

PwC

Cities of Opportunity

S E O U L

2014

**Seoul Metropolitan Government
110, Sejong-daero, Jung-gu
Seoul, 100-744
Korea**

PwC

Cities of Opportunity

S E O U L

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**1. Intellectual capital and innovation
& 2. Technology readiness**

Classroom size

Libraries with public access

Literacy and enrollment

Percent of population with higher education

Intellectual property protection

Internet access in schools

Statistics

Indicators	Statistics	Unit	Data					Notes
			2008	2010	2011	2012	2013	
Classroom size	Classroom size	no. of persons			26.69	25.40	24.33	Number of students enrolled in public primary education programs/number of classes in these programs Source : Seoul Metropolitan Office of Education
Libraries with public access	Number of libraries with public access	no.			186	196	206	
Literacy and enrollment*	Adult literacy rate**	%	99.7	-	-	-	-	Source : National Institute of Korean Language, 2008 'Survey on Koreans' Basic Literacy', (conducted every five years)
	Middle school enrollment rate	%			99.9	99.9	99.9	Source : Seoul Metropolitan Office of Education
	High school enrollment rate	%			99.7	99.7	99.7	
	Higher education enrollment rate	%			56.2	55.8	55.6	
Percent of population with higher education	The percent of people who have completed at least a university level education	%		29.5	-	-	-	Number of people who have completed at least a university-level education/ total population Source : Statistics Korea, CENSUS, 2010
Intellectual property protection	WEF survey	Score (ranking)			4.1 (46th out of 142 nations)	4.3 (40th out of 144 nations)	4.0 (48th out of 148 nations)	On a scale of 1 - 7 World Economic Forum (2012 - 2014)
	Total no. of patents applied for IP	Cases			118,459	120,548	128,734	Statistics Korea
Internet access in schools	Internet access rate	%			100	100	100	Source : Seoul Metropolitan Office of Education

* Since the data from the World Bank's Knowledge Index is provided at a country-level, the results from a national survey was used in the table above to give more accurate data at Seoul city level.

** **Adult literacy rate** : The results of previous surveys expected the future illiteracy rate in Korea to be kept under 1 percent with a high chance of it even further decreasing in the future, losing the purpose of making the statistics. Thus, Statistics Korea announced that it would cease to conduct a literacy survey in April, 2013.

Libraries with Public Access

Seoul's Objectives

- To expand libraries with public access reachable within a 10-minute walk from anywhere
- To build small libraries to promote local community culture
- To develop a plan to facilitate reading culture while promotion libraries

Libraries with public access in Seoul

Overview

The city has 206 libraries with public access offering a wide-range of library services to its citizens through national and public libraries as well as private libraries, libraries for the disabled, libraries built on school premises and school libraries open to the public.

(unit : no.)

Total	Public Libraries					Private	The disabled	Libraries on school premises	School libraries open to the public
	Sum	City	District	Office of Education	National				
206	133	1	107	22	3	7	11	9	45

Trends in Expansion of Libraries Over Time

Seoul had just 174 libraries with public access before 2010 but it has been adding 10 or so each year under the Comprehensive Plan for Promotion of Libraries and Reading Culture.

With a continuous expansion, the city government plans to increase the number of libraries with public access to 246 by 2018, making them accessible within a 10-minute walk from anywhere in the city.

(unit : no.)

year	before 2010	2011	2012	2013	2018
Libraries with public access	174	186	196	206	246

To build small libraries to promote local community culture

Small libraries at the community level

With the demand by citizens for library increasing, a growing number of different types of small libraries close to the community is being built. Now there are 432 small public libraries as well as 380 private ones established and run by the civil society.

Total	Public small libraries	Private small libraries	Notes
812	432	380	25 or more added each year

To build a sense of community through local libraries

9 specialized small libraries have been built since 2013 with direct involvement of local residents that can help to restore the local community and serve as a kind of reception room for the community with good accessibility.

To establish the structure and network of libraries with public access

The Seoul Metropolitan Library

The Seoul Library was built by remodeling the old city hall building, a previously administrative and geographical center of the capital. The addition of the Seoul Library expands the service functions of libraries with public access while laying the foundation for the city government to efficiently and systematically implement its policy for promoting libraries and reading culture.

To build networks among libraries

Following the opening of the Seoul Metropolitan Library, a collaborative network between the libraries named as a representative library of each district and the Seoul Metropolitan Library was built in 2013, sharing human resources, cultural infrastructure and culture education programs and expanding services.

To implement a policy aimed at promoting libraries with public access

Support for establishment and operation of libraries with public access

53.0% of the city's budget for library policy is spent on supporting the operation of existing libraries with public access, 39.3% on expanding libraries and 7.4% on running the Seoul Metropolitan Library.

Categories		2013 (KRW 1,000)	Percentage (%)	Description
Administration operation	Basic expenses	120,106	0.3	Administration operating expense
Promotion of library & reading culture	Library operation	18,292,470	52.1	Supporting operation of libraries with public access
	Library expansion	14,389,000	41.0	Constructing libraries
	Seoul Metropolitan Library operation	2,333,254	6.6	Buying books & running programs, etc.
Total		35,134,830	100	

Support the operation of small libraries

The Seoul government subsidizes the material purchase expense and operation expense for small libraries to help them educate professionals, buy books and expand information services all required in running their establishment. Before 2013, the government financially supported 300 of them each year but the number was increased to 375 in 2013, actively contributing to facilitating the operation of small businesses.

Public-private governance

The Library Information Service Committee composed of library operators, experts and citizens discusses key library policies while the Seoul Library Network, an advisory body based on public-private partnership governance made up of the representatives from the city government, office of education, district libraries and citizens offers advices in developing the plan for promoting library and reading culture and operating the Seoul Metropolitan Library.

Intellectual Property Protection

Seoul's Objectives

- **To build a virtuous circle of creation, protection and application of intellectual properties**
- **To strengthen the capabilities of small and medium enterprises (SMEs), citizens and public officials to produce and protect intellectual property and raise their awareness of its significance**

To build a virtuous circle of creation, protection and application of intellectual properties

Rebuilding Seoul as a pro-intellectual property city

In May 2011, the government of the Republic of Korea enacted the Korean Intellectual Property Law, and launched in July the Presidential Council on Intellectual Property. At that time, many countries throughout the world recognized intellectual property as a core source of national power and started to develop policies to make the best use of it. Specifically, the US adopted pro-intellectual property policies and Japan also declared its desire to become an intellectual property-based nation. To be in line with this global trend, the Seoul government has pursued hard to implement its project titled Seoul, a City of Intellectual Property. It enacted the Seoul City Framework Ordinance on Intellectual Property in 2012 and prepared a 5-year comprehensive plan in 2013 to effectively support the project.

The 5-year plan's road map includes activities to encourage small and medium enterprises (SMEs), Seoulites and civil servants to actively engage in producing valuable ideas to be intellectual property, and build a virtuous cycle of creating, protecting and applying such assets.

Supporting SMEs to produce and protect their intellectual properties

The Seoul government has encouraged SMEs to produce their own competitive intellectual properties by extending diverse supports tailored to each stage of corporate development cycle and other direct and practical supports through the Regional Intellectual Property Center.

Specifically, for businesses located in Seoul with 10 or less employees, the city government offered various supports to strengthen their technological competitiveness and protect their intellectual property rights; helping them advance their businesses, providing consulting service to address disputes on intellectual property right and extending financial support to cover patent trial and litigation cost.

Especially in 2013, the city government pushed forward diverse projects; nurturing 31 top patent-winning companies, supporting SMEs' 1,000 applications of patents, establishing a system to address international disputes on intellectual property and conducting training to raise SME's awareness on the significance of intellectual property. Its extensive support does not stop here. It also developed ways to build and utilize a database of excellent technologies owned by universities so that businesses can access and utilize it for free to create value-added businesses.

Covering cost of patent trial and litigation on intellectual property and providing patent attorney counseling service

The city government utilized legal experts including patent lawyers of the Regional Intellectual Property Center to help SMEs protect their intellectual properties. For SMEs, sole proprietors and young start-ups, it also provides financial support to cover up to 90% of retainer fee (KRW 1 million - 10 million) and maximum 90% of the cost of sending warning letter (up to KRW 300,000), and offers pro bono legal counseling service through patent attorneys.

To strengthen the capabilities of small and medium enterprises (SMEs), citizens and public officials to produce and protect intellectual property

Encouraging citizens to generate novel ideas in their daily life

In July 2013, the Seoul government signed a business agreement with the Korean Intellectual Property Office (KIPO) and Industrial Bank of Korea (IBK) to jointly support entrepreneurs in utilizing their intellectual properties to build start-ups or create new business, and in September it hosted a contest for citizens' novel ideas as one of the main events of the Idea Expo.

A total of 800 ideas were submitted and 10 were finally selected. For those 10 best ideas, the city government helped the idea owners in applying patent, producing design layout and prototypes and transferring technology.

Making city government officials role models for idea generation

In 2013, the city government revised the Seoul City Government's Ordinance on Compensation for Public Officials' Duty-related Inventions to build a reasonable compensation scheme. It also provides training on function-related idea creation, runs study groups to motivate government officials to generate ideas and even offers one-to-one consulting service by patent lawyers who are employees of the city government so that more concrete and refined ideas can be produced.

In addition, it selects excellent ideas of its employees and places them on the wall of patent in the Seoul government's building to make them open to visiting citizens. It also identifies the patents that have not been used for a long time but have high potential of contribution and make them available for citizens to use for free.

3. Transportation and Infrastructure

Public transport systems

Mass transit coverage

Cost of public transport

Licensed taxies

Statistics

Indicators	Statistics	Unit	Data			Notes
			2011	2012	2013	
Public transport systems	No. of bus lines	no.	573	576	595	
	No. of buses in service	no.	8524	8584	8428	
	No. of people using public transport systems	1,000/ per day	10,783	10,844	10,997	
	The share of public transport	%	65.1	65.6	-	
	Length of bicycle paths	km	804	674	707.6	
	Bicycle stands	no.	114,943	121,092	137,036	
Mass transit coverage	Median bus lanes	km	114.3	115.3	115.3	
	Total length of subway network	km	316.9	327.1	327.1	
Cost of public transport	Cost of public bus trip	KRW	600~900	750~1,050	750~1,050	Per capita
	Cost of subway trip	KRW	900	1,050	1,050	Per capita
	Cost of the longest mass transit trip	KRW	1,600	1,750	1,750	46.7km
Licensed taxis	Number of officially licensed taxis	no.	72,280	72,251	72,181	Based on no. of licenses
	Total population	1,000	10,529	10,442	10,388	
	No. of licensed taxis divided by total population	-	6.86	6.91	6.95	(no. of licensed taxis x1000)/total population

Public Transport Systems

Seoul's Objectives

- **To enhance public transport networks to meet unmet needs**
- **To expand a public bicycle rental program to deliver a green public transport system**
- **To improve user satisfaction with real-time public transport information**

To enhance public transport networks to meet unmet needs

Dense and extensive public transport networks

Seoul has a very close-knit public transportation network of bus and subway lines that takes you from one place to another with a minimum travel distance and time.

There are large numbers of buses and subway trains available in the city with strong interconnectedness between the two transport options. Therefore, people can rely on the city's public transit system to quickly get around anywhere on time in Seoul.

Seoul Public Transport Networks At-a-Glance

As for the subway system, there are three operators : the Seoul Metro, the Seoul Metropolitan Rapid Transit Corporation and the Seoul Metro Line 9. Together, they run 9 lines totaling 327.2km with 302 stations and 61 transfer stations.

There are 595 bus lines in the capital with 8,428 buses in operation with Green Buses connecting passengers from subway stations to bus stops. Some 55,000 taxis are in service per day to further help citizens to move around in the city. The following table describes the types and operation features of buses in Seoul.

[Types & Features of Buses]

Category	Operation Features	No. of Lines	No. of Vehicles
Blue Bus (Trunk Line)	It travels between regions connecting the suburb, the city center and sub-centers. Timeliness, punctuality	122	3,454
Green Bus (Feeder Line)	It connects trunk lines and also links trunk lines to subway stations. It addresses the travel demand within a region and achieves accessibility.	214	3,204
Yellow Bus (Circular Line)	It travels within the downtown and/or sub-centers, and addresses passengers' shopping travel needs with a wide-range of customized and demand-responsive routes.	4	23
Red Bus (Inter-regional Line)	It connects the outskirts of Seoul with its center. It absorbs the demand for cars traveling in and out of the city boundary.	11	228
Community Bus	It supplements the role of Green Buses. It takes people to nearby bus stops and/or subway stations.	9	45

To expand public a bicycle rental program to deliver a green public transport system

Public Bicycle Rental Program for a healthier Seoul

An unmanned public bicycle rental system was introduced by the city government to enable citizens to access bicycles anywhere, anytime in the capital. This program is designed to address the increasingly worrisome social problem of air pollution, and better cope with hikes in oil prices while building a healthier society with a higher-quality of life.

Public bicycle infrastructure

There are some 200 bicycle stations in the city equipped with some 3,000 public bicycles and 137,036 bicycle stands. In addition, 707.6 km long bicycle paths with 365 routes connect the entire city, giving citizens an easy access to bicycles anywhere, anytime. The

bicycle-friendly environment helps people to improve their health, save the cost of gasoline, and reduce CO2 emissions, the main culprit of air pollution.

To improve user satisfaction with real-time public transport information

Seoul TOPIS(Transport Operation & Information Service)

The city government runs the Seoul TOPIS (Transport Operation & Information Service) which comprehensively manages the traffic conditions of the capital with the traffic information collected from a number of transportation organizations and sources to improve convenience for citizens. Also, real-time bus information is delivered to BITs, smartphone apps as well as via the Internet(www.bus.go.kr), ARS(1588-0287) and QR(quick response) codes.

In 2012, the BMS (Bus Management System) was introduced even to community buses operating at the bottom of the bus system structure of the city, making real-time operation information of community buses available to citizens. Also, the real-time subway information from Line 1 to 9 separately managed by three operators (the Seoul Metro, the Seoul Metropolitan Rapid Transit Corporation and the Seoul Metro Line 9) was integrated and linked to the bus information system. Now all public transport information of the capital including city buses, community buses and the subway is offered in an integrated package.

At present, 75% or more public transport users receive real-time traffic information with the government's survey finding 96.1% of users satisfied.

- ※ **BIT(Bus Information Terminal)** : It displays the information on bus operation for passengers waiting at the bus stand including the current locations of buses, their expected arrival times and operating hours.
- ※ **BMS(Bus Management System)** : It is a system that provides bus information such as locations, real-time intervals, expected arrival times in real-time to citizens, bus operators and drivers through GPS and wireless communication devices.

Mass Transit Coverage

Seoul's Objectives

- **To deliver a city rail network with no unserved areas**
- **To expand median bus lanes for greater punctuality and rapidity of the public transport system**

A city rail network with no unserved areas

Seoul city rail network without unserved areas

Seoul now has a city rail network that stretches 327.1 km with the opening of the first section of Subway Line 9 (Gimpo to Sinnonhyeon) in July, 2009 following the completion of the 2nd round subway line construction in 2001. Not satisfied with the status quo, the city government plans to extend the current subway network and add LRT(Light Rail Transit) to deliver a even more dense and extensive city rail network with 427km in length. This world class network once completed, will leave no areas in the city uncovered.

Introduction of LRT for a rail-oriented city of Seoul

The 10-Year Urban Railroad Master Plan developed every decade along with its revision in every five years lays the ground for continued and steady expansion of urban railways and for a railway-oriented public transit system. Currently, 11 LRT(Light Rail Transit) lines (totaling 100.61 km) are either under discussion or planning. Once completed, they are expected to connect citizens to subway stations in 10 minutes from anywhere in Seoul.



[Seoul City Rail Map]

To expand median bus lanes for greater punctuality and rapidity of the public transport system

Median bus lanes improve bus travel speeds by 30%

The city government has been establishing median bus lanes in

phases since 2004. As of 2013, radial median bus lanes cover 12 corridors of major highways totaling 115.3km.

The benefit of having median bus lanes includes improvement in the travel time deviation of bus at $\pm 1\sim 2$ minutes while that of passenger car is very unstable at $\pm 4\sim 15$ minutes, greatly enhancing reliability of bus services. Another upside is expedited bus trips: the travel speed has improved at least 12% and up to 82% averaging a 30 percent (4km/h) increase.

As a result, the number of bus passengers have increased by 2-10% depending on the routes since the opening of median bus lanes. Compared to 2006, an average of 22,000 more people ride buses a day with 5,680,000 people using buses in 2009. Accordingly, the bus transport share continued to increase to 27.8% in 2009 from 25.6% recorded in 2003 before the transportation system reform, closing the gap with that of subway (which was 35.2% in 2009). This has brought the city's public transport share to 63%.

[Total Length of Public Transport Networks in Seoul]

Description	Unit	2008	2009	2010	2011	2012	2013
Subway	km	286.9	313.9	316.9)	316.9	327.1	327.1
Median bus lanes	km	75.9	92.6	100.4	114.3	115.3	115.3
Bicycle paths	km	728.8	764.4	829.5	804.2	674.0	707.6

Cost of Public Transport

Seoul's Objectives

- Reasonable public transport fares considering equity among users
- To expand transfer discounts among public transport modes in the entire Greater Seoul Area
- Multi-tiered pricing system to make public transport travel more enjoyable

Reasonable public transport fares considering equity among users

The further you travel, the more you pay

The Seoul government has introduced a distance-based fare system where you pay an additional price based on the distance traveled if you travel further than the base rate applied distance. This system is intended to address the shortcomings of the previous zone-based system in which short-distance riders unfairly pay more than long-distance travelers while addressing the unfair fare criteria applicable when you travel in and out of the city boundaries.

Public transport fares by different modes in Seoul

Description	Fare (based on traffic cards)	Notes
Subway	Distance-based system within 10km : KRW 1,050 10~40km: KRW 100 is added for every 5km Over 40km: KRW 100 is added for every 10km	For a single one-way adult trip
Bus	Flat fare : KRW 1,050	Blue, Green Bus

To expand transfer discounts among public transport modes in the entire Greater Seoul Area

Integrated Transfer Discount Scheme for the public transit system (for entire Greater Seoul Area)

When you use the public transport system in Seoul, you tend to make more transfers compared to other overseas metropolitan cities. Thus, the Seoul government has adopted a public transit transfer discount scheme to reduce the cost of public transport for citizens and deliver a more reasonable fare system that allows for discounts among different buses as well as between subway and bus rides.

The integrated transfer discount scheme allows for up to five transfers regardless of transport modes thus, giving real benefits to the working-class people who tend to make many transfers. In addition, under the scheme no matter how far you travel, you pay less than what you otherwise would pay when the sum of the full rates of each different transport mode is applied. You are also entitled to enjoy the discount if you ride the next bus or subway in a half hour from the time you get off the first ride (in a hour between 21:00 and 07:00), making public transport travel more affordable.

Multi-tiered pricing system to make public transport travel more enjoyable

One-Month Subway Pass, Free-Ride Pass and Group Tickets make public transport travel more convenient with a minimal cost

The Seoul government has introduced One-Month Pass for daily subway riders. You can make 60 subway trips with this 30-day pass that costs KRW 46,200 and the pass is very popular among subway commuters. In addition, the government issues Free-Ride Passes to those aged 65 or older, the disabled and men of national merit to make their travel more convenient and enjoyable.

4. Health, Safety and Security

Hospitals

Health system performance

End of life care

Statistics

Indicators	Statistics	Unit	Data			Notes
			2011	2012	2013	
Hospitals	No. of hospitals accessible to foreigners for every 100,000 individuals	No.	1,159	1,413	1,381	

Hospitals

Seoul's Objectives

- **To give foreigners an easier access to medical services**
- **To attract patients from overseas by promoting the medical tourism industry**

To give foreigners an easier access to medical services

Emergency and Medical Consultation Room for Foreigners available 24 by 7

The Seoul government runs the Emergency and Medical Consultation Room for Foreigners as part of the Health Call Center at the 119 Integrated Control Center to address the medical needs of international visitors and foreign residents. The 119 Health Call Center offers one-stop service from medical consultation to EMS dispatch 24 by 7 upon receiving a 119 call.

According to the survey of 1,000 foreigners residing in the city conducted in 2012 asking how satisfied/unsatisfied they were with their living environment, 43.9% of the respondents cited 'communication' as the biggest challenge of their life in Seoul. Given such a language barrier faced by foreign residents and international visitors, the Emergency and Medical Consultation Room has expanded its services to five languages including English, Chinese, Japanese, Mongolian and Vietnamese. 10 interpreters for English, Chinese and Japanese with medical knowledge and experiences work by turns 24 hours a day at the Room providing medical specialized interpretation and consultation services rather than simply offering translation service. Mongolian and Vietnamese services are also available during the day time. For the year 2013, the Health Call Center received 10,229 calls, of which 2,429 were made by foreigners, meaning one out of four calls were made by foreigners.

In addition, on top of the emergency and medical consultation services, the Room also offers a three-way call service between a foreigner, a medical provider and the Room along with the information on hospitals, clinics and pharmacies accessible to foreigners. All of these improve medical accessibility for foreigners.

To subsidize medical costs such as admission and operation costs for the underprivileged including migrant workers

The Seoul government subsidizes admission and operation costs and offers care services for migrant workers (i.e. migrant workers and their children, female marriage immigrants prior to acquisition of nationality and her children and refugees) who are not protected by the health care system such as the health insurance and aid to ensure them a minimum quality of life.

11 hospitals including Seoul Red Cross Hospital designated by the city participate in this program. When migrant workers use one of the 11 hospitals, they are eligible to receive medical services such as admission care and operations for free up to KRW 5 million per one treatment without any limits on the number of medical treatments they can receive a year. So far, the city government has paid the bill for 2,367 cases through the 11 hospitals.

In addition, it also provides medical interpretation and caring services for those migrant workers who experience a language barrier and have no one who can take care of them even though they receive medical care from one of the designated hospitals, contributing to improving their minimum quality of life.

To attract patients from overseas by promoting the medical tourism industry

To run a support center for medical tourism and conduct promotion activities overseas to attract more visitors

The Seoul Medical Tourism Center and its website offered one-stop services between 2009 and 2011 while partnership was formed between 2010 and 2011 by designating and supporting partner hospitals (50 hospitals in five areas).

Holding presentation meetings for development of medical tourism products as well as promotional meetings overseas (three times in China and one in Russia) helped to boost awareness among foreigners (between 2009 and 2011) while an experience program for oriental medicine treatment created the demand for wellness medical tourism (from 2011 to 2012).

Medical providers (1,381) and medical tourism agencies (581) are mostly concentrated in Gangnam-gu and Seocho-gu of the city and 58.1% of the medical providers are clinics representing the lion's share of the pie.

99,422 foreign patients visited Seoul in 2012, a 27.7% increase from 2011, representing 62.3% of 159,464, the total number of foreign patients who visited Korea. The increase in the number of foreign patients to Seoul suggests that the support center for medical tourism and overseas promotion have paid off.

Districts to lead the promotion of the medical tourism industry

Gangnam-gu, Seocho-gu and Jung-gu, districts with strong infrastructure for medical tourists are leading the efforts to form Medical Tourism Council as a way to promote medical tourism through such activities as holding presentation meetings overseas and signing MOUs among hospitals. Jung-gu, the most visited area by international visitors in Seoul has been designated as the first Special Medical Tourism District in the nation. So, now the development works for medical tourism are underway in earnest centering on Myeong-dong and Euljiro (the city downtown) areas after going through the announcement procedure at the Small and Medium Business Administration.

Seoul, a leading destination for medical tourism of the nation represented 72.8% (KRW 194.6 billion) of the Korea's total medical

revenue from medical tourists in 2012.

Leveraging on rich tourism resources and competitive medical skills, districts will launch differentiated medical tourism projects with unique local flavors, helping to boost the local economy.

[Medical Tourism Efforts by Districts]

Jung-gu	Has pushed ahead with getting designated as Special Medical Tourism District (since 2010)
Gangseo-gu	Run a program to nurture international paid caretakers for multi-cultural families in the district (2012) Held presentation meetings in Russia, the USA, and Vietnam (2012) *MOU signed : three MOUs signed in Russia and two in Vietnam
Seocho-gu	Established Global Healthcare and held a presentation meeting in China (2012)
Gangnam-gu	Built a website (2011) and ran a program to develop coordinators (2012) Held a presentation meeting in Kazakhstan and Vietnam (2012) *MOU signed: two MOUs signed in Kazakhstan

Health System Performance

Seoul's Objectives

- **To contribute to extending a healthy lifespan with personalized health services**
- **To help people with hypertension and/or diabetes improve self-health management capability**
- **To make family healthier through life-cycle specific health management for women**

To contribute to extending a healthy lifespan with personalized health services

Home Visit Health Management Program offering personalized one-to-one services

The Seoul government runs Home Visit Health Management Program where visiting nurses of health centers pay a visit to families of the medically underserved population and develop and maintain personalized one to one health plan. Visiting nurses offer health check-ups and preventive education by user groups and help them access local medical providers if necessary.

361 visiting nurses join the program to offer personalized home visit health management services and the number of cases using the program has been on a steady rise from 447,690 in 2011, 563,201 in 2012 to 577,472 in 2013.

The government is committed to building a sense of bonding and trust with local residents by retaining visiting nurses and having them take responsibility for specific areas. It also plans to expand the recipients of the program beyond the NBLS(National Basic Livelihood Security) beneficiaries, offering visiting services that meet the needs of the recipients and checking their health issues, health

risk factors and the level of self-health management. If this program helps the medically underserved population to be more aware of their health status and lead a healthier lifestyle, it will ultimately lead to extending a healthy lifespan.

To help people with hypertension and/or diabetes improve self-health management capability

Metabolic Syndrome Management Program designed to improve people's self-care ability

The 2007 National Health and Nutrition Examination Survey has found a 31 % prevalence rate for metabolic syndrome among those aged 30 or above in Seoul. Metabolic syndrome is the name for a group of risk factors that raises your risk for chronic diseases including heart disease, stroke and cancer. You must have at least three metabolic risk factors out of the five - a large waistline, a high triglyceride level, a low HDL cholesterol level, high blood pressure and high fasting blood sugar - to be diagnosed with metabolic syndrome. The risk of having metabolic syndrome is closely linked to a lack of physical activity, irregular meals and preferences of instant foods. So, it is also called a lifestyle disease.

The Seoul government launched Metabolic Syndrome Management Program in 2009 to prevent people with metabolic syndrome from developing chronic diseases by helping them better take care of their health.

Five to six professionals including doctors, nurses, nutritionists and athletic trainers work full-time at the Metabolic Syndrome Management Center in 25 health centers in districts, providing diagnosis and personalized health management services. Each year the Metabolic Syndrome Management Centers add 180,000 (the actual number of people who visit the Center in 2013) to their registry for management, totaling 550,000 on an accumulated basis from 2009 to the end of 2013. The target is to increase the number

of registered people to 1 million by 2016 for management.

To help full-time workers who have difficulty in finding time to use the Centers, Visiting Health Consultation Room for Metabolic Syndrome was set up in 2011 by grouping professionals into teams to offer medical check-up, personalized health consultation and education services at people's workplaces. In 2013, the mobile health consultation room paid 3,163 visits to 1,795 workplaces, offering user-centered on-site services.

Also, in 2013 in conjunction with the national health examination program, the metabolic syndrome service was provided to 15,480 people. The city government expects the Metabolic Syndrome Management program to play a pivotal role in preventing chronic diseases and improving people's ability to manage their health.

To offer universal health management services with introduction of Seoul Health Point

Seoul Health Point is a point program that gives points to hypertensive and/or diabetic patients when they register at a medical provider, receive follow-up medical care, get education or take necessary tests and allows the patients to use the accumulated points at the medical provider at which they registered for tests for complications and vaccination. A registered patient can accumulate up to 20,000 points a year. 84 hospitals from seven districts joined the program in 2013.

2,919 patients were registered, 1,449 got medical care and 268 received education in 2013 after its launch in October of that year and as of at the end of Q1, 2014, the number of registered patients stands at 7,466 while 4,853 have received medical care and 2,613 have participated in education. Although it is still an early stage, the program sets a model for integrated health management based on public and private partnership for prevention of cardio-cerebral-vascular diseases. This inclusive program is expected to address health inequality by offering universal health management services.

To make family healthier through life-cycle specific health management for women

In an attempt to move away from health management centering on examination and treatment toward enhancing women's ability to manage their health, the Seoul government runs a number of programs specific to life cycles from adolescent to old-age periods, offering education and consultation services while carrying out promotion activities along with a program that encourages women to get tested for women's cancers.

Working with private and civic groups, it identified 13 women-specific health problems through pilot programs launched in 2012 intended to identify gender-specific life cycle health issues and develop gender-sensitive health indicators. This became the basis for developing Comprehensive Plan for Women's Health in 2013 aimed at addressing major women's health problems. The main components of the Plan include health management for elderly women, a health support network for women with disabilities, health management for women working at traditional outdoor markets, health management for female care workers (paid caretakers, care workers for frail elderly) and other programs to improve women's capability for self-health care. For example, one of the activities of the Plan is to set up a Health Zone in an outdoor market furnished with blood pressure gauges, body fat analyzers, leg acupuncture apparatus and health books so that vendors in the market can check their health status by themselves and also take a rest. In addition, a nurse is dispatched to the Health Zone for three days a week, providing health consultation and education services.

Some of specific achievements of the Plan in 2013 are opening Workers Rest Place for female care workers, providing a preventive education program for musculoskeletal diseases and stress to 98,450 people and conducting a health status and needs survey for 5,021 female workers at 910 workplaces at Gasan Digital Industrial Complex.

In 2014, the pilot program has extended to eight districts and intends to look into the emotional labor issues of women with

unstable employment and launch health management projects for the day-to-day life of women in their home, workplace and societal environment through public and private partnership. With the slogan of Healthy Women are the Hope of Seoul, the city government is committed to helping women to lead a healthy life in Seoul.

End of Life Care

Seoul's Objectives

- **To contribute to enhancement of the quality of life for terminal cancer patients with systematic management and proper medical service**

Hospice care for terminal cancer patients

The Seoul government runs hospice beds at municipal hospitals that offer systematic End-of-Life care, consultation and education services for suffering terminal cancer patients and their relatives to better their quality of life for the remaining of days they have. Every year over 70,000 new cancer patients are generated and 80-90% of terminally-ill cancer patients suffer from cancer pain requiring a systematic management and proper care.

The government has been expanding hospice beds every year to provide End-of-Life care for more cancer patients and their relatives. In 2012, there were 99 hospice beds at four municipal hospitals offering End-of-Life care to 27,332 patients and the numbers were increased to 116 hospice beds, five municipal hospital and 29,187 patients in 2013. The government plans to add 16 more beds in 2014, bringing the number of the total hospice beds to 135.

The Seoul government is committed to improving the quality of life for terminally-ill cancer patients and their relatives by adding more hospice beds at municipal hospitals each year.

[Hospice Beds Performance]

(Unit : no. of person/KRW 1,000)

Year	Description		Total	Seoul Dongbu Hospital	Seoul Bukbu Hospital	Seoul Seobuk Hospital	Seoul Medical Center	Seoul Seonam Hospital
2011	No. of beds		100	21	30	29	20	
	No. of patients	No. of times beds are used	21,498	4,359	7,898	7,531	1,710	
		Actual no. of patients	827	191	330	242	64	
	Budget(including the central government's expense)		187,381	38,921	39,930	38,500	70,030	
2012	No. of beds		99	21	30	29	19	
	No. of patients	No. of times beds are used	27,332	6,125	7,679	7,290	6,238	
		Actual no. of patients	1,021	208	334	250	229	
	Budget(including the central government's expense)		346,547	56,117	53,730	45,000	191,700	
2013	No. of beds		116	21	30	29	19	17
	No. of patients	No. of times beds are used	29,187	6,686	7,719	7,204	7,085	493
		Actual no. of patients	1,200	248	383	239	300	30
	Budget(including the central government's expense)		402,600	58,000	61,320	45,000	238,280	-

5. Sustainability and the natural environment

Natural disaster risk

Recycled waste

Public park space

Air pollution

Statistics

Indicators	Statistics	Unit	Data					Notes
			2008	2010	2011	2012	2013	
Natural Disaster Risk	Max. precipitation per hour	mm/hr	50.5	98.5	113	83.5	67	-Typhoon Kompasu in Sep. 2010 -Heavy rain of 113mm per hour in Jul. 2011 led to landslides
	Number of houses flooded	no.	398	24,551	20,903	747	116	Natural Disaster Management System (NDMS)
	Number & area of landslides	ha	-	-	109	0	0	Internal source
		no.	-	-	81	0	0	
	Landslide prevention project	no.	-	-	-	206	275	-249 landslides, KRW 20.5 billion in damage -Since the landslides in 2011, landslide prevention project got intensified
		KRW 100million	-	-	-	456	289	
	Number of earthquakes	no.	0	0	0	0	0	Korea Meterological Administration
Snow days	days	-	-	9	14	16	Number of snow days in Seoul during winter (Nov. to Mar.)	
Snowfall	cm			13.2	53.7	29.6	The sum of snowfall in Seoul	

Indicators	Statistics	Unit	Data			Notes
			2011	2012	2013	
Recycled waste	Percentage of municipal solid waste diverted from the waste stream to be recycled	%	63.5	63.7	65.4	
Public park space	Park space	km ²	169.79	170.00	169.13	

Indicators	Statistics	Unit	Data					Notes
			2002	2005	2008	2011	2013	
Air pollution (PM-10)	Concentration of particulate matter	μg/m ³	76	58	55	47	45	

Natural Disaster Risk

Seoul's Objectives

- **To build a mid- to long-term preventive urban safety network with the Seoul Safety Management Master Plan**
- **To build a systematic response system by types of disasters for prevention and damage minimization**
- **To include citizens in a disaster response system to make policies more effective**

To build a mid- to long-term preventive urban safety network with the Seoul Safety Management Master Plan

Four strategies and 66 integrated disaster response measures

The Seoul government has put in place the Seoul Safety Management Master Plan to brace for disasters and safety accidents that may happen, presenting a vision of Seoul, a city where everyone can be assured of safety. The Master Plan is composed of four strategies: 1) strengthening preventive safety management, 2) building disaster readiness, 3) establishing a complete recovery system and 4) reinforcing urban safety through public engagement and communication. It also lays out comprehensive measures for 66 disasters and safety accidents. Among them, 17 kinds of disasters and accidents including floods, slope disaster, heavy snow storms, heat and cold waves, and facility accidents are subject to special management as they frequently happen with potentially huge damage, thus requiring a high-level of readiness.

City Safety Policy Meeting, a control tower for greater cooperation and stronger response

The City Safety Policy Meeting - which serves as a control tower at the city government- led by a deputy mayor with representatives from 43 departments reviews any redundant investment among an array of disaster-prevention plans developed by individual departments and their connections to the Safety Management Master Plan on a prior consultation basis. This prior review process helps the city government quickly respond and collaborate when it is hit by a large-scale complex disaster. In addition, it conducts monitoring every quarter for a set of key urban safety indicators (which include reducing areas prone to floods, securing seismic performance of public facilities, reducing facilities at high-risk for disaster, five-minute or less response to fire sites, and deployment of basic fire-fighting equipment, etc.) to check and reinforce disaster response readiness on a regular basis.

Flood : implement safety measures against floods that meet specific community needs

To minimize flood damage by implementing safety-measures that meet specific needs of community in coping with emergency

In Korea 50-60% of the annual rainfall concentrates in summer from late June to early September with increasingly more frequent torrential rain caused by global warming. To cope with changing weather patterns, the city government installs water tanks and temporary water tanks, as well as small water-stops for flood prevention in areas prone to floods while offering care services to families vulnerable to flooding. In addition, it makes efforts to put in place effective flood-prevention measures to minimize damage from floods such as expansion and establishment of rainwater pump stations, improvement of their performance, river dredging and bank improvement, repair and replacement of old sewer pipelines as well as installment of rainwater collection facilities.

To build a management system for flood-control situation for prompt response to emergency

The city government has set up a system for anticipation and early response to a disaster emergency situation. 230 or so rain gauges are used for integrated management of the precipitation situation and for monitoring of the water levels of sewer pipelines while alert systems for emergency evacuation are installed for 18 rivers for integrated monitoring. In addition, a database has been built to allow the operation status of floodgates of rainwater tanks, water-level pump control and 32 floodgates called Yukgammun installed in Han River to prevent flood during large storms to be retrieved from the Hydrological Information System. Fire fighting crew such as 119 emergency unit is ready to be dispatched to the site if damage occurs for early response.

Make Seoul, a city free from flood damage with citizens

The Seoul government has laid out community-level safety measures directly involving experts and civic groups from the vision-setting stage of flood control policies. It held an open meeting with citizen participation along with the Special Committee on Anti-Flood Measures composed of experts, citizens and civil servants to discuss flood control measures. The government has also set up a system to make use of private, professional human resources by offering disaster response training to volunteer centers and launching a voluntary disaster prevention corps. In addition, it is drawing a disaster map that contains information on historically flooded areas, evacuation sites in high-risk areas, evacuation routes, and medical centers and plans to distribute it to its citizens in May, 2014.

Landslides : build a damage mitigation system

To build a system for prevention and damage mitigation of landslides

The Seoul government carried out preventive erosion control works on 206 sites vulnerable to landslides in 2012 and on 275 of them in 2013. It also conducted Korea's first-ever complete survey on 110 mountains, 2,470 road slopes and 667 housing slopes in Seoul to gather data on overall dangerous slopes and rate them according to disaster risk levels, laying the foundation to mitigate landslide damage. Based on the complete survey, it developed and launched a 10-Year Plan for Preventive Erosion Control that includes slide simulations, stability analysis, and analysis of areas of influence of damage.

To put in place a forecast and warning system for landslides

An emergency call tree has been set up involving citizens in areas prone to landslides, the city government, Gu-office, a community center, evacuation shelters, and a police station to share information on landslide risks and quickly respond to emergency if it happens. A forecast and warning system has been further strengthened with establishment of a database on the houses, military troops, temples and residents in mountainous areas and a launch of a disaster safety app for smartphones.

Earthquake : develop seismic design for buildings and an earthquake response system

Although Seoul is not included in earthquake-prone areas, the government has put in place earthquake-resistant design for buildings and a post-earthquake response system to mitigate potential damage from earthquakes. Currently, an earthquake acceleration measuring equipment installed at the Seoul Safety Control Center monitors any seismic movements 24 by 7 while districts are also in the process of installing the instrument in their area. To advance earthquake prevention readiness, the city government plans to carry out a geological fault survey for the city and develop a Standard Model for Earthquake Measures of Seoul in the future.

Heavy snow : minimize inconvenience experienced by citizens by quickly clearing snow from the roads during unexpected heavy snow

Due to extreme weather patterns, snowfall is more frequent and heavier these days. For early response, the Seoul government runs a Video Transmission System that predicts upcoming heavy snow. It identifies the signs of heavy snow one hour prior to the actual snowfall, triggering early snow-removing works and manages snow-clearing works in real-time using GPS installed on snow removal vehicles and CCTVs. It also remotely controls snow clearing works by deploying automatic salt water spraying devices in areas not accessible by vehicles. Volunteers and civic groups participate in snow removal works, too. There are Life Safety Governance, a volunteer group composed of residents at Dong community centers, disaster information correspondents of volunteer fire fighters and a teenager volunteer system that could lend a hand in clearing snow. The city also wages a campaign urging people to clear the snow in front of their houses and stores to encourage citizens' voluntary participation in snow clearing.

Recycled Waste

Seoul's Objectives

- **To strive to reduce wastes from their sources and recycle them as much as possible**
- **To make Seoul a best recycling city with the implementation of an innovative waste release and collection system**
- **To expand the culture of reusing goods by promoting flea markets**

To pursue recycling as the ground rule for the city's waste policy

Ground rules of waste management

The Seoul government's waste management policies are designed to create a resource recycling city with more pleasant living conditions by making the most efficient use of resources and recycling wastes as much as possible to leave the least amount of waste for disposal. The following are the ground rules for waste management to effectively implement such policies:

First, to make efforts to reduce wastes from their sources;

Second, to maximize the recycling rate by implementing a separate discharge and collection of wastes to be recycled as much as possible;

Third, to ensure that the still remaining waste be collected in hygienic ways and waste disposal facilities be maintained in eco-friendly manners in order not to cause any inconvenience to citizens; and

Fourth, to step up promotional campaigns to encourage citizens to actively cut down on wastes from the start and recycle resources

Status of waste generation, collection and disposal

As of 2012, Seoul had a total volume of 9,189 tons of waste produced, 6,005 tons recycled, 2,465 tons incinerated and 719 tons buried per day, and the average volume of waste generated per capital was 0.87kg. Since the implementation of the volume-based waste fee system in 1998, the total volume of waste declined from 15,397 tons per day in 1994 to 9,189 tons per day in 2012, and the total amount of recycled materials grew from 3,159 tons per day in 1994 to 6,005 tons per day in 2012.

Once households put wastes in standard plastic garbage bags and take them out to designated places, garbage collection crew pick them up and deliver them to resource recovery facilities (incinerators) or intermediate treatment points for compression to finally send them to the Greater Seoul Area landfills, or directly transport them to the landfill without stopping at the intermediate places.

Garbage discharge and collection are performed after sunset and before sunrise, respectively. Families of detached houses are required to put out garbage bags outside the houses on designated collection days while residents of apartments or other multi-household buildings take them out on designated locations or place them in garbage containers installed outdoor at their pleasure so that collectors from district offices or cleaning/collecting agencies take them away at least 3 times per week. Citizens can easily buy standard garbage bags at supermarkets.

To enhance the recycling rate with the implementation of an innovative recycling system

The city's status of recycling

Materials to be recycled are classified into paper, bottles, cans, plastic and scrap metals on a high level. While autonomous districts have different guidelines for waste release, multi-household buildings such as apartments have to separate wastes into 5 - 6 types, and

single family houses do not separate them at all or divide them into 2-3 types.

Meanwhile, the Seoul government developed a master plan for recycling in May 2013 and has pushed forward more innovative recycling policies and also sought to expand the recycling culture by actively promoting flea markets.

Setting up recycling stations at areas of detached houses

Since wastes placed outside single-family houses had lots of contents left inside, they had to be re-classified at another places, incurring considerable amounts of costs; labor cost, sorting cost and left-over waste disposal cost.



To address this issue, the city government has put up movable recycling stations within 50 - 100 m radius of houses; public parking lots, vacant lots, playgrounds and designated parking areas for residents, so that residents release their wastes at the defined spaces. This program has also created jobs, supervisor of recycling stations, for the elderly people who used to collect paper for their living.

In 2013, a pilot project was launched to set up and run 112 recycling station in 5 dong (towns) and produced tangible results; cleaner streets, growing recycled goods and decreasing leftovers inside wastes to be separately treated. In 2014, a total of 1,128 stations are planned to be installed in 73 dong in Mapo-gu (district) and other districts.

Free visiting & collecting service of large-sized electronic wastes

The total number of 4 major electronic wastes (e-waste) generated per year amounts to 1.8 million units and about 580,000 units out of them are subject to disposal fee, of which total amount is KRW 4.6 billion.

The city government introduced a free visiting & collecting system for e-waste in June 2012 in order to remove financial burden of citizens as well as to prepare a systematic collection mechanism of resources so that some polluting substances, such as refrigerant, can be disposed of in eco-friendly ways to curb pollution, and the Korea Association of Electronics Environment, which signed an agreement with the city to collect and treat e-waste, offers a part of its profit to help the underprivileged citizens.

The implementation of this program has saved Seoulites a total of KRW 4.6 billion per year in reduced disposal cost and also produced jobs through the operation of dedicated collection and transportation units. Moreover, the proper treatment of unused electronic goods has been translated into 8 tons of greenhouse gas reduction.

To expand the culture of reusing goods by promoting flea markets

The Seoul government and its districts have actively expanded downtown flea markets (Gwanghwamun and Ttukseom) and the districts' own green markets, in which citizens buy and sell highly practical goods, all of which



allows the city to successfully recycle resources and encourages the participating citizens to donate a part of their proceeds for the vulnerable neighbors.

Gwanghwamun Hope Sharing Flea Market is held every Sunday with different themes for each month as well as for each season, and it offers diverse engaging and entertaining features: recycling flea market open to local adults and children as well as foreigners, farmers' market, traditional goods' market and an outdoor art theater.

In 2013, this flea market was open 22 times in total, 5,685 teams

participated and 690,000 citizens visited, 468,000 units of goods were traded and 11,459 units were donated.

Ttukseom Beautiful Flea Market was held in Hangang (River) Park in the Ttukseom district every Saturday since 20004 and has been held on every weekends since 2013. It has offered various opportunities for citizens to engage in: recycling markets, free repair shop for electronic appliances, an eco-friendly T-shirts-making program, a cotton ball campaign. The market opened 48 times, engaged 18,124 teams, attracted 480,000 visitors, had 756,000 pieces of goods traded and received 71,790 pieces of goods as donation.

In the meantime, districts have also hosted small-scale flea markets, such as recycling market and food market, in empty spaces of apartment complexes or community parks, contributing to facilitating harmonious relationship among citizens and practicing the culture of sharing. In 2013, a total of 1,899 times of small markets were held and 331 groups joined.

Public Park Space

Seoul's Objectives

- **To build eco-friendly parks by utilizing landfill and closed water purification plant**
- **To create Lush Green Seoul with afforestation projects engaging citizens**

To expand park space per citizen

Increased park space in Seoul : 2,714 parks with a combined total area of 169.13km²

Parks in Seoul make up 27.95% of the city's gross area of administrative district (605.21km²), and the park space per capita, which used to be smaller than 10.00m² before 1995, has increased to 16.20m² through intensive park expansion projects.

Major initiatives to enlarge park space

The Seoul government has implemented diverse projects to produce a green city; turning landfill and closed water purification plant into its landmark parks, such as World Cup Park, Seonyudo Park and Seoseoul Lake Park; creating urban gardens by planting herbaceous flowers on rooftops as well as on the roadsides next to soundproof walls and retaining walls, and making rest areas, and launching the Seoul, a City Covered with Flowers campaign, which is a city afforestation project targeting villages and their alleys.

These initiatives are more meaningful as they are designed to expand the scope of green space into daily living spaces of citizens, such as schools, offices, apartments and markets.

Reference Data

- Economic value of Seoul urban forests' contribution to air purification : KRW 228 billion.
- A drop in the number of housebreaking after flower road projects : 1,710 cases in 2002 → 390 cases in 2008 (77% decrease) (Case of Suginami, Tokyo)
- An average 16% increase in the prices of houses with well-maintained garden
(Source: Husqvarna survey : 2012 Business Day)

To build eco-friendly parks by utilizing landfill and closed water purification plant

World Cup Park, a landfill turned into an environment-friendly space with cultural features

The Seoul government built on Nanjido, an islet of landfill located in Sangam-dong, Mapo-gu, a large-scale eco-friendly park (1,270,500m²) comprising small parks with different cultural themes: Pyeonghwa (Peace) Park, Nanjicheon (Stream) Park, Haneul (Sky) Park and Noeul (Sunset) Park. This place has become one of the city's major attractions with symbolic themes.

Seonyudo Park, an ecological park built on a closed water treatment plant

The city government built one of its main ecological parks on Seonyudo, located in Yanghwa-dong, Yeondeungpo (110,407m²), which used to be a home to a water treatment plant. Facilities of Seonyu filtration plant, which had long been left unattended after closure, was converted into a building of exhibit halls, called Story of Seonyudo.



World Cup Park



Seonyudo Park

Pureun Arboretum, destroyed green belts transformed into an arboretum

This project was designed to transform an wide area of destroyed green belts in Hang-dong, Guro-gu (103,265m²) into an arboretum. The Ministry of Land, Infrastructure and Transportation paid KRW 2 billion as the land compensation cost for a project to support the residents of green belts and the Seoul city government covered the rest of the project cost with its own budget (KRW 36.6 billion). The arboretum was open in May 2013 with various features, such as a rose garden, an observation deck and a visitor center.

Gyeongui Line Forest Trail, born out of a closed railroad

Gyeongui railway line, which was open in 1906 connecting Seoul to Sinuiju, has been a historic infrastructure filled with citizen's joys and sorrows, history and memory. Once a project started in 2005 to relocate Gyeongui line running overground to underground railroads, the Seoul government began to convert the 6.3km-long closed overground railway into a green linear park to serve as a recreational space for citizens. The total area of 17,400m² has been developed into a park until now and the entire forested area, which is as large as 102,008m², is scheduled to finish by the end of the next year.



Pureun Arboretum



Gyeongui Line Forest Trail

Seoul Forest, the whole district of shanty towns transformed into a great public park

This project converted an wide area of illegal shanty towns near the Han River on Ttukseom-ro, Seongdong-gu, into an eco-friendly Seoul Forest. (1,156,498m²)

Town hill parks, small mountains in the neighborhoods converted into community parks

Small mountains left without care in towns, which usually did not have enough space for park, were remodeled into community parks, tailored to meet different needs of each town. (220,438m²)



Before



After

National Memorial Board Neighborhood Park

Dream Forest, built on the area of a deserted amusement park

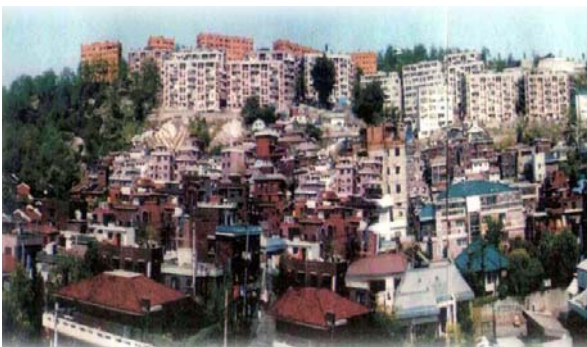
The city government purchased Dream Land, a deserted amusement park, and adjacent land area and transformed them into a large-scale park filled with plants (660,000m²) for citizens in order to enhance urban living conditions of Gangbuk area (the district north of the Han River), which did not have sufficient park space.

Jungnang Camping Forest, an outdated residential area changed into a family camping park

Hills in Mangu-dong, Jungnang-gu remained seriously outdated since the area was designated as a green belt. A wide range of regulations have led to deteriorating houses, illegal houses, forest damages following unauthorized farming, and a jumble of graves. The Seoul government converted this area into Jungnang Camping Forest (180,000m²) to provide 2 million citizens of the northeast urban zone with an excellent space for relaxation.

Namsan Park, a demolished residential area turned into a giant park

The city government created 260m-long paved walking trails along with a stream (140,400m²) and installed wooden decks, lookout shed and sport facilities on the site, in which two buildings of Namsan Foreigners' Apartment and detached house complexes of foreigners had been demolished. In addition, it reconstructed an uncrowded part of the walking trails into a green space and planted 227 tall trees, including Indian lilacs, and 57,690 short trees and about 100,000 herbaceous flowers.



Before



After

Namsan Park

To create Lush Green Seoul with afforestation projects engaging citizens

Launching the Seoul, a City Covered with Flowers campaign

This project was conceived to promote citizen-led urban afforestation efforts by strongly encouraging their cooperation and engagement and further create a cleaner and greener city environment. A total of 337,400 citizens from 8,500 communities have joined this green campaign, planting 3.42 million trees and 10.83 million flowers.

Type	Tree (1,000)	Flower (1,000)	Flower seed (kg)
Total	3,422	10,831	3,494
Afforestation of public facilities	1,892	5,786	2,023
Citizens' own afforestation efforts	887	4,968	1,471
Afforestation of private facilities	643	77	-

Promoting citizen-led town forest/green street-making campaign

As the Seoul government shifted the direction of its urban afforestation strategy from government-led projects to citizen/community-led campaigns, it involved more and more citizens in planting and maintaining trees on their own, and turned so many living spaces green that citizens realized the difference; 24 town forests created on a combine total area of 11,607m² and 31 green streets on 5,427m².

Creating open green space for apartment complex

The city government removed walls of apartment complexes and built 157 open green spaces on a combined total of 195,856m² so as to provide residents and neighbors with a more pleasant

environment and a place for community activities as well as communication.

Making small unused spaces green

This program is about identifying small unused spaces all over the living areas of citizens, which usually have little space for plants, and making and keeping them green beautiful living environment for community activities as well as communication. A total of 445 green spaces were built on a combined total area of 85,672m².

Expanding the green space on streets

This project was intended to actively find out idle, empty spaces on streets and turn them green so as to reduce noise as well as air pollution, which will improve the environment for pedestrians. A combined total area of 135.016m² was transformed into green spaces.

Creating Eco-Schools

The city government has launched pilot projects to build Eco-School zones integrating school playgrounds, neighboring parks and community sports facilities in order to provide eco-friendly education environment and build local ecological hubs. (18,582m²)

Air Pollution

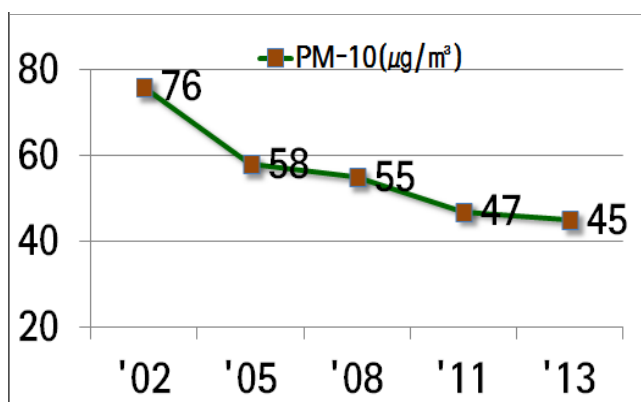
Seoul's Objectives

- To reduce concentrations of particulate matter 10 micrometers (PM-10) to that of advanced cities ($30\mu\text{g}/\text{m}^3$)
- To strengthen cooperative ties with polluting countries in Northeast Asia, such as China and Mongolia
- To early adopt an ultra-fine particles warning system to protect citizens' health

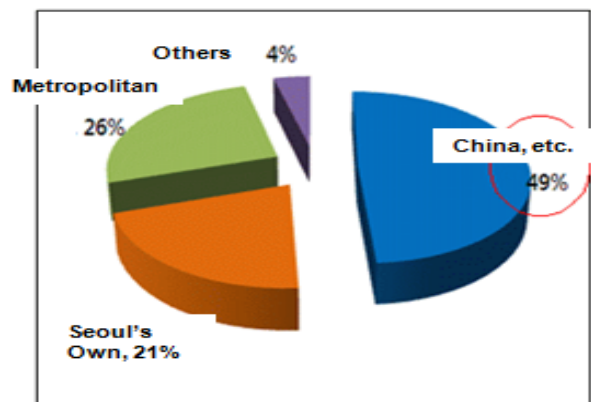
Seoul's status of particulate matter 10 micrometers (PM-10)

Concentrations of particulate matter 10 micrometers (PM-10) dropped from $76\mu\text{g}/\text{m}^3$ in 2002 to $55\mu\text{g}/\text{m}^3$ in 2008, and has continued to decrease to $45\mu\text{g}/\text{m}^3$ in 2013.

According to a research titled A Study on Measures to Reduce Ultra-fine Particles, 30% to 40% of contributors to PM-10 come from other countries, such as China and there is a growing need to facilitate cooperation with countries involved to improve air quality by addressing external sources of the fine dust.



Decreasing trend of concentrations of PM-10



Different regions' contribution rates to air pollution

Diverse initiatives made to enhance air quality

① Making intensive efforts to change transportation section to reduce polluting gas emission since 2002

Since 2003, for diesel vehicles found to exceed the exhaust gas standards in an in-depth emission investigation, the Seoul government took diverse approaches to lower their impact on air pollution; installing exhaust gas-reduction devices, scrapping outdated vehicles earlier than usual cycle and replacing diesel engines with LPG engines, all of which have affected a total of 265,504 units of cars.

Since 2002, the city government has had diesel-engined buses and garbage trucks replaced with CNG vehicles, which involve a total of 10,376 units. It extended financial support to cover cost gap between diesel and CNG vehicles: KRW 18.5 million for each intra-city bus (KRW 16 million per medium size bus), and from KRW 27 million to KRW 42 million for garbage trucks.

In addition, since November 2010, it restricted the operation of the vehicles that failed to take required actions to reduce gas emissions, such as installation of device to decrease exhaust gas, and began to expand the Low Emission Zone (LEZ), a geographically defined area which seeks to restrict access by polluting vehicles; a crackdown on the entry of vehicles registered with the Greater Seoul Area into Seoul since 2014 and such vehicles from all around the country since 2015.

The city government also strengthened its control on traffic demands; extending the entire distance of exclusive central bus lanes in Seoul up to a total of 117km and applying this public bus management system to the whole Seoul area, and increasing the total number of cars of the Car-sharing program from 567 units to 1,500 units in 2004.



Installation of exhaust gas-reduction device



Replacement of diesel vehicles with CNG vehicles



Median exclusive bus lane



Guidance to restrict car idling

② Extending air quality improvement programs to power generation and incineration, and residential and industrial heating sectors since 2008

As a total of 3.6 million household boilers in Seoul are mostly low-efficiency, high-NO_x ones, it is urgent to supply high-efficiency, low-NO_x (eco-friendly) boilers. In fact, A total of 11,000 units of domestic green boilers were supplied in 2013 and additional 20,000 units will be dispatched by the end of 2014.

The city government also started in 2008 to provide small- and medium-sized companies with low-NO_x burners, which curb the generation of NO_x by controlling the levels of oxygen and flame temperature during combustion. A total of 2,450 units were supplied until 2013.

It also reduced the total volume of NO_x emission by 18 large-scale high-polluting businesses subject to the city government's control of their total NO_x generation, such as incinerators, power plants and hospitals, from 870 ton in 2012 to 805 ton in 2013.

③ Strengthening control on fugitive dust to restrict the emission of PM-10

The city government examined a total of 9,096 plants that emitted fugitive dust, exposed 286 high-emitting facilities and took necessary actions on 186; imposed penalty on 98, accused 2 and issued correction orders to 86.

In addition, it has taken concrete measures to lower the total level of fugitive dust; raising the total number of dust-collecting road

cleaning vehicles to 47 in 2014, which can sweep roads even during winter time not conducive to water cleaning, and extending the entire distance of road sweeping from 900,000 km in 2007 to 1,200,000 km in 2013.

To strengthen cooperative ties with polluting countries such as China

As the air quality of Seoul is vulnerable to local as well as foreign factors, the Seoul government pursues cooperation with China as well as major local cities to alleviate the significant level of air pollution.

With this realization, the city government has continued to host Northeast Asia seminars on air quality improvement since 2011, made the director general for climate change visit Beijing in December 2013, and proposed to the Chinese capital a memorandum of understanding (MOU) on air quality enhancement in January 2014, which will be signed off in coming June.

On April 3, 2014, the mayor of Seoul visited Beijing to sign an Agreement to Jointly Tackle Air Pollution with his counterpart of China's capital and hosted a symposium between air quality experts from Seoul and Beijing. The two parties agreed to propose joint pilot projects to be implemented in the two cities, set up a joint environment policy-making team, exchange technologies, information and human resources on anti-air pollution policies, jointly host a Seoul-Beijing forum to enhance air quality and build a network between the two cities.

The Seoul government also signed a memorandum of understanding to improve air quality with Ulaanbaatar, one of the major sources of yellow dust, in February 2014. It also plans to sign MOUs with other major cities in China.



Visit to Beijing on Dec. 11, 2013



Signing an MOU with Ulaanbaatar



Announcement of a joint agreement with Beijing on Apr. 3, 2014



Symposium of experts from the two cities on Apr. 3, 2014

To early adopt an ultra-fine particles warning system to protect citizens' health

The Seoul government launched the nation's first ultra-fine particle (PM-2.5) warning system in October 2013 to protect citizens, especially the vulnerable groups, such as people with respiratory problems and the elderly.

On November 29, 2013, it started to issue pre-alert for the level of ultra-fine dust, which is even lower than that of alert, in its more proactive actions to protect the health of citizens.

[Ultra-fine dust (PM-2.5) warning criteria]

Level	Criteria for issuance	Criteria for lifting
Pre-alert	Average $60\mu\text{g}/\text{m}^3$ or over per hour for at least 2 hours	Average $45\mu\text{g}/\text{m}^3$ or lower per hour
Alert	Average $85\mu\text{g}/\text{m}^3$ or over per hour for at least 2 hours	Average $50\mu\text{g}/\text{m}^3$ or lower per hour
Warning	Average $120\mu\text{g}/\text{m}^3$ or over per hour for at least 2 hours	Average below $85\mu\text{g}/\text{m}^3$ per hour

Once the alert is issued, the city government provides about 190,000 citizens with a description of the alert and guidelines for necessary actions through multiple channels: Seoul Air Quality Information website, mobile application, electronic boards for air quality information and SMS (for those applying to receive this information).

On February 26, 2014, the Seoul government beefed up the warning system. If concentrations of ultra-fine dust does not drop for at least 48 hours after the issuance of the alert, it forms an Ultra-fine Dust Control Headquarters to minimize damage to citizens' health.

[Detail countermeasures for each action item]

Action item	Alert	Alert continued after 48 hours (Stage of crisis management)	Warning
Limit on operation of vehicles belonging to public agencies	Suggest restriction of operation	Impose a full-scale limit on operation	Impose a full-scale limit on operation Ask public organizations for cooperation (i.e., central government agencies and public corporations)
Suggestion of self-restriction for private cars	Suggest self-restriction of operation	Suggest self-restriction of operation	Expand a license plate rationing system
Reduction of operation hours of exhaust gas-emitting businesses	Request shortening of operation hours	Lower operation rate to 80% for businesses affiliated to the city government Suggest shortening of operation hours for private businesses	Lower operation rate to 60% for businesses affiliated to the city government Suggest lowering operation rate to 80% for private businesses
Water cleaning of roads	Perform operation at 100%	Perform operation at 150% Send in fire trucks and towns' administrative use vehicles	Perform operation at 200% (even for alleys) Send in fire trucks and towns' administrative use vehicles Deploy water sprinklers
Operation of schools and child care centers	Suggest self-restriction of operation	Suggest closing or shortening operation hours	Close or shorten operation hours (need for the city office of education's cooperation)
Construction site management	Conduct investigation at district level	Have the city and districts conduct joint investigation	Request discontinuation of dust-emitting operations and outdoor construction
Extension of fountain operation hours	Suggest extension of operation hours	Extension of fountain operation hours -Period: May - Oct. → Mar. - Apr. (designated days) -Hours per day: 2.5 → 4.0 hours	Extension of fountain operation hours •Period: May - Oct. → Mar. - Apr. (designated days) •Hours per day: 4.0 → 7.0 hours
Crackdown on exhaust gas-emitting vehicles	Increase work force for emission control squad	Increase work force for emission control squad (18 officers of 3 teams → 93 officers of 28 teams) Conduct intensive control on high-emitting areas (i.e., bus garage and bus terminal)	Increase work force for emission control squad (18 officers of 3 teams → 93 officers of 28 teams) Conduct intensive control on high-emitting areas (i.e., bus garage and bus terminal)

6. Economic clout

Number of Global 500 headquarters

Financial and business services employment

Productivity

Rate of real GDP growth

Attracting FDI : Number of greenfield projects

Attracting FDI : Capital investment

Statistics

Indicators	Statistics	Unit	Data			Notes
			2011	2012	2013	
Number of Global 500 headquarters	Number of Global 500 headquarters	No. of offices	12	11	12	Fortune Global 500
Financial and business services employment	Financial and business services employment rates ¹⁾	%	25.0	25.1	-	Statistics Korea Employment in finance & business services/ The city's total employment × 100
Productivity	Productivity	\$	50,102	50,865	-	Statistics Korea GDP/the employed
	Seoul's GDP	100 million(\$)	2,511.1	2,561.6	-	Statistics Korea
	Number of the employed	1,000	5,012	5,036	5,097	Statistics Korea
Rate of real GDP growth	GDP growth rate in real terms	%	1.99	2.47	-	Statistics Korea
Attracting FDI: Number of greenfield projects	FDI: Number of investments in greenfield projects	No. of cases	1,092	1,112	1,099	KOTRA
Attracting FDI: Capital investment	FDI: Number of capital investments	1 million\$	1,946	3,174	2,541	KOTRA

1) Financial and business : banking and finance, insurance and pension funding, real estate and renting activities, professional, scientific and technical services, business facilities management and business support services

Attracting Foreign Direct Investment (FDI)

Seoul's Objectives

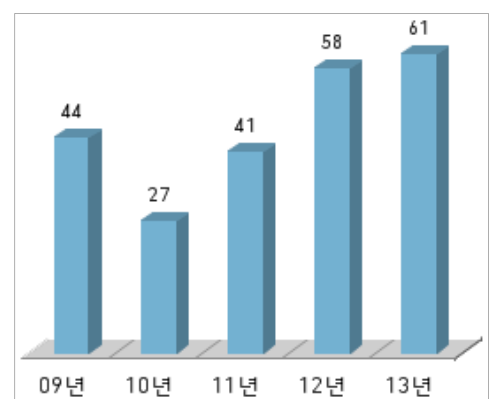
- To make Seoul a business hub of East Asia by attracting FDI into high value-added businesses
- To actively seek investment from companies of emerging economies

To make Seoul a business hub of East Asia by attracting foreign direct investment into high value-added businesses

Actively performing diverse programs to draw foreign investment

Foreign direct investment (FDI) makes large contributions to growing a recipient country's economy through direct and indirect job creation, technology transfer, improved productivity and increased exports, and also boosts the nation's industrial competitiveness with the introduction of advanced technologies.

With this understanding, the Seoul government conducts a variety of activities to attract FDI into its strategic businesses for growth, such as financial services, business services, tourism, culture and IT-BT convergence; holding roadshows overseas, providing incentives (i.e., tax reduction and exemption, grants for employment and training and cash support), seeking cooperation with related organizations and making better business conditions for foreign companies doing business in Seoul.



FDI amounts reported in the last 5 years (Unit: 100 million USD)

The Seoul government successfully attracted FDI worth USD 6.1 billion, which is the largest scale since the global financial crisis in 2008. It also made its utmost efforts to encourage global companies to move their headquarters here so that it finally hosted the business headquarters and research and development center of Solvay, a global producer of special chemicals, which brought in USD 17 million in direct investment and created 40 jobs.

It also persuaded Siemens in Germany to bring its Asia Pacific headquarters of energy solutions division to Seoul. This was praised as a success story of attracting FDI since it facilitated the transfer of Siemens' advanced technologies to Seoul, producing high-end jobs and building foundations for joint development with related industries. The city government expects to attract a total foreign investment worth KRW 130 billion and generate 520 new jobs by 2018.

It even went to invite Grevin Museum, a wax museum in Paris, to build its Seoul branch in its efforts to expand tourism infrastructure, celebrating the era of 10 million foreign tourists to Seoul. Grevin Museum Seoul is the city's first case of FDI from a foreign museum, and the Seoul government expects a total investment worth KRW 18.5 billion and 30 new permanent jobs including curators. The museum is scheduled to be open in 2015 and is expected to offer tailored tour options along with neighboring tourist attractions, such as Deoksugung (Palace), Cheonggyecheon (Stream), and Myeong-dong (Market).

Creating business environments more conducive to foreign investors

The Seoul government held 2013 Job Fair for Global Firms to enable foreign companies doing business in Seoul to find human resources they need and also provide young local job seekers with opportunities to work in global companies.

With the participation of a total of 55 global firms located in Seoul as well as 2,500 young job hunters, the job fair produced win-win opportunities for both parties.

The city government also hosted a meeting of the Foreign Investment Advisory Council (FIAC), which comprised a group of experts having a wealth of experience and knowledge in the field of foreign investment, in order to obtain valuable opinions to facilitate foreign investment in the city.

The council, which Seoul has run two times every year, consists of branch managers of foreign firms, lawyers and representatives of chambers of commerce from different countries/regions to advise the Seoul government on how to attract more foreign investment as well as to make better business environments for global firms.

It also operates 11 foreign investment supporting organizations, including 1 global center and 2 business centers to extend counseling and other support services for foreign investors, and holds forums and roundtable meetings with CEOs of foreign companies with operations in Seoul in order to understand and resolve the challenges they face.

To actively seek investment from companies of emerging economies

The Seoul government has actively developed incentives to lure global firms, whether they already have operations or do not have them in Seoul, to bring their headquarters and research and development centers to Seoul. As the South Korean government put in place the standards to recognize and support headquarters and research and development centers of foreign companies (2014), the city government offers a special income tax rate for all foreign employees as well as cash support, re-designs the existing incentive system and continues to carry out promotional meetings and marketing activities.

It also diversified its target investors and recently sought to find new investors in emerging economies, such as China, India and the Middle East, while continuing to attract more investment from the advanced economies.

It will actively identify potential investors by seeking cooperation

from the chambers of commerce and associations of foreign investors of target countries and build a strong network with those organizations. It will also relate these efforts to the projects to support local companies to enter overseas markets in order to promote the exchange of information between Korea and foreign countries. All of these initiatives will contribute to boosting the city's economic growth as well as generating high-quality job opportunities.

7. Ease of doing business & 8. Cost

Ease of starting business

Ease of entry : Number of countries with visa waiver

Foreign embassies or consulates

Consumer Price Index

Statistics

Indicators	Statistics	Unit	Data			Notes
			2011	2012	2013	
Ease of starting a business	Ease of starting a business	Ranking	8th out of 183 nations	8th out of 185 nations	7th out of 189 nations	Doing Business ('12~'14)
Ease of entry	Number of countries with visa waiver	no.	-	-	100	Ministry of Foreign Affairs Republic of Korea Website
Foreign embassies or consulates	Number of foreign embassies	no.	-	-	106	Ministry of Foreign Affairs Republic of Korea Website
	Number of consulates	no.	-	-	72	Diplomatic List 2013

1) Financial and business : banking and finance, insurance and pension funding, real estate and renting activities, professional, scientific and technical services, business facilities management and business support services

Indicators	Statistics	Unit	Data			Notes
			2011	2012	2013	
Consumer price index (CPI)	CPI (against New York)	Index	66.68	70.53	84.37	Numbeo
	CPI (2010=100)	Index	103.80	106.39	107.88	Statistics Korea
	Consumer price inflation	%	3.80%	2.50%	1.40%	Statistics Korea

9. Demographics and livability

Cultural of vibrancy

Working age population

Traffic Congestion

Statistics

Indicators	Statistics	Unit	Data			Notes
			2011	2012	2013	
Cultural vibrancy	Number of restaurants	no.	-	79,251	-	World Cities Culture Report 2013
	Number of visual arts exhibitions	no.	-	7,268	7,102	Seoul Survey 2013
	Number of performances	no.	-	5,273	4,905	Seoul Survey 2013
	Number of festivals	no.	-	306	-	World Cities Culture Report 2013
	Number of cinemas	no.	66	71	71	Internal data
	Number of theaters	no.	257	285	302	Internal data
	Number of art museums	no.	35	34	37	Internal data
	Number of museums	no.	108	111	115	Internal data
Working age population	Working age population	1,000	7,400	7,398	7,437	Statistics Korea
	Ratio of working age population to the city's total population	%	88.1	87.6	87.3	Statistics Korea Working age population/ The city's total population × 100
Traffic congestion	Car travel speed	km/h	-	-	26.4	2011 & 2012 data not available
	Bus travel speed	km/h	19.5	20.4	20.3	

Cultural Vibrancy

Seoul's Objectives

- **To expand opportunities to share and enjoy culture and art with a goal of delivering universal welfare in the cultural sector**
- **To support programs that raise the potential of culture and art and expand related facilities**

To expand opportunities to share and enjoy culture and art with a goal of delivering universal welfare in the cultural sector

Inclusive culture and art sharing programs across generations

The Seoul government offers a wide-range of cultural and art education programs to those who wish to take. University students also provide culture and art education to children and teenagers through club activities. 183 children and teenagers from low-income families have benefited from such programs and 16 of them have won in 31 competitions so far.

In addition, the Art Academy for Young Life, a culture and art program geared for senior citizens offered by the city is designed to help the elderly to be more active producers in the culture and art scene by providing a wide-range of cultural and art education programs.

Hi, Seoul Festival, a participatory festival created by both citizens and artists

Each year the Seoul government holds Hi, Seoul Festival created and enjoyed by citizens and artists led by the Festival Organizing

Committee formed based on public and private governance. Citizens become participants for the Festival rather than just spectators with ample opportunities to enjoy high-quality performances including those performed by invited foreign artists free of charge in every corner of the capital and participate in some of them during the Festival period. In addition, it is gaining more status as a major festival in Seoul as performance festivals like the Seoul Drum Festival are being incorporated to and held during the Hi Seoul Festival Week.

To subsidize performance and exhibition ticket costs for the underprivileged through Love Tickets and Culture Cards

The Seoul government runs culture sharing programs designed to offer access to culture and art experiences and help to improve the quality of life for the culturally underprivileged population including the recipients of the NBLIS(National Basic Livelihood Security) scheme, the elderly and the disabled. Activities of those programs include provision of Culture Cards, a culture voucher program that can be used in purchasing performance tickets and books, the service of taking the elderly and the disabled who have trouble in getting around to performance venues and other personalized culture and art services. In addition, mobile performance companies visit culturally disadvantaged areas, nursing homes and other facilities with limited access to cultural experiences to perform on-site.

Another program is Love Tickets, a ticket discount program through which the government subsidizes ticket costs so that people can enjoy performances and exhibitions at affordable prices.

Currently, an Integrated Culture Voucher program is in preparation which can be used for culture, travel and sports activities. The age limit of the program users will be expanded from nine to six-year olds with a prospect of some 185,000 people benefiting from the program a year.

Small-sized Community ArtRooms and Community Media

The Seoul government supports Community ArtRooms, autonomous community-based cultural space where local residents can get together for cultural and art activities. Currently 25 Community ArtRooms are in operation usually concentrated in culture and art villages bustling with creative activities by community art clubs and societies.

In addition, Community Media, a program in which local residents themselves become reporters to deliver their local stories for better communication and a stronger sense of bonding among local residents is supported by the city government, too. Over the last two years, more than 50 resident groups have joined the program and now over 1,000 residents are active in running 20 or so Community Media. If those in a preparation stage receiving education before opening are counted, the number of Community Media goes up to 40.

To support programs that raise the potential of culture and art and expand related facilities

Seoul Art Space, a facilitator for a culture and art ecosystem

Seoul Art Space, cultural and art space with a new concept supported by the city government offers programs aimed at growing young promising artists into competitive artists. This program helps to create a virtuous cycle of the art ecosystem. Currently, there are 11 Seoul Art Spaces, most of which are remodeled from private and public idle spaces in underdeveloped and/or artists-concentrated areas such as abandoned print factories and public health centers. Such spaces are offered to young promising artists to support their creativity works with a goal of developing them into world's class professional art groups or artists.

Support for film production and expansion of cultural facilities

The city government supports small film production companies as well as film makers who are competent but lack financial resources with provision of production space and financial support. Support activities include supporting pre-production of independent films, subsidizing the operation cost for cinema exclusively playing independent films, and holding free-movie screening events in six places in Seoul, all aiming at promoting independent films and expanding their fan base. The government also supports film festivals held in Seoul with different genres including artistic, independent and experimental films to give more choices to its citizens in film-watching experiences.

Other government's activities include the expansion of the concert hall of Blue Square by attracting private investment and the opening of the North Seoul Museum of Art in an area with relatively weak cultural infrastructure, addressing the gap between different parts of the city. In an attempt to meet the growing needs of citizens, currently a number of projects are underway to expand integrated cultural space in a number of areas including Gileum, Jeonnong and Pyeongchangdong. Also, there is a plan to build a concert hall exclusively presenting classical music in a space optimally designed for such a purpose to meet the needs of growing classical music lovers. A concert hall for Korean classical music will be also constructed to attract international visitors and offer education programs and experience opportunities for Korean traditional culture.

Public and private partnership for promotion of culture and art

The city government makes efforts to expand art sponsorship by companies and the social roles of arts to promote culture and art through public and private partnership. One example of such efforts is up to one-to-one matching for the corporate sponsorship given to professional art groups and 21 art group projects benefited from it in 2013. Also, the government funds 50% of the cost of public culture and art projects led by private companies.

Traffic Congestion

Seoul's Objectives

- **To smooth traffic flows through function-based road improvement**
- **To implement 'low-cost, big benefit' improvement projects in the regularly congested sections of urban freeways**
- **To offer real-time information on traffic flows to help motorists to choose optimal routes and more efficiently use roads**

To smooth traffic flows with road improvement plans based on different road functions

Improving urban freeways (expressway, motorways), serving as the main arteries of Seoul with a focus on their mobility function

In its efforts to better road services, the Seoul government focuses on accelerating a travel speed in urban freeways that handle inter-regional travels while it works on enhancing safety and convenience for intra-city roads rather than their mobility.

As part of its efforts to improve traffic flows in urban freeways that play a pivotal role in urban transportation, the government implements function improvement projects every year targeting frequently congested sections after identifying such sections based on the average travel speed. The improvement projects also target the sections unreasonably structured from a transportation system perspective. From 2012 until now, four road improvement constructions have been completed with a plan to conduct additional four improvement works in 2014 including Gangbyeon station entrance and exit ramps of Gangbyeon Expressway. Improvement works will be implemented sequentially for the remaining congested sections.

According to the analysis of traffic flows conducted after completing function improvement works for the main congested sections of intra-city freeways, the Seongsu entrance ramp of Dongbu Expressway and Mukdong entrance ramp of Bukbu Expressway show improvement in a travel speed by 29.2% and 71.2% respectively. This is reported to have the economic effect of saving KRW 1.62 billion each year, two times greater than the cost of construction works.

To implement 'low-cost, big benefit' improvement projects in the regularly congested sections

Efforts to address bottlenecks : Road Traffic Service Improvement Projects

The Seoul government has been implementing Road Traffic Flow Improvement Projects to address recurrent bottlenecks and illogically designed transportation system following the changes to the environment brought by large scale development projects. Between 2007 and 2013 some KRW 27.7 billion was invested to improve 265 places, improving 20-50 places each year. Improvement projects will be conducted for 19 places in 2014.

[Progress Made Each Year]

(Unit : KRW million)

Project name	Description	Total	'07	'08	'09	'10	'11	'12	'13	'14
Road Traffic Service	No. of places	284	51	48	38	19	32	34	43	19
	Cost	32,177	4,666	4,392	3,308	2,312	3,257	5,065	4,760	4,417

Improving city's transportation structure for greater safety of pedestrians

The Seoul government strives to make Seoul a pedestrian-friendly city by lowering the speed limit in the downtown and community roads. There is a big gap between the speed limit of 60km/h applicable to most sections of the roads in the city and the city's

average travel speed of 24km/h(downtown: 16.6km/h). Thus, it intends to further reduce the speed limit in the downtown and community roads for greater safety of pedestrians and traveling cars.

In discussion with the Seoul Metropolitan Police Agency, the speed limit for the seven routes totaling 5km including Segeomjeongno was lowered in August, 2012 considering the speed limit of adjacent roads, increasing the number of sections whose speed limit has been reduced to 96 as of at the end of 2013.

To offer real-time information on traffic flows to help motorists to choose optimal routes and more efficiently use roads

Efforts to reduce inconvenience : Road Traffic Service Improvement Project

The city government collects the information on traffic flows and speeds for the entire sections of urban freeways to feed it to Variable Message Signs, the website of the Seoul Transport Operation & Information Service and mobile apps, offering real-time traffic information to citizens. In addition, each year it publishes the results of a comprehensive traffic condition analysis by road sections and times. The published data is used by citizens as reference for their road trips as well as by the government for management and operation of urban freeways.

A high-tech traffic management system installed for 12 main roads in the city including Gangnam-daero and Banpo-daero that can serve as replacements or bypasses of urban freeways has been providing real-time traffic information by roads since August, last year. This enables motorists who wish to use urban freeways to check the traffic conditions of near-by main roads in real-time and choose optimal routes depending on the traffic conditions. This effectively distributes road traffics and eases traffic congestions, which may contribute to reducing road accidents.

10. City gateway

Hotel rooms

International tourists

Number of international association meetings

Airport to CBD access

Statistics

Indicators	Statistics	Unit	Data			Notes
			2011	2012	2013	
Hotel rooms	Number of hotel rooms	no.	25,160	28,917	30,228	
International tourists	Number of international tourists	10,000 persons	980	1,114	1,217	Seoul Statistical Year Book
Number of international meetings	Number of international meetings	no.	232	253	-	UIA
Airport to CBD Access	No. of transfers from Incheon International Airport Rail to CBD	no.	0	0	0	Direct rail link from the airport to Seoul station
	A single one-way, adult weekday trip cost	KRW	3,800	3,950	3,950	Trip cost from Seoul station to Incheon Airport
	The length of the trip	km	58	58	58	Seoul station to Incheon Airport
	The travel time from airport to CBD	Mins.	43	43	43	Seoul station to Incheon Airport

[Reference] The definition of international meetings by the UIA(Union of International Associations) and the number of international meetings held in Seoul

Description	UIA(Unions of International Associations)	
Definitions	<ul style="list-style-type: none"> · Meetings with at least 50 participants each organized or sponsored by international organizations · Other meetings of important international character, organized by national organizations or national branches of international associations even though not organized or sponsored by international organizations, fulfilling the followings <ul style="list-style-type: none"> - At least 40% participants are foreigners from five or more countries, - Minimum duration of the event: 3 days, - Either be held along with an exhibition or at least 300 participants 	
No. of international meetings held in Seoul (ranking)	2011	232 (5th)
	2012	253 (5th)

Hotel Rooms

Seoul's Objectives

- To increase hotel rooms based on an accurate demand analysis for hotels
- To provide institutional support for hotel construction while increasing promotion activities

Hotels in Seoul At-a-Glance (as of March-end, 2014)

Tourism Hotels in Seoul

There are 200 hotels in Seoul including aparthotels, a hybrid of hotels and apartments with 30,652 rooms. Among them 23 are deluxe hotels, accounting for about 12% of the total.

Description	Total	Tourism Hotels						Aparthotels	Hostels
		Deluxe	First class	Tourist class	Third class	Fourth class	Not rated		
Number of Hotels	200	23	29	43	24	17	45	10	9
Number of Rooms	30,652	11,067	6,722	5,268	1,390	883	3,488	1,641	193
%	100	12	15	22	12	9	23	5	5

To expand accommodations considering an increase in the number of tourists

Continuous increase of hotel rooms

The number of tourism hotel rooms in Seoul increased from 25,160 at the end of 2011 to 30,228 in 2013, contributing to expansion of tourism and accommodation facilities. To respond to the increase in international visitors from China and South East Asia, driven by the

popularity of the Korean Wave - Hallyu in Korean, the city government is pushing ahead with building different types of hotels through the Tourism Hotel Construction Support Center to meet the needs of international visitors whose number has already exceeded 10 million a year.

year	2009	2010	2011	2012	2013
No. of international visitors (growth rate)	7.82 million (13%)	8.8million (13%)	9.8 million (11%)	11.14 million (14%)	12.17 million (9.3%)

Goodstay, an accommodation endorsement program by the Korea Tourism Organization

The city government encourages the operators of general accommodations to convert their establishments into tourism accommodations, leveraging on Goodstay, an accommodation endorsement program by the Korea Tourism Organization. Under the target of adding 2,000 Goodstay accommodations, it has been actively promoting the program through districts from two months prior to the sign-up and evaluation period. Endorsed establishments are able to get a wide-range of benefits including loans from the Tourism Promotion Fund, promotion, support for sale of rooms, the use of Goodstay logo and support of goods.

Goodstay Seoul Overview

- **Background** : There is need to use general accommodations, the most universal type of accommodations in Korea as tourism accommodations.
- **Benefits** : Loans from Tourism Promotion Fund, promotion, support for sale of rooms, use of Goodstay brand, support of goods, etc.
- **Evaluation Period**
 - H1 : Sign-up (Feb.1 to Feb. 28, 2014), evaluation (Mar.1 to Mar. 25, 2014)
 - H2 : Sign-up (Jun.1 to Jun. 30, 2014), evaluation (Jul.1 to Jul. 20, 2014)
- ※ The Korea Tourism Organization endorses accommodations when they meet a set of certain standards in terms of facilities and services. There are currently 72 Goodstay accommodations with 2,713 rooms in Seoul.
- ※ Innostel, an endorsement program by the Seoul government was integrated into Goodstay by the Korea Tourism Organization (in May 2013).

Promotion of alternative accommodations (urban-stay and Hanok-stay)

The Seoul government also promotes alternative accommodations (i.e. urban-stay and Hanok(Korean traditional house)-stay) to supply personalized, alternative accommodations to meet the diverse needs of growing international visitors, create jobs for the retired and deliver the vision of Inclusive Seoul.

It has created the atmosphere conducive to starting up alternative accommodation business by holding presentation meetings aimed at promoting urban-stay catering to foreign guests while supporting the operation of alternative accommodations, building an integrated website and conducting aggressive marketing. Thanks to such efforts, the users of urban-stay has significantly increased.

With the target of increasing the number of alternative accommodations to 700(600 urban-stay, 100 Hanok-stay) in 2014, the government is conducting the following activities: 1) holding presentation meetings and running academy, 2) supporting supplies and meetings of owners based on the actual demand, 3) producing a alternative accommodation logo and an specialized information booklet and 4) conducting targeted PR and promotional events.

International Tourists

Seoul's Objectives

- **To develop more diverse tourism contents applying storytelling technique**
- **To use Seoul's unique strengths to further promote tourism**
- **To provide more advanced tourism infrastructure to bring visitors a better tour experience**

Seoul, a city of attracting 10 million tourists per year

According to Annual Tourists Statistics, a total of 12.18 million tourists visited Korea in 2013 and 10.04 million, 82.5% of the total, came to see Seoul. The most popular district and facilities are found to be Myeong-dong (71.4%) and Gyeongbokgung (Palace), respectively. Other popular areas following Myeong-dong are Namdaemun Market, Dondaemun Market and Insa-dong.

To develop more diverse tourism contents applying storytelling technique

Redesigning Seoul as an attractive city filled with stories

We find it very meaningful that diverse cultural aspects, which have been ingrained in every corner of Seoul, enable the modern city to build ambitious plans for the future and share its stories with visitors from all around the globe. The modern Seoul has enormous potential as a destination for foreign tourists. It owns centuries-old historic sites such as Han River and Seoul City Wall, and natural heritages, food and shopping spots, which have become a part of culture, and stories of warm-hearted citizens.

The Seoul government started in earnest in 2013 to develop stories depicting the past, present and future of the city, and translate them into tourism resources. With mottos of an Open City and an International City, the city government tries to find out stories about places and facilities representing cultures of different countries and convert them into charming tourist attractions. For this purpose, it prepares a tour guide book titled A World Tour within Seoul, builds a storytelling zone in the city government's building, in which mural paintings and experience spaces are built, and plans and promotes unique, specialized contents. There are a variety of themes to be developed; Hangul, Korean alphabet, traditional market, films and TV dramas, food items, architecture, music and art. The city government seeks to transform the symbolic areas with history and stories into tourists spots through storytelling; the street of the Chinese Embassy in Myeong-dong, the multi-cultural street in Itaewon and a French Town in Gangnam (Southern part of Seoul).

With the two following themes: a city that does not sleep for '24 hours' and stories of Seoul that entertain visitors for '365 days', it will develop 24 tour courses as well as 365 tour items and connect them.

To use Seoul's unique strengths to further promote tourism

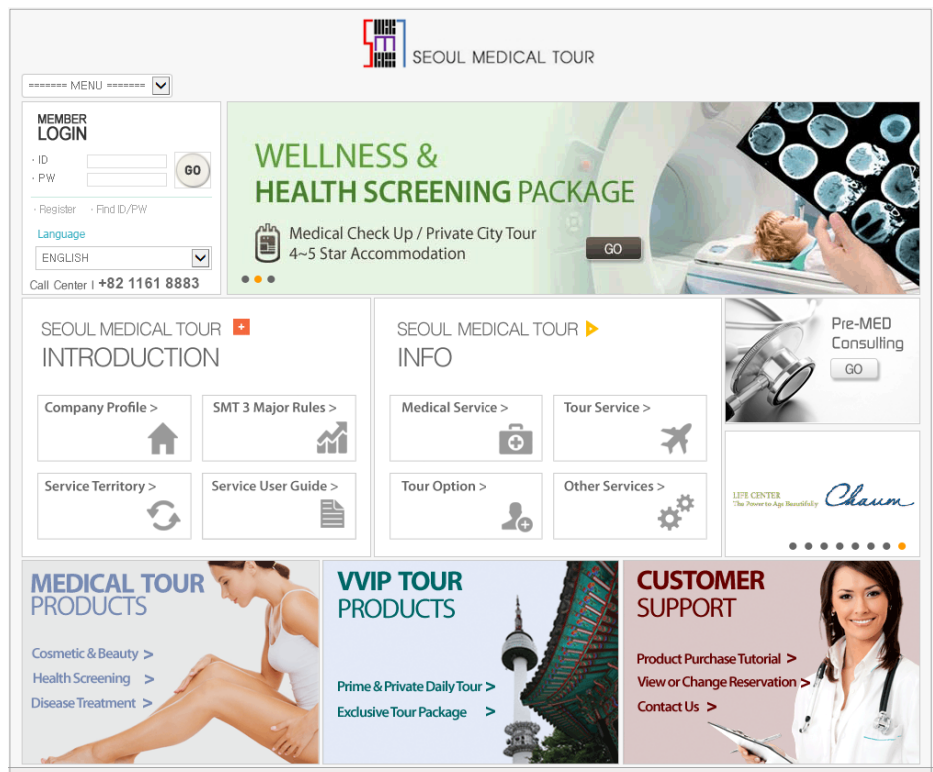
Developing high value-added tourist contents utilizing medical services and the Korean wave (Hanryu)

The city government strives to devise attractive tourism contents; developing experience programs by combining internationally popular Korean wave-related contents, such as K-pop and Korean dramas, and lifestyles of Seoul, and installing multiple symbolic structures.

It is also building foundation to make Seoul a city of sustainable medical tourism. It is actively engaged in designing and operating the city's unique medical tourism marketing and promotion, and experience programs to attract more medical tourists. It even has established a comprehensive information service mechanism

comprising Seoul Medical Tour, a website (www.seoulmedicaltour.co.kr) to provide visitors with information on the city's medical services as well as beauty care, and Medical Tourism Support Center. To facilitate promotion and marketing for cities with high potential demand, the city government makes tourist information available in 7 languages including English, Chinese, Japanese and Russian.

As per the areas that have well-managed medical service infrastructure, it will develop tour courses connecting medical facilities to close tourist attractions. For example, it is possible to connect oriental medicine experience programs to Namsangol Hanok (Traditional House) Village, or plastic surgery and dermatology clinics in Gangnam to Garosu-gil (Street), a hot tourist spot in the same area.



www.seoulmedicaltour.co.kr

To provide more advanced tourism infrastructure to bring visitors a better tour experience

The city government has made intensive efforts to increase the number of accommodations to meet the growing demand of foreign visitors. It plans to significantly reduce the shortage of rooms to 7,000 by 2018, by strongly pushing forward the following projects; construction of budget hotels, opening of guest houses & home stays and operation of special accommodation-experience programs such as Hanok (traditional Korean houses) stay and temple stay.

It is also opening Four Major Tourist Information Centers in main tourist districts in Seoul by 2015. The first one was already open in Gangnam in June 2013 and the second one in Myeong-dong in November last year. The other two centers will also be open at the COEX (2014) and Yeoui-do (2015) in a planned order.

The four centers will serve as area-specific tourist hubs by introducing tourism resources in tourists' locations and addressing their complaints as well as sharing diverse information with 25 tourist offices and making reservation service for flight and accommodation.

Providing smart and speedy digital environment for tourism applying advanced ICT technologies

As the concept of Free Independent Traveler (FIT) has become popular throughout the world, the ease of access to various tourist information has become one of the major factors to determine a city's competitiveness in tourism. Therefore, the Seoul government plans to fully utilize its state-of-the-art IT technologies and mobile environment to considerably enhance the tour experience of visitors. Now we are more familiar with the scene where travelers are taking out smart phones from their small pockets and making their tour schedule and recording their memories in the small device, rather than young tourists searching their destinations in a big paper map.

By 2016, the city government will launch a mobile application called My Own DIY Seoul Travel Log that will display the locations of

tourist attractions and famous restaurants in tourists' vicinity real time, and once tourists select and save their own choices, they will have their own itinerary stored in their mobile devices.

In addition, to further promote Seoul as a global city, various information will be provided in multi languages; not only in English, Chinese and Japanese, but also in French and Spanish by 2015 and in Thai, Russian and Arabic by 2018.

International Association Meetings

Seoul's Objectives

- To discover the potential demand for international meetings and market to host them in the city
- To promote a city's support program for international meetings
- To offer support specific to the different stages of bidding, promoting and hosting international meetings

Seoul's ability to host international meetings

Seoul, the world's fifth host of international conventions in 2012

Seoul hosted 253 international meetings in 2012, a 170% up compared to 2009. Thanks to the continuous efforts to host international meetings, the city has been maintaining the 5th place in the world in hosting international conventions for three consecutive years (from 2010 to 2012) according to the rankings published by the UIA.

year	2009	2010	2011	2012
Number of international meetings	151	201	232	253
world's ranking	9th	5th	5th	5th

Seoul chosen as the best MICE city by international business travelers

Seoul was named as the Best International Business Meetings Destination in the Best in Business Travel Awards presented by

Business Traveler magazine (the US edition), the world's most authoritative award in the tourism industry for two consecutive years in 2012 and 2013. In addition, it was also chosen as the best MICE city in the world at the 10th Global Traveler Tested Reader Survey Awards for the first time in 2013 beating Abu Dhabi, Madrid, Sydney and other cities.

Seoul's master plan to promote the MICE industry

Unique venue, qualified workers & MICE infrastructure

The city government developed the Master Plan for Promotion of MICE Industry in 2013 with a vision of Seoul, a global leading MICE city. It has been actively promoting the MICE industry since then through 10 key projects laid out in the Master Plan. The key components of the Master Plan include establishing world's class MICE infrastructure, building an integrated support system for bidding for MICE events, introducing tourism and traffic cards exclusively used by MICE participants, developing Seoul's leading MICE business and strengthening MICE ecosystem.

To be specific, the Master Plan envisions development of an urban convention district by 2020 where meetings, exhibitions, accommodations, shopping, culture and entertainment are well connected and integrated, providing a unique venue with museums, Han River waterfront, ancient palaces and private facilities full of Seoul's charms and flavors.

In addition, a human resources supply system will be built by expanding the current Seoul Convention Supporters system that provides field workers for MICE activities. A potential demand survey will be conducted to discover and host new international meetings and the survey data will be used in building a database which will become the basis to carry out marketing activities.

Bidding for, promoting and hosting international meetings by working with Seoul MICE Alliance

A package of convention support policies and public and private partnership

A package of convention support policies and co-marketing with the Seoul MICE Alliance, a public and private partnership are the two main pillars for the city government in promoting the MICE industry.

Societies, associations, organizations, groups or corporations which intend to bid for or host a meeting with at least 50 foreign participants are eligible to receive an international meeting grant and the city government supports up to KRW 100 million from bidding, promotion to hosting processes.

The city's supports are very specific and tailored to each stage. First of all, in a bidding stage, it supports the following activities: strategy advice for successful bidding and consulting, development of a bidding proposal, supporting the visit by Seoul due diligence team, writing bidding presentation and one to one English presentation lesson. In the next promotion stage, it uses on/offline venues to actively conduct marketing and promotional activities to gather a large audience such as the city government's website, web magazine, news letter (monthly), the social media, leading MICE magazines and also supports the production of promotional video. In the last hosting stage, it provides qualified and professional workers from Seoul Convention Supporters, offers welcome messages through the multi-cube of the baggage claim area of the Incheon International Airport and Seoul tour guide books.

These customized supports are provided by working with the Seoul MICE Alliance, a public and private partnership composed of 144 members including convention centers, hotels, professional convention organizers, unique venues, travel agencies, transportation and event planners.

Stage		Support amount	Details
Bidding	Bidding attempts to host international meetings in Seoul	Up to KRW30 million	<ul style="list-style-type: none"> ▪ Producing mementos and PR materials (prints, banners, videos) ▪ Developing and printing bidding proposal presentation ▪ International mail & parcel costs to send PR materials ▪ Official overseas banquet and performance (ex. Korean Night) ▪ Making and operating PR booths ▪ Accommodations, airplane tickets and registration fees of bidding committees (up to three persons, standard room for accommodation and economy class for flights)
Promotion	Promotion to increase foreign participants after successful bidding	Up to KRW 20 million	<ul style="list-style-type: none"> ▪ Producing mementos and PR materials (prints, banners, videos) ▪ International mail & parcel costs to send PR materials ▪ Official overseas banquet and performance ▪ Making and operating PR booths ▪ Registration fees for a meeting in which PR team participates (up to three persons)
Hosting	Hosting international meetings in Seoul, 2014	Up to KRW 50 million	<ul style="list-style-type: none"> ▪ Producing mementos and PR materials (prints, banners, videos) ▪ Rent for convention facilities (convention centers, hotels) in Seoul ▪ Official banquet and performance (ex. Welcome Dinner) ▪ The cost for using tourism facilities and service in Seoul (Seoul tourism program operation cost)