From Rubbles to Smart City

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Smart Green Life

Korea’s Leader in Telecommunication Services Experience and Knowhow in Smart City Business

Global Leader in Network Solutions Experience and Knowhow in Smart Solutions Business
Mega Trends

- Globalization
- Urbanization
- Population Ageing
- Convergence/Consilience
The World is now Urbanized

% of population living in cities

1800 1950 2008 2040

3% 29% 50% 65%

There are 21 MEGACITIES With over 10 Million people

Up until 1975 there were just 3
New York, Tokyo and Mexico City

Largest City: Tokyo 36 Million +

If it were a country, it would rank 35th in population size

China alone will have 221 cities with 1 million + people by 2025

By 2025, the number of megacities is expected to reach
with an additional five in Asia (Shenzhen, Chongqing, Guangzhou, Jakarta and Lahore),
two in Latin America (Bogota and Lima), and one in Africa (Kinshasa)

Source: Anatomy of a Smart City, Postscapes (http://postscapes.com/anatomy-of-a-smart-city-full)
Asia – Leading Urbanization

Number of Cities with at least One Million Residents

(Source: Urbanization in developing countries: Current trends, future projections, and key challenges for sustainability, Barney Cohen, Oct 2005, pp. 9)
Global City Competitiveness

Source: Benchmarking global city competitiveness, Economist Intelligent Unit; The Economist, Mar 12, 2012
Megacity

- 10M+ Pop
- % of Pop in Large Cities (> 1M) - 21%, GDP - 48%

2010 GMP vs GDP
- Metro NYC GMP $1282.6B
- Korea GDP $1014.7B
- Indonesia GDP $706.6B + Switzerland GDP $523.3B

Common Problems
Smart City – Smart Green Life

Smart City = Open Government + Economic Prosperity + Green + ICT + Smart Life

- Open Government
- Economic Prosperity
- ICT Infrastructure
- Sustainability
Smart Life

Smart Cart

Smart Virtual Store
Future Smart Classroom

Smart Education – Cyber Classroom
Smart Life in Smart Building

Smart Parking Lot
Smart Life in Smart Stadium

NFC & JOY

Stats and Instant Replay
Smart Green Life in Smart City

Healthcare

Payment

Movie

Work

Books
On ICT Infrastructures, Various Smart Services are managed by IOC in Smart City

- U-Traffic
  - Smart Signal Control
  - Traffic Information
  - Parking Information
  - Illegal Parking Detection

- U-Building
  - Intelligent Building System
  - In-Building Communication Network
  - Smart Office and Business Solutions

- U-Urban Infrastructure
  - Underground Facility Identification
  - Water-pipe Monitoring
  - Streetlight Monitoring

- U-Park
  - RFID Ticketing
  - Park Info
  - Child ID

- U-Street
  - Public Surveillance
  - Smart Bench and Street Furniture
  - Mobile Community and Tourist Info
  - LED mood lighting

- U-Home
  - Home Automation
  - Home Security

- U-Media Signage
  - Kiosk, Signage, Screens, Floors, Projections, etc.
Smart City Projects in Korea

52 Smart City projects in 39 municipalities

- Pangyo New City (’07-’10)
- Paju New City (’05-’11)
- Suwon Gwanggyo New City (’06-’10)
- Hwaseong Dongsan New City (’05-’08)
- Yongin Heungdeok New City (’05-’09)
- Gimpo Hangang New City (’08-’13)
- Namyangju New City (’09-’13)
- Dangjin Economic Free Zone (’06-’12)
- Asan New City (’09-’12)
- Sejong Admin City (’05-’30)
- Taean Enterprise City (’06-’10)
- Chungnam Innovative City (’06-’12)
- Cheonan Cheongbu Area (’09.02-’08)
- U-Jeonju (’05-’10)
- Muju Enterprise City (’06-’15)
- Jeonbuk Innovative City (’05-’12)
- Naju City
- Muan Enterprise City (’05-’11)
- Haenam Enterprise City (’06-’16)
- Gwangju Enterprise City (’06-’12)
- Incheon
- Gyeonggi
- Gangwon
- Jeonbuk
- Gyeongnam
- Busan
- Jeju
- IFEZ Songdo (’08-’20)
- IFEZ Cheongna (’08-’12)
- u-Gangwon Strategic Planning
- Gangneung u-Blue Triple City (’04-)
- Wonju Enterprise City (’06-’15)
- Gangwon Innovative City (’06-’12)
- uBio-City (’05-’09)
- Chungju Enterprise City (’05-’11)
- Chungbuk Innovative City (’06-’12)
- u-Gyeongbuk (’06-’10)
- Pohang Strategic Planning (’06-’10)
- Daegu Innovative City (’05-’12)
- Gyeongbuk Innovative City (’06-’12)
- u-Travel City (Tongyoung)
- u-Ulsan
- Yangsan u-City (’06-’10)
- Gimhae u-City
- Busan Innovative City
- Ulsan Innovative City (’05-’12)
- Gyeongnam Innovative City (’06-’12)
- u-Jeju
- Jeju Innovative City (’06-’12)
Dongtan Smart City, Korea

Basic Information
- Location: Dongtan, GyeongGi
  - 40km South from Seoul
- Size: 9Km² (903.7ha)
- Population: 120,730
- No. of Household: 39,825

Smart City Details
- Period: 2006.05 ~ 2008.09
- Budget: US$ 40 M
- Smart Services:
  - Public Security, Traffic, Admin., Environment

“1st smart city project in Korea, started 2006”

Smart Services
- Public Transportation Info.
- Outbound Road Info.
- Smart Parking
- Real-time traffic signal info.
- Media Board
- Smart-Passcard
- Auto vehicle identification
- Illegal parking mgmt.
- Public security
- Environmental
- Water Leakage mgmt.
- Smart Facility Mgmt.
- Integrated Platform
- Fiber-optics Network infra.
- MSPF, BBM/BBS

Integrated Operation Center
Paju Smart City, Korea

**Smart Services**

- **Convenience**
  - Traffic/Local/Adm.info.
  - Web mail/Storage
  - Community
  - Public Info.

- **Safety**
  - Image surveillance
  - Emergence Call

- **Transportation**
  - Water/Seewage monitoring
  - Street light remote control

- **Environment**
  - Health
  - Fitness
  - U-health Portal

- **Well-being**
  - Health Care
  - Alarm system
  - Monitoring

**Integrated Operation Center**

**Basic Information**

- **Location**
Paju, Uoonjong, GyeongGi
  - 25km North West from Seoul
- **Size**: 9.6Km² (954.7ha)
- **Population**: 124,000
- **No. of Household**: 46,000

**Smart City Details**

- **2008.09 ~ 2011.12**
- **Budget**: US$ 67 M
- **Smart Services**: Security, Facility Management, Traffic, Environment, Health, Portal, Mobile
IFEZ (Incheon Free Economic Zone) – Smart City in Korea

2.5 Billion People
61 Cities with One Million+ Residents within a three and half hour flight
Song Do – from Past to Present

1985
Song Do – from Past to Present

Green Climate Fund
Incheon U-City Company on May 24, 2012

First PPCC for Smart City

IFEZ

Incheon, Centios, Local SME Investments

Public Svc – Traffic, Security, Emergency Mgmt

Facility Mgmt, Public Info and Notices

Private Commercial Services

Export Smart City Knowhow

PPCC: Public Private Cooperative Company
Smart City – 6 Key Public Services

- Traffic
- Security
- Safety
- Emergency Mgmt
- Facility Mgmt
- Admin
- Environment
Smart City Integrated Operation Center

- Anti-Crime with CCTVs, License Plate Detectors
- Transportation Information & Traffic Control
- Facility Management for water/drainage, electricity and LNG gas supply
- Public Information Management with Digital Signage, e-Bulletin Boards
Web 3.0 vs Government 3.0

Portable & Personal
Individual Focus
Consolidating Content
User Engagement
Behavior Advertising

More Info Disclosures
Commercial Use of Data
Boost Entrepreneurship
Collaborative Policy Making
Foster Creative Economy
Collaborative User Engagement

Source: Seoul Metropolitan Government, 2013
Behavior Advertising with Big Data Analytics
Song Do Smart City – a Home of GCF Secretariat

**Vision**

**Global Leading Smart City**

World’s Top Competitive City by 2020

**Goals**

- Creation of new demand in public sector
- Stepwise Promotion
- Maximized effectiveness of international events
- Construction of high-tech industrial clusters
- Construction of U-information systems

**Smart City Roadmap**

**Phase 1 (~2009)**
- Expansion of Public Infrastructure for efficient development
- Promoting development of core area and leading projects

**Phase 2 (~2018)**
- Development of IFEZ public services and IOC
- Development of Global IT, BT, Education hub
- Expand to private services

**Phase 3 (~2020)**
- New Sea Port
- Global Leading Smart City