Making Cities More Livable

Smart City in Environment, Equity and Economy (3Es)

28–31 October 2019 • Seoul, Republic of Korea

Cities in Asia and the Pacific have unprecedented opportunities to transform human well-being and catalyze economic development by 2030. At the same time, these cities face several mega trends, including high rates of urbanization, growing infrastructure deficits, increasing risks of climate change impacts and disasters, environmental stress, aging societies, and rapid technological advancement. Alongside existing trends, rapidly emerging threats include cyber-attacks and terrorism. All such challenges are often most apparent and difficult to address in urban settings, which are characterized by complexity, uncertainty, concentrations of people and compounding risks.

Seoul is not an exception in this trend. As the capital city, Seoul has made remarkable progress within a relatively short period time for about 60 years from its complete destruction during the Korean war. Rapid economic growth during the industrialization in the 1960s–1970s has raised living standards considerably, but it was the beginning of the city's urban problems. A huge number of rural people have migrated to Seoul looking for economic opportunities, which has turned Seoul into one of the most crowded cities in the world. This massive population influx caused housing shortage, increase in slums, lack of infrastructure and services, such as water supply and sewerage system, environment degradation including river and air pollution, and traffic problems.

Asian Development Bank's (ADB) Strategy 2030 identified "Making Cities More Livable" as one of its seven operational priorities and will support cities in developing member countries (DMCs) for developing the right institutions, policies, and enabling environment to become more livable. To help its DMCs build livable cities, ADB is developing the operational plan focusing on three priorities: (i) improved access, quality and reliability of services in urban areas, (ii) strengthened urban planning and financing sustainability of cities, and (iii) improved urban environment, climate-resilient and disaster management of cities.

In this context, ADB and Seoul Housing and Communities Corporation (SH Corp), a leading public enterprise responsible for housing welfare under Seoul Metropolitan Government (SMG), will co-organize a workshop on "Making Cities More Livable—Smart City in Environment, Equity and Economy (3Es)" on 28–31 October 2019 in Seoul, Republic of Korea. SH Corp will coordinate the program with other relevant national and local government agencies, bringing together distinguished scholars, key policy makers, practitioners and technology experts.

The workshop is designed to learn from Korea's experiences focusing on key success factors, as well as failure cases in the areas of comprehensive urban planning, housing, environment, urban infrastructure (water, sanitation, and transportation), business environment, and startup ecosystem. The participants will learn key policy actions and initiatives from some case studies in addressing key urban issues through site visits as well as interactive discussion sessions. It is expected that around 70 participants from national government agencies and local governments from ADB's developing member countries will join the program, in addition to ADB staff directly related to ADB's operations in the urban sector.

Day 1, 28 October (Monday)

8:30 a.m.–9:00a.m.	Registration
9:00 a.m.–9:30a.m.	**OPENING SESSION**

Welcome Remarks
Kim Seiyong, President, Seoul Housing and Communities Corporation

Opening Address
Thomas E. Abell, Advisor and Chief of Digital Technology for Development, Sustainable Development and Climate Change Department, Asian Development Bank

BRIEF INTRODUCTION
Moderator
• Workshop outline
• Introduction of participants
• Group photo

PART 1: INTEGRATED URBAN PLANNING AND DEVELOPMENT

9:30 a.m.–10:30a.m.   **SESSION 1: MANAGING CITY GROWTH**
• **Urban Strategy and Planning for Managing City Growth**
  Bum Hyun Lee, The Seoul Institute or Korea Research Institute for Human Settlements (KRIHS)
• **New Town and Urban Renewal Projects**
  Keonwoo Kim, Deputy Director, Office of Urban Development, Affordable Housing Project, Seoul Housing & Communities Corporation
• Question and Answer

10:30 a.m.–10:45 a.m. Coffee break

10:45 a.m.–12:00 a.m. **SESSION 1: MANAGING CITY GROWTH** *(continued)*
• **Compact City in Seoul: Utilizing underused infrastructure**
  Chil-Moon Choi, Head, Compact City Development Office, Seoul Housing and Communities Corporation
• **Digital Technology (DT) Use Case:** Urban Planning Information System
  Doi Kim, Manager, Urban Planning Division, Seoul Metropolitan Government
  The Seoul Urban Planning Portal and the Urban Planning Information System (UPIS) was opened in 2011 to support Seoul Metropolitan Government officials' decision making in urban planning. Currently, the data for 146,000 projects are stored in UPIS, and about 1,000 officials visit the site daily.
• Question and Answer

12:00 p.m.–1:00 p.m.	Lunch
1:00 p.m.–2:00 p.m.	Move to Site

2:00 p.m.–4:00 p.m.   **SITE VISIT 1: Bakdal Wastewater Treatment Plant**

Located in Anyang, Geyonggi Province the treatment plant goes underground. The surface has been converted to a public park, which opened in September 2019. The biggest motivation for building an underground wastewater treatment system was to mitigate the foul odor from being released in the surrounding neighborhood. The facility can handle 25,000 tons of wastewater a day, mostly from Anyang's 600,000 residents. The new plant will generate electricity, offsetting the energy consumed. The plant has the ability to convert methane from sludge into electricity.

3:30 p.m.–4:00 p.m.   Move to Site
4:00 p.m.–5:30 p.m.   **SITE VISIT 2: The Compact and Smart City – Magok District (Botanic Park)**

The Magok Smart District (MSD) is the last major development district in Seoul. MSD enjoys excellent access to an airport and is located in an area that boasts of convenient transportation infrastructure that is connected to downtown Seoul, while forming an organic industrial belt with nearby industrial complexes. Designed to be an advanced research and development industry hub for Northeast Asia, MSD has high-speed ICT infrastructure and a smart integrated control system built across the city. With the creation of Seoul's first botanical park within the district, known as Seoul Botanic Park, MSD has demonstrated the potential of an eco-friendly, smart, and self-sufficient city as an engine of economic growth.

5:30 p.m.–6:30 p.m.   Move to Site
6:30 p.m.–8:30 p.m.   **Welcome Dinner**
Hosted by SH Corporation at Natural Byeol Gok Gwanghwamun

Day 2, 29 October (Tuesday)

PART 2: ENVIRONMENTALLY SUSTAINABLE CITY

9:00 a.m.– 10:30 a.m.   **SESSION 2: CITY DEVELOPMENT AND RIVER**
- **River Comprehensive Development**
  Woowon Kang, Tourism and Culture Specialist, Han River Headquarters, Seoul Metropolitan Government
  - o   Han river comprehensive development projects (1982)
  - o   New Master Plan (2016~): Nature, Land Use, Accessibility, Landscape
- **Resilience to Water-Related Disaster Risk and Safety System in Seoul**
  Suk-Min Lee, Research Fellow, Seoul Institute
- **DT Use Case:** Flood Forecasting System
  Man-Shin Han, Senior Officer, Forecast and Control Division, Han River Flood Control Office, River information Center, Han River Flood Control Office
- Question and Answer

10:30 a.m.–10:45 a.m.   Coffee Break

10:45 a.m.– 12:15 a.m.   **SESSION 3: ENVIRONMENT AND WASTE MANAGEMENT**
- **Smart Wastewater Management**
  Byung Kook Lee, Vice President and Chief Research Fellow, Korea Environment Institute
- **Municipal Solid Waste Management**
  Kunwoo Oh, Team Leader, City Environment Division, Seoul Housing and Communities Corporation
- **DT Use Case:** Thermal hydrolysis technology for the conversion of sludge to renewable energy and high-quality bio solids
  SangKyu Hwang, Director, CAMBI Korea
- Question and Answer

12:15 p.m.–1:00 p.m.   Lunch

1:00 p.m.–1:45 p.m.   Move to Site

1:45 p.m.–3:00 p.m.   **SITE VISIT 3: Mapo Resource Recovery Facility**

The facility was created in May 2005 after prolonged use of landfills for the northwest region of Seoul. It has the capacity of incineration for 750 tons of waste per day (250 tons per day × 3 units). The wastes are safely incinerated at high temperatures. Recycled thermal energy is captured and re-used for various services including district heating, and creating a clean and comfortable environment. The facility reduced greenhouse gas emissions by 21,405 tCO_2 which is comparable to crude oil

imports of 34,070 barrels.

3:00 p.m.–3:30 p.m.	Move to Site

3:30 p.m.–4:30 p.m. **SITE VISIT 4: Seoul Housing Lab (https://seoulhousinglab.com/)**

Seoul Housing Lab is co-working space acting as housing issue platform through sharing, cooperation and data archiving among individuals and groups. Seoul Housing Lab is a residential community space where anyone can experiment, play, and collaborate. Located in Yeongdeungpo-gu, Seoul, its facilities include an exclusive building with café and coworking space, auditorium, education and seminar room, and living room.

5:00 p.m.–6:00 p.m. **SITE VISIT 5: Han River Ferry Cruise**

The Hangang River Ferry Cruise began operations on 26 October 1986, traversing Seoul between east and west. It also aims to promote and familiarize international tourists with the Hangang River as a world-famous attraction.

6:00 p.m.–6:30 p.m.	Return to Hotel

Day 3, 30 October (Wednesday)

PART 3. URBAN TRANSPORTATION FOR INCLUSIVE CITY

9:00 a.m.–10:30 a.m.   **SESSION 4. URBAN DEVELOPMENT AND TRANSPORTATION (I)**
- **Seoul's Policy Sharing Initiative**
  Dong Hoon Shin, Seoul Urban Solutions Agency (SUSA)
- **Public Transportation System Reform in Seoul**
  Wonho Kim, Director/Senior Research Fellow, The Seoul Institute
  - Reorganized bus lines
  - Dedicated Bus Rapid Transit (BRT) corridors
  - Integrated fare structure and ticketing system between transportation routes as well as modes
- **DT Use Case: T-Money,** Smart Public Transportation Pass (PTP) System
  Byungsang Lee, Chief Architect, T-MONEY Corporation (www.tmoney.co.kr)
- Question and Answer

10:30 a.m.–10:45 a.m.   Coffee Break

10:45 a.m.– 12:15 a.m.   **SESSION 5. URBAN DEVELOPMENT AND TRANSPORTATION (II)**
- **Smart City and Intelligent Transport System (ITS)**
  Taehyung Kim, Head of Smart City and Transport Division, The Korea Transport Institute (KOTI)
- **DT Use Case:** Car Sharing Service in S. Korea.
  Sang Yeon Hong, Associate Research Fellow, Department of Transportation System Research, The Seoul Institute
  Seoul's experience on the emerging ride-sharing services will be presented and discussed in the context of the government's policies for this new business. The peer-to-peer ride-sharing industry is rapidly expanding worldwide, except for South Korea, where it continues to face difficulties trying to overcome regulations and opposition from rival industries. Uber, Inc. attempted to enter the South Korean market in 2013 before it shut down all services in 2015. In 2019, Kakao Mobility began its own carpooling business but has been struggling to determine a solution for the opposition from the taxi industry. South Korea's leading car-sharing service provider SoCar launched Tada in November 2018, using passenger vans to offer ride-hailing service, but it is also struggling with existing tax businesses' protests.
- Question and Answer

12:15 a.m.–13:15 p.m.   Lunch
13:15 p.m.–2:00 p.m.   Move to Site

2:00 p.m.–3:00 p.m.	**SITE VISIT 6: Transport Operation and Information Service (TOPIS) Center**

Seoul TOPIS refers to the general transport control center responsible for operating and managing Seoul's overall traffic. TOPIS does this by collecting traffic information from the Bus Management System (BMS), the Transport Card System, the unmanned surveillance systems of traffic-related authorities and institutions such as Seoul Traffic Broadcasting, Seoul Metropolitan Police Agency, and the Korea Expressway Corporation.

3:00 p.m.–3:30 p.m.	Move to Site
3:30 p.m.–4:30 p.m.	**SITE VISIT 7: Seoul Start Up Hub** (http://seoulstartuphub.com)

- **Start-Up, Scale-Up and Global-Up Program in Seoul**

Tae-Hoon Lee, Director, Seoul Start-up Hub Team, Seoul Business Agency, http://www.sba.seoul.kr/eng /main/main/index.jsp

Founded in June 2017, the Seoul Start-Up Hub is Korea's largest start-up incubator. The hub aims to cultivate 450 new companies and it also serves as a control center for 24 smaller start-up incubators in Seoul. The hub provides a diverse range of support services such as business model development support, open-space, and preparations for pre-start-up companies.

4:30 p.m.–5:00 p.m.	Move to Site
5:00 p.m.–5:40 p.m.	**SITE VISIT 8: Ku Anam-dong Campus Town**

Korea University transformed the neighborhood of its campus into a future-oriented district. The university took the initiative in creating a unique life zone, by establishing infrastructure that caters to the students' and local residents' educational, research, consumer life, business development, housing, cultural, and leisure activities. The campus town has been built on Korea University's "π-Ville," where aspiring entrepreneurs share and develop their business ideas, receive professional mentoring, and expand its

business startup supporting services within the campus. For the initiative to support the university town, Korea University, the Seoul Metropolitan Government, and the Seongbuk District Office established a partnership through a Memorandum of Understanding.

5:40 p.m.–6:30 p.m.   Return to Hotel

Day 4, 31 October (Thursday)

PART 4. COMPETITIVE CITY

9:00 a.m.–10:20 a.m.   **SESSION 6: SME AND STARTUP SUPPORT PROGRAMS**
- **Start-up Ecosystem in Korea**
  Nari Shin, Team Manager, Start-up Alliance (https://start-upall.kr)
- **Case of YESF Incubation Programs**
  Sung Joo Bae, Associate Professor of Technology Management, Yonsei University School of Business
- Question and Answer

10:20 a.m.–10:40 a.m.   Coffee Break

10:40 a.m.–12:00 a.m.   **SESSION 7. E-GOVERNMENT AND SMART ADMINISTRATION**
- **Seoul Metropolitan Government's e-Government road maps**
  Kyunghee Ko, Director for the Smart City Division, Seoul Metropolitan Government (SMG)
  The SMG has set up a total of 477 types of information systems, covering the entire range of its public services, including urban planning, culture, tourism, transportation, and housing for its 127 divisions. The Seoul e-Government currently focuses on the promotion of across-the-board mobile administrative services and the so-called big data-based municipal administration to realize a new data-centric, scientific, innovative information culture in the city. Experiences for some e-government application projects will be shared including smart administration systems (32 types of administrative functions), workflow management information system (electronic approval and document management), online civil service portal ("Minwon," with 96 types of online applications).
- **Geospatial Information Service**
  Jongile No, Senior Manager, Global Business Department, Korea Land and Geospatial Informatix Corporation (LX)
  Two gas explosions in 1995 have spurred public awareness on the necessity of geospatial information service (GIS) in South Korea. Under the four-phase national GIS implementation plans, the government has undertaken the National Geospatial Information Service (NGIS) project, with the cooperation of many local governments, GIS academies, and industries. The project's implementation covers a 20-year period.
  In the meantime, the use of GIS has considerably increased since the 1990s. The Seoul Metropolitan Government launched its GIS project in 1995 to improve the quality of its service delivery and has produced fundamental digital maps and developed various GIS application systems on roads, urban planning information, water supply, sewerage, land information, geotechnical

information, underground facilities, and a new address management system.
- Question and Answer

12:00 nn–1:00 p.m.   Lunch break

1:00 p.m.–3:00 p.m.   **SESSION 8: GROUP DISCUSSION**

- Group projects and presentations

3:00 p.m.–4:00 p.m.   **CLOSING**