

Introduction to Smart City Busan



April. 2016



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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

Dynamic
BUSAN



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

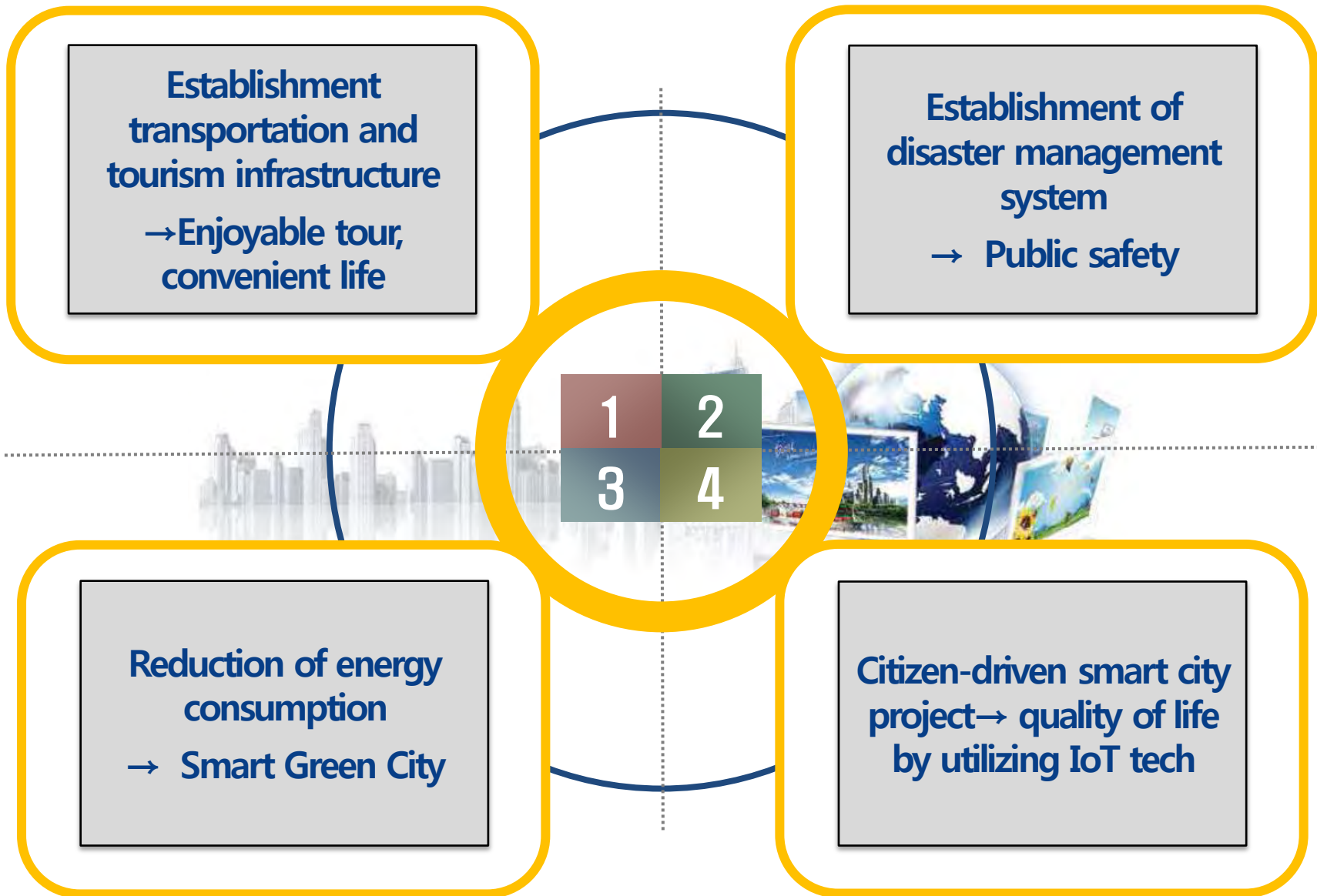


- Establishing IoT-based smart city operation platform
- Promoting creative economy by boosting smart city industries
- Strengthening Busan's competitiveness and creating high added value in the era of global competition

Smart Green City



4 Goals of Smart City Busan



History of Smart City Busan



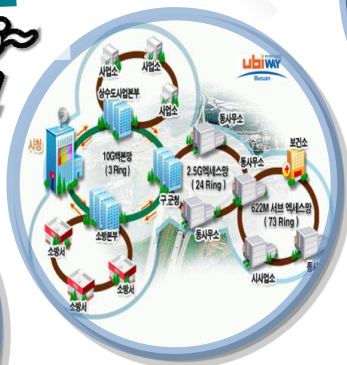
2005



World-First U-City Master Plan

※ reports of Financial Times, UK (April 23, 2005)

**2006~
2011**



Busan Information Super-Highway (Ubi-Way)

*Busan Ubi-Way: Korean Government's U-City exemplary model

**2012~
2013**



**Busan Ubiquitous City Plan
Global Cloud Data-Center Pilot Cluster**

2014



**Busan Initiative at
ITU-Plenipotentiary Conference 2014
MOU for Smart City among Busan-Cisco-SKT**

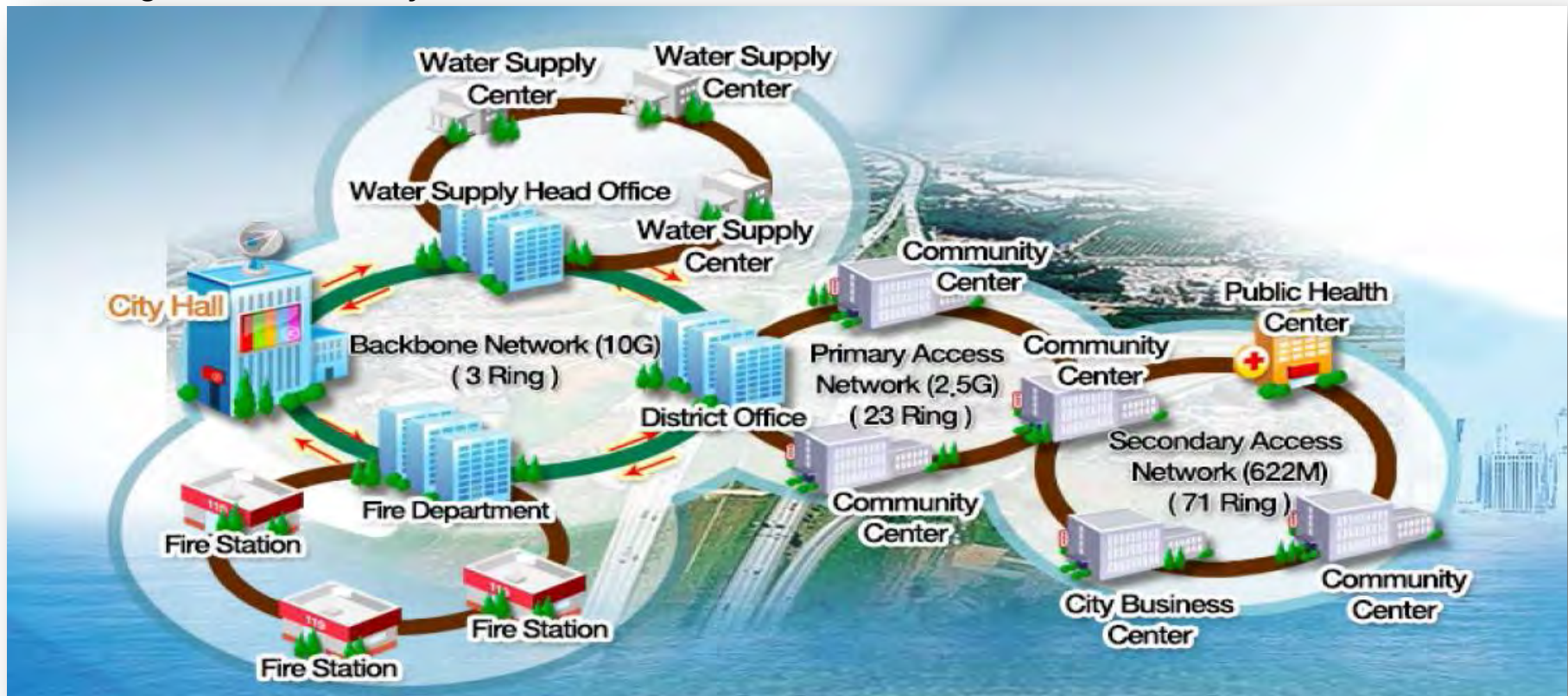
2015~



**Initiation of IoT-based
Smart City Project**

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



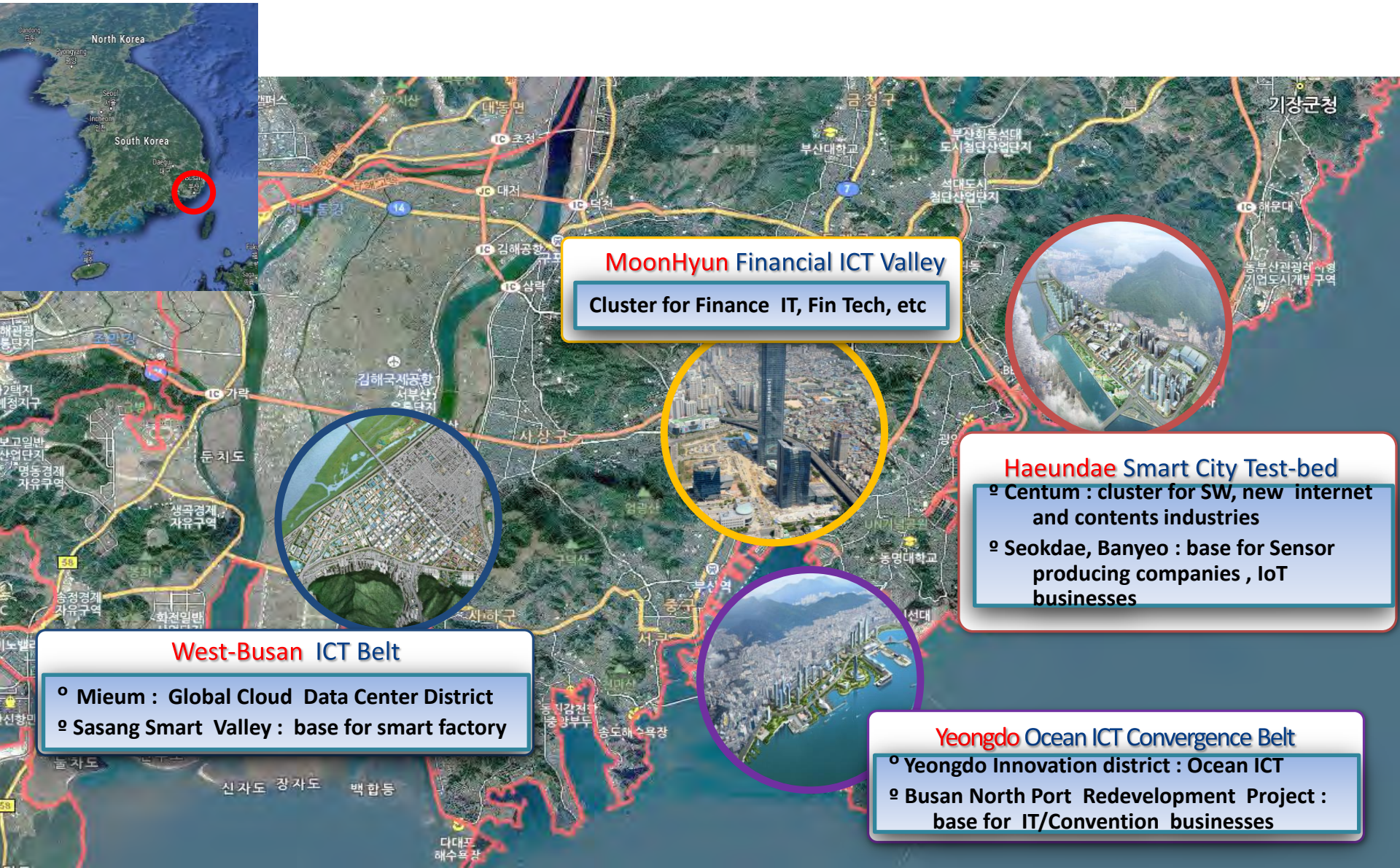
- Emergency service linking ambulance and hospitals
- Patient recognition system
- Tele-radiology service

U-Safety



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

Smart City Busan – 4 Clusters (2015 -)



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

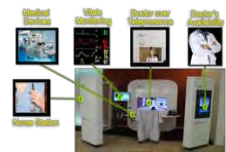


Tourism



- 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



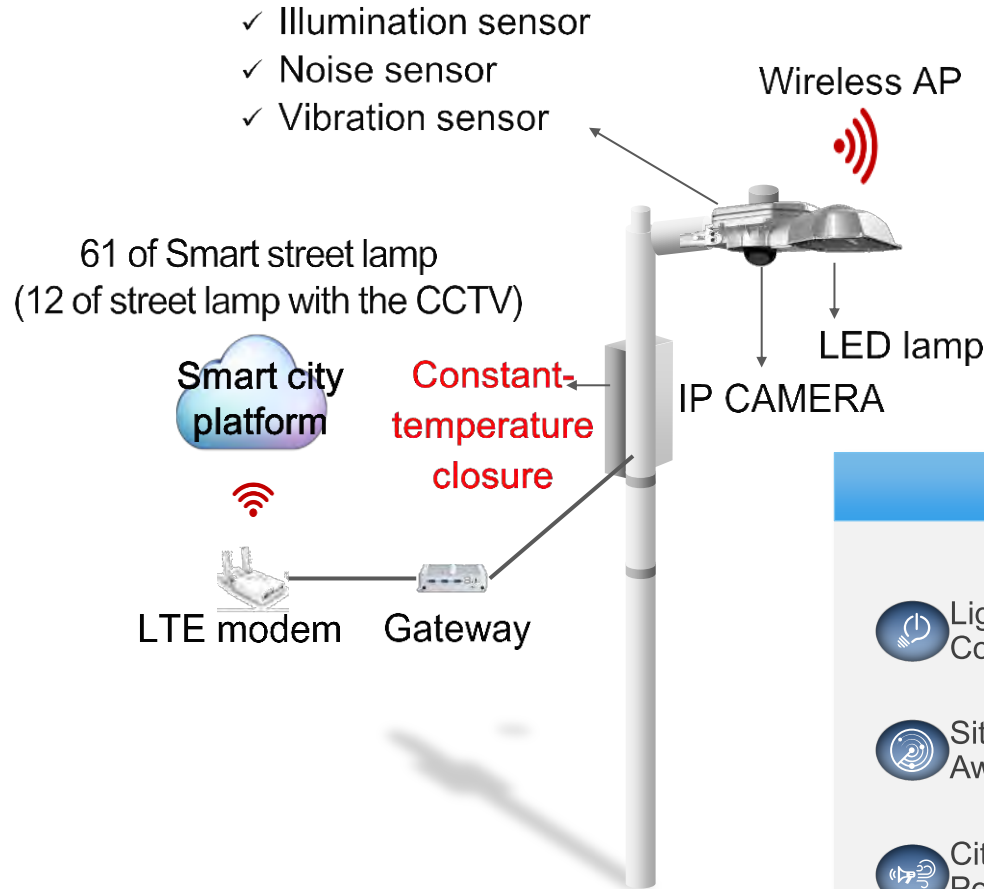
Basic infrastructure



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

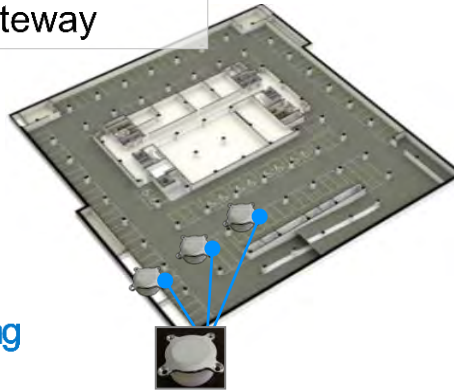
Case 2 - Haeundae Smart City Test-bed Project



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

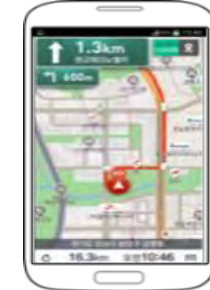
- Searching for the real-time information on available parking lot - location, distance, fee

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



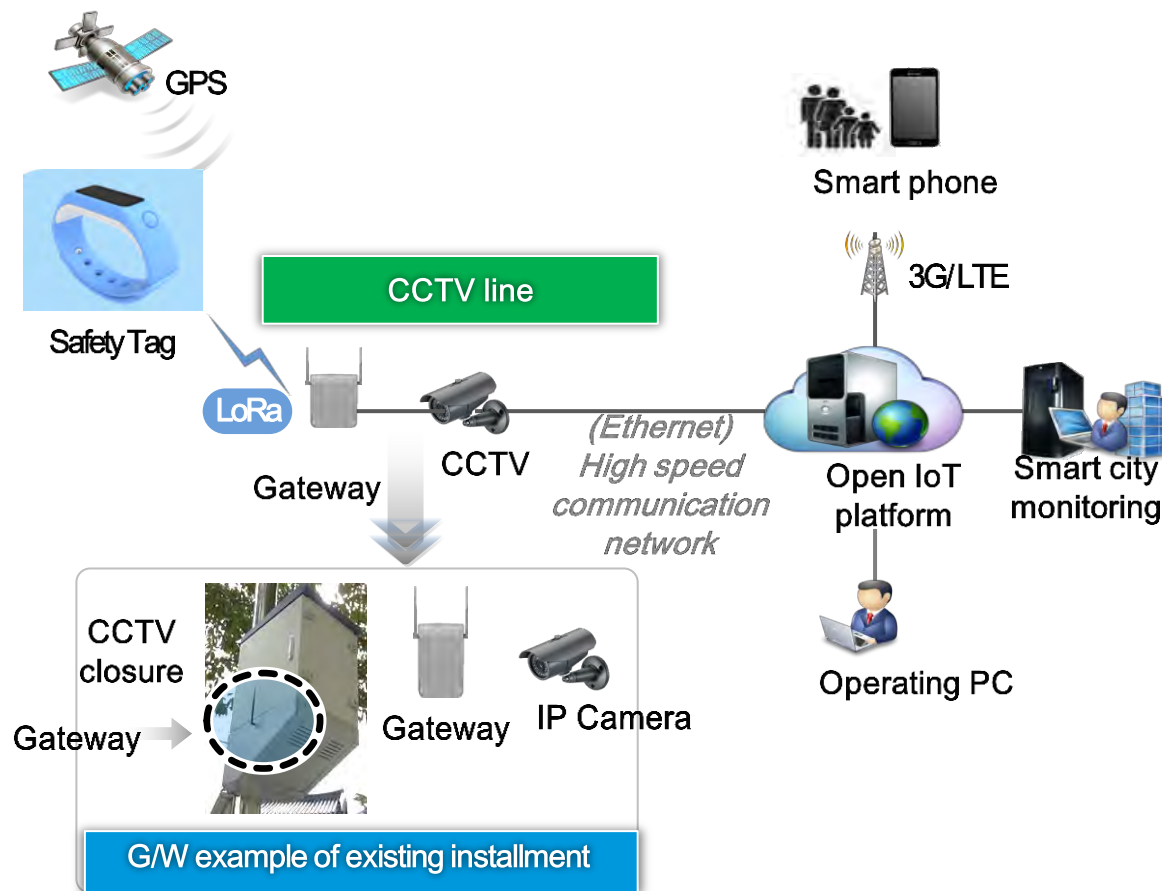
4 Inform the estimated parking fee

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



Case 3 – Haeundae Smart City Test-bed Project

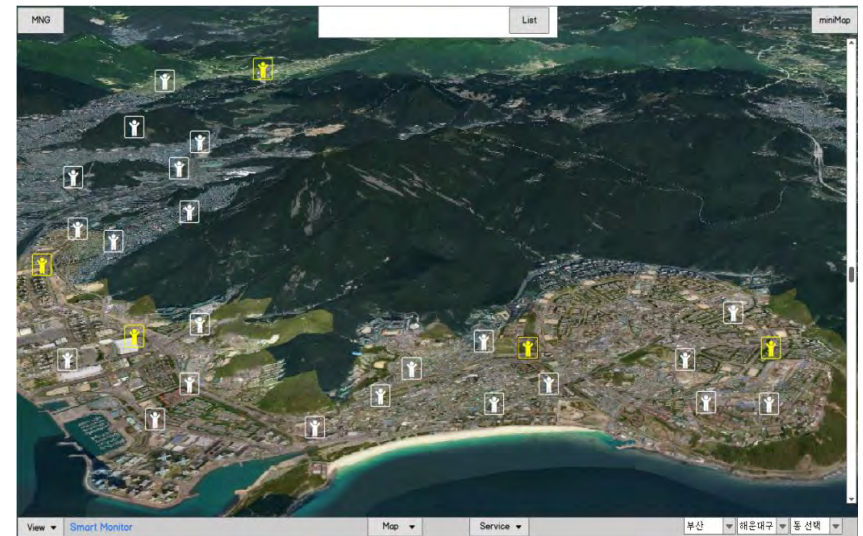
IoT based Public Service for Safety of Children and Senior Citizens



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

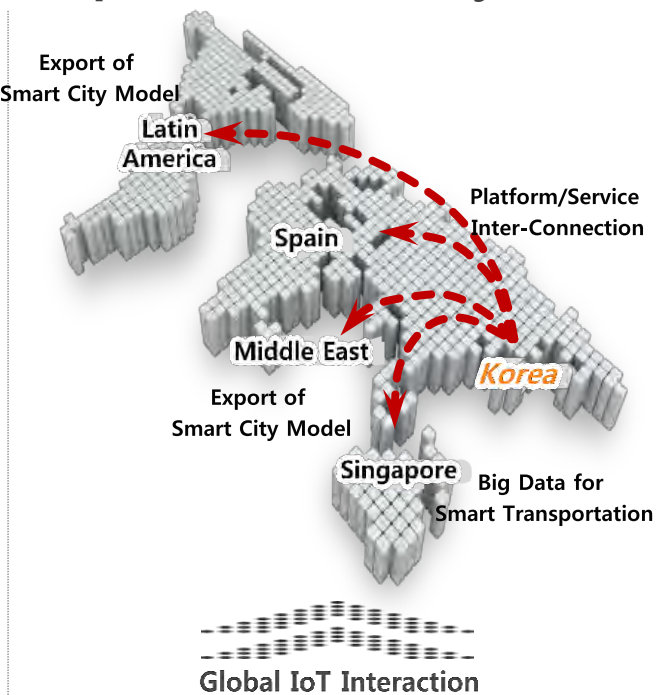


City-to-City Collaboration for Smart City

City-to-city collaboration for Smart City



Export of Busan's Smart City Model



Open Standard Smart City Platform



A black and white photograph of a large suspension bridge spanning a body of water. The bridge has two prominent white towers and a long approach viaduct. In the background, a city skyline with several tall skyscrapers is visible on a hillside. The sky is filled with dramatic, heavy clouds, and the water is calm. The overall scene is a wide-angle shot from a low perspective, looking across the bridge towards the city.

Thank You