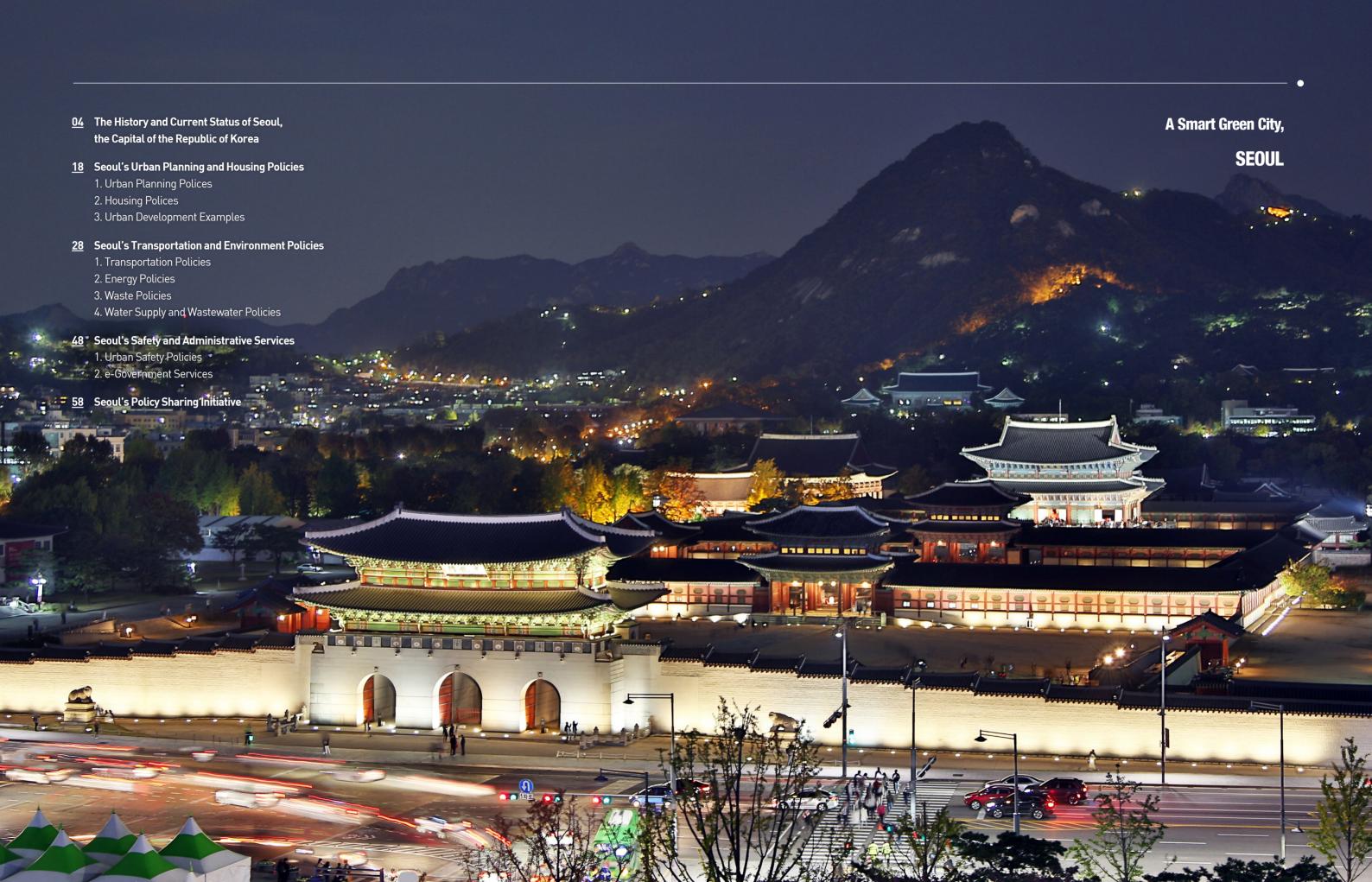
SEOUL'S POLICY SHARING







Centrally located in the western part of the Korean Peninsula, Seoul is a city with an excellent natural environment with 41.5km of the Hangang River passing through the city and 27% of its total area being public green space. It is also the center of politics, economy and culture with a long history as the capital of Korea for 600 years, and it is the heart of Korea's economy that accounts for 23% of the country's gross domestic production.

In 2016, Seoul was visited by more than 13 million foreign tourists and was ranked third in the world in the number of international conferences hosted, according to the UIA. Seoul has been also ranked first among 100 major cities for the seventh consecutive time since 2003 in the e-government evaluation conducted by Rutgers University in the United States, earning recognition as the world's leading 'smart' city.

Seoul was nothing but ruins of war in the 1950s, a city of poverty with its GNP per capita standing at only USD 82. It suffered from environmental pollution and infectious diseases. Within just 3-4 decades after the end of the Korean War, Seoul has grown into a mega city where some 10 million people live comfortably. It has solved various urban problems such as slums, housing shortage, water shortage, garbage, traffic congestion and security problems in a short amount of time. Seoul has now developed into a smart sustainable city.

This development experience and knowledge of Seoul will serve as an important intellectual asset that helps many cities in its early urbanization get through without experiencing hardship. Thus, the City of Seoul has launched the "Seoul's Policy Sharing Initiative" with an aim to share its development experiences and knowledge with other cities around the world. Under the Initiative, Seoul carries out various projects such as its overseas partner cities' capacity-building program, policy consulting, expert dispatch, and knowledge sharing on and offline.

Seoul plays a leading role in promoting the global city development agenda as the chair city of WeGO, CITYNET and ICLEI. Seoul also joined forces with UN ESCAP and CITYNET to build 'the Urban SDG Knowledge Platform' and take the lead in sharing knowledge among cities around the world. Seoul hopes that such efforts will contribute to creating sustainable communities in cities around the world.

Current Status of Seoul

10,197,604 people 605,25 km² Seoul boasts outstanding natural beauty amid mountains and rivers. It is home to approximately ten million people who live in a safe and healthy environment. For the sustainable development of the city, the Seoul Metropolitan Government (SMG) makes steady efforts to reduce its greenhouse gas emissions and improve its energy efficiency while at the same time incorporating the country's cutting-edge information and communication technology (ICT) into every aspect of its municipal administration including traffic control, water management and urban safety.

- Location Center of the Korean Peninsula
- **Population** 10,197,604 (as of 1Q 2017)
- **Area** 605.25 km²
- Major River Hangang River

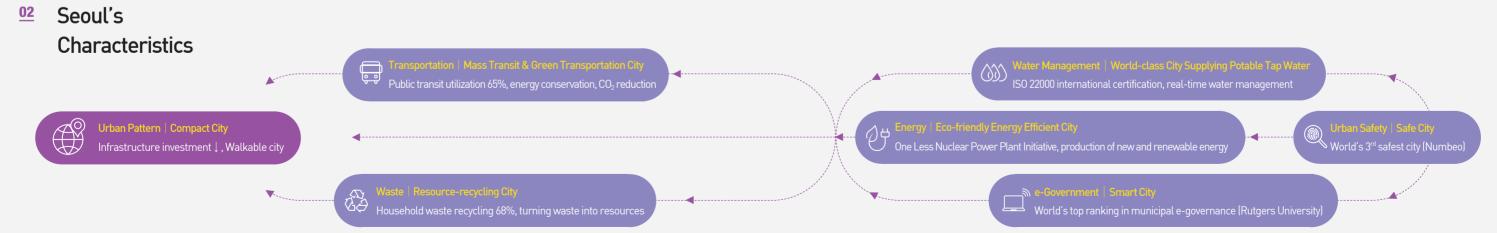
Mountains 26 including Namsan, Bukhansan, Gwanaksan, Dobongsan, Umyeonsan and Buramsan

International Evaluation of Seoul

- World's No. 1 in municipal e-governance (Rutgers University, USA) for seven consecutive times (2003-2016)
- Ranked 3rd in the world in the number of international conferences hosted (UIA 2015)
- Ranked 6th in the world in global city competitiveness (Mori Memorial Foundation, Japan 2016)
- Ranked 8th among the world's 'smartest' cities (Forbes, USA 2016)



*Eungdapso: Integrated Online Civil Complaints and Suggestion Management System Minwon 24: 24-hour public service portal



Major Indices

Source: Seoul statistics (stat.seoul.go.kr)>

Population

Q 10.19

Total population

10,197,604 persons (as of 1Q 2017)

Population density 16,861 people/km² (2016)

No. of households 3,698,433 (2017)

Industrial Economy

KRW 344 trillion

Regional GDP KRW 344.426 trillion (2015)

No. of businesses 820,658 (2015)

Welfare Benefits

No. of National Basic Living Security beneficiaries 267.978 (2016)

No. of social welfare facilities 7.51 per 100,000 citizens

(2015)

Urban Development and Housing



No. of houses 3,633,021 (2015)

Diffusion ratio of housing 96% (2015)

No. of public rental housing 267,326 (June 2017)

Public libraries 146 (2015)

Foreign tourists

13.450.000 (2016)

No. of international

conferences

494 (2015)

No. of cultural assets 1,723 (2016)

Culture/Tourism

13.45 million tourists

International Exchanges



Sister and friendship cities 58 (July 2017)

Membership in international organizations 18 organizations

Environment



Parkland per person 16.3m² (2015)

Residential waste 9,438.7 tons/day (2015)

Waste recycling 35,575.5 tons (2015)

Food waste 3,165.8 tons/day (2015)

Fine dust

60µg/m³(2017)

Electricity consumption 3,845,908MWh (2016)

Water consumption 1.113 billion m³ (2016)

Sewer pipeline 10.615km (2015)

Water supply pipeline 13,648km (2016)

79.7 points

Urban Safety

Traffic safety index 79.7 points (2015)

No. of crimes 356,576 (2015)

No. of 119 rescue services 127,481 (2015)

Wind and flood damage KRW 197.668 million (2016)

No. of fires 5,921 (2015)

Transportation

3.05 million 94.8 %

No. of registered vehicles 3,050,000 (2015)

Traffic volume 32.10 million/day (2015)

Traffic speed

25.2km/h (city center: 17.9km/h) (2015)

Road ratio 22.43% (2015)

No. of subway lines 9 lines (2016)

> Total length of subway 331.6km (2016)

Subway ridership 7.27 million/day (2016)

No. of buses 6,951 (March 2017)

No. of bus routes 352 (March 2017)

Bus ridership 4.28 million/day (2016)

ICT

(Public Service) Information disclosure rate 94.8% (2017)

Smartphone users 90% of Seoul citizens (2016)

Free WiFi hotspots

2,694 locations/8,679 AP installations (2017)

Free smartphone charging stations

390 (5,700 chargers) (2016) **CCTV Integrated Control**

Center 25,070 (24/7 service) (2016)

High-speed telecom network (e-Seoul Net) 35 institutions, 183km (2016)

Seoul Data Center Information System Integrated management of 1,065 systems (2016)

Mobile app service 42 apps in 11 fields (2017)

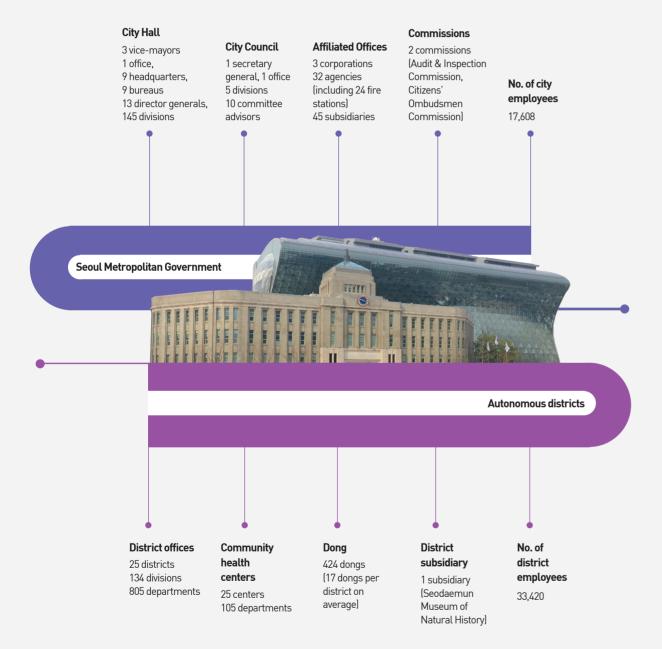
> (Source: Information & Planning Division, the Seoul Metropolitan Government

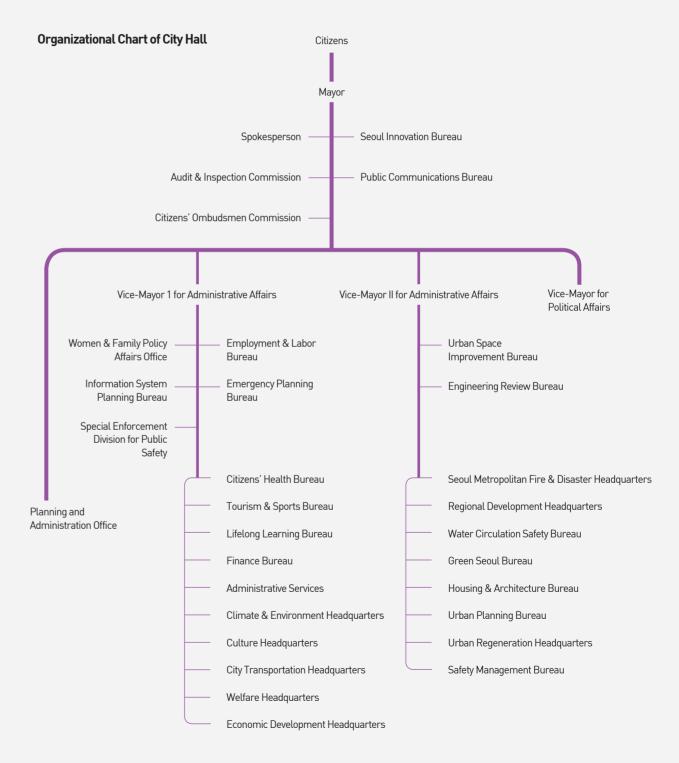
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The History and Current Status of Seoul

Current Status of Administrative Organization

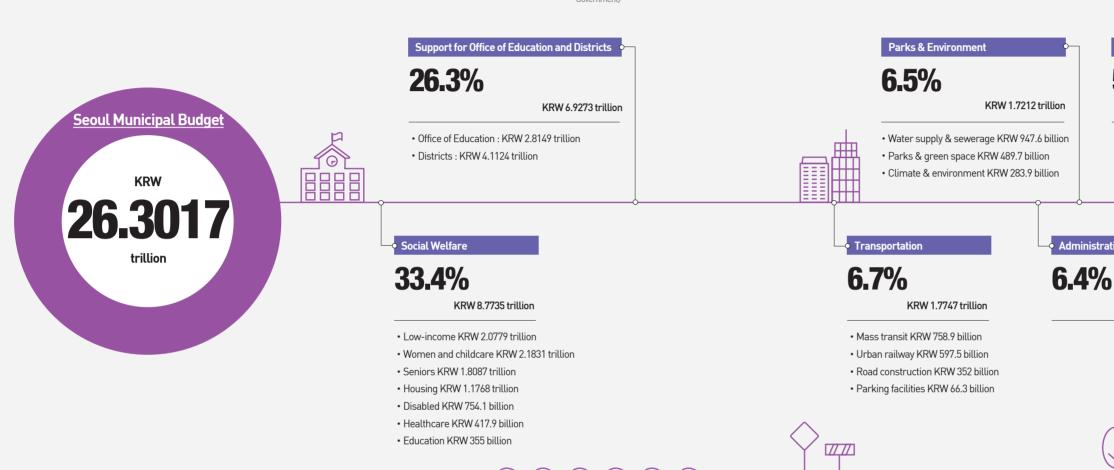
As of July 2017 (Source : Organization Division, the Seoul Metropolitan

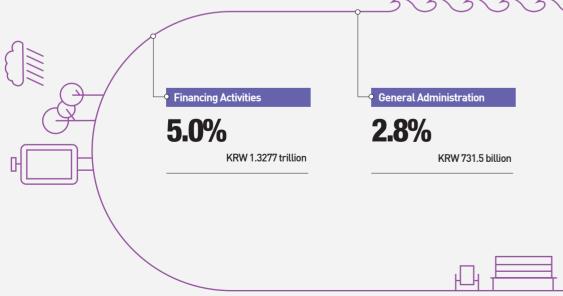




Seoul Municipal Budget 2017

⟨Source : Budget Division, the Seoul Metropolitan Government⟩





Culture & Tourism

2.4%

KRW 629.1 billion

- Culture, arts and sports KRW 371.4 billion
- Historic & cultural heritage KRW 183.6 billion
- Tourism promotion
 KRW 74.1 billion

Urban Planning

2.1%

KRW 540.3 billion

Urban Safety

5.5%

Administrative Operation

KRW 1.677 trillion

- Housing environment KRW 278.3 billion
- City maintenance
 KRW 262 billion

Industrial Economy

KRW 1.4589 trillion

• Facility management KRW 758.3 billion

Flood control KRW 512.8 billion

• Fire protection KRW 187.8 billion

2.1%

KRW 544.4 billion

- Industrial support KRW 254.6 billion
 - Job creation KRW 178.3 billion
 - Welfare economy KRW 80.5 billion
 - Social economy KRW 31 billion

Sale economy river or bittlerin

Reserve Fund KRW 196.2 billion (0.7%)

The History and Current Status of Seoul

Seoul's History

The history of Seoul can be traced back 2,000 years to when the capital of Baekje was located near the Hangang River basin in the southeastern part of the city. The full-fledged urban development began when Seoul became the capital of the Joseon Dynasty (1392-1910) in 1394.

With the opening of the port of Incheon to the west in the late 19th century, Seoul started to build a modern city by introducing electricity, railways, trams, parks, waterworks, schools and hospital facilities. However, as the Japanese colonial period (1910-1945) followed with gradual industrialization, poor settlements emerged throughout the city, and the surrounding areas were rapidly incorporated into the city as new residential areas. After the national liberation in 1945, Seoul was officially renamed the Seoul Special Metropolitan City which however turned into ashes during the Korean War (1950-1953).

Seoul has rapidly transformed itself from ruins of war to a global metropolis in just half a century accompanied by rapid economic growth. Industrialization that the European countries had achieved over a century took less than 30 years in Korea. Having overcome various urban problems within half a century, Seoul has become a smart city where 10 million people can live conveniently.

The development of Seoul can be divided into three stages. In the 1960s and 1970s, due to massive population inflows and lack of infrastructure, Seoul experienced serious urban problems such as traffic congestion, environmental pollution, unauthorized settlements, and housing shortages. To solve these problems, the City of Seoul concentrated on building road infrastructure, construction of public housing in what had been unauthorized settlements, construction of Cheonggye Overpass roads and Yeouido residential areas.

In the 1980s and 1990s, Seoul played host to the Asian Games in 1986 and the Olympic Games in 1988, and aggressive urban

improvement and beautification policies were implemented in the city throughout the period. It was during this period that Seoul implemented the comprehensive development plan of the Hangang River and completed a great variety of infrastructure projects including the construction of the Gangbyeonbuk-ro and the Olympic-daero along the Hangang River, Subway Lines 2-8, and large apartment complexes in Gangnam, Mokdong, Godeok, Gaepo and Sanggye in response to the explosive demand for middle class housing. Following such large-scale infrastructure construction projects, Seoul was able to equip itself with a considerable level of urban infrastructure including public transportation, roads, and water supply and sewage systems. However, Seoul also suffered the typical side effects of indiscriminate economic development such as destruction of the natural environment, deterioration of historical resources and collapse of communities.

In the 2000s, along with the development of information technologies and increasing citizens' demand for improvements to the quality of life, the Seoul Municipal Government's urban management goals changed into the achievement of a sustainable city and a cutting-edge IT city. It was during this period that Seoul restored Cheonggyecheon Stream and expanded green space including Seoul Forest while the municipal government digitalized the whole of its administrative services.

Recently, the economic growth has slowed and the social environment has changed due to rapid population aging. The municipal government has made a paradigm shift to urban regeneration, the results of which include Seoullo 7017 and the Sewoon Shopping Center Regeneration Project.

(Source : Seoul and Global Megacities, Seoul Institute (2017), p. 21)

Seoul's Urban Development Stages and Major Policies

Stage 1 Urban Foundation Expansion Period (1960-1980)

Characteristics

Concentration on the expansion of basic infrastructure (water supply, roads, housing) following population explosion

Major Development Plans

- The Yeouido Development Plan
- Announcement of the Gangnam Development Plan

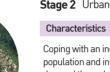
Major Projects

Stream

- Covering Cheonggyecheon Removal of
- Starting construction of Cheonggyecheon Overpass
- Building major bridges across the Hangang River (Yanghwadaegyo, Hannamdaegyo, Cheonhodaegyo Bridges)

water pipelines

- unauthorized buildings Completion of Subway
- Expansion of Guui & Ttukseom Reserviors and replacement of old



Stage 2 Urban Growth Period (1980-2000)

Coping with an increase in population and infrastructure demand through renewal of downtown urban area and old apartments together with the construction of arterial roads and urban expressways

Major Development Plans

- Mokdong New Town Development Plan · Commencement of five new metropolitan towns (Bundang, Ilsan, Pyeongchon, Sanbon, Jungdong)
- · Construction of arterial roads including the Gangbyeonbuk-ro and Olympic-

Major Projects

- Construction kickoff of the five new metropolitan towns
- Completion of subway lines 2-8
- Launch of the separate waste disposal system
- · Launch of the Seoul Bus Card

Stage 3 Sustainable City Development Period (2000-present)

Promotion of sustainable development including the regeneration of the historic city center and the restoration of Cheonggyecheon Stream and Gwanghwamun Square (IT development, increased civic awareness and citizens' incomel

Characteristics

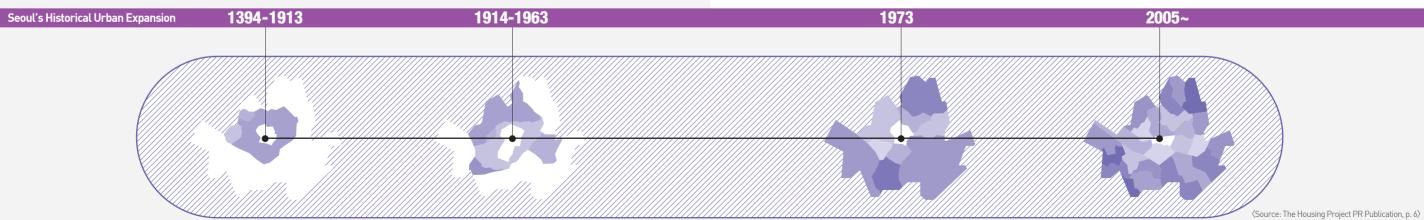
Major Development Plans

- · Restoration of Seoul City Wall and the historic city center
- Restoration of the Cheonggyecheon Stream area (including construction of Gwanghwamun Square) • Development of cutting-edge office
- buildings in city center • Digitalization of all municipal services
- through cutting-edge ICT Announcement of the 2030 Seoul Plan

Major Projects

- Restoration of Seoul City Wall and the historic city
- Cheonggyecheon Stream Restoration Project • Park Refurbishment Project
- Seoullo 7017
- Sewoon Shopping Center Regeneration Project
- Installation of Subway
 - Platform Screen Doors Public transport reforms
 - (integrated public transportation card, exclusive median hus lane system, etc.)
 - One Less Nuclear Power Plant Initiative

(Source: Research on Overseas Cities and Establishment of Strategic Exchange Plans (2013), p. 59)



New York 786km²/8.33 million people/about 10 people per 1,000m²

'Compact City,' the Characteristics of Seoul's Urban Spatial Structure



Seoul is a very compact and efficient city in terms of land use. With one of the world's highest population density, Seoul has one of the smallest amounts of land use per capita. If Seoul had been developed at the same density as a Western city, its forests mentioned above would have disappeared, and the areas would have been developed as urban space. The diffuse land use would have increased the burden on traffic and infrastructure and aggravated environmental pollution. One of the biggest achievements brought about by the development of compact towns in Seoul is green Seoul as an 'invisible' real beauty.

Compressive urban development has drastically reduced CO₂ emissions per capita in Seoul. The Public Transportation Mode Share in Seoul has surpassed the 2/3 mark. Compact systematic land use has enabled Seoul to develop an efficient, convenient and environmentally friendly public transportation system. That has in

turn empowered the city to grow into a world-class low-carbon city. Seoul began to transform itself into one of the world's most sustainable modern cities in 1966 with the announcement of the 'Basic Urban Plan of Seoul.' Through the plan, Seoul that predicted rapid growth will establish a spatial order instead of the disorderly development that was prevalent at that time, secure necessary urban space to accommodate the increasing population, and designate greenbelts on the outskirts as spaces of coexistence between nature and humans. Seoul also put forward a plan for its secondary central business districts, thus improving the efficiency and effectiveness of its infrastructure such as transportation, water supply, sewerage and waste management.

〈Source: Prof. Gang Myeong-gu, The World and Cities, Vol. 8, p. 14-15〉

Total area: 605km² Population: 10.56 million people Paris 105km²/2.26 million people / about 21 people per 1,000m **London** 1,570km²/8.17 million people/about 5 people per 1,000m² Beijing 16,801km² / 20.69 million people / about 1 person per 1,000m² Tokyo 622km²/8.97 million people/about 14 people per 1,000m Comparison of the world cities' population density and CO2 emissions per capita 20

Seoul

Compact City SEOUL

Advantages of a compact city

- Infrastructure investments \
- Land use efficiency ↑
- Example of the comparison of infra costs
- Green space ↑
- CO₂ emissions |



- Water supply and power supply lines (n) n = a+b
- One bus stop

High density city



Population density (person/km²)



• Two bus stops



Seoul's Urban **Planning** and Housing **Policies**

Having experienced explosive population growth and extreme rapid urbanization, Seoul is now leading stable urban development with urban planning considering the next 100 years and housing policies and development projects based on such

96% (2015)

Urban Planning Policies

⟨Source: Urban Planning Division, the Seoul Metropolitan Government⟩

Seoul has prepared and operated a basic city planning system for the next 100 years in solving problems caused by rapid growth and bracing itself for the incoming low-growth period.

Urban Planning Charter

2030 Seoul Plan

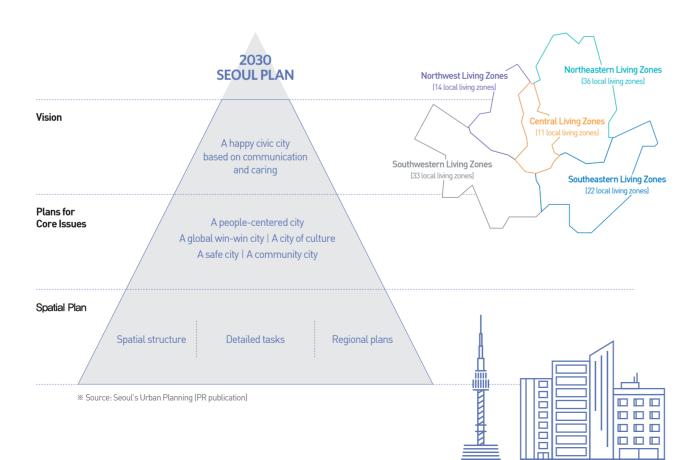
Living Zone Plan

01 2030 Seoul Plan

Seoul Plan (urban master plan) is the highest statutory plan in the field of urban planning in Seoul. '2030 Seoul Plan' established in 2014 is the city's fourth master plan since the first plan was announced in 1990. More than 250 citizens and experts participated in the decision-making process of the city's vision, development directions and space management quidelines.

02 Living Zone Plan

The living zone plan is the city's first plan of its kind established in 2017. It has set up citizens' 'living zones' throughout the city through citizens' direct involvement. The Seoul Metropolitan Government has collected 34,833 opinions from 4,479 citizen representatives for over three years and set up plans for five regional living zones and 116 local living zones in Seoul.



The Seoul Urban Planning Charter

The charter, which consists of a total of ten articles, plays the role as the constitution for urban planning in Seoul, by presenting consistent principles that will not change with the passage of time.

01 Nature Conservation City

Seoul's natural environment shall preserve its unique ecological and landscape values. Seoul shall protect and restore its surrounding mountains (Naesasan and Oesasan), the Hangang River and its tributaries to establish and enhance its environmental identity and symbolism and create a healthy city where citizens can easily access nature in their daily lives.

D2 History and Culture Preservation City

As the history and culture of Seoul is a precious cultural heritage of the Republic of Korea which has been accumulated over its people's long history, Seoul shall preserve and inherit it to the next generations. Seoul shall also creatively utilize both its tangible and intangible historical and cultural heritage to create a future value that will enrich the cultural life of its citizens and contribute to its urban revitalization.

04 Life Safety City

Seoul shall build a city that is safe from disasters with urban planning that enables it to adapt to natural terrains and restore its natural water cycle. Seoul shall set up a risk management system to prevent various disasters, minimize their impacts, and quickly recover from them. Seoul shall create a pleasant and dynamic urban environment that allows people to live safely without fearing crime.

(IS)

03 Public · Green Transportation City

Seoul shall build roads and traffic systems centered on public transportation in order to guarantee all citizens' access rights and reduce both environmental pollution and traffic congestion. Seoul shall increase the convenience of using green traffic such as walking and bicycling, and create a street environment that prioritizes the safety and comfort of pedestrians ahead of vehicles.

05 Eco-friendly Energy Saving City

Seoul shall pursue sustainable development by respecting the natural environment and reducing the energy consumption of buildings through the use of new and renewable energy. Most notably, public buildings and facilities shall lead the energy conservation efforts.

06 Harmonious Scenic City

Seoul shall ensure that its buildings, facilities and structures match the city's natural environment and historical scenery and harmonize with buildings in the area. Seoul shall overcome the uniformity of its urban and residential environment and create diverse and distinctive landscapes drawing on the characteristics of each region.

07 Convenient City Anywhere

Seoul shall aim to reduce the commuting cost of citizens and promote the balanced development of various regions by creating an urban space structure where citizens' residential areas and workplaces are close by. Seoul shall create a pedestrian-friendly urban center everywhere by building diverse commercial and cultural complexes near subway stations.

08 Placeness City

Seoul shall maintain the diversity of its places by protecting the unique characteristics of its various locations and the memory of their communities. Seoul shall enhance the quality of its urban regeneration and environmental improvement efforts and seek specialized regional development through the creation of places with various life values and historical experiences.

09 Participation and Communication City

Seoul shall ensure that all its citizens voluntarily and democratically participate in the process of city planning so that their diverse interests can be reflected in its municipal administration. Seoul shall contribute to revitalizing its local communities by establishing a cooperative system that enables public administration agencies to continue to communicate with citizens.

10

10 Consideration and Coexistence City

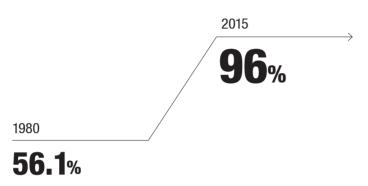
Seoul shall aim for urban plans promoting social integration so that citizens of various classes and generations can coexist without conflict. Seoul shall create a social welfare environment in which priority is given to disabled people, the elderly, children and pregnant women. Seoul shall become an international city that embraces differences in nationality, race, language, religion and culture while respecting diversity.

HousingPolicies

⟨Source: Housing Policy Division, the Seoul Metropolitan Government⟩

01 Diffusion Ratio of Housing

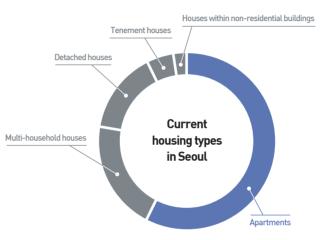
As the demand for housing increased explosively during the high-growth period, Seoul experienced a severe housing shortage. The government has supplied large-scale apartment complexes since the late 1980s to address chronic housing shortages. As a result, the housing penetration rate in Seoul reached 96% as of 2015.





02 Housing Types

The types of housing in Seoul have changed dramatically. Until 1970, more than 80% of the houses in Seoul were detached houses and only 4% were apartment complexes. However, since the mid-1970s, large-scale apartment complexes have been supplied, resulting in the rise of the proportion of apartments to 58.8% while the ratio of detached houses dropped to 16.1% in 2014. Apartments have become the typical housing type in Seoul.



Apartments
59.0%

Multi- household houses
20.3%

Detached houses
14.6%

1,613,000

398,000

14.6%

Tenement houses 142,000

Houses within non-residential buildings **0.9**%

曲

24,000

03 Housing Occupancy Types

As of 2014, 40.2% of Seoul residents live in self-owned houses. This indicates that 58.4% of Seoul residents live in rented houses.

Self-owned houses

40.2%

Jeonse (large lump-sum based rent system)

32.1%

Monthly rent

26.3%

Rent-free housing

1.4%

04 Housing Welfare Policies

Public rental housing

As low-income households have suffered from high home prices and subsequent rent increases, the Seoul Metropolitan Government has contributed to their housing stability through the provision of various public rental housing. Recently, it has expanded the supply of public rental housing customized for citizens' life cycles (267,326 units as of June 2017) as the elderly population and single-person households continue to increase while the young suffer from a high unemployment rate and ever-rising housing costs.

Diverse rental housing customized by income level

The Seoul Metropolitan Government provides various types of rental housing to contribute to the stabilization of lowincome citizens' housing: It builds large-scale rental housing complexes through residential land development, purchases existing multi-dwelling housing units including those set to be redeveloped/reconstructed and rents them out, or leases detached houses from home owners to rent them out,

Classification	Types	Contents	Rent Area	Mandatory Period
Construction	Lifetime rent	Rent for the lowest income group	25~49m²	50 years
	Public rent	Displaced residents, subscription savings account holders	Less than 84 m ²	50 years (special), 20 years (general)
	Long-term rent for the poor	Citizens of income level-4 or lower	Less than 59 m ²	30 years
	Long-term jeonse	Jeonse-based rental housing for a minimum of 20 years	Less than 129 m ²	20 years
	Redevelopment rent	Purchase of units to be redeveloped for rent	59 m ²	50 years
Purchase	Multi-dwelling unit/studio apartment purchase & rent	Purchase of multi-dwelling units & studio apartments for rent	Less than 84 m ²	20 years
Lease	Long-term guaranteed rent	Support for jeonse deposits (municipal budget)	Less than 60 m² (85m² for a household of four or more people)	Up to 6 years
	Existing house purchase & jeonse	Support for jeonse deposits (government budget)	Less than 85 m ²	Up to 20 years

 $\langle {\sf Source: PR \ Department, Seoul \ Housing \ \& \ Communities \ Corporation} \rangle$

Construction & supply of various types of housing customized by stages in life

Seoul continues expanding the supply of tailor-made rental housing to niche groups, contributing to the stabilization of housing for numerous citizens who were not satisfied with existing public rental housing services.

〈Source: Seoul Housing & Communities Corporation〉



Youth/Entrepreneurs (265 units)



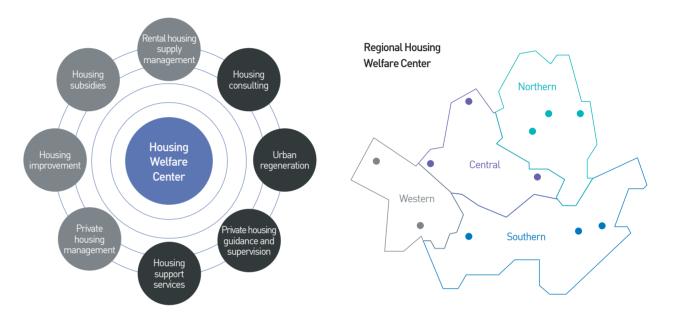
Housing for the youth cooperative (lut-Giut) in Hongeun-dong, Seodaemun-qu

Dojeonsuk (#1) in Seongbuk-gu

Housing welfare system

Seoul's Urban Planning and Housing Policies

Seoul operates eleven housing welfare centers in its four regions with the purpose of managing rental housing near residents and providing a better housing management service to improve the quality of life of its citizens by establishing and implementing differentiated regional residential welfare systems.





Females (146 units)

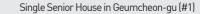


Mother-Child Safety House in Dongjak-gu



Seniors/the underprivileged (289 units)







Artists (59 units)



Artist Village in Seongbuk-gu

UrbanDevelopmentExamples

Seoul has been making continuous efforts to create a place where all citizens can live in a pleasant environment. Seoul realizes its vision of a city where residential areas and workplaces coexist and citizens can live a good life through urban development based on large-scale residential development and the balanced development of deprived areas combined with downtown development projects that pursue both regeneration and development.

Cheonggyecheon Stream Restoration Project

Seoullo 7017

Sewoon Shopping Center Regeneration Project



The Cheonggyecheon Stream flowing through the inner city center of Seoul lost its function as a stream as a result of being covered from 1925 to 1977. Due to the safety risks posed by the covering itself and the aging highway installed above, it was a longstanding challenge to the municipal government. To solve the problems, Seoul implemented the Cheonggyecheon Stream Restoration Project from 2003 to 2005 and removed both the concrete covering and the highway above it while restoring the natural, historical and cultural resources of the area to make it one of the city's most vibrant places (recognized by the Civil Engineering Conference in Asia in 2007, and others).



Completed in May 1970, the Seoul Station Overpass was the symbol of the country's modernization and the first scene of Seoul that visitors to Seoul faced upon their arrival by train. However, the overpass was put on a schedule of being demolished after having been classified as a Class D safety structure in safety diagnosis conducted in 2006. Instead, the Seoul Metropolitan Government carried out 'the Seoul Station 7017 Project' from 2014 to 2017 in order to recycle the overpass as a catalyst for the regeneration and revival of the areas surrounding Seoul Station. The Seoul Station Overpass has transformed into a vibrant and charming pedestrian walkway where people can rest, walk and experience various things.



Completed in 1968, the Sewoon Shopping Center was the country's first residential-commercial complex. In the 1970s and 1980s, the arcade was the leading center of electric appliance businesses. As Yongsan and Gangnam began to replace its commercial position, its businesses declined and was about to be removed for fear of falling into the status of a slum. Seoul is carrying out the 'Sewoon Shopping Center Regeneration Project' with an aim to develop it into the center of the quaternary sector of economy and the center of cultural and creative industries.

Section 1: Jongmyo-Daerim Shopping Center (2015-2017) Section 2: Sampung-Namsan (2017-2019)

Magok Smart City



A Safe City

Magok Smart City has installed intelligent CCTVs in schools, parks and residential areas so that emergencies can be notified to the police for immediate response. In order to immediately detect disasters and provide information, it carries out real-time monitoring on the rise of rainwater and sewage due to torrential rain. It also carries out visual monitoring of its main roads to deal with accidents/disasters promptly.

Informationized City

Magok Smart City has laid fiber optic cables throughout the city to build a broadband high-speed information and communication infrastructure and connect various facilities to the Integrated Control Center through wired and wireless networks. Thus, instant communication is possible with the sensors installed in various field facilities such as CCTVs and water level meters. The smart city also provides citizens with WiFi service in parks, subway stations, bus stops and taxi stands (within a radius of 50-100 meters).

A Convenient City

Magok Smart City ensures smooth traffic flow and provides real-time traffic information. It collects and processes traffic information on detours, bottleneck points, accident-prone areas, intersections, and expected congestion areas in real time and provides it to citizens through the Seoul Transport Operation & Information Service. The smart city thoroughly enforces illegal parking and stop control throughout its major commercial areas, traffic congestion areas and crowded alleys.

Location: Magok-dong & Gayang-dong, Gangseo-gu, Seoul Area: 3,665,722m² Project period: Dec. 2007 - Dec. 2016

Creation of Nanji Ecological Park



Seoul, which had been struggling with the disposal of garbage due to the adverse effects of rapid growth and urbanization, designated Nanjido, a floodplain in the lower reaches of the Hangang River, as a landfill in 1978 for all kinds of waste produced by the city. Approximately 10 years later, Nanjido was transformed into a land of death where leachate, filthy odors and noxious gases were generated. Also, the water quality of the Hangang River and atmosphere of the surrounding area became polluted, destroying the ecosystem of the nearby area. In order to solve the problem, Seoul began the task in 1991 to turn the entire Nanjido area into an eco-friendly area. After about 10 years of planning, designing and construction from 1991 to 2002, Nanjido was revived as an eco-friendly residential complex, ecological park and World Cup Stadium. Most notably, Nanji Ecological Park stages diverse cultural programs and performances and runs camping grounds and a golf course. It has become an extremely popular spot in the city, attracting about 10 million visitors each year (won the UN-HABITAT Scroll of Honor award in 2010).







Seoul's Transportation and Environment Policies

Seoul, where people and nature coexist with one another in harmony, is transforming itself into a city centered on convenient and safe public transportation on the basis of a pleasant natural environment through the implementation of advanced public transportation and environmental protection policies and systems.

Public Transportation Mode Share

65.8%

Transportation Policies

(Source: Transportation Policy Division, the Seoul Metropolitan Government)

Since the 1980's, the income level of Seoul citizens has steadily increased leading to an explosive growth in car ownership. Between 1983 and 2015, the number of cars increased by more than tenfold while the number of roads expanded by just 1.2 times, making the Seoul city streets congested. Thus, the SMG has implemented diverse policies to reduce the use of passenger cars and increase the use of public transportation.

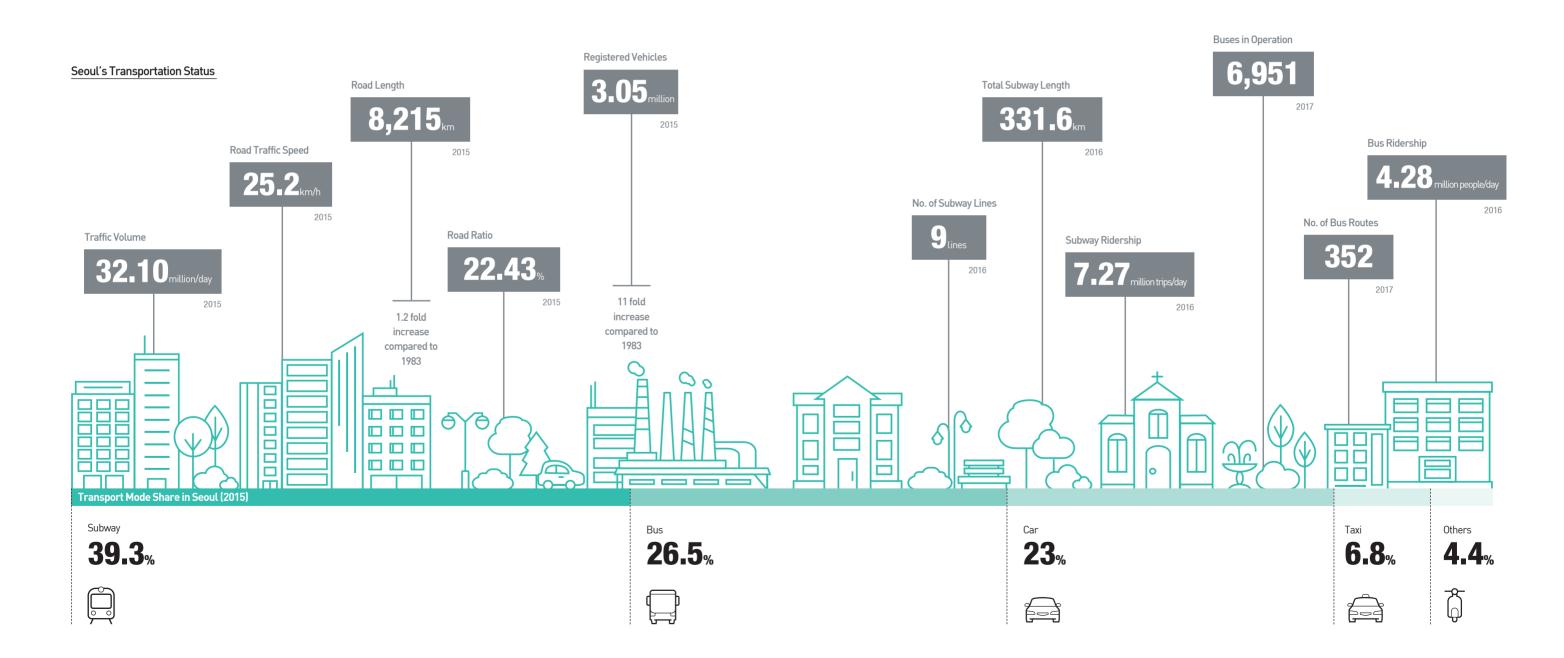
Currently, Seoul has an advanced public transit system enabling its citizens to conveniently have access to anywhere in the city. The system has been a benchmark for many cities around the world.

Public Transit Utilization

65.8%

80.9%

Public Transit Satisfaction Rate



32





01 Buses, Faster and More Convenient Than Cars

'Semi-public bus operating system' to provide reliable bus services

Seoul launched a semi-public bus operating system in 2004, whereby the municipal government is in charge of route decisions, operating method coordination, operation evaluation and financial support while private companies are responsible for bus operations, vehicle management and personnel management. Seoul provides its citizens with safe and convenient transportation services.

Bus priority through 'BRT (Bus Rapid Transit)' systems

The SMG has installed an extensive network of median bus exclusive lanes. boosting the punctuality and speed of bus operations and raising citizens' satisfaction remarkably.

Punctuality 87.3%(2006) → 91.2%(2015) Satisfaction 59.2(2006) → 80.79(2016)

Transit Smart Card (T-money)

The SMG introduced a transit smart card that can be used to pay for bus, subway and taxi fares with a single card. The smart card even offers discounts on transfers between buses and subways, helping boost citizens' convenience with the municipal government's public transit services.



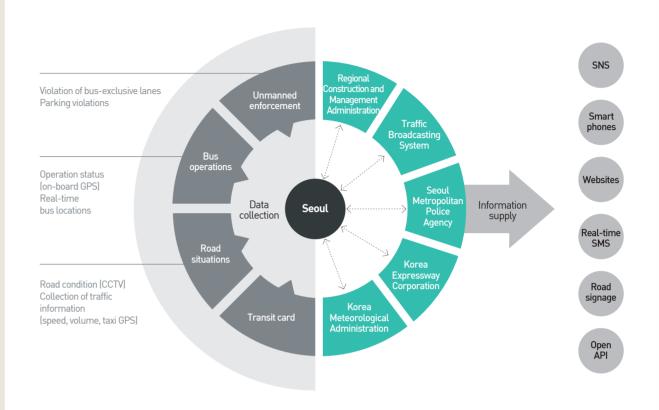
Night Bus

In April 2013, Seoul launched the so-called 'owl bus service' so that citizens could use public transportation from late at night to early in the morning. As of July 2017, Seoul runs 70 buses on 9 bus routes. The owl bus routes were determined according to citizens' demand. To identify the floating population and their travel patterns late at night, Seoul analyzed big data on taxi operations (600,000 pieces of GPS information) and cell phone usage. As of 2015, the satisfaction rate of owl bus users reached 80%, and the success story of the owl bus operations based on big data has also attracted much attention from abroad.

Monthly ridership 6,300(2014) → 7,900(2016) Citizen satisfaction 80.15(2015)

Seoul's Intelligent Traffic System (ITS): TOPIS

Seoul's Transportation and Environment Policies



Integrated Traffic Control and Traffic Flow Monitoring

- Traffic signal control during traffic congestion and detour information in emergencies in addition to around-theclock monitoring of traffic situations
- Providing real-time information on traffic flows to drivers through the TOPIS website, road signage, traffic broadcasting system, mobile apps, ARS, navigation systems and social media

Unmanned Enforcement Systems

- Enforcement of bus-exclusive lanes and parking violations
- Unmanned operation ranging from violation enforcement to payments

Road Traffic Control

Collection and processing of real-time information on traffic flows, speeds and emergencies; control of various equipment at sites; and improvement of surface traffic

Systematic Bus Operations and Integrated Public Transit Services

- Real-time management of more than 9,000 public buses in Seoul
- Supply of information on bus arrivals and traffic flows to bus riders
- Scientific management of bus operations including the control of non-stop or outof-route bus operations

Big Data Analysis Service

Support for scientific transport policies by analyzing various transportation related data (T-money, real-time operation data, road speeds, and emergency information)

Transport Demand Forecasting

Providing citizens with transport demand forecasting services to help them avoid traffic congestion beyond the level of supplying real-time transportation information

 $\langle {\sf Source: Transportation Policy Division, the Seoul Metropolitan Government} \rangle$

Lines 1-4

Lines **6** – **3**

Length: 27km, No. of stations: 25

Line

02 Subway, Fast and Safe Transportation Mode for Seoul Citizens

Seoul operates nine subway lines connecting the city center to the entire metropolitan area. 7.2 million citizens use the subway each day. Seoul plans to extend the existing subway lines and expand the light rail network in order to build a compact urban rail network of 441km, raise the public transportation mode share to 75%, and make the subway available within 10 minutes of walking anywhere in the city.

Free wireless Internet service

Wireless Internet service is available at all subway stations and on trains. Citizens can enjoy free Internet on the subway on their smartphones and tablets.

App service to report discomfort/emergencies

Seoul offers a free app service whereby subway riders can file complaints about heating and cooling conditions or inconveniences of subway facilities, or report emergencies including medical situations on the scene. Call center staff, subway sheriff and police identify the reporters' location in real time and arrive immediately at the scene.





location via WiFi



Platform screen doors for citizens' safety and health

Seoul has installed platform screen doors at all of its subway stations to prevent people from falling onto tracks, reduce noise and make its subway environment more pleasant.

Air quality on platforms 35.3% ↑

Noise 7.9%↓

CCTVs to reduce inconvenience and prevent accidents

Seoul runs CCTV cameras at all its stations and is expanding installation of CCTV cameras on subway trains as well.

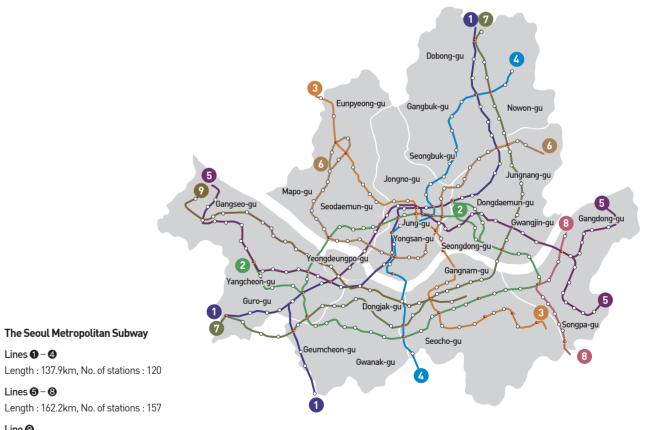
No. of CCTV cameras at stations 11,260(2015)

No. of CCTV cameras on subway trains $1,876(2015) \rightarrow 3,116(2022)$









37

Energy Policies

⟨Source: Environmental Policy Division, the Seoul Metropolitan Government⟩ In order to actively respond to the energy crisis and climate change, Seoul is implementing the 'One Less Nuclear Power Plant Initiative.' The Initiative is Seoul's unique energy policy that seeks to reduce the city's energy consumption and increase its production of renewable energy through the participation of its citizens with an ultimate goal of reducing or replacing 2 million TOE, the amount of energy produced by one nuclear power plant, with clean energy.

Through the first phase of the Initiative from 2012 to 2014, Seoul succeeded in producing clean energy or reducing its energy consumption by 2 million TOE. In July 2014, Seoul launched the 2nd phase of the Initiative called 'the Seoul Sustainable Energy Action Plan,' which aims to develop Seoul into an energy producing city, a city safe from electricity crises, and a city that coexists with other regions of the country.

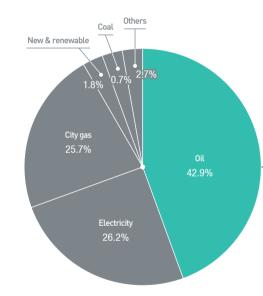
Like the 1st phase of the Initiative, the 'Seoul Sustainable Energy Action Plan (July 2014 - 2020)' was prepared with citizens on the major directions and promotion methods of its projects right from the outset. Seoul gathered its citizens' opinions through a social fiction conference called 'Energy Saving City Seoul: July 2014 - 2020,' policy debates and online surveys. The One Less Nuclear Power Plant Initiative Committee took the lead in setting the values, policy objectives and detailed tasks to be promoted during the 2nd phase of the Initiative. Seoul has also made extensive efforts to reflect opinions from all walks of life and adopt outstanding overseas

policies and learn about new energy technologies through the Seoul International Energy Advisory Council and the Seoul International Energy Conference. The Action Plan goals including the achievement of a 20% power independence rate, production or conservation of 4 million TOE of energy, and the reduction of 10 million tons of CO_2 eq of greenhouse gas emissions were set through 24 meetings of the Initiative Committee, 2 grand citizen debates, and a forum from January to June 2014.

(Source : Citizens' White Paper on the One Less Nuclear Power Plant Initiative, 2012-2016)

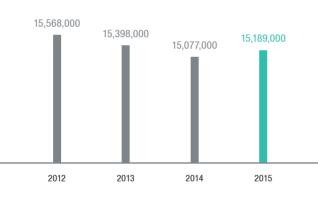
Energy consumption by energy source

2015



Energy consumption

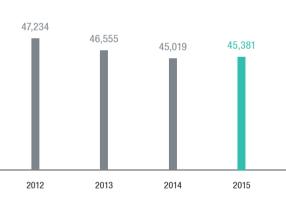
Unit: TOE



※ TOE (Ton of Oil Equivalent): TOE is a unit of energy defined as the amount released by burning one ton of crude oil. It is an imaginary unit created to compare the efficiency of various energy units.

Electric energy consumption

Unit : GWh



Current status of new and renewable energy

Classification	2011	2012	2013	2014	2015
New & renewable energy	256	233	238	293	335
Final energy	15,496	15,568	15,398	15,077	15,189
Utilization rate	1.7	1.5	1.5	1.9	2.2























One Less Nuclear Power Plant Initiative

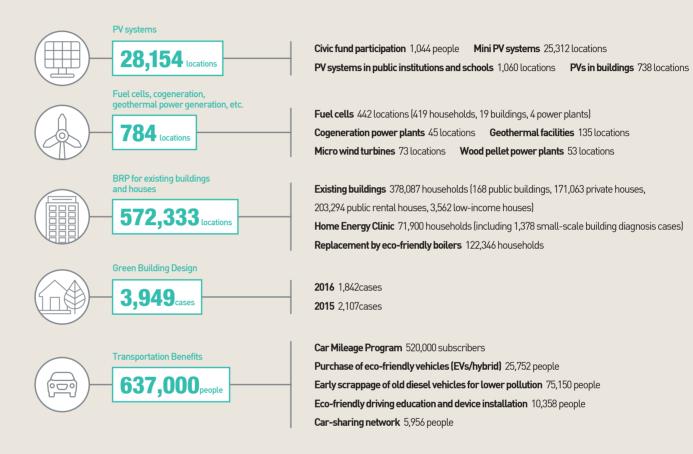
Outcomes of the One Less Nuclear Power Plant Initiative



One Less Nuclear Power Plant Initiative, 2020 target of Phase 2



Major Policies of the One Less Nuclear Power Plant Initiatives



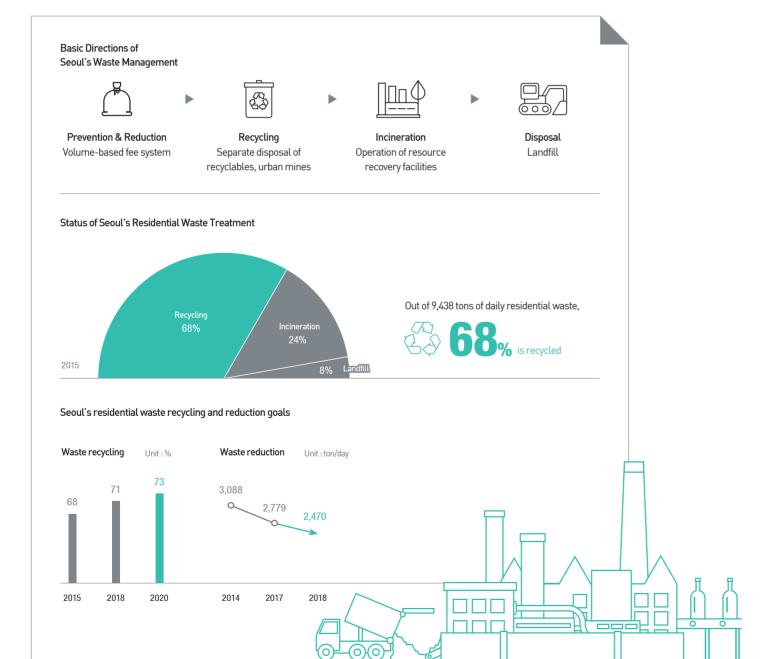
Citizen Engagement Status: "We promote the One Less Nuclear Power Plant Initiative with citizens."

이코	Eco-Mileage subscription 1.87 million people (as of Dec. 2016)		Good Stores conserving energy 5,022 stores		Participation in energy education and tour programs 78,934 people
2 2 2	Training of Green Leaders 50,477 people	<u>2</u> 2 ⁴ 2	Training of Energy Designers 523 people (including 42 social workers)	+	Creation of the Seoul Energy Welfare Fund and welfare projects 31,304 people
에너지 (g) 스크선사단	Energy Guardian Angels Corps 92,813 people		Participation in energy conservation implementation project contests 152 organizations		

Waste Policies

⟨Source: Resources Recycling Division, the SMG⟩

Waste generation in Seoul increased sharply in the 1970s and 1980s as the country's economic development boosted consumption. Through the implementation of a separate waste disposal system and a volume-based fee system, the SMG has continued to reduce its waste generation considerably since the 1990s. As of 2015, the SMG recycles 68% of the city's residential waste with 24% being incinerated. The SMG also recovers the incineration heat to heat water in houses in nearby communities. Seoul is being reborn as a city that maximizes the recycling of its resources through its diverse waste recycling and recovery policies.

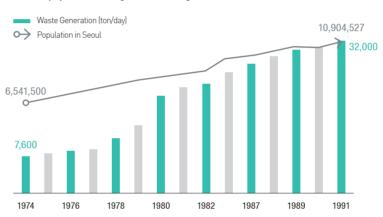


01 'Volume-based Fee System' that Reduces Waste Generation and Considerably Boosts the Waste Recycling Ratio

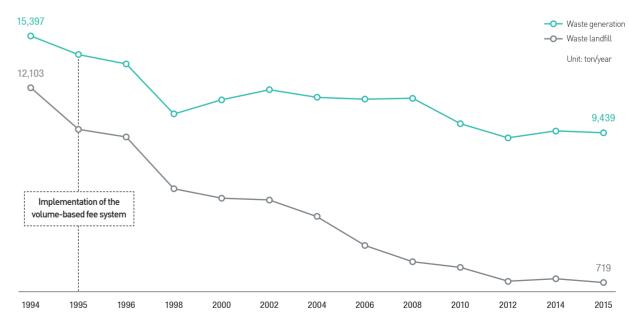
The volume-based fee system applies fees based on each household's waste generation. It embodies the 'Polluter Pay Principle' that calls on polluters to pay fees required to clean up environmental pollution. Since its launch of a volume-based fee system in 1995, the SMG has succeeded in reducing the volume of residential waste and increasing the quantity of waste recycling to a remarkable degree.



Seoul's population changes and waste generation



Trends of Residential Waste Generation





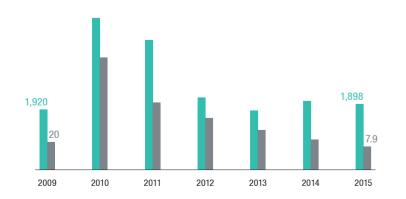
02 Separate Disposal and Collection of Recyclables

Seoul citizens separately dispose of recyclables such as paper, paper cartons, plastics, bottles, metals and vinyl.

03 Recycling Stations to Which Residents Bring Their Own Recyclables

Seoul implements a residential area recycling station project whereby the residents of both multi-dwelling units and detached houses bring their own recyclables to mobile disposal sites. As of 2017, 2,092 recycling stations are in operation.

SR Center performance Discarded home appliances (tons) Discarded cell phones (10,000 units)



04 Urban Mines to Promote Recycling of Household Appliances

Seoul is implementing the urban mining project to extract and recycle precious metals from discarded electronics while creating jobs for socially vulnerable groups. Seoul established the Seoul Resource Center (SR Center) in 2009 has since successfully transformed waste home appliances into valuable resources.

Efficiency of urban mining



05 Resource Recovery Facilities, from Waste to Energy

Seoul operates resource recovery facilities for the hygienic disposal of household waste and the solution of the shortage of dump space. The resource recovery facilities recycle the waste heat generated from waste incineration to supply heating energy and produce electricity.

Areas covered by resource recycling facilities

- The area covered by the Gangnam Resource Recovery Facility
- The area covered by the Nowon Resource Recovery Facility
- The area covered by the Mapo Resource Recovery Facility
- The area covered by the Yangcheon Resource Recovery Facility



Current status of resource recovery facilities

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Classification	Yangcheon	Маро	Nowon	Gangnam
Capacity	400 tons/day	750 tons/day	800 tons/day	900 tons/day
Construction period	1992.12-1996.2	2001.11-2005.5	1992.12-1997.1	1994.12-2001.12
Project cost	₩31.8B	₩ 166.5B	₩ 74.2B	₩ 101.1B
Land area (floor area)	14,627m² (13,166m²)	58,435m ² (30,558m ²)	46,307m ² (29,035m ²)	63,818m ² (27,195m ²)
Waste input	103,798 tons	203,635 tons	186,082 tons	244,746 tons
Waste incineration	104,343 tons	203,066 tons	182,959 tons	243,270 tons
Electricity generation	12,951,034kW	32,579,072kW	-	-
Electricity sales	5,946,444kW	14,436,402kW	-	-

Water Supply and **Wastewater Policies**

(Source: Water Circulation Safety Bureau / The Office of Waterworks, the Seoul Metropolitan Government

Seoul makes an all-out effort to provide its citizens with clean, healthy tap water and environmentally friendly sewage treatment. Arisu, Seoul's 108-year-old tap water brand, supplies healthy and delicious water through systematic and scientific management. Seoul runs four water reclamation centers to sanitarily and safely treat five million tons of sewage, manure, and food waste leachate daily.

Seoul's Water Supply



3.17 million m³/day Daily production (capacity 3.49 million m³/day)

Average daily supply 303L (maximum 335L) per person

Water purification (two treating more than 1 million tons) centers

Intake stations Revenue water (non-revenue water 4.7%)

Service 102 (capacity 2.42 million m³/day) reservoirs



2015



Wastewater treatment ratio 100%

- Length of sewer lines: 10,616km
- 4 Water reclamation centers (Seonam, Nanji, Jungnang, Tancheon)
- Treatment capacity 4.98 million m³/day

Flood Control Facilities

Sewer pipes +

Drainage spots

Rivers (national, local) 40 | Detention basins 52 Rainwater pumping stations 114 | Rainwater harvesting systems 23









239



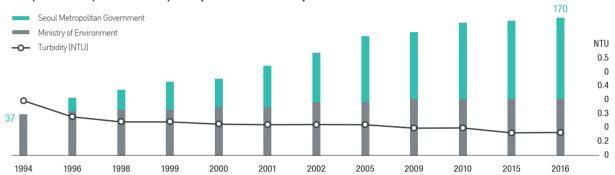
01 Thorough Water Quality Management from Water Source to Tap

Seoul's water supply boasts thorough water quality management and an efficient crisis management system from the water source to the tap. Seoul's tap water Arisu conducts water quality inspections for 170 items, which surpasses the World Health Organization (WHO) recommended level, to supply citizens with the world's safest tap water. Seoul conducts water quality tests on five main items which include residual chlorine, turbidity, hydrogen ion concentration, iron and copper each year on 300,000 households.

Comparison of the number of water quality inspection items

WH0	1	163
Seoul	1	70
USA	1	112
Japan	1	125
EU		52

Comparison of inspection items required by Seoul and the Ministry of Environment



02 State-of-the-art System to Produce the Best Tap Water and Provide a Stable Supply

To produce delicious and healthy water and provide a stable supply, Seoul applies scientific and systematic management systems that draw upon state-of-the-art water purification technologies combined with IT technologies throughout the entire process.

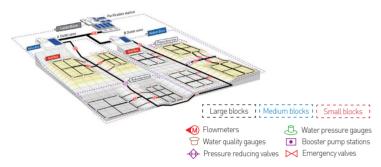
Major systems for tap water production, supply and management

Water purification	Advanced water treatment system	Seoul has added an ozone and granular activated carbon process with excellent adsorption power to the existing water treatment process to remove unpleasant taste, odors and environmental pollutants. It has installed advanced water treatment facilities to all its six water treatment centers.
	Increased frequency of chlorine disinfection	As a technique to reduce the smell of chlorine when drinking tap water, Seoul has increased the frequency of chlorine disinfection from once to twice and significantly reduced odors.
	Application of membrane filtration	Seoul uses a water purification method that separates and removes impurities from raw water by using a membrane as a filter medium. Seoul received eight patents related to membrane filtration.
Water	Uninterrupted water supply through reservoir expansion	Through indirect water supply supported by reservoir expansion, Seoul has prevented pipes from bursting due to pressurization and can supply water for up to 16 hours without interruption in case of emergencies.
supply	Double pipe system	Seoul prepares for crises through the installation of double pipelines between water purification plants.
	Arisu Integrated Information System	Seoul monitors all the main facilities of its waterworks with CCTV, and takes action as dictated by a 'real-time integrated response management system' in the event of an emergency.
	Seoul Water-Now System	Seoul inspects and manages water quality from raw water to purified water in real time.
Management	Waterworks Geographic Information System	Seoul collects and analyzes geographic information related to waterworks facilities to prevent accidents.
	Mobile Arisu	Seoul provides information on the suspension of Arisu water supply and risk of burst pipes and receives complain about the water supply through mobile devices.

03 Systematic Water Management Proven through One of the World's Best Revenue Water Ratios

Seoul has replaced old water pipelines causing leakage and rust, reorganized a complex water supply network into several blocks, installed flowmeters and established a flow monitoring system, thus raising its revenue water ratio to the highest level in the world. Through the scientific operation of waterworks, Seoul boasts lower water prices compared to those of any other cities in the world.

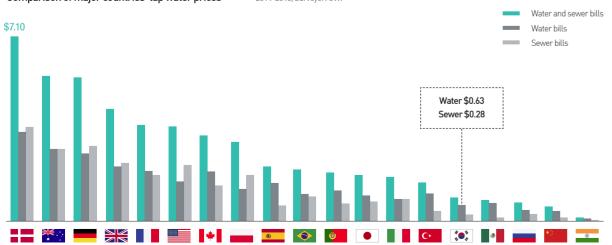
Management systems to improve the revenue water ratio



Waterworks Block Management Seoul divides its water supply network into 100 large, medium and small blocks to facilitate leakage identification and consumption analysis.

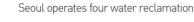
Improvement of Water Supply Pipes Seoul has replaced leaking antiquated pipes with durable dust-free stainless steel pipes and ductile iron pipes (97% until 2015). Scientific Supply Management Seoul has installed flowmeters and flow monitoring systems for its water pipes, water supply areas, blocks, pumping stations, and reservoirs to manage water inflows and outflows accurately.

Comparison of major countries' tap water prices 2014-2015, Surveyor: GWI



Impacts of improved revenue water ratio

Reduced water leakage 95.2% 8.8 billion tons **Budget reduction** KRW 5 trillion **55.2**% Reduction of water purification centers 10→6



04 Seoul's Water Reclamation Centers

Seoul's Transportation and Environment Policies

47

Water is the source of life. Clean water secures our health for the future. Seoul operates four water reclamation centers to transform polluted water such as household wastewater into clean water.

Classification		Total	Jungnang	Nanji	Tancheon	Seonam
Land area (1,000m²)		3,155	801	929	393	1,032
Facility	Wastewater (10,000m³/day)	498	159	86	90	163
capacity	Body waste (kl/day)	12,500	4,000	4,500	_	4,000
Sewage	No. of streams	50	25	11	7	7
pipes	Length (km)	468	183	93	97	95

05 Sewage Transforms into New Resources

In partnership with private companies, district heating corporations, and thermal power generation companies, Seoul is faithfully implementing a project that turns sewage into renewable energy. It utilizes the bio gas generated in the sewage treatment process to generate electricity and supplies it to households as bio gas while using the sewage heat as district heating energy. It supplies sewage sludge to thermal power plants as fuel.

2016.12

Desirate	Takal assaulting		Centers' production quantities (TOE)			
Projects	Total quantity	Jungnang	Nanji	Tancheon	Seonam	
Total	51,372	18,773	9,805	12,198	10,596	
The Bio Gas Project	33,994	12,663	6,657	4,167	10,507	
The Wastewater Heat Utilization Project	5,245	-	11	5,221	13	
The Small Hydro Project	76	-	-	-	76	
Sales of dehydrated sewage sludge as thermal power plant fuel	12,057	6,110	3,137	2,810	-	

(Source: Water Reclamation Facility Division, the Seoul Metropolitan Government)



Seoul's Safety and Administrative **Services**

Seoul is a city that is safe from crimes and disasters. It is a city that realizes efficient administration with citizen participation.

Seoul enhances its competitiveness through citizens' safety and smart administrative services.

(Administration) Information disclosure rate

94.8%

Seoul's Safety and Administrative Services

Urban Safety Polices

Source: Seoul Metropolitan Fire & Disaster Headquarters If a city's safety is not guaranteed, neither its citizens' quality of life nor its competitiveness can be fostered. To guarantee its citizens' safety, Seoul places top priority on their safety and comfort in its urban design in addition to the establishment and operation of an advanced disaster response system. For such efforts, Seoul was rated as the world's third safest city in 2016 by Numbeo (www.numbeo.com), the world's largest city and country comparison statistics site in its world city crime and safety survey of the year.







01 Crime Prevention with Urban Design

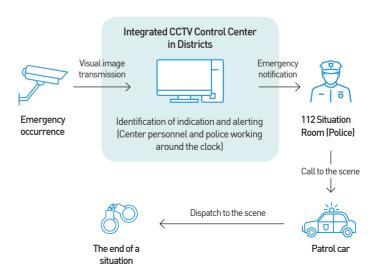
Crime Prevention Through Environmental Design (CPTED) refers to the design that seeks to eliminate crimes of opportunity by frustrating criminal intent. Seoul has applied CPTED to areas where the crime rate is high. Starting with the 2012 project targeting Yeomni-dong, Mapo-gu, Seoul plans to complete CPTED in a total of 50 locales by 2018. The Korean Institute of Criminology's report has verified its effectiveness.

⟨Source: Design Policy Division, the Seoul Metropolitan Government⟩

02 Integrated CCTV Control Center

Seoul has installed 37,883 CCTV cameras. Each of its 25 districts runs its own integrated CCTV control center which monitors all the CCTV cameras in its district around the clock and dispatches emergency responders to sites immediately in cooperation with fire departments and police stations.

〈Source: Information Communication & Security Division, the Seoul Metropolitan Government〉



The example of Yeomni-dong, Mapo-gu



- · Installation of exercise facilities, LED security lighting, CCTV and reflectors; painting with bright colors; and formation of local residents network
- Following the design application, a significant reduction in the number of crimes and increase in residents' satisfaction (83.3%) and awareness of the effects of crime prevention efforts (78.6%)
- Community visited by more than 5,720 people from 260 institutions for benchmarking, introduced to the UK Design Against Crime (DAC), and became the subject of a documentary film

03 119 Seoul Emergency Operations Center

Seoul has established an advanced disaster response system to ensure the safety of its citizens anytime, anywhere around the clock. 119 Seoul Emergency Operations Center responds to various disaster situations effectively and contributes to the specialization of emergency rescue services through the Golden Time Target System and the Automated Emergency Dispatch System.

Introduction of the Golden Time Target System

Seoul has introduced the Golden Time Target System to rescue citizens in danger as early as possible and prevent disasters from being aggravated. It has identified a golden time for each type of disaster and improved the systems of emergency rescue agencies and responsible authorities. It strives to achieve rescue teams' on site arrival time of within 7 minutes.

24-hour monitoring system



Seoul Metropolitan Fire & Disaster Headquarters and the National Police Agency monitor the information collected by 14,942 CCTV cameras in real time. Based on the information, Seoul supports appropriate disaster response activities such as surveillance of rivers and vulnerable areas, following up on changing on-site situations, and ensuring evacuations within the golden time.

Disaster response flow chart

119 emergency reporting system



119 Situation Room's collection of reports made through various media such as wired/ wireless telephone calls, text messages, the Internet and SNS.

Rescue dispatch system



Organization of the optimal dispatch teams depending on the nature of disasters and issuance of dispatch orders through diverse channels

Situation control system



Situation Room's real-time monitoring of visual information of disaster sites and systematic control of the sites

Fire safety guidance system



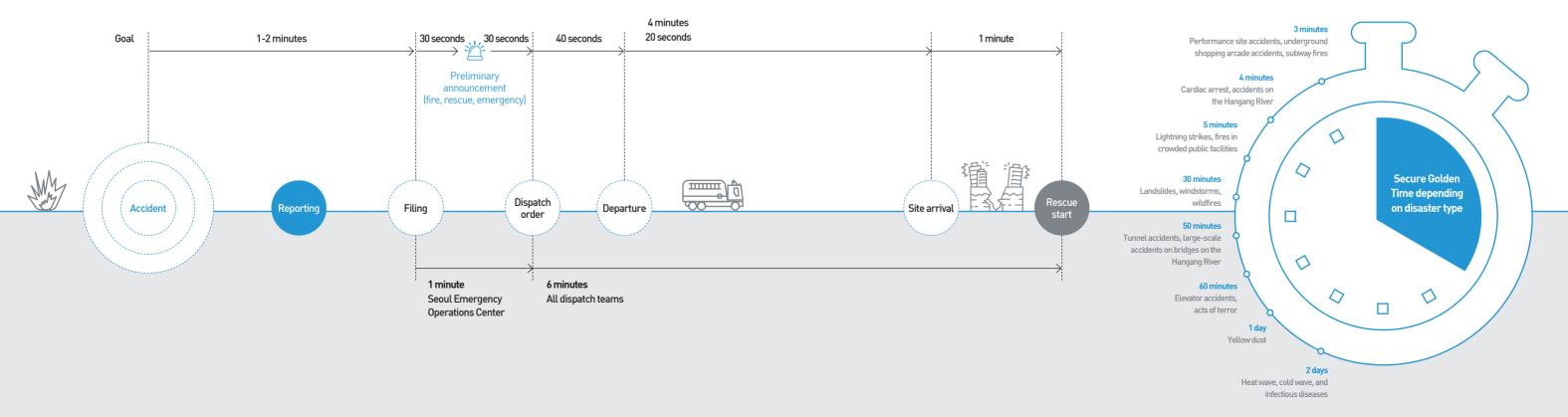
Web-based operation guidance that provides all the information necessary for fire response in real time from the dispatch stage Scientific and systematic follow-up management system that collects information on disaster site

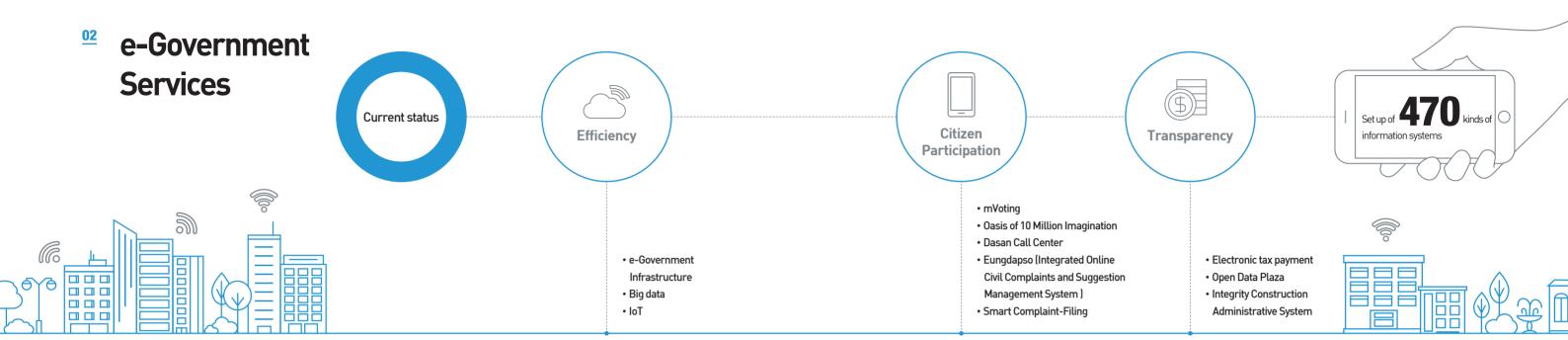
activities

Activity information

statistics system

Emergency Rescue Agencies' Golden Time Dispatch Manual





Seoul has incorporated state-of-theart IT technology into its administration to provide prompt and accurate administrative services and realize efficient and transparent citizenparticipatory administration. It has been ranked first in '100 Cities Survey on e-Government' carried out by Rutgers University, the USA, for seven consecutive times since 2003, with the recognition of it being a world-class smart city.

Seoul launched WeGO (World Smart Sustainable Cities Organization) in 2010 to enhance administrative efficiency and transparency through the enhancement of digital capabilities and to resolve the digital divide of cities around the world. It has been contributing to the promotion of exchange and cooperation for the development of the world cities' e-government.

01 Efficient Urban Management

e-Government Infrastructure

Seoul has established 470 kinds of information systems in the fields of its municipal administration including urban planning, culture, tourism, transportation and housing in order to improve its administrative efficiency with IT.



Big data solutions for urban problems

- Using big data to determine the optimal routes for all-night buses
- Analyzing traffic accidents and reducing traffic accidents for the vulnerable
- Providing commercial area analysis service to protect the interests of mom and pop business owners, etc.



Urban management based on IoT

Smart road lighting, smart garbage can operation, and smart parking reminders

Road lighting that detects the movements of people and objects and automatically adjusts brightness



20% brightness when there is no vehicle on the road



100% brightness when there is a vehicle on the road

02 A City that Communicates with its Citizens

mVoting

mVoting is a smartphone app developed to collect citizens' opinions through real-time voting during policy promotion processes. It is a citizen participatory voting app that allows anyone to easily ask questions and participate in voting.

Eungdapso

Eungdapso is an online system that has integrated 31 public service channels. Citizens can file complaints with or submit proposals to Eungdapso in all fields through the Internet, mobile devices, SNS, and telephone.

Smart Complaint-Filing

Citizens can report various inconveniences about facilities, transportation and the environment on their smartphones at relevant sites. As they can indicate their locations on maps and attach site photos, the information is used as a basis for the analysis of pending issues of the locations and policy decisions for the localities.

Oasis of 10 Million Imagination

Oasis of 10 Million Imagination is a system whereby citizens suggest ideas and realize them as policies under the catchphrase of "I put my imagination into reality." Anyone can suggest any kind of ideas.

Dasan Call Center

Dasan Call Center is a system whereby the helplines of City Hall and district offices have been integrated into the single number of 120. Citizens' requests for help are handled quickly and accurately at this single number around the clock. The Center provides services via telephone, texts, in sign language for the hearing impaired, and in foreign languages for foreigners.



03 A Transparent City

Electronic Tax Payment (E-TAX)

E-TAX is a convenient tax payment system enabling citizens to pay an assortment of bills that are issued by City Hall, its affiliated offices, and 25 district offices through various online media.

Open Data Plaza

Open Data Plaza is a website that provides citizens with the city's public data in raw form. Currently, the municipal government provides 4,607 kinds of data sets and 8,813 kinds of services free of charge in 10 fields including transportation, the environment and urban management.

Integrity Construction Administrative System

Seoul has achieved an anti-corruptive and transparent construction administration through the implementation of the Construction Information Management System - which manages construction projects transparently and systematically - and the real-time disclosure of the information of Construction Payment e-Immediate Disclosure System to the public through Construction Allimi.





Seoul's Safety and Administrative Services

Seoul Citizens' Daily Routine Closely Connected with Seoul e-Government

On the way to work, get the bus arrival

information at a bus stop or online











During lunch time, pay taxes on the internet - http://www.hometax.go.kr



During a break, cast a vote on Participatory **Budgeting System** with smart devices



At work,





Make a call 120 Dasan Call Center for inquiring any questions about Seoul city life - http://120dasan.seoul.go.kr



Receiving real-time responses to any inconveniences from Complaint Center





On the way home, issue civil documents at a subway station







At night, check and pay taxes imposed on overseas direct purchase





Seoul Solution

Seoul builds an urban policy database and provides it to Seoul Solution in order to share its experiences and knowledge of city development with overseas cities. The Seoul Solution also serves as a communication channel with overseas cities.

seoulsolution.kr

Urban SDG Knowledge Platform

The Urban SDG Knowledge Platform established and operated jointly by Seoul, UNESCAP and CityNet is an organization that seeks to set up specific action plans to achieve the Sustainable Development Goals (SDGs, 2016-2030) adopted by the United Nations. It aims to contribute to the development of sustainable world cities by sharing many cities' excellent policies and strengthening the cooperation between world cities and international organizations.

www.urbansdgplatform.org





Urban SDG Knowledge Platform

The invited training and facility tour program for overseas city officials

Seoul Solution

Seoul offers various mid- and short-term training programs free of charge to share its urban development experiences and knowledge and strengthen the policy capacity of overseas city officials.

Short-term program (7-10 days)

- Fields : Transportation, e-Government, urban management, water supply
- Lectures on Seoul's excellent policies and visits to policy sites
- Operating agency: Metropolis International Training Institute (Seoul Human Resource Development Center)

hrd.seoul.go.kr/shrdc

Long-term program (two-year course)

- Fields: Intern opportunity for urban planning and municipal administration experiences
- A master's course in urban planning, an intern opportunity for municipal administration experiences
- Operating agency : The University of Seoul

isus.uos.ac.kr

The Seoul Policy Consulting Group

Seoul runs the Seoul Policy Consulting Group composed of experts (researchers, professors, etc.) who have knowledge and skills in urban policies. Upon requests by overseas cities for policy sharing, the Group dispatches experts in relevant fields immediately to conduct field surveys and policy consulting and consultation.



Dispatch of city officials to overseas cities

When requested by overseas cities, Seoul dispatches its officials to them and implements policy exchange cooperation projects between Seoul and the relevant cities.

Operation of Seoul Urban Solutions Agency (SUSA) To implement 'Seoul's Policy Sharing Initiative' more professionally and efficiently, Seoul has established 'Seoul Urban Solutions Agency' in Seoul Housing & Communities Corporation, one of its affiliated agencies, to take charge of various policy sharing programs implemented under the Initiative.

Partner Organizations

Seoul Metropolitan Government

Korea Development Institute

www.kdi.re.kr

ww.seoul.go.kr	www.krihs.re.kr
linistry of Strategy and Finance ww.mosf.go.kr	Korea Chamber of Commerce and Industry www.korcham.net
linistry of Foreign Affairs	Korea Federation of SMEs
ww.mofa.go.kr	www.kbiz.or.kr
orea Trade-Investment Promotion Agency	Korea Planning Association
www.kotra.or.kr	www.kpa1959.or.kr
orea International Cooperation Agency	The Seoul Institute
www.koica.go.kr	www.si.re.kr
xport-Import Bank of Korea	University of Seoul
ww.koreaexim.go.kr	www.uos.ac.kr
nternational Contractors Association of Korea	World Bank
pr.icak.or.kr	olc.worldbank.org
orea Financial Investment Association	Asian Development Bank
ww.kofia.or.kr	www.adb.org

UN-Habitat

unhabitat.org

UN Economic and Social Commission for Asia and the Pacific www.unescap.org

et Local Governments for Sustainability
www.iclei.org

CITYNET citynet-ap.org

Korea Research Institute for Human Settlements

or.kr World Smart Sustainable Cities Organization
www.we-gov.org

Metropolis

global.si.re.kr

World Cities Summit www.worldcitiessummit.com.sg

www.metropolis.org

Megacity Think Tank Alliance

Urban SDG Knowledge Platform www.urbansdgplatform.org







For inquiries about Seoul's Policy Sharing Initiative, please contact the following:

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Transportation (22)

China (Beijing)
New Zealand (Wellington)
New Zealand (Auckland)
Malaysia (Kuala Lumpur)
Colombia (Bogota)
Thailand (Bangkok)
Greece (Athens)
Mongolia (Ulaanbaatar)

Cote d'Ivoire (Abidjan)
Saudi Arabia (Mecca)
Malaysia (Malacca)
Egypt (Cairo)
Azerbaijan (Baku)
Philippines (Metro Manila)
Ghana (Accra)

Sri Lanka (Colombo)

Vietnam (Da Nang)
Indonesia (Bandung)
Colombia (the Ministry of
Finance and Public Credit)

Water Supply (4)

Peru (Chanchamayo) Indonesia (Central Java) Papua New Guinea (Port Moresby) Brunei (Brunei)

e-Government (7)

Mozambique (Maputo)
Ethiopia (Addis Ababa)
India (Mumbai)
Colombia (the Ministry of
Information Technologies and
Communications)
Argentina (Buenos Aires)
Ukraine (Kiev)
Thailand, Ukraine, Jordan,
Vietnam

Metro/Light Rail (8)

Bangladesh (Chittagong-Chinki Astana) Myanmar (Yangon) Vietnam (Ho Chi Minh) Colombia (Columbian Development Bank) Indonesia (Jakarta) Philippines (Metro Manila)

Urban Planning (2)

Vietnam (Da Nang) Myanmar (Hanthawaddy, southern Yangon Region)

Environment (2)

China (Hunan & Henan Provinces) Philippines (Metro Manila)

Firefighting (1)

Bangladesh (Fire Service and Civil Defence)

Education (2)

Ethiopia (Addis Ababa) India (Panjim, Shimla, Hubli)

