

Smart City Development in Korea: Smart Government and Future Technologies

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Korea's Urban Development History

Urban Development Process of Korea

Korean War (1950s)



Rebuilding (1960s)

Promotion of Economic growth policies for rebuilding the country

- 5Year Economic Development Plan, heavy industrial growth policy (Pohang Iron & Steel, Gyeongbu Expressway)



Urbanization (1970s)

Slums/polarization of Wealth/Aggravation of Environment from over urbanization



Shantytown near Cheonggyecheon Stream in the Capital Seoul in 1960s



Coexisting of new constructions and shantytown in Seoul



Traffic in Seoul Square in 1970



Mapo, Seoul, Flooded from river overflow in 1966

Korea's Urban Development History

Phase 1 New Town (1990s)

Due to shortage of Available land in Seoul, Korea developed five new cities near Seoul
(Rapid development of four to five years from planning to moving in)

• Bundang New Town •



• Ilsan New Town •



Phase 2 New Town (2000s)

In order to provide quality residential environment linked to The natural environment and according to The increase of Income, Korea developed 10 new cities



Korea's Urban Development History

Multi-Purpose New Town (2005~)



Project area
72.9km²

Project cost
KRW 15.2 Trillion

Project period
2005 ~ 2030
(26 years)

Population taken
500,000 persons



Backgrounds on Smart City Developments

Solving Urban Problems and Innovative Growth Engine

— Solve Urban Problems —



Population density



Traffic Congestion



Environmental Pollution



Energy Deficiency

— Innovative Growth Engine —



Drones



Autonomous Driving

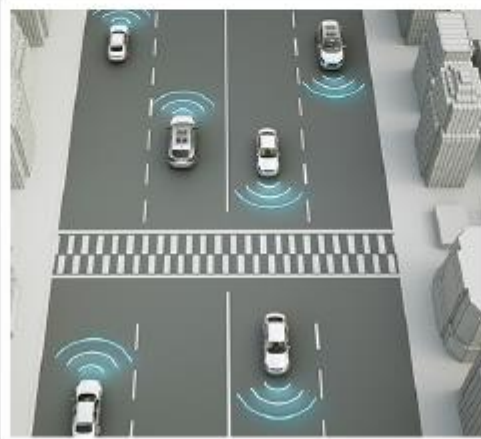


AI



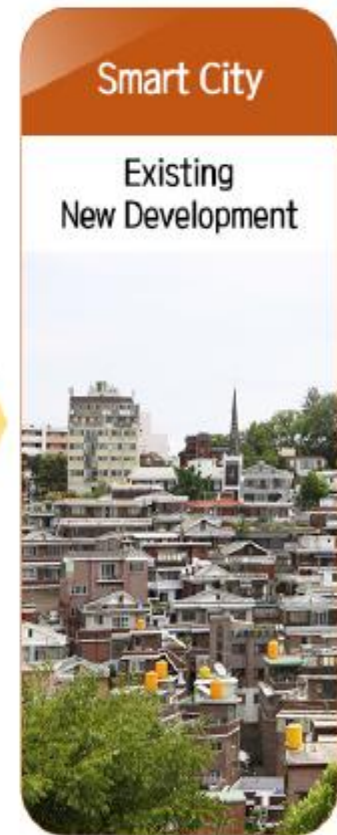
Big Data

Korea's Smart City



Smart City Developments

Move towards a Smart City



Smart City Developments

Korea's Smart City Projects

Gyeonggi Province (16)

Test City

Ansan, Namyangju

U-City Infra-Structure Initiative

Uijeongbu

Ubiquitous City Plan

Yongin, Hwasung, Osan, Siheung, Namyangju, Uijeongbu, Gimpo, Suwon, Sungham, Paju, Gwangmyeong

Other U-Cities

Pyeongtak, Paju, Hwasung, Yangju, Yongin, Goyang, Dongducheon

Choongcheong Province (8)

U-City Infra-Structure Initiative

Jecheon, Chungju, Gyeryong

Innocity

JinCheon

Ubiquitous City Plan

Cheonan

Other U-Cities

Cheonan, Asan, Hongsung, Geumsan

Gyeonggi Province (5)

Test City

Naju, Jeonju, Yeosu

Ubiquitous City Plan

Yeosu

Innocity

Jeonju, Naju

Other U-Cities

GimJae, Jeonju, Muan

Gangwon Province (2)

Test City

Gangneung

Ubiquitous City Plan

Wonju

U-City Infra-Structure Initiative

Innocity

Wonju

Other U-Cities

Wonju

Gyeongsang Province (9)

Test City

Yeongju, Yangsan

U-City Infra-Structure Initiative

Gyeongju, Gumi, Yeongyang

Innocity

Jinju, Gimcheon

Other U-Cities

Gimhae, Yangsan

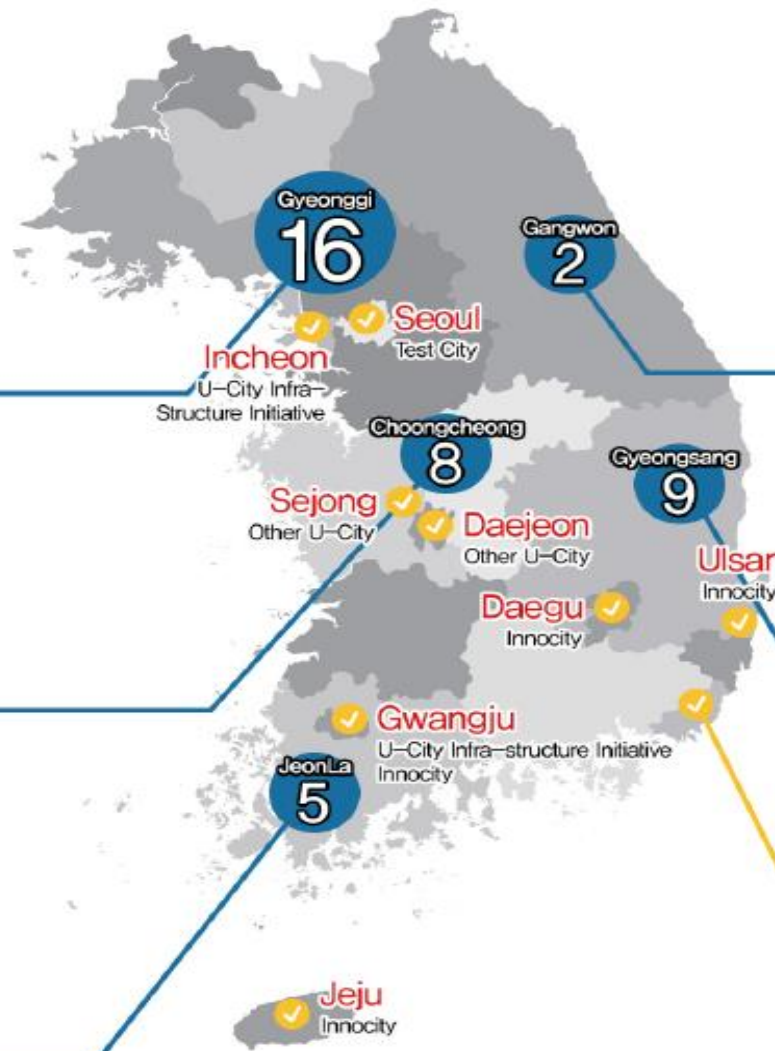
Busan

Test City

Ubiquitous City Plan

U-City Infra-Structure Initiative

Innocity



Korea's Smart City – Strength

Smart Transportation



BIS



ITS



Autonomous Vehicles



Drones

Smart Energy



Zero-Energy Building



Smart Factory



Smart Grid



Home Solar System

Korea's Smart City – Strength

Smart Environment



Smart Waste Bins



Electric Car Supply

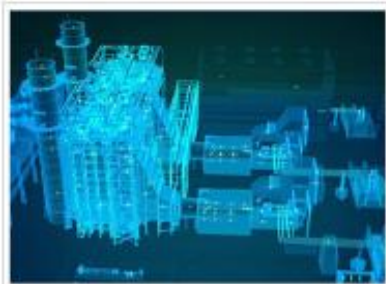


Smart Water Supply



Asian Dust Monitoring

Smart City Administration / Residential



Digital Twin



Smart Home



Open Data



Smart Farm

Korea's Smart City

1950s Seoul : A war-torn city





Korea's Smart City



Korea's Smart City – Strength

Smart City as a Full Package Export Available

New Town Development Experience

Experience of developing new towns successfully and boosting condensed economic growth within the half century



Various Smart Technologies

Since 2003, various cutting-edge technologies including ICT have been applied to newly developed cities



Korea's Smart City – Strength

Smart City as a Full Package Export Available

Customized development for each phase of urban growth

Constant trial and verification of customized smart solutions ranging from new city development to urban regeneration



Full legal framework to support smart city development

Special Initiatives for Smartcity Development such as Housing Construction Promotion Act, Land Development Promotion Act



Legal framework

Land Development Base	Regulatory framework that covers all matters in smart city development from National Land Planning and Utilization Act, Urban Development Act, Urban Improvement Act, Urban Regeneration Act, and Smart City Act
Various Business Support	Land Compensation system to ease the public service project progress and pre-sale system to reduce the financial burden on developers
Encourage Private Participation	Regulatory sandbox to encourage private participation through deregulation

Thank You!

Questions and Comments

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