



2017 Korea Smart City Study Tour Summary Report

**The Korea-World Bank Partnership Facility
Korean Ministry of Land, Infrastructure and Transport
Smart Cities KSB**

Seoul, September 04-08, 2017

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SECTION I. BACKGROUND NOTE

Key Partners

Korea-World Bank Group Partnership Facility



The Korea-World Bank Group Partnership Facility (KWPF), established in May 2013, is an initiative to strengthen ties between the Republic of Korea's Ministry of Strategy and Finance and the World Bank Group (WBG). The facility's overall objective is to assist developing member countries of the WBG in achieving inclusive and sustainable economic growth and to foster broader dialogue on economic development issues. The facility supports a broad range of economic development opportunities with a focus on promoting best practices by leveraging the WBG's knowledge and covering power and Korea's expertise. Through this Facility, the Government of Korea has provided US\$90 million during FY11-16 and a replenishment of US\$90 million from FY17-19.

The Facility has three windows through which funding is provided:

- Window 1: Financing for global and Regional Programs
- Window 2: Co-financing of Lending Operations and Project Preparation Support
- Window 3: Generation and Transfer of Development Knowledge, Project Identification, Pre-Appraisal, and Technical Assistance Activities

Smart Cities Knowledge Silo Breaker



The Smart Cities Knowledge Silo Breaker (KSB) works within the World Bank and with government and private sector partners to facilitate knowledge sharing on Smart City initiatives among policy makers, development practitioners, academics and private sector experts through global events, discussions and collaborative resources. The KSB organizes a range of activities, from workshops that bring private sector, city governments and urban experts straight to our community, to a range of multi-media knowledge resources related to smart cities, including movies, booklets, and webinars, and many international study tours. Through this, the KSB aims to effect change in World Bank operations. For its efforts to bring efficiency to World Bank Operations, the KSB was shortlisted as a finalist for the IFC's KNOWbel awards.

Korean Ministry of Land, Infrastructure and Transport



The Ministry of Land, Infrastructure and Transport (MOLIT) was first established in 1948 with the name of the Ministry of Transportation. It was reorganized and renamed in 2013 to focus on future-oriented territorial development, safe and convenient infrastructure and transport development. MOLIT's vision is to have a livable territory and convenient transport.

The World Bank and MOLIT signed a Memorandum of Understanding in June 2016 to work together on smart urban solutions for developing countries through knowledge sharing and mobilizing financial and technical capacity. They have a joint aim of sharing knowledge, leveraging existing financial and technical capacity and working together to deliver faster impact on urban issues to developing countries.

Objectives of the Study Tour

The study tour aimed to contribute towards enhancing Smart City frameworks and building the Smart City development capacity of urban practitioners through active support and partnership from Korean research agencies and Smart City solution development companies. Some of the targeted outputs from the Study Tour and Knowledge Exchange Program were:

- I. Identification of critical and relevant lessons from Global Smart City development models, with emphasis on developing linkages between ICT and broad-based development policy through Smart Platforms, Infrastructure and Mobility, Smart Energy, Venture Capital, Startup Policy and Open Innovation.
- II. Understanding the role and operation of government agencies and private players at various levels and their pivotal role in developing collaborative solutions for smart cities.
- III. Understanding the challenges in the effective application of ICTs for smart city development.
- IV. Exploring working partnerships between government agencies and private sector solution development companies towards achieving smart city goals.



SECTION II. SMART CITIES STUDY TOUR AND WORLD SMART CITY WEEK 2017

Day 1 – Introduction and Business Meeting

The Korea Smart Cities Study Tour began with an introduction from all attendees, including the World Bank delegation and clients of the Ministry of Land, Infrastructure and Transport (MOLIT) of Korea. The study tour organizers, KAB and Smart Cities KSB, welcomed the World Bank delegation consisting of ten project teams and their city and national representatives from Argentina, Croatia, Egypt, India, Indonesia, Kazakhstan, Kenya, Kyrgyz Republic, Lebanon, Rwanda and Serbia.

Mr. Sang Ju Lee, Head of the Overseas Construction Policy Division of MOLIT, emphasized in his welcome remarks to all participants the humanity aspect of smart city development, a recurring theme during the Study Tour and Smart Cities Week to complement themes of technology advancement and institutional enablers. Mr. R.M.B. Rajakaruna, Director of the Ministry of Irrigation and Water Resources Management in Sri Lanka, delivered a thank you speech on behalf of all participants.

The keynote speech was given by Mr. Jung Ho Kim, Professor at Korea Development Institute (KDI) on how urban transformation creates an opportunity for economic growth. His statement that a smart city is equipped with integrated planning and management using IT and emerging business models and is built on collective intelligence based governance shed light on the importance of collaboration between the public and private sectors.



The Business Meeting session in the afternoon brought together the participants to share the strategy, goals and approaches behind their smart city development projects, before networking



with Korean private sector companies and city officials. World Bank delegations presented projects in seven broader categories:

- **Energy:** Croatia, Lebanon
- **Governance service delivery:** Egypt, Serbia
- **ITC & Transport:** Argentina, Kyrgyz Republic, Kazakhstan, Lebanon, Rwanda
- **Open data & spatial data infrastructure:** Croatia, Indonesia,
- **Smart economy:** Croatia
- **Urban infrastructure development:** India, Kenya, Rwanda
- **Waste management:** Lebanon

Day 2 – Site Visits with Seoul Metropolitan Government

On the second day, the World Bank delegation conducted site visits to the Seoul Big Data Campus and Gangseo Integrated Control Center. They had an immersive learning day for the city's e-government policy, integrated smart card solution and data-driven urban management.



Participants listening to the presentations given by Study Tour leader Mr. Hyoung Gun Wang from the World Bank and by SMG representatives

Seoul Big Data Campus

Located in S-Plex Center, Seoul Big Data Campus provides over 4200 datasets and the space for city government officials and citizens to utilize big data collected by SMG to analyze and research social challenges around them. The center collaborates with institutions to improve data literacy among the public and raise awareness of the data analysis initiatives taken by the government.

Mr. Jihyun Kim from the Information Planning Division of SMG introduced Seoul e-Government from infrastructure, open government, PPP and technology innovations perspectives. The e-Seoul Net connected via fiber optic cables along the subway lines frees public administration officials from relying on private telecommunication carriers. u-Seoul Net covers Wi-Fi, Seoul portals on desktops and mobiles, public services and CCTVs. Seoul also builds a responsive city engaging citizens through 120 call centers and smart complaint reporting systems. Through m-Voting, citizens can share ideas on improving urban service delivery and participate in policy making, making Seoul a city built on their aspirations. Two great examples are the manmade island on Han River and designated non-smoking zone around the Seoul Museum of Art, both submitted by citizens on the m-Voting platform.



Ms. Sunghoon Kris Moon introduced three big data analysis cases



Discussion between delegates after the sessions

Ms. Sunghoon Kris Moon, Project Advisor from the Seoul Urban Solutions Agency, presented three case studies to illustrate how Seoul utilizes big data analysis to solve urban issues. The transformation of Seoul's urban development, from post-war ruins to one of the world's most technologically advanced cities, took advantage of network expansion and ICT development and built on the existing urban infrastructure foundation to improve citizens' quality of life. Using big data analysis, Seoul can capture and respond to the citizens' demand of optimized late-night bus route in the areas where no public transportation service was provided after 1am in the past. Similar approaches were used to promote local economy in the Golmok business district and reduce traffic accidents for children and senior pedestrians. To ensure a successful utilization of big data analysis for solving urban problems, a city would need to create a pool of quality data sources from public and private sectors, and also understand the legal and intuitional issues behind the limitations in using such data.

The Korea Smart Card Co., Ltd. introduced the critical role it plays in the SMG public transport system – developing and managing transportation cards under the T-money brand name in South Korea. These smart cards provide an integrated solution for payment of buses and subways fares, as well as public facilities, such as toll gates and parking lots, convenience stores, and vending machines. The T-money transportation systems was adopted as a public transport payment solutions by countries in Asia, North and South America, and Europe.

S-Plex Center

The delegation then toured the S-Plex Center, the landmark building in Seoul that houses IT, media, contents industry and urban data administration. On different floors, participants interacted with colleagues from App-Business Center, KBS TV Studio and e-Sports Stadium to get deep understanding of Seoul's vibrant information technology industry.



Public Wi-Fi and an interconnected working system allow people to work from anywhere inside the building



Participants attracted by a VR game developed by a start-up supported by SMG to promote entrepreneurship and social innovation



Delegation in front of the SMG Big Data Campus

Gangseo Integrated Control Center

The integrated CCTV Control Center allows staff to monitor the traffic situation, parking violations, and crime scenes in the nearby districts. To protect citizen privacy, the data is only provided upon request of policy department for a criminal investigation or the lodging and continuation of an indictment, for court trial duties, or for enforcement of a pact with a foreign government or international organization.



Touring the Gangseo Integrated Control Center

Days 3-5 – World Smart City Week 2017

Hosted by the Ministry of Land, Infrastructure and Transport (MOLIT) and Ministry of Science, ICT, and Future Planning (MSIP) of Korea in the newly-built smart city Goyang, the first Smart Cities Innovation Summit offered a combination of symposiums, high-level meetings, networking activities, contests of related topics, awards, and site visits. It attracted over 200 Cities and respective city leaders and experts from around the globe to share best practices, policies and solution technologies in the field of smart city, and thus strengthen the global network of smart city related projects.



Mr. Ede Jorge Ijjasz-Vasquez, Senior Director of Social, Urban, Rural and Resilience Global Practice at the World Bank talked about the importance of a global partnership for building smart cities in developing countries



Ms. Hyun-mee Kim, Minister of Land, Infrastructure and Transport, Mr. Kyung-Wook Kim, Assistant Minister of Construction Economy Bureau, and Mr. Ede Jorge Ijjasz-Vasquez, Senior Director of Social, Urban, Rural and Resilience Global Practice at the World Bank after signing the MoU Work Plan



MoU Signing

During the hosted luncheon, participants witnessed the agreement made between the MOLIT and the World Bank on a Smart City Partnership Program. By signing the MoU Work Plan, the MOLIT and the World Bank have agreed to support clients by developing a Global Smart City Solution Portal, providing just-in-time technical assistance, facilitating smart city study tours and customized knowledge exchange, among many other activities.



Mr. Sudhir Sharma, Minister, Ministry for Urban Development, Housing and Town & Country Planning, India, talked about Himachal Pradesh's endeavor in building a smart city



Egyptian delegate Mr. Khaled Abdel Aal, Advisor to the Governor on Smart Services Project of Cairo Government, asked questions



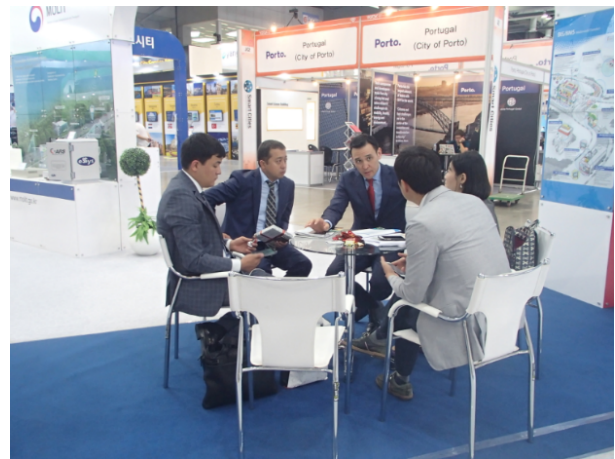
The group in front of the conference venue, KINTEX, located in the newly build smart city Goyang



Mr. Olzhas Sartayev, Chairman of the Board, Astana Innovations JSC, Kazakhstan, talked about how Astana keeps up its pace with the global smart community and improves its urban services under the concept of smart Astana



Hyoung Gun Wang, Senior Economist, Global Social Urban, Rural and Resilience of the World Bank and Team Leader, Smart Cities KSB, introduced what the World Bank is doing in the field of smart cities



Learning more about Korean smart city solutions in exhibitions and business meetings

Smart Cities Study Tour participants gathered where the first day started to share memories, lessons learnt, key takeaways and notable moments from the past four days. After closing remarks by Mr. Sang Ju LEE, participants Mr. Kedar Neupane the Joint Secretary of the Ministry of Home Affairs in Nepal, and Dr. Hyung Gun Wang of the World Bank expressed their appreciation to MOLIT, Korean counterpart and event organizer KAB for delivering the valuable five-day event as well their expectation to strengthen the partnership and benefit client cities through Korean expertise. The tour closed with a culture experience tour, bringing a successful closure to the five-day event. The group agreed to stay in touch and together explore the detailed activities under the partnership programs in the coming months.



SECTION III: LESSONS LEARNT AND STEPS FORWARD

Key takeaways

1. Nowadays a lot of initiatives and activities on smart city development are booming beyond developed countries, both at national and country level. For example:
 - India 100 Smart Cities Mission, a nation-wide pan-city urban renewal and retrofitting program aiming to improving human-centric urban development and sustainability
 - Internet of Things (IoT) network in Kigali, Rwanda provides a blueprint for its smart city development under the Smart Africa Initiative
 - Rio Operations Center (COR) in Rio de Janeiro, Brazil coordinates over 30 municipal agencies, using ICT to gather real-time information to track and improve urban service delivery
 - Chinese and Singapore governments together built Tianjin-Eco city, the first clean and energy efficient demonstration city in China
2. Cross-sectoral and public-private collaborations are critical for the success of Smart City
3. Government officials need to build capacity on integrated planning and management of smart city projects, in the meantime, to ensure citizen participation.
4. ICT and digital technologies are becoming increasingly important for achieving smart cities, however, it is whether we utilize them on what improves quality of life that makes the difference in smart city projects.

Next steps

- Organize two smart city study tours (tentative) annually with financial and technical support from MOLIT.
- The Smart Cities KSB will start to accommodate Just-in-time TA missions based on client demands identified during the study tours.

