As the capital and largest metropolis of South Korea, Seoul is home to about half the country’s population. Surrounded by a mountainous and hilly landscape, the city is strategically located on the Han River that previously served as a trade route to China.

Fondly referred to by residents as the Soul of Asia, the city moves at a fast pace with a pulsing energy that’s reflected in its culture of hard work, service and friendliness. The birthplace of K-Pop, Seoul is experiencing a creative renaissance.

As the commercial and financial hub of South Korea, its economy is driven by manufacturing, information technology, electronics and assembly-type industries as well as food and beverage production and printing and publishing. It is the headquarters of some of the world’s best-known manufacturers, including Samsung, LG, Hyundai, and Kia.

Following an economic boom in the 1950s, South Korea was transformed from a developing nation to a developed one. Seoul was in the vanguard. Now greater Seoul has a bigger population than the whole of Australia and can truly be called a megalopolis. High-profile architecture, excellent museums and an influential art scene are some of the hallmarks of Seoul alongside world-leading internet connectivity.

With a population density almost twice that of New York, three times higher than Paris and four times greater than Los Angeles, Seoul does not have much room to grow. The city is divided into 25 districts or boroughs called gu. Each gu has its own government and is split into several neighbourhoods, called dong, that vary in size and population.

Since 1990, the Seoul Metropolitan Government has issued periodic City Development Plans as the highest level of policy for the following 20 years. The fourth plan, issued in 2014 and looking ahead to 2030, has a broad framework covering social, economic, environment/energy, transportation/infrastructure, culture and welfare. Its policy and detailed action plan have limitations since Seoul is a metropolis of 10 million homes with inherited complex regional characteristics. Putting the plan into operation often means negotiating civil complaints and allowing an adjustment period.

One of the biggest obstacles to transport policy is in persuading people of the need to move from private cars to public transport, even in Seoul, which is the policy and geographical hub of efforts for a low-carbon, green environment. In addition to the National Core Transport Network Plan, the Ministry of Land, Infrastructure and Transport has created a high-level plan for metropolitan areas. Long-range policies and plans to solve metropolitan traffic problems rely on the meshing of high-level and local government plans.

With Seoul’s Culture Vision 2030 plan focused on using creativity and culture to create a happy and engaged city that is also prosperous, the city is tackling broader social issues.
CITY ASSESSMENT

PLACES

Housing 6.0/10

The highly-developed urban environment of Seoul results in serious sprawl to surrounding districts, even in the city-designated green belt and development restricted areas. The commuting area has expanded to a 40-kilometer radius and half of the country’s population is concentrated in the capital area, causing an imbalance in the development of the country. Even the city understands the problem. There is no practical solution since it requires integrated government action.

Some relief may be over the horizon. Today’s population within the city limits is 10,112,000 but it is expected to fall to about nine million by 2045 because of a low birth rate of 0.94 per cent. For now, housing costs keep rising. To control the overheated market, Seoul is trying to increase the ratio of public housing for rent to 10 per cent of the housing stock by building 10,000 rental units a year and expanding mortgage support to low-income renters through the National Housing Fund.

Seoul is working on providing a support system for senior and disabled people with consolidated community facilities. It plans to increase the number of Housing Welfare Centers from one for every two or three boroughs to one center for each of the 25 boroughs.

Apartment buildings account for 42 per cent of dwellings in the city and it has design guidelines for them that consider the environmental quality of the block plan, landscape, traffic, open space and public facilities.

HOUSING

SCORE: 6.0/10

SOCIAL INFRASTRUCTURE

SCORE: 7.3/10

For instance, Gwanghwamun Plaza is struggling with complaints about expected traffic congestion since the elimination of four traffic lanes in the city center. Similar problems arose during the restoration of Cheonggyecheon Stream in downtown Seoul and the building of Seoullo 7017. The city is already weighed down by a massive volume of traffic despite its affordable public transport system.

Seoul Riverfront Vision 2050 provides a framework for the revitalization of areas along the 41.7 kilometers of the Han River that runs from east to west across the city. Twenty-seven districts are involved in the plan that aims, among other things, to nurture a million square meters of forest along the river bank, which will be the axis of an urban ecosystem to secure biodiversity.

For the elderly, Seoul Riverfront Vision 2050 plans 350 “senior-care centers” with a variety of facilities and services located within 10 minutes’ walk from residential areas. The Seoul Metropolitan Government has used this method to increase the number of parks located within 10 minutes’ walk from residential areas. Green City Division of Seoul highlights “a thousand forests, a thousand gardens” as a primary goal, and sets five main tasks: reclamation of parks, extension of green area, empowerment of green culture, environmental protection and prevention of accidents.

The 2040 Seoul Plan outlines a vision for environmentally-friendly urban surfaces to increase water permeability by turning existing pavement into green surfaces.

PUBLIC REALM

SCORE: 7.0/10

In the city plan there is a lot of emphasis on public places and how citizens connect with them. The city fosters the use of more recently established parks such as Seoullo 7017, built atop a former highway overpass, Gyeongchun Line (Railroad) Forest, and Oil Tank Culture Park.

Enhancing the public realm means authorities face objections from conflicting interests. Often big open space projects entail extra traffic congestion during construction and even after completion.

URBAN GREEN SPACE

SCORE: 6.3/10

At present about a quarter of Seoul’s area is devoted to green space, or about 16.5 square meters per resident. Whereas big parks such as the one created for the 2002 World Cup were the focus of efforts around the turn of the century, recent projects have utilized and regenerated spare land and incorporated private sector participation.

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One of the biggest challenges facing Seoul is the serious polarization and social imbalances because of the huge gap between the circumstances of citizens of the established central city and those from the rest of the metropolitan area. To lighten the burden of underprivileged citizens, the city plans to increase the concentration of social infrastructure in the outer areas to minimize economic, generational and regional gaps.
In response to the rising cost of healthcare due to the aging population and obesity, the city is focusing on preventative healthcare services. The Cultural Policy Division of Seoul plans to double cultural infrastructure by 2030 and has set a target of 4.5 facilities per 10,000 residents.

Although the demand for schools is likely to continue to fall because of a declining and aging population, the need for childcare and after-school programs is rising. More families have both parents at work. The Seoul Metropolitan Government has set a target of having 35 per cent of children in childcare by 2030 but a lot of parents are against it because they fear it will result in a lower level of service. As 48 universities are already located in Seoul, new campus plans are being made in other cities for balanced regional development. The city is focusing on investment, such as a campus town station, as part of a campus town development policy in partnership with an innovative startup entrepreneur and local business.

**CLIMATE CHANGE**

**SCORE: 5.3/10**

Seoul has set a 2030 target of reducing its Greenhouse Gas (GHG) emissions to 40 per cent of 2005 levels as part of the global strategy on climate change. It hopes to do this by persuading people to use their cars less and public transport more. In addition, the Metropolitan Government has an Eco-Mileage Program that encourages citizen to reduce energy consumption of electricity, gas and district heating by giving incentives that can be exchanged for credit on public transport or environmentally-friendly products. Unfortunately, few citizens have shown any interest in the program.

There is no long-term plan for climate change measures beyond GHG emission reduction and relatively low understanding of systemic resilience issues and social and economic impacts.

**MOBILITY**

**6.5/10**

**INFRASTRUCTURE: PUBLIC TRANSIT**

**SCORE: 8.0/10**

Seoul is in the process of designing transport policies that focus on encouraging pedestrian, cycle and public transport through active traffic demand management (controlling passenger car traffic) and human-centered infrastructure supply (securing space for pedestrian, cycles and public transport).

The city has a railway system consisting of nine metro lines and one light rail route, which is part of the Seoul Metropolitan railway system consisting of 24 regional, rapid and light rail lines. At present Metro 9 and the Shinbundang Line are being extended and the light rail Sillim Line is being built. Eight new light rail lines are planned.

Since the introduction of exclusive median bus lanes in the early 2000s, the system has expanded by about 15 kilometers a year, mainly on roads with heavy traffic congestion. Now 119 kilometers of exclusive median bus lanes are in operation, providing fast and safe bus services by connecting major arterial roads while eliminating congestion. By 2026, the system should be extended to 214 kilometers of lanes exclusively for buses.

There are plans for the expansion of metropolitan transfer centers and the park-and-ride facilities as well as providing extensive traffic information. Seoul Metropolitan’s integrated transit fare card system has been in operation since 2009.

Last year, the newly built Gyeonggang bullet train line linked Incheon Airport to the port city of Gangneung, crossed the north of the country from coast to coast and connected Seoul to Pyeongchang, the Winter Olympics venues. It is now possible to travel by train from Seoul to South Korea’s other big cities within three hours.

**LOGISTICS AND FREIGHT PRODUCTIVITY**

**SCORE: 6.5/10**

Compared with other global cities, Seoul has relatively mediocre logistic facilities and connections with transport networks.

Recently, Seoul authorities have tried to link metropolitan logistic facilities with the urban logistics complex in the southeast of Seoul. The city also wants to link major metropolitan expressways, such as the Seoul beltway, and logistic facilities to strengthen the connections to major corridors in the metropolitan area and arterial roads.

**GLOBAL CONNECTIVITY**

**SCORE: 8.3/10**

At the beginning of the year, Incheon International Airport opened its second passenger terminal, boosting capacity by 18 million passengers to 72 million. Plans for 2030 envisage its capacity being stretched to 350 million travelers in a step-by-step expansion.

Meanwhile, the facilities are being improved and expanded at major ports in metropolitan areas, such as Incheon and Pyeongtaek. Connecting railways and roads are in the process of being planned or built.

**INFRASTRUCTURE: PEDESTRIANS AND CYCLING**

**SCORE: 6.5/10**

At present the city has about 670 kilometers of cycle paths with plans to double that by 2030. The focus will be more on expanding safety facilities and education.

In addition to pedestrian priority areas, projects for pedestrian and transit malls are being planned and put into operation.

School zones are in place around almost all elementary school areas. Those that reduce speed limits to help elderly pedestrians might also be expanded, although there is some doubt about their effectiveness.

**BUILT FORM: PARKING PROVISIONS**

**SCORE: 6.3/10**

The metropolitan transportation plan emphasizes the need for parking management policy to help activate public transit. Meanwhile, a holistic approach is also necessary to solve the basic problems associated with the lack of parking facilities. In the downtown area, the city is expected to activate public transportation through rigorous parking control and park-and-ride expansion.

**FUTURE MOBILITY: SERVICES**

**SCORE: 5.5/10**

Taxi services and carpool services are provided by private companies but with limiting conditions such as only for the commuting time slot.

A flexible transit service provided by a demand-responsive bus is in the process of establishment.

**FUTURE MOBILITY: TECHNOLOGY**

**SCORE: 4.7/10**

A test bed for autonomous vehicles is expected be developed in the city center area by next year under the Intelligent Transportation System Plan.

More electric vehicle charging stations are being provided but their effectiveness is the subject of controversy. Expansion of the hydrogen vehicle charging network is also envisaged in the plan.

A masterplan to promote the drone industry is being developed but at present most areas have flight restrictions and they are prohibited in some areas.

**TECHNOLOGY**

**8.3/10**

Seoul is a leading player in smart industries and all infrastructure related to communication services is well-established. South Korea has 21 million high-speed internet connections and 64.3 million wireless communication service devices in the hands of subscribers. Considering it has a population of 51 million, the level of communication technology usage is healthy.

**FUTURE MOBILITY: CONNECTIVITY AND INFRASTRUCTURE**

**SCORE: 9.0/10**

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URBAN SYSTEMS

POWER GENERATION AND DISTRIBUTION
SCORE: 1.4/10

Seoul follows the national Renewable Energy Policy of the Ministry of Industry, Trade and Energy as a framework for power generation. It has struck a chord with citizens. Seoul was selected as the city to have best carried out the national energy policies successfully by a survey conducted last year. However, implementation plans often face strong critics. For instance, Seoul’s One Less Nuclear Power Plant policy has encountered strong civil complaints and protest from local companies. Still, the city was willing to pursue the policy and able to accomplish its primary target. The authority continues to encourage awareness of the importance of renewable energy. Since there is lack of regulatory flexibility to allow innovative solutions, it is required to invest in the development of relevant technology to be ready for novel methods.

WATER TREATMENT AND DISTRIBUTION
SCORE: 3.6/10

The Seoul Metropolitan Government has responded to changes in the city’s basic plan and the higher plan by establishing a stable water supply system case of an emergency, including an earthquake disaster. In addition, the basic plan for the readjustment of the city was systematically and reasonably changed to addition, the basic plan for the readjustment of the city was systematically and reasonably changed to

SOURCES
- District Plan of Seoul (2014) | Central District, Northern West District, Southern West District, Northern East District, Southern East District
- 2014 Seoul Housing Plans
- 2015 Cultural Vision , Ministry of Culture, Sports and Tourism 2018
- 2016 Seoul Metropolitan Area Master plan 2011–2020
- Master plan for Metropolitan Transportation 2013–2020
- Implementation Plan for Metropolitan Transportation 2013–2020
- Master plan for National Logistics 2016–2025
- Master plan for Development of Sustainable National Transport Logistics
- Master plan for National Traffic Safety
- Master plan for Urban Traffic Readjustment 2012–2025
- 3rd Seoul Public Transportation Plan
- Seoul’s 10-years Urban Railroad Network Plan (Revised 2015)
- Master plan for Seoul Urban Railroad (Being Revised)
- Seoul Regional Plan for Intelligent Transport Systems 2018–2020
- Master plan for Development of Sustainable Regional Transport Logistics 2013–2020
- Master plan for Seoul Urban Logistics 2018–2025

Through these measures, the government established a plan for the mid-to-long-term, such as the introduction of an IT intelligent water network system. The city has a four-stage plan to take it to 2030. To establish a stable production base, Seoul plans to undertake duplication of the water intake source, double lines of water distribution system, maintain an obsolete water pipe line and improve facilities at each water purification center. These measures should mean no major distribution of the water supply. To carry out the plan for 2020, total investment is expected to be CAD6.2 billion and water bills should have risen between four per cent and 12 per cent from 2015.

WASTE MANAGEMENT
SCORE: 6.9/10

Since 1990, the collection of recycled material has been expanded from apartment complexes to the whole area. As strict volume-rate garbage disposal system and food waste separation was implemented, the recycling rate of glass bottle, scrap metal, plastic, paper and plastic bags rose to a record 65.3 per cent in 2012. There are waste collection bins and recycling bins in private and public areas operated by a recycling center by each district. Also, the city has tried to control the generation of waste. For instance, free plastic bags are banned and customers should carry their own bag or buy a paper one. All discharge requires payment by the volume of waste source except for the recyclable material. However, the city is still struggling in waste collection and disposal. Two landfill areas in Seoul are facing their limits and another one in Nanji has already been converted to public garden where landfill gas is used for power generation. Now the city is sending waste and recycling materials to another city, a move that met strong opposition from the region. Moreover, the existing landfill area near the capital city is expected to reach its limit in 2044. It will be difficult to find extra landfill area due to civil complaints. Accordingly, a strong framework for waste management is required long-term.