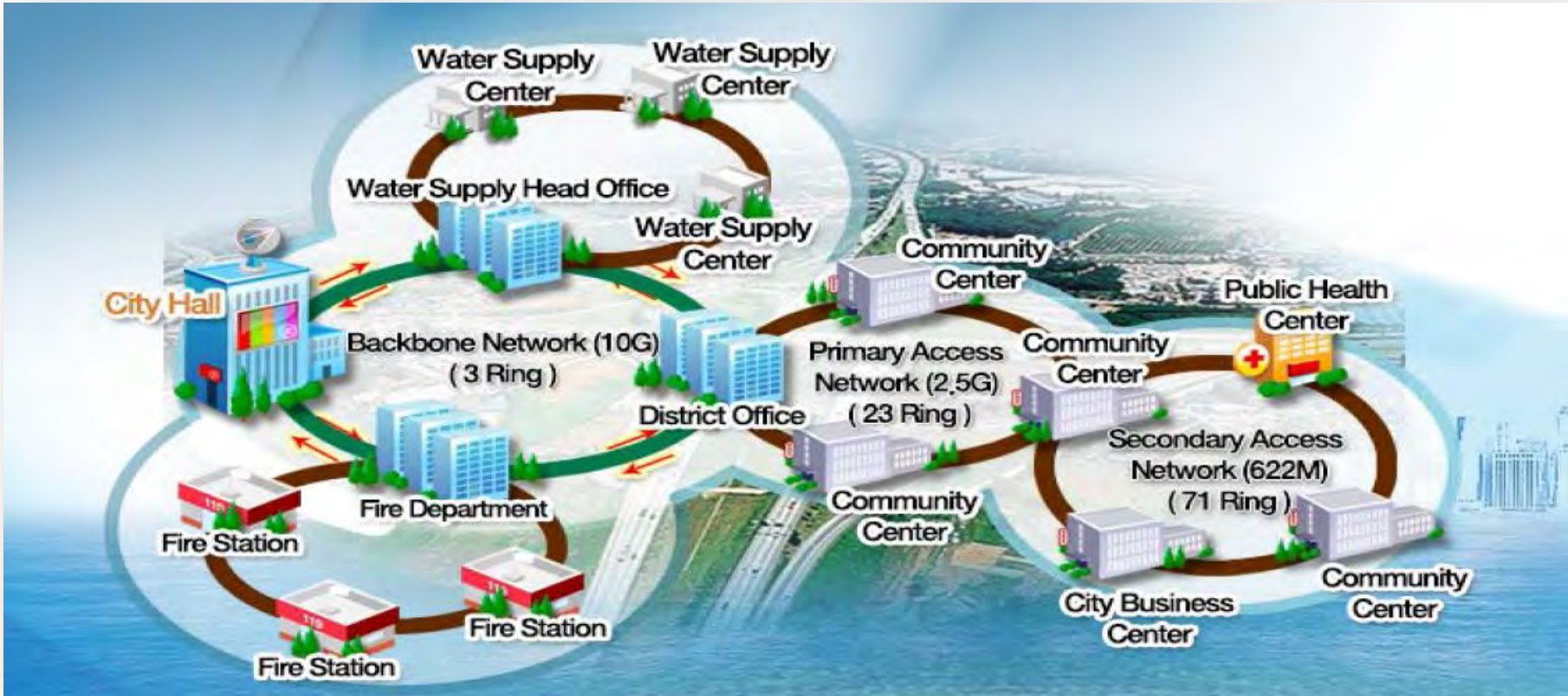
**Reduction of energy
consumption**
→ Smart Green City

**Citizen-driven smart city
project → quality of life
by utilizing IoT tech**



Smart City Busan – ICT Infrastructure

- Busan Information Highway: 1,278km network connecting 319 public service organizations in Busan
(Completion in 2007, established and owned by Busan City government)
- Wi-Fi Zones: Wireless Internet Access (free service for citizens)
- Integrated CCTV System



Busan U-City Project (2006 -2014)



❖ 10 Domains, 66 Projects, \$274 million

U-Port



- RFID to container, vehicles
- Location tracking for improved export/import logistics visibility
- Efficient custom clearance

U-Transportation



- Real-time bus arrival info
- Automated toll collections
- Internet/Mobile Traffic info

U-Tour



- Tour contents/guide
- Travel, Hotel, Attractions
- Intelligent Tour Bus

U-Health



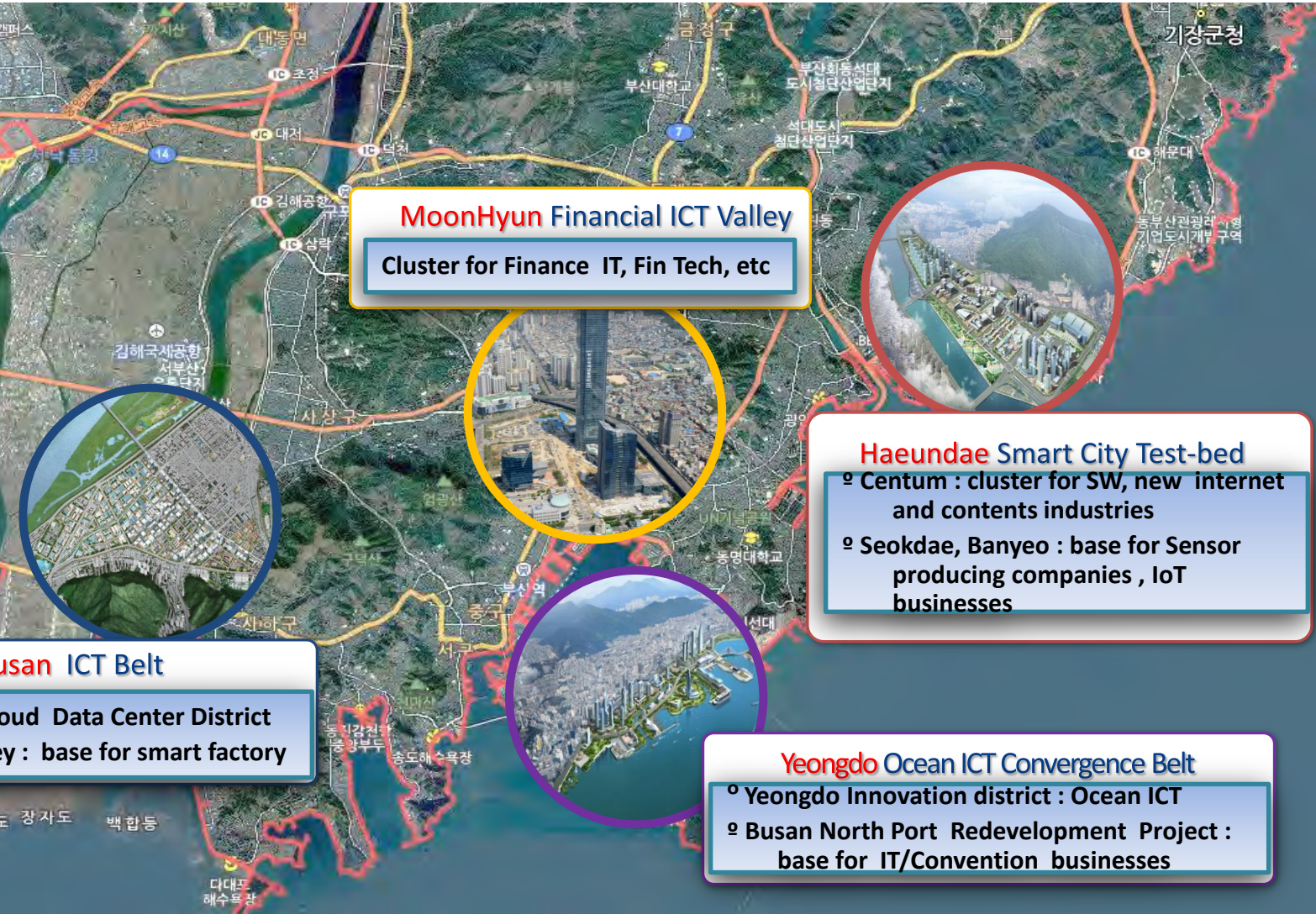
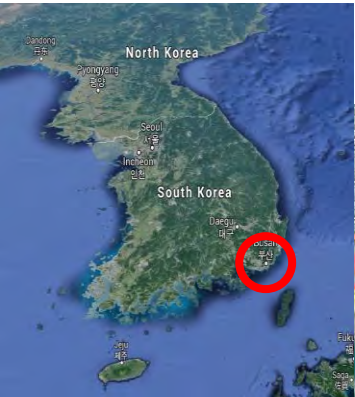
- Emergency service linking ambulance and hospitals
- Patient recognition system
- Tele-radiology service

U-Safety



- Remote monitoring using network of u-sensors
- Disaster early-warning system
- CCTV network, for enhanced safety

Smart City Busan – 4 Clusters (2015 -)



MoonHyun Financial ICT Valley
Cluster for Finance IT, Fin Tech, etc



Haeundae Smart City Test-bed
 ◦ Centum : cluster for SW, new internet and contents industries
 ◦ Seokdae, Banyeo : base for Sensor producing companies , IoT businesses

West-Busan ICT Belt
 ◦ Mieum : Global Cloud Data Center District
 ◦ Sasang Smart Valley : base for smart factory



Yeongdo Ocean ICT Convergence Belt
 ◦ Yeongdo Innovation district : Ocean ICT
 ◦ Busan North Port Redevelopment Project : base for IT/Convention businesses

Haeundae Smart City Test-bed Project (2015-2017)



► Exemplary model of IoT based smart city for citizens

- ✓ Provision of IoT based public service in 8 fields including traffic control, environment and safety management
- ✓ Smart city service: solution to challenges facing the city, quality public service, development as international IoT hub

Traffic Control



Environment



Safety management

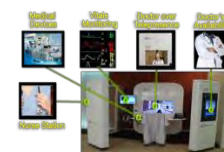


Tourism



- Korean government funds (over \$12M USD) – Ministry of Science, ICT and Future Planning
- 20 Project participants including Busan City government
- Coordinator: SK telecom (largest mobile network operator in Korea)
- The 1st phase will ended in the end of 2015 (10 Services)

Healthcare



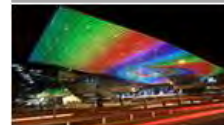
Education



Energy Saving



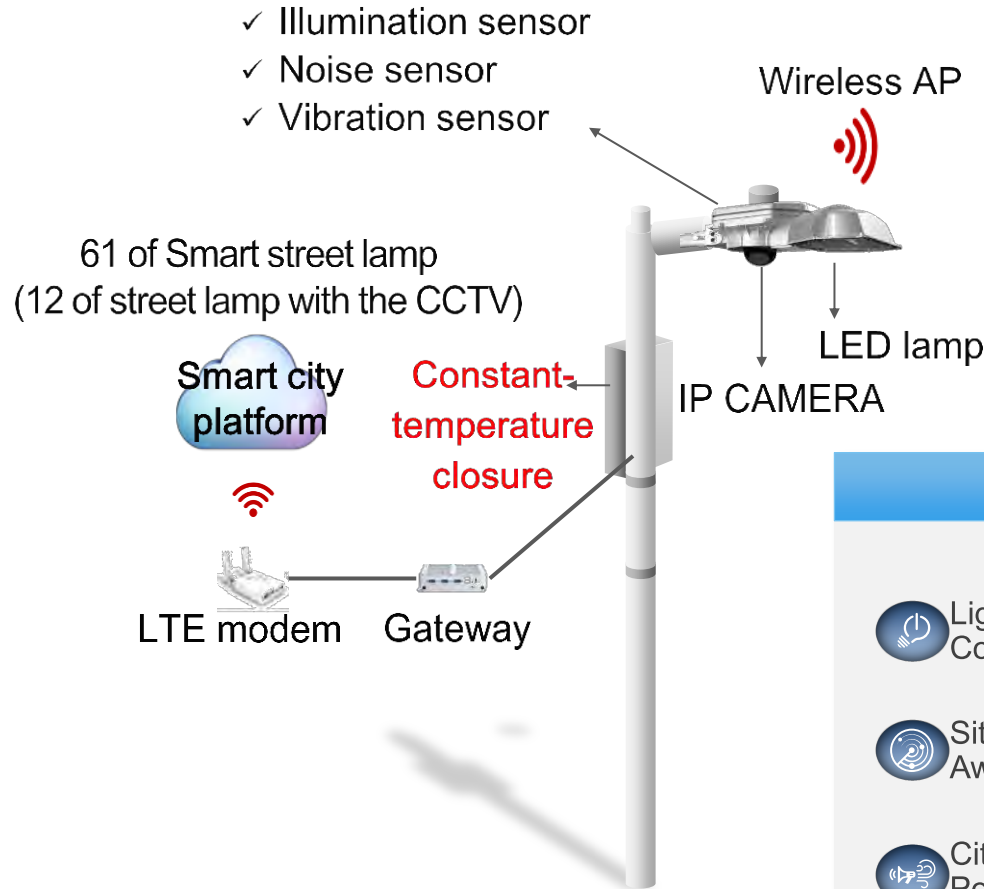
Basic infrastructure



Case 1- Haeundae Smart City Test-bed Project



Smart Node



Service extensions



Lighting Control



Energy Reports



City Safety/ Security



Situational Awareness



Incident Detection



Traffic Flow monitoring



City Air/Noise/ Pollution Maps



Public Wi-Fi

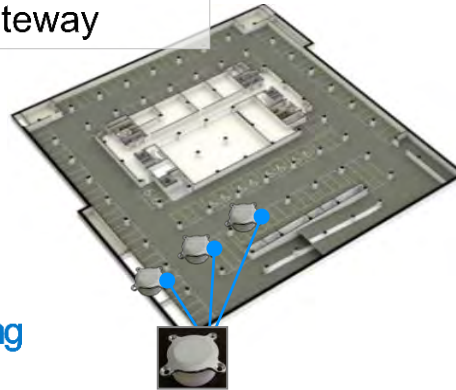
Case 2 - Haeundae Smart City Test-bed Project



Smart Parking

1 Implement Infrastructure

- Installation of sensor, video camera and gateway



Gateway for smart parking
(Video Camera)

Smart parking sensor

2 Search for lots

- Searching for the real-time information on available parking lot - location, distance, fee

Device for Android, iOS



3 Linkage with navigation

- linkage with Tmap
- Linkage with applications without input the destination



5 Monitor the parking lot

- Real-time video information
- Battery information for parking sensor



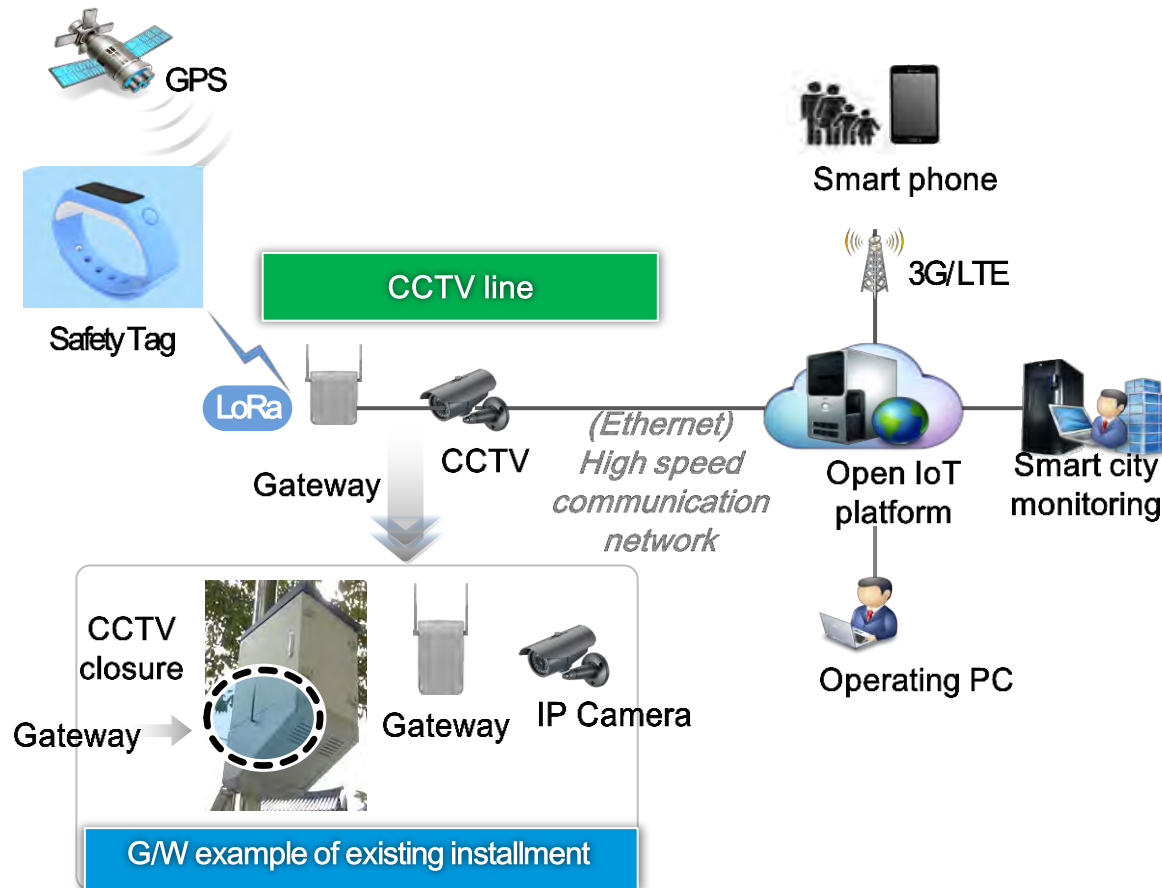
4 Inform the estimated parking fee

- Push service for the setting time/estimated fee
- Automated calculation with parking fee DB



Case 3 – Haeundae Smart City Test-bed Project

IoT based Public Service for Safety of Children and Senior Citizens

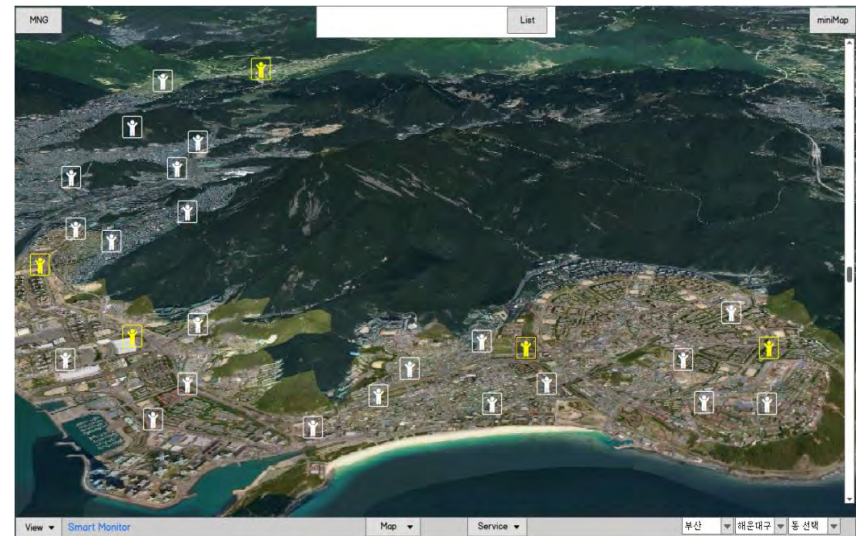


Case 4 – Haeundae Smart City Test-bed Project



3D based Monitoring System for Smart City Data

3D visualization of smart city data
: smart city data appears on screen in real time.



Smart City Test-bed Support Center



Introduction

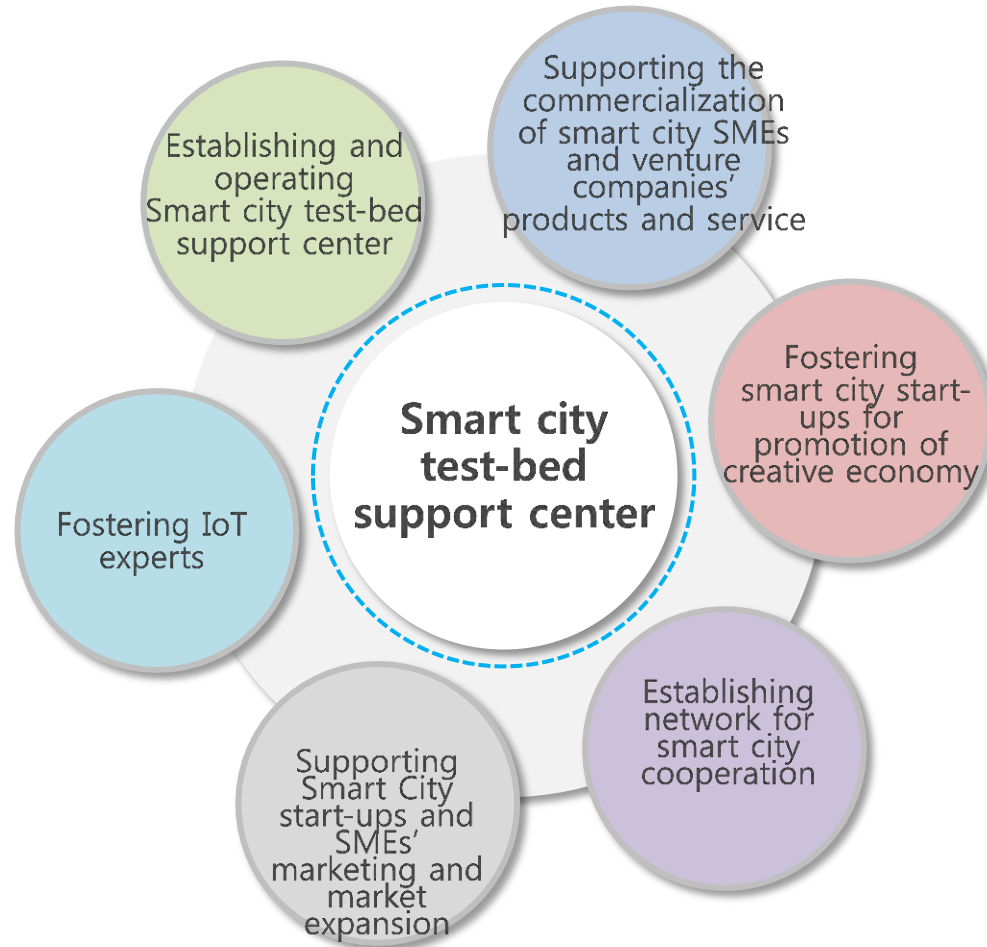
- Main base for Haeundae Smart City Test-bed Project
- Facility: smart city platform and service operation center, software development facilities including DIY software development and test facility for trial product
- Goal: promotion of support for smart city businesses and projects
- Support for smart city SMEs and start-ups : commercialization of their products and services, marketing and market expansion, establishment of business to business or business to government cooperation network



Smart City Test-bed Support center



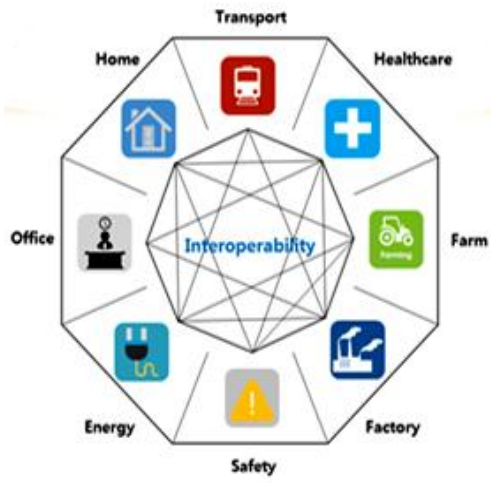
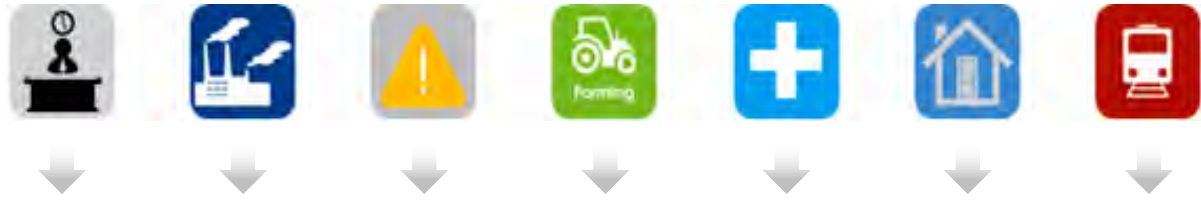
Strategies





City-to-City Collaboration for Smart City

City-to-city collaboration for Smart City



Export of Busan's Smart City Model



Open Standard Smart City Platform



Thank You

