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Seoul Solution for Urban Development

Urban Planning

2015

SEOUL METROPOLITAN GOVERNMENT

Table of Contents

Seoul Solution for Urban Development 01

01. Urban Planning

01

Urban Planning

1. Urban Planning & Management

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Policy Area: Urban Planning

Trends in Urban Planning & Development by Time Period[1]

Before the fall of the Joseon dynasty, Seoul underwent gradual changes in space, focused mainly on the center of the walled city, Mapo, and Yeongdeungpo. After liberation from Japanese colonial rule and into the 1960s, the city experienced an explosive growth in population and urban development. In 1966, the Basic Urban Plan was set up to respond to these changes and to lead the change through a long-term vision with systematic and comprehensive planning. Today, Seoul's urban development serves as a model to other partnering economies.

After liberation from colonial rule, Seoul began its struggle to overcome post-war chaos and modernize. City development began in the 1960s with Seoul's efforts toward land readjustment of the city into districts, which had started under Japanese colonial rule, and establishment of an infrastructure to connect districts. Construction of the Gyeongbu Expressway in 1968 was soon followed by rapid national economic growth in the 1970s, laying the foundation for the improvement of urban housing and infrastructure. One of the most noteworthy phenomena of the time was the start of growth management through the development of Gangnam and areas designated as development prohibited areas. The 1980s were marked by urban growth, with the upcoming Seoul Olympics in 1988. Seoul introduced a new urban design in roads such as Eulji-ro and Tehran-ro towards quality management through control of land use, development density, building height, and other factors. Housing redevelopment also made improvements to the city as it was conducted on a large scale. In the following decade, 5 new cities were built in the Seoul metropolitan area to address overpopulation. The inner city welcomed many public works, such as the introduction of a subway system and the restoration of Nam Mountain. Between the 2000s and today, Seoul has risen to join the world's top 7 megacities, and is a popular choice for international events such as the World Cup and G20 summit meetings as it continues to enhance its sustainability.

1. Korea Planners Association, 2005, Urban Planning Theory, Boseonggak; Reconstructed based on p.182 - 211.

Period 1: Expansion of Basic Infrastructure (1960 – 1979)

The 1960s: Population Outgrowing Housing and Infrastructure

Economic development plans in the 1960s attracted a phenomenal number of people to Seoul, with approximately 500,000 people moving to the city within one 2-year period. Such massive migration of jobseekers with no ties to the city contributed directly to the formation of poor, unauthorized settlements throughout the city. The outskirts, which had been non-residential, were inundated with the new arrivals and quickly became part of the burgeoning capital. The inclusion of Gangnam and the northeastern areas – an addition of 594 ㎢ – to the city in 1963 doubled its size. The sudden growth of population (3 million at the time) ultimately led to extreme traffic congestion, environmental pollution, an overburdened public transit system, overcrowded residential areas, and rampant development of unauthorized settlements.

Construction Projects as the Solution

To address traffic congestion, existing roads were expanded and new arterial roads, overpasses, and underground roads were built. It was around this time that the Cheonggye Stream was uncovered and restored to create Seoul's first overpass – Cheonggye Overpass. Countless pedestrian overpasses and underpasses were also built to enhance traffic flow. By 1967 the Yeouido area, inundated every flood season, saw the addition of a new urban district of over 900,000 pyeong (approximately 2.97㎢) of land. The Seoul City government began to focus on removing unauthorized settlements and redeveloping those areas. Inner city slums and red-light districts were demolished and department stores and large commercial/residential complexes (e.g., Seun Arcade) took their place. The poor neighborhoods on the hillsides became the site of apartment complexes. Through this flurry of activity, some 400 apartment buildings were erected in the city in 1969 alone.

Continued Land Readjustment to House the Population

The land readjustment program begun under Japanese colonial rule and continued into the mid-1980s across various regions, significantly influencing Seoul's current inner city structure. Land was readjusted to systematically develop and revamp built-up areas while minimizing public costs in the establishment of infrastructure and laying of foundations for private development. In Seoul, the program was implemented with a goal to redistribute the concentrated inner-city population and industrial facilities out to surrounding areas. The program also centered on detached housing which was then universal, based on which lots were divided. During this time, readjustment took place in Seogyo, Dongdaemun, Suyu, Bulgwang, and Seongsan districts.

The First Institutional Measure for Urban Planning

This particular time period was marked by a need for new urban planning legislation in order to address the housing, transportation and infrastructure made inadequate due to poverty and population growth. The Jo-

seon Town Planning Ordinance, enforced after liberation but only until the late 1950s, had been introduced by the Japanese Governor-General in Korea to promote the national interests of colonial Japan. In 1962, it was divided into the "Urban Planning Act" and the "Construction Act", two independent legislations for the sovereign nation. This new Urban Planning Act was the first institutional measure for urban planning taken by the Republic of Korea. It included provisions for the improvement of poorer districts, and urban planning decisions were to be made through Central Urban Committee resolutions. The Land Readjustment Program Act was enacted in 1966, and the concept of replotting was introduced to renew basic infrastructure (roads and parks, etc.) at minimum public cost. The Act set forth regulations on implementation, methodology and cost so as to promote the land readjustment program, thereby encouraging healthy development of the city and its public works infrastructure.

Seoul's Urban Planning in the 1960s

1966: The Basic Urban Plan

_ The Basic Urban Plan of 1966 was a turning point in shaping the spatial structure of Seoul. The target was to increase the population to 5 million by 1985, and consisted of a central area and 5 sub-central areas, with the central area being the city center and Yongsan, and the sub-central areas being Changdong, Cheonho, Gangnam, Yeongdeungpo, and Eunpyeong. The central area was planned as the heart of political administration, with the legislature in South Seoul (currently Yeongdong) and the judicature in Yeongdeungpo. The residential structures in both the central and sub-central areas were encouraged to be high-rise, and a concentrated network of streets was to radiate out and connect the central and sub-central areas to each other.

The 1970s: Establishment of Housing & an Urban Infrastructure

In the 1970s, Korea enjoyed astonishing economic growth. The per-capita income was approximately 250 USD in 1970, but exceeded 1,000 USD by 1977. Primary in importance to this accomplishment was Seoul, as the city had many export-oriented light industries, including sewing factories at the city center and other industrial regions on the outskirts. This continued the inflow of people seeking jobs and opportunities for a better life while the city continued to grow quickly, reaching 6 million residents by 1975.

The Expansion of Seoul and Miracle on the Han River

Around this time, tension between North and South Korea increased and Seoul needed a new strategy for itself. As a way to develop Gangnam and expand the city in general, the concept of **development-prohibited areas** was adopted. The decision to develop Gangnam was in order to redistribute urban functions away from the Gangbuk area. Additionally, the Gyeongbu Expressway was built to transport workers and resources. Accordingly, the land readjustment program was introduced to the agricultural Gangnam area. A grid of arterial

roads was built, and the area was soon occupied by legal offices, detached houses for the social upper class, large-scale apartments and shopping centers, high-rise office buildings, and historical secondary educational institutions migrating from Gangbuk. Development of Yeouido, which started in the 1960s, was pushed forward in earnest, with the area becoming home to the National Assembly as well as high-rise office buildings and residential neighborhoods.

In 1973, the administrative districts in Seoul were expanded to 605 ㎢, similar to their size today, but there were ongoing requests for expansion of infrastructure and urban construction in order for the city to keep pace with the rapid economic growth. To meet these demands, Seoul replaced its outdated trams with a new subway service in 1974 (Line 1 today). In the meantime, construction of commercial and cultural facilities (high-rise office buildings, high-end hotels, trading centers, art and cultural centers, etc.) and the larger infrastructure (arterial roads, tunnels, bridges, sewer systems etc.) continued. The volume of work accomplished and South Korea's dramatic economic growth was referred to as the Miracle on the Han River by the international community.

The 1970s, an era marked by rapid industrialization and economic growth, continued to see further urbanization, which led to demands for a new administrative framework capable of dealing with urban planning and relevant legislation across various sectors. In particular, the Urban Planning Act underwent a full revision in 1971 and featured an enhanced district system, introducing the concept of **development prohibited areas** as a way to control chaotic urban expansion and promote healthy development of built-up areas. With this revision, renewal of poorer districts was given a new name – the Redevelopment Program – and detailed procedures were prescribed for implementation. In 1976, the Urban Redevelopment Act was enacted to establish an institutional framework to prevent deterioration of the city center and overhaul the areas of unauthorized housing built in and around the city. Other legislation included the Act on Utilization & Management of the National Territory (1973) towards management and planning efficiency, and the Housing Construction Promotion Act (1973) for fundamental resolution of housing issues.

Seoul's Urban Planning in the 1970s

1970: Modification of the "Basic Urban Plan"

_ The population of Seoul surpassed 5 million by the early 1970s, and the need to modify the Basic Urban Plan was inevitable. The target year for completion of the modifications was 1991, while the target population was 7.6 million. The single-nucleus CBD (Central Business District) system was maintained while adding two additional sub-central areas for a total of seven: Miah, Mangwu, Cheonho, Yeongdong, Yeongdeungpo, Hwagok, and Eunpyeong. Yeongdong held the administrative functions while Yeouido became the seat for the legislature and the new business area. The street network was of a radial and circular type, comprised of 3 circular and 8 radiating lines.

1972: The "Revised Comprehensive Plan"

_ While it did not constitute a part of the Basic Urban Plan, the Revised Comprehensive Plan served as a guideline for the city's development administration. It also targeted the year 1991 and a population of 7.5 million. The urban structure was to be the same as that of 1970, but more street networks were added: the Plan constituted 3 circular and 14 radial roads.

1978: The "Basic Seoul Urban Plan"

_ In need of an urban development plan that would address the changes of the 21st century, the Basic Urban Plan was updated, targeting the year 2001 and a population of 7 million. It was designed to contain overpopulation and disorderly urban sprawl, reconfigure urban functions and facilities, promote balanced urban development based on building multi-nuclei, and encourage people to live closer to their places of work. Development of Gangnam was also facilitated as one of the solutions to congestion and overpopulation in Gangbuk, to even the balance between Gangbuk and Gangnam, which are located on opposing sides of the Han River. The existing city center was considered one national center, supported by an urban structure comprising 7 local centers (Yeongdeungpo, Yeongdong, Suyu, Jamsil, Janganpyeong, Susaek, and Hwagok), 27 district centers, and 157 community centers. The Plan also aimed to preserve and maximize the east-west blue axis and the north-south mountain axis near the Han River and to create a large green belt connected to the nearby **development prohibited areas.** As for the transportation system, the arterial road system was rearranged to facilitate the subway system and passenger vehicle travel and supplement the radial artery road system. The street network grid was introduced to encourage the growth of multiple nuclei.

Period 2: Urban Growth (1980 – 1999)

The 1980s: Formation of Large Built-up Areas and the Development of CBD (CENTRAL BUSINESS DISTRICT)

In 1980, Seoul had become a very large city with a population of 8.5 million: within 8 years, it would be 10 million. Through unprecedented rapid economic growth, Seoul witnessed the emergence of large corporations, diversified industrial structures, and a strong middle class. After the death of former President Park Jeonghee, who had led the economic development in the 1960s and 1970s, the socioeconomic changes in the following decade called for sustainable urban growth that would match the development as well as in the past.

City Overhaul for the Olympics

As host for the 1986 Asian Games and the 1988 Olympics, Seoul felt it necessary to improve and beautify itself. In Jamsil, large stadiums, Olympic parks, residences for athletes and other facilities related to the Olympics were built. In the meantime, the Han River and the nearby areas were also targeted. Through this project, the riverside lands – now used as city waterfront parks – were developed, and sewer lines installed on either side of the river to prevent water pollution. City highways were paved alongside the river to connect Gimpo International Airport to the city center and the Olympic stadiums. Subway expansion also followed to resolve traffic congestion. These things were already in the existing plans, but were expanded for the upcoming Olympics. In 1984, Subway Line 2 was opened, followed by Line 3 and 4 in 1985.

City Center Redevelopment & Construction of Housing

Redevelopment projects for the city center – overhauling the inner city slums to supply more space for business – became active, boosted by the high development density and tax benefits of the 1980s. At the time, the City of Seoul approved over 70 redevelopment projects, which modernized the traditional city center. To improve functionality and beautify the capital, city design projects were carried out along Eulji-ro and Tehran-ro in Gangnam.

The government also paid attention to redevelopment of areas with poor or inadequate housing and the construction of new residential buildings. The extensive farmlands and forests in the Gangnam, Mokdong, Godeok, Gaepo, and Sanggye areas were replaced by large apartment complexes. Companies discovered that building apartments in a city with a longstanding housing shortage was highly profitable. An apartment boom was fueled, which changed the face of Seoul entirely.

By the 1980s, a series of significant issues arose due to the rapid economic growth resulting in overpopulation and a city crowded with industry. Demands increased for updated housing and amenities for greater housing stability as well as for improved urban design to match the enhanced standards for education, cul-

ture, medicine, and other facilities. In 1981, the government amended the Urban Planning Act. With the Basic Urban Plan in place, the 3-phase urban planning system (Phase 1: the Basic Urban Plan; Phase 2: Urban Plan Overhaul; Phase 3: Yearly Execution Plan) was implemented, and an urban design system was introduced to provide more detailed guidelines and information on managing land use. Another adopted institutional measure was public participation, giving opportunities to local residents at public hearings. A number of laws were put in place such as the Housing Site Development Promotion Act (1981) for the supply of extensive housing sites and the Act on Temporary Measures for the Improvement of Dwelling and Other Living Conditions for Low-Income Urban Residents (1984).

Seoul's Urban Planning in the 1980s

1980: The "Mid- to Long-term Plan for Urban Development in Seoul"

_ The Basic Plan was revised in accordance with the higher-level Seoul Metropolitan Area Readjustment Planning Act, targeting the year 2001 and a population of 9.45 million and including plans for the mid- to long-term. During the mid-term development period (1980 – 1986), urban structure would be updated where necessary according to actual changes and basic direction of the Plan; in the long-term structural planning period (1987 – 2000), the focus would be on the use of highly dense land, development of a multi-nucleic structure, living sphere plans, and the urban environment. This Plan did not include detail on the urban spatial structure but categorized the "living spheres" into 18 large, 90 medium, and 333 small spheres.

1984: The "Multi-Nucleic City Development Research for Urban Restructuring"

_ Revision of the Urban Planning Act in 1981 was to result in the Basic Urban Plan becoming law and adjustment of the higher level Seoul Metropolitan Area Readjustment Plan. In 1984, the Basic Urban Plan of Seoul was reworked to reset the direction for urban development. It proposed a new direction for Seoul for the 2000s and guidelines for urban restructuring and readjustment. The target year was 2001 and a population of 10 million, but the Basic Urban Plan failed to become law due to the delayed public hearings. Suburbanization, sprawl, and expansion were managed through the building of satellite cities and decentralizing development, which led to Seoul becoming a multi-nucleic city. The single-nucleus network of transportation was restructured by turning the circular/radial street network into a grid. The CBD (CENTRAL BUSINESS DISTRICT) would be made up of one main nucleus in the primary center, with 3 minor nuclei (Yeongdong, Yeongdeungpo, and Jamsil), 13 secondary centers, and 50 district centers.

The 1990s: Urban Infrastructure & Investment in the Environment

After the Olympics Games, Seoul became a megacity with a population of 10 million with a per-capita income of over $10,000. As the capital of a modernized industrial nation, Seoul required enhanced and further diversified urban restructuring to meet the needs of the ever-growing economy and population.

Many public projects were carried out during this decade, including expansion of the subway system. Four

subway lines (Lines 5, 6, 7, and 8) were added and new bridges, highways, and art and music centers were built as part of the central and Seoul government plans. High-rise buildings constructed by the private sector changed the skyline of the city especially in the Gangnam area. The increased ownership of private cars and the construction of highway networks contributed to urban expansion beyond the **development prohibited areas.** Five new towns, such as Bundang and Ilsan, were created, and development continued on the surrounding outskirts, all serving as local centers of a metropolitan area. However, Seoul had new issues – unemployment, labor unrest, increased homelessness and the need for greater social welfare – that the Asian financial crisis of 1997 had brought to the forefront.

Significance of Managing the Old City Center

As Seoul had served as the capital of the Joseon Dynasty for hundreds of years and as the nation's capital, the city government became acutely aware of the significance of restoring Seoul's ancient city walls and cultural heritage that was slowly being eaten away by urban growth and development. In 1990, the Namsan Mountain Restoration program was initiated to protect this mountain in the middle of the city. An association made up of experts, ordinary citizens and local residents was organized, and it soon realized that its key agenda would be the removal of foreigner apartments and moving of the Agency for National Security Planning and the Capital Defense Command that stood in the way of Namsan's beautiful view. The Command was replaced with Namsan Hanok Village, a small restoration of the ancient hillside village from the Joseon Dynasty, and in 1994 the apartments were demolished, finally clearing the view. With this campaign, the public began to appreciate the importance of managing the old city center, rich with historical and cultural heritage.

By this time, local government administrations had been brought back to life. City administration and urban planning, which had so far been top-down, now appeared with a new face – public participation and new administrative procedures. The 25 local administrative districts in Seoul were given more leeway, each working on their own diversified plans, facilities, and activities.

As such, the 1990s saw the introduction of different systems and initiatives: the Wide-area Plan was devised to efficiently build and manage infrastructure (roads, railroads, waterworks etc.) that required a wider perspective for systematic maintenance, while the Detailed Planning Initiative was adopted to specify building use, the number of floors, and the floor space ratio of the buildings in certain areas so as to make better use of the land and beautify the city at the same time. In line with democratic and decentralized governance, most of the urban planning authority held by the Construction & Transportation Minister was transferred to the City Mayors or the Provincial Governors. Before approving the Basic Urban Plan, the Minister was required to listen to the views of local councils and incorporate them into the Plan.

Seoul's Urban Planning in the 1990s

1990: The "Basic Seoul Urban Plan" for the 2000s

_ The Basic Urban Plan of 1990 was more significant as it was the first statutory plan for the City of Seoul. It set 2001 and a population of 12 million as its targets. It aimed to balance development in both the Gangnam and Gangbuk areas by providing standardized placement of essential facilities, road grids, and enhanced access and connection points to city areas where key activities were carried out. It was designed to continue activities in the existing city center while allowing for flexibility in the multi-nucleic structure and increasing the role of the secondary centers. The urban structure in the Plan comprised of one city center within the Four City Gates area, 5 secondary centers (Shinchon, Cheongnyangni, Yeongdeungpo, Yeongdong, and Jamsil), and 59 district centers.

1991 – 1995: A Basic Urban Plan for the Autonomous Districts

_ In July 1991, the City of Seoul prepared a Basic Urban Plan for the autonomous districts and instructed each gu (district) office to develop its own basic plan from December. The top-down planning structure of the existing Basic Plan was amalgamated with the new bottom-up planning system to provide for more detailed and effective urban planning. In this process, the local characteristics of and input from the local communities were deemed particularly important. This Plan was a long-term comprehensive scheme at the autonomous district level, taking into consideration the different characteristics of each district in setting the direction of and strategies for future development. The projects included in the Plan had yearly execution plans.

1997: The "Basic Seoul Urban Plan" for 2011

_ It was understood that the Basic Urban Plan established in 1990 required a feasibility review and revision. In 1997, a new Plan was thus established, with the year 2011 and a population of 12 million as its targets. The Plan proposed a vision of a 21st century Seoul, distinguished priority tasks from sustainable tasks, and came up with long-term goals and policy directions to be carried out in the following 15 years. While the Basic Urban Plan of 1990 was Seoul-oriented, the 1997 Plan encompassed a wider approach to the distribution of urban functions and to the transportation network. The 1990 Plan was physical facility-intensive while the new Plan put more emphasis on software such things as operation and management. In terms of urban spatial structure, the 1990 Plan was less about a multi-nucleic system, comprised of one primary center, 5 secondary centers, and 59 district centers. The 1997 scheme was a more aggressive 4-phase plan, consisting of one primary center, 4 secondary centers (Yeongdong, Yeongdeungpo, Yongsan, and Cheongnyangni/Wangsimni), 11 local centers, and 54 district centers.

Period 3: Sustainability (2000 – Present): A City of Class & Public Participation

The 2000s: Sustainable Urban Development

Having hosted the 1988 Olympics and other international events with success, Seoul earned its place as one of the world's great international cities. In the meantime, the influence of the city became even more widespread, with Seoul and the nearby regions creating a single living sphere. Meanwhile, as local governments became more autonomous, the City of Seoul enacted the Urban Planning Ordinance in July 2000 (the first in Korea), in which the matters commissioned to local autonomous governments were specifically regulated. The overall tone of the urban development policies also changed from growth to sustainable development.

Accomplishments with the Seoul City Center Management

1994 was the 600th anniversary of Seoul being designated the capital city. To efficiently manage this historical city, a number of plans were launched: the City Center Management Plan (1999); the City Center Development Plan (2004); the Comprehensive City Center Recreation Plan (2008); and the Historical City Center Management Plan (2010). Other projects were also put in place to return to the citizens the space that had been otherwise used for traffic-oriented development projects. Examples include the restoration of the royal palaces (e.g., Gyeongbok Palace, Changdeok Palace, Deoksu Palace) and Jongmyo; construction of Seoul Plaza, Sungnye Gate Plaza, and Gwanghwamun Square; and the addition of open spaces in the city center. Other efforts included the creation of an eco- and pedestrian-friendly environment within the city, such as the restoration of Cheonggye Stream, the transformation of Dongdaemun Stadium into a city park, and the launch of the Open Nam Mountain campaign. The city also sought to reclaim its identity as a timeless historic yet modern city by restoring its historical and cultural heritage such as the Bukchon Village Beautification program, restoration of ancient city walls, and inclusion of Hanyang township – the ancient capital of the Joseon Dynasty and today's Seoul –on the UNESCO Cultural Heritage list.

Seoul's Endeavor to Be an Advanced City

In 2002, the pilot "New Town" project was launched in the Eunpyeong/Gireum/Wangsimni region in an effort to narrow the wealth gap between Gangnam and Gangbuk and establish or improve the infrastructure. From then until 2007, a total of 26 regions were appointed to be a part of the New Town project.

Also in 2002, Korea and Japan co-hosted the World Cup. In preparation, the Nanjido landfill site in the Sangam area, west of Seoul, was entirely transformed; an environmentally-friendly eco-park, the World Cup Stadium, and Eco Village were built, and the Digital Media City (DMC) was developed using cutting-edge IT. This, however, was only the beginning. Seoul took on a variety of activities developed by each region, such as the Han River Renaissance and the Northeast Region Renaissance, with the latest development projects including the Yongsan International Business District and Magok District.

To be the advanced city it aspires to be, Seoul has poured its energy into urban design and endeavors to make the changes necessary to turn itself into a city of beauty and class. Examples of where this energy has become reality include regional parks (Dream Forest in North Seoul, Seoul Forest, Pureun Arboretum, etc.); the pathway on the ancient city walls; the Seoul walking trail from Oesasan Mountain to neighboring peaks; the pedestrian and bicycle path along the Han River and its branches; and walking trails such as the Eco & Cultural Trail that connects the parks, mountains and streams. Pedestrian areas – Gangdong Greenway and Design Street – were also modernized. Seoul also urged people to walk more and enjoy the city's rich history, culture and tourist attractions. To this end, some of the streets have been designated for pedestrians only.

Seoul continues to enhance itself even today. It has successfully recovered its historical and cultural identity and developed itself into an international high-tech city. It has implemented urban policies designed to promote balanced development within its boundaries. During the 2000s, it became particularly important to encourage public participation in decision-making towards social consensus. In the Seoul Plan 2030, the Citizen Board, and in the following living sphere plan, residents' boards were organized to take an active part in developing future plans.

Into the 2000s, the institutional framework related to urban planning was greatly affected by the social conditions of the time and changed accordingly. The Urban Planning Act (2000) was also considerably revised. The living sphere grew bigger by the day as the city continued to grow outwards, aided by improved transportation. The growth had to be managed, and the wider urban plan for Seoul was instituted to do just this for 2 or more administrative regions. Reckless development of the Seoul metropolitan area was to be prevented under the "Plan First, Develop Later" system. With concerns rising regarding land tied to long-term urban facility projects not yet begun, a "Request for Purchase" system was introduced to improve unrealistic regulations. Other regulations on **restricted development areas**, a concept from the 1970s, were later separately addressed and managed by the Act on Special Measures on the Designation & Management of **Development Prohibited Areas (2000)**. This can be seen as a reflection of the circumstances of the time – stimulus for a construction industry that had underperformed due to the Asian financial crisis in the late 1990s, corrective action on regulations encroaching on property rights, and a desire to reverse overcrowding and environmental degradation. In other words, the paradigm where priority was on development and growth changed to a greater emphasis on the environment and sustainability, and legislation systematically reflected this changing view.

The Urban Planning Act, which applied to cities, and the Act on Utilization & Management of National Territory, which loosely managed non-urban areas, were integrated and revised to unify the land use management system. In 2002, the Urban Planning Act (1962) and the Act on Utilization & Management of National Territory (1973) were each revised into the Framework Act on National Land and the Act on Planning & Use of National

Territory, respectively. The city design plans and the detailed planning initiatives, provided for similar purposes, were also integrated into the plans at the district level. The provisions on urban development projects in the Urban Planning Act were combined with the Land Readjustment Program Act to create the new Urban Development Act (2000), while the Urban Redevelopment Act (1976) and the Act on Temporary Measures for the Improvement of Dwellings & Other Living Conditions for Low-Income Urban Residents (1984) were merged into a new Act on Maintenance & Improvement of Urban Areas and Dwelling Conditions for Residents (2003). As such, in the 2000s, related or overlapping urban plans were brought together to simplify the system and add more details to the provisions. By 2010, the Seoul City government was increasingly conscious of the necessity to revitalize and update the city as it witnessed a decrease in population, changes in industrial structure, reckless and unregulated expansion, and dilapidated residential areas, leading to the enactment of the Special Act on Activation & Support of Urban Restoration (2013).

Seoul's Urban Planning in the 2000s

2006: The "Basic Seoul Urban Plan" for 2020

_ The Basic Seoul Urban Plan for 2020 was a revision of and supplement to the 1997 Plan, targeting the year 2020 and a population of 9.8 million. The existing plan's CBD (Central Business District) system was maintained to ensure consistency in policy. If the Basic Urban Plan of 2011 is considered to comprehensively embrace the material and socioeconomic aspects, the Basic Urban Plan for 2020 was more strategic in nature, with clear priorities, goals and strategies. The 2020 Plan also reflected expert and public opinion, proposed goals and a monitoring index, and provided direction for urban development in each of the 5 living spheres as one of the ways to promote balanced regional development. Its urban spatial structure is comprised of one primary center, 5 secondary centers (Yeongdong, Yeongdeungpo, Yongsan, Cheongnyangni/Wangsimni, and Sangam/Susaek), 11 local centers, and 53 district centers.

2014: The"Seoul Plan 2030"

_ The Seoul Plan 2030 was developed to revise and supplement the Basic Seoul Urban Plan for 2020. It targeted the year 2030 and an estimated population of 10.2 million, according to Statistics Korea. The Basic Urban Plan for 2020 had independent plans for each of the 12 sectors, and therefore, seeking connection and consistency between the plans would be restricted. Moreover, the information provided was too broad and technical for the general public to understand. In the Seoul Plan 2030, the amount of such information was materially reduced and simplified into 5 key issues and 17 goals. It was firmly built on the actual involvement of people from diverse backgrounds, such as ordinary citizens, experts, city council members, civil servants, and personnel from the Seoul Institute, and the information made accessible and easy to understand. The Plan was established with an emphasis on governance of the wider area within Seoul, in consideration of the relationship between the autonomous districts and the Seoul metropolitan areas. To address the issues related to spatial structure (public demand for better quality of life, the widening wealth gap between regions, expansion and absorption into the Seoul urban area, fierce competition between global megacities etc.), the Plan proposed switching back to the multi-nucleic system, with a focus on various connections to the CBD (Central Business District) and utilization of diverse functions. The multi- nucleic system that the Plan suggested was comprised of 3 city centers (the ancient Hanyang walled city area, Yeongdeungpo/Yeouido, and Gangnam), 7 wider-area centers (Yongsan, Cheongnyangni/Wangsimni, Changdong/Sanggye, Sangam/Susaek, Magok, Gasan/Daerim, and Jamsil), and 12 local centers, with a particular emphasis on the functional connection.

Figure 1 - The History of Urban Planning & Institutional Framework

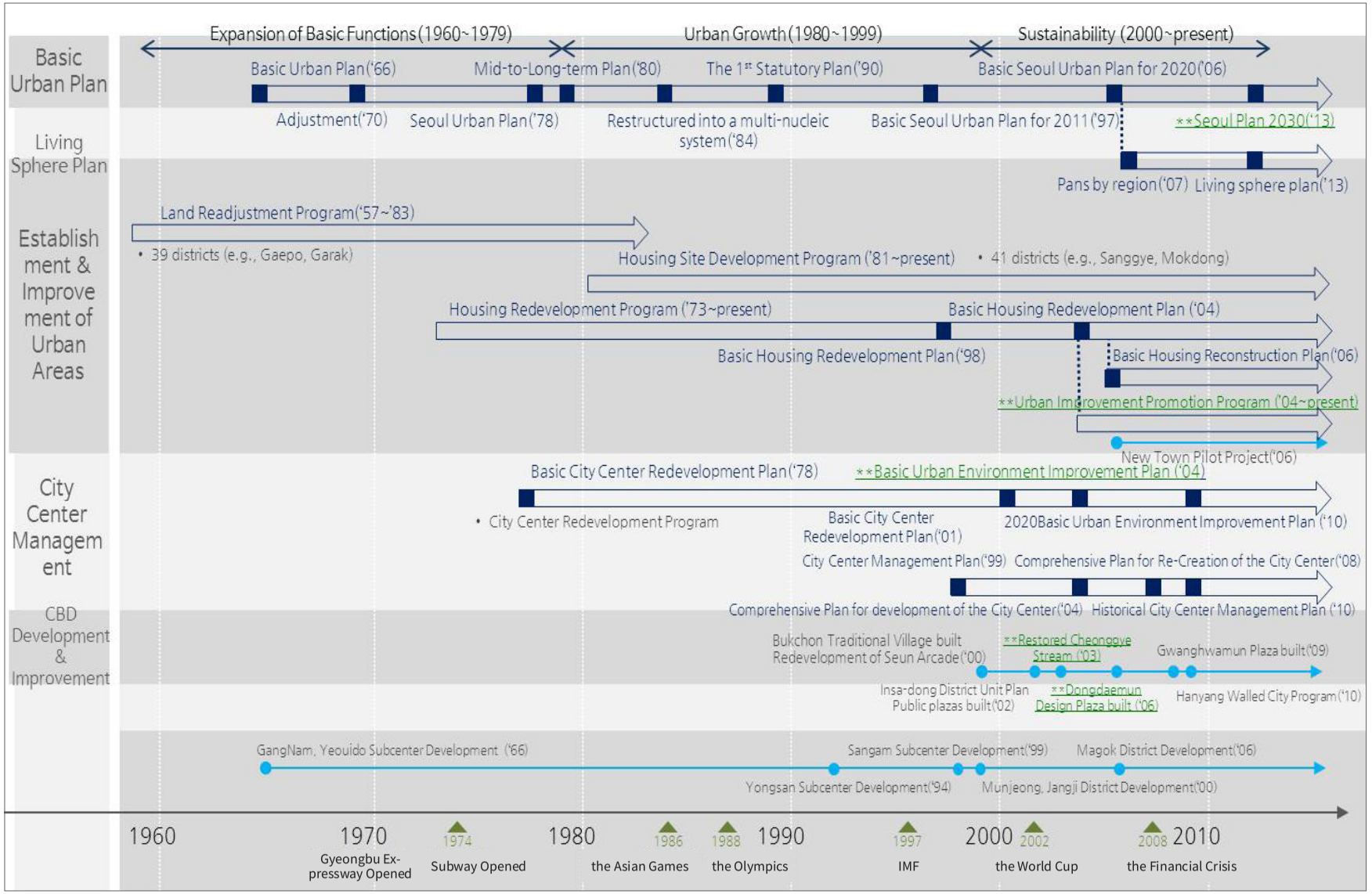
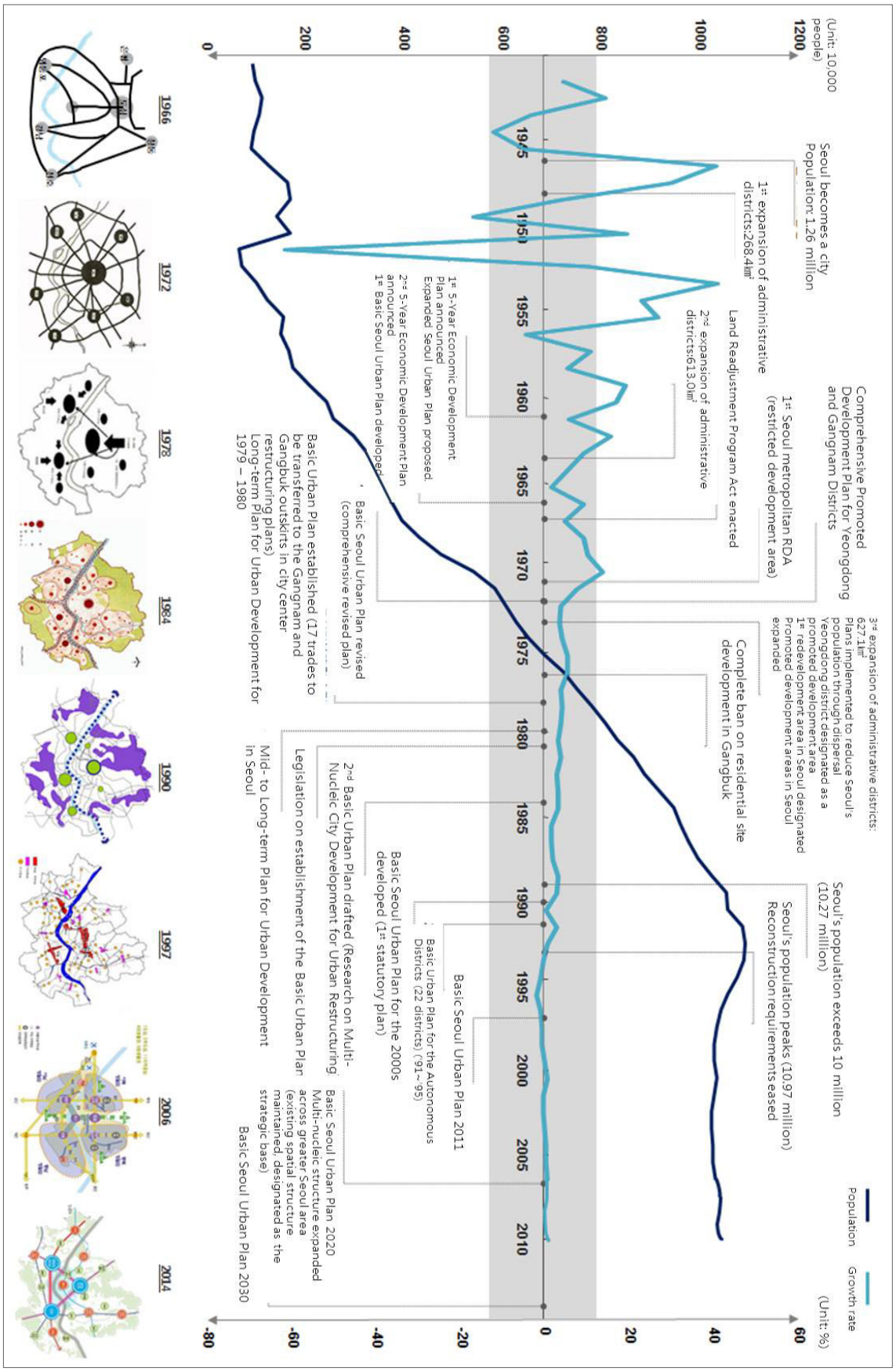


Figure 2 - The History of Seoul' s Urban Planning & Institutional Framework and Changes to the City



From its appointment as the official capital city for the Joseon Dynasty in 1394 to today's Republic of Korea, Seoul has served as the heart of the nation. It underwent considerable changes in area under the Japanese colonial government from 1910 to 1945, and suffered the utter destruction of homes, commercial buildings, public institutions and other structures during the Korean War from 1950 to 1953. However, the city rose from its ashes to see incredible growth during the 1960s to the 1980s. The resulting explosive growth in population and expansion of its administrative districts led to many issues such as unauthorized settlements, overcrowding, traffic congestion, and pollution, but the city continued to grow. The emergence of new "towns" in Seongbuk and Gangbuk was accompanied by the construction of many roads, and development in Gangnam began to divert these burdens away from Gangbuk. **Development prohibited areas** were designated in the Seoul metropolitan area to prevent chaotic expansion.

This trend of growth continued into the 1980s. Anticipation of the 1986 Asian Games and the 1988 Olympics resulted in enthusiastic urban improvement and beautification, and many development projects were implemented in preparation: in the Jamsil area large stadiums were built; projects were carried out to enhance the Han River areas; additional subway lines were built; the city center was redeveloped; and poorer residential areas were redeveloped. New residential units were built in Gangnam, Mokdong, Godeok, Gaepo, and Sanggye to meet the phenomenal demand. By the 1990s, further expansion of the subway system and other public projects were initiated, quickly transforming the city. However, in the face of the Asian financial crisis and aid from the IMF in 1997, Seoul realized that it needed a new kind of change. From the 2000s to today, the city has focused less on quantitative change (excessive amounts of development etc.) and more on a qualitative enhancement. In preparation for the World Cup in 2002, Seoul was able to realize qualitative improvement in the Sangam area, the Cheonggye Stream restoration, urban recreation projects, and the Han River Renaissance.

In the above description of urban planning and management by decade, what the city has done can be seen, as well as the flexibility and effectiveness of the measures used to address issues in various physical, social, and economic situations. Seoul is now focused on new policy direction designed to respond to a new era, demographic changes, and extensive public demands. Developing nations on a similar path as Korea who wish to benchmark and learn from Seoul's experience will greatly benefit from a review of the following.

First, Seoul is unlikely to witness any more significant population growth due to Korea's low birth rate and aging population. Population growth will stabilize and Seoul will need to pursue qualitative rather than quantitative growth. However, developing nations in the process of rapid urbanization need both qualitative and quantitative growth. They need to develop the size of their urban areas as well as enhance quality. For this to happen, each city will need to choose the regions that need the most attention and concentrate on qualitative development.

Second, the pursuit of quantitative growth should not lead to reckless abuse of the environment and resources but aim for sustainable development from which future generations can benefit. In the past, Seoul destroyed green areas, filled up open spaces and farmland, and neglected its historical and cultural heritage for urban development. Today, the value of Seoul's intangible and cultural assets exceeds the value of its tangible resources. It is important to remember that resources are not only for use today but also for future generations, and that continued, systematic management is the key to sustainability.

Third, involving the public in the establishment of any planned action and seeking organic relationships between upper and lower-level plans. Accept that top-down decision-making is a thing of the past and seek to use the bottom-up approach, or a mixture of the two. Development plans must be based on the requests and participation of local residents. Planning of any development should be systematically structured and meticulous, ensuring consistency between plans. At the heart of any urban development plan is its people: it is crucial to improve communication with the constituents of the city, and institute public hearings and other forums of participation in establishing basic urban plans and living spheres.

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Relevant Laws

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- Urban Development Act
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2. Management Policies for Seoul's City Center & Changes

Writer : Seoul Institute Dr. Hyun-Suk Min

Policy Area: Urban Planning

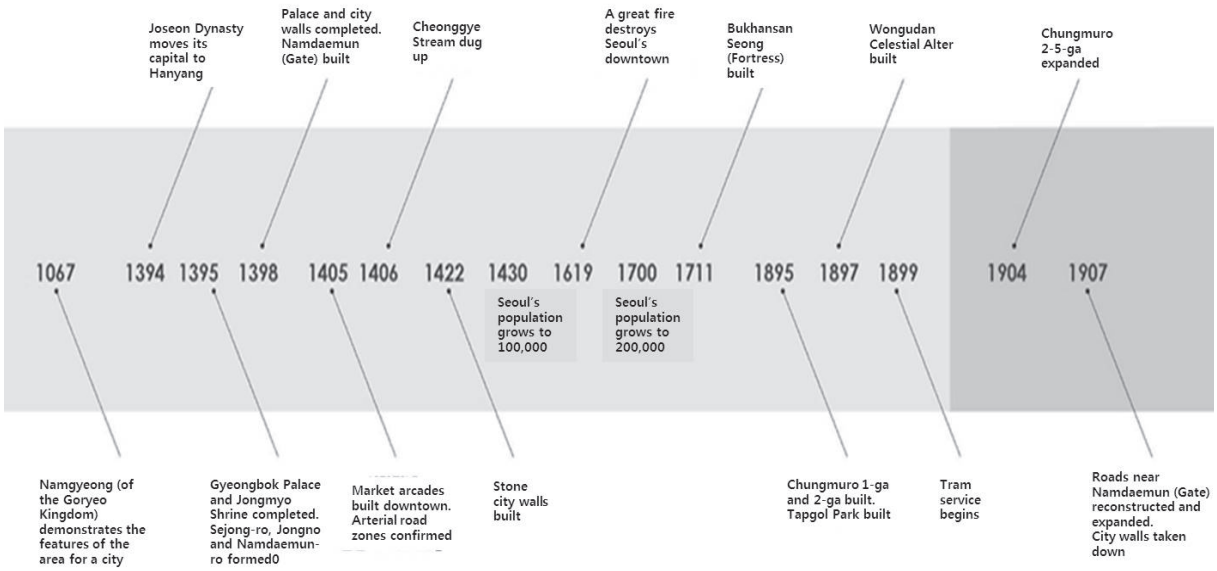
Physical Heritage of the City Center

Since the Kingdom of Joseon moved its capital to Hanyang (present-day Seoul) in 1392, the basic urban structure of the city center has remained largely unchanged. Today, the heart of the city is comprised of villages where narrow alleys are lined with compact buildings huddled together on small urban lots laid out in irregular patterns.

But the city center's urban frame began to experience fundamental changes when its population, commerce and industry grew under Japanese colonial rule. The spacious sites where the fallen kingdom's government buildings and aristocratic mansions used to stand were taken up by various sorts of large structures such as public buildings, department stores and financial institutions, while new arterial roads like Taepyeong-ro and Yulgok-ro were built in grid patterns. Despite such changes however, the traditional urban layout – confined lots brimming with traditional houses, connected by squeezed streets – mostly endured in the areas surrounded by these arterial roads.

The downtown structure once again experienced momentous change during the Korean War. What the war destroyed was repaired by the Land Readjustment Program; small, non-uniform sites took fixed forms, narrow alleys were widened, and areas prepared for public facilities. The Land Readjustment Program however was designed as post-war restoration limited to destroyed areas. Other areas still retained the structure they had during the Joseon Dynasty.

Throughout the 1950s and 1960s, much of the city center was quickly taken up by unauthorized structures built by poor migrant workers. The downtown area at this time was nothing more than the kind of disorganized slum one can find in poor countries today: narrow roads, decrepit buildings cluttered the area, and the most basic hygienic and public facilities were non-existent.



City Center Management Policy in the 1960s: Awareness of the Need for Redevelopment

The need to redevelop the city center attracted more attention in the mid-1960s, once post-war chaos came to an end and the central government focused on economic growth. In order to perform its role as a city, Seoul felt the need for modern buildings and infrastructure at its center. At the time, land in the city center was divided into small lots, and it was understood that any integrated development would pose a challenge. The city government soon realized that it needed specialized measures – something more than the construction of new buildings – if it wished to realize effective redevelopment of the city center.

The Enforcement Decree of the Urban Planning Act was revised in 1965 to address this need. This was when the "redevelopment district" policy was introduced. However, it did no more than designate the areas where redevelopment could be carried out; it did not provide the means to integrate the minutely divided land and develop it as part of a consistent program. It was not for another five years that privately-owned land was open for redevelopment, except for the Seun Arcade and its vicinity, which the City of Seoul owned.

The importance of modernizing the city center grew considerably in terms of national development policies once the vision of "A modern nation" was established in government circles, and the city began setting its course. The Basic Seoul Urban Plan proposed to carry this out aggressively to transform the city center into an urban area with sufficient space and a number of skyscrapers. The simple designation of districts was not enough; there was a need for practical means to implement relevant programs. Seoul officials studied advanced methods of collective demolition and redevelopment used by the Japanese, and introduced the new concept of stereo replotting– integrating divided land under different owners into one building and dividing the share vertically. This had a decisive impact on city center redevelopment policies in Korea.

City Center Management Policy in the 1970s: the Urban Redevelopment Act & Promotion of Redevelopment

After being fully revised in 1971, the Urban Planning Act introduced new provisions that made city center redevelopment no longer a simple part of the land use plan but an "urban planning program". Included in the law for the first time were stipulations on requirements, action plans, management and disposal plans, and liquidation of old housing: crucial institutional measures that drove the redevelopment programs. From 1973 to 1976, redevelopment districts were designated in 12 key areas in the city center – Sogong, Euljiro-1-ga, Seoul Station-Seodaemun, Gwanghwamun, Shinmun-ro and other areas

Despite this designation, private sector-led redevelopment did not take place as actively as hoped due to complicated land acquisition procedures and the need for vast sums of money. For these areas where redevelopment was not completed by private investors within a certain period of time, the City of Seoul took

charge of the development or commissioned the program to a third party, pursuant to the newly introduced "Special District Improvement" system. In addition, the Act on Temporary Measures for the Promotion of Development in Specific Areas (1972) was established, providing incentives (cuts to property, transaction, and acquisition taxes) for specific areas included in the urban redevelopment program area.

Regardless of such measures to promote it, redevelopment of the city center was still sluggish. The Urban Redevelopment Act was passed in 1976, providing systematic institutional measures and independent legal grounds for the urban redevelopment program. Designed to modernize the city and maximize the use of available land, the Act defined the requirements for designation as a redevelopment district to ensure redevelopment programs were implemented in areas where the land needed to be used to its maximum capacity. Basic procedures for program execution were also set out where the redevelopment plan would be drafted and determined by the central and local governments while the private sector would be in charge of implementation. To redevelop a city of a million or more people, establishment of a basic urban redevelopment plan was necessary, which could then be carried out in line with long-term urban plans.

In November 1977, the City of Seoul passed the Redevelopment Program Ordinance pursuant to the Urban Planning Act and put forward the Basic City Center Redevelopment Plan (1978), aiming to restore the key functions of the city center in Seoul, supply and enhance the facilities with consideration for future improvements, and create peaceful urban spaces for residents of the city. In the Basic City Center Redevelopment Plan, the following areas were deemed as "seriously deteriorating": areas with a concentration of dilapidated buildings and small places of business; areas lacking in facilities and space; areas to which functions were inappropriately moved; areas with a mix of residential and recreational/amusement facilities placed in a disorganized fashion; and areas negatively affecting the aesthetic view of the city. The Plan suggested removing or recovering most of the traditional urban structure for redevelopment. Accordingly, a phased demolition/redevelopment plan was proposed for all areas except for the historically significant Insa-dong, Jongmyo area, and Hyoje-dong etc. and areas designated for preservation or restoration.

The urban redevelopment policy began with much enthusiasm but soon encountered a roadblock in 1979 due to extremely high tensions with North Korea. The government realized the national security aspect of development concentrated in Seoul, being within firing range of North Korea, and development of the Gangnam area was emphasized to disperse the population. This brought strict regulations on height and floor space ratios of the buildings within the Four City Gates area. The requirements for urban redevelopment became stricter; the required land area and the requirements for consensus among the land/building owners became more rigorous. The policy moved away from majority owners purchasing the rest of the land and implementing the program to all land owners being involved in the redevelopment. Other requirements included drafting plans to provide for residents evicted by the urban redevelopment.

City Center Management Policy in the 1980s: Accomplishments in Preparation for International Events

Districts were actively designated for urban redevelopment in the 1970s, but the government's containment policy for the city center tamped down redevelopment until the early 1980s. When Seoul was chosen as host for the 1986 Asian Games and the 1988 Olympics, urban redevelopment policies were rekindled. South Korea was determined to show off a modern Seoul to the international community at these events, and urban redevelopment was considered the means to make the showcase possible in a short period of time. The city government established a 5-year urban redevelopment plan and selected 124 districts, spanning over 600,000 ㎡ along major arterial roads, as the target area.

As a way to promote this urban redevelopment, the government revised the Urban Redevelopment Act in 1982. Eminent domain, which only applied to certain public programs and to a limited extent, was also granted to private entities pursuant to the revised Urban Redevelopment Act. This was to prevent postponement of programs due to objections by some landowners. Adjusted regulations on deposits for programs implemented by third-party developers made such development considerably easier. In 1983, a third party was approved as the developer for 3 districts (District #5 in Euljiro-1-ga, District #2 in Mugyo, and District #12 in Seorin) for the first time. The government-affiliated Korea Land Corporation (the Korea Land Development Corporation at the time) was able to work with the Korea Housing Corporation to carry out the urban redevelopment program as well.

Following these mitigations, the City of Seoul announced its own in February 1983, through plans to relax floor space ratio requirements and provide tax incentives. The ratio for the urban redevelopment program in the commercial zone within the Four Gates was increased from 670% to 1,000%, and taxes on transfers, acquisition, and registration were removed. Such legal and institutional measures ensured profitability under the urban redevelopment programs, and the government's aggressive economic stimulus policies in the early 1980s quickly pushed up real estate prices in the city center, encouraging large corporations to get involved on a larger scale. The Korean economy flourished, driven by low oil prices, low international interest rates and the weak Korean won against the Japanese yen. The demand for office space in Seoul skyrocketed, which further boosted urban redevelopment. For the years between 1983 and 1986, urban redevelopment programs were approved in 76 districts, and the trend remained in place until the Olympics in 1988.

City Center Management Policy in the 1990s: Criticism & Reflection on Existing Urban Redevelopment

After the Olympic Games in 1988, the urban redevelopment programs did not attract as much attention as before. It was no longer a priority on Seoul's to-do list, and area designation for the urban redevelopment did not grow noticeably. However, the 1990s were characterized by growing public interest in the city center environment, which led to a number of policy changes.

Primarily the redevelopment method of demolishing traditional urban structures and buildings fell out of favor: full demolition destroyed historic value and replaced it with high-rise, high-density development. In July 1990, the government revised the Enforcement Decree of the Urban Redevelopment Act and adopted restorative and preservationist redevelopment methods. The government sought to preserve the urban structure and its cultural heritage and to revitalize the area, but the new methods could not be applied to the actual redevelopment program. No specific procedures or methods were developed, and it was not easy to consider the program feasible when redevelopment depended on private financing.

In the previous 20 years of urban redevelopment, critics had argued that the program decreased the residential areas in the city center and caused a donut effect in the evenings. In April 1990, the City of Seoul responded by offering an incentive (relaxing the floor space ratio regulations) to those providing residential space in new buildings through the redevelopment program. Furthermore, the Basic City Center Redevelopment Plan was changed to designate "mandatory residential-commercial areas" where a third or more of the total building area should be residential, and "recommended residential-commercial areas" by which the addition of residential space led to incentives. However, these too did not produce visible results. Reducing the maximum allowed floor space ratio from 1,000% to 670% canceled the effects of the relevant incentives, and added to the fact that there was almost no demand for such residential/commercial buildings in the city center. In 1996, Seoul modified the Basic City Center Redevelopment Plan to remove the distinction between the mandatory residential-commercial areas and recommended residential-commercial areas; instead, all areas within the Four Gates boundary were designated as recommended residential-commercial areas in order to attract voluntary introduction of residential functions.

City Center Management Policy in the 2000s: Meticulous City Center Management to Restore Identity

From 2000 onwards, city center management policies broke free of demolition-oriented modernization and development and adopted an approach of preserving the unique characteristics of city areas while adapting to the rapid economic changes. While the old regulations applied a uniform method of development, the new approach was more inclined toward deregulation to attract more private investors while utilizing public

investment to improve the environment and enhance the competitiveness of the city center. This change of policy originated from some of the plans established at that time, beginning in 2000.

In 2000, the Basic City Center Management Plan was put in place. It was the first city center plan for Seoul, a guideline in nature, drafted not for program execution or development but for ideal management of the city center. It was a strategic means to preserve city center identity and achieve economic prosperity, with an emphasis on improving the area via public investment and promotion of private investment via deregulation. Furthermore, the City Center Development Plan (2004) was devised to restore the Cheonggye Stream project scheduled to be completed in 2005. This Plan brought the restoration together with a long-term vision and principles for development of the whole city center, especially near the stream area. It sought to promote aggressive public investment to improve the historical and cultural environments of the city and convenience for pedestrians while developing private-sector involvement in revitalizing the city center. It was a continuation of the policy foundation – a balance between development and preservation – set out in the Basic City Center Management Plan (2000).

With the policy framework and changes from the two development plans, the Comprehensive City Center Recreation Plan (2007) was established. This action plan proposed four south-north axes : a historical axis, a tourism axis, a "green" axis, and a compound axis, each of which would have its own programs. The Open Nam Mountain project was also planned to provide better access to the mountain.

Citizens and various entities increasingly desired to be involved in the planning to enhance effectiveness. In response to this public demand, the Historical City Center Management Plan (2014) was established after discussion with both citizens and experts. It was a comprehensive plan, developed to restore the historical identity of the city, providing for strategic plans and guidelines according to issues and comprehensive management of development, preservation and restoration of the districts spanning the whole area of the ancient city of Hanyang.

1. The Historical Axis: Gyeongbok Palace – Seoul Plaza – Sungnyemun (Gate) – Seoul Station – Nam Mountain;

2. The Tourism Axis: Bukchon Village – Insa-dong – Eulji-ro – Myeongdong – Nam Mountain;

3. The Green Axis: Changdeok Palace/Changgyeong Palace – Jongmyo Shrine – Seun Arcade – Nam Mountain;

4. The Compound Axis: Daehak-ro – Heunginji Gate – Dongdaemun Stadium – Nam Mountain.

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3. Development of Gangnam

Writer : University of Seoul Prof. Myung-Gu Kang

Policy Area: Urban Planning

Background

Need for New, Large Built-up Areas due to the Rapid Expansion of Seoul

Seoul's population has grown at a phenomenal rate. It was a million in 1953, and skyrocketed to 2.45 million by 1960, up 1.5 million in less than a decade. There was no planning for such explosive growth, and urbanization quickly deteriorated quality of life and generated slum areas across the city. Disorganized urban sprawl characterized the city as it encroached on the mountains, rivers, green belts, national land, and even roads.

The shortage of adequate housing and deterioration of existing housing were serious issues: there was 1 housing unit per 2 households and at least a third of all dwellings were shoddy clapboard houses. Officially, the water service rate was 56%, but it was supplied only once an hour. The road ratio was only 8%, and it took 2 hours to commute across the city, which was only 16 km east to west and 268 ㎢ in area. Sewage was released into the river system without treatment, causing sanitation problems. There were not enough schools; tents were set up as temporary classrooms. Classes ran morning and afternoon, but there were not enough to accommodate everyone. Most citizens roamed the streets, unable to find work. Crime was rampant.

To accommodate the growing population, the city government planned to increase the density of the existing built-up areas (e.g., Seun Arcade) and systematically develop the adjacent areas (e.g., land readjustment programs in Seogyo, Dongdaemun, Myeonmok, Suyu, etc.). However, this was not sufficient to handle the dramatic population growth. For instance, population grew by 298,780 on average in 1960; this meant that the city needed at least 50,000 housing units (assuming 6 people in each household) and other infrastructure, which at the time could only service a few thousand. Seoul was in need of new, large built-up areas to resolve the snowballing urban issues.

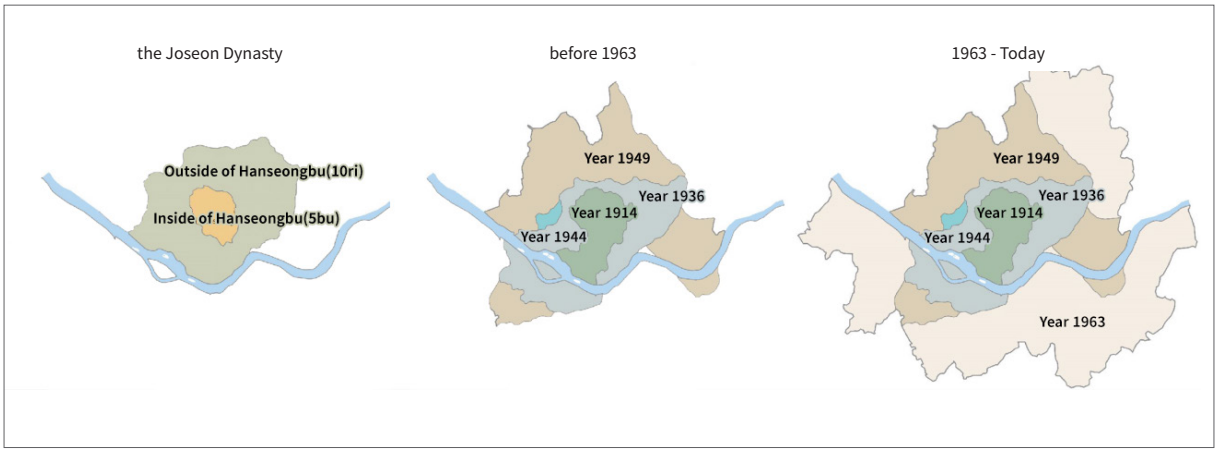
"Gangbuk could no longer handle it. The population kept growing. The development of Gangnam first began in earnest in the 1970s, and the population was about 6 million at the time. Gangbuk couldn't handle it. That's how the development of Gangnam began." (Son Jeong-mok, Former Director, Urban Planning Bureau, Seoul Metropolitan Government)

Expansion of Administrative Districts & Plans for Large Built-up Areas

In the early 1960s, population growth and urban problems became even more serious. As the population density reached an average of 100 persons/ha, the city doubled its administrative districts (Figure 1). With this decision, non-urban areas in the surrounding regions were absorbed by the city, thus setting off plans to

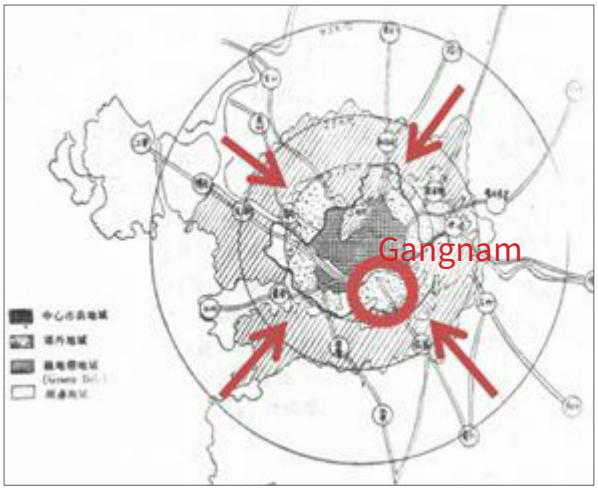
develop new, large built-up areas. In 1965 various plans were developed such as the Seoul 10-Year Plan, the Arterial Road Network Plan, and the Greater Seoul Urban Plan. After much deliberation, the Basic Seoul Urban Plan was announced in 1966 (Figures 2 & 3). Development of Gangnam began as part of Seoul's population dispersal policy, with an aim to have 40% of the population north of the Han River and 60% to the south (January 23, 1970, The Chosun Ilbo).

Figure 1 - 1963: Expansion of Administrative Districts in Seoul



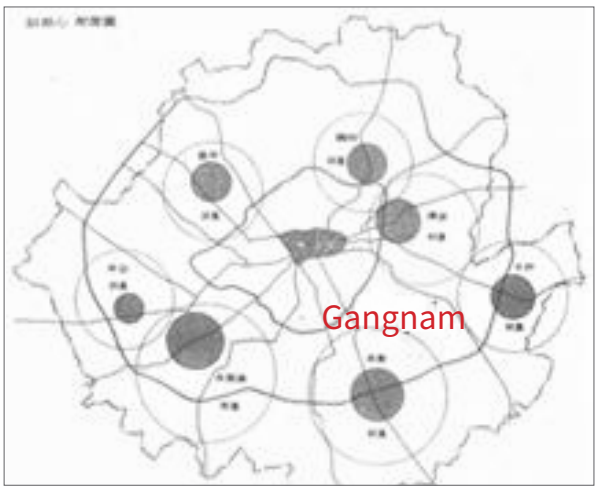
In the early stage of the plan, Gangnam was to be one of many sub-centers. At the time, these sub-centers were supposed to be the hinterland and residential areas structurally and were thus located at the center of transportation hubs to enable easy access from the center of Seoul or other cities. On the contrary, Gangnam did not have any residential districts or built-up areas. Its planned density was not as high as we see today.

Figure 2 - Regions of Greater Seoul (Korea Planners Association Draft)



Source: Seoul Urban Plan, 1965, p108; quoted in Gwon Yeong-deok, 2012.

Figure 3- Arrangement of Sub-centers



Source: Revision of the Basic Seoul Urban Plan, 1970, p159; quoted in Gwon Yeong-deok, 2012.

In the mid-1970s, development of Gangnam began in earnest. The "3 nuclei plan" added 3 nuclei to Seoul's urban structure. Detailed plans were developed to turn Gangnam into a high-density urban center, just as we see today. It became one of the 3 major city centers of Seoul, alongside the old city center and Yeouido. Seoul designated Yeouido and the Yeongdeongpo area, where development began in 1970, as the commercial center while appointing Gangnam and Jamsil's land readjustment districts as another city center and financial hub.

The third Hangang Bridge (today's Hannam Bridge; begun January 1966 and completed December 1969) heralded the start of the era of Gangnam. When the Gyeongbu Expressway (begun in 1967) opened in July 1970, connecting the old city center to Gangnam, the development of Gangnam progressed even faster.[1]

Figure 4 - 1960: Aerial View of Gangnam

Source: Korean National Archives

Figure 5 - 1969: Shinsa-dong, Gangnam-gu and the Third Hangang Bridge

Source: City History Compilation Committee of Seoul

Development Plans for Gangnam

The development of Gangnam proposed in the Basic Seoul Urban Plan was carried out as the land readjustment plan became more specific. Land readjustment became more detailed with the start of the Gyeongbu Expressway construction in 1967. A New Built-up Area Plan for Yeongdong District was announced, which would focus on developing Gangnam as a built up area, and creating residences for 600,000 people in District 1 and 2 (59 km²) of Yeongdong.[2] The City of Seoul asked the Ministry of Construction to designate the Yeongdong Districts for land readjustment in September 1966; a decision was made to install the facilities as part of the readjustment plan in December of the same year. The enforcement decree for Yeongdong District

1. At the time, Gangnam was nearly uninhabited and there was no demand for a bridge. The construction of Hannam Bridge was prohibitive and thus did not comply with the demand-based supply of transportation infrastructure. However, the decision to build the bridge was made, not to provide transportation infrastructure for future demand, but to make the city more sustainable.

2.The developed area in Gangnam accounted for 60% of Seoul's planned area, which was about 44% of the total area of Seoul before it was expanded. It was nearly twice the size of the old city center at the time.

1 – the first project in the development of Gangnam – was the Ministry of Construction Notice #154, issued on December 15, 1967. The process from request to approval was accelerated, taking no longer than 2 years.

Readjustment of the land enhanced its use. Order was introduced to the disorderly arrangements of lots and parcels. Land for public use was secured; schools and other public structures were better located, and accessibility and traffic flow improved. Gangnam was developed as part of the land readjustment program for Yeongdong Districts 1 and 2. Gangnam was developed even more so after the addition of programs and program sites. Furthermore, the use of the land readjustment approach allowed land development costs to be paid by the party that would profit from the program.

Defined Urban Structure, Space Secured for Public Use, Creation of Infrastructure

The land readjustment programs in Yeongdong District 1 and Yeongdong 2 were launched in 1968 and 1971 respectively and were both completed in 1985. The land readjustment programs[1] in Yeongdong District 1 and 2 was clearly set apart from other land readjustment programs in Seoul by their objective. In 1963, Maljukgeori and its vicinity were designated as a sub-center as part of Seoul's urban improvement plan and were again selected as the top 4 sub-center areas by the Basic Seoul Urban Plan in 1965. Accordingly, the development of Gangnam was launched to provide for a new town designed to disperse urban functions and population to undeveloped areas.

Land Use & Lots Secured for Public Use (Appendix 1)

The ratio of housing sites to total land in Gangnam was set lower than the national average while the ratio of the land for public use (such as roads and green belts) was set higher. While Gangnam was designed as a residential area, it had a higher ratio of land for public use compared to Gangbuk as the latter already had a built-up area.

In Yeongdong District 1, the land reduction rate was 39.1%. Public land is usually secured through program execution, and roads (road ratio: 23.1%) account for the largest percentage. It was markedly different from the previous land readjustment programs in that the overall ratio of public land – schools (5.5%), parks (1.74%), and other public land (10.52%) – was higher. As the land reduction rate increased, so did public land, but this also included utility infrastructure, leaving little room for green spaces. With the replotting plans for Yeongdong District 1, the land reduction rate continued to rise, but this too was rather passive, placing a priority on minimizing the land reduction rate, from today's point of view.

1. Until the 1960s, the only bridges over the Han River were the pedestrian bridge to the west of Seoul and Gwangjin Bridge to the east. There was no bridge that connected to Gangnam. The Gangnam area, a quiet farmland for growing rice and vegetables, had to be accessed by boat, and was referred to as 'Yeongdong' – 'the east of Yeongdeungpo'. Gangnam was so scarcely known that it did not have its own name.

Table 1 - Public Land Secured in Yeongdong District 1 & 2

Area	Before the Program		After the Program		Land Reduction Rate
Yeongdong District 1	Private Land	94%	Housing Site	53%	39.1%
	National / Public Land	6%	General Land Set Out for Recompense*	5%	
			Public Land	42%	
Yeongdong District 1	Private Land	83%	Housing Site	58%	35.1%
	National / Public Land	17%	General Land Set Out for Recompense*	15%	
			Public Land	27%	

* This land is sold to the private sector and becomes private land but some percentage can be reclaimed for public land

Yeongdong District 2 was similar to Yeongdong District 1 in regard to land reduction rate and land use.[1] Land reduction rate was slightly lower at 35.1% because District 2 had more national/public land but the percentage of parks and green areas was higher (4.8%). District 2 was much higher in terms of general land set out for recompense (15%), largely due to part of the Gyeongbu Expressway being located in District 1.

Lots & Housing

To prevent the issues of small land subdivisions that had occurred in existing land readjustment districts, subdivision was prohibited on land 165m² or smaller in area while construction was limited to 66m² (building-to-land ratio up to 40%) in 1972. Restricting the building-to-land ratio to 40% particularly contributed to creating a pleasant physical environment in Gangnam.[2]

In 1973, the City of Seoul introduced the Yeongdong/Jamsil New Built-up Area Plan and the Yeongdong Development Promotion Plan; while restricting building size, color, and arrangement, the city sought to make plans and control the elements that replotting could not.[3] In 1975, a decision was made to group the land secured for recompense, which had previously been located in the areas that were easy to sell; that same year, an apartment district was included in the district designated for specific use according to urban planning. Designating and grouping the land secured for recompense for up to 50% of the area was done to sell the land to public corporations such as the Housing Corporation or to national housing builders. Since those

1. Refer to Attachment 1 "Land Use in Yeongdong District 1 & 2".

2. These measures could have triggered conflict with landowners at the time.

3. One of the limitations of land readjustment was that because the program ends with securing space for roads and infrastructure and plotting, construction after that could not be controlled. This also gave rise to the issue of landowners subdividing the replotted land and selling houses. Due to the lack of private capital and adequate technology, as well as the growing demand for housing at the time, development tended to be low-density, resulting in inefficient use of the land.

public corporations eligible to purchase such grouped land were capable of high-density development, this measure of grouping the land for recompense and including the apartment district in the district designated for specific use provided the groundwork for and promoted high-density development in Gangnam.

"...Even if Seoul were covered with detached houses, there was not enough land for 10 million people. Apartments were the only solution. With apartments, we'd have high-density housing and still have some land. The urban environment would be improved, and the energy supply would be more efficient. You use less energy because you don't have to move as much. According to plans to utilize national land, we needed apartments to have some land for landscaping. ....so we designated apartment districts. This wasn't in the law yet." (Kim Byeong-lin, former Director, Urban Planning Bureau, City History Compilation Committee of Seoul, 2012)

Infrastructure for Public Services

As land readjustment was being planned, plans for a road network and underground utility tunnels[1] were also being developed for Yeongdong Districts, and made up the key infrastructure for Seoul, significantly helping Gangnam to perform its intended functions. The plans for Yeongdong Districts included: arterial roads that were 50 m or wider; arterial road networks inside the Districts, such as Samneung-ro (50 m, today's Tehran Avenue), Yeongdong Avenue (70 m), and Gangnam Avenue (50 m); and the riverside roads that constitute today's Olympic Expressway. The road ratio was 24.6% and arranged in a grid network, same as the road networks of major cities in advanced nations. There was strong criticism of such a high road ratio, but the road width was pursuant to the road networks from the Basic Urban Plan, and this plan was deemed reasonable when the automobile use soared in the late 1980s.

Figure 6 - Land Use before the Development of Gangnam (1957)

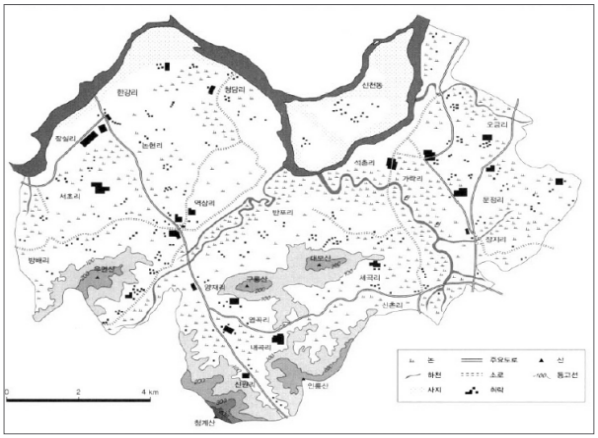
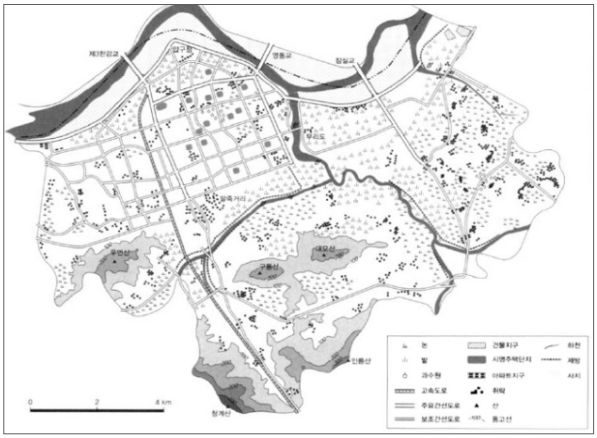


Figure 7 - Land Use during the Construction of Foundation in Gangnam (1974)

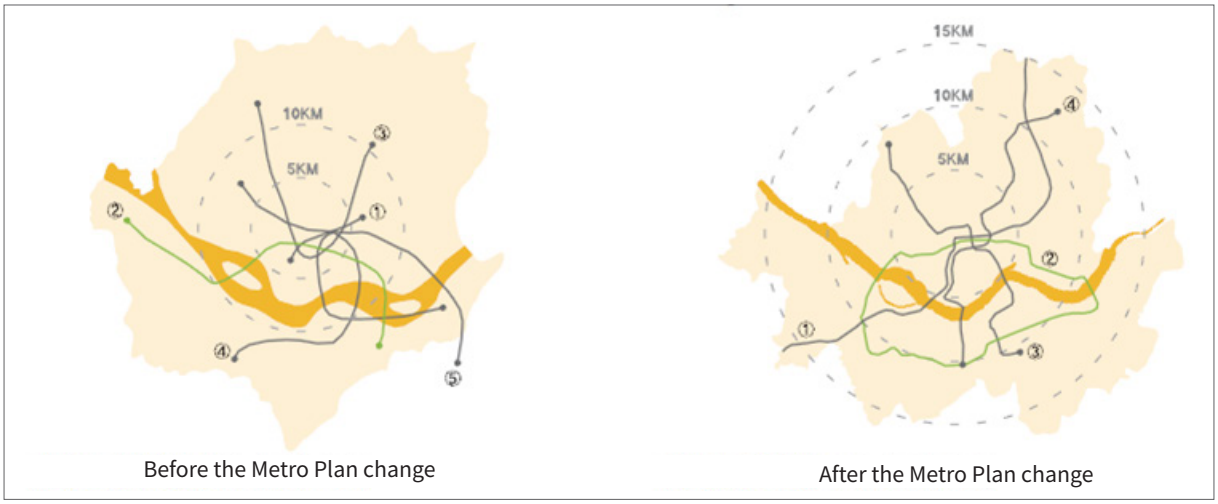


Source: Lee Ok-hee (2006), Characteristics & Problems of the Gangnam Development Process in Seoul, Journal of the Korean Urban Geographical Society.

1. The decision to install underground utility tunnels for Yeongdong Districts was made in 1971.

Seoul also changed its city Metro plan. Established in 1972, the Metro plan was significantly revised in 1975; Line 2 was to become a circle line connecting Yeongdong Districts to Yeongdeungpo and Seoul's city center. This would not only disperse the population of Gangbuk to Gangnam but also helped promote the 3-nuclei plan that would emerge a year later, giving a multi-nucleic structure to today's Seoul (Son Jeong-mok 2003).

Figure 8 - 1972 City Metro Plan & 1975 Changes



Source: Capturing 600 Years of Seoul, Seoul Museum of History.

Underground utility tunnels were needed to connect the communications, electricity and waterworks lines to Gangnam, known as a flood-prone area. To develop Gangnam, waterworks, sewer lines, roads, communications, and gas lines were installed underground. Above ground, green spaces would create a natural landscape.

Financing for Land Readjustment in Yeongdong Districts

Because the City of Seoul could not finance the development of a new, large built-up area, it had to rely solely on the sale of land set out for recompense from the land readjustment programs. The program cost from Yeongdong District 1 and 2 can be seen in Table 2. In Yeongdong District 1, the sale of the land set out for recompense played a decisive role in financing the program. In addition to the 9.5% from the national coffers, revenue from land sales accounted for more than 90% - markedly different from the previous land readjustment programs.[1] This difference was even more pronounced in Yeongdong District 2, where 99.9% of its program costs were paid with revenue from land sales.

1. In land readjustment programs before the development of Gangnam, assistance from the national coffers and the city accounted for 30 – 50% of the total program costs. The underlying concept was that urban improvement was to be financed by the public. This was possible because the scale of those previous programs was rather small. With the development of Gangnam however, the circumstances did not allow for public financing. After that, land readjustment programs were pursued without public financing.

Table 2 - Yeongdong District 1 & 2 Program Costs

	Revenue (Unit: KRW 1,000)		Expenses (Unit: KRW 1,000)	
Yeongdong District 1 Land Readjustment	Total	4,725,800	Total	4,725,800
	Municipal Bonds	-	Office Expenses	210,000
	National Assistance	-	Construction Expenses	10,510,000
	Sale of Land Set Out for Recompense	4,274,000	Maintenance	4,000
	Contribution	0.1	Municipal Bond Interest	-
	Liquidation Receivables	5,000	Liquidation Cashout	5,000
	Misc. Income	0.1	Reserve	20,000
Yeongdong-District 2 Land Readjustment	Total	10,683,000	Total	10,683,000
	Municipal Bonds	-	Office Expenses	150,000
	National Assistance	-	Construction Expenses	10,510,000
	Sale of Land Set Out for Recompense	10,677,990	Maintenance	4,000
	Contribution	0.1	Municipal Bond Interest	-
	Liquidation Receivables	5,000	Liquidation Cashout	5,000
	Misc. Incom	10	Reserve	14,000

Difficulties with Gangnam Development & Policy Response

Development of Gangnam began in the early 1970s, but the population was still concentrated in Gangbuk. In 1970, the population of Seoul reached 5.43 million. The population had been 4.78 million in 1969 and had risen 630,000 in only one year. The population growth was even more drastic than in the 1960s and they were all headed to Gangbuk, where, by 1970, 76% of Seoul's population lived. The overpopulation issue deteriorated by the day. The rest of the city's population – 24% - lived to the south of the Han River, mostly in Yeongdeung-po. Yeongdong was therefore empty, and Seoul desperately needed to disperse its population.

Recommendations for Migration & Development Promotion Policies

In Gangnam where land development had just started, public servant apartments and city apartments were built. In 1971, public servant apartments were completed in Nonhyeon-dong. In the following year, the city apartments were built. With these, Seoul intended to encourage public servants and other citizens to move to less crowded areas within the city. The public servant apartments were sold to those at Seoul City Hall who did not own a home as well as to those at the Seoul Metropolitan Office of Education and Seoul Metropolitan Police Agency, but it did not work as the city intended. In the end, Seoul had to exert significant pressure to get public servants to move into these buildings.

Figure 9 - Public Servant Apartments Completed in 1971 in Nonhyeon-dong

Figure 10 - City Apartments Completed in 1974 in Cheongdam-dong

Source: Korean National Archives

The program was still in its early days, and there were no adequate facilities or public transport to support those living in the area. Infrastructure was so poor that some of the migrants sold their houses in Yeongdong Districts and returned to Gangbuk. Despite many attempts to encourage public servants to move to these dedicated apartments, many returned to Gangbuk. People did not yet believe the development of Gangnam would succeed.

To make matters worse, external economic conditions were deteriorating. Global markets were sluggish, holding the South Korean economy back as well. Consumers were hesitant to spend and so were property buyers, creating problems for plans to sell the land set out for recompense to finance the development. Ultimately, this plan could no longer be pursued.

To promote the development of Gangnam, the government introduced the Act on Temporary Measures for Development Promotion in Specific Areas in 1972, easing the tax regulations that had been put in place to prevent real estate speculation and removing almost all taxes on land transactions and use. The real estate speculation tax[1], business tax, registration tax, acquisition tax, property tax, urban planning tax[2], and licensing tax were removed until the Act was abolished in 1978. This temporary measure proved effective: land transactions became more active, and prices rose again.[3]

However, this Act once again attracted speculators who were not interested in the normal process of urban development, causing serious delays or even cancellation. Then the first oil crisis in 1973 froze the economy, stunting urban development again.

The Yeongdong/Jamsil New Built-up Area Plan of 1973 was drafted to promote the development of Gangnam by enabling an approach where the target area was divided into many zones with a central location that received intensive focus. In 1974, the government introduced a tax on vacant lots to curtail property speculation and promote urban development. The tax, which was quite heavy, was imposed on owners of vacant lots where there were no development activity 2 years after replotting.

The development of Gangnam picked up speed only after the sale of land set out for recompense was vitalized in 1975. Now that a source of program financing was in place again, Yeongdong Districts began to reveal their overall structure, defined by the roads. Development accelerated in Gangnam. By 1975, the population of Seoul was nearing 7 million. The central and Seoul governments strongly encouraged development and construction of major facilities in Gangnam through very attractive assistance programs and policies to discourage concentration in Gangbuk.

1. When real estate speculation became rampant, the government passed the Act on the Special Tax on Real Estate Speculation in 1968, which imposed a tax in excess of 50% of gains on transfer. The tax increased to 80% until the relevant laws were revised in 1970.

2. This was passed by the Seoul Metropolitan Council in 1968. Its target was all houses and land in Seoul, imposed on the 1/1,000 of the official rate (registration tax base).

3. However, this Act once again attracted speculators. They were never interested in the normal process of urban development, causing serious delays and even cancellations.

Discouraging Concentration in Gangbuk & Promoting Construction of Major Facilities in Gangnam

By expanding the concept of a special facility-restricted area[1] to boost the growth of sub-centers in 1972, the government prohibited the development of housing sites north of the Han River. Apartment buildings and private housing could not be built or sites developed in Gangbuk. Construction or expansion of department stores, markets, universities, and other facilities that attract people to an area were forbidden. New restaurants, bars, university preparation schools, gas stations, and other facilities were either disallowed or obtaining a permit made very difficult. Seoul was determined to stop the overpopulation in Gangbuk.

In 1975, Seoul announced its plans to build the social infrastructure to develop urban functions in Gangnam. Its first targets were secondary government offices, such as the City Hall, court, Public Prosecutor's Office, Korea Forest Service, and Public Procurement Service, as well as headquarters of 8 financial institutions, including the Bank of Korea, Korea Development Bank, and Korea Exchange Bank. However, this resulted in fierce opposition as the city did not hold sufficient discussions with the relevant departments, and the institutions were not moved to Gangnam. The only public offices that moved to Gangnam were the Supreme Court and the Public Prosecutor's Office, but only after a decade.

Figure 11 - Supreme Court in Seosomun-dong (Gangbuk) in 1971

Figure 12 - Supreme Court in Seocho-dong (Gangnam) Today

Source: 40 Years of Gangnam, Seoul Museum of History

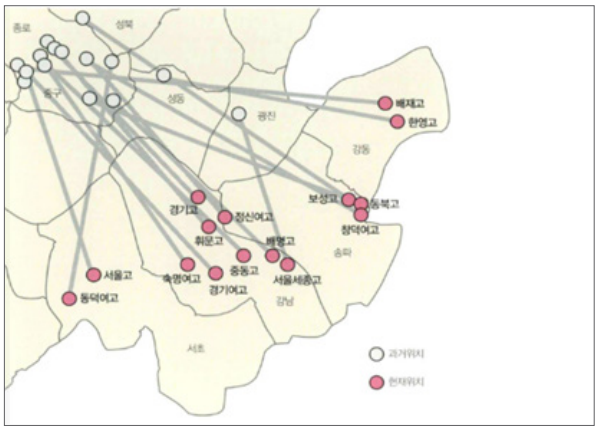
In 1976, the next targets were the prestigious high schools in the old city center.[2] Starting with Gyeonggi High School, 8 high schools, including Hwimun High School and Sukmyung Girls' High School, were moved to today's Gangnam-gu. In 1980, Seoul High School moved to Seocho-gu, and Baeje High to Gangdong-gu. A total of 15 high schools were moved, creating the famous 8 school districts, and South Korea's vehement

1. In this area, the construction or extension/expansion of universities, express bus terminal, factories, and other industrial facilities is prohibited.

2. In 1974, the high school curriculum was standardized, and the teaching staff and school facilities were not up to people's expectations at some high schools.

pursuit of good education has fueled the continued migration to Gangnam ever since.

Figure 13 - Move of High Schools from Gangbuk to Gangnam



Source: 40 Years of Gangnam, Seoul Museum of History

The construction of bridges and the express bus terminal moving to Gangnam significantly vitalized the area. Besides the third Hangang Bridge (completed in 1969, today's Hannam Bridge), Seoul built Jamsil Bridge, Yeongdong Bridge, Jamsu Bridge, Jamsil Rail Bridge, Seongsu Bridge, Banpo Bridge, and Dongho Bridge in 1972. While these structures enhanced the connection to and from Gangnam and the city center, they were more than just bridges; they also provided a link between the city center and satellite cities, expanding the extent of the city. Built in 1976, Gangnam Express Bus Terminal was completed alongside Jamsu Bridge, further promoting the development of Yeongdong District 1 and the move of urban functions to Gangnam.

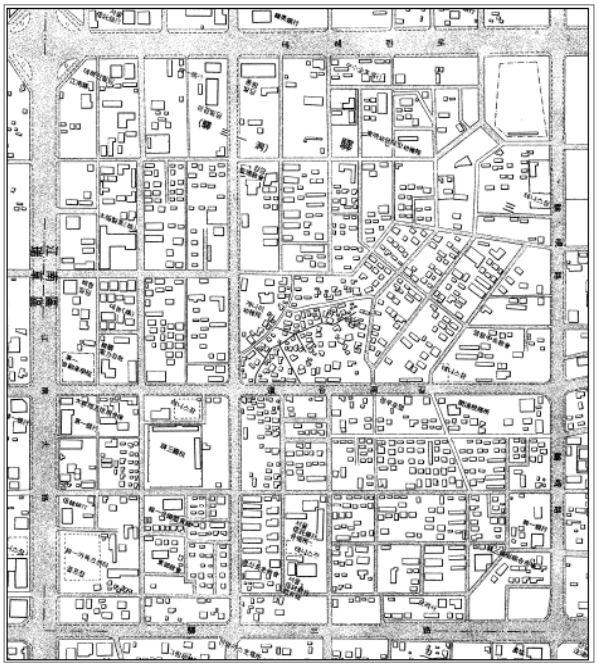
Improved Development of Gangnam

Until the beginning of the 1980s, the new Gangnam area was confined to Yeongdong and Jamsil. Soon, the boundaries were expanded to the south of Yangjae Stream and to the east of Tan Stream. Vacant lots were also developed. Dongho Bridge, Metro Line 2, 3 and 4, and Yangjae Avenue improved transportation links to Gangnam. The increasing number of drivers also contributed to the development. With the city Metro lines and bridges, it took less time to go to and from Gangbuk, giving rise to a number of riverside apartments.

The blocks created by the road networks were slowly filled. At the time, blocks were sporadically scattered with buildings, making it difficult to merge with housing sites. Thus row houses, villas and other low-density houses were actively developed. Small apartments and row houses occupied these blocks and the remnants of developed land in areas such as Bangbae and Hakdong.

1976

1987



1995

2009

Source: The Seoul Institute, Study of the Urban Structure of Seoul, 2009.

By the 1980s, no sizeable housing sites were available in Gangnam, and the land readjustment programs were drawing to a close. Nevertheless, housing demand remained high. Pursuant to the Housing Construction Promotion Act, a housing site development program was launched in Gaepo District. This plan involved

developing large apartment complexes spanning an area of 8,534,900㎡ in today's Gaepo-dong, Irwon-dong, and Dogok-dong in Gangnam-gu; Umyeon-dong in Seocho-gu; and Juam-dong in Gwacheon, Gyeonggi-do Province. In Gaepo District, the public corporations utilized the housing sites pursuant to the Housing Site Development Promotion Act, unlike with other apartment complexes, and applied the urban design concept to the area. Because of this approach, the area had much higher percentages of roads, public squares, parks, green spaces, schools, and other public infrastructure over other existing apartment areas. The expanded Gangnam area now had a better residential environment.

Figure 14 - Urban Design in Gaepo District

Source: 40 Years of Gangnam, Seoul Museum of History

The construction of large apartment complexes helped the area's population to grow. In 1975 when Gangnam-gu was added as a new administrative district, its population was 320,000; by 1987, it had grown to 820,000 – higher than the population in the Gangbuk city center[1]. Gangnam continued to grow, reaching nearly a million people (950,000) in 1995 when the commercial districts near Tehran Avenue had been completed (40 Years of Gangnam, 2011).

The population growth in Gangnam naturally increased the demand for commercial facilities and amenities. The areas near major stations on city Metro Line 2 and 3 and along arterial roads were then occupied by commercial buildings and offices. The Gangbuk city center had already run out of land for business use, was heavily congested, lacked parking space, and was stricken with high rent, but in Gangnam there was land available for buildings because the lot development near arterial roads had been postponed. The construction of bridges also improved Gangnam's accessibility. Gangnam, previously designed for residential purposes, encountered a turning point in the late 1980s. Business, cultural and other new functions were assigned to the area, and Gangnam slowly turned into the "new" Seoul.

1. This refers to the population of today's Jongno-gu, Jung-gu, and Yongsan-gu. In 1987, the population of these 3 areas was 770,000.

The areas in Gangnam that attracted attention for urban functions were Tehran Avenue, Samsung-dong through which major arterial roads passed, Seocho-dong, and the vicinity of Gangnam Station. Cultural centers such as the Seoul Arts Center and the National Library of Korea and major business buildings (such as the World Trade Center Seoul) acted as catalysts to the development of Gangnam. When construction of the Line 2 segment between Seoul National University of Education Station and Samsung Station in 1984 was complete, the area became accessible to residents in more areas of Seoul. With the urban design of Tehran Avenue, lot development along the arterial roads in Gangnam was completed, reinforcing the status of Gangnam as the center of business and commerce.

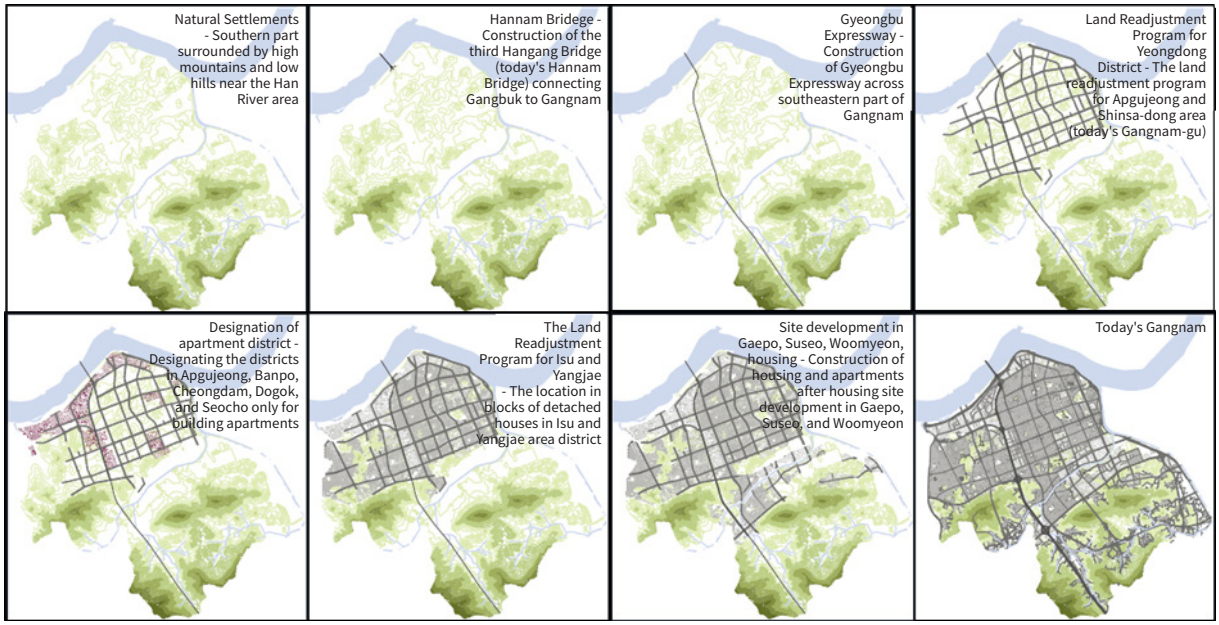
The development of Gangnam began as a program to resolve the issues caused by Seoul's explosive growth in its early years. With strenuous effort, Gangnam became one of the 3 city nuclei. It is now a prime location in Seoul and offers jobs and homes, providing both growth and a good environment. The success of Gangnam came as a result of developing good plans and implementing them in earnest in a timely manner, which would not have been possible if it were not for the hard work and participation by many as well as the leadership and a vision for the future.

Appendix 1 - Summary of the Land Readjustment Program in Gangnam: Timeline, Extent, Land Use, Land

Area	Date Approved, Date Completed	Area (㎡)	Land Use (㎡, %)								Program Cost/ Area (KRW)	Land Reduction Rate (%)
			Sale of Land Set Out for Recompense	Housing Site	Land for General Public Facilities					Total Public Land		
					Markets	Schools	Roads	Parks	Others			
Yeongdong 1	1968.1	12,737,831	701,830	6,715,053	112,985	700,532	2,945,372	221,980	1,340,079	5,320,948		39.1
	1990.12		5.5	52.7	0.9	5.5	23.1	1.4	10.5	41.8	371	
Yeongdong 1	1971.8	13,071,858	1,985,061	7,531,772	31.074	95,868	3,050,235	114,149	263,699	3,555,025		36.8
	1991		15.2	57.6	0.2	0.7	23.3	0.9	2	27.2	817	
Jamsil	1974.12	11,223,191	1,805,175	4,812,932		440,826	1,662,681	170,456	2,331,121	4,605,084		52.9
	1986.12		16.1	42.9		3.9	14.8	1.5	20.8	41	900	
Yeongdong 1 Additional	1971.12	991,736	71,976	603,989	3,306	62,810	223,587	5,950	20,118	315,771		39.8
	1984.9		7.3	60.9	0.3	6.3	22.5	0.6	2	31.8	991	
Yeongdong 2 Additional	1974.3	85,369	17,977	48,716			17,684	992		18,646		39.5
	1982.9		21.1	57.1			20.7	1.2		21.9	1,084	
Gaepo 3	1982.2	6,491,289	621,240	1,837,765	550,552	428,790	1,185,276	767,656	1,100,010	4,032,284		57.4
	1988.12		9.6	28.3	8.5	6.6	18.3	11.8	16.9	62.1	19,754	
Garak	1982.3	7,455,066	1,589,284	1,343,121	137,582	407,440	1,545,024	466,055	1,966,560	4,522,661		68.3
	1988.12		21.3	18	1.8	5.5	20.7	6.3	26.4	60.7	15,157	
Yangjae	1983.11	154,664	29,844	76,441	3,239		28,433	13,871	2,836	48,379		43.1
	1986.12		19.3	49.4	2.1		18.4	9	1.8	31.3	33,281	
Isu	1972.2	2,028,277	439,104	1,119,617	13,223	23,827	402,368	22,092	8,046	469,556		39.4
	1981.12		21.6	55.2	0.7	1.2	19.8	1.1	0.4	23.2	394	
Isu, Additional	1981.4	76,608	18,212	25,702			29,299	3,395		32,694		53.3
	1985.6		23.8	33.6			38.2	4.4		42.7	23,917	
All of Gangnam		54,315,889	13.5	44.4	1.5	4	20.4	3.3	12.9	42.1	5,132	
*National		140,019,379	10.4	51.5	0.9	2.4	20.1	1.7	7.6	34.6	2,448	

Source: Urban Planning Bureau, Seoul Metropolitan Government.
Note: The total land readjustment area across the nation since 1960.
(Source: Lee Ok-hee (2006), Characteristics & Problems of Gangnam Development Process in Seoul, Journal of the Korean Urban Geographical Society.)

Appendix 2 - Changes in Gangnam's Spatial Structure



Source: 40 Years of Gangnam

Appendix 3 - History of the Development of Gangnam

Year	Description	Total Population (Gangbuk; Gangnam)	GDP ($ 1 billion) GDP per capita ($)
1951		650,000	
1956		1.5 million	
1960		2.45 million	
1962			2.7459
1963	· Gangnam absorbed by Seoul during expansion of the city's administrative districts		3.8637
1965	· Seoul 10-Year Plan established · Seoul Urban Plan established	3.47 million	3.0176
1966	· Basic Seoul Urban Plan announced · Development of Yeongdong decided · Construction of Hannam Bridge begun		3.806
1967			4.7027
1968	· Yeongdong District 1 program launched		5.9553
1969	· Hannam Bridge opened for service (Gyeongbu Expressway opened)		7.4757

1970		(4,115,133 75.6%; 1,328,165 24.4%)	8.8997 $299
1971	· Yeongdong District 2 program launched		9.8514 $325
1972	· Seoul Express Bus Terminal in Gangbuk, near Seoul Station · Restricted area for specific facilities adopted · Act on Temporary Measures for Development Promotion in Specific Areas introduced · Plans developed to build additional apartments for public servants		10.7356 $347
1973			13.6915 $435
1974	· Pilot housing complex established in Yeongdong.		19.2294 $599
1975	· Development of housing sites prohibited to the north of the Han River · Plans to move City Hall, the court, Public Prosecutor's Office, Korea Forest Service, Public Procurement Service, the Bank of Korea, Korea Development Bank, and Korea Exchange Bank (headquarters of 8 financial institutions) · Plans for city Metro Line 2 changed to make it a circle line		21.4589 $657
1976	· Gyeonggi High School relocated · Gangnam Express Bus Terminal (Phase 1) completed (Gangbuk bus terminal taken down) · 'Apartment district' concept introduced (Enforcement Decree of the Urban Planning Act)		39.5548 $888
1977	· Samneung-ro changed to Tehran Avenue		37.9262 $1,123
1978	· The Act on Temporary Measures for Development Promotion in Specific Areas abolished · Construction of Metro Line 2 (circle line) begins		51.1252 $1,493
1980	· Metro Line 2 opens, from Shinseol-dong to Sports Complex	(4,981,687 56.6%; 3,382,692 40.4%)	63.8344 $1,890
1981			71.4692 $1,810
1982	· 2nd segment of Metro Line 2 opens, from Sports Complex to Seoul National University of Education		76.2182 $2,004
1983	· 3rd segment of Metro Line 2 opens, from Seoul National University of Education to Seoul National University		84.5106 $2,111
1984	· Metro Line 2 completed		93.211 $2,303
1985	· Yeongdong District 1 and 2 programs completed	(5,214,760 54.1%; 4,424,350 45.9%)	96.6197 $2,505

1986		(5,242,624 53.5%; 4,555,918 (46.5%)	111.3056 $2,561
1987		(5,267,177 52.7%; 4,723,912 47.3%)	140.0056 $2,917
1988		(5,381,815 52.3%; 4,904,688 47.7%)	187.4465 $3,630
1989	· Phase 1 construction begins of new town development · 1989 – 1996: Bundang; 1990 – 1995: Ilsan; · 1989 – 1995: Pyeongchon and Sanbon; 1990 – 1996: Jungdong	(5,476,956 51.8%; 5,099,838 48.2%)	230.4731 $5,847
1990	· Comprehensive plan for balanced development of Gangnam and Gangbuk – regulations eased on Gangbuk	(5,481,243 51.6%; 5,131,334 48.4%)	263.777 $6,626
1991	· People begin moving into Bundang · Seoul's population peaks	(5,578,106 51.2%; 5,326,421 48.8%)	308.185 $7,663

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4. The Role of Development Prohibited Areas & Management of Reopened Areas

Writer : Seoul Institute Dr. Sun-Wung Kim

Policy Area: Urban Planning

Prohibited Development Areas: Introduction & Designated Areas

Background: demand for stronger regulations on the use of land

Seoul continued to serve as the capital after Korea was liberated from Japanese colonial rule and became the Republic of Korea. It is not only the capital but also the heart of the nation's politics, economy, industry, society and transportation. Beginning in the 1960s, economic development in particular, led by the central government as it was, encouraged a concentration of population and industry in Seoul. This dense concentration made city management difficult, which posed a special problem as it was so close to the truce line with North Korea. In response, the South Korean government introduced the concept of development prohibited areas to contain spatial expansion, preserve the natural environment of the surroundings, and pursue its security policies.

Development of Relevant Policies[1]

The concept of the development prohibited area was developed in 4 stages: i) a period of policy development (1971 – 1979) when policies related to development prohibited areas were first introduced and implemented; ii) a period of maintenance and conflict (1980 – 1997) when rigid management resulted in a variety of complaints; iii) a period of policy change (1998 – 2002) in response to the complaints and demands regarding the city's built-up area; and iv) a period of policy adjustments and management (2003 – present) when the development bans were partially lifted and adjusted. Further details can be seen in the next sections.

Policy Development (1971 – 1979)

During this stage, revision of the Urban Planning Act in 1971 led to the designation of development prohibited areas, followed by stringent implementation. The ring type was specifically requested of the development prohibited areas so as to contain the concentration of population and industry in the outskirts, excluding the already built-up areas. The areas began to be strictly controlled through regulations on using and profiting from the area, pursuant to the Urban Planning Act.

1. Gwon Yong-wu, Park Yang-ho, Yu Geun-bae, et al., 2014, Our Dear Homeland, adapted from p.122 – 125.

Policy Maintenance & Conflict (1980 – 1997)

During the period of policy maintenance and conflict, the purpose of the development prohibited areas was maintained but operation and management were rather rigid, increasing controversy over the designation itself. When a shortage of development lots was felt in existing urban areas, the number of group complaints rose drastically. As part of the New Town (Saemaeul) Campaign, the government then launched a program to systematically improve the residential structure by bringing together the detached housing spread out in development prohibited areas and eased various bans to increase the convenience of local residents.

Policy Changes (1998 – 2002)

When Kim Dae-jung ran for president in 1997, he promised to lift some bans on areas where protection was deemed unnecessary, beginning discussions on the need to change the development prohibited area policy. In 1999, the Ministry of Construction & Transportation announced the partial removal of the development ban on 7 large city areas under significant pressure for expansion but still required good environmental management, and the full removal of the development ban on 7 small/medium city areas with lower pressure for development. The former, which included Seoul, was to include a wider-area urban plan. Additionally, evaluation of spatial structures and city environment for partial adjustment was included. As the legal foundation for this improvement, the Act on Special Measures on the Designation & Management of Development Prohibited Areas was enacted in 2000, stipulating the designation of development prohibited areas.

Policy Adjustment & Management (2003 – Current)

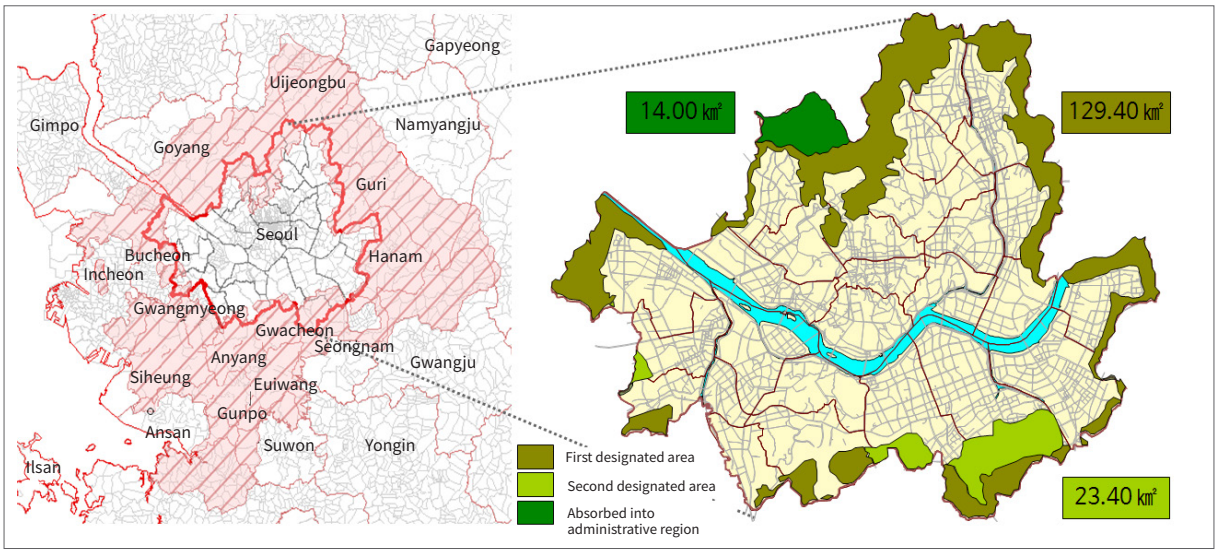
In 2003, the development ban was lifted for the construction of public housing for lease, such as the national public housing complexes and Bogeumjari housing areas. By 2007, the 2020 Wider-area City Plan for the Seoul Metropolitan Area was approved, with suggestions for the adjustment and management of development prohibited areas. The development prohibited areas were then reviewed to find the total number of restrictions that could be removed, with areas prioritized where easing should take place. Ways to improve the areas that would remain under the development ban were also discussed. Upon closer review, it was seen that the prohibition on lower-value areas with the infrastructure would stay to maintain the total volume but would be removed later to meet demand, although with some restrictions, so as to vitalize the local economy and use the available land for industrial and residential lots. On the other hand, the areas where the ban remained in place would see a stronger management system (e.g., fines for damage, bans on additional public facilities within the area) to prevent undesired outcomes such as increasing the cost of land or environmental degradation.

Development Prohibited Areas

Having reviewed the green belts in British and Japanese city outskirts and other areas where urbanization had been adjusted, Korea designed a development ban policy to meet its own needs. In 1971, the Urban Planning Act was revised to include the legal grounds for designation of development prohibited areas; starting with Seoul in July 1971 until April 1977, 14 city areas – large cities, the seat of provincial government offices, industrial cities, or cities requiring environmental conservation – were designated for development bans on 8 different occasions. The total land area affected was 5,397.1 km², or approximately 5.4% of the nation's territory. Of this total, 1,566.8 km² was in the Seoul metropolitan area, and 166.8 km² in Seoul itself.

Development prohibited areas were first designated in 1971; by 1976, a total of 1,566.8 km² was designated. As for Seoul, the first designated area was 129.4 km² (also in 1971), increasing to 166.8 km² by 1973. In August 1972, 23.4 km² were added to the Gangnam-gu, Seocho-gu, and Yangcheon-gu areas. In July 1973, some 14.0 km² of today's Jingwannaeoe-dong, Eunpyeong-gu (part of Goyang City in Gyeonggi Province at the time) was absorbed into Seoul's administrative region.

Figure 1 - Development Prohibited Areas in Seoul & Metropolitan Area



Effects of Development Prohibited Designations

As one of the strongest controls on land use in Korea's urban planning policies, development bans play a crucial role in preventing urban sprawl in the capital area getting out of hand, preserving the natural environment around large cities, and providing green spaces for urban dwellers. The effect of the development ban policy in the Seoul area has been to offer visually pleasing views of green spaces and of the major mountains (e.g., Bukhansan, Gwanaksan), a virtual breathing space for those living in the city, with other areas used for farming, livestock, forestry, and other similar means for gaining livelihood. Development prohibited areas take the form of a belt of certain width. In recent years, these areas have been fitted with hiking trails and bicycle paths for visitors to enjoy. Some of the state-owned land within the areas is currently used for "weekend farming" and other projects.

Undesired Results & Countermeasures

As mentioned, the designation of development prohibited areas helps keep urban sprawl from becoming disorderly and preserves greenery and open spaces for future generations to use in the city. While this system has had positive effects on the management of growth in the capital area, it cannot be denied that there have been adverse effects as well, such as the overly stringent development restrictions in some areas included in the scope, and complains from local residents. As times have changed, there has been an increasing demand for educational, cultural, welfare, and other public services to improve the quality of life, which in turned required the development of new cities. The rigidity of the development prohibited area regulations failed to reflect this trend and led to complaints such as the following:

First, the unreasonableness of banning development in areas where an urbanized residential area already exists or where the restricted area boundary passes through a town; second, having the ban apply to residential areas or low-productivity farmlands located within the designated area, while the ban does not apply to some urban green spaces, fields, forests, and farmlands that have been appropriated for urban use despite their relatively high preservation value; third, where stringent regulations imposed by the ban inconvenienced local residents in their daily lives and interfered with the exercise of property rights and where the land was considerably cheaper than other comparable regions; and fourth, where there was a growing demand for public investment as new city development meets the boundaries of development prohibited areas, making it more expensive to travel to other cities.

To answer these complaints, the government revised the Enforcement Ordinance of the Urban Planning Act some 40 times between August 1977 and December 1996 and attempted to relax the bans within the

development prohibited areas, but these revisions were not sufficient to meet the needs of the residents. Finally, in 1997, debate on removal or adjustment of the bans arose during the presidential elections. In the following year, an initiative was taken which included lifting the development bans from some designated areas. In 2000, the Act on Special Measures on the Designation & Management of Development Prohibited Areas came into effect, providing a separate system for the management of prohibited areas, which had formerly been under the Urban Planning Act. The initiation of the Act on Special Measures on the Designation & Management of Development Prohibited Areas in 2010 enabled the addition or removal of designated areas, with already-designated areas chosen as sites to develop for building public housing or the Bogeumjari housing districts.

Direction of Adjustment & Lifting the Bans

Basic Directions for Adjustment of Development Prohibited Areas

While the government was aware of the concerns over Seoul's expansion and the need for better environmental management, it was resolved to reduce the ongoing complaints in the best way possible. It instituted the wider-area urban plan for the Seoul metropolitan area to allow for the partial removal or adjustment of the bans, seeking to improve the relevant systems and policies in the following way: first, low-value areas where bans are not required were to be opened to city use but were to be managed in an environmentally-friendly way to prevent degradation; second, the underlying principle was to be that any profits gained from the increase in real estate value after a ban was lifted should be redeemed, with appropriate measures in place and meticulously carried out to prevent speculation.

Instructions for adjustments on the development prohibited areas were to be in accordance with these principles and based on environmental evaluations proposed for the 2020 Wider-area City Plan for the Seoul Metropolitan Area, which provided spatial and land use plans for the new cities. In cases where demands rose for public housing in urban areas, flexible measures could be adopted to respond. For instance, some areas within development prohibited areas could be designated for adjustment and bans lifted to the extent that it does not undermine the purpose for designation in the first place. Apart from this, some areas in development prohibited areas could be given priority for relaxation of the bans, such as group settlements that exceed a certain size, settlements through which a development prohibited area boundary passes, industrial complexes, and pending industrial development areas.

Table 1 - Eligibility for Removal of or Adjustment to Development Ban

	Adjustable Area	Priority Areas
Eligible Target	Subject of national projects (e.g., national public housing) · National public housing complexes · Bogeumjari housing complexes · Wirye New City	Group settlements of a defined size Settlements through which the boundary passes Industrial complexes Pending industrial development areas

The size of the area eligible for the removal of bans is 30% or more of the existing total restricted area, apart from the total set forth in the 2020 Wider-area City Plan for the Seoul Metropolitan Area, and is ultimately determined by factoring in the scope of the area additionally required to pursue national project tasks. Any area that must be used to improve the priority group settlements would not be subject to the aforementioned total, in accordance with the guidelines.

Table 2 - Total Adjustable Volume & Total Allowed Adjustment of the Development Prohibited Areas in the Capital Area

Region	Designated Development Prohibited Area (km^2)	Environmental Evaluation Score 4/5 Ratio (%)	Total Allowed Adjustment		Adjustable Area: Score 4/5 Ratio (%)
			Ratio against the Restricted Area (%)	Area (km^2)	
Seoul Metropolitan Area	1,540.80	11.84	8.07	125.8	-
Seoul City	166.8	11.23	7.98	13.3	60
Incheon City	80.6	19.36	10.28	8.3	60
Gyeonggi Province	1,293.40			104.2	

Source: 2020 Wider-area City Plan for the Seoul Metropolitan Area (2009)

Removal of Development Bans

According to the guidelines of the modified Urban Plan with regard to extensive settlements within development prohibited areas, the bans were lifted from the priority group settlements and/or adjusted for the eligible targets (e.g., national public housing, Bogeumjari housing, Wirye New City). As of June 2014, bans were lifted from a total of 51 areas (17.2 km^2), including 28 medium to large group settlements (6.4 km^2), and 19 areas (totaling 10.1 km^2) for the use of the national public housing complexes, the Bogeumjari housing complexes, and Wirye New City. The areas that remain under the ban totaled 149.6 km^2, or 89.7% of the total area initially designated.

Table 3 - Removal of Bans in Seoul (June 2014)

		No. of Areas	Opened Area (km^2)
(51 areas covering 17.2 km^2)	Group Settlements	28	6.4
	National Projects	19	10.1
	Others	4	0.7

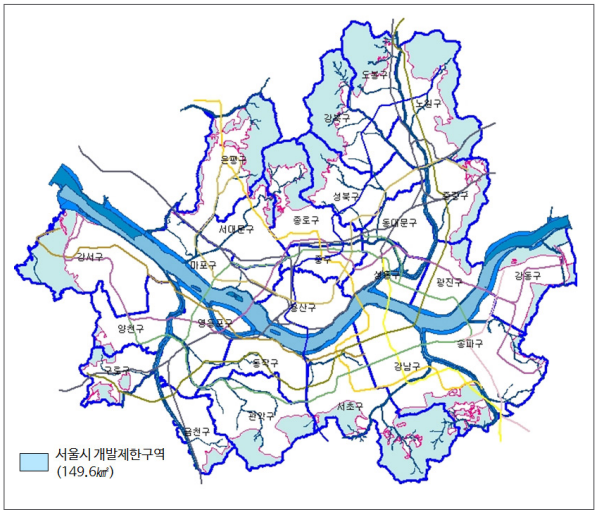
Source: Internal Document of the City of Seoul (June 2014)

Table 4 - Development Prohibited & Reopened Areas in Seoul (June 2014)

	Area (km^2)	Percentage (%)
Initially Prohibited	166.8	100
Reopened	17.2	10.3
Remaining	149.6	89.7

Source: Internal Document of the City of Seoul (June 2014)

Figure 2 - Development Prohibited Areas around Seoul (2014)



Group Settlements as a Priority: Removal of Bans by Type & Directions for Management

The criteria by which an area is selected for removal of development bans in Seoul are those group settlements with: i) 100 or more housing units; and ii) a density of 20 units or more per hectare. Here, "density" refers to the net household density[1], factoring in the characteristics of the group settlements in Seoul's development prohibited areas. The types of priority areas include improved settlements, existing urbanized settlements where the New Town Program has been implemented, settlements with a concentration of dilapidated houses built by those evicted from demolished houses, and natural settlements.

1.Net Household Density = Number of household units/(area of settlement – land area of roads, parks and other public facilities

Improved Settlements

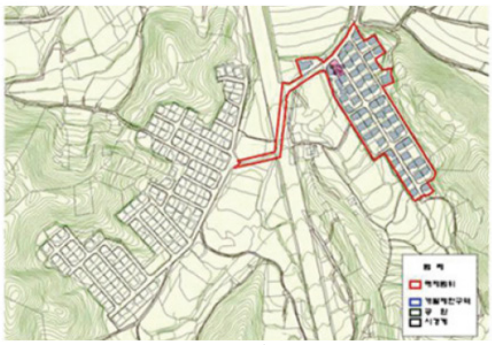
This category applies to settlements improved by the settlement improvement programs launched in 1976 – 1978 and in 1985 – 1986 and also to Maehwa Villa in Hang-dong, Guro-gu, renovated pursuant to the Residential Environment Improvement Program in 1993 – 1996. The restriction was lifted from 15 areas totaling an area of 1.0 km².

The settlements improved by the settlement improvement programs include Bangjuk Village in Yurhyeon-dong, Gangnam-gu, and New Village in Dobong-dong, Dobong-gu. There were two special Presidential orders in the late 1970s and the mid-1980s for housing renovation and systematic improvement in development prohibited areas and farming settlements in the natural green belt on the outskirts of Seoul. With this program, 46 settlements of 3,442 houses (34 settlements of 2,555 houses by the first order and 12 settlements of 887 houses by the second) were renovated.

Figure 3 - Large Group Settlements & Boundaries of Reopened Areas

View of Bangjuk 2 Village

View of New Village



Setting the boundary of Bangjuk 2 Village

Setting the boundary of New Village · Angol

Settlements improved by the Residential Environment Improvement Program include the 6 Maehwa Villa buildings in Hang-dong, Guro-gu. The Villa was built as part of the Residential Environment Improvement Program between 1993 and 1996, located on the city boundary shared by Bucheon. The boundary of the area where the ban was lifted was determined by the scope of the Residential Environment Improvement Program.

Existing Urbanized Settlements Where the New Town Program Has Been Implemented

Located in Jingwannae-dong, Gupabal-dong, and Jingwanoe-dong in Eunpyeong-gu, these settlements were developed as part of the Eunpyeong New Town Program for the pilot New Town Program. Bans were relaxed in 3 areas totaling approximately 3.5 km². The underlying principle of the New Town Program is to build residence-oriented communities where people from different walks of life and different ages can come together to create a residential space that balances welfare and development.

Figure 4 - View of Jingwanoe-dong, Eunpyeong-gu, & Boundary of Eunpyeong New Town

Settlements with a Concentration of Dilapidated Houses Built by Residents of Demolished Buildings

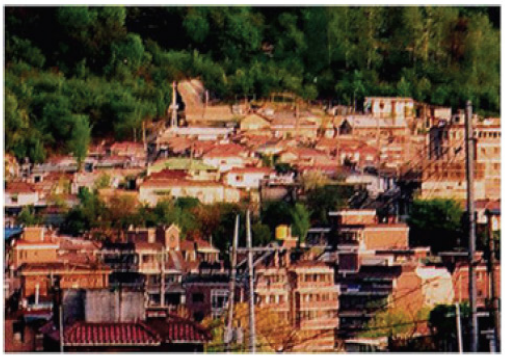
The settlements where old, dilapidated houses were concentrated were first created by mostly low-income earners who had been evicted from unauthorized houses in the wake of the city center redevelopment programs in the 1960s and 1970s. The houses and lots were confined, severely deteriorating, and in need of assistance from national programs such as the Residential Environment Improvement Program. These settlements spanned across 7 areas, approximately 1.6 km² in size. Of these, Gangil-dong and Nowon Village were supported by the national public housing program, and apartment complexes were built in the areas.

In Village #104 in Junggyebon-dong, Nowon-gu, the residential lifestyle remained as it was in the 1970s. Preserving such residential history is important to prevent it fading from people's memories. In the meantime, the City of Seoul obtained expert input, communicated with local residents, and launched a plan to protect and improve parts of that village. This is one of the best examples of successfully switching from demolition-oriented development to village transformation.

Figure 5 - Street & Bird's Eye View of Village #104

Figure 6 - View of Dilapidated Housing & the Renovation Plans

Gaemi Town formed on a hillside



View of Huimang Village

The renovation plans for Gaemi Town

The renovation plans for Huimang Village

Natural Settlements

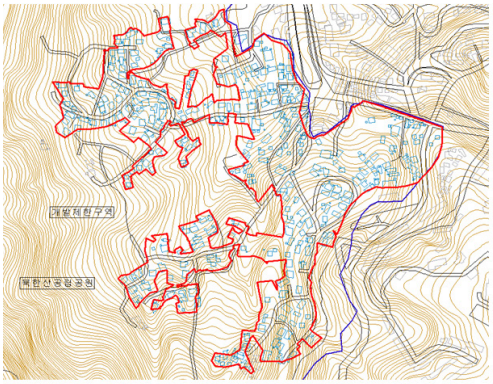
Natural settlements can be divided into low-density settlements on a hillside near the city, such as in Buam-dong, Jongno-gu, and farming settlements formed on the outskirts of a city. Bans were relaxed in 3 areas covering 0.2 km² of land. Buam-dong sits on a hillside and is comprised of low-density, low-rise detached houses, providing abundant open space. In the future, the area is likely to enjoy a good natural environment and has the potential to become a high-end residential area. On the other hand, farming settlements naturally formed in Sangam-dong (Mapo-gu) and Angol (Dobong-dong, Dobong-gu) are dilapidated and without adequate infrastructure. These settlements are in need of overall residential environment improvement.

National Program Types & Direction after Lifting of Development Bans

Figure 7 - View of Natural Settlements & Improvement Plans

Buam-dong Village

North settlement of Sangam Village



the Renovation Plans for Sangam Village

Setting the the boundary of Buam-dong Village

National Public Housing Complexes

Financed by the National Public Housing Fund, national public housing were built or bought to provide leases for 30 or more years. At first, housing was provided to evicted residents, migrants and those at the bottom of the income ladder, but the scope gradually widened to include people whose average income is a maximum of 70% of the national average. As of June 2014, 9 areas (3.5 km²) in Seoul saw their development bans eased to make way for national public housing.

Bogeumjari Housing Complexes

Bogeumjari housing is a new concept that embraces public-built small and medium houses for bidding as well as public housing for lease; the public sector finances or sources the funds to build or buy houses for bidding or lease. Bogeumjari housing is supplied to suburbs where development bans have been eased or through development of specific housing sites such as in Wirye New City. As of June 2014, 9 areas (5.0 km²) in Seoul saw their development bans eased.

Wirye New City

Located in the southeastern part of Seoul, Wirye New City is a new town spanning over 3 local governments – Songpa-gu (Seoul), Hanam City, and Seongnam City (Gyeonggi Province). The size of Wirye New City is approximately 6.8 km² and development is scheduled to be completed in December 2015. Wirye New City was designed to mitigate housing market instability due to housing shortages in the Gangnam area. It is expected to provide housing for some 43,000 households, 22,000 of which will be provided as part of the Bogeumjari housing scheme. As of June 2014, the development ban was lifted for 1 area (1.6 km²) in Seoul for Wirye New City.

Figure 8 - Location of Wirye New City

Figure 9 - Bird's Eye View of Wirye New City

Implications

Designation of development prohibited areas has positively contributed to preventing uncontrolled urban sprawl, preserving the natural environment of Seoul and its vicinity, and providing a pleasant environment to the city's residents. Nevertheless, issues with area boundaries and rigid management have resulted in continued public complaints, and residents in the development prohibited areas have increasingly demanded that the development bans be lifted. However, the necessity for such designation is widely agreed and accepted. Many different opinions have been voiced arguing for preservation, removal, or adjustment of the system. The following is a summary of these perspectives.[1]

Proponents of the system argue that development bans should be maintained as they are critical tools for limiting urban development and protecting the living environment. Those who oppose the system point out that the designation process is not democratic and that bans can be so excessive that they make the lives of the local residents very inconvenient. They claim that easing the regulations is not sufficient to fundamentally

1. Gwon Yong-wu, Park Yang-ho, Yu Geun-bae, et al., 2014, Our Dear Homeland, adapted from p.126 –127

resolve the issues. Voices who support adjustment of the areas accept their importance but desire unintended consequences to be adequately resolved.

The government supports adjustment to ensure effectiveness of growth management. If required to meet demands of the city, the government will take appropriate action to partially remove the ban from some areas or ensure meticulous management of areas with high preservation value. Priority has been given to relieving certain areas from development bans, such as the location of group settlements, and endeavored to respond to the public complaints. Some development prohibited areas have seen limited relaxation of their bans to allow for construction of national public housing complexes, thereby satisfying national demand for leasing of such units and resolution of other relevant complaints.

The following approaches are necessary to facilitate adjustment of the development bans and sustainable management:
First, the approach taken should be in accordance with the city's plans for growth management. In other words, the areas that remain under the development ban will need to be carefully managed to ensure that their environments remain protected and that any damage should be undone to allow restoration of an area to its original state. Second, any land that is no longer farmland or cannot be used for farming due to nearby development projects should be used for profit-making purposes by the local residents such as development of eco-villages, flower or weekend farming. Permitting such financially-beneficial activities, although limited, should be considered alongside preservation of the area. Third, areas where development bans are eased will need detailed instructions to ensure sustainable management in the future.

In accordance with these items, the role of the public sector will need to be strengthened. Priority areas should be managed in an eco-friendly manner, and be in balance with the surrounding natural environment, and any settlements with roads or parks that need improvement should be allowed to make such improvements. Those areas where settlement improvements have not yet taken place after adjusting the scope of the ban will need the public sector to make advanced investments for public facilities. As for management of national public housing complexes and Bogeumjari housing, it should be noted that many of the districts for such national programs are located on and near the Seoul city boundaries, and it is necessary to come up with plans to prevent conurbation (such as through creation of greenbelts of a certain width in the development of such districts). Lastly, small settlements scattered in development prohibited areas can be removed and reconstructed to restore the damaged environment. Any settlements that need improvement will also need assistance from the public sector to improve, for example, roads or parks. The public sector will also need to consider the scale of the local economy and provide public services that can be jointly accessed by 3 – 5 settlements.

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- Seoul Statistics Information, Seoul Metropolitan Government

5. Seoul's Urban Redevelopment Policy

Writer : Seoul Institute Dr. Jae-Sub Yang

Policy Area: Urban Planning

Background to Seoul's Urban Redevelopment Project

In the mid-1960s Seoul began to take political measures, realizing the need for urban redevelopment projects. The following is an introduction to the background in urban redevelopment projects in terms of the social, environmental, physical, and economic aspects.

Social & Environmental Aspects

The need for urban redevelopment projects (downtown renewal projects) in Seoul first became apparent in the 1960s. Korea had regained social stability after the Korean War and one of the main tasks of the city administration was the development of its deteriorating downtown: the city had to be modernized before urban functions could be implemented. Downtown Seoul was vulnerable to fire at the time with wooden buildings being the main type of residence, and also lacking basic hygiene. In 1971, provisions related to urban redevelopment projects were established in the Urban Planning Act to boost safety, hygiene, and the aesthetic appeal of downtown.

Physical Aspects

In the early 1960s, the central part of Seoul had small irregular lots and narrow roads. Physical structures were overcrowded and chaotic. Korea was extremely impoverished, with political and social turmoil right after the Korean War and the physical environment of downtown areas in gradual decline. Slum areas had developed as illegal dwellings and other buildings were erected and inhabited by a massive number of poor people migrating into Seoul. Essentially, the downtown areas were congested until the 1960s with deteriorating traditional urban structures built during a period of poverty.

Figure 1 - Downtown Seoul, 1960s

Economic Aspects

With accelerating economic development in the 1970s, the headquarters of large firms such as banks and insurance companies were constructed downtown and the demand for office had space dramatically increased. A stimulus policy initiated by the government in the early 1980s to break through economic recession intertwined with demand for office spaces in Seoul, led to an office building boom through urban redevelopment projects. The Korean economy, spurred by the three-low boom (declining crude prices, international finance rate, and dollar depreciation) during a 10-year period, needed modern office spaces and jump started urban redevelopment projects.

Chronological Development

Seoul's urban redevelopment projects introduced the first related system in the 1970s; the project went through a massive promotional period in the 1980s and 1990s and faced a changing direction in the 2000s.

1960-1970: Demolition of Downtown Areas & Modernization

A need for urban redevelopment projects was recognized in the 1960s, but projects were not implemented until the 1970s when the necessary systems and laws were in place. In 1971, provisions related to the downtown renewal projects that allowed collective reconstruction projects were established in the Urban Planning Act, and in 1973, the first 11 downtown districts were designated as redevelopment districts. In 1976, the first Urban Planning Act was established and active promotion began for the downtown renewal projects. In 1978, Seoul city established its first downtown redevelopment master plan targeting the area within the four major gates, and in 1979, it added the entire Mapo-ro area and supplemented the master plan. Political strategies during this period included the modernization of the downtown infrastructure, such as roads, parking lots, and parks, with buildings being demolished and high-rises taking their place.

The 1980s: Intensive Regulation & Suggestion of Redevelopment

In 1979, controls were intensified on the number of stories in buildings and density in order to control overcrowding the downtown area; in 1983, however, a downtown renewal project plan was announced which included new construction and expansion of existing facilities, and deregulation of the building-to-land ratio, floor area ratio, and usage restrictions as part of the preparations for the 1988 Seoul Olympic Games. These preparations included an area of about 600,000 m² (Approx. 180,000 pyeong) beside arterial roadways being designated as areas for reconstruction.

Figure 2 - The Plaza Hotel in the 1970s (Left)

Figure 3 - Standard Chartered Bank Korea in the 1980s (Right)

The 1990s: Searching for Ways to Prevent Decline in Downtown Areas

In 1994, the downtown redevelopment master plan was supplemented with plans to prevent any decline in downtown areas, including the sub-centers of Yeongdeungpo and Cheongnyangni in the Urban Master Plan for Seoul (1990). In 1996, floor-height planning for the downtown area was supplemented and the master plan partly modified in order to encourage construction of mixed-use buildings. The Urban Redevelopment Act, revised in July 1990, stipulated a method for small unit redevelopment, which was proposed for the Buk-chang district in the 1994 Downtown Redevelopment Plan. In 1996, however, provisions related to small-unit redevelopment (Article 3.2 of the Enforcement Ordinance) were deleted when the Urban Redevelopment Act was revised and small-unit redevelopment methods lost their legal basis.

Figure 4 - Seoul Finance Center in the 1990s (Left)

Figure 5 - SKT Tower in the 2000s (Rght)

The 2000s: Policy Shift Towards Preservation of Historical & Cultural Characteristics

With the establishment of the Downtown Management Master Plan (2000), management of the area within the four major gates changed towards preserving historical and cultural characteristics. The 2001 Downtown Redevelopment Master Plan reflected and strengthened the aforementioned height limit, and either lifted redevelopment district designation for certain downtown areas or allowed switching to small-unit redevelopment methods. Districts with modern buildings were able to engage in conservation redevelopment.

The 2005 Master Plan reflected the changing circumstances from such plans as the Act on Maintenance & Improvement of Urban Areas and Dwelling Conditions for Residents in 2002 and the Downtown Development Plan in Accordance with Restoration of Cheonggye Stream in 2004, and introduced deregulation of oblique line limitations, 20m height restrictions, and an FAR (floor area ratio) incentive to promote finishing of incomplete projects. It also designated a wide area of small-unit renewal districts to ensure redevelopment projects considered downtown characteristics, and also enabled application of urban redevelopment projects in balanced development project districts.

The Master Plan established in 2010 provided small-unit redevelopment methods towards maintenance of downtown characteristics and functions with conservation of historical and cultural characteristics. Moreover the plan included methods of revitalization and contributions to the creation of multi-nucleic spatial structures as political objectives, and expanded the range of application of urban redevelopment projects to the core center of the city.

Table 1 - Seoul Urban Redevelopment Policy Transitions

Period	Main Event	Laws & Related Plans	Master Plan
The 1960s	· Kyongin Expressway opened (1969)	· Improvement projects for poor areas included in the Urban Planning Act (1962) · Revision of the Urban Planning Act (Established a basis for designating redevelopment districts)(1965)	
The 1970s	· Gyeongbu Expressway opened (1970) · Seoul Subway Line 1 opened (1974)	· Revision of the Urban Redevelopment Act (Redevelopment projects included in urban planning projects) (1971) · Establishment of the first Urban Redevelopment Act (1976) · Installation of the Urban Redevelopment Fund (1978) · Strengthening of building height limits and density control to curb overcrowded urban development (1979)	· Establishment of a master plan for initial urban redevelopment (1978) · Supplement to Master Plans for Urban Redevelopment (Mapo area added) (1979)
The 1980s	· The 1988 Seoul Olympic Games/ Seoul population exceeds 10 million (1988)	· Revision of the Urban Redevelopment Act (1982) · Establishment of five-year plans for redevelopment projects · (Preparation for the 1988 Seoul Olympic Games) (1982) · Urban redevelopment promotion plans (1983) · Easing of construction restrictions within redevelopment areas (major repairs, change of usage, reconstruction, etc.) (1989)	· Basic inspections towards improvement of master plans for urban redevelopment (1986)

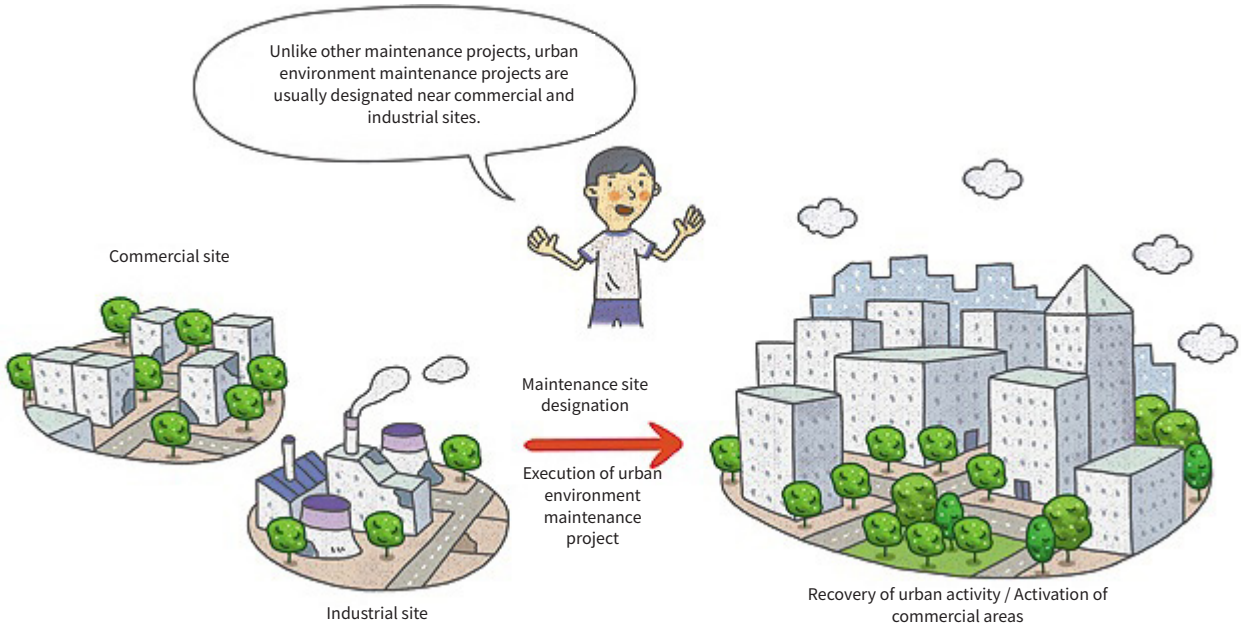
The 1990s	· Balanced development policy for Gangnam and Gangbuk · The Asian financial crisis (1997)	· Complete revision of the Urban Redevelopment Act (1995) · Maintenance of Urban Redevelopment Systems & Revitalization Plan (1998)	· Modification / supplementing of redevelopment master plan according to finalization of the Seoul urban master plan (1990) · Modification/supplementing of the downtown redevelopment master plan (1996)
After 2000	· Organization of Bukchon Hanok Village · -2001 · The 2002 Korea-Japan World Cup (2002) · Organization of Seoul Plaza (2004) · Completion of the Cheonggye Stream Restoration Project · -2005 · Organization of Gwanghwamun Plaza (2009)	· Establishment of the Seoul Urban Planning Ordinance (strengthening FAR) (2000) · Downtown management planning (2000) · Establishment of the Act on Maintenance & Improvement of Urban Areas and Dwelling Conditions for Residents (2002) · Downtown development planning according to restoration of Cheonggye Stream (2004) · Establishment of a comprehensive plan for urban recreation (2007)	· Revision of the master plan for urban redevelopment for 2010 (2004) · Revision of the master plan for urban redevelopment for 2020 (2010)

Source: Seoul, 2010, "Proposed Master Plan for Urban & Residential Redevelopment in Seoul 2020 - The Urban Redevelopment Sector"

Urban Redevelopment Policy as a Means to Actualize Urban Spatial Structures

In 1973, urban redevelopment projects were referred to as downtown renewal projects in accordance with the Urban Redevelopment Act. In 2002, however, this reference changed to "urban redevelopment projects" in accordance with the Act on Maintenance & Improvement of Urban Areas and Dwelling Conditions for Residents. In legal terms, urban redevelopment projects are defined as "projects that make effective use of land, such as commercial and industrial areas, and improve downtown and sub-center urban environments which require market revitalization or restoration of urban functions". These projects have been used as a means of actualizing urban spatial structures, including core systems proposed by city master plans and also as a means of expanding and redeveloping work-related spaces in the city core, such as businesses and commercial areas.

Figure 6 - Conceptual Image of Urban Redevelopment Projects

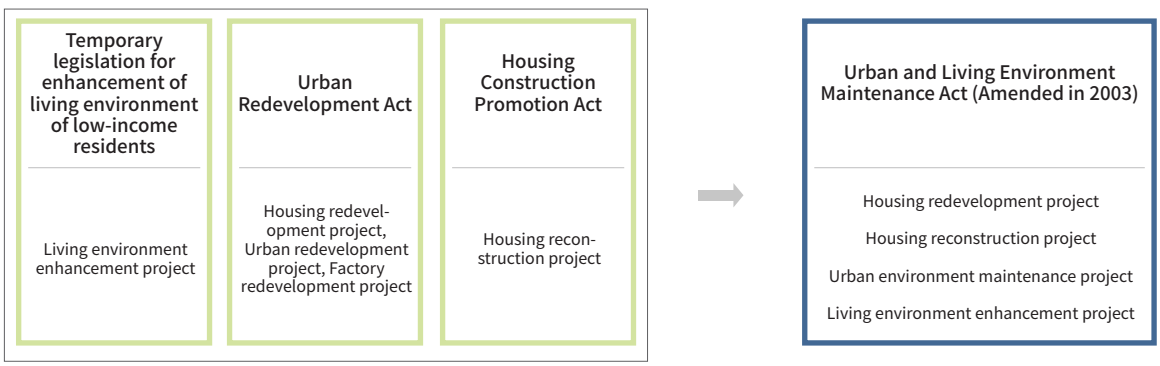


Source: Seoul Planning Portal Master Plan for Urban Redevelopment Projects and Applicable Law

The Act on Maintenance & Improvement of Urban Areas and Dwelling Conditions for Residents

Urban redevelopment projects are enforced in accordance with the Act on Maintenance & Improvement of Urban Areas and Dwelling Conditions for Residents. The Act, which integrates housing redevelopment projects, reconstruction projects, and residential environment improvement projects, which were specific identification methods of 2002, was established towards systematic management of urban areas. The Act regulates details necessary for improving deteriorated unauthorized housing as well as redeveloping deteriorated residential areas or those that require a restoration of urban functions.

Figure 7 - Changes to Laws Related to Urban Redevelopment Projects



Source: Seoul Planning Portal

Master Plan for Urban Redevelopment Projects

Seoul's Master Plan is in response to statutory requirements under the Act on Maintenance & Improvement of Urban Areas and Dwelling Conditions for Residents (Articles 3 and 8 of its Enforcement Decree), with feasibility reviewed every five years for redevelopment. The plan lays down a physical framework and political strategies for urban redevelopment projects, where urban redevelopment projects in Seoul are promoted in accordance with policy strategies proposed by the master plan.

Table 2 - Changes to Urban Redevelopment Project Master Plan for Seoul

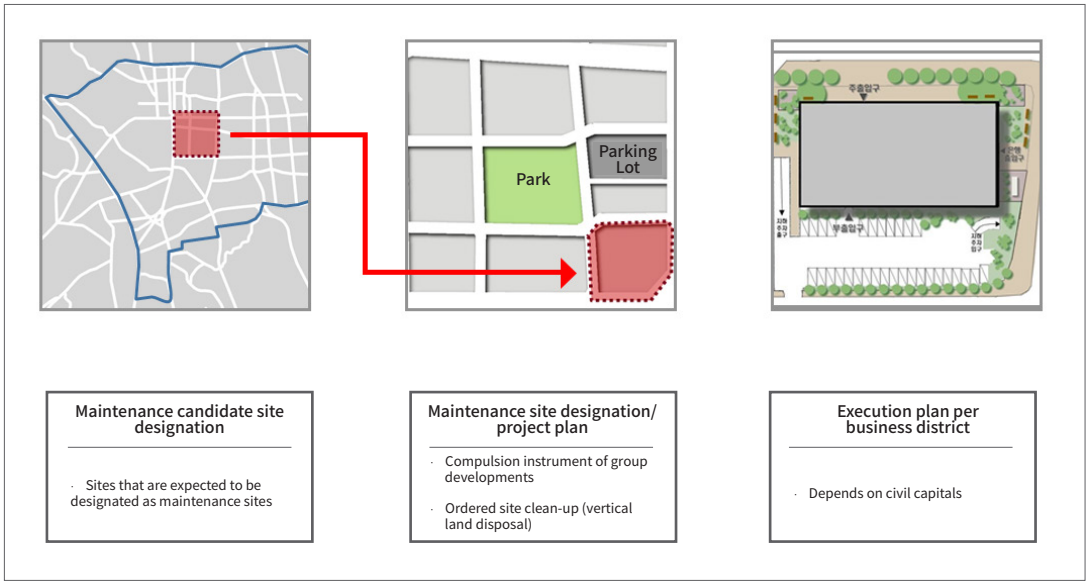
Year	Details
1978	· First downtown redevelopment master plan established
1979 - 1st Revision	· Addition of Mapo-ro
1994 - 2nd Revision	· Addition of Yeongdeungpo, Cheongnyangri · Designation of mandatory/recommended housing complex districts
1996 - 3rd Revision	· Housing complex guideline incentives, height limits loosened · First draft of environmental design guidelines
2001 - 4th Revision	· Addition of Yongsan as sub-center · Strengthening of height limits and density, recovery/conservation redevelopment, guidelines drawn up for each downtown district
2005 - 5th Revision	· Revision of the Act on Maintenance & Improvement of Urban Areas and Dwelling Conditions for Residents in 2002 · Addition of new towns / Balanced Development Projects, deregulation of height limits and incentives for districts with estimated reconstruction of small units
2010 - 6th Revision	· Application of development guidelines for each area, comprehensive plan for re-creation of downtown area (2007) · Expansion of urban redevelopment projects outside downtown and sub-center areas

Source: Seoul, 2010, Redevelopment Master Plan for Urban Central & Residential Areas 2020 – The Urban Redevelopment Sector

Project Implementation Methods

Urban redevelopment projects are implemented in three phases: Estimated districts for redevelopment → designation of districts for redevelopment → implementation plans for each project district. The plan determines an approximate range of districts (estimated redevelopment districts) to be designated as urban redevelopment districts, while the Seoul city government designates districts for redevelopment in response to requests and reviews the administrative district within the estimated redevelopment districts. Following the designation of districts for redevelopment, implementation plans are established for each project district to construct buildings and provide public facilities such as roads and parks.

Figure 8 - Project Implementation Methods for Urban Redevelopment Projects



Project Operators

The landowner(s), or a joint enforcement by the mayor or governor and the Korea Land & Housing Corporation with majority consent of the association members implement the Urban redevelopment projects. Unlike housing redevelopment and reconstruction projects promoted at an association level, landowners implement most urban redevelopment projects.

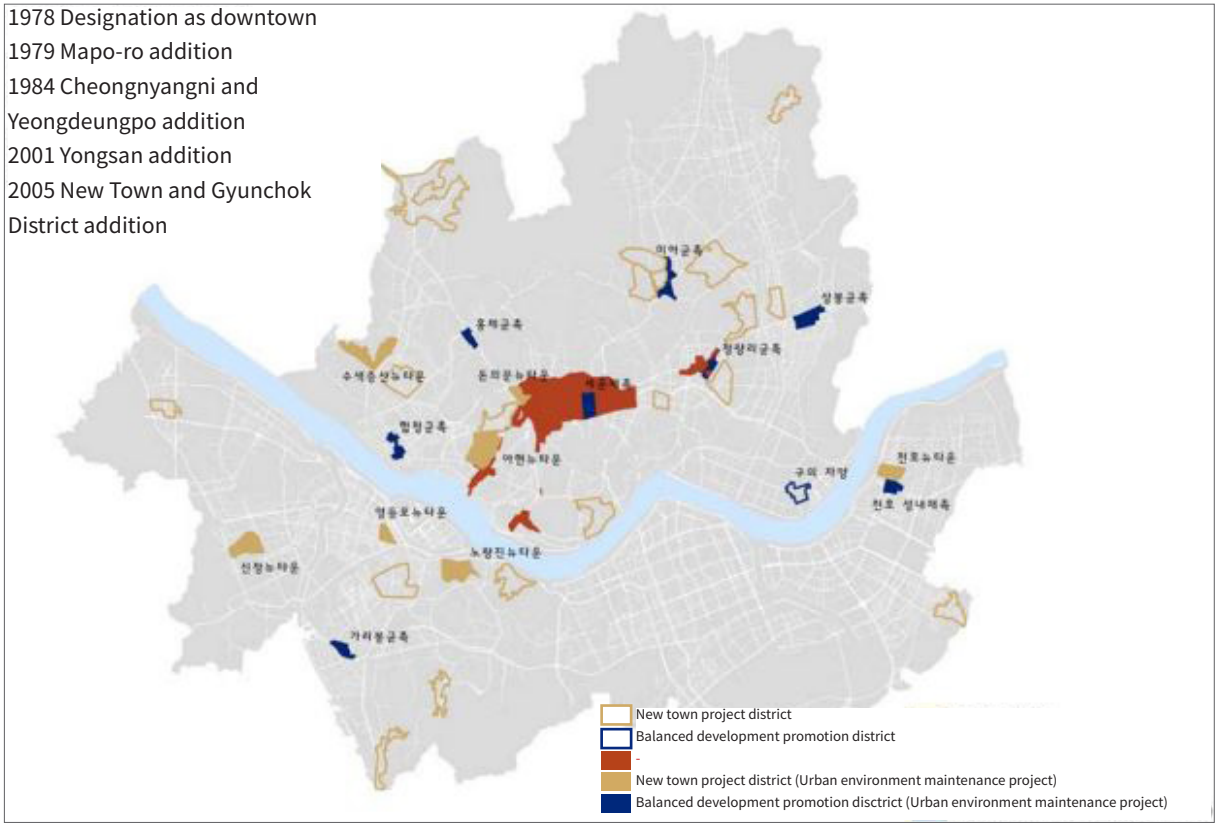
Target Areas

Unlike housing redevelopment and reconstruction projects, laws and regulations do not request specific criteria for urban redevelopment projects, such as the number of deteriorated buildings. The prioritized target areas for urban redevelopment projects are 1) land unsuited for buildings or where deterioration of the urban environment is highly likely because of underutilized land; 2) areas where buildings have deteriorated to a point where full functionality is no longer possible or areas with heavy concentrations of buildings; 3) areas where population and industries are concentrated and thus require the recovery of urban functions; 4) areas with easy access to public transportation (such as subway lines) and require construction of mixed-use buildings (Enforcement Decree of the Act on Maintenance & Improvement of Urban Areas and Dwelling Conditions for Residents - Attached Table 1).

The target areas for urban redevelopment projects have been expanded to include Mapo, sub-center areas (Cheongnyangni, Yeongdeungpo, and Yongsan), and districts where balanced development projects are being promoted following determination of the "downtown" being the area within the four major gates in 1978. In particular, the Master Plan for urban redevelopment projects established in 2010 provides measures for spatial structure multinuclearation and is expanded to the city's core center for strengthening the key functions.

As such, urban redevelopment projects have been undergoing gradual expansion for spatial structure multinu-clearation and redevelopment of downtown and sub-centers with high concentration but weak infrastructure due to integrated businesses and commercial facilities.

Figure 9 - Target Areas (estimated districts) for Seoul Urban Redevelopment Projects)



Source: Seoul, 2010, Proposed Master Plan for Seoul City & Maintenance of Living Environment - The Urban Redevelopment Sector

FAR Incentives

The FAR (Floor Area Ratio) incentive is available (within a 200% range) for those making a contribution to historical preservation or environmentally-friendly development, urban housing and downtown revitalization (culture and welfare facilities, public facilities, facilities promoting urban industry, etc.) to increase public interest and promote the completion of unfinished redevelopment projects in the downtown area. The City Planning Commission calculates the exact FAR incentive, with the addition of itemized amount incentive to standard FAR, upon review.

The FAR incentive has contributed to revitalizing urban development projects. There is, however, concern that incentives are excessive when compared to general construction; hence, the 2010 Master Plan has revised awarding FAR incentives according to land annexation and public facilities.

Public Support Funds (Urban/Residential Redevelopment Funds)

Urban redevelopment projects can receive financial assistance through urban/residential redevelopment funds, which is public financing for project revitalization, maintenance and conservation of urban characteristics, and promoting public interest.

The current urban redevelopment project provides financing for construction expenses by utilizing these funds. As of 2009, an average of approximately 27 billion won (about 8.7 billion won for each project district) had been provided for financing.

Project Status

In 1973, Seoul designated the first 11 districts for urban redevelopment and since has designated downtown and sub-center areas, such as Mapo, Yeongdeungpo, Cheongnyangni, and Yongsan. In line with its 1970 commitment to urban renovation, approximately 1,000,000 m² (approximately 330,000 pyeong) of the downtown area has been designated as urban redevelopment areas. Approximately 200,000 m² (about 60,000 pyeong) were added in the 1980s in preparation for the Seoul Olympic Games.

The projects for downtown and the Mapo area are making continued progress since their designation for redevelopment in the late 1970s; however, only 3 or 4 districts in Yeongdeungpo and Cheongnyangni are implementing such projects.

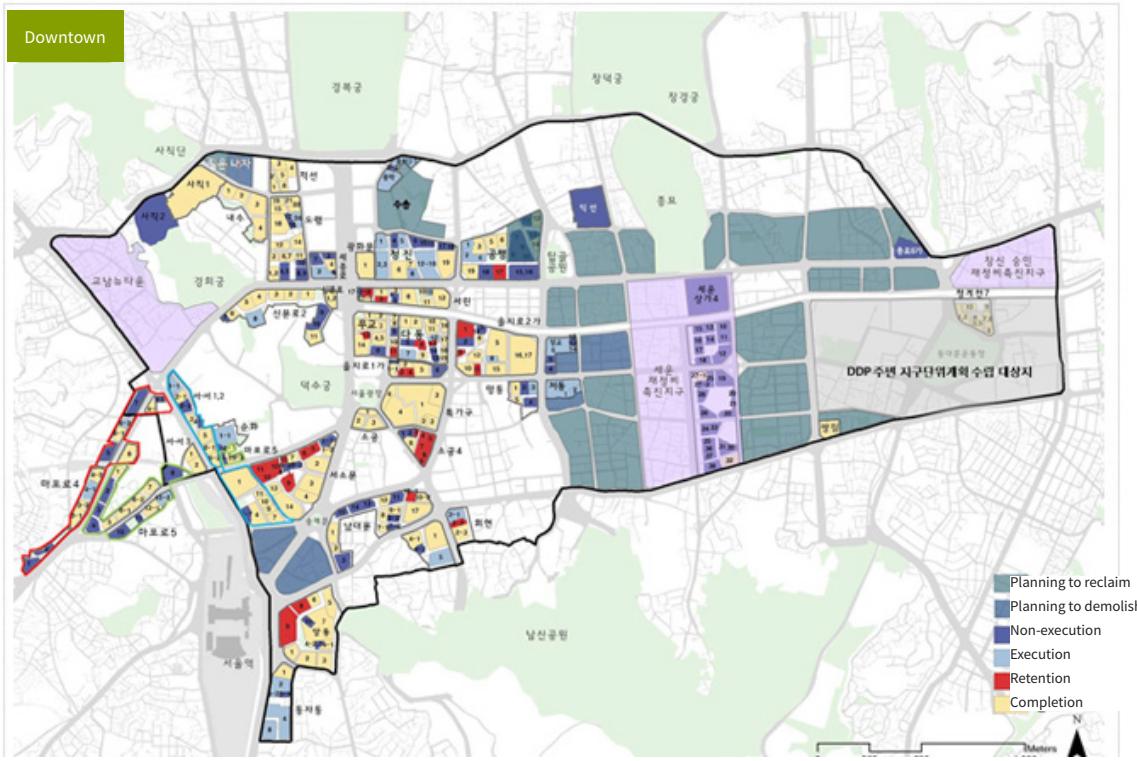
Of the total designated areas, about 44% (222 districts) have completed their urban redevelopment projects. Districts implementing the project account for about 7% (36 districts), suspended districts account for about 8% (41 districts), and districts with unfinished projects account for about 41% (209 districts).

Table 3 - Seoul Urban Redevelopment Projects

Area		Total	Completed	In Progress	Suspended	Incomplete
Downtown		357	149	21	37	150
Outside downtown area	Mapo	99	68	8	3	20
	Yeongdeung-po	7	-	3	-	4
	Cheong-nyangni	32	3	-	-	29
	Yongsan	10	2	4	1	3
	Other areas	3	-	-	-	3
Total		508	222	36	41	209

Source: Current Status of Urban Redevelopment Projects, Seoul, City Renewal Division (Dec. 31, 2013)

Figure 10 - Downtown Seoul Redevelopment Projects



Source: Seoul, 2010, Proposed Master Plan for Urban & Residential Redevelopment of Seoul 2020 - Urban Redevelopment Sector

Main Policy & Details

1) Physical Characteristics of Urban Redevelopment Projects

Size of Redevelopment Areas & Project Districts

The average urban redevelopment district in Seoul is about 50,800 m² with most between 40,000 and 100,000 m². Recently, however, projects have tended to be smaller at about 10,000 m². Urban redevelopment districts are usually divided into 10-20 project districts, and in some cases are divided into 50 or more. The average size of districts where projects have been completed is approximately 5,000 m², with the average land area, excluding land for public use such as roads, parks, and parking lots, being about 4,000 m².

Purpose of Buildings

In terms of the purpose for buildings constructed through urban redevelopment projects, business facilities account for 72%, apartment houses account for 14%, sale neighborhood account for 11%, and accommodations account for 3%. These percentages suggest that the areas tend to be focused on business.

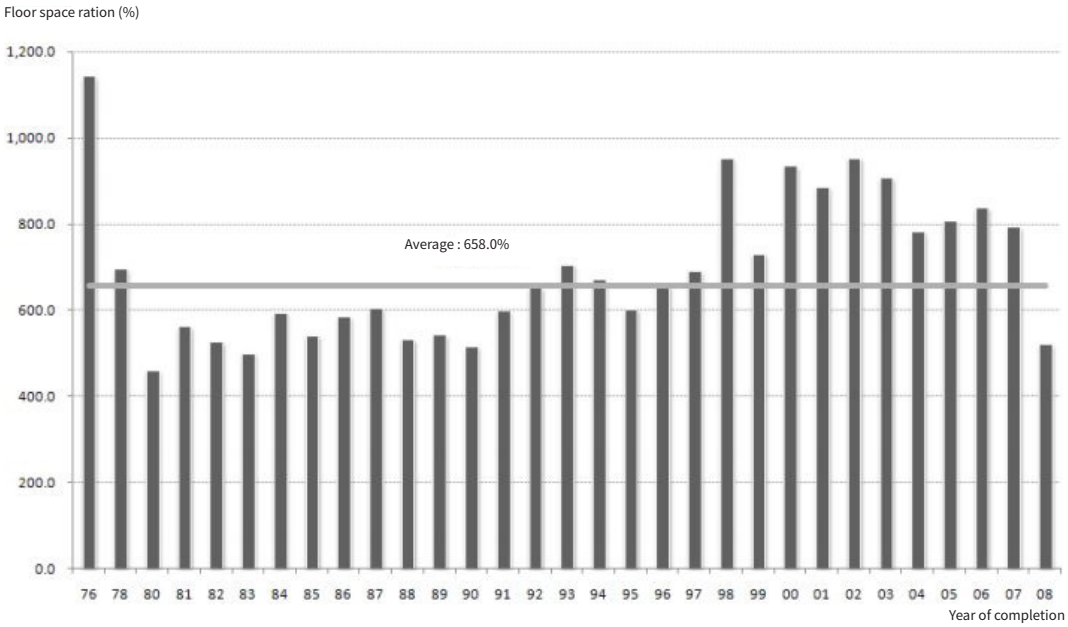
Building Sizes, Number of Floors, & Density

The average floor area (ground floor) of a building constructed through urban redevelopment projects is about 1,800 m² (about 550 pyeong).

The average number of floors of a building in a completed project districts is 17 floors. In the 1980s, the floor height was under ten stories on average, but by the early 1990s, the floor height was 15 stories on average, and 20 stories or higher by the end of the 1990s.

The average building-to-land ratio of districts where urban development had been completed was approximately 45% with the average FAR roughly 660%. From the late 1980s, the floor area ratio was less than 50%, but exceeded 900% by the late 1990s, an overcrowded situation; however, the ratio had decreased slightly to 800% by 2004.

Figure 11 - Average FAR of Completed Districts



Source: Seoul City, 2010, Redevelopment Master Plan for Urban Central & Residential Areas 2020 - Urban Redevelopment Sector

Lead Time

The average period for redevelopment of a project district was 15.4 years. In the early 1990s, this had lengthened to 22 years on average, and 25 years on average by the early 2000s.

2) Customized Small Unit Redevelopment Projects

Introduction: Background & Definition

In the 1970s, redevelopment of urban redevelopment projects was oriented towards demolition. These methods were responsible for the loss of downtown characteristics and the sense of place, resulting in urban

environmental degradation from high-density and development of high-rise buildings. Accordingly, the need for redevelopment of small units that preserved old city structures surfaced.

Unlike demolishing an area and creating a new foundation for a community such as businesses and commercial facilities, small-unit redevelopment, which focuses on area-specific renewal of smaller areas, gradually improves a degraded urban environment and deteriorated buildings while maintaining and preserving regional characteristics and the existing sense of place. Here, "small unit" refers to development on a smaller scale with a combination of several lots. “Area-specific” refers to redevelopment in line with the unique physical environments and functional characteristics of an area.

Table 4 - Comparison of Demolition-type Redevelopment & Area-Specific Small Unit Redevelopment

	Demolition-type Redevelopment	Area-Specific Small Unit Redevelopment
Redevelopment Method	Ignores existing conditions and functions Innovative modification of urban structure after demolition	Respects existing road network and lot patterns Widens/connects roads, encourages renewal through construction/parking lot deregulation, and encourages joint development
Pace of Change	Pursues rapid change to existing functions / severance of organizations	Pursues gradual change of physical environment Maintains existing functions / organization continuity
Development Density	Allows high-density development to ensure large-scale private projects are economical	Maintains development density to fit regional characteristics and road conditions
Development Size	Large-scale group development of an average project district size of approximately 5,000 m^2 (about 1,500 pyeong)	Pursues small-unit development, such as retention, community-initiated renewal, joint development according to lot/building conditions
Project Entity	Public: Zoning, project planning Project Implementation: Driven by large private enterprise	Focuses on resident participation in and government support for projects

Source: Seoul, 2010, Master Plan for Urban Redevelopment Projects in Seoul - Urban Environment Service Sector, p.138

Redevelopment Method

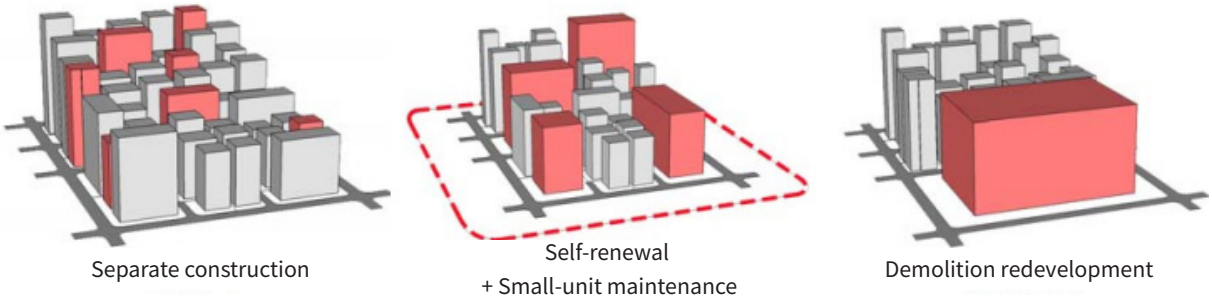
Area-specific small unit redevelopment respects existing urban conditions such as the existing road network, lot patterns, usage, and functions, and is based on government support. The method selectively redevelops infrastructure such as roads and public parking lots, and gradually redevelops through guidance provision, such as self-renewal and joint development of small units through construction and parking lot deregulation.

Development Scale & Density

Area-specific small unit redevelopment aims to maintain industrial diversity and regional characteristics, and renewal of small units in order to better adapt to social and economic changes. This kind of redevelopment encourages individual renewal of buildings while maintaining good land conditions with significantly good frontage; the method also provides guidance to jointly develop small units according to an agreement be-

tween the project entity and owners of adjacent land that lack economic feasibility or where individual redevelopment is not possible. The method avoids demolition and redevelopment into high-density high-rise areas, instead maintaining appropriate FAR and building height, and renewing deteriorated areas through cooperation between the public entity and private owners/residents to boost project value.

Figure 12 - Conceptual Diagram of Area-specific Small Unit Redevelopment Projects



Source: Seoul, 2010, Redevelopment Master Plan for Urban Central & Residential Areas - Development Guidelines by District, p.139

Project Entity

Construction of local infrastructure in area-specific small-unit redevelopment projects requires active participation and cooperation between the public and local residents. While the public pays for installation of public facilities such as roads and parking lots - which cannot be constructed by individual landowners - and proposes minimum construction standards to provide development guidance, local residents redevelop individual areas or participate in joint redevelopment according to proposed construction standards.

One Area-Specific Small Unit Redevelopment Project: Gongpyung Area

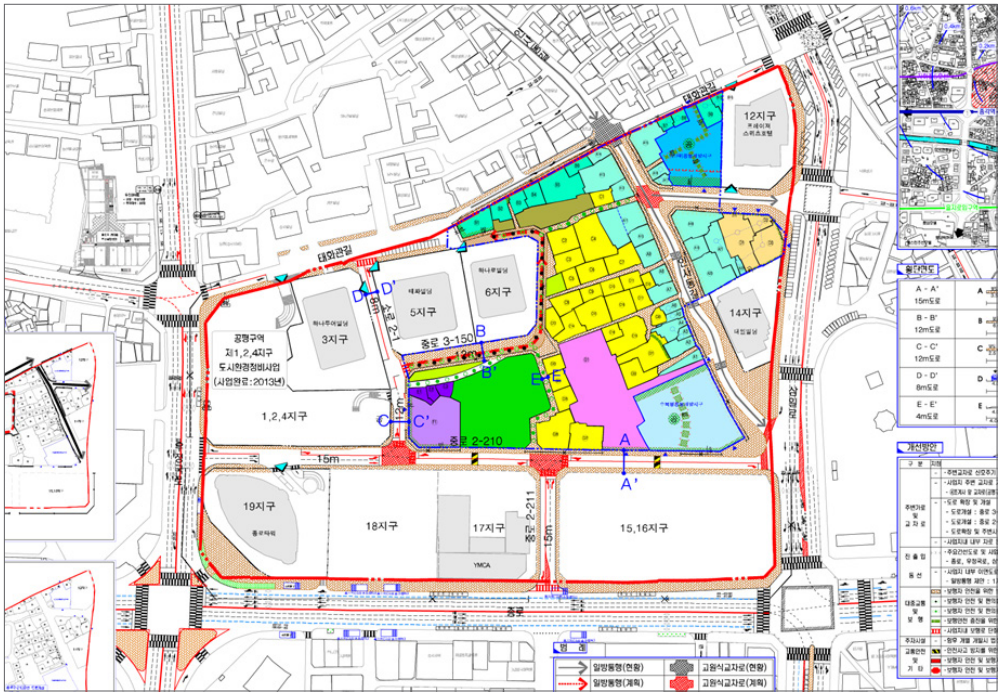
The Gongpyung area was designated as an urban redevelopment site in September 1978. Of the 18 total project districts where redevelopment plans were finalized and announced, development was completed in six districts; two districts are in retention (Seungdong Church, YMCA), while projects in 10 districts remain unfinished.

Old city structures still remain in downtown Gongpyung, such as Pimatgol Alley and Seungdong Church, a cultural property designated by Seoul City, which also adjoins Insa-dong; hence, a need has been recognized to maintain and preserve the regional characteristics. In addition, except for some buildings where redevelopment projects have been completed, most of the buildings are low rise with one to five stories. The Gongpyung area differs from the traditional atmospheres of the downtown area as well as urban redevelopment demand, and therefore requires area-specific small unit redevelopment to protect these local characteristics.

Figure 13 - Before Modification of Development Guidelines for Gongpyung Area

Source: Seoul, 2010, Redevelopment Master Plan for Urban Central & Residential Areas - Development Guidelines by District, p.93

Figure 14 - After Modification of Guidelines for Gongpyung Area



3) Development Guidelines for Each District

Purpose & Characteristics of Development Guidelines

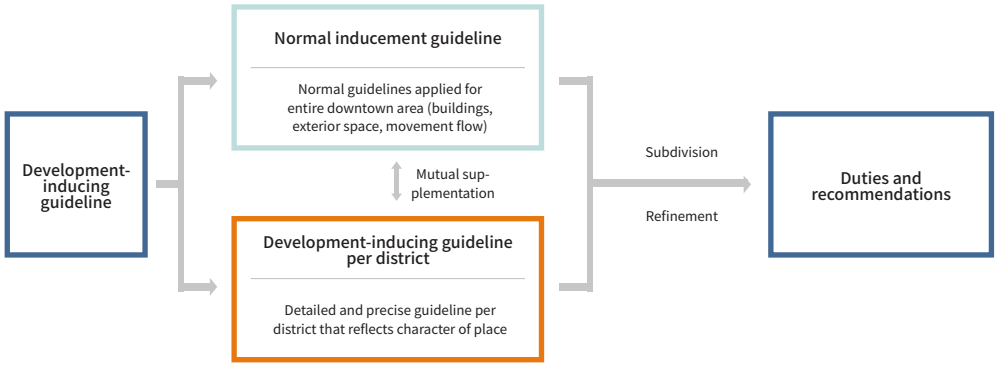
The development guidelines for each district suggest construction standards (such as the use of buildings, arrangements, styles, exterior space, and traffic movement) to be observed during implementation of redevelopment projects in urban redevelopment districts. Urban environments created through urban redevelopment projects are not viewed positively, as they are felt to damage the charming characteristics of various areas, so instructions and guidelines fit for each area are provided.

Development guidelines provide clear, detailed standards suited to each project district to emphasize their individual traits, and are used by the entity in charge and review committees as the standard when deciding whether to approve redevelopment project proposals.

Development Guidelines: Details & Application

Development guidelines are classified into general guidelines and individual guidelines for each district. As can be imagined, general guidelines apply to all project areas and districts within the downtown area, while individual guidelines for each district takes into account the characteristics of those places, which are applied differently according to business areas. Development guidelines are additionally classified into mandatory and recommended guidelines depending on their characteristics.

Figure 15 - Development Guidelines



Source: Seoul, 2010, Redevelopment Master Plan for Urban Central & Residential Areas - Development Guidelines by District, p.5

Development Guidelines: Main Elements

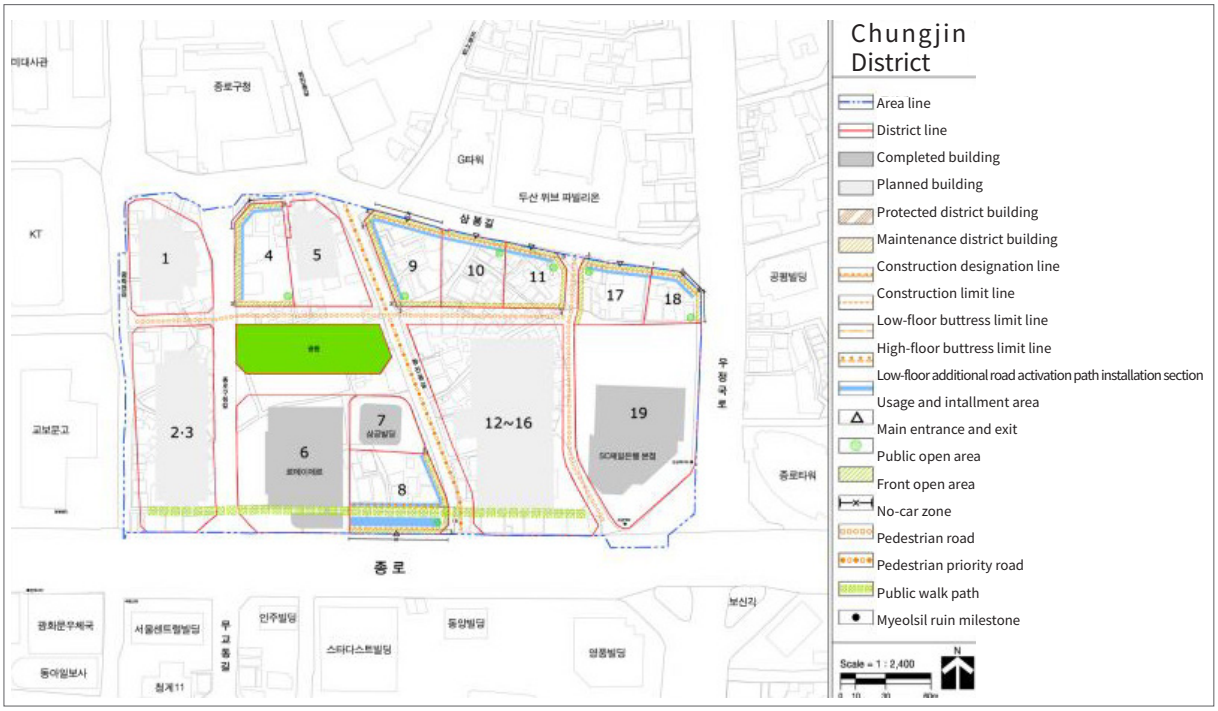
Separate guidelines exist for buildings, outside spaces, and traffic movement. The guidelines regulate the use and arrangement of buildings, as well as open spaces, frontage, environmental sculpture installation sections, details related to landscape within the land in the outside spaces, and the flow of vehicles and pedestrians.

Table 5 - Development Guidelines: Elements

Development Guidelines			
Buildings	Use	All	Main Use
		Lower floors	Horizontal-enabled installation section
	Arrangement	Frontage	Frontage
		Building line	Building designated line
			Building limit line
			Wall designated line
			Wall limited line
Outside Space	Public open space		Installation of public open space
	Frontage space		Installation of frontage space
	Environmental structure installation section		Installation of environmental structures
	Landscape within the area		Rooftop landscaping
Traffic Movement	Vehicles		Prohibited areas
	Pedestrians		Sidewalks

Source: Seoul, 2010, Redevelopment Master Plan for Urban Central & Residential Areas - Development Guidelines by District

Figure 16 - Chungjin District: Diagram for Development Guidelines



Source: Seoul, 2010, Master Plan for Urban Redevelopment Projects - Development Guidelines for Each District, p.81

Policy Implementation Outcomes

Performance

Contribution to Modernization of the Downtown Area

Seoul's urban redevelopment projects were part of a policy to redevelop aging buildings and other urban structures and create a new environment towards modernization of urban functions. Since the 1970s, 222 modern buildings have been constructed through these projects and about 9.71 million m² of land (as of the end of December 2013) has been provided. The projects contributed to transforming the appearance of Seoul's downtown areas, supplying large modern buildings for businesses and other commercial use and resolving hygiene issues and preventing disasters from the existing small buildings.

Table 6 - Project Performance for Urban Redevelopment in Seoul (as of the end of Dec. 2013)

Area		Number of Redevelopment Zones (Number of buildings)	Completed Buildings	Building Floor Area
Downtown		357	149	6,967,798 m²
Outside Downtown Area	Mapo	99	68	2,264,408 m²
	Yeongdeungpo	7	-	-
	Cheongnyangni	32	3	120,190 m²
	Yongsan	10	2	361,978 m²
	Other areas	3	-	-
Total		508	222	9,714,375 m²

Source: Status of Seoul Urban Redevelopment Projects, Dec. 2013

Urban Improvement Through Provision of Open Space & Expansion of Infrastructure

Urban redevelopment projects contributed to the expanding insufficient infrastructure such as roads, parks, greenbelts, and parking lots by removing small and irregular urban structures, or reorganizing them on larger areas of land. Of the total development areas, roads account for 183,000 m², parks and greenbelts account for 620,000 m², and parking lots account for 110,000 m² (as of the end of December 2013). This kind of outcome cannot be obtained through general construction; the projects improved deteriorating urban environments by contributing to meeting the demand for new urban spaces, open spaces and new infrastructure.

Problems

Damage to Unique Identity of Downtown Areas & a Sense of Place

Urban redevelopment projects implemented after full demolition reduced the number of small downtown industries, such as clothing manufacturing, print publishing, and advertising, and disfigured a significant number of areas with the remains of old urban structures. As a result, much of the historic characteristics and charm of the artistic effects were damaged, resulting in a loss of unique characteristics in these areas and the sense of place inside the four major gates.

Degeneration of Urban Environment Due to High-rise & High-density Development

Densely constructed high rises were built to maximize commercial value as urban redevelopment projects have been implemented by the private sector (landowners). Hence, traffic congestion in the downtown area has intensified, and brought about adverse effects, such as degeneration of public interest caused by undermined urban landscape, excessive incentives for business, and incongruity with surrounding structures.

Autonomous Renewal & Withering of Alteration

Of the areas designated for redevelopment in the late 1970s and early 1980s, a significant number of them remain undeveloped even after 30 years, as a result of the concurrent designation of large areas for redevelopment. These projects have been delayed, resulting in deterioration beyond the point of potential renewal, and inconveniencing residents due to the insufficient quality and/or quantity of roads, parks, and other public facilities.

Tasks for the Future

Strengthening Government Involvement & Support for Urban Redevelopment Projects

A variety of measures are required to promote significantly delayed redevelopment projects in districts designated in the 1970s. Unreasonable redevelopment plans should be modified or related methods provided to cover construction expenses besides project financing and urban redevelopment funds to build infrastructure facilities. Moreover, action is also necessary to prevent conflict between project entities and existing commercial tenants, as well as providing reasonable compensation and resettlement assistance for people forced to move out of the area.

Diversification in Redevelopment to Strengthen Identity of Regions within Seoul

With the increase of interest in restoration of Cheonggye Stream and recovery of Seoul Fortress, methods for historical and cultural preservation and area redevelopment should be diversified. Redevelopment methods are demonstrating various strategies, such as customized small-unit redevelopment and preservation rede-

velopment but still to no avail. In order to strengthen Seoul's identity and boost economic vitality, alternative methods are needed, such as including small unit redevelopment methods and expanding additional government funding and involvement.

Strengthening of Publicity for Urban Quality Improvement

Urban redevelopment projects so far have been somewhat fruitful in redeveloping deteriorating urban areas, but have been lacking in creating urban environments that benefit the public. The active redevelopment projects of the 1980s and 1990s would be difficult to implement today, and policies should change to improve the quality of the urban environment design. Therefore, a greater role for and support by the government is needed as well as measures that ensure differential incentives depending on the public benefit.

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6. Urban Planning System of Seoul

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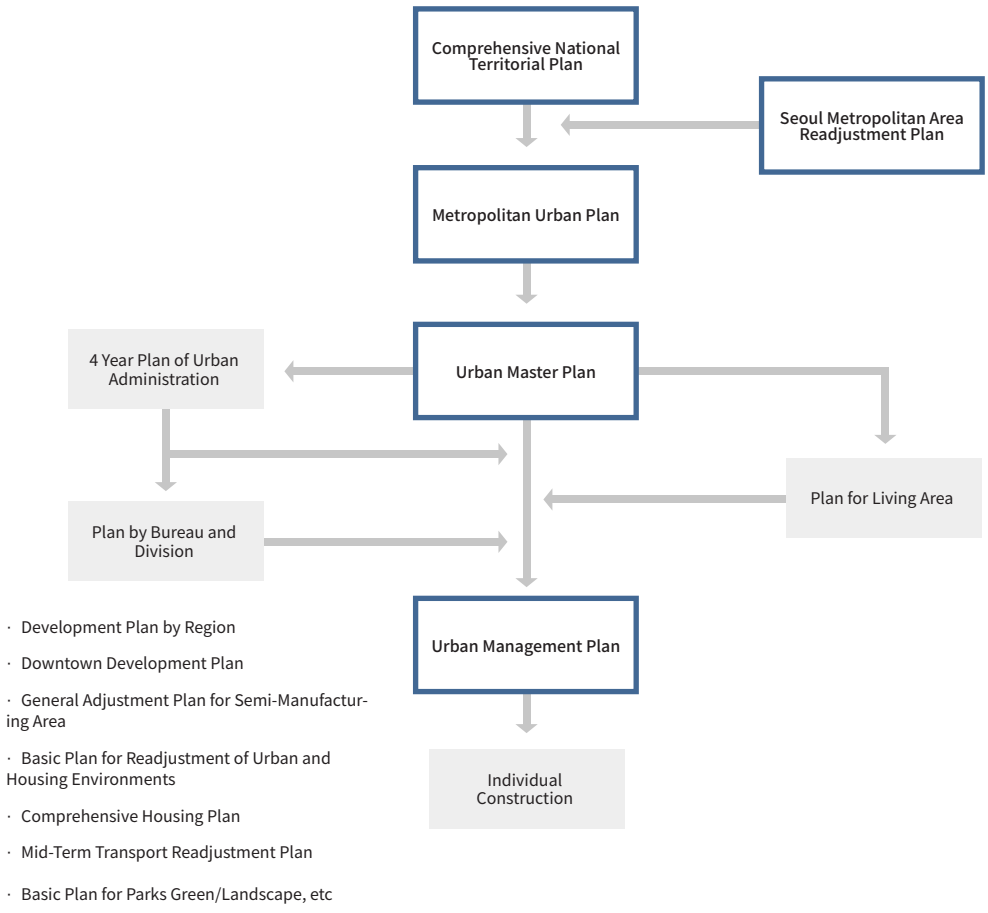
Policy Area: Urban Planning

Structure of Urban Planning System of Seoul

The Seoul urban planning system currently in operation consists of 3 stages; urban master plan, living area plan and urban management plan. Before introducing the living area plan as the second stage, urban planning had been divided into 2 stages, urban master plan and urban management plan. According to the "National Land Planning and Utilization Act," the long-term urban master plan was established for 20 years and the urban management plan was set for the next 10 years. However, because Seoul had grown so rapidly, there were limits to the planning and management for a population of 10 million and 25 autonomous districts with a two-stage planning system. The urban master plan suggests the development direction of a megalopolis Seoul from the long-term and abstract perspectives, whereas the urban management plan is established focusing on the individual lots of land. Therefore, the urban master plan could not work as a guideline for the urban management plan because the two plans lacked connectivity. Actually, there were big differences between the two plans in terms of target years, contents of planning, scale, legal binding, etc.

Figure 1 - Structure of the Urban Planning System of Seoul



In order to compensate for the limitations, Seoul sought for the ways to strengthen the connectivity of the two plans and increase the possibility of realizing the urban master plan. Thus, Seoul introduced the living area plan as an intermediate stage to make the urban master plan concrete and to suggest guidelines for the urban management plan. According to the policy, Seoul established "Development Plan by Region in Seoul" separately to give concrete shape to the plan by region suggested in the existing urban master plan in 2007, and developed the plan above more to establish the living area plan in spatial units (small living area), which are smaller than regional units (large living area) in 2009, reorganizing the existing urban planning system into 3 stages. However, the living area plan has been operated as a non-legal plan until now. It is necessary to legalize the living area plan as soon as possible to establish a more stable urban planning system.

As a sub-plan of the urban master plan and the living area plan, the urban management plan is an implementation plan that aims to materialize and realize the long-term urban development direction suggested in the upper level plans in the relevant spaces. The urban management plan includes the land use zoning plan, the urban planning facility project plan, the Plan for each District Unit, urban development project plan, various kinds of readjustment project, etc. Each project plan is established and operated individually. Seoul is seeking ways to strengthen the functions of the urban management plan to operate it efficiently by preparing the integrated implementation of the current urban management plan.

In order to improve the establishment and operation of the urban planning system while accommodating the characteristics and changes of Seoul, Seoul exerts continuous effort to prepare the concrete and detailed plans through professional monitoring and expanded citizens' participation, and to establish a Seoul's constant urban planning system.

Stage 1. Urban Master Plan

Definition

The urban master plan established according to the "National Land Planning and Utilization Act" is a general plan to suggest the basic spatial structure of Seoul and its long-term development direction. It works as a basis or guideline in establishing the urban management plan. The divisional plans made for the environment, transportation, water supply, sewage systems, housing, etc. which are under its jurisdiction according to the other acts or regulations should comply with the contents of the urban master plan.

Purposes and Background of Planning

The urban master plan is established for the purpose of rational use, sustainable development and preservation of affordable land. It is a comprehensive plan to present a framework of the developed city after 20 years. The urban master plan suggests the direction of policies to utilize the limited resources efficiently and reasonably, to improve the life quality of residents and to achieve environmentally sound and sustainable development.

The urban master plan is a comprehensive plan that encompasses various areas of the entire city including society, economy, environment, energy, transportation, infrastructure, culture, welfare, etc. Therefore, it is necessary to collect the various and extensive opinions of the citizens, experts, administrators, etc. and adjust the plan in the planning process, securing procedural justification.

The urban master plan of Seoul was established for the first time in 1990 after it was established by law according to the amendment of the "Urban Planning Act" in 1981. Since then, legal planning was conducted 4 times, including the adjustments in 1997 (target year: 2000), 2006 (target year 2020) and 2014 (target year: 2030). The "2030 Seoul Plan" is the 4th legal plan formally established on the Seoul-level. As the plan takes the highest status in the planning system of Seoul, it furnishes a guide to the directions of the sub-plans like the urban management plan, etc. and provides consistent and unified establishment of them.

The 2030 Seoul Master Plan (Seoul Plan) was made by reorganizing the previous contents and formats according to the advent of time to readjust the Seoul urban master plan in 2020, transfer of the right to set the urban master plan to the local government and consequent expansion of the Seoul Mayor's autonomy, and request for the realization of new social values such as civil participation and a sharing society.

Range of the Plan

Temporal Range: The target year of the urban master plan is set to be 20 years from the time of planning, according to the guideline for establishment of the plan[1]. The status of each sector such as population, industry, economy, environment, transportation, housing, etc. is documented as of the beginning year. Based on the investigated status, the goals and strategies for each sector are established and the planning indicators are set.

Spatial Range: The spatial range for the plan is the entire urban planning area matching the Seoul administrative districts with a total area of 605.96㎢. However, the target areas are expanded to the Seoul metropolitan areas in the vicinity of Seoul when analyzing the status and conditions to draw the planning tasks and planning the spatial structure reorganization.

Status and Roles

1. The highest legal plan encompassing all areas of Seoul

- The urban master plan is the highest level of spatial plan that takes precedence over the divisional plans and policies of each sector related to the use of spatial structure and land. It is used as the basis for integrating and adjusting all the divisional plans and policies through the use of spatial structure and land. In addition, it acts as the guideline for establishment of the urban management plan as its sub-plan.

2. Long-term plan to present the future image after 20 years and development directions

- The urban master plan is a long-term plan to present the framework of the future vision containing the values of Seoul and development directions looking 20 years into the future.
- The future vision and development direction of Seoul based on the basic status analysis of the main parts including population structure, social and economic conditions, change of land utilization according to climate change, industrial structure, changes of housing and built-up areas, etc. and in consideration of changes to internal and external situations, etc. in the long-term perspective.
- In addition, the feasibility of the urban master plan shall be reviewed every five years in consideration of the changing in order to revise and compensate for changes.

3. Spatial plan to realize the future image and core issues into the spatial structure and land utilization

- The urban master plan is meant to materialize and accomplish the plans regarding the core issues strategically set to achieve the future vision of Seoul in the space dimension. Therefore, it is a feature of the plan that it is materialized and realized in the shape of spatial planning for the urban spatial structure reflecting the future vision and plans regarding the core issues, suggestion of principles and directions of land use, and presentation of development directions, planning tasks by the living area.

1. Ministry of Land, Infrastructure and Transport, Instructions No. 45

- The plan aims to regulate the land use and efficient use of locations by integrating and adjusting the divisional policies and plans of each sector in the spatial dimension.

4. Strategic plan emphasizing the efficiency of resources by establishing policy priorities

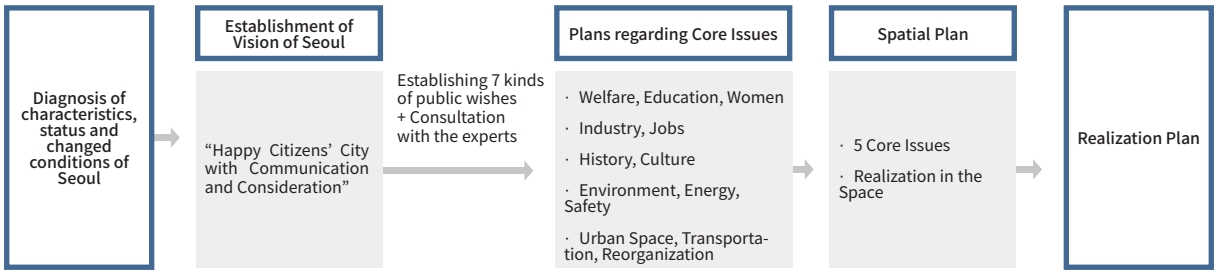
- The demand for public policies increases continuously due to continued slow economy, growing requirement for the financial commitment, diversified demand of citizens, etc. In order to address the policy demand effectively, it is necessary to clarify the priorities of policies, to implement the policies strategically and to use limited resources efficiently.
- The urban master plan combines multiple administrative areas to realize the future vision and sets the main strategies to be implemented in priority through the process of consultation and agreement with the citizens and experts who participated.

Contents of the Plan

The 2030 Seoul urban master plan (Seoul Plan) presented the future image of Seoul as the "Happy Citizens' City with Communication and Consideration" from the long-term point of view, draws 5 core issues to realize the vison and established 17 divisional plans that contain the goals and strategies for each of the issues.

The plans regarding the core issues are intended to set the priorities of administration while combining the entire administrative fields of Seoul and securing the consistency of the plans. They are the theme plan for Seoul in which the specific theme-centric plans presented in the guidelines for the establishment of the urban master plan are reconstituted considering the characteristics of Seoul.

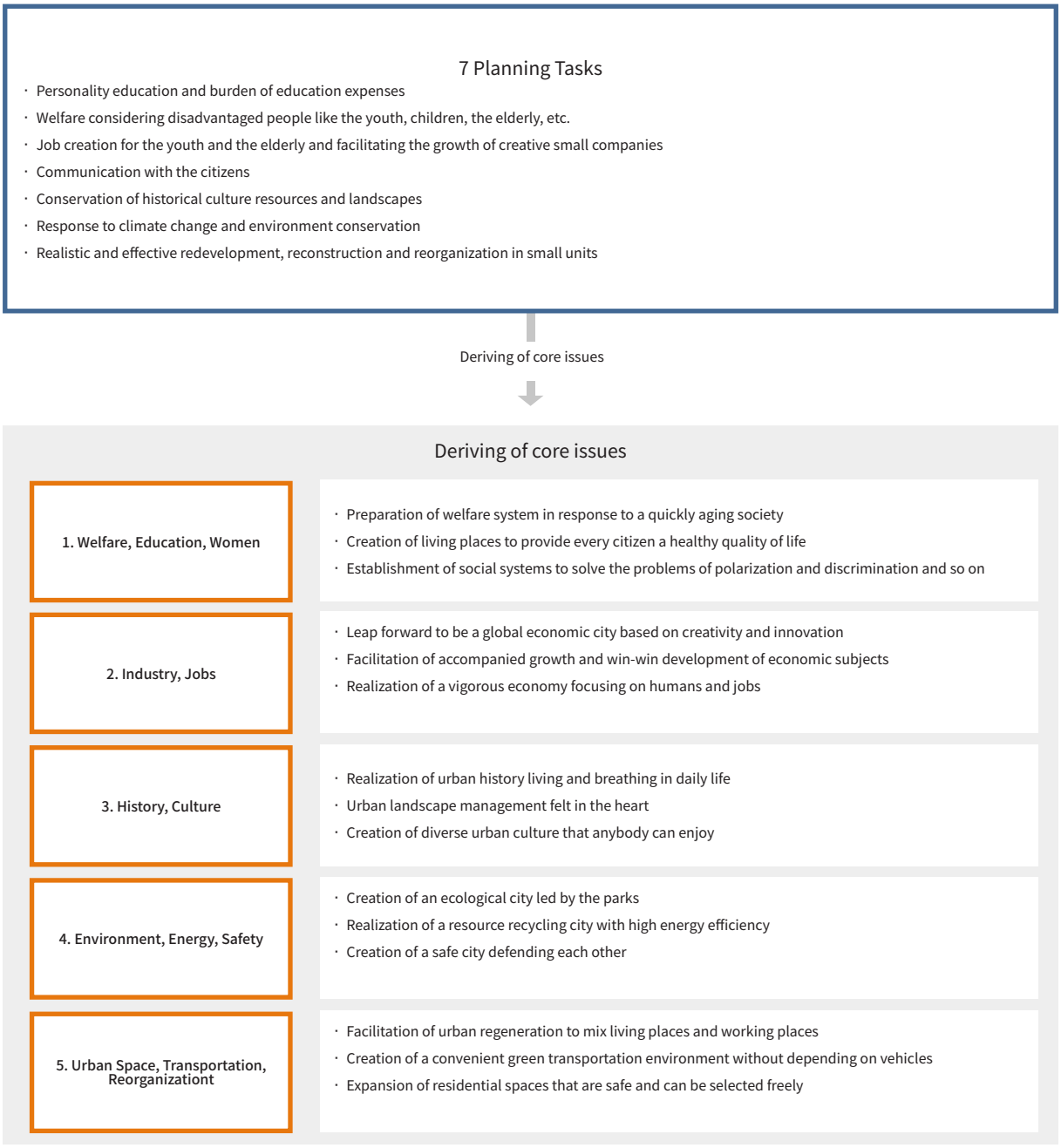
Figure 2 - Procedure of Establishment of Vision of Seoul and Selection of 5 Core Issues



To facilitate the establishment of 2030 Seoul Plan, Seoul had organized a civil participation group that discussed the tasks to be solved by Seoul and selected planning tasks in the 7 areas of education, welfare, jobs, communication, historical culture & landscape, climate change & environment, and urban development & reorganization. The 7 planning tasks formed the foundation of divisions in 5 areas including welfare/education/women, industry/jobs, history/culture, environment/energy/safety and urban space/transportation/reorganization. And they were positively reflected in the process of establishing goals and strategies of the plans regarding the core issues.

In addition, Seoul presented the regional conception of the living area plan while considering the regional characteristics in order to materialize the basic contents of the plan and to facilitate balanced development between regions. In order to accomplish the goals of the plans, the urban planning system of Seoul, constant monitoring system, establishment of civil participation and governance system and principles and directions of financial investment were included.

Figure 3 - Planning Tasks and Core Issues of the 2030 Seoul Urban Master Plan



In the 2030 Seoul Plan, the spatial structure of Seoul was planned to be transferred to the structure of multi-centers by setting it to be '3 city centers, 7 metropolitan centers and 12 regional centers.' The multi-centered structure was designed to facilitate win-win development through cultivation of special content by the center and the functional links between centers. The Seoul Metropolitan Government manages the city centers, the metropolitan centers and the regional centers strategically in the perspectives of the metropolitan region of Seoul and the 5 macro living areas.

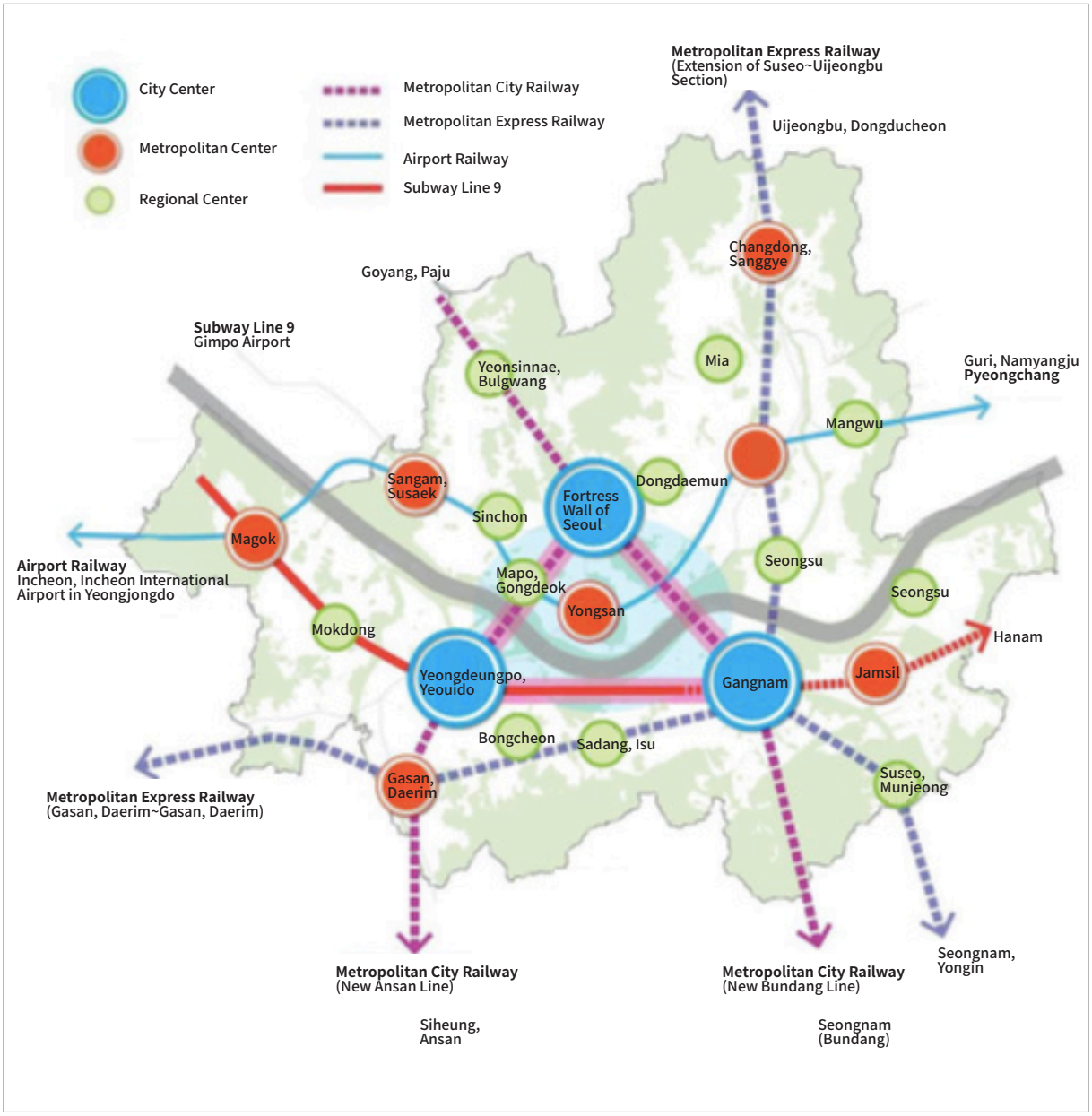
Spatial Structure

In the 2030 Seoul Plan, the transfer of spatial structure from the existing single centered one to the multi-centered was proposed to initiatively solve the tasks related to the spatial structure such as residents' demand for improved quality of life, deepening of differences among the regions, area broadening to the metropolitan regions of Seoul and deepening of competition among the big global cities.

The existing single centered system consisting of '1 city center, 5 sub city centers and 11 regional centers' in a simple hierarchy had limits in solving the issues raised at the upper levels. Through the 2030 Seoul Plan, Seoul reorganized the single centered system into '3 city centers, 7 metropolitan centers and 12 regional centers' to emphasize the functional system of multiple centers and to facilitate the win-win development through cultivation of special content by the center and the functional links between the centers.

The single centered system was the basic element in forming the spatial structure of Seoul. The special structure was formed by designating the centers that the Seoul Metropolitan Government had to manage directly. In other words, Seoul decided to provide strategic management service to the city centers, metropolitan centers and regional centers that took core roles in the Seoul metropolitan areas and 5 regional living areas. The centers of the districts as the basis for daily life in each regional living area in the existing 2020 urban master plan were maintained, but they were allowed to be adjusted through consultations with the autonomous districts if necessary when establishing living area plan following the urban master plan. In other words, the designation and management of the district centers could be negotiated and adjusted in consideration of the demands of the autonomous districts and the residents.

Figure 4 - Spatial Structure of Seoul



- City Centers: Strengthening of global competitiveness

- Seoul would have a 3 city center system in consideration of the development axes of Seoul to reflect the multi-centered spatial structure and to strengthen the global competitiveness of Seoul. Fortress Wall of Seoul (downtown inside the existing four gates) would be specialized as an International Cultural Center (ICC), Yeongdeungpo & Yeouido as an International Financial Center (IFC) and Gangnam as an International Business Center (IBC) and global functions would be assigned to each of them.

- Metropolitan Centers: Facilitation of regionally balanced development through fostering the functionally specialized centers

-The metropolitan centers would play the roles to support the global functions of the city centers to create the metropolitan employment basis specialized in the areas of business, commerce, culture, tourism, R&D and high-tech industry and to facilitate regionally balanced development through the strengthened self-sufficient functions. The metropolitan centers are designated according to the intensity of new growing industries, connectivity to the metropolitan railways, large scale of available development land and separate development plans in the central areas over regional center level. Based on these criteria, Seoul selected Changdong & Sanggye, Magok, Gasan & Daerim, and Jamsil in addition to the sub-centers of Yongsan, Cheongnyangni & Wangsipni, and Sangam & Susaek.

- Regional Centers: Preparation of employment basis by living area and strengthening of self-sufficiency

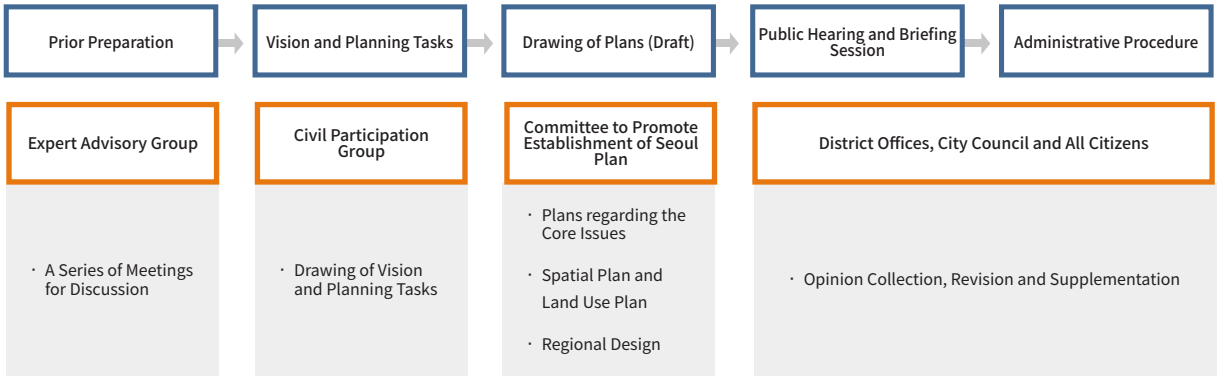
- The roles of regional centers are to strengthen self-sufficiency by living area and facilitate the improvement of living quality through the activation of commerce and business functions based on regional characteristics. Based on these criteria, Seoul selected 12 regional centers that would build up the regional employment basis, provide public services and take the roles as the centers of business and culture.

Establishment Procedure

To establish the urban master plan of Seoul, discussions were conducted about the formation of Seoul considering the characteristics of Seoul, nature and status of the strategic plans and the future vision. Seoul organized 'Citizen Participation Group' with 100 people to select the vision of Seoul and plan tasks that the citizens wanted. In order to accomplish this vision and these tasks, Seoul established a 'Committee to Promote the Establishment of 2030 Seoul Plan' consisting of civic groups, city council experts and public officials separately.

The 'Committee to Promote Establishment of 2030 Seoul Plan' drew up the urban master plan (draft), including plans regarding the core issues, plans for spatial structure and land use, regional designs and methods to realize the plans through survey, opinion collection of the districts and advisory conference by field. The draft was modified and supplemented in reflection of the opinions of the related divisions of Seoul City and the appropriate opinions of the citizens through the briefing sessions and public hearings in the districts. The urban master plan established by the citizens, experts and administrators together was finally confirmed after going through the legal administrative procedures like the deliberation of urban planning committee. The feasibility of the urban master plan has to be reviewed and adjusted every 5 years by the special city mayor, the metropolitan city mayor, the special autonomous municipal mayor, governor, or heads of counties, if any.

Figure 5 - Establishment Procedure of the 2030 Participatory Urban Master Plan of Seoul



Stage 2. Living Area Plan

Definition

In the 2030 Seoul urban master plan (Seoul Plan), the 'living area' is set as the necessary range of activities to engage in the day-to-day life and defined as the spatial range for commuting to work or school, shopping, leisure activities and social activities. Currently the living area plan is not the statutory one. For the continuous establishment and operation of the living area plan, it is required to legalize the plan according to the 'National Land Planning and Utilization Act.'

Purposes and Background to Establish the Plan

The living area plan is the intermediate stage of the planning system established on the level of Seoul regions and living areas. It is established not only to materialize the vision of Seoul and the long-term development directions regarding regional issues, but also to carry out the guidance role for the consistent and unified establishment of the urban management plan, the sub-plan of the urban master plan. The background of the living area plan is as follows.

Intermediate level of plan to improve the realization of the urban master plan

Seoul, with a population of 10 million people is not only the capital city of the Republic of Korea but also the center of a metropolitan economic bloc with population of 25 million. Like the other small and medium sized cities, Seoul was operated using a two-layer plan consisting of the urban master plan and the urban management plan until recently. But there were limits in connecting the long-term development directions presented in the urban master plan to the urban management plan to realize them in the case of a metropolitan city like Seoul. Therefore, the need emerged for the living area plan as an intermediate step to link the two plans to

improve the effectiveness of the urban plans. Based on the scheme, dual planning is made for the 5 regions (large living areas) and sub-divided zones (small living areas).

Establishment of area plans based on the lives of many citizens.

The city development and management in the past were led by the large scale of development and demolition such as the large scale of housing land development, reconstruction and new town projects. The areas outside of the plan suffered from continued decline and the small units of plans were no longer a priority. In other words, the existing urban plans of Seoul had limits in solving the problems of inconvenience felt by the citizens in their daily lives systematically. In order to address such problems, Seoul initiated the living area plan which was close to the citizens' lives to set the regional vision and development directions together with the citizens and to implement various urban plans.

Bottom-up plan established by the participation of the residents living in the regions.

Most of the urban plans of Seoul were made using the top-down system established and operated mainly by the officials and experts. The top-down plans have the advantage in managing all of Seoul synthetically and consistently, but have limits in reflecting the regional characteristics and diverse demands of the residents. The 'living area plan' was designed to switch the existing planning system to the bottom-up system like the 2030 Seoul Plan in which the citizens participated and to support the residents' participation actively. With the plan, the procedural measures to seek the solutions for the improvement of regional pending issues and living conditions together with Seoul and local governments were prepared and the justification and the procedural rationality could be secured.

Plan as a mediator to integrate and coordinate the related plans by sector (bureau and division)

Seoul established and operated the plans by sector (bureau and division) on housing, transportation, parks & green, landscape and industry in addition to the urban master plan. But the plans by sector (bureau and division) are at odds because they were established at different times. So, the living area plan plays an important role as a mediator to integrate and adjust the plans by sector (bureau and division).

Range of the Plan

Temporal Range: The living area plan is the follow-up for the urban master plan. Its regional (large living areas) plan targets the next 20 years like the urban master plan and its area (small areas) plan targets the next 10 years like the urban management plan. The first stage of the living area plan was established for the period of 2013 to 2015 for 4 regions (northeast, northwest, southwest and southeast regions) and 1 zone (small living area) of the autonomous districts in order to show an example. The second stage of the living area plan took place from 2015 to 2016 for downtown regions and the other zones (small living area) and implementation of

the necessary administrative procedures.

Spatial Range: The spatial ranges of the living area divided depending on the urban scale, administrative economy, single centered system, main terrains, purposed and natures of activities and service zones by facility. In general, the large cities have 3 categories; small living areas, mid-sized living areas and large living areas. In the case of Seoul, the living areas are divided into the 2 categories of 'regional area (large living area)' and 'zone (small living area).' Currently, there are 5 regional areas (large living areas) and around 140 zones (small living area).

Figure 6 - Division according to the 5 Regional Living Areas

Figure 7 - Northeast Regional Area

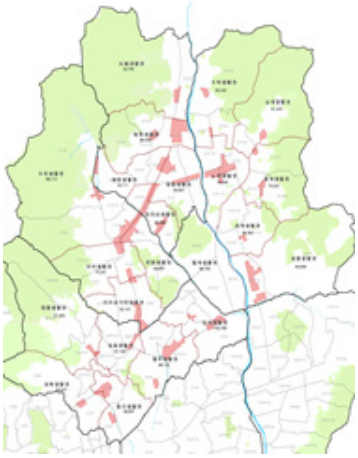


Table 1 - Comparison between the Regional Living Areas and the Living Zones

Classification	Regional Living Area	Living Zone
Concept	Regions including city center, sub-centers and the adjacent areas	Regions including district centers, main station influence area and the adjacent residential area
Criteria	Hangang (River) and Mountain area running from north to south	Considering topography, large constructions and population
Intention Point	Spatial structure towards job-housing proximity in the regions Balanced development based on self-sufficiency	Suggestion of regional development direction Establishment of tasks to improve residents/zone contacted living environment
Categories of Space	5 Regional Areas (When necessary, they can be supplemented by mid-sized living areas)	Around 140 Zones (around 3 administrative sections with less than a population of 100,000)

Status and Roles

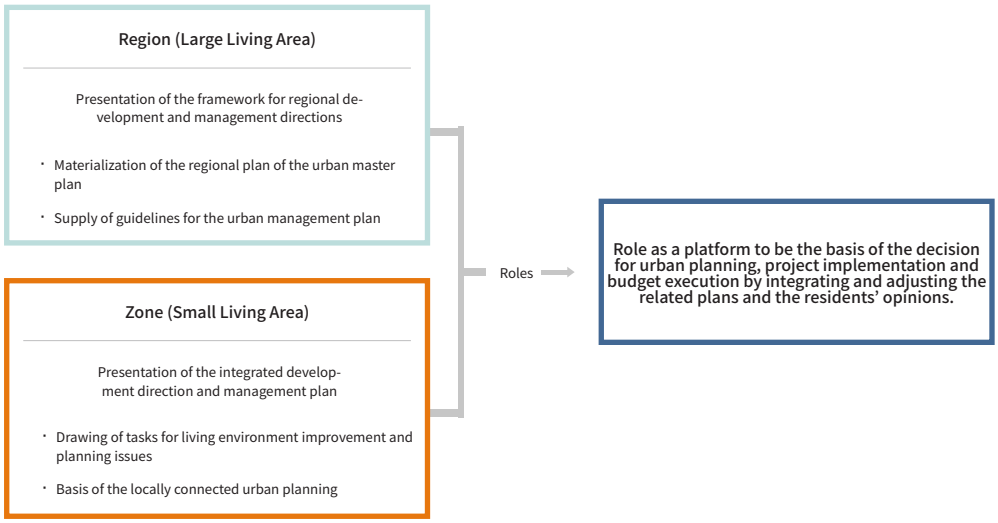
1. Established as a follow-up plan to the urban master plan

- The living area plan was established as a follow-up plan to the urban master plan to materialize the regional core issues and spatial structures presented in the 2030 Seoul urban master plan (Seoul Plan) on the level of 5 regional areas and 140 living zones.
- With the planning system consisting of the urban master plan, the living area plan and the urban management plan established, Seoul was equipped with the systematic planning framework containing the plans not only on the level of the metropolitan city but also the regional living zones for daily life.

2. Basis for the decision of urban plans, project implementation and budget execution

- The living area plan established to materialize the urban master plan integrates and adjusts the related plans made in the individual bureau or division of the Seoul Metropolitan Government in consideration of residents opinions. That would play a role as a platform to be the basis for the decision of the urban management plan, project implementation and execution of the relevant budgets.

Figure 8 - Status and Roles of the Living Area Plan



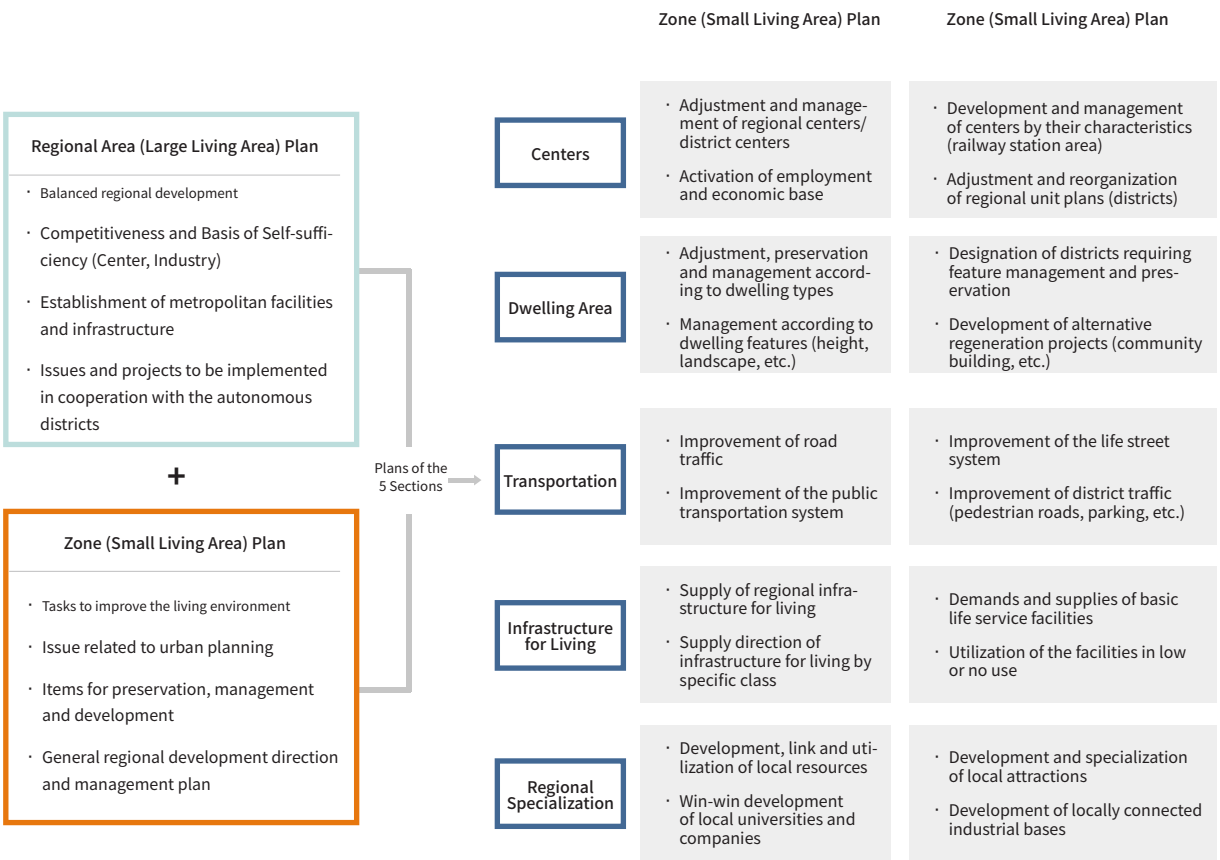
Contents of the Plan

The living area plan is the spatial plan that aims to materialize the urban master plan. It is established in 5 sections including 'centers & industry,' 'dwelling areas,' 'transportation,' 'infrastructure for living' and 'regional specialization.' The sectors can be added, omitted or integrated according to the characteristics of the living area.

In the section of center & industry of the living area plan, the development directions of the centers taking the roles of main business and commerce and the main railway station areas, and development methods and

directions of industrial resources to lead economic growth and to create jobs are produced and presented. In the section of dwelling areas, readjustment, preservation and management directions are proposed according to the dwelling types and features. In the section of transportation, the improvement directions of public transportation and transportation infrastructure are suggested on the regional or zone level. In the section of infrastructure for living, how to supply infrastructure for living and to improve its utilization are presented. In the section of regional specialization, how to develop and manage nature, history and culture to strengthen the local identity and features is proposed.

Figure 9 - Details of the Living Area Plan



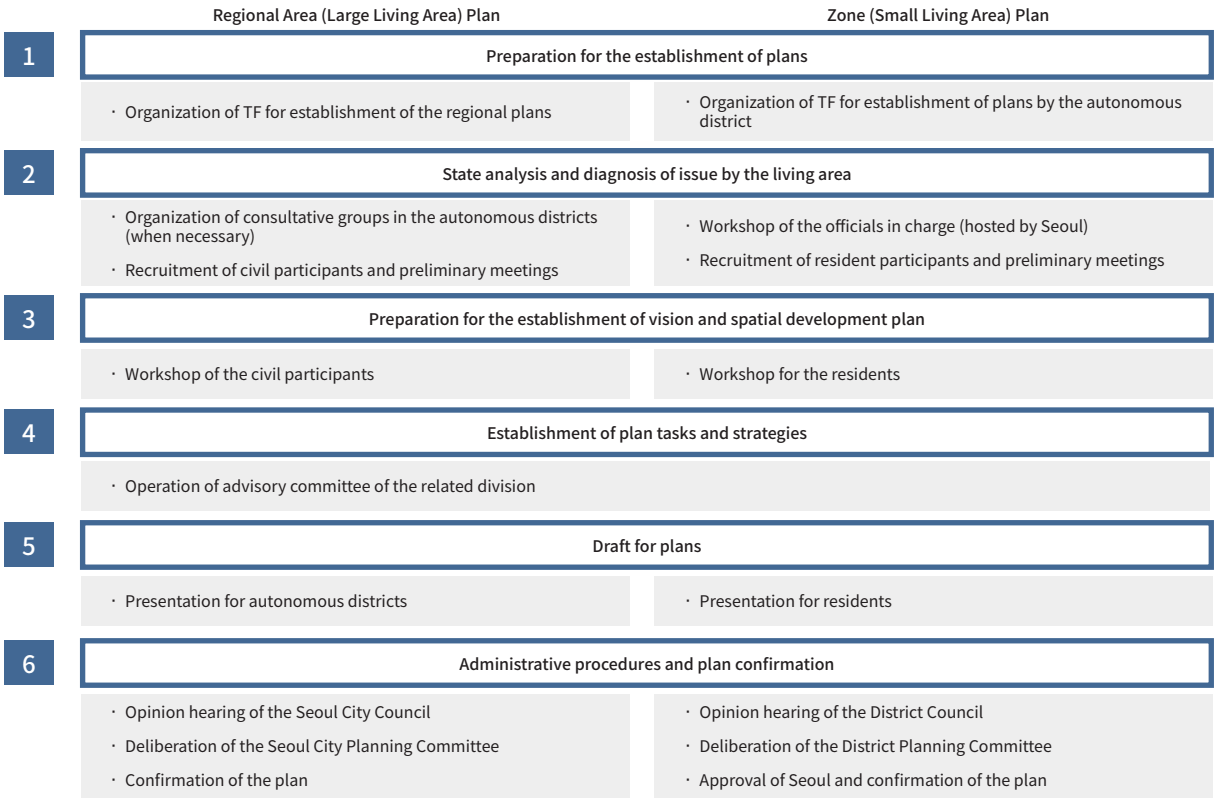
Establishment Procedure

The living area plan is established through 6 steps in total from the 'preparation for planning' to 'administrative procedures and plan confirmation.' The living area plan is focusing on the establishment process where 'Seoul city – autonomous districts – residents' and the experts. So it is important to create conditions that attract proactive participation of the subjects at each stage.

In particular, 'citizen/resident participation group' is organized in step 2. The group diagnoses the issues of the changes to living areas and problems, and facilitates the regional vision and spatial development plan. For the issues that can be solved in cooperation with neighboring districts, Seoul supports the task force team in each living area to perform collaboration and preparation for the necessary reaction plans. When necessary, district consultative groups in the region can be organized.

Finally, the living area plan has to go through the same administrative procedures for the urban master plan, the upper level one, to be confirmed. The regional area (large living area) plan is confirmed through an opinion hearing of the Seoul City Council and deliberation of the Seoul City Planning Committee. The zone (small living area) plan is confirmed through an opinion hearing of the District Councils, the deliberation of the District City Planning Committee and the approval of the Seoul Metropolitan Government.

Figure 10 - Establishment Procedure of the Living Area Plan



Stage 3. Urban Management Plan

Definition

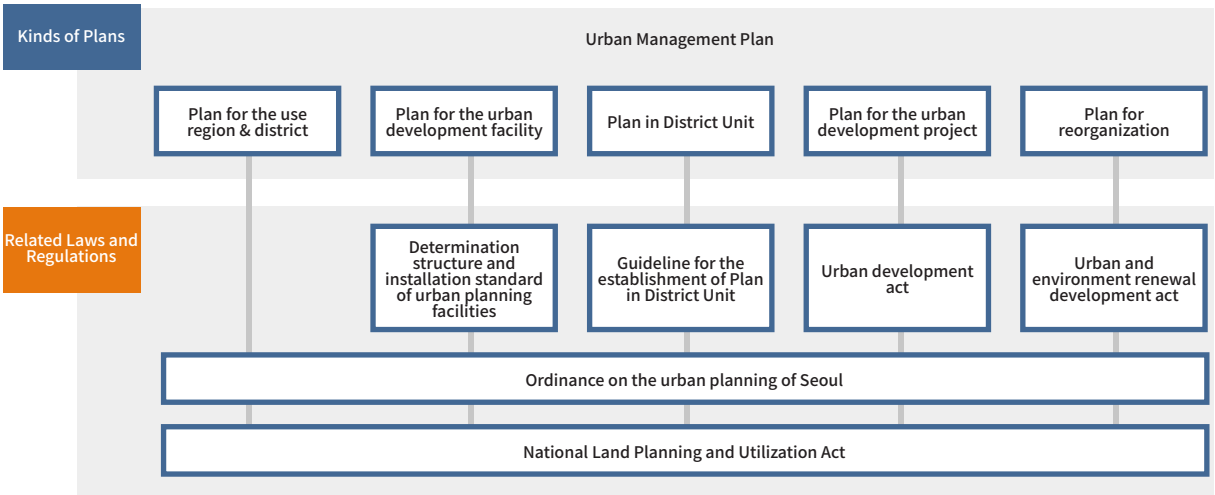
The urban management plan established according to the "National Land Planning and Utilization Act" for development, reorganization and preservation of cities is for the following items on land use, transportation, environment, landscape, safety, industry, information & communication, health, welfare, security and culture.

- Plans for designation or changes of the use region and use district.
- Plans for designation or changes to the limited development zones, urban nature park zones, controlled urbanization zones and fishery resource protection zones
- Plans for the installation, reorganization or improvement of infrastructure
- Plans for urban development or reorganization projects.
- Plans for designation or changes to the district unit planning areas and the plan in the district unit

The urban management plan shall be consistent with the metropolitan urban plan and the urban master plan. It has to be established with respect to the types of infrastructure decided by the level of details and the urban management plan differentially in overall consideration of the population, characteristics of land use and surrounding environment.

The urban management plan established to materialize and realize the long-term urban development directions presented in the urban master plan in the specific spaces, is individually established according to the purposes of plans in these areas; plan for the use region, district & area, the urban planning facilities, Plan in District Unit, urban development project and reorganization plan.

Figure 11 - the Urban Management Plan and the Related Laws and Regulations



Purposes and Background to Establish the Plan

The background of establishing the 2020 Seoul urban management plan is to meet the necessity of the administrative procedure according to the regulation in the National Land Planning and Utilization Act, to review and renew the entire existing urban management plan every 5 years and to present how to realize the plan after the renewal of the 2030 Seoul urban master plan.

The purposes of establishing the Seoul urban management plan are to lay the groundwork for the urban management plan of Seoul, to suggest the concrete methods to realize the established 2030 urban master plan of Seoul and to prepare for the management standard for the use districts by integrating the adjustment standards for the use districts that has been operated individually.

The urban management plan manages and regulates the land use and development of land directly for development, reorganization and preservation of the cities, carrying legal binding force.

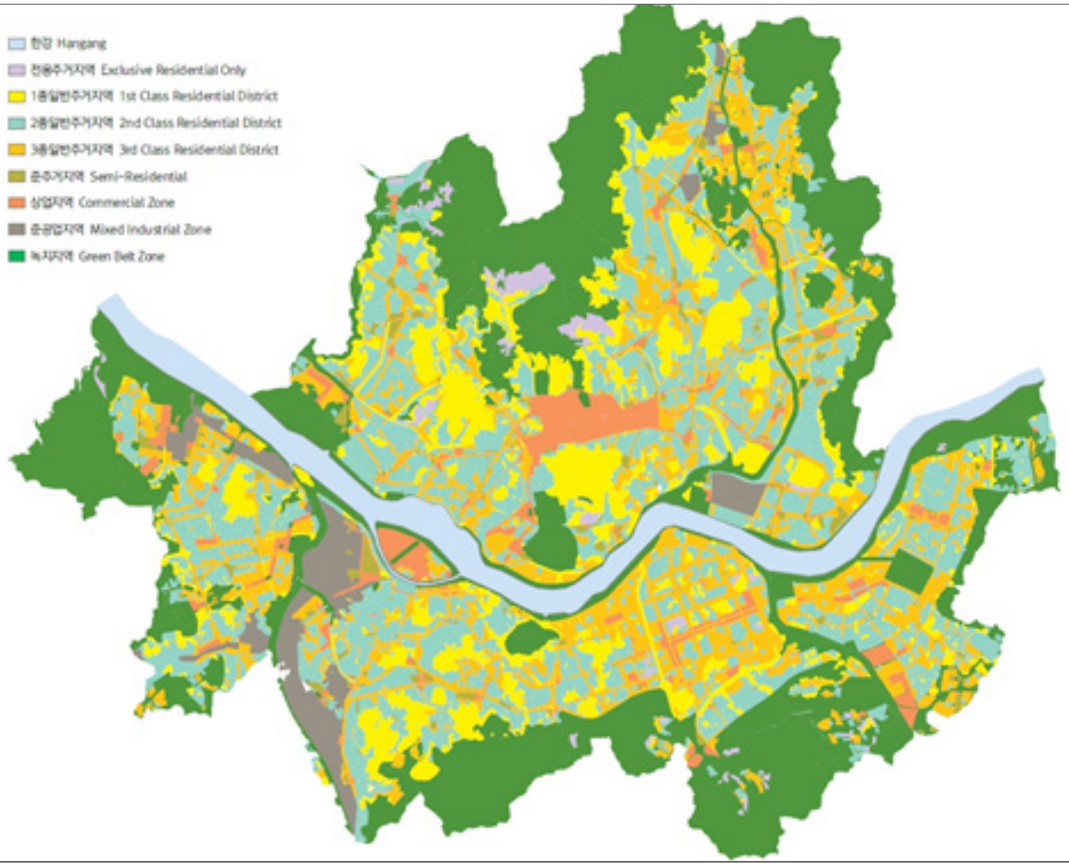
Contents of the Plan

1. Plan for designation or change to the use region, district or area.

- "Use Region" means the area designated by the urban management plan to use the land economically, efficiently and without overlapping to facilitate the improvement of public welfare by limiting the use, building-to-land ratio, floor area ratio and height of the constructions. According to the National Land Planning and Utilization Act and the Ordinance on the Urban Planning of Seoul, it is divided into 4 use regions (urban region, management region, agriculture and forestry region and nature environment protection region), and all parts of the land shall be designated as one of them. As of 2013, the whole area of Seoul was designated as urban regions (605.96㎢), which was sub-divided into residential regions (51.6%), business regions (4.3%), industrial regions (4.5%) and green regions (39.6%).
- "Use District" means the area designated by the urban management plan to increase the functionality of the use regions and facilitate their beauty, landscape and safety by strengthening or relaxing the limits on the use regions in terms of use, building-to-land ratio, floor area ratio and height of the constructions. The use district was introduced as a means of planned management and easy change of institution because there were difficulties in managing the city just with rough regulations on use regions. The use district is divided into the districts of landscape, fine view, height, prevention, preservation, facility protection, community, and development promotion. As of 2013, 197.80㎢ making up 33% of Seoul was designated as use districts.
- "Use Area" means the area designated by the urban management plan to prevent the disordered expansion of urban streets, to facilitate the planned and systematic use of land, and to perform the comprehensive adjustment and management of the land use by strengthening or relaxing the limits on the use of land, building-to-land ratio, floor area ratio and height of the constructions in the use region or in the use district. The use area acts as a mean to control the development activities or land uses in general by applying various kinds of regulated projects unlike the use region or use district. It is divided into limited development area, urban nature park area, urbanization control area and fishery resources protection area. The limited development areas are designated by the urban management plan when it is necessary to limit urban development to pre-

vent the disordered expansion of an urban area, to prevent the natural environment, to secure a sound living environment or to meet the requests of national security. In the limited development area, urban planning projects are prohibited except the activities or projects that obtained permission on a case by case basis. Since 1972, Seoul had designated 166.82㎢ as a limited development area, but lifted the restriction for 15.45 ㎢ for the purposes of the clustered settlement, national public housing and Bogeumjari (nest) housing.

Figure 12 - Status of the Use Region of Seoul (As of 2012)



용도지역 Specific Use Area	면적 Area [㎡]	비율 Percentage [%]
제1종전용주거지역 1st Class Exclusive Residential Area	5,445,969	0.9
제2종전용주거지역 2nd Class Exclusive Residential Area	844,368	0.1
제1종일반주거지역 1st Class Residential District	64,594,960	10.7
제2종일반주거지역 2nd Class Residential District	132,938,478	21.9
제3종일반주거지역 3rd Class Residential District	94,174,496	15.5
준주거지역 Semi-Residential Area	11,619,587	1.9
중심상업지역 Central Commercial Area	360,078	0.1
일반상업지역 General Commercial Area	23,246,007	3.8
근린상업지역 Neighboring Commercial Area	807,068	0.1
유통상업지역 Circulating Commercial Area	1,557,824	0.3
준공업지역 Semi-Industrial Area	27,645,005	4.6
녹지지역 Green Belt Zone	242,724,160	40.1
합계 Total	605,958,000	100.0

2. Plan for Installation, Renewal or Improvement of Urban Planning Facilities

- 'Urban planning facilities' refer to the essential public facilities that form the framework of cities, ensure smooth urban activities and maintain a good urban environment.
- According to Article 2 of the "National Land Planning and Utilization Act," the infrastructural facilities are divided into 52 types within 7 classifications which the urban management plan designates as 'urban planning facilities' to maintain urban functions.

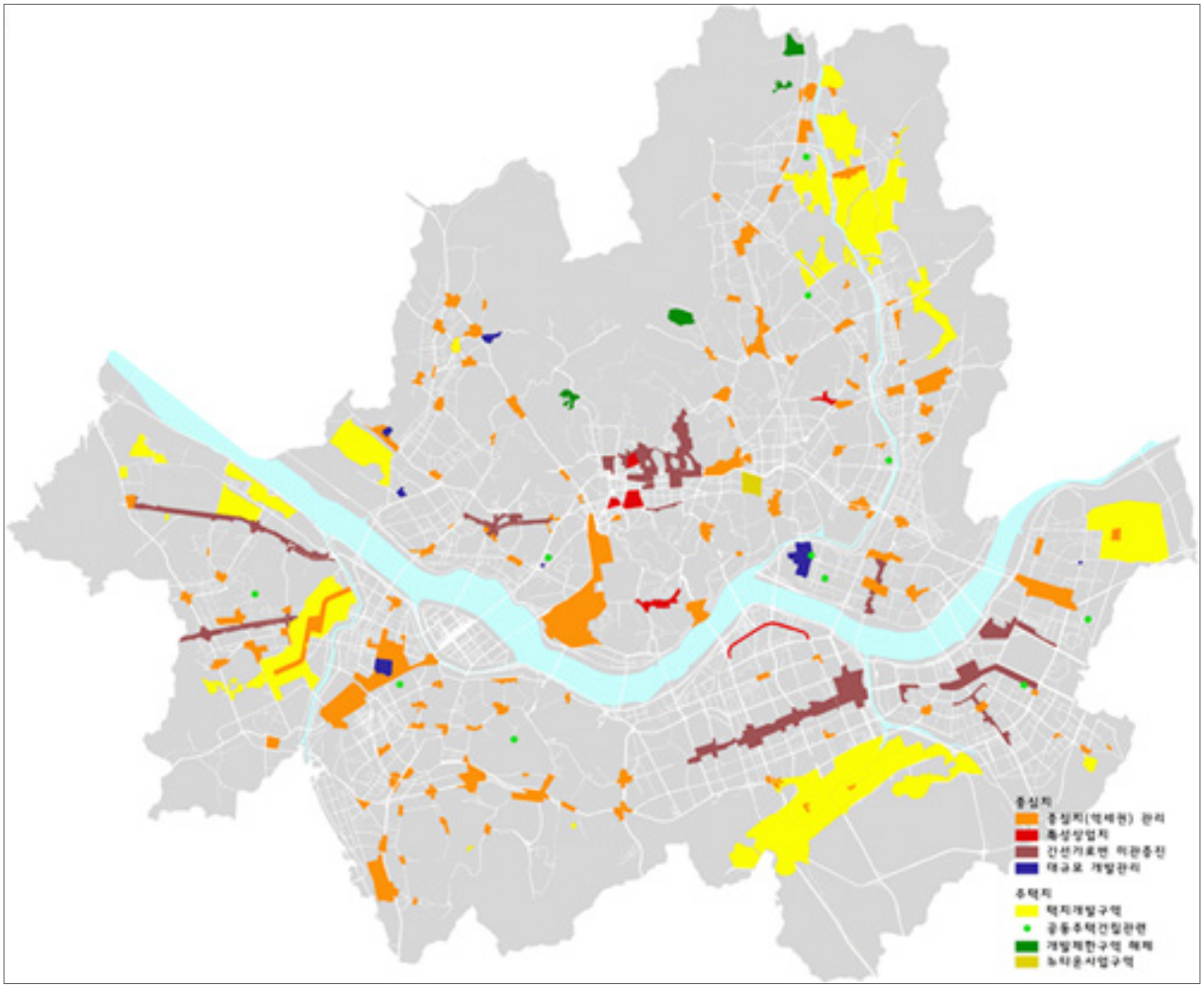
Table 2 - Kinds of the Infrastructural Facilities

Classification	No. of Facilities	Kinds
Transportation Facilities	10	Roads, parking lots, railways, tracks, harbors, canals, airports, inspection facilities for vehicles and construction machinery, driving academies for vehicles and construction machinery, automobile stops
Spatial Facilities	5	Plazas, parks, green areas, amusement parks, public open spaces
Distribution & Supply Facilities	9	Water supply facilities, electric power supply facilities, gas supply facilities, oil storage and supply facilities, broadcasting & communication facilities, heat supply facilities, pipe utility conduits, markets, distributing facilities
Public, Cultural and Physical Training Facilities	10	Schools, libraries, schoolyards, public offices, physical training facilities, cultural facilities, R&D facilities, social welfare facilities, youth training facilities, public vocational training facilities
Disaster Prevention Facilities	8	Rivers, reservoirs, storage dams, fire prevention equipment, wind protection facilities, flood protection facilities, embankment facilities, erosion control facilities
Sanitation Facilities	7	Cremation facilities, cemeteries, enshrined facilities, natural burial sites, funeral homes, slaughterhouses, general medical facilities
Environmental Basic Facilities	4	Sewers, water pollution prevention facilities, waste treatment facilities, junkyards

3. Plan in District Unit

- The plan in district unit is a part of the urban management plan established to rationalize the land use of the target regions under urban planning, to enhance the functions, to improve the appearance, to secure a good environment and to manage the regions systematically and methodically.
- There are limits in solving the problems related to urban appearance and growth management using only the construction law that regulates use regions and districts in loose ways and proposes minimum construction standards because of the accelerated extensional growth and the quantitative growth of Seoul since the 1970s. In order to address such problems, Seoul introduced the plan in district unit to allocate the functions and roles to cope with various urban problems. The plan in district unit has been settled as an integrated and intensive urban management institution that considers the flat land use plan and the three-dimensional construction plan at the same time for harmony.

Figure 13 - Designation Status of the Districts under the Plan in District Unit



- The plan in district unit includes subdivisions or changes of use region or use district, placement and scale of the infrastructure, land scale and development plan, use restrictions for buildings, building-to-land ratio, floor area ratio, minimum or maximum heights for construction, plans for the arrangement, shape, colors or construction lines, environmental management plan, landscape plan and traffic management plan.
- The districts that Seoul designates as the area for plan in district unit are the areas for strategic development and planned renewals such as areas requiring public facility renewal, street environment renewal, premeditated management of use, building-to-land ratio, floor area ratio and height, local specialization and activation via attracting the cultural functions and venture industries, the areas of mixed land use area of residential and industry in the semi-industrial regions, concentrated areas of low-rise housings, areas requiring financial support for balanced local development, areas for the development of private capital stations.

4. Planning for the Urban Development Project

- The urban development project refers to the project to create complexes or town areas having functions such as dwelling, business, industry, distribution, information & communication, ecology, culture, health and welfare in the urban development area.

- The goals of the urban development project are to create a pleasant urban environment and to increase public welfare. It can be implemented only when it is decided and announced as an urban management plan according to the 'National Land Planning and Utilization Act.' The project shall be executed according to the 'Urban Development Act.'
- In order to designate the section for urban development, the designator shall establish the plans for the development project in the relevant area. The name, location, area, designation purposes of the urban development section, project period, contractor, implementing method, population accommodation plan, land use plan, traffic processing plan, environmental preservation plan and financing plan shall be included in the development plan.

5. Plan for the Renewal Project

- The renewal project is implemented to systematically reorganize the areas requiring recovery of urban functions or in a poor residential environment or to improve old and poor buildings efficiently. The goals of the projects are to improve the urban environment and increase the quality of residential life.
- The renewal project can be implemented only when it is decided and announced as an urban management plan according to the 'National Land Planning and Utilization Act.' The project shall be executed according to the 'Urban and Residential Environment Renewal Act.'
- The renewal project refers to renewal of infrastructure and improvement or construction of buildings including houses in the renewal sections or town street sections (which are not the renewal sections but are designated by Presidential Decree).
- In order to have an area designated as a renewal section, the head of a local government shall establish the renewal plan, notify the residents of the plan in writing for over 30 days for public inspection and opinion collection and apply for designation as a renewal section to the Seoul Metropolitan Government. Name of the renewal project, renewal section and area, urban planning facilities, joint use facilities, main use/building-to-land ratio/floor area ratio/height of the buildings, environment preservation and disaster prevention plans, educational environment protection plan, tenant housing measures and scheduled period of the renewal project should be included in the renewal plan.

Implications

Seoul, the capital city of the Republic of Korea with a 2,000-year history has undergone a turbulent development period so far. Especially since the 1960s, Seoul has gone through urbanization in rapid industrialization and quantitative growth, resulting in Seoul becoming one of the global metropolitan cities. The big changes to Seoul made over the short period of 50 years were backed by an urban planning system such as the urban master plan.

The urban planning system works in 3 stages; 'urban master plan – living area plan– urban management plan' as shown above. For better and more desirable operation of the urban planning system, however, the following improvements and complements are needed.

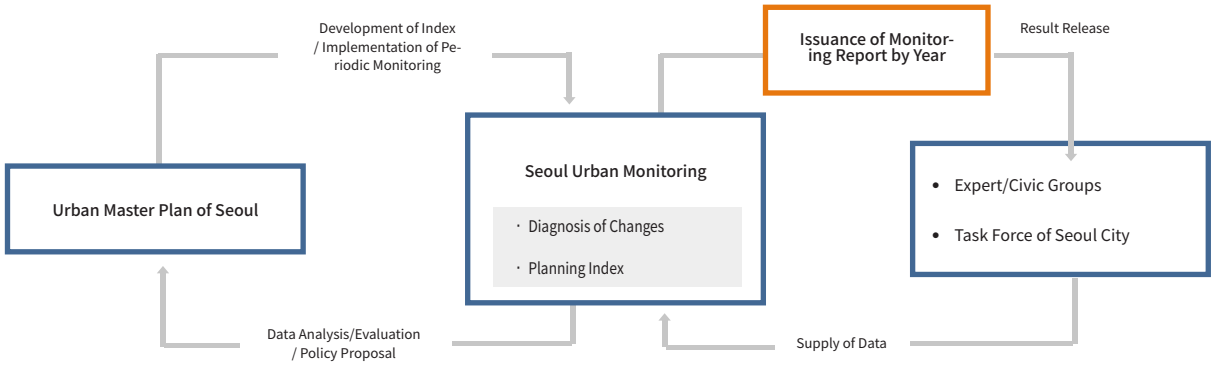
Substantiality of the Planning System

It is necessary to ensure the planning system consisting of the urban master plan, living area plan and urban management plan. The vision of Seoul, spatial structure and plans regarding the core issues presented in the urban master plan as the highest level plan shall be realized by the living area plans and various urban management plans. In other words, all sub-plans shall share the vision of Seoul as a "Happy citizens' City with communication and consideration" presented in the 2030 Seoul Plan, and shall be established in consideration of consistency with the 2030 Seoul Plan. The living area plan established as a sub-plan shall embody the spatial structure plans, plans regarding core issues and regional plans presented in the 2030 Seoul Plan in its own plan in consideration of the regional characteristics and draw the living connected issues concretely. It shall also be the guideline for various urban management plans as an intermediate plan connecting the urban master plan and the urban management plans. In other words, the living area plan shall suggest the planning direction and operating principles for the urban management plans that are individually established and operated for use regions, use districts, use sections, plan in district unit, renewal plans and urban planning facilities. Through continuous renewal, the living area plan shall provide the integrated framework for urban management.

Establishment of Urban Plan Monitoring System

The 2030 Seoul Plan was established as the urban master plan. It is important above all to monitor the realization process of the Seoul Plan continuously and to propose supplemental points and development directions which can be considered in establishing the next urban master plan, securing the realization of plans. The desirable policy execution and realization of plans on the issues in the urban planning area on population, housing, industrial economy, land use, transportation and climate change presented in the urban master plan and the living area plan shall be monitored and reflected in the subsequent plans by a well-established monitoring system.

Figure 14 - How to Establish the Urban Monitoring System



The monitoring system of Seoul can work in multi-levels for 1) changing status of urban environment in population, industry, land use and housing 2) achieving the degree of the policy goals set in the urban master plan and 3) comparison analysis with the global metropolitan cities. The monitored results are reflected in the subsequent planning through the feedback process. By the diagnosis and evaluation on the changes in conditions of Seoul, the existing planning tasks can be adjusted, new planning tasks can be presented and the priority of tasks and the main progress direction can be reset. It is necessary to prepare concrete action plans and procedures to reflect such results.

Civil Participation and Strengthened Communication System

The 2030 plan was the first urban master plan established in which various members participated. The 'Citizen Participation Group' drew the vision of Seoul directly and the 'Committee on the Establishment of Seoul Plan' consisting of citizens, experts, city council members and the Seoul Institute led the establishment of the specific and concrete plans. The living area plan established following the urban master plan was made in cooperation with the residents even in small living areas using the bottom-up method. Seoul released the information related to the planning processes and prepared various programs such as the 'Urban Planning School' to facilitate the participation of the citizens and to seek governance that the citizens can exert their abilities.

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Home Pages

- http://urban.seoul.go.kr (Web site of Seoul for Urban Planning)
- http://stat.seoul.go.kr (Statistics of Seoul)

7. Housing Site Development Projects

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Policy Area: Urban Planning

Definition & Background

A housing site development project is a comprehensive land development method implemented by the public sector through active participation in all processes, including land acquisition, development, supply, and management. In December 1980, the Housing Site Development Promotion Act was established to efficiently supply land for apartment houses. By the end of 2006, a total 639.674 million m² were included in estimated housing development districts nationwide with 37.106 million m² in 41 districts in Seoul. Mainly public institutions implemented housing site development projects in downtown Seoul. Since projects are initiated only after sites are purchased, preventing privatization of development gains has been a goal, as well as constructing urban infrastructure and convenience facilities.

Table 1 - Designation of Housing Site Development Project Districts (as of end of 2006)

(Units: 1,000 m^2, (%))

Division	Total	Korea Land Corporation	Korea National Housing Corporation	Local Government Agency
Nationwide	639,674 (100)	344,313 (53.83)	171,325 (26.78)	124,036 (19.39)
Metropolitan Areas of Major Cities	336,123 (100)	190,042 (56.54)	88,199 (26.24)	57,882 (17.22)
Seoul	37,106 (100)	6,438 (17.35)	7,378 (19.88)	23,290 (62.77)

Source: Ministry of Construction & Transportation , 2007, 2007 Housing Business Manual p.160, Housing Seoul, 2008, Internal Data

Changing Characteristics of Housing Site Development Projects

In 1980, the government initiated the 5 Million-Housing Unit Construction Plan and established the Housing Site Development Promotion Act (enacted in December 1980) as part of its efforts to secure land. The establishment of this act enabled a project entity to purchase large amounts of land surrounding major cities at affordable prices and rapidly promote projects in a short period of time. Previously, land readjustment projects were focused on small parcels, not only advantageous for avoiding collective construction of high-density apartment complexes, but also unsuitable for securing large housing sites due to the increase in housing construction costs caused by increased land prices.

The Housing Site Development Promotion Act (the Housing Act) also entails urban planning functions for the Urban Planning Bureau. The Act enables pre-designation and whole take-over of affordable green zones or

farmland. It also allowing the changing of those areas to residential areas in the development project-planning phase. It further allowed the acquisition of land at reasonable prices, thereby quickening development. It is consistent with public development in that a public entity purchases the entire land for development to keep development gains out of private hands and in the public sector, where they will be reinvested in housing site development projects.

With the establishment of the Housing Act, housing site development under the Housing Construction Promotion Act (the Promotion Act), which had been actively promoted in the late 1970s, became small-scale development projects, with large-scale development implemented in a way that develops individual complexes under the Promotion Act after housing site development based on the Housing Act. Furthermore, with the establishment of the Housing Act, the government designated[9] approximately 1,000 pyeong in 30 cities as the first estimated housing sites.[10] In 1986, the government prohibited adjustment projects in the Metropolitan area and six major cities, making public development projects under the Housing Act the main method of supplying new housing sites. This sparked active promotion along with the Two Million Housing Unit Construction Plan by the government in 1988. Between the 1980s and 1990s, development of large-scale housing took place in areas such as Gaepo, Godeok, Mokdong, Sanggye, Junggye, Suseo, and five new towns in the Metropolitan area, where individual residential complexes were constructed under the Promotion Act after implementation of housing site development programs with the Housing Act as the applicable Act.[11]

In the late 1980s, the Housing Act actively promoted public development. In 1988, regional corporations were installed in Seoul and Daegu as well as public development agencies in each city and province in the nation to expand public development to local governments, and encourage such actions as donation of development gains to regions and expansion of local finance to facilitate housing site development. With this in mind, Seoul City and local governments began to participate in large-scale public housing site development projects that had been led primarily by housing corporations and land corporations.

9. Kim Jung-ho, Bae Soon-seok et al. (1994), Page 62

10. Canceled September 1, 1993 by administrative order of the Ministry of Construction & Transportation.

11. Public development of purchased real estate within development areas at affordable prices was established through the authoritarian nature of the government in the early 1980s. The public development method was losing credibility as a provider of real estate at affordable prices due to landowner demands for higher compensation or failure to respond to sale requests in the late 1980s during the progress of societal democratization.

Figure 1 - Seoul's Housing Site Development Project Districts

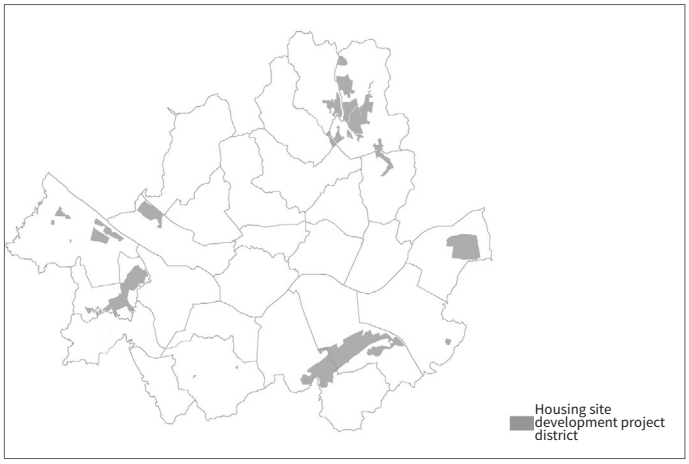


Table 2 - Seoul's Housing Site Development Project Districts

Division	Local Government	District	Location	Area (1,000 m^2)	Number of Houses (Household(s))	District Designation Date	Project Completion	Project Operator
Total		41		33,228	306,451			
1980s	Gangdong-gu	Godeok	Godeok-dong	3,148	19,010	'81. 4	'88.12	Korea Land Corporation
	Gangnam-gu	Gaepo 2	Gaepo-dong	335	31,923	'81. 4	'82.7	Seoul City
	Gangnam-gu	Gaepo 1	Gaepo-dong	1,694		'81. 4	'84.12	Korea Land Corporation
	Seocho-gu, Gangnam	Gaepo 3	Gaepo, Yangjae-dong	6,494	800	'81. 4	'88.12	Seoul City
	Nowon-gu	Wongae 1	Wolgye-dong	75	800	'82. 2	'83.9	Seoul City
	Yangchun-gu	Mok-dong	Mok-dong	4,375	26,629	'83. 6	'95.3	Seoul City
	Nowon-gu	Wongae 2	Wolgye-dong	246	4,840	'84. 4	'86.6	Seoul City
	Mapo-gu	Sung-san	Sungsan-dong	189	3,710	'84. 4	'86.12	Seoul City
	Songpa-gu	Munjung	Munjung-dong	423	4,494	'85. 10	'88.11	Seoul City
	Nowon-gu	Sanggye	Sanggye-dong	3,308	39,782	'85. 4	'91.12	Korea National Housing Corporation
	Nowon-gu	Junggye	Junggye-dong	1,596	24,865	'85. 4	'92.6	Korea Land Corporation
	Dobong-gu	Changdong	Changdong	497	6,500	'86. 7	'92.11	Korea National Housing Corporation
	Gangbuk-gu	Bun-dong	Bun-dong	360	6,511	'86. 7	'93.12	Korea National Housing Corporation
	Nowon-gu	Junggye 2	Junggye-dong	1,344	16,660	'86.12	'98.12	Seoul City

1980s	Nowon-gu	Wolgye 4	Wolgye-dong	150	4,300	'89.12	'94.6	Korea National Housing Corporation
	Gangnam-gu	Daechi	Daechi-dong	240	4,198	'89. 3	'96.7	Seoul City
	Gangnam-gu	Suseo	Suseo-dong	1,335	16,353	'89. 3	'96.7	Seoul City
	Seocho-gu	Woomyeon	Woomyeon-dong	157	2,327	'89. 3	'96.12	Korea National Housing Corporation
1990s	Gangseo-gu	Gayang	Gayang-dong	977	16,462	'89. 5	'96.7	Seoul City
	Gangseo-gu	Deungchon	Deungchon-dong	763	12,306	'90. 7	'96.6	Korea National Housing Corporation
	Nowon-gu	Shillim	Shillim-dong	27	960	'90. 7	'96.12	Seoul City
	Gangseo-gu	Banhwa 2	Banghwa-dong	89	1,995	'90. 9	'96.6	Seoul City
	Gangseo-gu	Banghwa	Banghwa-dong	640	8,101	'90. 3	'97.8	Seoul City
	Jungang, Nowon-gu	Sinnae	Sinnae Gongreung-dong	1,032	12,007	'90. 3		Seoul City
	Nowon-gu	Wolgye 3	Wolgye-dong	203	3,744	Sep.90	'97.7	Seoul City
	Nowon-gu	Gongreung 1	Gongreung-dong	175	3,420	'90. 9	'97.1	Seoul City
	Songpa-gu	Geoyo	Geoyo-dong	184	4,008	'91.12	'98.8	Seoul City
	Nowon-gu	Wolgye 6	Wolgye-dong	136	2,475	'91.12	'99.12	Seoul City
	Nowon-gu	Wolgye 6	Wolgye-dong	36	981	'91.12	'00.6	Seoul City
	Dobong-gu	Changdong 2	Changdong	22	609	'91.12	'00.9	Seoul City
	Nowon-gu	Gongreung 2	Gongreung-dong	386	5,365	'91.12		Seoul City
	Nowon-gu	Sanggye2	Sanggye-dong	283	4,607	'91.12		Seoul City
	Nowon-gu	Sanggye3	Sanggye-dong	54	1,053	'91.12		Seoul City
	Gwanak-gu	Bongcheon	Bongcheon-dong	25	564	'91.12		Seoul City
	Gangseo-gu	Hwagok	Sinjung-dong	29	625	'92.12	'99.12	Seoul City
	Yangchun-gu	Sinjung	Sinjung-dong	122	1,302	'96. 4		Seoul City
	Yangchun-gu	Sinjung 2	Sinjung-dong	140	1,800	'96. 4		Seoul City
	Dobong-gu	Dobong	Dobong-dong	70	584	'97. 3		Seoul City
	Mapo-gu	Sangam	Sangam, Sungsan-dong	1,629	6,307	'97. 3		Seoul City
	Yangchun-gu	Sintu-ri	Sinjung-dong	180	3,444	'99.12	00'.6	Seoul City

Source: Urban Planning Bureau of Seoul, 2008, Internal Data

Typical Housing Site Development Project Districts

Gaepo District

In response to the Five-million Housing Unit Construction State Policy initiated by the government, the entire area of Gaepo-dong and Ilwon-dong in Seoul were designated as districts for project implementation in order to supply affordable housing sites to tackle the housing shortage. These areas were chosen to absorb the increase in population expected with the development of Gangnam in the mid-1970s. Gaepo District encompasses Gaepo-dong and Ilwon-dong, Gangnam-gu, Seoul, an area of 1,693,559 m² (512,300 pyeong). The area is located 13 km to the southeast of downtown Seoul, 12 km to the east of the center of the large residential areas in Yeongdeungpo, and 5 km to the northeast of Gwacheon. On April 11, 1981, Gaepo was designated as an estimated housing site development district; development commenced December 24, 1981 and was finished in December 1984. The development master plan included 20% detached housing and 80% multi-family housing to accommodate 23,309 people or 5,287 households. A survey on land compensation was conducted from April to September 1981 to reach an agreement on compensation. The cost of the project was 37.242 billion won, including land (66.7%) and site development costs (33.3%).

Godeok District

Godeok was designated as an estimated housing site development district in April 1981, with construction beginning May 3, 1982 and finishing December 30, 1985. The total area for the project was 3,148,450㎡ and cost 81.294 billion won (49.359 billion won in land costs and 31.935 billion won in site development costs). Godeok district encompassed all of Godeok-dong and Myungil-dong in Gangdong-gu, Seoul, located about 1.6 km to the east of the downtown area and about 2 km from the center of Cheonho-dong. The housing site composition for the Godeok district was intended to accommodate 75,250 people in 18,820 households. The excellent clinical services available in Myungil Park in central and outskirt development prohibited zones were utilized to create suburban-type housing complexes. Residential areas (55.6%) were properly placed with multi-family, detached, and tenement housing units. The size of a detached house was based on 70 pyeong per parcel. Commercial areas (3.4%) were installed in the center of the district, and the public corporation planned the first urban design for commercial areas to ensure the proper placement of business facilities. Land for public use accounted for 33%, which is considered a high proportion. Adequate land for educational facilities provided space for six elementary schools, four middle schools, and six high schools to serve a population of 75,000. The amount of available water supply was 400L per person per day, and intercepting pipelines were installed at Tancheon Sewage Treatment Plant to treat sewage. The Seoul city government covered 11 billion won (16%) of the cost for Tancheon Sewage Treatment Plant to treat the district's sewage

Junggye District

Junggye district was designated as an estimated housing site development district on April 10, 1985 with construction supervised by the Korea Land Corporation. On October 29, 1985, the Corporation initiated a land compensation program, which obtained development approval on April 2, 1986 and completed construction on June 29, 1992. The total area of the project was 1,597,675 m², with costs totaling 140.369 billion won. Junggye District encompasses all of the Dobong-gu, Junggye-dong, Hagye-dong, and Gongreung-dong areas in Seoul where people mostly owned land from other regions. More than 95% of the residents are the urban poor working at adjacent brickyards, living in greenhouses and board-framed houses. Despite the poor living conditions, a countermeasure committee and a resident representative group was created by residents who were very active in autonomous activities. This served as an important basis for organizing a Multi-family Housing Association, a part of the Junggye District Relocation Plan.

With designs to accommodate 99,460 people, the plan was to organize 866,849 m² (54.4%) of land for housing, and 33,462 m² (2.1%) for commercial purposes, and 692,307 m² (43.5%) for public use. The plan did not include land for single-detached housing. A joint relocation measure was implemented through close coordination with the nearby Korea National Housing Corporation and Sanggye district and was the first district where land development was implemented by both public and private entities. It was the first public district to receive multi-housing land because the single-unit houses needed for migration measures were impossible to secure as the development was implemented in public districts only.

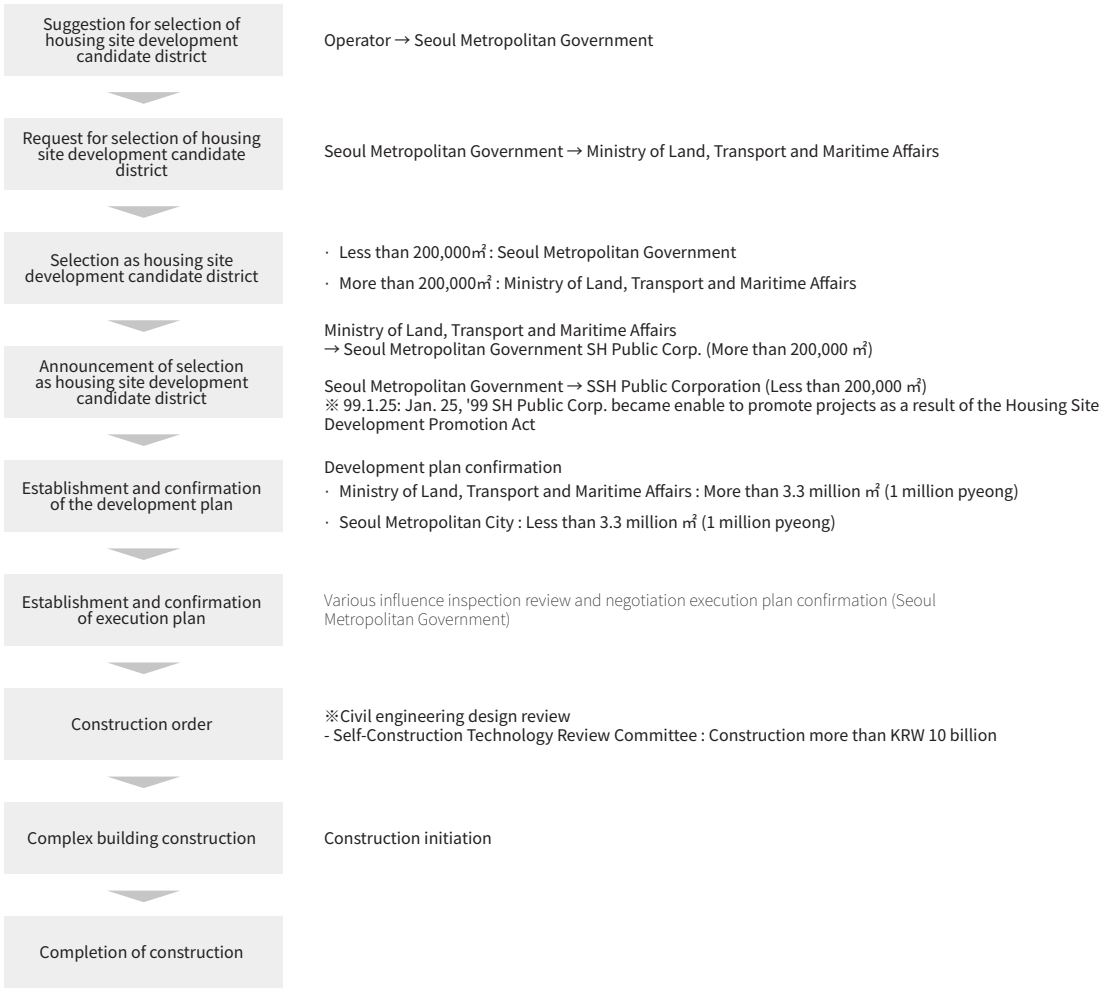
Promotion of Housing Site Development Projects

Procedure

When a housing–site-development project is proposed by a project operator such as the government, local government agencies, the Korea Land Corporation, the Korea National Housing Corporation, or regional corporations, the relevant site will be estimated for designation as a housing development district through review by the Housing Policy Committee. A public announcement of the proposal will be made, the opinions of the relevant local government agency and residents considered, and consultation held between the Central Administration Organization and the Ministry of Land, Transport & Maritime Affairs. From 2000, when a specific area is designated or rejected as an estimated housing development district, the area would be deemed designated or rejected as a Type 1 District-unit Planning Area in accordance with Article 51 of the National Land Planning & Utilization Act. When a district is designated for development, land would be supplied according to the housing site development plans, implementation plans, and housing site supply plans. While

mayors and governors have the power to approve proposals, only the Ministry of Land, Transport & Maritime Affairs has the authority to approve housing site development plans for districts of 200,000 m² or more and districts of 330,000 m² or more.

Figure 2 - Procedure for Housing Site Development in Seoul



Housing Site Development Processing Standard

The purpose of housing site development projects is to supply land for mass housing in response to rapid urbanization. Housing site development plans are established in accordance with the Housing Site Development Guidelines. These guidelines set standards for the distribution of housing construction land, the housing allocation for each size of lot for multi-family housing, the method of supplying housing sites, and supply prices.

Table 3 - Ratios for Allocation of Housing Construction Land

Area	Use of Land for Multi-family Housing		Single-detached Housing Construction Land
	Apartment Complexes	Tenement /Multi-household Housing	
1. Metropolitan Seoul and Busan	60% minimum	20% maximum	1. Metropolitan Seoul and Busan
2. Metropolitan Areas (Except Busan and Incheon)	40% minimum	20% maximum	2. Metropolitan Areas (Except Busan and Incheon)
3. City Areas	50% minimum		50% maximum
4. Other Areas	The entity with authority to approve housing site development projects will be determined by regional conditions.		

Note: For no. 1, 2 & 3 above, the entity with authority to approve housing site development projects may adjust the allocation ratio within a 20% range based on regional conditions
Source: Article 13, Housing Site Development Guidelines

Land to be designated for construction of multi-family housing is chosen according to the size needed for a certain number of families, unit sizes in the pyeong, the number of floors to be built, and the floor area ratio (FAR) for each household. Areas for construction of single detached housing are to be developed in parcel units of 165~660 m² per piece of land. In metropolitan areas, apartment complexes were to be constructed on at least 60% of development sites, a maximum of 20% for tenement /multi-household buildings, and a maximum of 20% for single detached housing. Within Seoul, land for single detached housing is rarely provided.

In September 1989, land was provided to supply 20-50% of multi-family housing land for public lease housing construction. Permanent lease housing and 50-year Public Lease Housing were mainly constructed from 1989 to 1990, and 5-year Public Lease Housing from 1990 to 2003.

Table 4 - Supply Standard for Rental Housing Construction Land

	Details of Transition
Sept. 1989	Minimum 30% of land for construction of multi-family housing
Nov. 1990	Minimum 20% of land for construction of multi-family housing
Dec. 2003	Minimum 40% of land for construction of multi-family housing

Source: Korea Land Corporation, 2007, Housing Site Development Guidelines

The size of housing to be constructed on land for construction of multi-family housing was regulated at 30% or more if it was 60㎡ and under, 60% or more if it was is 85㎡ and under, and under 40% if it was more than 85㎡. However, the entity authorized to approve housing site development projects may adjust these percentages within a 10% range when deemed necessary based on regional conditions.

Table 5 - Allocation Percentage for Dwelling Scale of Multi-family Housing Construction Land

Period	60㎡ or less	85㎡ or less	More than 85㎡
Aug. 1995	30-50%	· 70% or more including 60㎡ or below	· Below 30%
Feb. 1996	· Metropolitan areas and Metropolitan cities: 30% or more · Other Areas: 20% or more	· 60% or more including 60㎡ or below	· Below 40%
Jan. 1998	· The Metropolitan areas and Metropolitan cities: 30% or more · Other Areas: 20% or more	· 60% or more including 60㎡ or below	· Below 40%
Dec. 1998	· The Metropolitan areas and Metropolitan cities: 30% or more · Other Areas: 20% or more	· 50% or more including 60㎡ or below	· Below 50%
Aug. 2001	· The Metropolitan areas and Metropolitan cities: 30% or more · Other Areas: 20% or more	· 60% or more including 60㎡ or below exclusive	· Below 40%

Note: Starting from 1998, the entity authorized to approve housing site development projects may adjust the percentages within a 10% range considering regional conditions.
Source: Article 13 of Housing Site Development Guidelines

Competitive bid prices vary within 60% of construction costs in accordance with the usage of housing site supply prices. In Seoul and the metropolitan area, land for construction of lease housing provided in lots of 85 m² or less is provided at 60-85% of construction costs, building plots for housing units of 60 m² or below is provided at 95% of construction costs, public land is provided at 100% of construction costs, and housing construction land in lots of 60-85 m² is provided at 110% of construction costs. Commercial land is provided according to competitive bids and other sites according to appraisals.

Table 6 -Housing Land Supply According to Application & Supply Price (Based on End Users)

Application	Supply Method	Supply Price (Remarks)
Commercial site	· Competitive bid	· Bid
Supermarkets	· Competitive bid	· Bid
Religious buildings	· Lottery	· Appraised value
Kindergartens	· Lottery	· Appraised
Public government buildings	· Private contract	· Construction cost
Parking lots	· Competitive bid	· Bid
Parking lots	· Lottery	· Appraised
Medical centers	· Lottery	· Appraised value
Telecommunications facilities	· Private contract	· Appraised value
Comprehensive energy facilities	· Private contract	· Appraised value
Power supply equipment	· Private contract	· Appraised value
Urban factories, integrated facilities of venture enterprises, software business facilities	· Private contract	· Appraised value
Agriculture-related facilities	· Lottery	· Appraised value
Social welfare facilities	· Private contract · Private contract	· Construction cost (social welfare corporations) · Appraised value

Note 1. If a large housing site project (at least 3.3 million m^2) is developed as new town construction, some of the aforementioned standard may be adjusted in special cases.
Note 2. Electricity, toxin, and gas may be provided at construction cost if the receiver is subject to the Framework Act on Management of Government-Invested Institutions.
Source: Article 13, Housing Site Development Guidelines

Management of Housing Site Development Projects

With the revisions to the National Land Planning & Utilization Act in 2000, management of housing development sites and projects changed to a district-unit plan. This revision requires that districts designated for housing development projects include district-unit plans upon approval of the project implementation plan, and also gives details related to the Type 1 District-unit Plan and plans for implementation.

The development of housing site projects were mainly focused on apartment complexes; hence, it is necessary to be prepared for individual reconstruction and remodeling projects through a district-unit plan than that of Redevelopment Master Plan of Urban Central and Residential Areas. Development FAR requires continuous management after project completion to prevent overload of infrastructure at the initial planning phase.

Housing Site Development Project: Mok-dong District

Overview

Mok-dong district spans Yangcheon-gu Mok 1-dong, Mok 5-dong, Mok 6-dong, Sinjung 1-dong, Sinjung 2-dong, and Sinjung 6-dong. It was a large "new town" geared towards apartment complexes and features the Anyang stream, Mok-dong Sports Stadium, unique green zones and neighborhood parks within apartment complexes equipped with sports facilities.

The district complex has great access to the subway system (lines 2, 5 and 7); however the station is located on the outskirt of the complex thus public transportation is not readily available. Kyongin Expressway goes through the district, and the area also includes Nambu Sunhwan-ro. Seobu Expresswa. and Sindorim Overpass. However, traffic is congested on the Kyongin Expressway, Omok-ro, and Sinjung-ro arterial highways.

Appointment of Estimated Housing Site Development Districts

In April 1983, Seoul City announced its Southwest Regional Development Plan to create high-density residential complexes in the Mok-dong district. In May, the city requested housing site development districts for an estimated 4,375,000 m² (1,323,000 pyeong) of the Mok-dong district. The assignment request was approved in June. The purpose of the proposal was to boost stagnated areas and embody multi-core downtown development of the Mok-dong district centered as a large living zone in the Southwest region. Furthermore, the proposal was aimed at alleviating the housing shortage by supplying a large number of apartment complexes through large-scale housing site development.

After applying for district designation, Seoul City announced that its Mok-dong Newtown Development Plan would implement parcel and rental in a 2:1 ratio, including 25,000 apartment units of between 66 m² (20 pyeong) - 181 m² (55 pyeong) with the philosophy of initiating a "world-class new town construction idea". In addition, the plan included 11 schools (five elementary), regional heating from a new combined heat and power plant, and a public design contest for the construction master planning of Mok-dong New Town.

The Mok-dong district development began in April 1984 with apartment complex construction and was completed in November 1989. In 1988, Yangcheon-gu was separated from Gangseo-gu, and construction of the central axis and the strategic means of Mok-dong district development began. The central axis of Mok-dong new town was in a form where the central axis of the Hook new town plan was bent in the letter S and the two piled alongside. The central axis is a strip 150m wide, 4.5 km long, and covers an area of 607,000 m² (184,000 pyeong) that connects south and north, where a linear traffic system is planned to properly connect each major gu district.

Table 7 - History of Mok-dong District Development

Period	Details	Remarks
May 1983	· Request for housing site development district estimation	
Jun. 1983	· Housing site development district estimated	· Notice No. 201 of the Ministry of Construction & Transportation
Sept. 1983	· Approval granted for housing site development plan	
Oct. 1983	· Housing site development project implementation plan submitted for approval	
Nov. 1983	· Housing site development plan approved	· Notice No. 373 of the Ministry of Construction & Transportation
Jan. 1984	· Housing site development project implementation plan approved	· 4,375,000 ㎡(1,323,000 pyeong)
Mar. 1984	· Master Plan for housing site development project approved	
Jul. 1984	· Passed deliberation of the Central Design Council of the Ministry of Construction and Transportation's	· Seoul City Notice No. 995
Mar. 1995	· Housing site development projects complete	
2006	· Redevelopment of the district-unit planning of the central district	

Source: Seoul Special City, 1991, An Evaluation of Mok-dong Public Development, p.881~888

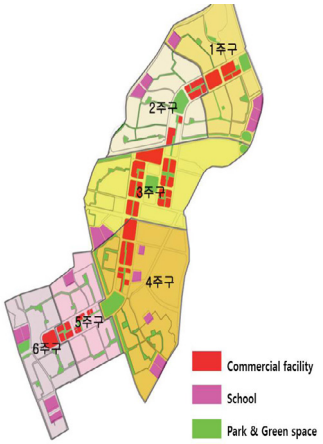
Characteristics of the Mok-dong Housing Site Development Plan

Mok-dong district is the central part of the Gangseo region. The project in this area was modeled after the linear central axis planning in the Hook Newtown Proposal (1961), with an aim of mitigating the housing shortage and stabilizing housing prices, using development profits for public development of high density residential complexes, reinvestment of collected funds, and trial urban infrastructure.

Planning Characteristics: Composition of Linear & Overlapping Living Zones

The Mok-dong district is a "living zone" concept focused on the central commercial district. The living zones are classified into three main districts, six sub-districts, and 20 divisions through a linear arrangement of the commercial areas. The plan was intended to provide opportunities to select various services and satisfy the needs of the residents by overlapping high, medium and low quality living zones on the central axis of a linear alignment.

Table 8 - Classification of Mok-dong District Living Zones



Division	No. of Parts	Characteristics	Radius of life (m)	Population	Required Facilities
Mid-living zone		All estimated target		100,000-120,000	
Main Districts	3	North district Center district South district	800~1200	40,000-50,000	Middle/high schools Shopping centers
Sub-Districts	6	Neighborhood living areas of life center in the central axis	400~800	20,000	Elementary schools Neighborhood parks Shopping centers Dong Office
Division of a district	20	General goods voucher	200~300	7,000	General stores Kindergartens Playgrounds

Multi-family Housing Complex: Low-density focused on medium and large housing

The residential area of the Mok-dong district consists of 14 districts, with the number of households accommodated in each district varying from 1,902 households and 1,300 to 3,100 households. The units are medium-large and were provided mainly for middle-class residents. In terms of distribution by size, units of a maximum 60 m² in area account for 22.5%, a maximum of 85 m² account for 35.8%, and above 85 m² account for 41.7% and 77.5% account for 85㎡ or more. Specifically, large units (above 85 m²) account for 50% of complexes 1, 2, 3, 5, 9, and 13.

Table 9 - Mok-dong District Housing Unit Sizes

Area	Total	Maximum of 60 m^2	Maximum of 85 m^2	Above 85 m^2
Complex1	1,882 (100)	240 (12.8)	502 (26.7)	1,140 (60.6)
Complex 2	1,640 (100)	-	400 (24.4)	1,240 (75.6)
Complex 3	1,588 (100)	-	646 (40.7)	942 (59.3)
Complex 4	1,382 (100)	594 (43)	240 (17.4)	548 (39.7)

Complex 5	1,848 (100)	-	525 (28.4)	1,323 (71.6)
Complex 6	1,362 (100)	594 (43.6)	240 (17.6)	528 (38)
Complex 7	2,550 (100)	720 (28.2)	1,200 (47.1)	630 (24.7)
Complex 8	1,352 (100)	834 (61.7)	278 (20.6)	240 (17.8)
Complex 9	2,030 (100)	240 (11.8)	621 (30.6)	1,169 (57.6)
Complex 10	2,160 (100)	570 (26.4)	584 (27)	1,006 (46.7)
Complex 11	1,595 (100)	760 (47.6)	835 (52.4)	-
Complex 12	1,860 (100)	470 (25.3)	1,390 (74.7)	-
Complex 13	2,280 (100)	240 (10.5)	804 (35.3)	1,236 (54.2)
Complex 14	3,100 (100)	720 (23.2)	1,270 (41)	1,110 (35.8)
Total	26,629 (100)	5,982 (22.5)	9,535 (35.8)	11.112 (41.7)

Note: Lease housing overlap with housing sizes due to supply amount of each complex.
Source: Seoul City, 1991, An Evaluation of Mok-dong Public Development, p.940-941

Apartment buildings were constructed sequentially from 1985 to 1988. All buildings today are 20 years old or more. Reconstruction became possible in 2013, but demand did not materialize. The average floor area ratio is 143% and varies by complex from 117.2 to 164.5%. FAR by complex is within 120% (excluding complexes 8, 13, and 14), and the average density per household is 130.7 units/ha, which is extremely low.

The number of parking spaces available per household is 0.6, which is far below one space for every household, suggesting a very serious parking problem.

Table 10 - Mok-dong District Complexes: Vehicles & Parking Spaces Per Household

	Households (Parcel + Lease)	Parking Spaces	Parking Spaces per Household
Complex 1	1,882	1,104	0.6
Complex 2	1,640	1,306	0.8
Complex 3	1,588	1,199	0.8
Complex 4	1,382	757	0.5
Complex 5	1,848	1,444	0.8
Complex 6	1,362	783	0.6
Complex 7	2,550 (2,130 +420)	1,251	0.5
Complex 8	1,352	617	0.5
Complex 9	2,030	1,466	0.7
Complex 10	2,160 (1,560+600)	1,397	0.6
Complex 11	1,595	646	0.4
Complex 12	1,860	873	0.5
Complex 13	2,280	1,625	0.7
Complex 14	3,100 (810+2,290)	1,879	0.6
Total	26,629 (18,512+8,117)	16,347	0.66

Note: Vehicles per household = Available parking spaces/ Number of households
Source: Seoul City, 1991, An Evaluation of Mok-dong Public Development, p.579

Central Commercial Area: Large-scale parcel & Postponement of Sales Causes Delay in Revitalization

All of the Mok-dong district's central facilities are located on the central axis, and the district center of an aggregated neighborhood is nearby the south and north, while commercial business facilities as in the CBD (Central Business District) are located in the center. General administration, public and cultural welfare facilities are located between the complexes. In terms of the central commercial area, business facilities account for 31.3% based on plottage, high-rise apartments account for 29.0%, and culture convention facilities account for 8.9%. However, high-rise apartment complexes account for 46.9% based on total floor area with the construction of these types of complexes following the Asian financial crisis in the late 1990s. Despite the claim that the Mok-dong district is the central living zone in the Southwest area, the number of businesses in the Mok-dong district is extremely low when compared to Seoul City. This is due to the outright sale of central commercial land, which was sufficient with 14.0 businesses and 89.0 business people per 10,000 m^2.

Table 11 - Mok-dong District: Functions & Facilities by Central Commercial Block

Zone	Block	Main Use
	1	Park and other green areas
District center	2	Education commercial (dwelling withhold)
	3	Living facility (withhold)
	4	District center
Cultural & welfare district	5	Park and other green areas
	6	Cultural welfare
Central commercial business zone	7	Commercial business
	8	Business center
	9	Park culture
	10	Business center
	20	Commercial business
	11	Commercial business
	12	Urban design excluding zone (commercial)
	13	Commercial business
Administrative facility zone	14	Administration
	15	Park and other green areas
	16	Administration
District center	17	Cultural welfare
	18	District center
	19	Living facility (withhold)

Source: Seoul City, 1991, An Evaluation of Mok-dong Public Development, p.68

Transportation: Worsening stagnation of central roads from Increased Through Traffic

Road networks in the Mok-dong district consist of three arterial roads and outer rings that pass through the inside of the district as well as an internal beltway. One of the most notable features of the road network is the one-way beltway of the central axis. The one-way feature allows left turns without the need for traffic signals and signal interlocking reduces through traffic travel time. In terms of road design, level crossings with local distribution roads and multi-level crossings using underground roads, such as the Jaemulpo-ro, and Omok-ro, (Mok-dong central axis and arterial roads) stand out.

Measures are needed to improve traffic flow in preparation for an increase in through traffic on district arterial roads to the Mok-dong central axis due to the development and traffic volume concentrated around the

central axis road, the Mok-dong East and West roads, and Jaemulpo-ro, all of which penetrate Mok-dong district. On Jaemulpo-ro, traffic will be concentrated from Yeouido and Downtown Seoul and from Incheon and Bucheon, while congestion will occur on the Mok-dong central axis road due to through traffic from outer ring areas connected to Sinwol-ro and Sinjung-ro.

Figure 3 - Mok-dong District: Road Network & Traffic Volume

General

A housing site development project is where the government or public institution provides real estate, develop sites, and builds housing in order to sell or lease to end users. Development projects have contributed to real-estate price stability (unlike land readjustment projects) because development profits from the public sector and some from the private sector were absorbed instead of using to buy more land (and drive up prices) and because project operation is limited to public entities. The public sector chooses affordable real estate and develops the site, while a private company constructs housing on the site, enabling more effective management of problems such as excessive speculation from private sector project operation.

Since housing development projects limit project operators as public entities, such method was effective in stabilizing housing prices through affordable land supply and development gains absorbed by the public sector unlike the last land readjustment projects. Systematic organization of "new towns" with public facilities and infrastructure also contributed to urban development. Despite the construction of infrastructure in accordance with service facility installation through housing site development projects, social and economic changes rendered this insufficient. The rules for landscaping, construction of rest areas within green zones, parking lots, nurseries, sports facilities, and other neighborhood infrastructure were different in the 1980s from today. The lack of adequate parking lots was the most serious issue. There was no required ratio of unit size to number of parking space ratio in the early 1980s, and did not come until later: 0 vehicles for up to 40 m², 0.4-0.6 vehicle for 40-85 m², and 1.0-2.0 vehicles for more than 85 m². Standards today are one or more spaces per household, but the lack of parking spaces is an ongoing problem for buildings constructed in the 1980s.

Table 12 - Land Readjustment Projects, Urban Development Projects, & Housing Site Development Projects: A Comparison

	Land Readjustment Projects (Urban development projects based on replotting)	Housing Site Development Projects	Urban Development Projects
Purpose	· Promotion of land utility · Redevelopment of public facilities	· Solve urgent housing shortage	· Urban development of complex functions
Applicable Act	· Land Compartmentalization & Rearrangement Projects Act	· Housing Site Development Promotion Act	· Urban Development Act
Project Site	· Land readjustment project district	· Estimated housing site development district	· Urban development districts
Project Operator	· Land owner association · Central & local government · Korea National Housing Corporation · Korea Land Corporation	· Government, local government agency · Korea Land Corporation Korea National Housing Corporation · Regional corporations and public-private corporations	· Government, local government agency · Joint-investment corporation · Individual landowners or association
Project Method	· Replotting	· Whole take-over	· Choose either whole take-over, replotting, or a mix of both
Land Supply	· Replotting after reduction of house lot size	· Supply to construction companies at cost of construction or less	· Depended on project methods
Funding	· Provided by landowners	· Provided by project operator	· Indirect government support · Provided by project operator
Infrastructure	· Lack of clarity on entity responsible for construction	· Lack of clarity on entity responsible for construction	· Specifies entity responsible for construction
Development Profits	· Privatizes development gains	· Returned to society	· Returned to society

Development Pattern	· Low-density, low-rise buildings	· High-density, high-rise buildings	· High-density, high-rise buildings
Advantages	· No investment burden · Reduced civil complaints	· Supplied affordable housing sites · Returned development profits to society · Systematic development and efficient use of land	· Urban development of complex functions · Private-sector participation · Clarification of responsibility for infrastructure
Disadvantages	· Delayed project completion due to conflict between owners · Increased real estate prices and speculation	· Civil complaints by existing landowners · Increased financial burden of project operators · Expansion of local money supply due to excessive compensation for land → Increased real estate prices and speculation	· Project target site relatively limited · Private developers find it difficult to secure project target sites

Source: Won Dong-il, Ahn Hyung-soon, Kang Jun-mo, 2005, "A Comparative Study on the Changes in Land Policy & Residential Development Systems of South Korea and China", Korea Planners Association, 2005 Regular Journal (11. 4~5) Sourcebook p.432

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8. Transition from the Vehicle-oriented City to the Pedestrian-friendly City

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Policy Area: Urban Planning & Transportation

Background of Transition to the Pedestrian-friendly City

Seoul has pursued industrialization and urbanization to achieve urban growth in the past, establishing a vehicle-oriented transport system that had advantages in ensuring urban competitiveness. The structure of city space focusing on vehicles reduced the space for pedestrians and lowered urban vitality. Due to the indiscriminate development, lots of pedestrian roads with cultural and historical value disappeared and the value of remaining footpaths were not utilized properly.

To address this situation, Seoul implemented various policies to create a pleasant and safe walk environment in order to develop Seoul as a pedestrian-friendly city. The policy of Seoul to create a pedestrian-friendly city began with the project 'Creation of pedestrian-friendly walkways' in 1988 in earnest. The Seoul plaza was built in front of Seoul City Hall in 2004, and the Cheonggyechoen (creek) restoration project was implemented in 2005 to remove large roads for vehicles and create space for walkways instead. During the period of 2007~2011, Seoul implemented the projects of 'Design Seoul Street' and 'Street Renaissance' to unify the designs of public facilities on the streets and improve the pavement of the walkways. In April 2012, Seoul announced the '10 Commandments on the Pavement in Seoul' to reduce the inconvenience of the pedestrians. According to the slogan, various projects including the 'sidewalk construction in real name' to inscribe the contractor's name on the sidewalks, the 'one strike out system' to restrict poor construction companies from participating in the biddings and 'securing temporary pedestrian walkways' at construction sites to improve pedestrian environments were implemented.

The pedestrian environments experienced by the citizens of Seoul did not seem greatly improved, in spite of the fact that Seoul had implemented pedestrian-friendly policies consistently. As of 2013, 78% of all the roads in downtown Seoul were roads for living less than 12m in width, but the citizens experienced discomfort passing through due to lots of illegally parked vehicles. The width of the walkways were over the minimum 2 meters mandated according to related regulations, but the sidewalks actually felt very narrow to the citizens because there were bollards, ventilation openings, roadside trees, etc. everywhere creating disorder. Out of the total number of road casualties, pedestrians made up 57.0% (as of 2011), raising the safety problems that pedestrians were facing. In a survey of the most unstable, inconvenient and unpleasant facilities conducted by Seoul in 2011, the walkways and roadways were ranked second and third making up 17.7% and 10.3% of the votes respectively. That means the pedestrians believed their environments were very poor.

In 2013, Seoul presented the 'Seoul Vision for the Pedestrian-friendly City' and prepared ways for Seoul to improve the pedestrian environment. The contents of 10 projects such as pedestrian-only streets, pedestrian-friendly areas, introduction and expansion of pedestrian priority roads, vehicle speed limits, improvements to the traffic signal system for pedestrians, creation of downtown pedestrian roads and the Seoul walkathon

were parts of the vision.

Main Contents of the Pedestrian Policies by Period

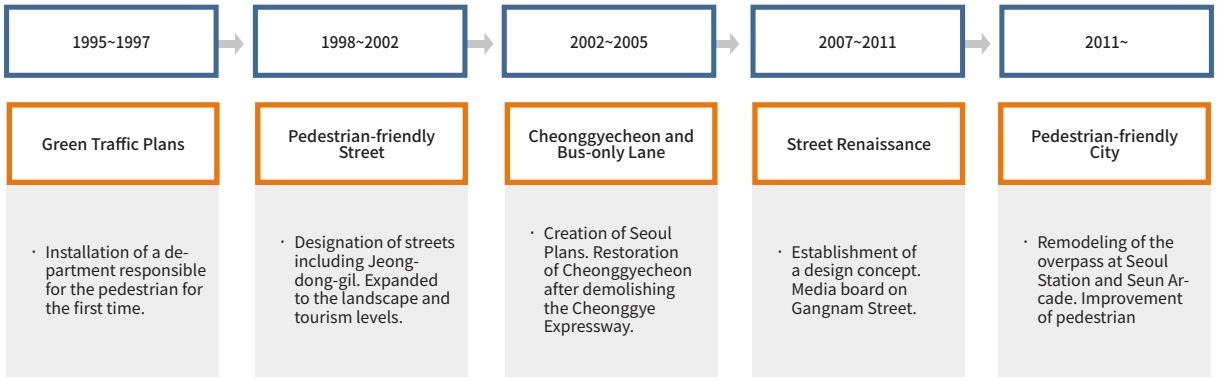
Main Pedestrian Policies of Seoul by Period

Until the early 1990s, pedestrian traffic accidents had occurred frequently due to the harsh pedestrian environment in Seoul, and accordingly, the citizens' demands for the improvement of narrow walkways was increasing. Seoul began to prepare systems to improve the pedestrian environment by implementing an act establishing children protection zones in 1996 and an ordinance on the pedestrian roads in 1997. Seoul started the projects for pedestrian road improvement by creating a street without cars in 1997, and pedestrian-friendly walkways in 1998. The Seoul Plaza, created in 2004, was noted because it was made by eliminating the intersections and driveways in the downtown area to create a large lawn area of 13,207m2 for pedestrians. Since then, it has become a foundation in the implementation of pedestrian related policies in Seoul. The design Seoul project executed from 2007 was not only intended to improve the pedestrian environment, but also to add aesthetic elements to the pedestrian passages to give pedestrians the feeling of satisfaction when passing the walkways. Seoul organized a department for the pedestrians and bikes under the Seoul City Traffic Headquarters in 2010. The department has devoted itself only to implementing the policies related to pedestrians and bikes. Seoul has made a continuous efforts to improve the pedestrian environment by implementing various policies such as designation of pedestrian priority areas, execution of Seoul Street Renaissance Project, announcement of the 'Seoul Vision for the Pedestrian-friendly City,' etc. Specifically, the' Seoul Vision for the Pedestrian-friendly City' was noted because it contained 10 action plans to improve the entire pedestrian environment by expanding pedestrian-only streets and pedestrian-friendly streets, installing additional crosswalks in downtown areas and introducing pedestrian priority streets in residential areas. The main policies related to pedestrians are as follows;

- In the Early 1990s: Movement on pedestrian rights for safety issues in the school zone walkways and alleys in residential areas.
- 1996: Legislation of an act establishing children protection zones.
- 1997: Legislation of ordinance on pedestrians in Seoul. Establishment of car-free streets (Insa-dong, Myeongdong-gil, Gwancheoldong-gil).
- 1998: Implementation of pedestrian-friendly walkway project. Establishment of the 1st basic plan for pedestrian environment of Seoul.
- 1999: Installation of a crosswalk on the north-south side of the Sejongro intersection. Implementation of the Green Way Project.
- 2000: Installation of a crosswalk in front of the Seoul Arts Center.

- 2004: Creation of Seoul Plaza.
- 2005: Establishment of the 2nd basic plan for pedestrian environment of Seoul.
- 2007: Implementation of design Seoul street creation project.
- 2008: Implementation of a pilot project for pedestrian priority areas. Implementation of Seoul Street Renaissance.
- 2009: Establishment of a plan to improve pedestrian traffic.
- 2010: Establishment of a new department for pedestrians and bikes within the Seoul City Traffic Headquarters.
- 2012: Legislation of an act meant to secure and protect pedestrian rights and improve pedestrian convenience.
- 2013: Announcement of Seoul Vision for the Pedestrian-friendly City.

Figure 1 - Paradigm of the Main Pedestrian Policies by Period



Source: Joongang Ilbo (2014)

Main Pedestrian Policies of Seoul

Legislation of an Ordinance on Pedestrians

Seoul is the city that enacted an ordinance on pedestrians for the first time among local governments around the world. The legislation of the ordinance had been the cornerstone to evolve Seoul from the vehicle-oriented city to the 'pedestrian-friendly city' that aims to put people first. The ordinance began to be prepared and developed while the civic groups insisted and its necessity was broadcasted to the public. In December 1995, the city council members of the Transportation Committee of Seoul Metropolitan Council and the civic groups held a meeting and agreed to develop a movement to legislate the ordinance on pedestrians. In February 1996, Seoul hosted a forum to discuss how to create pedestrian-friendly city and the future plans to legislate the ordinance on pedestrians. In October 1996, the Seoul Metropolitan Council proposed the ordinance on pedestrian of Seoul and the ordinance was implemented in January 1997. According to the

ordinance, Seoul shall establish a "Basic Plan for the Pedestrian Environment" every 5 years. The 1st basic plan for the pedestrian environment was established in 1998. In the basic plan, kinds, contents, necessary budgets and subjects of the pedestrian environment improvement projects that Seoul has to implement over the next 5 years should be presented clearly. In addition, the project related job allocation, promoting organizations, preparation of relevant regulations and standards and method to facilitate civil participation were to be included.

Creation of Car-free Streets

The 'Creation of Car-free Streets' in Seoul is one of the representative projects for pedestrian oriented traffic policies. The project to create car-free streets was designed to allocate more urban spaces to the citizens because the spaces for the pedestrians were insufficient. Seoul designated Insadong-gil, Myeongdong-gil and Gwancheoldong-gil as the car-free streets in 1997, and began to expand the areas gradually. As of 2011, there were 24 car-free streets and the total length of all the car-free streets totaled around 18km. The car-free streets were designated mainly in downtown commercial areas and residential living spaces. The car control periods and methods are different depending on the local conditions (all day operation in 9 streets, weekend operation in 14 streets and occasional operation in 1 street).

Figure 2 - Examples of Car-free Streets in Seoul

(a) Car-free Myeongdong-gil

(b) Car-free Gwancheoldong-gil (Street for the Youth)

Source: The Seoul Institute (2012)

Creation of Seoul Plaza

Before Seoul Plaza was reborn to its current form, there had been large intersections and broad drive ways in front of Seoul City Hall. The neighboring areas suffered from chronic traffic congestions. Because pedestrian crossing was allowed only through the underground passage, the accessibility of pedestrian crosswalks was low, and there was no consideration for the disabled and the elderly in the current infrastructure. As the area in front of Seoul City Hall was used as a cheering place during the 2002 World Cup, the necessity for a space for citizens to gather and communicate increased and the discussions began to convert the area in front of City Hall into a plaza in the city center. Seoul conducted a survey to examine public opinions, and responses agreeing with the plan made up 79% of the total respondents, showing positive reactions and support from the people.

Seoul created Seoul Plaza based on 4 basic directions; recovery of historic and symbolic value, reorganization of the traffic system, satisfaction of pedestrians' desires, and creation of cultural spaces. Seoul Plaza was completed on May 1st, 2004. With a total area of 13,207m2, it has been used widely for various events and gatherings. Meanwhile, there were responses against the construction of Seoul Plaza with concerns regarding serious traffic congestions (accounting for 82% of the total 15% of answers opposing the new plaza). However, most experts evaluated that the traffic flow had been improved after the creation of Seoul Plaza.

Figure 3 - Before and After the Creation of Seoul Plaza

(a) Before (b) After

Source: Home page of the Seoul City (http://plaza.seoul.go.kr/archives/367)

Removal of Elevated Roads and Pedestrian Overpasses

With the many projects to improve the pedestrian environment, Seoul tore down elevated roads in order to enhance the city's appearance and the aesthetic satisfaction of pedestrians. Also, Seoul demolished the overpasses which had been installed for the pedestrians to cross over the roads, and instead installed crosswalks at the same places to provide convenience to the pedestrians.

Beginning with the demolition of Tteokjeon overpass in 2002, Seoul has torn down over the past 10 years around 20 elevated roads installed on main streets. The representative overpass demolition project was to tear down the Cheonggye overpass crossing Seoul from east to west in 2003. The demolition of Cheonggye overpass was effective in improving the urban landscape and environment. In addition, the resulting traffic flow was not as bad as was originally concerned. According to some domestic studies on the demolition of overpasses, it has had positive economic effects such as improvement of traffic flow, revenue increase in neighboring commercial areas, house value increases and improvement of surrounding landscapes, supporting the appropriateness of the overpass demolition project.

Many citizens and experts pointed out that the pedestrian overpasses installed recklessly as a part of pedestrian environment improvement projects had caused inconvenience to the mobility of handicapped pedestrians (such as children, the elderly, the disabled and stroller carriers) and had increased traffic accident rates because of jaywalking. Seoul accepted these opinions, and started the project to tear down the pedestrian overpasses and to install new pedestrian crossings instead. The pedestrian overpass demolition project was not implemented in a comprehensive form, but allowed the autonomous districts to tear down the pedestrian overpass individually when the citizens wanted it torn down and proposed its demolition through the site investigation and meetings with the related people. The number of pedestrian overpasses in Seoul was reduced from 206 in 2007 to 165 in 2013, an average of around 6 have been torn down annually.

Main Contents of the "Seoul Vision for the Pedestrian-friendly City"

In January 2013, Seoul announced the "Seoul Vision for the Pedestrian-friendly City" to pave the way for successful transition to become a city with an advanced pedestrian environment. Seoul set a goal to increase the pedestrian traffic rate from the current 16% to 20% by 2020. The "Seoul Vision for the Pedestrian-friendly City" has acted as a guideline for all pedestrian related polices.

Current Problems and Issues with the Pedestrian Environment of Seoul

Seoul made a diagnosis regarding the pedestrian environment in downtown areas before establishing the Seoul Vision for the Pedestrian-friendly City. The result was that Seoul had 4 main problems to be solved; dangers of jaywalking resulting from the lack of pedestrian crossings, roads in residential areas occupied by vehicles, around 250 pedestrian overpasses and underground passages and uneven width of walkways. Also, the pedestrian overpasses and the underground passages were built focusing on vehicles, not on the convenience for people and not in consideration of the mobility handicapped pedestrians.

10 Main Projects of the "Seoul Vision for the Pedestrian-friendly City"

Expanded Designation of the Pedestrian-only Streets

Seoul planned to expand the designation of the pedestrian-only streets and operate them in weekend or all day modes in consideration of the local conditions like pedestrian volume, functions of roads and traffic. Seoul designated Sejongno after several pilot operations as the first pedestrian-only street operated in week-end mode on the third Sunday of each month. On the streets to be designated as pedestrian-only ones like Sejongno located in the downtown area of Seoul, recycled goods sharing markets, farmers' markets, open art theaters and cultural events offering hands-on experiences would be held. Professional MPs (Management Planners) would be hired for substantial content operation. Seoul planned to invite public participation for developing festivals and events reflecting local characteristics and to encourage the autonomous districts' participation by supporting their design planning.

Figure 4 - Test Operation of Pedestrian-only Street in Sejongno

- Initial Implementation Date: Sep. 23rd (SUN) 2012 (occasional operation)
- Section: Gwanghwamun three-way intersection to Sejongno intersection
- Events: Recycled goods sharing markets, Farmers' markets, etc.
- Project Results
  - No. of Participants: around 53,000 people
  - Increased social interests via media reports
  - Fourfold increase of the No. of visitors to the neighboring commercial areas and a 10% increase in revenue.

Source: Press release of the Seoul Metropolitan Government (2012)

Creation of 5 Pedestrian-friendly Areas by 2014

The pedestrian-friendly areas suggested by Seoul are different from the pedestrian-only street because the former will lead to the improvement of the pedestrian environment by doing things such as the extension of walkways, installation of safety related facilities and specialized local passages, while the latter just controls the entry of vehicles while keeping the existing street shapes maintained. The target areas of the project were Yeonsero which was the first public transportation only area in Seoul, Seongbukdong-gil which was a history and culture tour area, Gangbyeonno which has lots of pedestrians, Yeeongjungno and Daehangno. The areas were expected to increase their local competitiveness by integrating regional characteristics and pleasant pedestrian passages. Seongbukdong-gil was anticipated to be full of vital energy when the pedestrian sidewalks were renewed, the installation of pedestrian guidance signboards was expanded and the citizens gathered to walk the passage. Seoul also planned to designate pedestrian-first roads and children-only pedestrian walkways and to lower the regulated speed.

Introduction of Pedestrian-first Roads in Living Areas

Seoul decided to introduce the pedestrian-first road system in living areas where the pedestrian traffic was high and the width of roads is around 10m with high traffic accident risk. The pedestrians have passing priority over vehicles the pedestrian-first roads in living areas. The sidewalks on pedestrian-first roads would be widened as much as possible and speed bumps, pedestrian-first signboards and roundabouts would be installed. Additionally, the speed limit on these streets would would be less than 30km/h.

Operation of Children-only Streets

Seoul planned to expand children-only streets gradually after analyzing the effects of pilot projects which were implemented in front of 10 primary schools in 2013. Once a road is designated as a children-only street, the traffic safety signs are marked on the road, more CCTV cameras are installed and the entry of vehicles is controlled on roads in front of schools during school arrival and departure times. Also, 'Amazone' refers to the space where children can be playing around would be operated at 7 model areas in 5 districts by 2014. Seoul dispatched experts to the sites of 19 autonomous districts that had expressed their wishes to operate an Amazone and selected 5 districts. The pilot projects were implemented in 3 districts in 2013 and in 2 districts in 2014. The goals of the Amazone operation were to prevent various crimes as well as secure pedestrian traffic safety of children through placement of traffic safety instructors, designation of no-smoking areas, operation of volunteer patrol groups, unification of crowded vehicles of private educational institutes, expansion of CCTV installation and transition of two-way traffic to one-way traffic.

Strengthened Speed Limit on Back Roads of Living Areas

Seoul decided to strengthen the speed limit of vehicles back roads of living areas in order to prevent traffic accidents in residential areas. Seoul had a conference with the National Police Agency to adjust the speed limits from 40km/h to 30km/h on double lane roads and from 60km/h to 50km/h on four-lane roads. The adjusted speed limit was applied first for 10 roads in the first half of 2013. Seoul also facilitated the adjustment of the speed limit from 50km/h to 30km/h on main roads in downtown areas including Cheonggyecheon, and planned to expand the new speed limit to all of Seoul.

Overall Improvement of the Pedestrian Environment for the Mobility Handicapped

Seoul was determined to improve the pedestrian environment to help mobility handicapped people go anywhere by themselves in Seoul. It planned to expand the installation of elevators (from 796 to 826 units) and escalators (from 1,779 to 1,852 units), 2,678 units in total at subway stations and to provide 'voice recognition service destination information' for the blind at 400 inter-city bus stations. Seoul also planned to improve the functionality of acoustic signal generating devices, and to expand their installation by 1,000 units every year. In order to ensure that pedestrian and traffic safety facilities give real help to the mobility handicapped, Seoul would introduce a system to evaluate and validate whether facilities like bus stations and subways, roads and pedestrian facilities (walkway, crossing, traffic light, etc.) meet suitable criteria for the mobility handicapped in the pedestrian environment.

Extension of Green Signal Time of Traffic Lights Installed at Pedestrian Crossings

Seoul planned to extend the green signal time from the existing 1.0m/s to 0.8m/s in consideration of the various walking speeds of the mobility handicapped such as children and the elderly. The main target places would be the areas densely populated with the mobility handicapped such as neighboring areas of Tapgol Park and Boramae Park where many elderly persons come and go and the Children's Grand Park with heavy traffic of children.

Installation of Crosswalks at All Intersections in Downtown Areas

Seoul planned to install crosswalks at all intersections in downtown areas step by step. The plan was designed to remove the inconvenience of taking a long way around because there was no crosswalk and to guarantee the right of mobility handicapped people who have difficulties in using the pedestrian overpasses. The crosswalks would be installed at most of the intersections, including Gwanghwamun, Anguk-dong, Heunginjimun (Gate) and City Hall in downtown going in all directions and at the places where the underground

passages and pedestrian overpasses had been installed. Seoul would select the type of crosswalks and install them after checking the pedestrian and vehicle traffic of each intersection and road functions.

Spread of Walking Culture through the 'Seoul Walkathon' as a Pedestrian Festival and the Creation of 'Downtown Pedestrian Roads' Connecting the Tourist Attractions

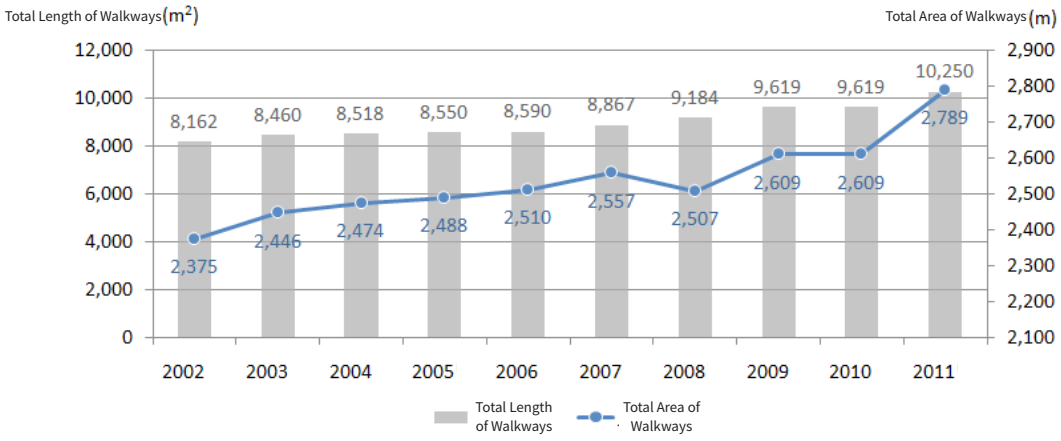
Seoul planned to hold the Seoul walkathon as a pedestrian festival to allow people to walk through the pedestrian-friendly Seoul, to spread walking culture and to develop the downtown pedestrian roads (promenade) connecting palaces, shopping areas, historical & cultural spaces in downtown Seoul in parallel with the application of Seoul Fortress Wall for UNESCO registration. Seoul also planned to designate a day in April or September as a 'Day for Pedestrians and Bikes' and select an area with big PR effects and symbolic meaning where the pedestrians would occupy the downtown area usually filled with vehicles to hold the event. The downtown pedestrian roads would be constructed with Seoul Plaza as the center and signboards for the pedestrians, signposts showing the distance and time required and the pedestrian road guide lines.

Achievements of Pedestrian Environment Improvement Policies of Seoul

Status of Installed Pedestrian Facilities in Seoul and their Achievement

In order to improve the pedestrian environment, Seoul has installed walkways, crosswalks, pedestrian-only streets and various facilities over time. The total length of walkways in Seoul has steadily increased from 2,375km in 2002 to 2,789km in 2011. (Refer to <Figure 5>).

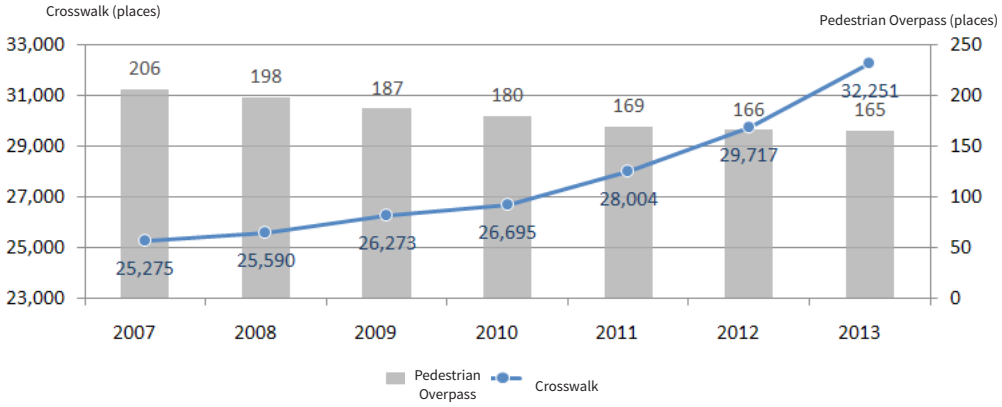
Figure 5 - Change of Total Length of Walkways and Their Area



Source: The Seoul Institute (2013)

The number of crosswalks has also increase from 25,275 in 2007 to 32,251 in 2013. Especially for the first year after the "Seoul Vision for the Pedestrian-friendly City" had been announced, 2,534 crosswalks were installed. As of 2011, there were 3.6 crosswalks per 1km of road, meaning there was 1 crosswalk around every 300m. 32% of all crosswalks had traffic lights installed with them, and 7,938 crosswalks had acoustic signal generation devices installed.

Figure 6 - Change in No. of Crosswalks in Seoul



Source: Seoul Statistics

Seoul has designated and expanded children and senior protection zones. As of 2012, the number of children protection zones in operation was 1,598 places and the number of senior protection zones in operation was 48. In the case of children protection zones, around 55.1% of the target facilities (primary schools, kindergartens, private educational institutes, etc.) were designated.

Table 1 - Status of Designated Children Protection Areas and Improvement Projects of Seoul (As of 2012)

Classification	Sum	Primary School	Kindergarten	Daycare Center	Special Education School	Private Educational Institute
No. of Target Facilities	2,899	594	866	374	45	1,020
No. of Designated Facilities	1,598	593	652	324	29	

Source: Press release of the Seoul Metropolitan Government (2012)

Table 2 - Status of Designated Senior Protection Areas and Improvement Projects of Seoul (As of 2012)

Classification	Sum	Housing Welfare	Medical Welfare	Leisure Welfare	City Park	Lifetime Sports Facility
No. of Target Facilities	6,362	30	432	3,545	1,966	389
No. of Designated Facilities	48	3	8	37	-	-

Source: Press release of the Seoul Metropolitan Government (2012)

Increased Pedestrian Traffic in Seoul

As a result of the continuous promotion of the pedestrian environment improvement projects of Seoul, the pedestrian traffic in Seoul showed a growing trend. Seoul has taken censuses of the floating population on the main streets of all of Seoul since 2009. According to the census data, the floating population of Seoul on the weekly average pedestrian traffic basis was increased by 4.3% from 5,411 persons/14 hours in 2009 to 5,680 persons/14 hours in 2012. By days of the week, the largest increase of pedestrian traffic occurred on Friday, changing from 5,411 persons/14 hours in 2009 to 5,680 persons/14 hours in 2012. The citizens used to enjoy leisure activities in the afternoon time of Friday. Taking into account the fact that the largest increase of pedestrian traffic occurred on Friday, it seems that the pedestrian environment improvements made by Seoul seem to have facilitated the walking activities of the citizens.

Table 3 - Change of the Floating Population of Seoul from 2009 and 2012

Unit : person/14hr

Classification	Mon.	Tue.	Wed.	Fri.	Sat.	Weekday Average	Weekly Average
2012	5,352	5,371	5,393	5,680	5,126	5,449	5,384
2009	5,101	5,241	5,156	5,411	4,913	5,227	5,165
Difference (2012-2009)	251	130	237	269	213	222	219

Source: The Seoul Metropolitan Government (2013)

Limits and Implications

Low-carbon green growth, environmentally-friendly industry, pedestrians and public transportation have become the common values of the current world. In accordance with these global trends, the creation of a pedestrian-friendly city has attracted attention as a core project. But Seoul's projects to develop Seoul as a pedestrian-friendly city have been somewhat lacking in connectivity between projects so far because the

project target areas tended to be selected in the interest of administrative expediency and the projects were implemented individually. As a result, the continuity of the pedestrian traffic flow could not be ensured satisfactorily. Thus, it is recommended for future pedestrian projects of Seoul to consider the connectivity between the projects during the planning phase first, and then implement them gradually to create the pedestrian-friendly city.

However, the pleasant and safe pedestrian-friendly city that Seoul planned to create cannot be realized with only the projects meant to improve the pedestrian environment. In spite of Seoul's endeavors, it is true that transportation using cars is relatively easier than using public transportation or by walking in the current traffic environment of Seoul. Therefore, it is necessary to improve pedestrian related policies and public transportation services currently in operation and to implement parking and traffic demand management policies in parallel with various fields in order to create a better pedestrian-friendly city.

The pedestrian policies of Seoul have been promoted individually and uniformly and concentrated on the improvement of pedestrian walkways rather than the meaning of urban space. The policies related to the pedestrian-friendly city should focus on pedestrian walkways as a part of urban space and make the space alive. Also, it is necessary to manage the land use and landscape surrounding the streets and create pedestrian spaces that reflect local characteristics beyond the uniformed improvement of pedestrian walkways. If Seoul offers the residents the chance to participate directly or indirectly in the planning and implementation stages of the projects, it would be beneficial to create pedestrian spaces that correctly reflect local features.

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9. Seoul's Digital Media City

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Policy Area: Urban Planning

Background

Development of a New Town for a New Millennium

The last century in South Korea was characterized by rapid urbanization, taking after the fossil fuel-driven industrialization and modern cities of the Western world. Quantitative growth, heavily dependent on economic and physical development, has brought wealth and prosperity to to both individuals and the state and is deemed a success in from an economic perspective. However, the economy-driven, compressed growth has somehow given birth to the notion that sacrifice by the socially vulnerable and of the environment is inevitable for a nation to grow. In fact, the growth has been built on the sacrifice of priceless values – social continuity and environmental sustainability – and has resulted in a myriad of issues and adverse effects.

Entering the 21st century, Seoul's major industry – manufacturing – was quickly replaced by information technology. Public awareness of various issues also experienced significant growth. More people began to consider the outcomes of compressed growth and the importance of the environment. The pursuit of a good quality of life became increasingly valued. After the Asian financial crisis, the South Korean government and people realized that quantitative growth was no longer the best development model. It was against this transitional background period that the Sangam New Millennium Town project was born, with the nation turning its attention to attracting industries that would be the next engines for growth while pursuing a peaceful balance between environmental preservation and urban development.

Figure 1 - Location of DMC

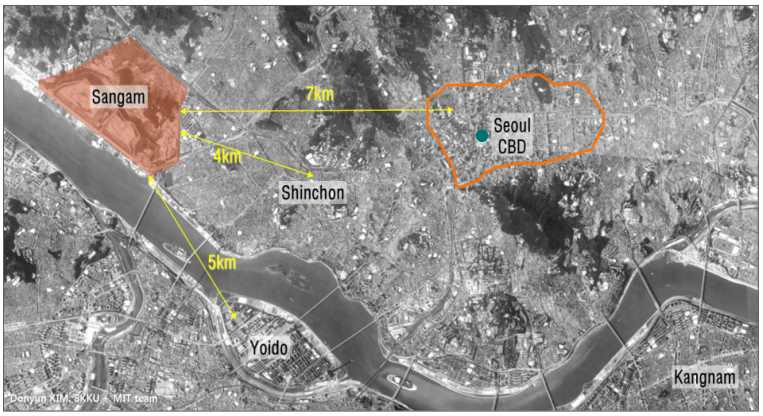
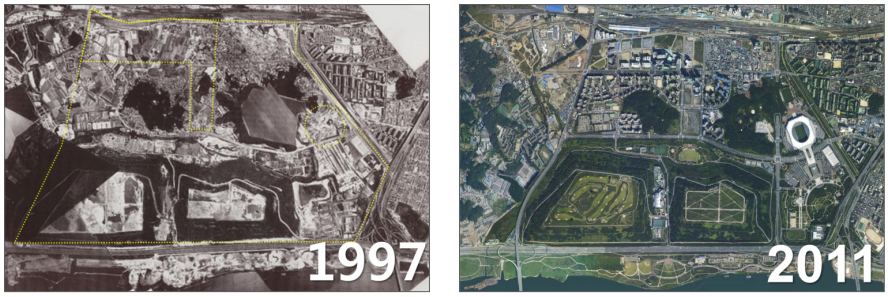


Figure 2 - Transformation of Nanjido & Sangam



In the early 1960s, Nanjido, a beautiful and peaceful island of orchids and mushrooms, was nowhere to be seen. In its place, coal briquette ashes and waste generated by 10 million people and construction were piled up as high as 100 meters and as wide as 2 kilometers: a massive hill of trash (190 million tons). Consequently, the Susaek Station area, which had been the most vibrant hub of transportation before the two Koreas were separated, became an abandoned, contaminated place with no activity. Once again, the area would be revived and become the site of a new town for a new millennium. The change was sparked when the decision was made to build a stadium in the Susaek and Nanjido area for the 2002 Korea-Japan World Cup. The fact that certain projects had to be completed to make this global mega-event a success acted as catalysts to the chain of transformation in the region.

For this, the Sangam New Millennium Town Master Plan (New Seoul Town Development Guidelines, 1998) was established. The key objective was to build a new, sustainable town for the future through environmental renewal and novel technologies. Abandoned land would be developed into a valuable resource for the future, a business center for Northeast Asia built on high-tech industry clusters that would ultimately take Seoul's competitiveness to the next level, and an innovative, sustainable model of a city where people live, work, and play all at the same time. As a gateway to Seoul, its geographical advantage and ultra high-speed communications network and infrastructure would be used to foster upcoming digital media industries in a district designed for new creative industries and futuristic residential complexes with extra attention paid to the environment and a technology infrastructure. The nearby Millennium Park was designed in reflection of the past inattention to the environment and placed more focus on the peaceful cohabitation of people and nature and on the efficient use of land and saving energy and resources.

Efforts to develop the Sangam area were considered demands for both the present and the future. As a result, the massive heap of garbage was turned into an eco-park that would be attractive to the 10 million citizens of Seoul, and able to successfully host World Cup games as part of the first global event of the 21st century in South Korea, taking the world by surprise.

Figure 3 - Sangam New Millennium Town Master Plan

DMC

DMC (Digital Media City) is the key to the Sangam New Millennium Town Development Plan (2000) that will open the door to Seoul's new future. With a vision of becoming the center of the global information media industry as a high-tech information city that will lead economic, cultural, and environmental development, DMC set 3 main goals: be the world-leading producer of digital media content, be a world-leading academia-industry-research center for digital media technology, and the overall most sought-after business center in Northeast Asia.

For these grand goals, DMC acts as a laboratory where synergy is maximized via collaboration between disciplines, industries, industrial-disciplinary, the public and private sectors, and between the generations, where new technologies and cultures are tested to experience the tomorrow 'now'. It will be a place where new resources are continually produced and accumulated, where creative minds exchange information, acting as a portal bridging Seoul with Northeast Asia, and connecting South Korea to the world. Ultimately, it would become a digital media city in a true sense, the nerve center for the economies of South Korea and Northeast Asia, and further develop into the heart and business hub of the Northeast Asian network where the brightest minds gather together to study and develop life-changing technologies and contents. The design is such that when people think of DMC, they will associate it with novelty, innovation, creativity, cultural diversity, and advanced IT, to help them project a positive image of Seoul and South Korea. It is also designed as a pioneering industrial ecosystem based on creativity, innovation and flexibility, acting as the heart of a national network that shares its best with other technological centers. DMC will help push South Korean IT and content industry to the top of the world, driving digitalization of other industries and subsequently enhancing productivity.

Basic Direction & Principles

Setting Direction & Principles

DMC is a futuristic community of urban production and an industrial ecosystem where traditional urban activities and cutting-edge technologies come together. It is designed as a novel, high-tech industrial cluster, a lively, pedestrian-oriented city that supports diversity of use, where creativity lives, works and plays. To realize this ideal, the following principles have been developed:

First, it is essential to provide information customized to the preferences and needs of visitors via a cutting-edge infrastructure, both wired and wireless, making DMC a "smart" town. For this purpose, digital computing technology and new "smart" urban infrastructure should be supported and pioneered by the City of Seoul.

The second principle is the concept of a permeable border between building and street, between the inside and outside – the private and the public domains respectively – designed to boost interaction between the two. This involves arranging the space on the ground level of a building to be both private and public in nature,

offering programs by which technological innovation and information produced inside are shared with the outside, especially at street level.

The third principle is mixed use of a single space, presently impossible under the existing system where districts are designated for certain uses. The DMC management body can offer incentives to land- or building owners for an ideal mix of uses, also providing at the same time a space that allows for multiple uses, primarily located on the ground level, adjacent to the street.

The fourth principle is a 'programmable urban landscape' for cutting-edge ICT and relevant programs to support various urban activities and respond to the demands of pedestrians. This would offer experiences that cannot be replicated in ordinary street environments, with urban public spaces like streets taking on special purposes. Street facilities can be installed according to changing needs and to give uniqueness to DMC.

Summary of the Plan

Competitive Urban Functions & Industries

DMC classifies information media industries into IT hardware/software, IT services, and M&E content, and has selected those most likely to be seen as attractive and relevant. Key industry relevance was determined by location, competitiveness, and uniqueness, with M&E and software found to be most appropriate.

One of the greatest factors behind the success or failure of a new industrial complex is whether it is different from other similar types, or even unique. This is the reason focus was placed on M&E and software, the primary and secondary core industries, with an aim of developing the place into a specialty complex.

Table 1 - Competitive Functions & Industries

	software	Hardware	IT Service	Media& Entertain-ment	Biotech-nology (Others)
Cyberport Hong Kong	●	●	○	●	○
Cyberjaya, Malaysia	●	●	●	●	○
Singapore Science Park	●	○	●	○	○
Taicang Science & Technology Park, China	●	●	○	○	○
Hi-Tech Park Shanghai, China	●	●	○	○	●
Science Park, Hong Kong	●	●	○	○	●
Hsinchu Science-based Industrial Park, Taiwan	○	●	○	○	●
Nankang, Taiwan	●	○	○	○	○
Digital Media City, Korea	●	●	●	●	○

● Primary Core Industry ● Secondary Core Industry ● Third Core Industry

A Different Approach to Land Supply & Gradual Program Planning

To transform DMC into a global leader in digital media, facilities are divided into: key facilities (broadcasting, games, animated films, music, digital, etc.), recommended facilities (media and entertainment, software/IT-related services, manufacturing), and general facilities (CBD business or commercial facilities).

Instead of relying on conventional block sales, DMC became the first region in the nation to adopt a phased-in sale of lots to successfully attract key facilities and industries. Suitable companies are provided with a location for business to create a prosperous ecosystem of high-tech industries, linking the business and its performance with the supply of land.

To offer an environment that developers trust and are willing to invest in, the City of Seoul and the central government prioritized the development of public facilities and functions necessary to boost the relevant industries. Because the conditions of DMC were inferior to other similar projects in Seoul, it was critical for the

public sector to drive the project forward to win the trust of the market. An action plan was developed to build the key facilities for media and entertainment and the infrastructure proposed by small and medium-sized enterprises (SMEs) (high-tech industrial center; accommodations for foreign visitors; Korea Creative Content Agency, the research facility of the Ministry of Culture, Sports & Tourism; and Nuri Dream Square, the business start-up center of the Ministry of Information & Communication).

Table 2 - Strategy for Supply of Business Space

	Key Facilities	Recommended Facilities	General Facilities
Supplied To	Designated facilities (public institutions) Multilingual education facilities Public-assisted facilities (Korea Creative Content Agency) Non-designated facilities Broadcasting facilities (terrestrial broadcasting station) Research & education facilities (media-related research centers) Academia-industry-research facilities (related to basic IT research)	Developer Companies (users)	Designated facilities Hotels, residential-commercial buildings, commercial-leisure buildings, religious facilities, public offices (public and government) Non-designated facilities Individual companies per corresponding lot, etc.
Supplied At	Development cost (for designated facilities) Appraisal rate (for non-designated facilities)	Appraisal Rate	Bid Rate Development cost or appraisal rate (urban factory) Development cost (public facilities)

Evolving Urban Design to Adapt to Changing Demands

The spatial structure of DMC is split into two categories: "Media & Culture" and "Digital & IT". Additionally, a feasibility plan was developed so as to promote accelerated use and long-term success of the area, while ensuring its linkage to the adjacent environmentally-friendly residential complex, improved residential environment district, and the planned Susaek district in the functional, spatial and policy sense.

To usher in this plan, priority facilities (broadcasting facilities, Korea Creative Content Agency, media-related research centers, Seoul Business Center and research & education facilities) were arranged at the center; other facilities (high-tech business facilities, general business facilities, commercial facilities, commercial-leisure facilities, residential-commercial facilities, hotel & convention centers, urban factories, etc.) considered the traffic/environment/building height restrictions but were planned to maximize location potential. To create a "center" feel for the intersection of major arterial roads, high-rise buildings were arranged systematically, carefully considering their height and shape. It was also suggested to locate a landmark for all of Sangam at

the south entrance to the district.

Digital Media Street (DMS) is a central street planned for major activities designed to create the image of a high-tech city. DMS was planned as a crescent shape towards an attractive street environment and to respond to varied demands. It was also designed to inherit the sense of scale from Myeongdong and Insadong. By each public space located at major points, the concept of "augmented place making" was applied, embracing both the latest media technologies and traditional elements of a city. Adjacent commercial facilities were also encouraged to adopt this concept for applicable spaces and to provide for multiple uses of particular spaces.

Upgradable Infrastructure for Sustainability

To help DMC become a global hub for digital media and for original, creative culture, infrastructure was made agile to enable effective response to new demands and changes. Namely, IP Intellights and media façades – interactive installations with sensor and monitoring functions – were installed across the district to support the digital media businesses in the area. Other smart infrastructure installations include two-way wireless LAN stations and NOC (Network Operation Center).

Other types of integrated infrastructure provided at the district include: "industrial infrastructure" supporting media, video, game facilities, programs, industries and business; "cultural infrastructure" supporting artistic and cultural activities; and "green infrastructure" utilizing renewable energy.

Figure 4 - IP Intellights

Digital Media Street (DMS) as a Landmark Location

DMS is the main street for DMC and brings together IT and media content to create a digital environment where physical activities and space interact with cyberspace. DMS is a leading project designed to make

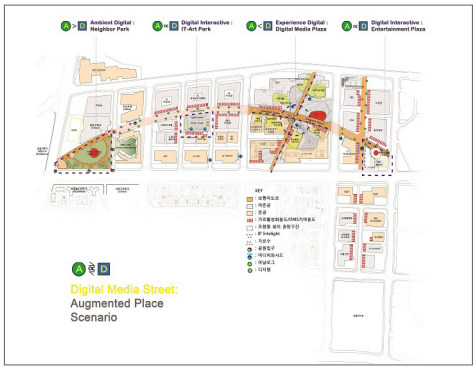
DMC the incubator for cutting-edge digital media technologies and content.

DMS will be a living laboratory for new technologies and culture. This high-tech urban environment will be the center of future city activities and life, shaped by creativity, innovation, and flexibility. It will be where people can experience tomorrow "now".

It is also a place where new technologies interact with the future, designed to help resident companies showcase their digital media technologies and applications. DMS will be a place where new technologies and ideas are applied even during development, and many of its ideas have been applied in real life.

Figure 5 - DMS

Figure 6 - Making of the High-Tech Cultural Space on DMS>



Source: Making of the High-Tech Cultural Space on DMS, 2010

Process & Management Organization

Process

① Planning

From 1997 to 2002, major plans, business principles, and policy and institutional frameworks were drafted and planned. The designation of Sangam for inclusion in the land development program in March 1997 sparked the development of adjacent areas in preparation for the Korea-Japan World Cup. Starting with the New Seoul Town Development Master Plan (1998), plans required for DMC, such as the Digital Media City Master Plan (2001) were developed by experts from home and abroad under the leadership of the City of Seoul. Based on these plans, the Seoul Ordinance on DMC Assistance (2002) was drafted, followed by various promotional and marketing activities.

② Development

From 2002 to 2014 was a period of development when the conventional and smart infrastructures were set up, including most of the buildings and facilities required for industry and culture. The physical environment, such as DMS, is not yet complete, but the headquarters of major media companies – MBC, YTN, and Donga Daily – and the City of Seoul's IT Complex building were completed in October 2014. The smart infrastructure is mostly in place, such as the aforementioned IP Intellights, and companies have moved into the buildings. Companies that are to move in have been chosen for all sites except a few (such as the landmark site), and are ready to complete this ecosystem for the digital media industry.

③ Management

The period of management overlaps with the development period, and began when DMC CoNet, the resident company council at DMC, was founded in 2008 to start the private sector-led management of the district. While the DMC program was acclaimed at home, this was especially the case abroad. As a result, Russia Science Seoul (RSS) and ASEM's TEIN (Trans-Eurasia Information Network) research center moved in. Exchange programs were also initiated with international industrial complexes such as University of Maryland BioPark (USA) and Sophia Antipolis (France). Moreover, Seoul Digital Culture Open (SeDCO) has been held every year since 2008 to maintain a competitive edge as the center for the digital media and cultural industries. Still undergoing development and improvement, DMC has recently discovered more demand through a business assessment and needs to be proactive if it wishes to maintain its competitiveness and evolve into a source of creative culture.

Management Organization

The management organization for DMC was established on July 28, 2000 when the "DMC Task Force" was founded by the city of Seoul government. At the time, SH Corporation was commissioned with the site devel-

opment for DMC and also launched and operated an Information City Task Force.[1] In 2002, Seoul placed the DMC Task Force at the Bureau of Industry & Economics to oversee the DMC program, attract IT companies to the district, and invite foreign investors. Since then, the name of this organization has changed multiple times to DMC Team, Bureau of Industry (January 15, 2003); DMC Department, Bureau of Industry (January 2, 2007); Investment Team, Competitiveness Promotion Headquarters (May 31, 2007); Investment Department, Competitiveness Promotion Headquarters (July 30, 2007); Investment Team, Competitiveness Headquarters (January 1, 2008); Investment Department, Economic Promotion Headquarters (September 27, 2010); and Investment Department, Division of Economic Promotion (January 1, 2012); with roles and responsibilities changing accordingly.

DMC is managed by the City of Seoul, SBA, and SH Corporation in accordance with the assigned duties. The City of Seoul has been responsible for DMC-related ordinances, guidelines, plans, operation of working-level committees, and other general policy-making and planning processes. It also eased regulations on land supply and relevant plans while working on the guidelines and their management. Other duties include developing operation plans for supporting facilities, assistance plans for resident companies, websites for financial assistance and district promotion programs, "culture open" plans, tourism promotion plans, and CoNet operation plans. SBA is in charge of i) managing the supporting facilities (monitoring resident company compliance with designated use protocols, selecting resident companies, and collecting resident contributions, etc.); ii) offering assistance programs for resident companies; iii) developing "culture open" plans and operating CoNet; and iv) promoting tourism and conducting marketing activities. For its part, SH Corporation supports infrastructure development and appraisal, notification, presentation, and other land supply-related responsibilities.

To ensure the consistency in planning, experts who drafted the early plans are encouraged to stay involved in the urban planning, construction, and management process via the DMC Planning Committee, the DMC Working-level Committee, the DMC Management Committee, the District Unit Planning Committee, and the Landmark MA Committee, etc.

Table 3 - DMC Responsibilities

Duty	City of Seoul	SBA	SH Corporation
Policy Making & Planning	Manage DMC-related ordinances and guidelines; Operate the DMC Planning and Working-level Committees; Establish DMC policies and development strategies	-	-

1. Seoul Metropolitan Government and SH Corporation, Comprehensive DMC Development Plan 3 (DMC Promotion Plan), 2010.

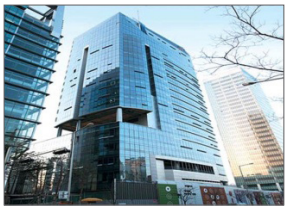
Land Supply	Develop land supply plans; provide the sites (project orientations, applications, selection, contracts, collection of fees)	-	Support infrastructure development and construction, land supply-related responsibilities (appraisals, notifications, orientations, applications, contracts, collection of fees, etc.)
Management of Designated Use Protocols & Development Schedule	Ease regulations and manage guidelines; manage progress (e.g., land use approval, agreement to begin construction, KGIT Center, landmark buildings); manage designation of use and development schedule	Assist resident companies with their status and progress (monitor compliance with designated use protocols)	-
Management of Supporting Facilities (DMC Academia-Industry Research Center, DMC High-tech Industrial Center, DMC Promotion Center, DMS, etc.)	Develop supporting and public facilities; develop operational plans for supporting facilities; develop financial and other assistance plans for resident companies	Manage supporting facilities; review resident selection; collect resident contributions; implement assistance programs for resident companies	-
Promotion of the District	Run the DMC website; develop plans for "culture open" and CoNet operation and to promote tourism for the area	Implement DMC "culture open" plans, promote tourism; operate the resident company council and CoNet	-

Source: Internal data, Seoul Metropolitan Government

Major Achievements

<MBC>

<KBS Media>



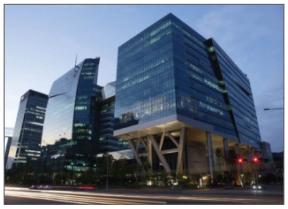
<Electronics Center>

<CJ E&M>

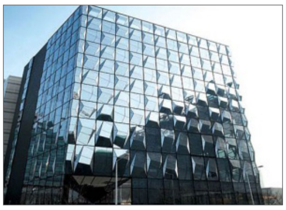
<YTN>

<Cultural Content Center>

<Nuri Dream Square>



<LG CNS, LG Telecom>


< TRUMP Korea >


<Pantech>


<Pan Entertainment>


<Sangam IT Consortium>


<SBS Prism Tower>


<High-tech Industrial Center>


<DMC R&D Center>


<DMC Ville>

South Korea's Largest Media Hub & a Living Laboratory through Consistent Planning

South Korea's top 3 broadcasting headquarters, key branches, and major media companies and their branches have moved into DMC. With these reputable media, film, game and animation companies, DMC has become the largest media hub in South Korea and a global leader in the media industry. As of today, some 882 companies operate from DMC, including 442 high-tech companies (241 M&E content companies, 179 IT/software companies, 22 NT•BT companies) and 440 supporting and offshoot companies, employing some 40,000 people. Completion of the district is expected to create a total of 68,000 high-quality jobs, with resident company revenues expected to reach KRW 35 trillion. Considering most resident companies are in M&E and IT, the economic repercussions will be far greater in the future than now.

New Ecosystem of Full Range, from Digital Media R&D to Education & Production

The Academia-Industry Research Center was built to reinforce DMC's R&D functions, while the High-tech Industrial Center was established to foster SMEs. Having invited top global research centers to join, DMC is more than a hub for content production: it is now the birthplace of core technology. The integration of media content production by broadcasting companies, information production and distribution by media companies, and production of entertainment content from a single district will not only generate profit for individual companies but also produce synergy aided by the media network, proving the advantage of creating a media ecosystem.

An e-Sports stadium and 4D studio were also built to diversify the range of content production at DMC. A 'Cartoon Artist Zone' (which can be linked with the 'PD Zone' and the 'Director Zone') was also installed to boost the competitiveness of the content industry in comics and animated film. This will act as an incubator for training experts, producing creative content, and experimenting with new ideas.

DMS: the First Beautiful, Smart Street in South Korea

Construction of DMS is underway, and is one of the key DMC projects. Measuring 815 m east to west and 325 m north to south, it is in fact the world's first "concept" street with smart functions. Located at the heart of DMC, DMS is a test bed for digital experience aided by the latest IT and media content technology. This frequently visited high-tech tourist attraction provides unique experiences to visitors 24 hours a day. The plaza in front of MBC, Korea Creative Content Agency, and Nuri Dream Square have been acclaimed as new concepts in urban space, shaped by the latest technologies, broadcasting content, and urban activities.

DMS is an experimental urban infrastructure perfected by the creativity of individual buildings. It proposes to be an exemplary model of a street environment that can evolve and stay "smart".

Thanks to the creative urban design and detailed guidelines, DMC has turned its streets, buildings, and urban facilities into valuable resources unique to the district. It is a good example of open and reasonable planning and development. In particular, guidelines allowing permeability in building ground floors and opening the space to pedestrians have significantly contributed to making the city environment more integrated, and breathing vitality into it. It has also helped resident companies and users experience the economic benefits of such a practice and change their awareness about the regulatory nature of urban design. Today, resident companies and residents alike share the necessity to work together to make DMC a better environment. Presently, a suitable platform for this is being developed.

Systematic Development of an Industrial Ecosystem Through Selection of Suitable Companies & Provision of Land

Instead of relying on bidding and block sales, a new approach was chosen to find companies seeking to meet the project objectives. This way, projects are pursued in a more consistent manner as the new approach integrates project models with physical plans. Public projects with certain objectives are linked with companies with relevant demands, to whom the project is proposed and a site provided. This is one of the main reasons that DMC has become an industry cluster and high-tech industry ecosystem. The decision to switch from conventional real estate development to a new direction and provide space to suitable companies has made a significant difference in the development of the high-tech industry cluster in Korea.

Cultural Origin of Digital Media

Digital media projects were launched at a time when the concept was new. To boost the program, the City of Seoul hosted artistic and cultural events such as the Media City Biennale and Seoul Digital Culture Open. While these early programs continue, newer events – short film and documentary festivals – are being added and held throughout the year, with the influence of MBC and CJ auditioning programs being felt far and wide, engaging the district in cultural pioneering. DMC has obtained its competitive edge as a new industry cluster, and is now recognized by the world as a cultural source in this era of digital media.

New Model for Urban Restoration & Knowledge Industry Package

Environmentally, the area has become a test bed for "green" technology and urban restoration in South Korea. From projects such as "Plant 10 Million Trees" to renewable energy technologies involving hydrogen fuel cells and zero-carbon houses, the latest environmental technologies and industries have been brought together to restore a sustainable ecosystem to this previous landfill site. DMC involves not only the regeneration of Hongje and Bulgwang Streams but also the restoration of Cheonggye Stream. It is now an invaluable reference to many cities in and outside of Korea.

Socially, DMC has helped develop the urban production community (which continues to evolve), where the entire process from production to use takes place. All the functions required for the media industry and production of knowledge are located here, with the environment allowing everyone, from business start-ups and entrepreneurs to SMEs and large corporations, to work together to turn original ideas into valuable creations. Residents have joined with companies (including CoNet, a gathering of companies) to be actively involved in management, and improvement, of the region.

Economically, the area creates value. Some 40,000 employees working at 882 companies are the engine driving the local economy. Tax revenues that go into national and city coffers are more than just numbers. Furthermore, the existing approach of block sales was rather ambiguous, caught between investment and speculation, but the new approach of providing land that companies need presented a new possibility and a new model for more advanced urban development and restoration that allows everyone involved to share the fruits of success.

DMC is an ongoing program, but it has been praised as exemplary by MIT's New Century City Forum. It is the amalgamation of future knowledge industries and has contributed to the planning and implementation of the Digital Mille project in Zaragoza, Spain, and of the Media City UK project in Manchester. Thanks to its success in injecting core production functions into the city and enhancing the city's competitive edge, DMC has been benchmarked by Baikal Smart City (Irkutsk, Russia) and Đà Nẵng High-Tech Park (DHTP, Vietnam) in terms of its development of a high-tech industry cluster and strategic urban development/restoration.

Figure 7 - Renewable Energy Infrastructure in DMC

Implications

DMC is still ongoing but is gaining increasing attention from the world. With this project, Seoul has systematically achieved its goals of enhancing the city's competitiveness and creating a model for a sustainable city, highly-sought after by many cities in advanced nations but without much success.[2]

Seoul has struggled to escape the past pattern of quantitative growth and become a city where people and nature co-exist peacefully, where tradition and history are treasured. The above-mentioned goals were tested at DMC and the potential for success discovered. Such attempts at novel planning and experimentation were what made it possible for the city to change its urban development policies, providing a groundwork for today's Seoul Plan.

As a "smart" "green" city integrating environmental, social and economic sustainability, DMC is a model urban production community and is considered more highly outside of this nation's borders than within. It is more than a simple urban development project: a new creative ecosystem of knowledge and a cluster of media and IT industries have been created, proposing a system and a precedent for creating a new understanding of value. DMC shares this understanding of value with other countries and encourages them to start a change, based on the leadership it has shown in the creation of new urban industries.

In the past, South Korea has been rather keen on following in other countries' footsteps. However, DMC has showcased an integration of media and urban development, a place where industry and culture join together. DMC now does more than sharpen the national competitive edge: it demonstrates that creating value can change the future of mankind and the world.

2. MIT,2005, MIT Tech Talk, vol.49, no.16, p.6

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10. The Land Readjustment Program

Writer : Seoul Institute Dr. Sun-Wung Kim

Policy Area: Urban Planning

Definition & Background

The Land Readjustment Program is a replotting-based approach, exchanging and subdividing/combining the land without altering the relationship of rights in existence prior to the program. This method of securing land for public facilities and developing built-up areas in the city was adopted as a way to prevent disorderly urban sprawl as the city grew in areas without sufficient financing. It also sought to acquire public land in new built-up areas in advance. One the advantages of the program is that public land can be acquired without investing public resources as the land owner is compensated through replotting as per a certain percentage of lots on the land set out for public use or for other plans. Priority to become the program entity (and implement the program) is given to the land owner and the association. If this does not occur, the national government, local governments, the Korea Housing Corporation, or the Korea Land Development Corporation can implement it.

Characteristics by Period

Prior to the 1960s: the "Joseon Town Planning Ordinance" for Residential Areas

The Land Readjustment Program began with the Joseon Town Planning Ordinance in June 1934 while Korea was still under Japanese colonial rule. In February 1937, Seoul chose Donam and Yeongdeungpo districts as the first areas and Daehyeon as the second. The program was implemented in 10 districts spanning over 16,952,000 m² between 1937 and 1945. In the 1950s, the program was implemented in Central District 1 and 2 (1,202,000 m²) as a post-war restoration project.

The 1960s & 1970s: Advancement of the Land Readjustment Program

In Seoul, the Land Readjustment Program reached its peak in the 1960s and 1970s. In the 1960s, the program expanded to include 20 districts (63,674,000 m²) for both 5-Year Economic Development plans and development of new built-up areas. In the 1970s, the program was implemented in 14 districts (49,650,000 m²). If housing site development[1] prior to 1962 was conducted on the premise that detached houses would be built pursuant to the Joseon Town Planning Ordinance, the site development programs that followed were done as part of the Land Readjustment and the Residential Site Development programs, thanks to relevant laws and institutional framework such as the Urban Planning Act and the Land Expropriation Act of 1962. During this period, residential areas occupied by detached houses – such as 100,000 Hwagok Complex of (1965) – were developed sporadically, while some large apartment complexes – Mapo Apartment (1961) and Civil Servant Apartment (1966, Hangang Apartment) in Dongbu, Ichon-dong – were also developed as part of the government's pilot program.

In the 1960s, the government also announced a policy to supply housing (mostly apartments) to enhance the efficient use of land in large city areas. In the 1970s, Hangang Mansion (1970, LH apartment), Yeouido Pilot Apartment (1970, City of Seoul), and other apartment complexes built by the public sector for the middle class became immensely popular, further encouraging similar policies to follow. In 1972, the Housing Construction Promotion Act[2] and the Act on Temporary Measures for Development Promotion in Specific Areas[3] were passed to assist with construction of private housing and to involve private housing construction companies in the Gangnam area in development of Seoul, respectively. These two Acts[4] accelerated private

1. A land readjustment plan based on the Joseon Town Planning Ordinance was actively pursued by 1936 by Gyeongseongbu. However, new site development virtually came to an end due to the chaos of the time that followed Korea's liberation from Japanese colonial rule in 1945 (US Army Military Government and the Korean War). Any efforts that were taken stopped short of building houses for rescue and rehabilitation within the program area designated before Korea was liberated.

2. Enacted in 1972, the Housing Construction Promotion Act reflected the details for private sector-led housing policy, a trend which was reinforced in the 1970s. Immediately after the Yushin Reforms, a 10-year plan to build 2.5 million houses was announced in October 1972, and the Act was one measure to support the 10-year plan. It sought to provide access to public housing funds for private developers to encourage the private sector to be involved in the policy in an organized manner. With its enactment, the Public Housing Act of 1963 was repealed. Since then, the concept of public housing changed to include housing supplied by the public sector as well as the private.

3. The Land Readjustment Program for Yeongdong District 1, initiated alongside the construction of Gyeongbu Highway in 1968, was pursued as part of the Gangnam development policy, to disperse the population of Seoul. The program scope was expanded to cover Yeongdong District 2 (1970) and Jamsil District (1974). However, economic slowdown in the early 1970s put up roadblocks to Yeongdong development. The government passed and implemented the Act on Temporary Measures for Development Promotion in Specific Areas to support the economy and Yeongdong development, mainly through tax relief and granting priority access to the housing construction fund to site developers and construction companies targeting Yeouido and Gangnam. It was designed to be in effect only until December 1975 but was extended to December 1978.

4. In the early 1970s, Seoul had difficulties selling the land developed from construction projects in Yeouido and on the banks of the Han River. The city had to provide incentives to housing construction companies to buy the land, and even ordered them to purchase it. To compensate construction companies for losses from the Gyeongbu Highway project, the land from the Han River embankment project was developed and sold by the association of these construction companies (Gyeongin Development). It was purchased by the Land Corporation and became the site of apartment complexes. This is today's Banpo area. Much of the Hyundai Apartment complex in Apgujeong-dong was given to Hyundai Construction, also a participant in the embankment project.

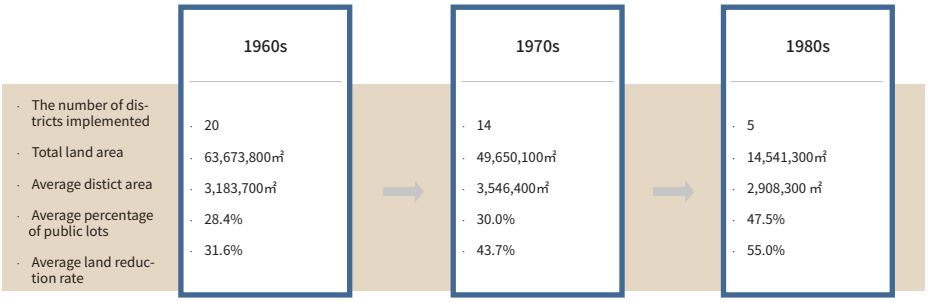
development of apartment complexes in and around Yeongdong.

Most of the housing site development around this time was based on the Land Readjustment Program Act. This Act was modified to allow for development of apartment complexes in detached housing areas. In December 1975, the Land Readjustment Program Act was revised to designate group sites to secure land for apartment construction. In January 1976, the "Apartment District System" was introduced to allow the addition of districts for apartment construction on top of the ones specified in the Urban Planning Act, to require developers to build apartment complexes.[5] With this change, most residential areas began to see apartments rise, mostly centered in the Gangnam area. This development of Gangnam fueled speculation in the property market. Accordingly, the need for more housing sites and housing grew. By December 1977, the Housing Construction Promotion Act had been completely revised, providing a legal basis for housing site development. In 1979, rules on housing construction were set forth to regulate installation of facilities within the residential complex. This subordinate law was put in place to control the quality and level of facilities in complexes built by private developers.

1980s: Reduction of the Land Readjustment Program

In the 1980s, speculation began to create serious problems in terms of housing affordability. Replaced by a new public development plan, the Land Readjustment Program was only conducted on a limited scope in 5 districts (14,541,000 m²), including Gangdong, Gaepo, Garak and Yangjae.

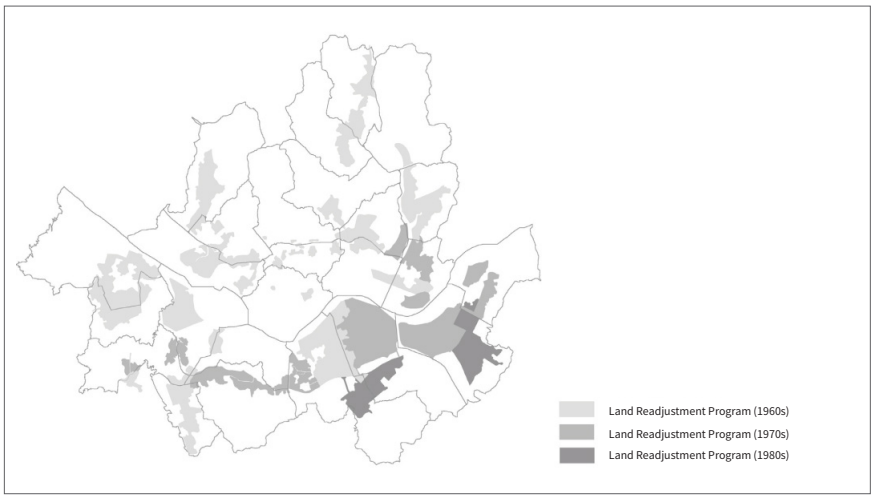
Figure 1 - Characteristics of the Land Readjustment Program by Period



The number of districts (and total land area) where the program was implemented was highest during the 1960s, but average district area was the largest in the 1970s. In the 1980s, the number of programs was reduced, but the average percentage of public lots and the average land reduction rate were much higher than in previous decades. The increasing size of public land over time can be explained by the fact that the program entities allowed more land for infrastructure, such as roads, parks, waterworks and sewer lines.

5. The apartment district system was introduced to utilize land to most efficiently and establish public facilities. After the system was legislated, 11 districts (229 ha) were designated in Jamsil, Banpo, Apgujeong and other areas in August 1976. A total of 14 districts had been designated by 1979.

Figure 2 - Land Readjustment Program Districts in Seoul by Period



Changes in the Size of Districts in the Land Readjustment Program by Year

By decade, the average district area of the Land Readjustment Program was 3,183,700 m² in the 1960s, 3,546,400 m² in the 1970s, and 2,908,300 m² in the 1980s. The larger areas were preferred as larger facilities boosted the economy and reduced program costs. However, the increasing amount of land to be readjusted and of the rights holders created an issue with replotting and resulted in longer construction periods.

Figure 3 - Size of Districts in the Land Readjustment Program by Year (Approved Programs)

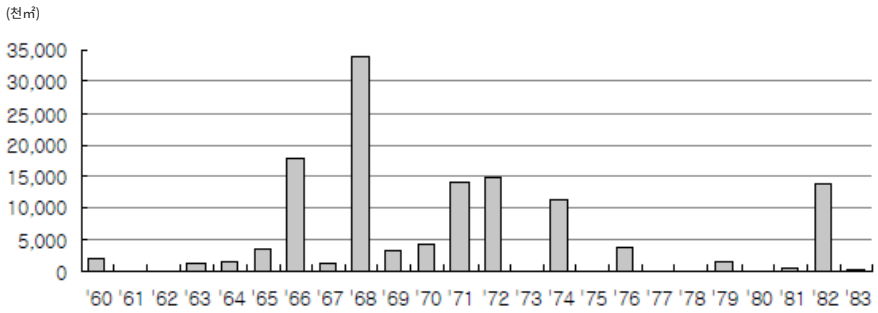


Table 1 - The Land Readjustment Program in Seoul

	District Name	Date Designated	Date Approved	Area (1,000 ㎡)	Percentage of Public Lots (%)	Land Reduction Rate (%)	Program Cost (KRW 1 million)	Remarks
1960s	Seogyo	'57.7.8	'60.7.13	1,723.00	30.5	25.7	224	City of Seoul
	Dongdaemun	'60.2.8	'60.9.29	267.1	32	30	52.3	City of Seoul
	Myeonok	'62.3.5	'63.2.5	1,101.50	24.4	29.1	170	City of Seoul
	Suyu	'61.1.11	'64.10.16	1,393.90	26.7	24.9	200	City of Seoul
	Bulgwang	'61.1.11	'65.10.7	1,189.80	28.3	24.8	185	City of Seoul
	Seongsan	'63.3.8	'65.11.8	2,246.10	29.2	33.8	340	City of Seoul
	Dokdo	'61.1.11	'66.1.21	1,354.00	25.3	25.6	275	City of Seoul
	Yeonhee	'66.5.26	'66.1.21	806.1	23.1	34.2	263	City of Seoul
	Changdong	'66.7.1	'66.1.21	2,793.10	26.3	30.2	556.3	City of Seoul
	Yeokchon	'66.7.1	'66.1.21	4,344.50	35.2	34.4	911	City of Seoul
	Hwayang	'66.5.10	'66.1.21	2,110.50	20.7	26.6	273	City of Seoul
	Mangwu	'66.5.10	'66.1.21	6,450.60	29.2	30.6	1,340.00	City of Seoul
	Hwagok	'66.11.24	'67.3.10	1,025.10	28.1	32.2	858.7	Korea Housing Corporation
	Gyeongin	'66.12.28	'68.1.8	6,918.70	27.4	32.9	1,723.00	City of Seoul
	Yeongdong 1	'66.12.28	'68.1.8	12,737.80	41.8	39.1	4,725.00	City of Seoul
	Gimpo	'66.12.28	'68.1.23	4,706.40	27.3	31	1,274.80	City of Seoul
	Siheung	'66.12.28	'68.1.23	5,746.20	26.3	30.8	1,249.00	City of Seoul
	Dobong	'66.12.28	'68.1.23	2,661.60	32.9	36.3	521.3	City of Seoul
	Gaebong 1	'68.5.14	'68.7.18	959.7	28.8	44.4	968.5	Korea Housing Corporation
	Junggok	'67.8.10	'69.10.1	3,138.10	23.7	34.9	1,356.70	Union
	Subtotal (20)			63,673.80	28.4	31.6	17,478.60	
1970s	Gaebong 2	'70.3.11	'70.5.25	1,030.80	28.3	55.1	1,275.30	Korea Housing Corporation
	Shillim	'66.12.28	'70.9.3	3,420.00	33	33.1	1,447.00	City of Seoul
	Yeongdong 2	'66.12.28	'71.8.24	13,071.90	27.2	36.8	10,683.00	City of Seoul
	Jamsil	'71.5.5	'74.12.6	11,223.20	41	52.9	10,100.00	City of Seoul
	Yeongdong 1 (additional)	'71.5.5	'71.12.28	991.7	31.8	39.8	983.2	City of Seoul
	Hwayang (additional)	'71.11.26	'72.3.28	1,522.40	29.4	38.5	617	City of Seoul
	Cheonho	'66.12.28	'72.11.6	2,621.60	27.3	35.1	4,000.00	City of Seoul
	Shillim (additional)	'71.5.5	'72.11.6	2,006.60	29.5	32.8	1,400.00	City of Seoul
	Yeongdong 2 (additional)	'71.11.26	'75.2.14	85.4	21.9	39.5	92.6	City of Seoul
	Heungnam	'71.3.10	'72.2.9	556.4	22.7	50.1	577	Union
	Isu	'71.4.8	'72.2.18	8,028.30	23.2	39.4	3,159.20	Union
	Amsa	'75.1.18	'76.4.22	1,697.10	29.4	50.4	3,400.00	City of Seoul
	Janganpyeong	'75.1.18	'76.6.25	1,933.10	33.6	53.8	5,944.30	City of Seoul
	Guro	'77.1.31	'79.3.29	1,461.60	41.4	54.4	18,650.00	City of Seoul
	Subtotal (14)			49,650.10	30	43.7	62,328.60	
1980s	Isu (additional)	'79.9.21	'81.4.10	76.6	42.7	53.3	6,937.20	Union
	Gangdong	'80.5.20	'81.4.10	363.6	40.6	53	4,600.00	City of Seoul
	Gaepo	'81.4.11	'82.2.18	6,491.30	62.1	5734	128,229.00	City of Seoul
	Garak	'80.7.2	'82.3.20	7,455.10	60.7	68.3	112,995.00	City of Seoul
	Yangjae	'83.3.11	'83.11.22	154.7	31.3	43.1	5,147.30	City of Seoul
	Subtotal (5)			14,541.30	47.5	55	257,908.50	
Total				127,865.20	31.4	38.9	337,715.70	

Limitations & Development

Because the Land Readjustment Program usually supplied sites for detached housing, it did not alleviate the housing shortage caused by rapid urbanization at the time. There was a growing need for extensive sites for housing to respond to the population boom, with a strong institutional framework to control land development as there was a problem of privatizing development profits. In response to these needs, the Housing Site Development Promotion Act was passed in December 1980, under which the public sector was able to take a leading role throughout the stages of acquiring, developing, supplying and managing the housing sites. In January 2000, various urban plans and development programs regulated by the Urban Planning Act were integrated into the Urban Development Act, and the Land Readjustment Program also changed to urban planning through replotting.

Achievements & Challenges

The Land Readjustment Program was an approach suitable to built-up area development when financing was insufficient in the early days. Nearly half of the already-developed area was developed to supply land and lots for public use and accommodate the waves of people moving into the city. By the end of the 1960s, the program was implemented all over Gangnam, dispersing the population away from Gangbuk.

Deterioration of Detached Housing & Growing Demand for Reconstruction

The Land Readjustment Program offered replotting as compensation, which pushed up the percentage of detached houses and created a problem of development profit privatization. Moreover, real estate prices grew in the process of selling replotted land, with demand increasing for lots for public use. By the end of the 1980s, the program transitioned into the Housing Site Development Program based on public development. Currently, all Land Readjustment Program districts, including the Yangjae district, (the last program, designated in 1983), are 20 years old and older. The land remains low-rise and low-density due to the program, and thus demands for reconstruction are steadily rising.

Reconstruction Requirements for Detached Housing Sites

The reconstruction program for detached housing sites applies to areas with 200 or more detached houses or are 10,000 ㎡ or more in area, and should meet the following requirements:

_ The existence of sufficient infrastructure such as roads in the area and no need for additional infrastructure in adjacent areas, or the program entity will pay for construction of additional required infrastructure;

_ Old, deteriorating buildings in the area account for half to two-thirds of the total, and at least three-tenths of the multi-household and multi-unit buildings are 15 years or older.

_ Source: Ministry of Construction & Transportation, 2004,

_ Guidelines for Reconstruction of Detached Housing Sites

Lack of Infrastructure

The introduction of new types of housing – multi-household and multi-unit buildings in 1984 and 1990 – quickly multiplied the number of households in the Land Readjustment Program areas. Most areas however lacked parking lots and other infrastructure along with narrow alleys ways. The demands for systematic management plans increased.

Mixed Use

In many regions, community facilities were set up in residential areas, giving rise to a mixing of commercial facilities and detached houses. The increasing number of community facilities within the general residential areas complicates the categorization necessary for urban planning and degrades the living environment, making it necessary to review the facilities being allowed for commercial use.

Table 2 - Use of Community Facilities in Residential Areas

Category	Allowed Use	Remarks
Class 1 General Residential Area	Class 2 Community Facilities (Excluding bars and massage parlors) Religious assembly facilities, charnel house (in the religious assembly facilities), zoo or botanic garden (cultural assembly), educational facilities, research facilities, youth hostel (training facilities), exercise facilities, parking lot	Enforcement Decree of the Construction ActRefer to Attachment 1 · 4.
Class 2 General Residential Area	Class 2 Community Facilities (Excluding bars and massage parlors) Performance hall, assembly hall, retail shops, medical clinic, broadcasting and communications facilities, generator facilities, education, research facilities, public service facilities from business facilities, financial business branch/office, storage, parking lot, carwash, generator facilities, military facilities, storage and treatment of dangerous materials (petrol station, pressurized gas charging station and storage)	Enforcement Decree of the Construction Act Refer to Attachment 1 · 5.
Class 3 General Residential Area	Class 2 Community Facilities (Excluding bars and massage parlors) Performance hall, assembly hall, retail shops, medical clinic, broadcasting and communications facilities, generator facilities, education, research facilities, business facilities, exercise facilities, training facilities, storage, factory, parking lot, carwash, generator facilities, military facilities, prison, storage and treatment of dangerous materials (petrol station, pressurized gas charging station and storage)	Enforcement Decree of the Construction Act Refer to Attachment 1 · 6.

Note: Class 3 General Residential Area is similar to Class 1 and 2 in allowed use, but differs in floor area.
Source: Urban Planning Ordinance of Seoul, Chapter 8, Section 1.

Increase of Residential-Commercial Buildings

Residential-commercial buildings were built in concentration in the central commercial areas, such as at area or district centers, resulting in a shortage of business facilities and other facilities. This was because since 1994, residential facilities in residential-commercial buildings were easily excluded from the requirement for plan approval when certain conditions were met, and regulations on residential-commercial buildings located in the commercial areas were steadily eased. From 1999, large houses of less than 297㎡ were allowed and construction was permitted for up to 90% of the total area.

Table 3 - Changes to the Residential-Commercial Building System

	Residential Facilities Excluded from Requirement for Plan Approval	Facilities Allowed to be Built in Multi-unit Residential Buildings	Allowed Floor Space Ratio
1982.5	-	· Community facilities, business facilities, sale facilities	-
1989.9	-	· Community facilities, business facilities, sale facilities, social welfare center	-
1994.7	· Average net area: up to 150 m^2 · Less than 50% of total area · Less than 200 households	· Same as above	-
1995.1	· Average net area: up to 150 m^2 · Less than 70% of total area	· Same as above	-
1998.4	· Average net area: up to 150 m^2 · Less than 90% of total area	· Same as above	-
1999.12	· Maximum net area: less than 297 m^2 · Less than 90% of total area	· Same as above	-
2000.7	· Same as above	· Same as above	· Central commerce: 800%/1,000% · General commerce: 600%/800% · Community commerce: 600%

Source: Article 32, Enforcement Decree, the Housing Construction Promotion Act, Article 4, Rules on Housing Construction Standards, Attachment 2, Urban Planning Ordinance of Seoul.

Shortage of Public Lots & Reduction of Lot Size

To pay for the program and secure public lots without financial assistance, lot size reduction[6] inevitably increased. The average percentage of public lots also gradually decreased: 28.4% in the 1960s, 30.0% in the 1970s, and 47.5% in the 1980s. Lot size reduction increased accordingly to 31.6%, 43.7%, and 55.0% for the respective decades. Due to the resistance of landowners and the percentage of public lots decreased in many districts, which led to deteriorating quality in terms of space.

6. Lot size reduction: Land that has been expropriated for use as public lots for construction under the Land Readjustment Program. If the entity cannot finance construction on these lots, then the land is not sold but is replotted (lot size is reduced) in areas where the conditions are almost identical to the original

Case: Gaepo District 3

Outline

Gaepo District is located 13 km to the southeast of the city center. It once belonged to Gwangju-gun, Gyeonggi Province but was absorbed by Gangnam-gu, Seoul after adjustment of the administrative districts. It spans across Daechi-1-dong, Daechi-2-dong, Gaepo-4-dong, Dogok-2-dong (Gangnam-gu) and Yangjae-2-dong (Seocho-gu) and is easily accessible via Subway Line 3 and the new Bundang Line.

Figure 4 - Gaepo District Surroundings

Designation of the Land Readjustment Program Districts

Gaepo District was originally designated as part of the Land Readjustment Program by the City of Seoul in January 1968 and some of it was replotted. However, the program was canceled due to the Green Preservation Plan in June 1978. In April 1981, the Ministry of Construction designated the district while implementing the Land Readjustment Program Act. The site development program in Gaepo District aimed to supply extensive sites to build 5 million houses, the plan for which was launched to address the housing shortage issues in the early 1980s pursuant to the Housing Construction Promotion Act.

To alleviate the lack of sufficient urban infrastructure and traffic congestion in Seoul, the government sought to disperse the population away from the Seoul metropolitan area and contain growth in the CBD. It focused on developing Gangnam so as to divert the urban functions from Gangbuk to Gangnam. Gaepo was then planned as the next new "downtown" for Seoul. By developing this district, Seoul attempted to address the housing shortage and promote balanced urban development.

Table 4 - Gaepo District Development History

	Detail	Remarks
Dec. 1980	· Change in intended use of part of Yangjae District and application for Land Readjustment Program plan	
Jan. 1981	· Change in intended use of part of Yangjae District and cancellation of application for Land Readjustment Program plan	
Apr. 1981	· Gaepo District designated for housing site development	· Notice #113 of the Ministry of Construction
Jul. 1981	· Basic Urban Development Plan established for Gaepo District	
Sep. 1981	· Notification of changes to the site development plan for Gaepo District	· 8,460,000 m² (2,559,000 pyeong)
Nov. 1981	· Approval of the site development plan for Gaepo District	
Feb. 1982	· Changes to the Gaepo District 3 development plan and approval for action plan · Implemented as part of the Land Readjustment Program	· Notice #76 of the Ministry of Construction · 6,618,000 m² (2,002,000 pyeong)
Mar. 1982	· Public notice of replotting plans for the Land Readjustment Program district in Gaepo	
Sep. 1983	· Approval for development plan changes and action plan for Gaepo District 3	· Notice #296 of the Ministry of Construction
Sep. 1983	· Approval for replotting plan and designation of planned replotting area	· Notice #534 of the City of Seoul
Jun. 1985	· Approval for changes to development plan and action plan	· Notice #25 of the Ministry of Construction
Feb. 1987	· Approval for changes to replotting plan and designation of planned replotting area	· Notice #116 of the City of Seoul
Dec. 1988	· Construction completed and replotting plan changed / Notification of replotting confirmation	· Notice #992 of the City of Seoul
2002	· District unit plan established for Gaepo area in Gangnam-gu	· Multi-unit housing area
2004	· District unit plan established for Yangjae area in Seocho-gu	

Source: Seoul Metropolitan Government, 1990, White Paper on Seoul Land Readjustment.

Implementation of the Land Readjustment Program

While designating districts for site development, the Ministry of Construction divided Gaepo District into 3 areas, with one area each to be developed by the City of Seoul (5,983,000 m²), the Korea Land Corporation (1,818,000 m²), and the Korea Housing Corporation (602,000 m²). In 1981, land to be developed in all 3 districts was to be expropriated, but this changed due to the Land Readjustment Program in February 1982. Gaepo District 1 and Gaepo District 2 were thus developed as part of the public development approach by the Korea Land Corporation and the Korea Housing Corporation, while Gaepo District 3 was developed by the City of Seoul based on the Land Readjustment Program. Seoul divided Gaepo District 3 into 2 areas: the east was for multi-unit houses, while the Yangjae area in Seocho-gu and other parts were developed as part

of the Land Readjustment Program.

After construction was completed, an issue was raised on the Land Readjustment Program in Gaepo District 3. It was the only place in the site development program area where the land was replotted as per the land readjustment method, which was in violation of the Housing Site Development Promotion Act. In site development program districts, land readjustment was only allowed on "confirmed areas targeted by the Land Readjustment Program" and "areas where land prices are higher than in designated districts in the vicinity, making it impossible to develop the site otherwise". Neither of these criteria applied to Gaepo.

Table 5 - Changes in the Gaepo District (Unit: 10,000 m²)

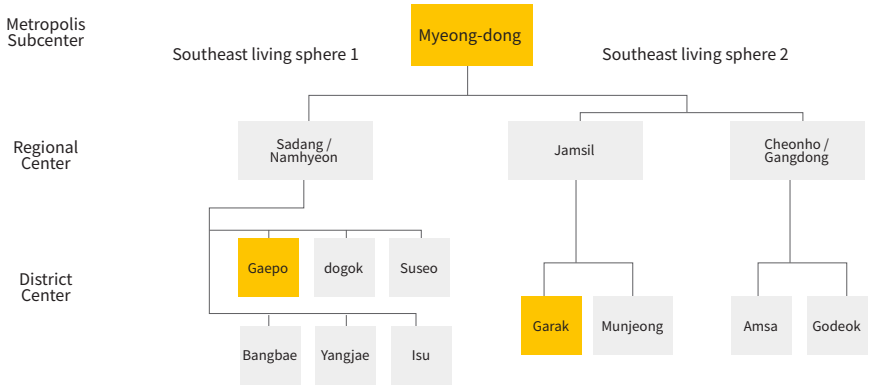
Period	Gaepo District 1 (Korea Land Corporation)	Gaepo District 2 (Korea Housing Corporation)	Gaepo District 3 (City of Seoul)	Total
Apr. 1981	181.8	60.2	598.3	840.3
Sep. 1981	213.2	33.1	599.7	846.0
Nov. 1981	213.2	35.0	675.6	923.8
Feb. 1982	213.7	35.0	661.8	910.5
Sep. 1983	213.7	35.0	645.1	893.8
Feb. 1987	213.7	35.0	649.4	898.1

Source: Seoul Metropolitan Government, 1990, White Paper on Seoul Land Readjustment

Basic Features of the Site Development Plan for Gaepo

The purpose of the plans for Gaepo District 3 was to create idyllic residential areas and an advanced streetscape, allow for development to meet cultural and consumer needs, and enable private development by providing public programs and infrastructure. Based on the neighborhood unit theory, a "daily living sphere" was formed, which was hierarchically structured to complete the total spatial structure. The total spatial structure was made up of 4 stages – local center, district center, neighborhood center, and neighborhood precinct.

Figure 5 - Structure of the Basic Seoul Urban Plan 2020



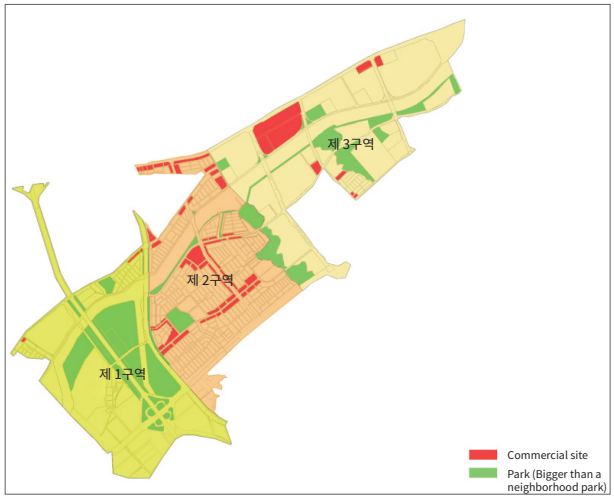
Gaepo District 3 was an early Korean model of the neighborhood unit theory. It was a relatively strict concept of household unit complex, but some parts were more street-oriented.

Evaluation

Characteristics of the Plan: Separation of Detached Housing & Multi-Unit Dwelling Areas

Gaepo District 3 was divided into 3 districts: District 1 with large parks, detached housing and a commercial distribution area near the highway; District 2 with detached housing only; and District 3 with multi-unit dwellings. District 2 saw the most change of the 3 parts.

Figure 6 - Urban Design by District in Gaepo District 3 (1985)



Detached Housing Area: Transition to Multi-Household/Unit Dwellings & Increased Community Facilities

Detached housing in the area was mostly changed to multi-household/unit dwellings and the number of community facilities increased, weakening the residential function of the area but strengthening its commercial functions. Of the existing units, 17.5% are 20 years or older while 66.1% are 10 to 20 years old. There is no concentration of deteriorating houses that are 20 years old or more because most were changed to multi-household/unit dwellings. For the same reason, the unit density of the detached housing area is high, standing at 197 households/ha. However, the sections adjacent to roads measuring 6m or longer are quite good at 70%, with no lot smaller than 90 m². The parking issue is serious however, with about 0.49 spaces per household.

Table 6 - Changes to Land Use in Gaepo District 3

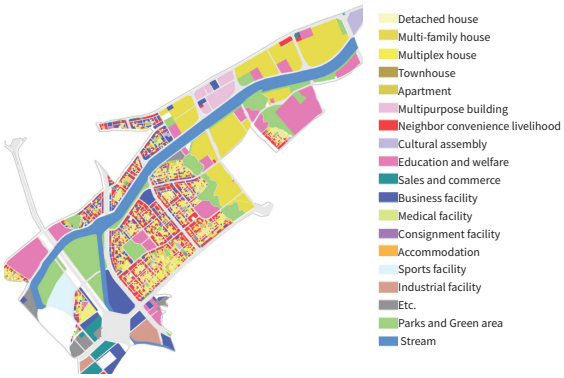
Urban Design in 1985	2008
	

Table 7 - Land Use in Gaepo District 3

Category	Residential						Commerce	School	Park, Green Space	Other	Total
	Detached Housing	Multi-Unit Housing	Multi-Household Housing	Townhouses	Apartments	Residential-Commercial					
Percentage against Urban Design (%)	15.9	-	-	2.8	14.7	-	7.1	5.9	12.7	41	100
	33.4										
Current Percentage (%)	0.2	3.3	2.2	1.1	13.4	1.6	13.7	6.5	11.2	46.8	100
	21.8										

Note: The current percentages are based on site investigation and GIS analysis.

Multi-Unit Dwellings: All 20 Years or Older

Large and medium complexes are the most numerous, with 37.4% of complexes housing between 300 and 1,000 households, and 24.9% housing more than 1,000. There are 18 complexes; all but one are 20 years old or more. By size of housing unit, those up to 60 m², between 60 & 85 m², and larger than 85 m² account for 21.6%, 21.4%, and 57.0% respectively, with some 80% being designated as "medium to large". In terms of the floor space ratio, 72.2% of the 18 complexes are 200% or less; density is relatively low due to the buildings' linear arrangement as well as the distance between buildings. Household density is 150/ha in 10 buildings, in 55.5% of the total. The available parking spaces per household equal 1 or more, but actual investigation revealed that 90% of the complaints were about parking.

Table 8 - Changes in Residential Type in Gaepo District 3

(Unit: %)

Residential Type (2008)		Detached	Multi-unit/ household	Townhouse	Apartment	Total
Area Percentage	Detached House	2.9	72.9	16.6	7.6	100.0
	Townhouse	1.9	79.7	14.5	3.9	100.0

Commercial Center: Dominant Residential-Commercial Buildings

To ensure the self-sufficiency of Gaepo District 3, the following areas were designated as commercial areas: 1 local center; 2 district centers; and 7 neighborhood centers. The Asian financial crisis however encouraged the construction of residential-commercial buildings, which take up the largest area (50.7%) in the commercial area.

Table 9 - Changes in Local Centers in Gaepo District 3

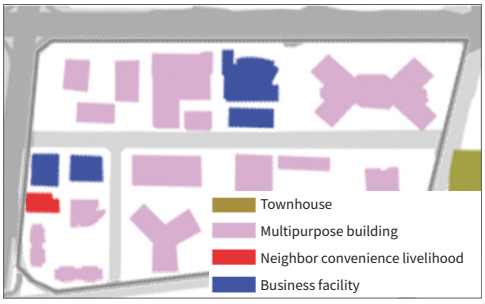
Urban Design in 1985	2008
	

Table 10 - Changes in District Centers in Gaepo District 3

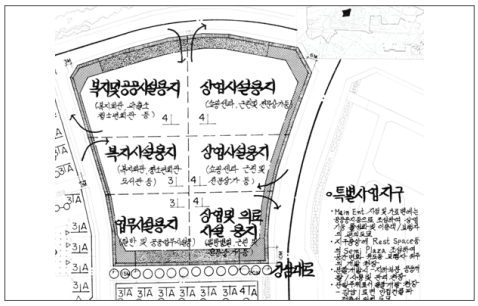
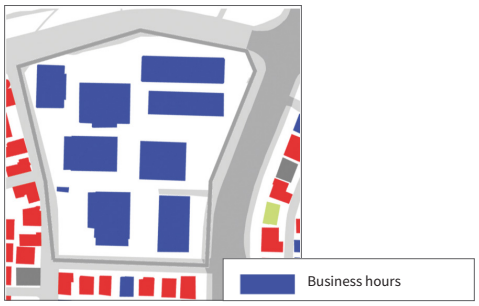
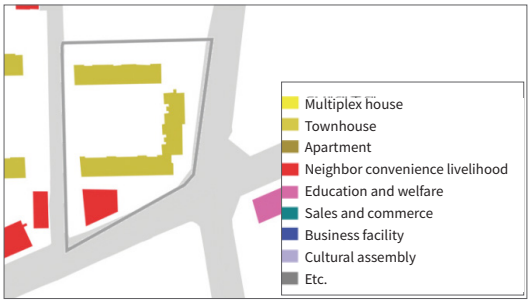
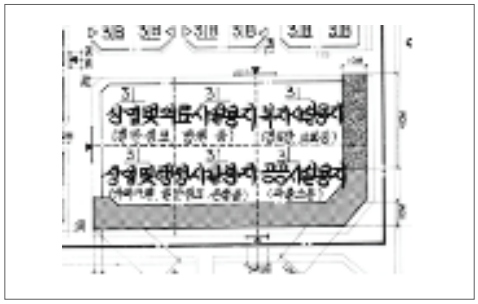
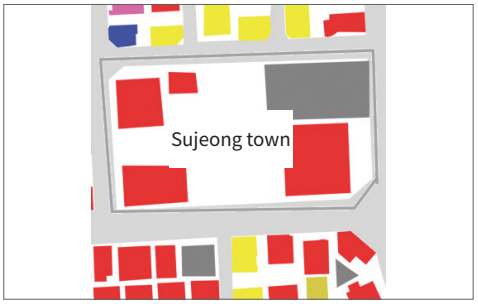
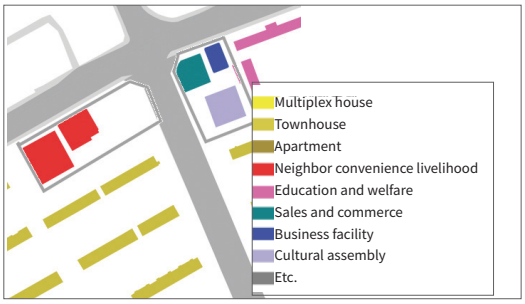
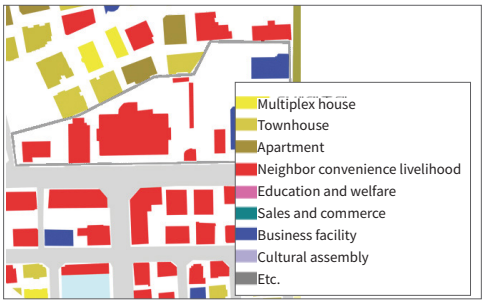
Urban Design in 1985	2008
	

Table 11 - Changes in Neighborhood Centers in Gaepo District 3

Urban Design in 1985	2008
	
	
	
	

Currently, the local centers are mainly occupied by residential-commercial buildings such as Tower Palace. The neighborhood centers were originally designed to be the center of the living sphere and to accommodate commercial facilities and amenities, but today, only 4 neighborhood centers have a gu-district community center, commercial facilities, post office and the like. In the other 3 neighborhood centers are business facilities, an unauthorized slum area (Sujeong Village), and apartments, altering the originally intended function since sale of the area was more time consuming than expected. As for local centers, 37.4% were sold 7 years after initially offered, with 83.8% sold today.

Transportation: Controlled Traffic on Nearby Arterial Roads

Created by the Land Readjustment Program, Gaepo District 3 has a regularly planned landscape, mobility (except for pedestrian mobility), accessibility, flexibility to growth and change, and an excellent grid road network that can adjust to overpopulation or concentration. Traffic is concentrated on the major arterial roads such as Gangnam Avenue and Yangjae Avenue, Eonju-ro connected to Seongsu Bridge, and the Nambu Beltway connecting east and west. On most main roads, traffic volume exceeds capacity at peak hours, at a congestion rate of higher than 1.0. Travel on the main roads in Gangnam-gu is significantly slower in the afternoon than in the morning because of the concentration of large business and commercial facilities around Gangnam Avenue and Tehran-ro where traffic volume grows in the afternoon. The total number of people in Gangnam-gu is decreasing, but the number of registered vehicles in Gaepo District 3 grew from 29,000 in 2006 to 42,000 in 2012 and is expected to grow further. Even in Gangnam, Gaepo District 3 has the highest traffic density, and the redevelopment and reconstruction programs will further increase traffic volumes

Figure 7 - Road Network & Traffic Volume in Gaepo District 3

Summary

The Land Readjustment Program was carried out by an association of land owners and sites supplied for detached houses via replotting-based compensation. However, the program did not improve the housing shortage much, and replotting came with undesired side effects, such as privatization of development profits and rising land prices. Demand for multi-unit dwelling sites continued to grow, and the Land Readjustment Program had to come to an end in the late 1980s. Since passage of the Housing Site Development Promotion Act in December 1980, the public sector was actively involved throughout each stage of acquisition, development, supply and management of the sites.

The Land Readjustment Program, devised to respond to rapid urbanization in the 1980s, was designed to supply the required sites while minimizing the financial burden on the public sector. In program districts that are 20 years old or more, there is a need for remodeling, reconstruction and other types of improvement. The Program does have some historical significance in Seoul's urban plans of the past. It will be necessary to conduct a comprehensive evaluation in terms of the functions and roles of a large-scale development program from the point of view urban planning and socioeconomics before improvement programs are implemented in earnest.

Table 12 - Comparison: Land Readjustment Program, Urban Development Program & Site Development Program

Category	Land Readjustment Program (Urban Development Based on Replotting)	Site Development Program	Urban Development Program
Purpose	Enhance the efficiency of land use. Improve public facilities.	Resolve urgent housing shortages.	Develop a city that serves composite functions
Legal Basis	Land Readjustment Program Act	Housing Site Development Promotion Act	Urban Development Act
Program District	Land Readjustment Program Districts	Site Development Program Sites	Urban Development Sites
Program Entity	Association of landowners Central/local government Korea Housing Corporation Korea Land Corporation	Central government, local government organizations Korea Land Corporation Korea Housing Corporation Local public corporations and private-public partnerships	Central government, local government organizations Joint ventures Landowners or landowner associations
Method	Replotting	Full purchase	Full purchase, replotting, or both
Land Supply	Replot after reducing lot size	Supply to construction companies at cost or less	Dependent on program method

Financing	By landowner	By program entity	By indirect government assistance By program entity
Infrastructure	Unclear as to who is responsible for construction	Unclear as to who is responsible for construction	Clearly specifies who is responsible for construction
Development Profits	Privatization of development profits	May be returned to society	May be returned to society
Development Type	Low-density, low-rise	High-rise, high-density	High-rise, high-density
Advantages	No burden of investment	Supply of affordable sites Social contribution of development profits Advantageous for systematic development and efficient land use	Development of a city with composite functions Private sector participation Percentage of contribution to infrastructure is clearly specified
Disadvantages	Program prolonged due to conflicts between owners Cause for rising land prices and real estate speculation	Complaints from original landowners Excessive financial burden on program entity Increase in money supply to area due to extensive compensation for land → rising land prices in vicinity and more speculation	Limited number of program sites Difficult for private investors to secure program sites

Source: Won Dong-il, An Hyeong-sun, Gang Jun-mo, 2005, "Comparative Analysis: Changes in the Land Policies and Site Development Systems of South Korea and China", Korea Planners Association 2005 Symposium (11. 4~5) Collection p.432.

References

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- Seoul Metropolitan Government, 2014, Chapter 8, Section 1, Urban Planning Ordinance of Seoul.

11. 2030 Seoul Plan

Writer : The Seoul Institute Kim In-hee

Policy Area: Urban Planning

The Urban Master Plan: Status & Features

What is the Urban Master Plan?

A Plan That Provides Long-term Direction for Urban Development for the Next 20 Years

The Urban Master Plan was legislated in 1981 pursuant to the Urban Planning Act to guarantee the sustainability of national territorial management for the purpose of using, developing, and preserving the land. It proposes policy direction for environmentally-sound and sustainable development, as well as the efficient and reasonable utilization of limited resources, thereby improving quality of life. By its nature, it is a comprehensive plan that presents a long-term framework for the city to adhere to in order to achieve its development goals 20 years down the road.

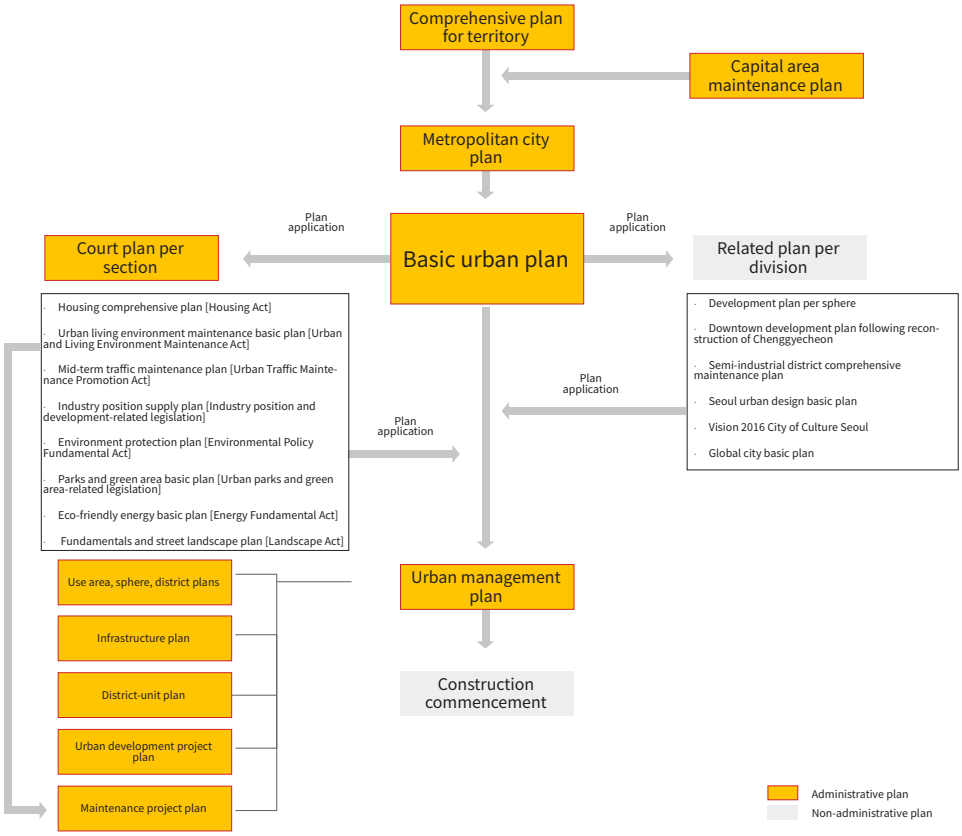
A Highest-Level Statutory Plan for Urban Development

The Urban Master Plan provides direction for lower-level plans that relate to the use, development, and preservation of land. As the highest-level plan, it provides guidelines for lower-level urban management plans and similar plans established by other relevant laws, for consistency and uniformity

A Comprehensive, Multi-faceted Plan

The Urban Master Plan is comprehensive and touches upon various aspects of the city, socially and economically, such as environment & energy, transportation & infrastructure, and culture & welfare. In the planning stage, it requires procedural justification wherein the input from citizens, experts, and administrators is collected and incorporated.

Figure 1 - Structure of Seoul's Urban Planning



Source: Seoul's Urban Planning Structure for an Advanced Urban Manvagement System (The Seoul Institute, 2010, p18)

Legal Grounds for the Urban Master Plan

Established Based on the Act on Planning and Use of National Territory

The Urban Master Plan is based on the Act on Planning and Use of National Territory, providing the basic spatial structure and long-term direction for development of the special free cities, metropolitan cities, special autonomous cities, special autonomous provinces, gun (counties) or other administrative zones. The Plan serves as a guideline for city and gun (county) management plans.

Established & Approved by the Mayor of Seoul Special Free City

The individuals with the authority to establish an urban master plan are "the mayors of special free cities, the mayors of metropolitan cities, the mayors of special autonomous cities, the governors of special autonomous provinces, and the governors of gun (counties)". In Seoul, the mayor has the authority to establish an Urban Master Plan.

In February 2009, the authority to approve an urban master plan was moved from the central to the local governments due to the revision of the Act on Planning and Use of National Territory, which is how the mayor of Seoul was endowed with the authority to approve an urban master plan.

Reviewed & Improved Every 5 Years

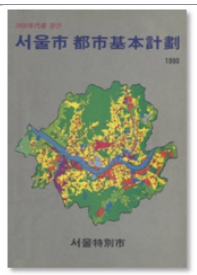
By regulation, the mayor of Seoul is to review the feasibility of the urban master plan and make improvements every 5 years.

Developments of the Urban Master Plan

Established 4 Times since Legislation

Seoul's first Urban Master Plan was established in 1990 (target year: 2000). Statutory plans were established 4 times, with overhauls in 1997, 2006, and 2014.

Table 1 - Development of Seoul's Urban Master Plan since 2000

Plan	The Seoul Master Plan for the 2000s	The Seoul Master Plan of 2011	The Seoul Master Plan of 2020
Target Year	2000	2011	2020
Established	1990	1997	2006
Vision	· The capital city for the unified Koreas · The central city of the Pacific Region · A 'people' city	· A great, people-oriented city to live in	· An international city of nature and people; of history and technology
Core of the Plan	· Globalization, expansion, access to information, quality of life	· Citizen- and people-oriented	· Healing and recovery
Background and Plan Description	· Balanced development of Gangnam and Gangbuk · Transition into a multi-nucleic city · Plans for a city metro network (13 routes) and a city highway network · 1 center - 5 sub-centers - 59 districts · The first statutory plan	· Revision of the plan from 2000 · Emergence of the local government system · Incorporation of local government plans · Development plans for Sangam, Yongsan, Ttukseom, and Magok Districts · 1 center - 4 sub-centers - 11 districts - 54 districts	· Revision of the plan from 2011 · Incorporation of the changes after the Asian financial crisis of 1997 · Incorporation of changes such as relocation of the administrative capital and restoration of Cheonggye Stream · Change with the GB cancellation · 1 center -5 sub-centers -11 districts - 53 districts
Plan			

Source: 2030 Seoul Master Plan (Seoul Metropolitan City, 2014, p8).

Characteristics & Execution of the 2030 Seoul Plan

2030 Seoul Plan - Another Name for the Citizen-involved Urban Master Plan

The Seoul Plan is another name for the Seoul Master Plan, indicating that Seoul's Urban Master Plan, based on the Act on Planning and Use of National Territory, was revised, in collaboration with its citizens, to reflect the characteristics of the city.

Under the guideline standards of the Urban Master Plan, Seoul developed its own urban master plan under another name, the "Seoul Plan", to align the elements and contents of the Plan with Seoul's specific requirements. Citizens, experts, and other interested parties were involved in formulation of the 2030 Seoul Plan, the process of which was carried on in an open, transparent manner. Key issues were incorporated into the Plan to complement the strategic nature of the Urban Master Plan. The Urban Planning Bureau and the Management & Planning Office led the way in raising the status of the plan.

Background to the 2030 Seoul Plan

Proper Timing to Review & Improve the 2020 Seoul Master Plan

It is necessary, according to Article 23 (Improvement of the Urban Master Plan) of the Act on Planning and Use of National Territory, to review the feasibility of the urban master plan of the relevant region every 5 years. Therefore, it became necessary to review the 2020 Seoul Master Plan, which was finalized in 2006, and revise the plan in accordance with the change in conditions.

Institutional Changes: Transition of the Authority to Establish an Urban Master Plan to Local Governments

With revision of the Act on Planning and Use of National Territory in February 2009, the authority to establish an urban master plan was moved from the central government to local governments. This gave the mayor of Seoul the authority and responsibility to develop an urban master plan that reflected the characteristics and conditions of the city.

Demands for Citizen Participation & Sharing to Realize Current Values

The Urban Master Plan of Seoul needed to incorporate the values of the time and changes in the environment. To do this, Seoul needed to consider the following: i) more stringent democratic procedures that do not exclude the citizens, as opposed to the old habit of relying on administrators and experts; ii) more focus on future values, such as sharing innovation, co-existence, and convergence; and iii) urban restoration and urban planning that reflects the actual lifestyle of the city and considers demographic changes and regional characteristics.

Direction of the Seoul Plan

The Seoul Plan was revised substantially to overcome the limitations of the existing Urban Master Plan, such as the lack of public involvement and actionability, and to reflect the changes in values felt by society. To help overcome the limitations of existing urban master plans, the Seoul Plan placed a priority on 'people' and was implemented as follows:

First, the planning stage was designed so as to allow both citizens and experts to review and make changes to the plan in an open and transparent manner from start to finish.

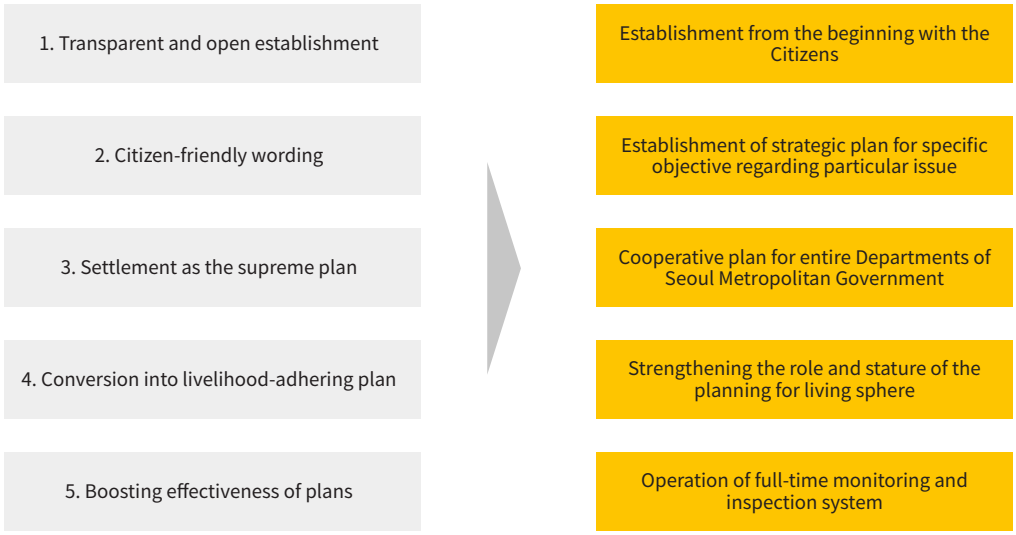
Second, the plan was revised to reflect the defining characteristics of Seoul, with input from citizens, and prepared in a way that is easy to understand.

Third, the relationship between the Seoul Plan and the plans from the Seoul government offices was reviewed to prioritize the policies and raise the status of the umbrella plan.

Fourth, the foundation was built upon so as to ensure that the abstract concepts of the Urban Master Plan are implemented and applicable in fact, thereby helping to improve the quality of life.

Fifth, plans were developed for the living spheres and CBD, for all practical purposes, to explicate the follow-up measures, monitoring systems, governance between autonomous districts and the capital city, financing principles, etc.

Figure 2 - Direction for the 2030 Seoul Plan



Source: 2030 Seoul Master Plan (Seoul Metropolitan City, 2014, p10).

Features of the Seoul Plan

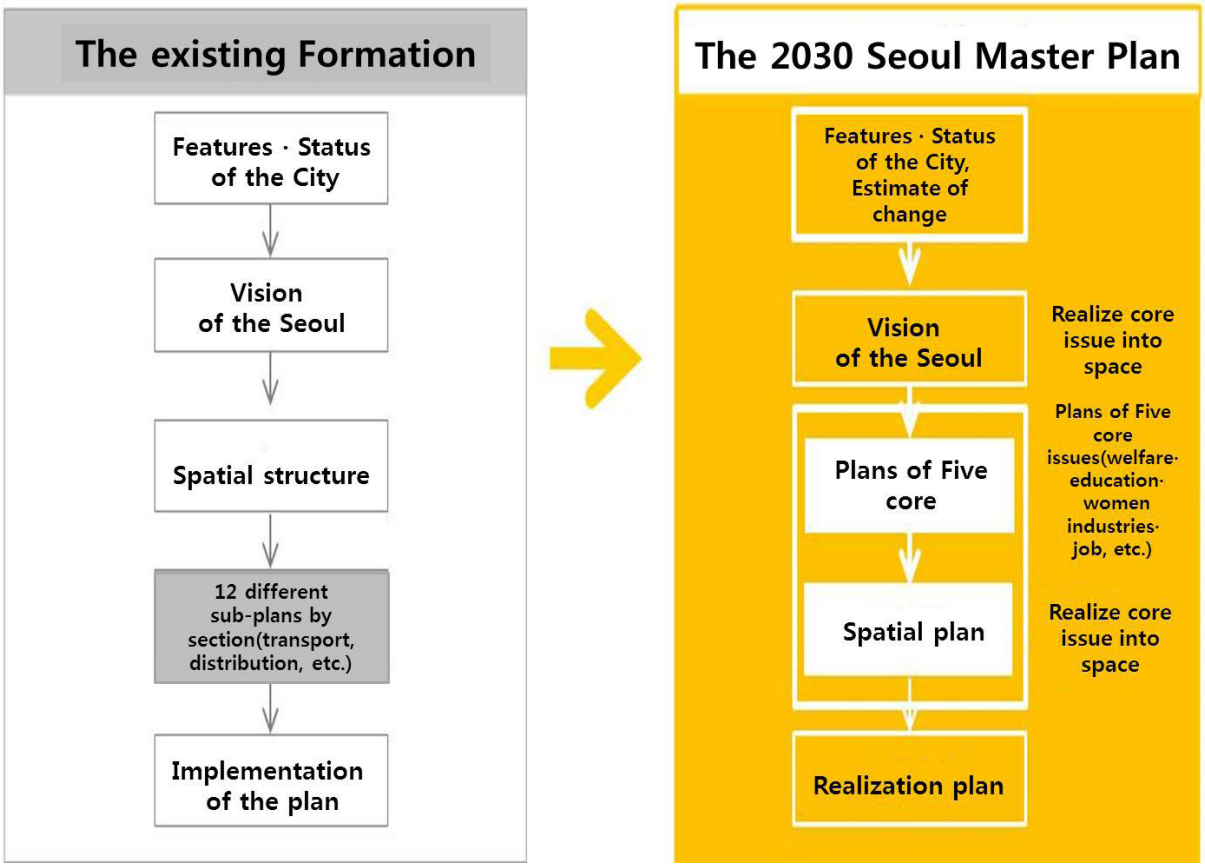
Citizen Involvement from the Planning Stage

In order to have public consensus, the Seoul Plan involved the citizens from the very beginning of planning so as to come up with the appropriate vision and tasks to perform. The public worked with administrators and experts in developing the plans for key issues.

Issue- & Goal-oriented Strategic Plans

The existing urban master plans had 12 different sub-plans by section, which made it more challenging to ensure consistency between those plans. Moreover, their scope was so broad and their content so technical that it was difficult for the citizens to read and understand. To address these issues, the 2030 Seoul Plan identified the major issues that would affect Seoul and was shortened and made easier to understand.

Figure 3 - Composition of the 2030 Seoul Plan



Source: 2030 Seoul Master Plan (Seoul Metropolitan City, 2014, p11).

Inter-departmental Collaboration at Seoul Metropolitan Government

Led by the Urban Planning Bureau, the existing urban master plans were mostly focused on spatial and physical elements. However, the 2030 Seoul Plan reinforced welfare, education, history, culture, environment, and other non-physical aspects. During the entire planning stage, the Management & Planning Office and the Urban Planning Bureau encouraged the departments and offices at Seoul Metropolitan Government to work closely together and raised the status of the umbrella Seoul Plan.

Enhanced Role & Function of Living Sphere Plans

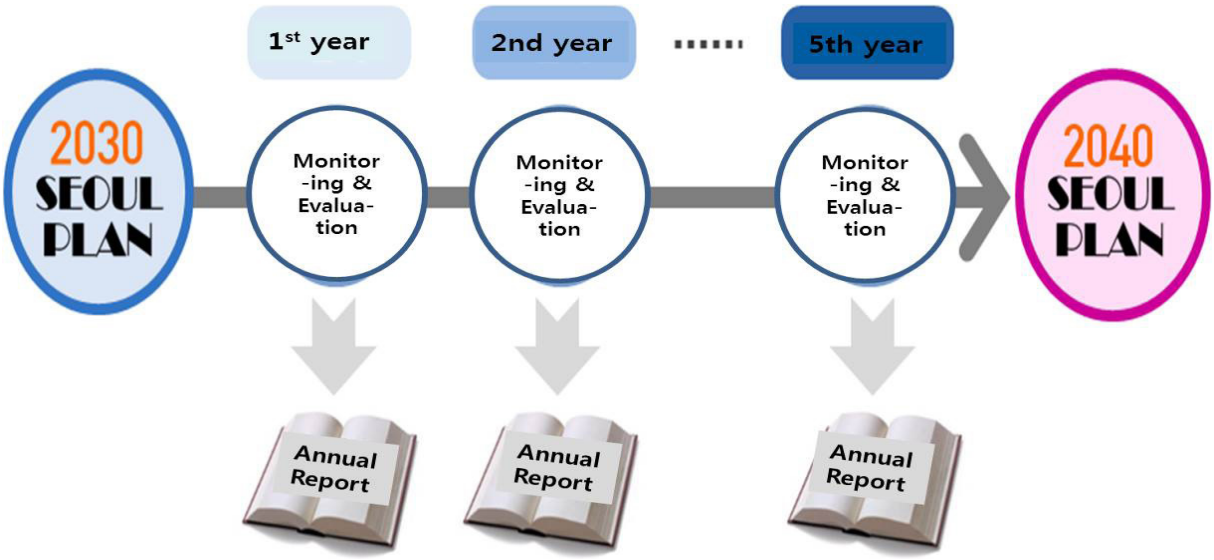
The existing urban master plans paid attention to quantitative and external growth and competitiveness but did not place much emphasis on quality of life.

The 2030 Seoul Plan however, laid out the framework necessary to build a 100-year urban plan that encompasses everything from the city-wide plan to minor, detailed plans that affect the life of the citizenry. For balanced regional development, the plan also pursued spatial restructuring and promoted the roles and functions of the living sphere plans.

Full-time Monitoring & Evaluation Systems for Effectiveness

The 2030 Seoul Plan instituted the continued monitoring and evaluation of the Plan to measure progress. Indices are available for key issues and goals that indicate the level of achievement, and the outcome is shared with the citizens. The public is encouraged to participate and evaluate so their input is incorporated in follow-up plans.

Figure 4 - Full-time Monitoring System in the 2030 Seoul Plan



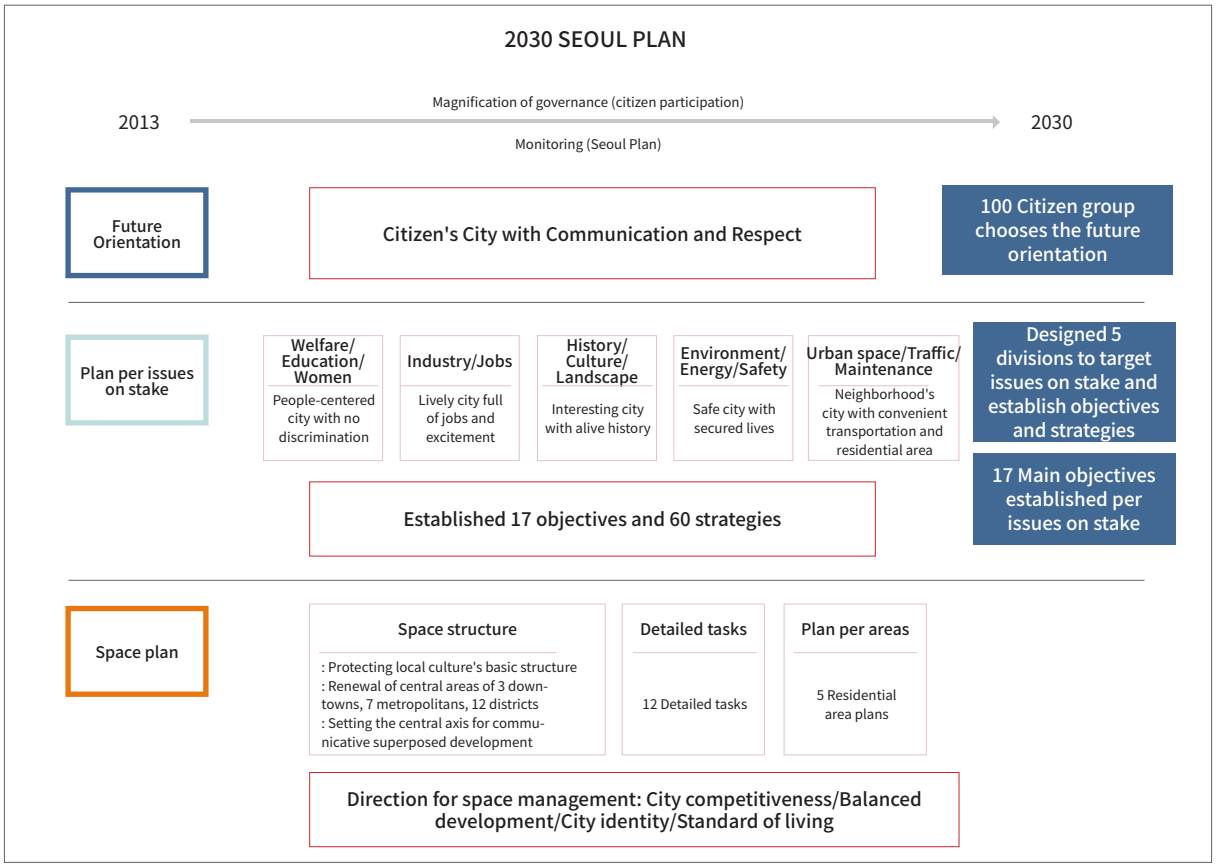
Source: 2030 Seoul Master Plan (Seoul Metropolitan City, 2014, p12).

Composition of the Seoul Plan

Vision, Key Issues, & Spatial Plan (Spatial Structure & Living Sphere Plan)

The basis of the 2030 Seoul Plan is to develop the future vision of the city and to propose appropriate goals and strategies. The Plan therefore is composed of the vision, key issues, and spatial plans that touch on spatial structure and living sphere plans for 2030.

Figure 5 - Composition of the Seoul Plan



Source: Material handout at the press conference for the 2030 Seoul Master Plan (Seoul Metropolitan Government, 2014).

Implementation Structure of the Seoul Plan

Collaborative Network of Citizens, Experts, & Administrators

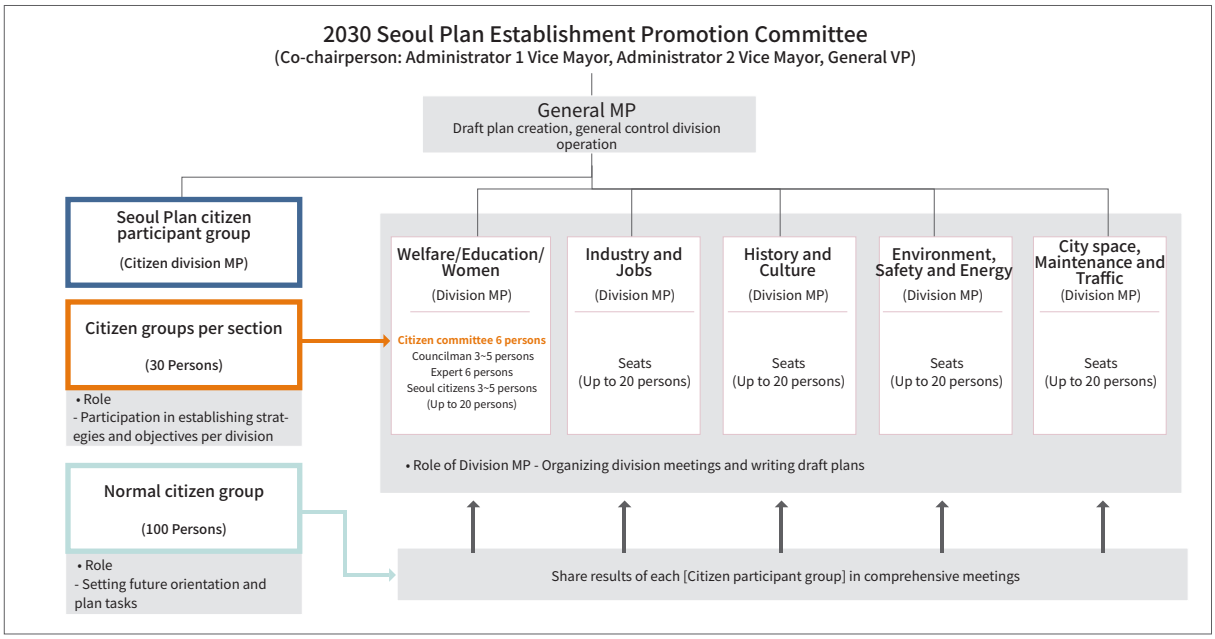
In accordance with the 2030 Seoul Plan, the "2030 Seoul Plan Development Committee" was founded to establish the plan within a collaborative network and framework of citizens, experts, administrators, and other interested parties. The committee was comprised of the Seoul Plan Citizens' Group that shapes the vision, and of sub-committees that help develop the plans for key issues.

The Citizens' Group has 100 citizens as participants and is responsible for identifying the vision and key tasks

for the city.

As for the sub-committees, there are 5 of them, with 108 participants in total, according to the tasks set up by the Citizens' Group. Each sub-committee is composed of 20 people (experts, Seoul city government officials, city council members, civic organization and civic group members, and researchers from the Seoul Institute. They work together to propose goals and strategies for key issues.

Figure 6 - Implementation Structure of the 2030 Seoul Plan



Source: 2030 Seoul Master Plan (Seoul Metropolitan City, 2014, p16).

Table 2 - Role of Master Planners at Difference Stages

Category		Vision & Key Issues	Plans by Key Issue
MP (Master Planner) Roles	General MP	· Supervise identification and development of vision and key issues	· Supervise sector subcommittees, prepare complete plan (draft) · Prepare and manage sector plan (draft)
	Sector MP	· Supervise and manage system to encourage participation by the citizenry · Support deliberation by citizens' groups and prepare a report	· Host sector subcommittee meetings · Develop basic direction and framework of the plans (draft) · Draft a report for key issue plans

Development & Description of the 2030 Seoul Plan

Development of the Seoul Plan

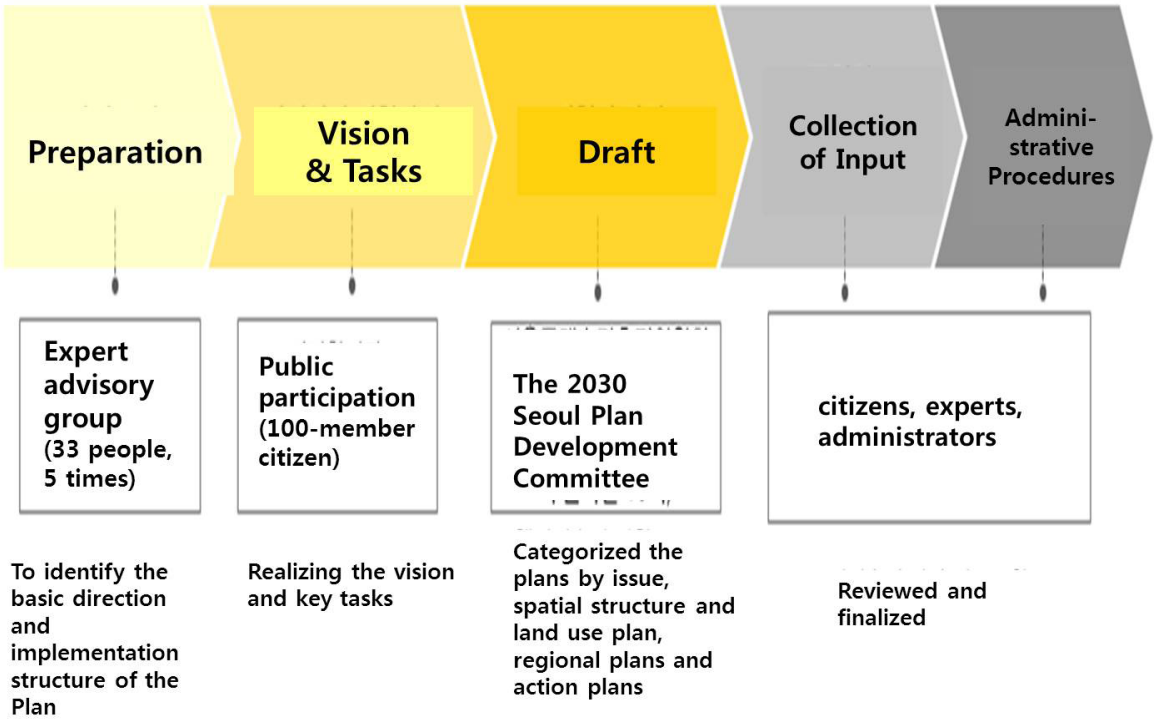
Preparation - Vision & Tasks – Drafts - Collection of Input and Administrative Procedures

For the 2030 Seoul Plan, an expert advisory group was formed to identify the basic direction and implementation structure of the Plan, and determine public participation. To develop the vision in line with the direction, the 100-member citizens' group was created to come up with the vision and key tasks for Seoul in 2030.

To realize the vision and key tasks identified by the citizens' group, the 2030 Seoul Plan Development Committee was created, comprising citizens' groups, city council members, experts, and officials from the Seoul government. It drafted the 2030 Seoul Plan, which categorized the plans by key issue, spatial structure and land use plans, regional plans, and action plans.

This draft, made by the citizens, experts and administrators, was reviewed at public hearings and regional presentation sessions, and was finalized after fulfilling the statutory administrative procedures.

Figure 7 - Citizen-Involved Establishment of the Seoul Plan



Source: 2030 Seoul Master Plan (Seoul Metropolitan City, 2014, p14).

Vision of Seoul 2030

Seoul 2030 as Envisioned by Citizens: "A Friendly City Based on Mutual Communication & Care"

The most notable difference of the Seoul Plan from existing urban master plans is that the vision and actionable plans are developed and proposed by the citizens. Citizens were recruited to form a group that would represent the 10 million residents of Seoul. Three workshops were held to discuss the strengths, weaknesses, and major issues of Seoul as a city, as well as to deliberate on a vision for the city. As a result, the following vision was developed: ***"A Friendly City Based on Mutual Communication & Care".***

Table 3 - Summary of the Citizens' Group for the Seoul Plan

What is the Citizens' Group for the Seoul Plan?

_ The citizens' group is comprised of 100 citizens who have gathered to identify a vision for Seoul in 2030. Representing the 10 million people of Seoul, the group is the first of its kind in Seoul dedicated to 'shaping the vision of Seoul by the hands of its citizens', and is appointed by the mayor of Seoul.

Objective

_ The group aims to analyze the issues of Seoul and identify a vision and key tasks for the city. It develops the vision and goals based on public consensus, ensuring acceptance of the plan.

Recruitment

_ Target: Adults (age 19 or above) residing in Seoul

_ Method: Random telephone survey, commissioned to an expert survey institution

_ Random selection of 100 people to ensure statistical representation and reliability

_ Balanced consideration of gender, age, occupation, and region

_ Disabled persons and foreign nationals were selected based on recommendations from offices at the Seoul government, or other relevant organizations.

<Age & Occupation of the Participants>

Age	University Student	Office Worker	Entrepreneur	Self-employed	Housewife	Others			Total
						Senior Citizen	Disabled	Foreign National	
20s	13	5						2	20
30s		14		1	2				17
40s		8	6	6	5		1		26
50s		10	1	5	7		2		25

60s or older		2		2	2	6			12
Total	13	39	7	14	16	6	3	2	100

–

Plans by Key Issue

Strategic plans developed on specific issues; setting priorities for the city

The plans developed in accordance with key issues are strategic in their nature, bringing together the administrative functions of all offices and departments of the Seoul government to ensure consistency between planning and setting policy priorities. They are focused on specific issues, as proposed in the guidelines for urban master plans, and are customized to the unique circumstances of Seoul.

17 Indices, 17 Goals, and 60 Strategies

The plans set up by key issue incorporate the basic direction, indices, goals and strategies. To establish these plans, 5 sector subcommittees (Welfare/education/women, Industry/jobs, History/culture, Environment/energy/safety, Urban space/transportation/improvement) met 10 or so times over a ten-month period to identify the key issues and have come up with 17 indices, 17 goals, and 60 strategies to address the key issues.

Table 4 - Goals & Indices for the Plans by Key Issue

Key Issue	Goal	Index
Key Issue 1 People-oriented city of equal opportunity	Develop a welfare system prepared for a super-aged society	Guaranteed minimum income
	Create an environment where citizens lead a healthy life	Number of local public health clinics
	Build a social system that helps eradicate polarization and discrimination	Number of welfare facilities for senior citizens
	Design an education system that offers lifelong learning opportunities	Number of lifelong education facilities
	Promote gender equality and social care	Quality/quantity of childcare service provided by national/public childcare centers
Key Issue 2 Global city of cohabitation, with abundant jobs and vibrancy	Recognition as a global economic city built on creativity and innovation	Percentage of creative community to the whole
	Promote shared growth between economic entities and regional mutual development	Social/economic job rates
	Promote economic vibrancy with an emphasis on people and jobs	Employment rate
Key Issue 3 Exciting city of culture and history	Create a city of living history	Satisfaction rate with the cultural environment
	Manage an urban landscape embraced by the population	Number of cultural facilities
	Create a diverse urban culture enjoyed by all	Number of foreign tourists/residents

Key Issue 4 Safe, environmentally-friendly city	Build an eco-friendly city of parks	Percentage of regions with access to parks
	Build an energy-efficient city	Percentage of renewable energy use
	Create a safe city where everybody looks out for each other	Change in the number of crime/disaster victims
Key Issue 5 City of close community, residential stability and easy mobility	Promote urban restoration with an emphasis on the balance between home and work	Journey time between home and work
	Create a green transportation environment where the dependence on cars is minimal	Green public transport share
	Provide more residential spaces where people have stability coupled with a wide range of choice	Percentage of public lease housing

Spatial Structure

A City Design Based on Vision, Communication & Care

The spatial structure of Seoul 2030 was designed based on the city's vision. It was modified to adapt to the socioeconomic changes in Seoul and its metropolitan area as well as to implement the goals and strategies of the 5 key issues.

The city's spatial structure was designed as follows: 1) aggressive management and maintenance of the natural, historical and cultural heritage of Seoul; 2) restructured CBD areas for enhanced urban competitiveness and balanced regional development; and 3) the axis of development to be in the metropolis for better communication and cohabitation.

Structural Change in Central Areas – from a Single-nucleus Structure to a Multi-nucleic Structure

The CBD is one of the fundamental components of a spatial structure. To address the issues related to spatial structure (the better quality of life requested by the residents, the increasing gap between regions, the expansion of Seoul, and the increasing competition among global cities), it was suggested that the existing single-nucleus structure be changed to a multi-nucleic one.

The existing structure was of a simple hierarchy, comprised of a single city center, 5 sub-centers, and 11 regional centers; the new multi-nucleic structure has 3 city centers, 7 wide-area centers, and 12 regional centers, modified to encourage shared development, promote special roles designated to the CBDs, and ensure the functional connection between the CBDs.

Figure 8 - Spatial Structure Designed to Maximize Communication & Care

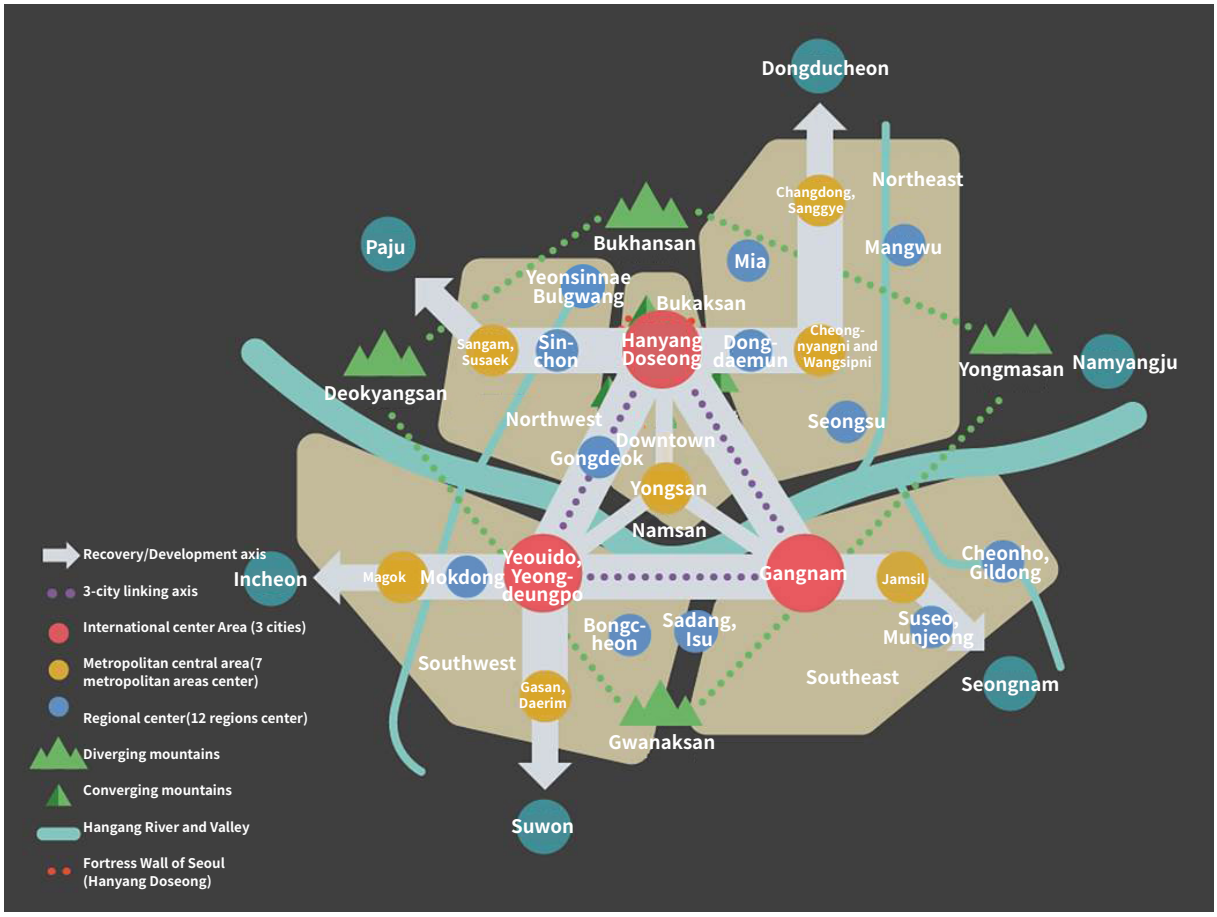


Table 5 - Change in the CBD Structure

2020 Seoul Master Plan		2030 Seoul Plan
[1 City Center]		[3 City Centers]
[5 Sub-centers]		[7 Sub-centers]
[11 Regional Centers]	→	[12 Regional Centers]
[53 District Centers]		[District Centers] Delegated to the subsequent living sphere plans
<Hierarchical>		<Functional>

Source: 2030 Seoul Master Plan (Seoul Metropolitan City, 2014, p139).

Living Sphere Plan

Direction for Development & Key Tasks for 5 Living Spheres

The Living Sphere Plan presents the details on the vision, key issues and their plans, spatial structure, and other contents of the Seoul Plan at the living sphere level and proposes guidelines and direction to lower-level plans such as the Urban Management Plan.

Some 10 million people live in Seoul, spanning an area of 605 ㎢. The city needs to specify which extensive and macroscopic urban master plan to apply to the living spheres, and needs guidelines for the development and policy goals of the relevant living spheres when developing the Urban Management Plan. For this reason, the city was divided into the 5 living spheres (city center, northeast, northwest, southwest, and southeast) based on their natural/physical features, administrative regions, and travel patterns, for each of which directions and key tasks were set up.

Input from residents & civil servants from 25 gu offices

To establish the living sphere plans, general opinions on the key issues were studied by a hearing from the local mayor's office, 2 workshops for local governments & residents, studying the space-related projects launched by departments and offices at the Seoul government, and/or reviewing the suggestions from local governments.

Based on the study of various opinions, 5 sectors (city center and jobs, residential, transportation, living, and regional characteristics) were established to identify the key tasks for each. Any issues that were not included in the regional plans were to be reviewed and specified in the subsequent living sphere plans.

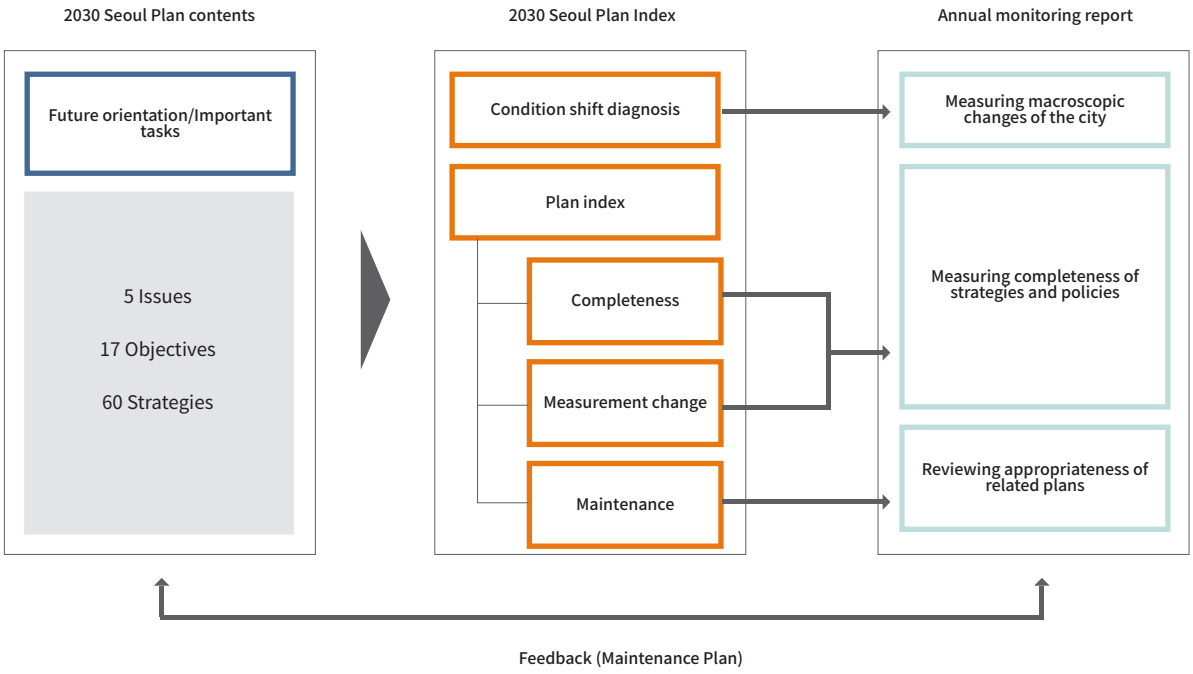
Implementation

Establishment & Operation of a Full-time Monitoring System

As the 2030 Seoul Plan became the top-level plan for the basic direction of Seoul, it was specifically indicated to review the implementation process continually and monitor the Urban Master Plan.

By monitoring implementation towards evaluation, reviewing the consistency of the Urban Master Plan and other sector plans, and analyzing the changes within the city, the Plan would be cyclic and thus more able to ensure the timeliness of the Seoul Master Plan.

Figure 9 - Cycle of Annual Monitoring Reports



Source: 2030 Seoul Master Plan (Seoul Metropolitan City, 2014, p201).

Citizen Participation & Governance

The underlying principle is to develop the Plan by involving various parties – citizens, experts, etc. – to allow for social consensus. For its part, Seoul is to seek different ways to involve citizens in the planning, disclose relevant information, and develop the governance in which citizens are encouraged to reveal their talent in the making of plans.

Focus on Wider-Area Governance

To enable the spatial and functional connection between the city and the surrounding metropolitan areas, Seoul is determined to lead the way in promoting the balanced development of the capital and the country as a whole. In the long term, it seeks to develop urban plans that are dedicated to communicating with adjacent cities and towns for mutual benefit.

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12. Dongdaemun Design Plaza (DDP)

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Political Area : Urban Planning

Background & Purpose of Dongdaemun Design Plaza Project

Background & Purpose of Dongdaemun Design Plaza Project

Dongdaemun Design Plaza (henceforth called, "DDP") was planned as a landmark to grow the downtown economy as the growth engine of design and creative industries in the recessed downtown, to build an international exchange network as a global source of design and creative industries, and to serve as a hub of East Asian culture and tourism. To implement the plan, 8 strategic objectives were established: development of creative and future design, strategic base of design business, global design knowledge exchange system, designer network platform, hub of cultural and art activities, global landmark to create a tourism brand, creative environment and place identity, and downtown trading area promotion program.

Figure 1 - View of Dongdaemun Design Plaza (DDP)

Source: Home page of the Seoul City, http://infra.seoul.go.kr/

Historical & Cultural Background of Dongdaemun

① Demolition of Fortress Wall of Seoul in Dongdaemun area

DDP will be developed in an area where the fortress wall was once located to protect Hanyang in the Joseon Dynasty. However, it was inevitable that the wall would be demolished because of the development of modern weapons and tactics, new transportation means, and external expansion of city. The demolition was

started in 1889 as the trolley railway was installed between Seodaemun and Cheongnyangni. Then, the wall around Dongdaemun was destroyed in 1908 when a Japanese prince visited Seoul and the wall connecting Dongdaemun and Gwnaghwamun was destroyed, with no planning, to build Gyeongseong Sports Complex to celebrate the marriage of a Japanese crown prince during Hirohito's term in 1924. Then, the wall was further destroyed as civil housing was constructed around the wall of Dongdaemun and it was accelerated by many unauthorized constructions there after Korea obtained independence and following the Korean War.

② Hullyeondogam and Gyeongseong Sports Complex

Along the Fortress Wall of Seoul, there was Hadogam, a branch barracks of Hullyeondogam to train soldiers and Yeomchocheong, a gunpowder agency. In 1925, the wall and other building were demolished to build the Gyeongseong Sports Complex, later Dongdaemun Sport Complex. It was the first modern sports facility for athletics, baseball, tennis, and swimming. After Korea gained independence, the Gyeongseong Sports Complex was renamed to Seoul Sports Complex serving as the site for important national events in 1948. It was renamed again to Dongdaemun Sports Complex, and its functions were reduced when Jamsil Sports Complex was built in 1984.

③ Formation and development of Dongdaemun commercial sphere

The Dongdaemun commercial sphere started to develop at the same time that a market was autonomously formed around Baeogae in the latter part of Joseon Dynasty. Gwangjang Market was formed and developed as a modern market in 1905, and it became a hub for the clothing industry as well as a nation-wide wholesale shopping district because sewing factories were built around Pyenghwa Market in the 1960s. Meanwhile, a general fashion shopping mall, Miliore was built in 1998 when the new retail commercial sphere was formed to sell the latest fashions at a low price.

Progress

Establishment of general downtown recreation plan

The 2006 General Downtown Creation Plan was established to develop an attractive and active downtown with the class of a 600-year history and different cultures as the center where the global city of Seoul could meet the world. This plan suggested 4 South-North corridors[1] and important arrangement points to promote the entire downtown area.

DDP was planned as a hub of complex cultural corridors to connect Daehakro, Heunginjimun, Dongdaemun, and Mt. Namsan. This plan suggested the renovation of Dongdaemum, where its functions had been degraded along with its aged facilities, into a downtown resting place, as well as DDP development to lead related cultural industries as a global design and fashion industry hub.

Figure 2 - Establishment of general downtown recreation plan (Complex Cultural Corridor in the Downtown area)

Source: the Seoul City, Establishment of general downtown recreation plan

1. The Downtown Corridor 1 is about the history and culture to connect Gwanghwamun, Cheonggye Square, Seoul City Hall and Seoul Square, Bukchangdong, Namdaemun Market, and Seoul Station. It has many historic resources of the 600-year-old capital city including Gyeongbokgung Palace, Yukjogeori, Deoksugung Palace, Sungneymun, etc., so it requires continuous recovery of historicity and symbolism. The Downtown Corridor 2 is about the tourism and culture that connects Samcheongdong, Bukchon, Insadong, Nakwon Shopping District, Jongno, Gwancheoldong, Cheonggye Stream, Samgakdong, Euljiro, Myeongdong, and Mt. Namsan. It consists of traditional areas including Bukchon and Insadong, and modern commercial spaces including Myeongdong and Gwancheoldong, so it requires preservation of local characteristics and connection of attractions. The Downtown Corridor 3 is about the green field culture that connects Changgyeonggung Palace and Changdeokgung Palace, Jongmyo Shrine, Sewoon Shopping District, Hanok Village, Pildonggil, and Mt. Namsan. The green fields of Changgyeonggung Palace, Jongmyo Shrine, and Mt. Namsan are disconnected so it requires recovery of the South-North green network. The Downtown Corridor 4 is about the complex culture that connects Daehakro, Dongdaemun, Cheonggye Stream, Dongdaemun Sports Complex, Jangchungdangil, and Mt. Namsan. This district has separated cultural spaces including performance culture of Daehakro, fashion culture of Dongdaeum, and history and culture of Dongdaemun so they need to be connected.

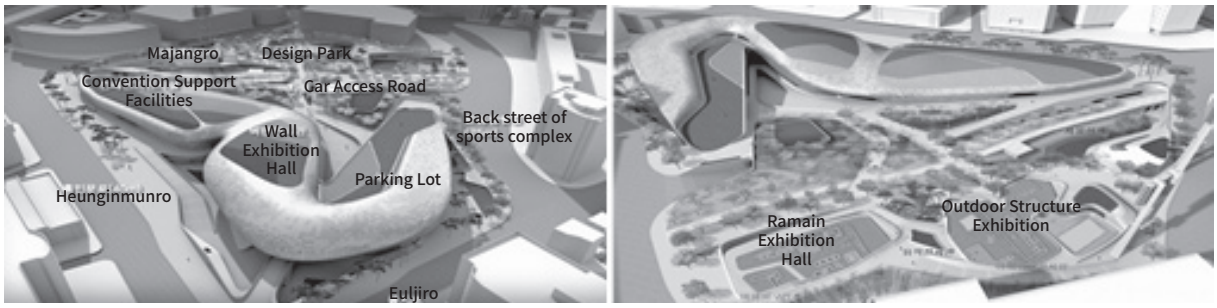
Establishment of Dongdaemun Sports Complex park development plan

With the General Downtown Recreation Plan established in July, 2006, the Dongdaemun Sports Complex Park Development Project was actively discussed as a part of the way to promote the 4 Downtown Corridors. The project was planned to promote commercial and cultural activities by installing Dongdaemun fashion and cultural centers and connecting underground spaces to demolish the aged Dongdaemun Sport Complex and develop a cultural space combining business and culture. Meanwhile, the archaeological field survey for cultural assets, feasibility study to establish the fortress wall restoration plan, and framework plan were established in August, 2006 and announced on September 18th to excavate and restore Seoul Fortress Wall and the cultural assets within the site. KRW 24.3 billion was budgeted, and KRW 40 million and 180 million of reserve fund was allotted for the archeological field survey for cultural assets, feasibility study and framework plan research expenses, respectively.

Design and construction of Dongdaemun Design Plaza

In November, 2006, Seoul held an idea contest for citizens to promote the DDP project and draw interests of citizens. It was an opportunity for citizens to reflect their ideas to the International Nominated Design Competition for Invitees and thus to the DDP project. The design competition was announced in April, 2007 and the design of an architect, Zaha Hadid won the competition in August of the same year. Demolition of the Dongdaemun Sports Complex began in April, 2007, and Samsung C&T started construction in March, 2009. The Dongdaemun History & Culture Park was opened on October 27th, 2009 and the DDP was open on March 21st, 2014.

Figure 3 - Dongdaemun Design Plaza Plan (Draft)



Source: Seoul City (as of 2013), Dongdaemun Design Plaza & Park Project

Details

Dongdaemun Design Plaza

The DDP, which has 3 aboveground floors and 4 underground floors and was opened in March, 2014, has become a landmark and tourism attraction to symbolize the design and creative industries of Seoul. It will a hub to show and spread trends of the global design and creative industries through domestic and international cooperation network development and an annual variety of programs and events by inviting global exhibitions and conferences within the design and creative industries. To this end, DDP has multi-purpose exhibition & convention halls, international conference halls, a design museum, design gallery, design playground, design lab, and amenities for visitors in 3 sections: Alimteo, Baeumteo, and Salimteo.

Figure 4 - Dongdaemun Design Plaza

Source: Seoul City Government (2013), Construction of Dongdaemun Design Plaza & Park

Development of Dongdaemun History & Culture Park

Located on the East side of DDP, the Dongdaemun History & Culture Park connects the ring-shaped Downtown Green Field Corridor from Mt. Naksan to Mt. Namsan, as well as serves as a cultural space to exhibit historic and cultural assets of Seoul. It was originally planned as a design street to introduce the latest design trends, but later changed to the history and culture park because structures and artifacts of Joseon Dynasty (including Fortress Wall of Seoul and Hadogam Site) were discovered on the site during construction of the

building. The park consists of the Fortress Wall of Seoul and Igansumun (8,030㎡), 2 outdoor structure exhibition spots (4,373㎡), Dongdaemun History Museum to exhibit discovered artifacts (1,313㎡), Dongdaemun Sports Complex Memorial Hall to show the history of Dondaemun Sports Complex (339㎡), small-scale Igansumun Exhibition Hall (2,058㎡), and Gallerymun (400㎡).

Figure 5 - View of Dongdaemun Design Plaza

Source: the ddp, http://www.ddp.or.kr

Connected local commercial districts and improved the walking environment with underground space.
The local commercial districts were integrated by connecting the Eastern and Western commercial districts, which were separated by the Jangchungdanro-ro, with underground space. In addition, the poor aboveground walking environment was improved by developing an underground walking network to connect Euljiro Underpass and the subway stations of lines No.2, No.4, and No.5. It was planned for the connected underground space to serve as a downtown cultural space along with the aboveground space.

Excavation and preservation of the Fortress Wall of Seoul and Hadogam remains

Because the Fortress Wall of Seoul was found to cross the planned DDP site, Seoul planned to restore the fortress wall in the site in conjunction with the entire fortress wall (18.6km) restoration project. The restoration was started within the site in April, 2009 with a budget of KRW 2,488.7 million. The Fortress Wall of

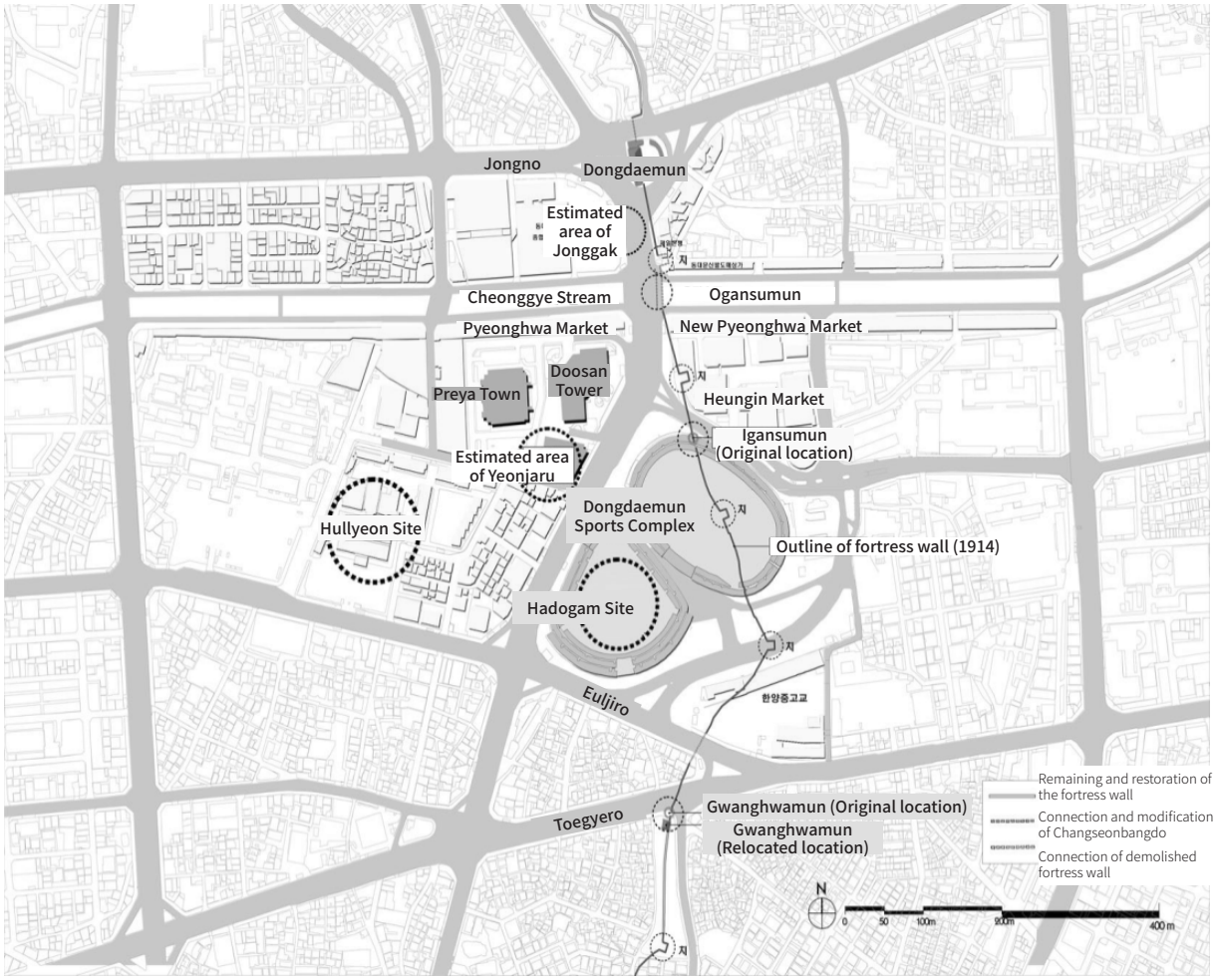
Seoul Restoration Project was performed in the order of test pitting, excavation, restoration plan establishment, and restoration. The test pitting was performed in the baseball and football field sections first, and many artifacts were discovered through the excavation. According to the Fortress Wall of Seoul Preservation Measure, it was decided to preserve the site and restore later by principle.[2]

Meanwhile, full-scale excavation was started as the life and culture layer of Joseon Dynasty was found in the Hadogam, which is a branch barracks of Hullyeondogam, and related government building sites. The excavated structures were restored by relocating them on the basis of historical research to the extent that their original state is maintained. KRW 1,377.8 million was budgeted for the structure relocation and restoration.[3]

1. The excavated Fortress Wall of Seoul is 265m long and reaches from Heunginjimun to Gwanghwamun, of which 142m was restored with partial preservation, and 123m was trace-restored. The base was found 3.7m under the current ground of the fortress wall with different styles of different times. Seoul restored it with the original construction method. The fortress wall included the Igansumun with Hongye structure to drain water from inside to the outside, which was preserved by installing wooden fence and dry-cleaning the entire gate. The iron fence of was restored in the arch form.

2. The excavation found 44 structures and about 1,000 ceramics such as Joseon white porcelains and grayish-blue-powdered celadons from the first to second half of Joseon Dynasty; Hullyoen park remains from the Late Period of Joseon; basic facilities of gymnasium from the modern times; and many artifacts including roof tiles showing the life style from the first half of Joseon to modern times. According to the Remains Preservation Measure, stonework, stylobates, Jeokshimseok, and Gomaegi facility found from 3-5 building sites of Hadogam were preserved as they were in the center of Eoullim Square on th 2nd basement floor of DDP while military structures to defend the fortress wall were relocated to the Structure Exhibition Hall 1 for restoration and preservation. Meanwhile, the weapons and gunpowder production equipment of Hadogam and structures from Hullyeon Park were relocated to Structure Exhibition Hall 2 for restoration and preservation.

Figure 6 - Distribution Map of Historical Remains around DDP



Source: Seoul City (as of 2013), Dongdaemun Design Plaza & Park Project

Details

Organization

For the DDP project, the organization of Seoul City Government was planned for the design and construction, operation preparation and promotion, and post-development operation.

① Design & construction: Cultural Facility Project Unit

Dongdaemun Design Park Manager, Cultural Facility Project Unit was in charge of designing and building DDP. The Cultural Facility Project Unit was responsible for building large structures of important city projects and managed the design, construction, and supervision for International Nominated Design Competition for Invitees, civil engineering, construction, and equipment.

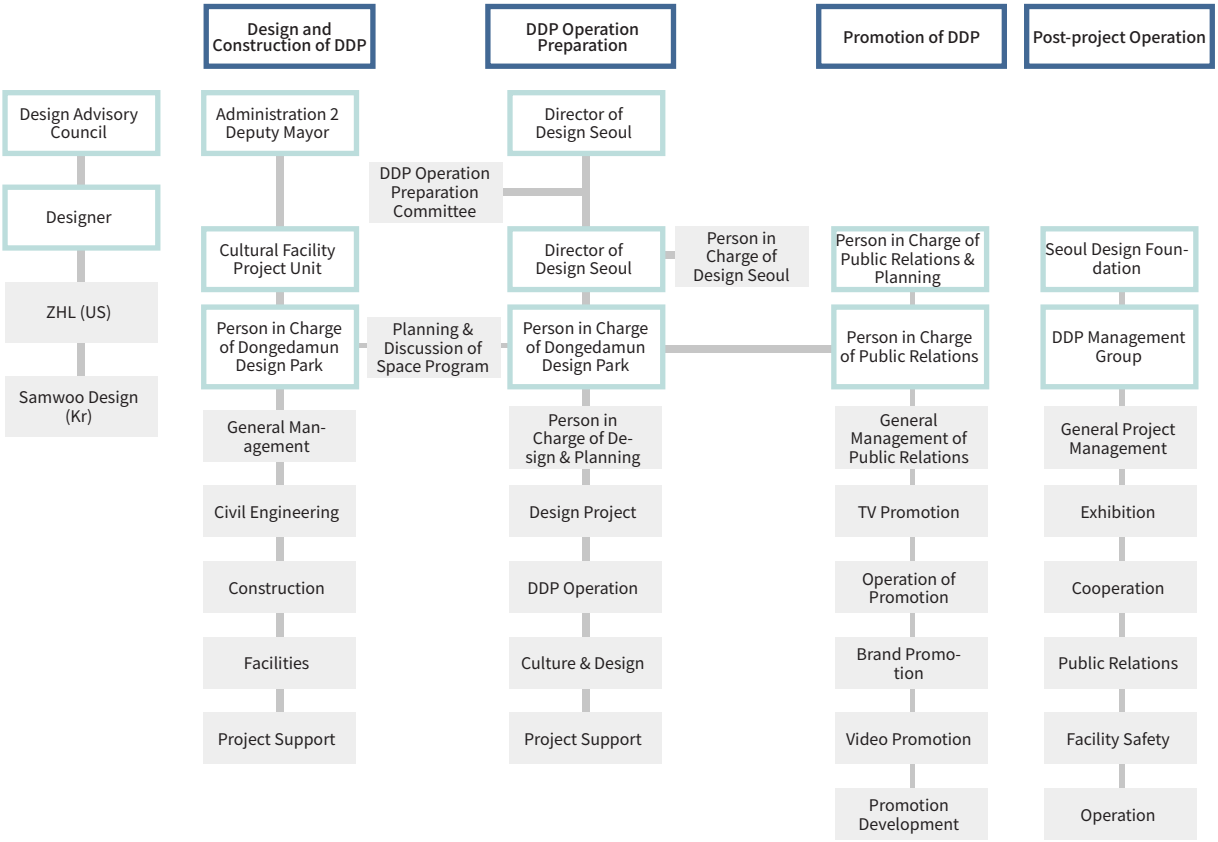
② Operation preparation & promotion: Design Seoul Headquarters

Design & Planning Officer and Promotion Officer were responsible for the operation preparation and promotion of DDP. The Design Seoul Headquarters was responsible for general administrative work for Design Seoul policy and assumed full charge of operation preparation and promotion required for the DDP to serve the central function of design development policy of Seoul.

③ Post-development operation: Seoul Design Foundation

A professional, efficient, autonomous, and financially independent organization was established to operate the DDP as a global design center. The Design Seoul Foundation[4] was established in March, 2009, and is now responsible for planning and implementation of different programs to support design industry and promote design culture in Seoul, as well as the management and operation of DDP facilities.

Figure 7 - Organization



Source: Seoul City Government (2013), Dongdaemun Design Plaza & Park Project

4. Besides the DDP operation, Seoul Design Foundation is responsible for design exchange, civil service design, design industry ecosystem development, and fashion & sewing industry support projects.

Idea Contest for Citizens

Seoul held an idea contest for citizens to inspire civil interest in the DDP project and to promote the purpose of it. It was announced in November, 2006; works were received in December; and the result was announced in January, 2007. There were 35 and 45 participants respectively for the general and professional (including corporate bodies) categories, and the evaluation was based on the design concept and design.

Based on the contest result, Seoul included preservation of part of the first modern sports facility in Korea and development of Dongdaemun Sports Complex Memorial Hall in the DDP plan instead of the original plan to remove the entire sports complex for development. It was also reflected to the guidelines for International Nominated Design Competition for Invitees.

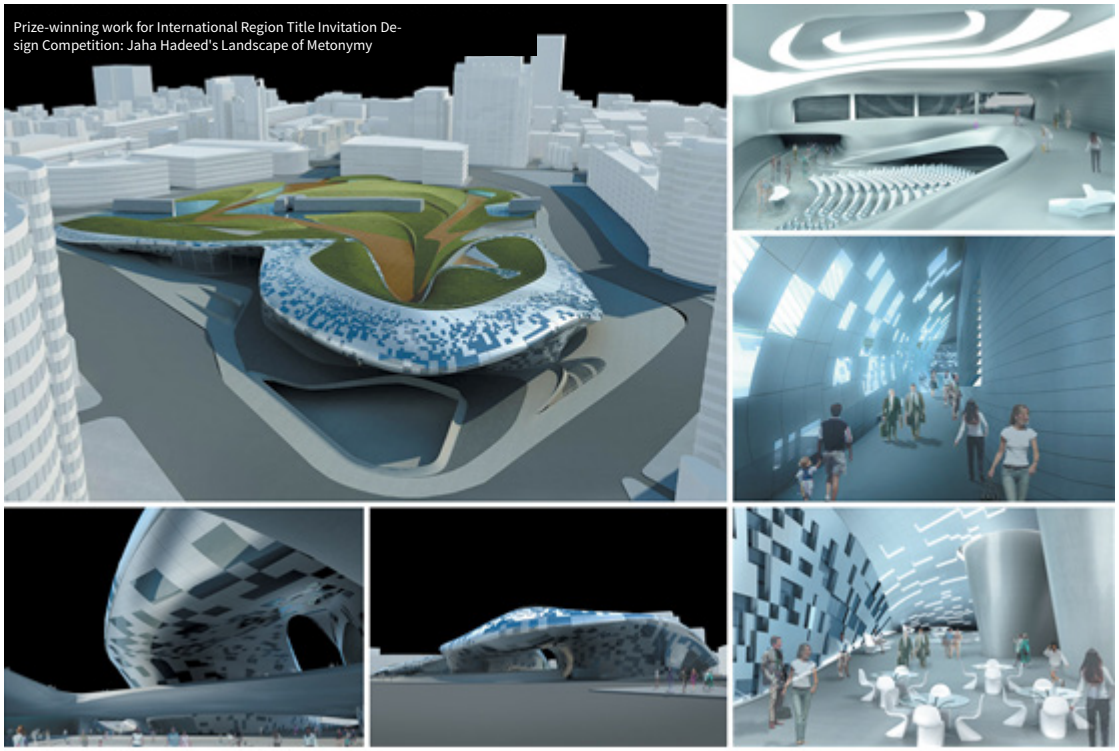
International Nominated Design Competition for Invitees

According to the advice of architects, the nominated design competition for invitees was selected for less restricted competition while avoiding turn-key tender in February, 2007, in order to achieve a world-class result to build the landmark of Seoul by inviting proven artists. It was equally open to domestic as well as foreign architects to achieve fair competition and the best possible architectural design. It was planned to form the selection committee in February, 2007; select committee members[5] and invitees in March; announce the contest for invited architects and receive proposals in April; and decide winning proposal in August and complete the planning, basic, and execution designs. The design guidelines of International Nominated Design Competition for Invitees included details of developing the design plaza[6], underground space, and history & culture park. Metonymic Landscape by Zaha Hadid won the competition.

5. According to the criteria of the International Union of Architects, the committee members included Jong Seong Kim (Korea), Seong Jung Cho (Korea), Jonathan Barnett (US, Chairman), Diana Balmori (US), and J. M. Charpen tier (France). The invited architects included Hyo Sang Seung, Geol Ryu, Seong Ryong Cho, and Mun Kyu Choi from Korea and Zaha Hadid, Steven Holl, FOA, and MVRDV from other countries.

6. The design guidelines were about the development of design plaza, underground space, and history & culture park. The development of design plaza had to improve the image of Seoul as a cultural and industrial city, and create attractive space and environment by providing opportunities to experience different design cultures as a landmark for the design industry and tourism attraction in Korea. The development of underground space had to build an underground walking network to form integrated space and connect disconnected local commercial districts using the underground space of Heunginmun-ro (Jangchungdan-ro) and Euljiro. The development of history & culture park had to be a local promotion hub by developing an urban park to connect the green field corridor from Mt. Naksan to Mt. Namsan, and cultural space merged with the historic artifacts including the fortress wall.

Figure 8 - Winner of International Nominated Design Competition for Invitees, Metonymic Landscape by Zaha Hadid



Source: Seoul City (as of 2007), General Downtown Recreation Plan

Introduction of Construction Administration (CA)

It was very complicated and difficult to draw drawings of the DDP design, which is mainly composed of curves and slopes in and out of building, so Seoul made an agreement with the DDP designer on CA to engage in the construction. CA is a supervisory process where the designer supervises construction according to the drawings and specifications as a representative of the client, which costed additional KRW 2 billion for the DDP construction.

Details

Conflict with the world of sports

Civic Network for Justice of Sport (CNETJS) held a solidarity conference to oppose the demolition of Dongdaemun Sports Complex in July, 2007, which criticized the demolition which was agreed to by the Seoul City Government, Korea Baseball Organization, and Korea Baseball Association, and proposed remodeling it into a stadium during baseball seasons and an open sports complex for citizens during the off-season. Meanwhile,

a joint task force of the CNETJS and 8 other civil society associations announced Declaration of 100 People to Oppose Demolition of Dongdaemun Sports Complex and Preserve It with members of National Assembly and famous baseball players. The declaration stressed the historical and cultural value of Dongdaemun Sports Complex as the first sports & cultural facility in the modern times, and suggested to remodel it into a stadium, sports museum, or park. To solve the conflict, Seoul organized a TF team of Sports Promotion Department and Seoul Sports Council and tried to convince the civil associations and sports figures who engaged in the declaration. While contacting the civil associations through official and unofficial channels and emphasizing the necessity of DDP project, Seoul tried to find solutions including development of an alternative stadium, partial preservation of facilities, and construction of a memorial hall by actively listening to their opinions.

Conflict with merchants

The DDP project required merchants in Folk Flea Market of the Dongdaemun Sports Complex, Dongdaemun Sports Complex, and underground shopping area in front of the baseball stadium, as well as street vendors around it to move out. To solve the conflict with those merchants who opposed the project because of the uncertainty of their livelihood, Seoul had face-to-face interviews with them and suggested suitable solutions for individual merchant groups.

① Conflict with merchants in Folk Flea Market and street vendors

Seoul developed the temporary Folk Flea Market in the football stadium of Dongdaemun Sports Complex as a part of the solution for street vendors around Cheonggye Stream as Seoul started to recover it in 2003. With the Dongdaemun Sports Complex Park project announced in September, 2006, the Folk Flea Market merchants required development of a Global Folk Flea Market and relocation measure as promised through the Cheonggye Stream Recovery project. They sporadically resisted the Cheonggye Stream Recovery, but became organized and collective on the basis of their experience. Street vendors around the sports complex joined the movement to oppose the project and require their right to live.

So Seoul justified the DDP project and analyzed the statetment and detailed requirements of street vendors by having over 1,500 meetings with them so that they could calm down and fully understand the scope and limitation of negotiation. On the other hand, Seoul tried to find the relocation measure for Dongdaemun Folk Flea Market considering the time the negotiation would be over. With Seoul Folk Flea Market open at Shinseldong in April, 2008, Seoul started negotiation for relocation with the street vendors and suggested a complete solution including support for equipment modernization, change of business type, and marketing for those who agreed to relocate.

② Conflict with merchants in Dongdaemun Sports Complex

Sporting goods stores were established in the Dongdaemun Sports Complex because it was remodeled in 1966, and the merchants maintained operations through private contracts with Seoul City Government. With

their places of business at risk with the DDP project, they argued possessory right to the shopping district as the reward for their efforts to promote it until then and required compensation. Seoul took a hardline stance by filing eviction suits for stores because their request for possessory right was unreasonable, but tried to find a more flexible solution as they filed counter suit, and thus, the negotiation seemed like it would take a long time.

First, the negotiation, negotiation support, relocation support, and legal support operations were allotted to responsible departments, and detailed analysis was performed for the relocation subjects. According to the results, they carried out individual negotiations along the requirements of individual merchants and actively convinced them while having a more active discussion with the representatives of associations. As a result, the relocation was agreed to in February, 2008 with the conflict solved.

However, the process emphasized the necessity of systematic management of shared assets and prior management to prevent this type of conflict. Also, it was proven that development of a negotiation manual, growing negotiators, and other efforts to manage public conflicts were required.

③ Conflict with merchants in the underground shopping area in front of Dongdaemun Baseball Stadium

The DDP project included underground space development to use the underground space under Heunginmunro and Euljiro, as well as the underground shopping area in front of the Dongdaemun Baseball Stadium that had been managed by Seoul City Government. So it was inevitable to demolish the shopping mall and relocate the merchants, who demanded to be permitted to install stores under the DDP and continue the rental agreements to guarantee their living.

Seoul expressed difficulty in accepting the conditions and took actions including eviction of stores and returning of rental deposit. Seoul also suggested relocation of the merchants at their disposal to the underground passageway of Euljiro entry and City Hall Square, or the private shopping mall in the Jamsil area, but the merchants refused. After several negotiations, they eventually agreed to build alternative stores in the underground shopping area of Euljiro section 4 and relocate to there as required by the merchants, which was opposed by store owners and merchant association of Euljiro section 4 on the grounds that it will cause inconvenience by increasing density of stores and the items to relocate (sports clothing) do not match the existing commercial district. So Seoul ordered the facility management corporation of underground shopping areas to negotiate with the merchants, which finally convinced them by forming a bond of sympathy through continued communication, including a marathon conversation which lasted 12 hours.

Conflict with the world of cultural assets

Culture Solidarity and other civil associations started an anti-demolition campaign arguing that the Dongdaemun Sports Complex needs to be registered as a cultural asset of modern times because it has historical and cultural value. The members of the Modern Cultural Asset Committee, Cultural Heritage Administration also emphasized the necessity of preserving it because it held history of the Japanese colonial era, indepen-

dence, and division. However, Seoul was restoring the Fortress Wall of Seoul connecting the 4 main gates and 4 sub-gates, and the arguments for the restoration of the fortress wall and preservation of cultural assets of Dongdaemun Sports Complex were conflicting.

Through a series of discussions, Seoul decided to restore the remains of the Joseon Dynasty around the Fortress Wall of Seoul and demolish the Dongdaemun Sports Complex, and then tried to convince the Cultural Heritage Administration. It took a step backward to propose partial preservation of the representative section and Seoul agreed with the proposal. According to the agreement, 2 light towers were preserved in the north of football stadium and the Eastern flame holder was relocated to the park site. It was also planned to have a separate exhibition space with a miniature model of Dongdaemun Sports Complex and 3D video in the DDP. Now, with the end of the conflict over the preservation of cultural assets finished, the conflict over the demolition of Dongdaemun Sports Complex began.

However, another trouble occurred regarding restoration, as the actual Fortress Wall of Seoul was excavated. The Cultural Asset Committee, Cultural Heritage Administration insisted to fully excavate and restore it because of its high value as a historical site, but Seoul wanted to perform trace restoration because the full restoration would require changing the framework of the DDP project.

Seoul explained about the necessity of the DDP project to convince the members of the committee, and Seoul and Cultural Heritage Administration finally agreed on 3 policies to preserve the historical site - to preserve the site of Fortress Wall of Seoul and Igansumun, of which bases were found, with minimal emergency restoration; to relocate Hadogam and other building sites to a newly built remains park (Structure Exhibition Hall) on the East side of the fortress wall for preservation; and to preserve part of Hadogam site of baseball stadium in the underground square of the main building of DDP. Seoul also reached agreement with the Cultural Heritage Administration by calling the park Dongdaemun History & Culture Park to reflect its characteristics. There, 2 difficult problems; preservation of cultural assets and implementation of DDP project, were solved in harmony.

Details

Positive result

① Promotion of design and creative industries

Seoul held the biggest ever Seoul Fashion Week with the opening of DDP in March, 2014, which would provide opportunities for rising designers to raise public awareness and for top designers to improve their competitiveness and create business opportunities in Korea and overseas so that the Korean fashion industry would develop[7]. Seoul will contribute to the promotion and expanded sales of Dongdaemun commercial district by continuously holding fashion events including joint fashion shows and fashion fairs at the DDP.[8]

② Promotion of tourism

It was reported that the floating population was increased by 10% or more after the opening of DDP, and the number of foreign tourists is increasing.[9] Seoul expects that half or more of all tourists will visit Dongdaemun in the future. The effect of DDP and the increased floating population on production inducement will be about KRW 881.7 billion, along with the creation of 5,129 new jobs. The effect on production increase is expected to be about KRW 210 billion in the neighboring commercial district.[10]

③ Conflict management

After the DDP project was announced, the stakeholders opposed the spatial rearrangement for their interests, identity, and actual profit. The conflicting groups included the world of sports, merchants of Folk Flea Markets and Dongdaemun Sports Complex, street vendors, and world of culture, and the conflicts continued from the demolition to the completion of construction. The conflicts had a large effect on the DDP project, so Seoul organized and operated the required negotiation groups.

The public conflict aspect of the DDP project was recognized as an important challenge for public policies to reach agreements through negotiations with multiple parties as the civil participation extended. The conflict management policy had been to understand situations after a conflict occurs and have talks about it, but the progress of the DDP project showed that this method was not efficient. It was recognized that it is required to put in efforts to prevent conflicts instead of taking actions later. The DDP project was an opportunity to build a public conflict control system by operating conflict management teams for public projects, recording the know-how of controlling public conflicts, and growing negotiators.

7. Metro, 2014.3.23. 'Potential of Korean Fashion Industry Has Been Seen', www.metroseoul.co.kr

8. Money Today, 2011.9.16. 'The Fashion Mecca, Will Dongdaemun Find The Glory of Old Times?', www.mt.co.kr

9. Munhwa, 2014.6.20. 'DDP Reached 2M Visitors In 70 Days', www.munhwa.com

10. Munhwa, 2014.6.20. 'DDP Reached 2M Visitors In 70 Days', www.munhwa.com

④ New paradigm of urban planning and design

The DDP project was conducted through private and public cooperation such as DDP Operation Preparation Committee, DDP Planning & Coordination Group, Creative Process for Experts, and Expert Advisory Council. In addition, the opinions of citizens were actively collected through the political workshop and idea contest. The DDP project was carried out through the participation of different groups and agencies including Dongdaemun merchants and collection of civil opinions to suggest new paradigm for the urban planning and design.[11]

On the other hand, it was the first time to introduce the nominated design by invitees to a public project to upgrade the quality of public construction, and it adopted new management methods including Construction Administration (CA) and Construction Management for fair and transparent management of the entire process from start to finish, having an effect on the development of standard work system for public building procurement.

Challenges

① To promote Dongdaemun commercial district

Local traditional businessmen point out the lack of programs of DDP to promote industry in the Dongdaemun area. Unlike the original objective to develop Dongdaemun as a global fashion hub by combining young designers, Pyeonghwa Market, and skilled sewers in Changshindong with the DDP, it only holds Seoul Fashion Week without any other fashion programs and focuses on visible items such as exhibitions.[12] There is growing criticism that it will be difficult to promote the Dongdaemun commercial district and transform it to a design hub.[13]

2014 did not have enough related programs to promote the neighboring commercial district because it was the first year of DDP, but 2015 is planning to actively contribute to promoting the Dongdaemun commercial district through different programs to support marketing in cooperation with the neighboring commercial district, to provide a tour to DDP in conjunction with its tourism and historic resources, and to create added value and jobs by recycling (or upcycling) leftover pieces of fabrics and leather from neighboring sewers and combining them with new designs.

② Preservation and creation of historicity and locality

It is criticized that the DDP destroyed the historicity and space of Dongdaemun, even though its degree of architectural completeness is high. The memory of space and history about Dongdaemun Sports Complex site is locked in the small memory hall of Dongdaemun History & Culture Park with some remains and stories

11. Operation plan of Dongdaemun Design Plaza, 2012.12.11. http://spp.seoul.go.kr

12. The Scoop, 2014.8.14. 'Unprofitable DDP, Poor Shell of Spaceship', www.thescoop.co.kr

13. Joongang, 2014.7.2. 'Hot 100 Days of DDP but Cold Wind in The Commercial District Across The Street', www.joongang.co.kr

scattered around.[14] It is also criticized that the Fortress Wall of Seoul has not been fully restored under the shadow of DDP building and the history could not be fully understood by relocating the Hadogam out of the fortress wall.[15]

It would have been difficult to restore the original state of the site during the development of DDP, but it is essential to preserve the historicity and locality as much as possible through efficient operation and management of Dongdaemun History & Culture Park, Dongdaemun History Museum, Dongdaemun Sports Complex Memorial Hall, Igansumun (a part of the Fortress Wall of Seoul), and Structure Exhibition Hall that were developed to pass down the historical memory of the site. On the other hand, continual efforts are required to create a new and dynamic history of DDP by developing unique content related to DDP as a global source of design and creative industries and operating cooperative programs with neighboring districts.

③ Reasonable balance between public benefit and profitability

After the DDP was opened in March, 2014, its operator, Seoul Design Foundation increased its financial income from KRW 19.2 billion that was estimated in the 2010 DDP Operation Plan to KRW 32.1 billion to improve the financial independence of DDP while reducing expenditure from KRW 39.8 billion to KRW 32.1 billion.[17] To reinforce the financial independence of DDP, Seoul Design Foundation changed the objectives of organization from opening preparation and facility development to operation while focusing on creating new businesses including branding, place marketing, and advertisement in addition to its key businesses such as leasing, rental, and exhibition.[18] However, the profitable operation for financial independence cannot avoid criticism for potential damage to the public identity of DDP, so the balance of public benefit and profitability is a remaining challenge to solve in the future operation of DDP.[19]

Seoul Design Foundation has been developing and developing and operating different business models including leasing, rental, and exhibition planning to improve the financial independence after DDP was opened. It is required to reinforce the financial independence capability for sustainable operation of DDP, but consistent efforts and consideration are required to balance the public benefit to provide a creative experience to citizens for a reasonable price and profitability through development and operation of creative content and programs.

14. Asia Economy, 2014.2.5. 'Metonymic Landscape, DDP Buries Memory of Space', www.asiae.co.kr

15. Pressian, 2013.10.16. 'Tragedy of Showing-Off Administration of Sehoon Oh, Dongdaemun Design Plaza', www.presian.com

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18. e-Daily, 2014.7.29. 'Dongdaemun Design Plaza Achieves 84% Financial Independence This Year', www. edaily.co.kr

19. The Scoop, 2014.8.14. 'Unprofitable DDP, Poor Shell of Spaceship', www.thescoop.co.kr

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13. Landscape Management Policy for Better Seoul

Written by : Hyeon-Chan Park of Seoul Institute

Policy Area : Cityscape

Background of Seoul Landscape Policy Formulation

Damaged Landscapes around Mountains, Rivers and Historic and Cultural Properties due to Reckless Development in the 1970-80's

Housing Supply-Centered Policy in Development & Growth Periods

Seoul underwent dramatic changes due to economic development in the 1960's, and started to focus on supplying houses in the 1970-80's. Based on the "Housing Construction Promotion Act" enacted in 1972, houses were supplied on a massive scale. Then, the "Housing Site Development Promotion Act" was also enacted to effectively promote large-scale housing site development in the 1980's. Then, a number of large apartment complexes were built across Seoul. In particular, the hill areas overcrowded by deteriorated houses were released from the restrictions on scenic areas, so that apartments could be built in those areas on a grand scale. The high-rise, high-density apartment development grew more fiercely due to the deregulation of building controls, such as an increase in both floor area ratio and building coverage ratio of apartments, and a lower pitch of buildings according to the housing construction promotion plan in 1985. However, the high-rise, high-density apartments around mountains and rivers began to destroy the urban landscape as a whole, producing an overwhelming and standardized view.

Downtown Redevelopment Policy for Modernization of Urban Functions

The "Urban Redevelopment Act" was enacted in 1976 and the "Basic Plan for Urban Redevelopment" was established for the first time in 1978. Then, the Seoul government complemented this basic plan and implemented active urban development by relaxing the restrictions on the floor area ratio and the building coverage ratio for residential complex development. This urban redevelopment policy brought about the modernization of urban functions, such as the construction of modern-style buildings, the improvement of road networks, and the expansion of parks and parking lots. However, it fell short of considering the historic and cultural characteristics of downtown areas, so many cultural heritages and urban structures across the city were destroyed by the large-scale urban development.

Natural Landscape Management with the Removal of "Namsan Oein Apartment" as Momentum

In 1991, the "Basic Plan for Namsan Mountain Recovery" made a proposal to transfer or remove ten encroaching facilities including the U.S. army facilities and the capital defense command (CDC), and transforming the enemy territory into a park. Then, Namsan Oein apartments were torn down in 1994 through the activities of the "Namsan Recovery Committee." The apartment concerned was built for the purpose of accommodating many foreigners who were invited to hand down advanced technology when the economic development plan was in active progress in the late 1960's. It stood high at the foot of Namsan Mountain, so it could be seen easily from everywhere, blocking the original scenic view of the mountain. At that time, its demolition was

aired live on TV and served as an opportunity to raise public awareness about the value of landscape.

Figure 1 - Removal of Namsan Oein Apartments (1994)

Scenic Conservation Act Implementation Focusing on Inducement and Support

In the early 1990's, the Seoul government and the academic circles started to recognize the necessity for managing the urban landscape, and came to establish many plans for controlling the height and scale of buildings. By doing so, they intended to secure the scenic view of mountains and rivers, which corresponded to landscape frameworks. However, the regulation-oriented landscape plan was non-statutory without an applicable law, so there was a limit to implementing the plans based on related laws. Also, the urban landscape is formed by means of urban plans, buildings, parks and green areas, etc., which are managed and operated according to individual laws (Land Planning and Utilization Act, Building Act and Act on Urban Parks, Greenbelts, etc.). Therefore, for the realization of landscape management, there was a growing need for implementation of an applicable law that covers all the landscape targets to be managed. Accordingly, the Scenic Conservation Act was enacted in 2007 to lay the institutional grounds for landscape resources preservation, management and formation, for example, establishing landscape plans, executing landscape projects, and concluding a landscape agreement with land owners and its support. Seoul City has established its statutory landscape plans for the first time as a local government based on the landscape ordinance in 2008 and the Scenic Conservation Act in 2009. Then, it mapped out specific landscape plans for each landscape type; natural green space, waterside, history and culture, nighttime and streets.

Content of Seoul Landscape Policy

1st Period: Start of Protection and Management of Damaged Urban Landscapes

Seoul is a city with its own urban identity formed already by the landscape framework including its inner four mountains (Bugaksan, Naksan, Namsan and Inwangsan Mountains), outer four mountains (Bukhansan, Gwanaksan, Yongmasan/Achasan and Deokyangsan Mountains), the Hangang River and four streams (Hongjecheon, Jungrangcheon, Anyangcheon and Tancheon Streams), as well as downtown palaces, Hanyang Walls, traditional Korean-style houses and historic, cultural properties. Therefore, when there was a demand for managing damaged urban landscapes and protecting Seoul's own unique landscapes in the early 1990's, many efforts were made to secure scenic views of natural landscapes, centering on the related academic societies and research institutes. At the same time, related laws were enacted and amended to lay the institutional grounds for the realization of landscape management. Although the historic and cultural landscapes constituted a key element in forming the identity of Seoul along with its natural landscapes, the Seoul government was not very interested in protecting and managing the non-listed historic and cultural resources, while putting focus only on the listed historic and cultural properties.

Securing Scenic Views of Natural Landscape Resources like Mountains and Rivers

- In many studies, it was suggested that a viewing point should be selected against theoretical backgrounds and the buildings between viewing points must be regulated, so that people could see the landscapes above the 5th to 7th ridges of mountains. For the realization of landscape management, they also suggested the designation of scenic districts, the application of deliberation standards, etc. However, in the case of designating scenic districts that may cause an infringement on property rights, we must first win the public consensus. When it comes to the height of buildings, which were defined by the existing use district system and setback regulation, there is a limit to regulating it with landscape plans without an applicable law. So, the methods for securing a view suggested in many studies have not been executed yet.

Protection and Formation of Historic and Cultural Landscapes through District Unit Planning

- Historic and cultural landscape resources like ancient palaces and Hanyang Walls constitute a key element in forming the identity of Seoul, along with its natural landscapes like mountains and rivers. Nevertheless, almost no studies have been conducted so far with an aim of protecting and managing such landscapes. The listed historic and cultural properties have been protected by the cultural heritage protection area, elevation control, etc., but there was still a limit to forming the landscape of adjacent areas considering the corresponding cultural properties. Most of the non-listed historic and cultural landscape resources were also excluded from protection and management.
- There was a growing demand for protecting and managing the historic, cultural resources and landscapes which had been lost and damaged during the rapid process of urban development. The Seoul government started to map out its district unit plans, centering on the characteristic bases of historic and cultural resources, such as Bukchon, Insa-dong and Myeong-dong. The district unit planning of characteristic bases was not intended for protecting and managing historic and cultural landscapes only, but has made contributions to their maintenance through detailed planning.

Laying the Institutional Grounds for Landscape Management

- Seoul Architectural Committee Rules on Apartment House Design Review

  - At a time when the reconstruction of large-scale apartments was progressing, the Seoul government had no means to conduct city management. Then, it managed to enact the "Seoul Architectural Committee Rules on Apartment House Design Review" in 1999 temporarily. These rules on apartment house design review were classified into indexical deliberation criteria and derivative deliberation criteria. The former includes an elevation area, elevation blockage ratio, height limit of hills, outdoor living space, sidewalk ratio and roadway ratio, while the latter includes a complex formation and layout plan, cutting/banking ratio, land deformation ratio, building type and number of stories, circulation planning in complex, structural plan, landscape plan, existing tree preservation, color plan and underground excavation. The rules on apartment house review were enacted according to the "Land Planning and Utilization Act" and manages the scale of apartment houses including a local floor area ratio, number of stories, maximum height, building layout and type. However, it was abolished in 2008 due to the enactment of the "Apartment House Architectural Design Review Standards" for securing the diversity of designs and forming high-quality residential environments.

- Landscape Areas

  - As the "Urban Planning Act" was completely revised in 2000, the Seoul government subdivided landscape areas into natural landscape, visual landscape, waterfront landscape, cultural heritage landscape, street landscape and prospect right landscape through the amendment of urban planning ordinances. On that basis, of the 24 scenic areas, which had been designated according to the Joseon Street Planning Act in 1941, 20 areas were changed into natural landscape areas and 4 areas were changed into visual landscape areas. Then, according to the "Land Planning and Utilization Act" enacted in 2003, which allowed the designation of natural landscape, waterfront landscape and street landscape areas, the Seoul government permitted the designation of visual landscape, cultural heritage landscape and prospect landscape areas through the revision of urban planning ordinances.

  - However, it was difficult to designate new additional landscape areas, because people in the existing natural landscape areas continued to raise civil complaints against that type of designation because of its infringement on their property rights. Accordingly, the city council decided to delete some districts from designation, because they had not been designated before and had not produced actual benefits from separate regulations. Therefore, the prospect landscape areas and the cultural heritage landscape areas were deleted in 2009. Now, the Seoul government is allowed to designate the natural landscape, waterfront landscape and street landscape areas according to the Land Planning and Utilization Act and also designate visual landscape areas under the urban planning ordinance. As of 2013, the size of landscape areas totaled 13.1㎢, with only the natural and visual landscape areas designated.

- Average Number of Stories

  - Due to compulsory rental housing reconstruction in 2006, the floor area ratio was increased 10-30%, so it became inevitable to change the height limit of buildings in the type II general residential areas, of which floor area ratio and the number of stories were limited to 200% and 12-15, respectively. Furthermore, due to the previous limit on the maximum number of stories, the city landscape of housing areas looked too uniform and standardized. There were also continuous civil complaints regarding poor residential environments due to the difference in building heights from other nearby areas with lower height limits. Against these backdrops, for a variable sky line and better urban landscape, the Seoul government introduced the average number of stories (the number of stories obtained by dividing the ground area of apartments by a reference area, under Clause 2, Article 28 of the Seoul Urban Planning Ordinance) for the first time as a local government through the revision of the Seoul Urban Planning Ordinance.

  - In the case of building apartments in the District Unit Planning Areas and Renewal Areas, the average number of stories was alleviated and changed to 11 for type II general residential areas (7 stories or less), and 16 for type II general residential areas (12 stories or less), considering their contribution to public interests

through a land donation for public sites as well as their potential improvement to the landscapes of adjacent areas.

- Then, in 2009, there was an attempt to compensate the issues of hills, which formed a uniform and standardized landscape view due to the application of the absolute number of stories without considering geographical characteristics. Therefore, the type II general residential areas were divided into hill and flatland areas and the differential criteria for alleviating the limit on the number of stories were applied there, considering regional characteristics, while maintaining the framework of the subdivision (7 and 12 stories) of type II general residential areas. On the contrary, the districts in need of landscape management were excluded from the alleviation of the limit on number of floors. By doing so, the government set a strict restriction on the simple upgrade of building stories in use districts. However, if an architectural plan (special landscape design, etc.) for hills has been made through a design competition or if there has been a consultation with the committee in advance, the government could apply separate criterion to that case within a scope of 18 stories on average, thus enabling architectural planning of various designs in practice. Meanwhile, in the case of building apartments in a structure capable of easy remodeling, the average number of stories could be relaxed within 20% of the corresponding standards. By doing so, the government took measures to prevent reckless reconstruction from causing any environmental damage and waste of resources.

Table 3 - Improvement Proposal for Average Number of Stories (2009)

Use Districts	Classification	Reference Number of Stories	Maximum Number of Stories	Infrastructure Burden Ratio
Type II General Residential Area (7 stories or less)	Hill	10 stories or less on average	13 stories or less on average	5%
	Flatland	13 stories or less on average		10%
Type II General Residential Area (12 stories or less)	Hill	15 stories or less on average	18 stories or less on average	5%
	Flatland	18 stories or less on average		10%

- By considering the ordinance on the limited number of building stories in type II general residential areas through the revision of the Land Planning and Utilization Act in 2012, the Seoul government maintained the limit on the number of stories in type II general residential areas (7 stories or less), but abolished that limit on type II general residential areas (12 stories or less). In the case of building apartments, the government tried to suppress reckless high-density developments by setting a limit to the number of stories through the committee's deliberation for the purpose of managing the landscapes and protecting residential environments. Therefore, in the case of building apartments in type II general residential areas, the number of stories must be limited to 7 on average. However, such number could be relaxed to 13 or less on average, as long as some of the land is donated for public facilities.

2nd Period: Landscape Planning based on Induction/Support-Centered Scenic Conservation Act

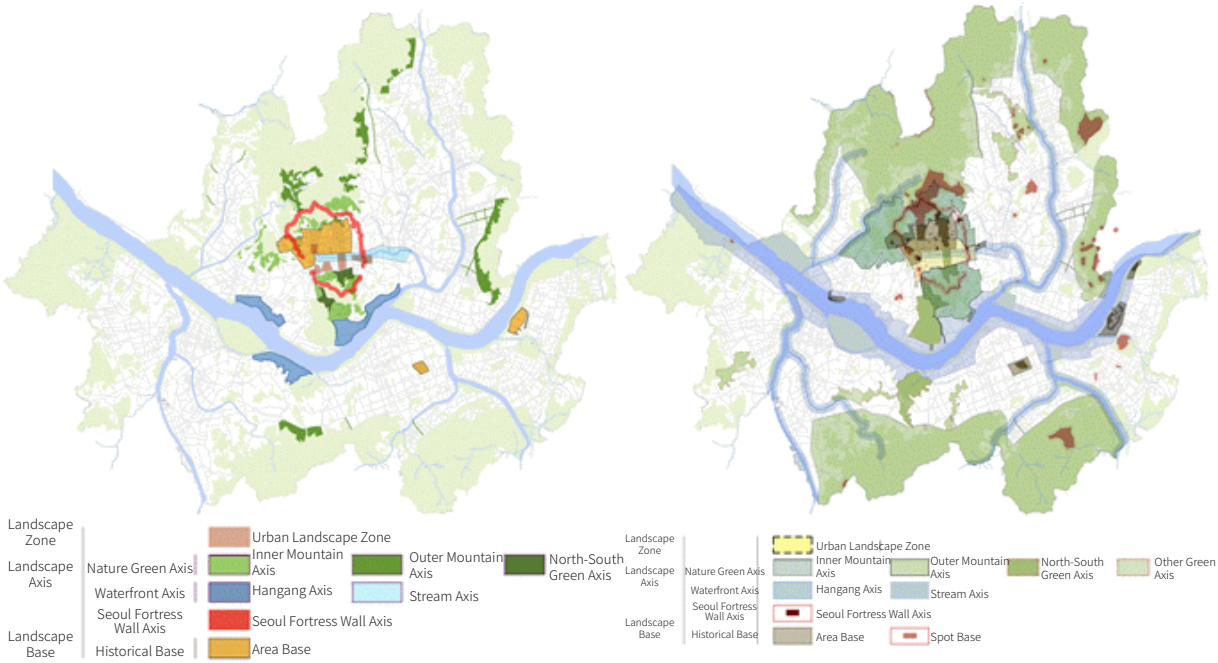
The Seoul government established its basic landscape plan in 2009 based on the Scenic Conservation Act implemented in 2007, and mapped out a specific landscape plan for each landscape type in the following year. The Seoul Basic Landscape Plan was designed to lay the framework for landscape planning and served as an opportunity to systematically integrate and organize basic concepts and management methods for each landscape type (natural green areas, waterfront, historic & cultural landscapes, etc.), which had been accumulated during a non-statutory landscape planning process.

Local Government's First Statutory Landscape Plan based on the Scenic Conservation Act

- The Seoul Basic Landscape Plan was mapped out according to the guidelines on landscape planning notified by the former Ministry of Construction and Transportation (currently the Ministry of Land, Infrastructure and Transport) in 2008. Accordingly, the framework for landscape plans was prepared for the first time on institutional grounds. The basic landscape plan clearly presented the areas that need landscape management, and also suggested the guidelines for landscape design for buildings to be built within landscape management areas.

Figure 2 - Landscape Basic Management Area and Landscape Intensive Management Area

Source: Seoul Basic Landscape Plan, 2009, p63, p69

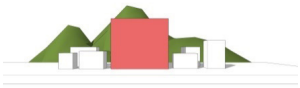
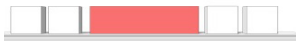
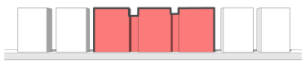


- The citizens and public parties could share the necessity for landscape management in the areas concerned by preparing the criteria for setting the scope of landscape management and raising civil awareness about the necessity for landscape management. Also, the boundary of landscape management areas was drawn with GIS data, so that it could be easily be used for mapping out a related plan and promoting a project.

- The landscape design guidelines contain the minimum principles required for protecting and preserving the valuable landscape resources within the management areas, and are designed to share the value of surrounding landscape resources, facilitate the construction of buildings considering landscapes and create a coherent view of buildings within the same management area.

  · Designers should check whether buildings belong to the landscape management areas or not, figure out the type of landscape design guidelines, and conceive the concepts of buildings by considering those guidelines. Before the approval and review of buildings, designers should write the answers ("fully consider," "consider," etc.) to questions regarding their considerations of the landscape design guidelines for eight items (layout, scale/height, shape/appearance, material, outdoor space, nighttime view, color and outdoor advertisement) and submit them with accompanying documents upon approval and review.

Table 3 - Scale/Height Checklist for Landscape Basic Design Guidelines on Inner/Outer Mountains

Key Word	Landscape Checklist			Evaluation
Harmony with Surroundings	To promote scale and height that harmonizes with inner/outer mountains and surrounding features	 Scale and height in disharmony with surroundings (×)	 Scale and height in harmony with surroundings (◯)	
Skyline	To form a skyline that considers natural geographical features To map out a height plan to secure the view up to the 5th ridge of the summit of mountains	 Sky line without considering mountains (×)	 Sky line in harmony with mountains (◯)	
No Feeling of Oppression	To avoid excessively large and protruding buildings - Not to block a scenic view or cause a feeling of oppression by folding screen-type buildings or a group of buildings - Divide buildings and design in a slender type in harmony with surrounding landscapes	 Excessively large buildings causing a feeling of oppression (×)	 Buildings in a segmental type (◯)	
Memo				

*This box is for designers to write their opinions.

You can self-check each item as [Not Considered ×] or use for your explanation about plans. (Related drawing, simple sketch, sentence, etc.)

Evaluation: Fully considered → ◎ Considered → ◯ Not considered → ×

Source: Seoul Map Homepage (http://gis.seoul.go.kr)

Writing Checklist for Landscape Design Guidelines, Institutionalizing its Submission and Executing the Landscape Self-Check System

- For the approval and review of buildings, it was suggested that a checklist for landscape design guidelines should be written and submitted in advance. Its pilot operation was conducted from April 2009 to March 2011. After the end of the pilot operation, its results were monitored from March to August, 2011 before the system was put into compulsory execution. As a result, it was necessary to complement the defects of the new system and extend the period of the pilot operation. So, the period was extended to December, 2011 and the system was complemented more. As of January, 2012, the system was renamed into the landscape self-check system and is now put into compulsory execution.

  - The Seoul Development Institute (currently the Seoul Institute) monitored a landscape self-check system from March to August, 2011 through the "Evaluation on landscape management operation according to the Seoul landscape plan and the study on improvement plans." As a result of the monitoring, the rate of checklists submitted tended to increase gradually, but still low, within 20%. It also appeared that the errors on the checklists were not addressed yet. However, about 50% of qualified architects replied that the landscape design guidelines made contributions to the improvement of landscapes. In particular, it raised public awareness about the landscape itself and helped to present a direction of plans considering the landscape.

  - Furthermore, it appears that public officials recognized just 50% of the targets subject to checklists submission, and there was a very large deviation in the operational results for each autonomous district (Gu). It suggests that the operational results might vary a lot depending on public officials' attentions and efforts.

Agreement on Landscapes and Promotion of Landscape Projects

- The landscape project is designed to improve regional landscapes and raise public awareness about landscapes. A landscape agreement project leads residents to participate in preserving, managing and forming landscapes for more pleasant environments and more desirable landscapes.

  - For some preferential landscape projects, the basic landscape plan presented a Seoul Fortress Wall gateway formation project, a station area landscape improvement project, a ground steel structure upgrade, a specialized street formation project and a gateway landscape formation project. Out of them, the gateway landscape formation project was conducted as a pilot project. The landscape agreement project was performed to target three places (Ui-dong of Gangbuk-gu, Sinwol 2-dong of Yangcheon-gu and Junggok-dong of Gwangjin-gu) after accepting applications from autonomous districts (Gu). However, in the case of Junggok-dong, its agreement was cancelled according to the residents' opinions.

Figure 3 - Gateway Landscape Formation Project (before/after the project)

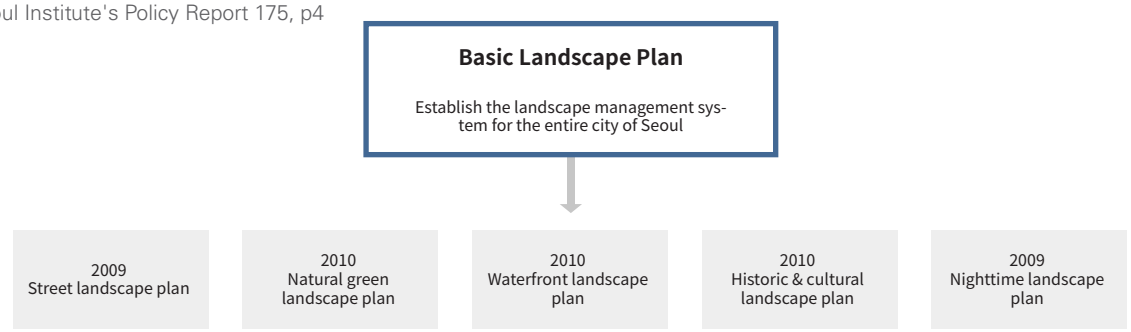
Source: Seoul Street Landscape Plan, 2009, p94

Specific Landscape Planning by Landscape Types

- The basic landscape plan is a landscape master plan that builds a big framework and processes for preserving, managing and forming Seoul City landscapes, while the specific landscape plan presents the execution methods for preserving, managing and forming landscapes with specific landscape types (forest, waterfront, agricultural/fishing village, history/culture, street, etc.) on the basis of specific environmental elements (nighttime landscape, color, outdoor advertisement, public facilities, etc.) and is based on the landscape plan guidelines.[1]
- The Seoul government established a specific landscape plan for four landscape types (natural green area, waterfront, history/culture and street) along with basic landscape plans. Out of them, the street landscape plan was established first in 2009, targeting the streets that urgently needed landscape management and were highly likely to show the effects of improvement. Then, it established a landscape plan for natural green areas, waterfronts and history/culture in 2010. Additionally, it mapped out a nighttime landscape plan as a specific landscape plan for each specific element in 2009.

Figure 4 - Seoul Landscape Plan System

Source: Strategy for Seoul Landscape Policy Improvement according to the revision of the Scenic Conservation Act, August 2014, Seoul Institute's Policy Report 175, p4

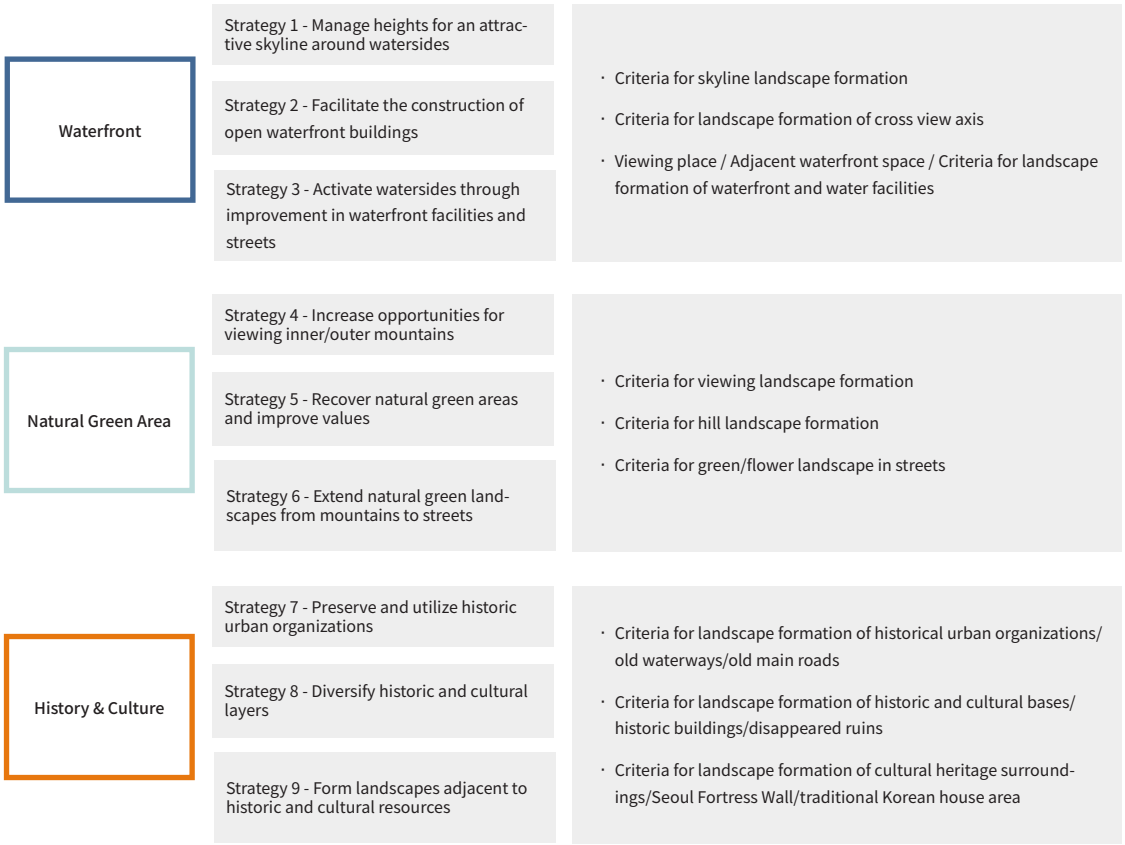


1. The intensive landscape management district was introduced into the revised Scenic Conservation Act and the content of a specific landscape plan established for a specific area was deleted (Administrative notice on some revised plans for landscape plan guidelines, August 2014).

- The specific landscape plan set the strategy and management elements based on its basic concept for each landscape type, which was established in the basic landscape plan, and also prepared criteria for landscape formation.

  - The criteria for landscape formation are either planning principles or criteria for establishing a planning direction, so that the related plans (district unit plan, renewal promotion plan, basic plan for urban and residential environment renewal, etc.) and the related projects (landscape project, street environment improvement project, urban planning facilities project, etc.) can be promoted according to a landscape strategy.

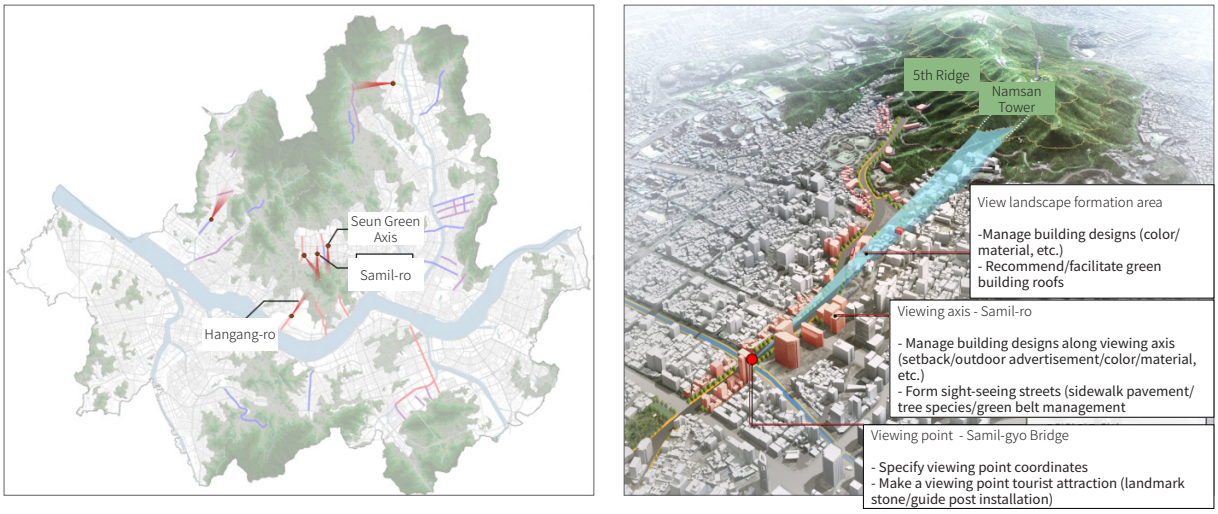
Figure 5 - Strategy for Seoul Natural Green, Waterfront and Historic/Cultural Landscape Plans and Criteria for Landscape Formation



- The plan for natural green landscapes established management elements such as prospect, hills, streets and green areas/flowers and prepared the criteria for landscape formation based on its strategy for increasing viewing opportunities of inner and outer mountains, recovering natural green areas, improving values, and extending the natural green landscapes from mountains to streets.

  - The government determined 251 viewing points and 35 viewing axes according to the plan and set Samil-ro, Hangang-ro, Seun Green Axis, etc. as a view landscape formation area, which overlapped with the no. 1 view point and axis according to the priority of view landscape formation and management.

Figure 6 - Samil-ro View Landscape Formation Area (Seoul Natural Green Landscape Plan, 2010, p71)



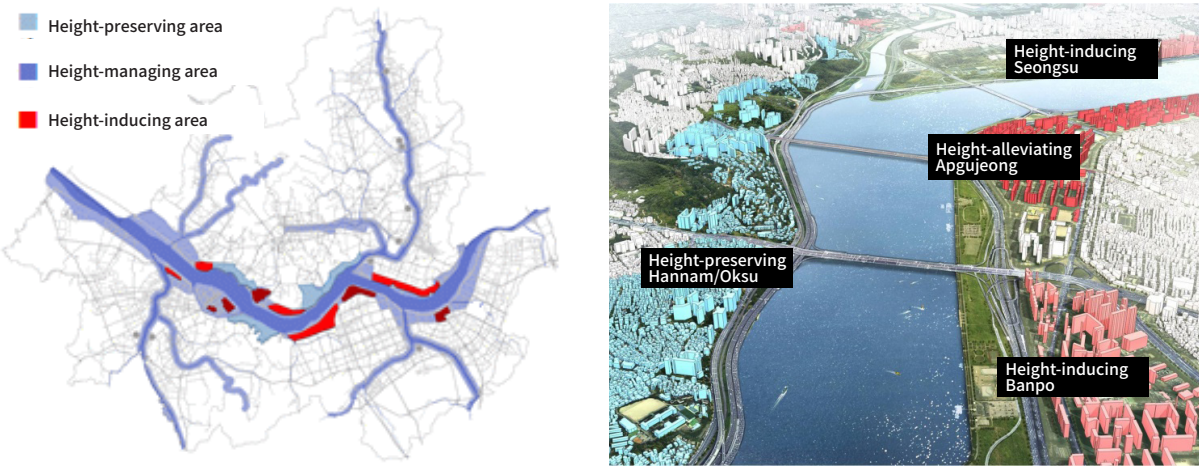
- The waterfront landscape plan set its management elements such as a skyline, a cross view axis, a viewing place, adjacent waterfront space, and waterfront and waterborne facilities and prepared landscape formation criteria, based on its strategy for height management to produce an attractive skyline around the waterside, facilitate the construction of open waterfront buildings and improving waterfront facilities and streets.

  - In particular, the various plans such as the Hangang Renaissance Master Plan (2007), the Hangang Public Reform Plan (2009) and the Hangang Stream Local Development Plan Study (2009), created new waterfront landscapes and presented various issues about the skyline. The waterfront landscape plan reflected a framework for height management of related plans and designated the stream sides without a prior height plan (Jungnangcheon Stream, Bulgwangcheon Stream of Hongje, Dorimcheon Stream of Anyang, Tancheon Stream of Yangje, etc.) as height management areas.

Table 4 - Classification of Height Management of Waterfront Landscape Plans

Area	Management Direction	Target Areas
Height preservation area	Form a landscape that adapts itself to and harmonizes with natural topography	Mapo/Seogang, Hannam/Oksu, Heukseok/Noryangjin
Height management area	Form a landscape in harmony with surrounding areas	Landscape management areas excluding height-preserving/inducing/alleviating areas
Height induction area	Form a waterfront landscape full of vitality through the introduction of multi-purpose designs	Hapjeong, Dangsan, Ichon, Banpo, Seongsu and Guui/Jayang
Height alleviation area	Create a new landmark landscape around the waterfront area	Yongsan, Yeouido, Apgujeong and Jamsil

Figure 7 - Height Management-Applied Areas (Seoul Waterfront Landscape Plan, 2010, p55)

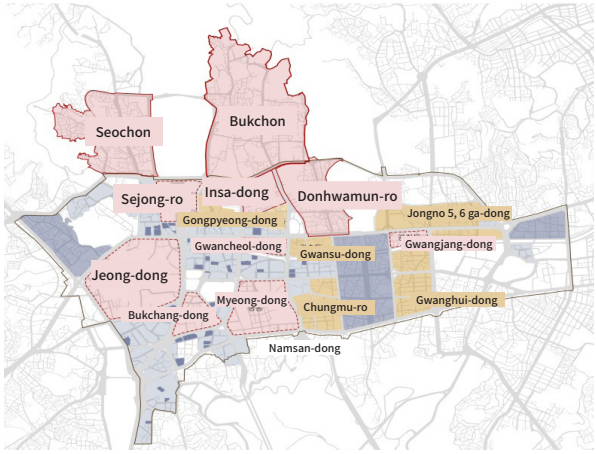


- The historic and cultural landscape plan set its management elements such as a historic urban organization, old waterways, old roads, historic and cultural bases, historic landscape buildings, disappeared ruins, cultural heritage areas, Seoul Fortress Wall and traditional Korean house areas and prepared landscape formation criteria, based on its strategy for preserving and utilizing historic urban organizations, diversifying historical and cultural layers and forming landscapes around historic and cultural resources. Through this first plan for historic and cultural landscapes, it suggested the necessity for managing the non-listed historic and cultural heritage as well as old landscape resources like old waterways, disappeared ruins and old roads.

Table 5 - Classification of Historic Urban Organization Areas

Area	Management Direction	Target Areas
Historic Features-preserving district	Maintaining and preserving the original form of old urban organizations	Bukchon, Seochon, Insa-dong and Donhwamun-ro
Historic features-managing district	Maintaining and managing the characteristics of old urban organizations	Sejong-ro, Jeong-dong, Bukchang-dong, Myeong-dong, Gwancheol-dong and Gwangjang-dong
Small-unit maintenance district	Protecting the characteristics of old urban organizations	Gongpyeong-dong, Gwansu-dong, Chungmu-ro, Jongno 5, 6 ga-dong, Gwanghui-dong, etc.
Large-unit maintenance district	Considering and utilizing old urban organizations	Large-scale development plan areas (urban environment maintenance area, renewal promotion area, special planning area, etc.)

Figure 8 - Historical Urban Organization Areas and Examples (Seoul Historic and Cultural Landscape Plan, 2010, p62)



Landscape Project Proposal by Types

- The specific landscape plan presents strategic landscape projects that public sectors must promote according to the strategy for each landscape type. The landscape project must be promoted in connection with landscape agreements so that residents can participate in landscape management.

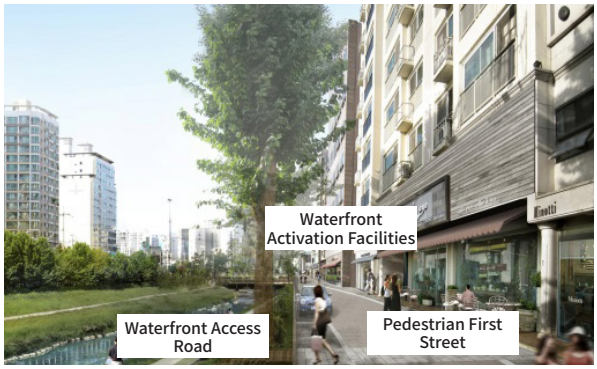
Figure 9 - Seoul Natural Green/Waterfront/Historic & Cultural Landscape Plan and Landscape Project Examples

Greenway Formation Project

Green Tunnel Formation Project

Viewing Place Attraction Project

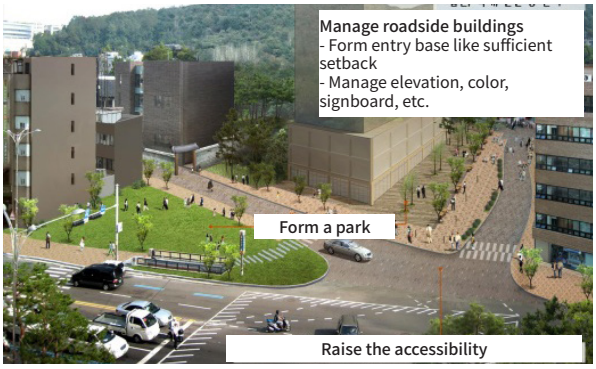
Hangang Stream River Walk Project



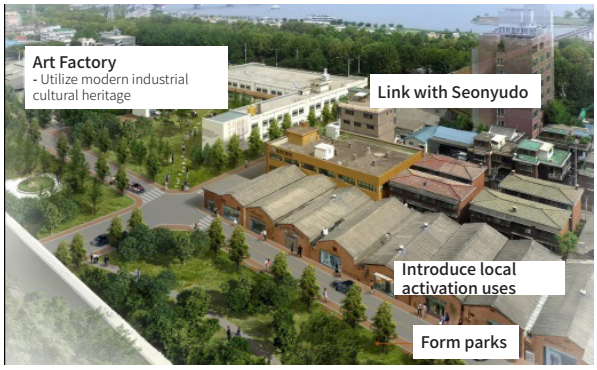
Riverside Below High Road Design Project

Donhwamunro King Road Project

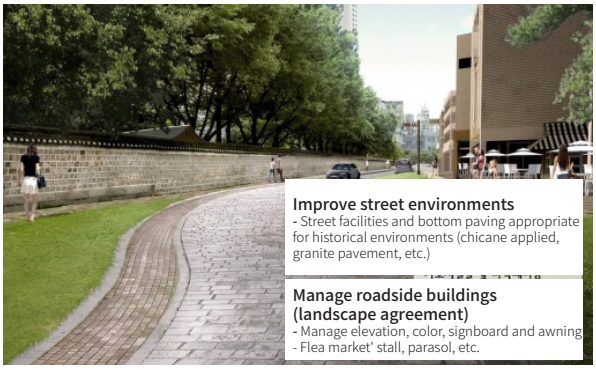
Namsan Hanok Village Road Project



Art Factory Formation Project



Cultural Heritage Neighborhood Street Project



The 3rd Period | Landscape Plan Renewal according to Changed Conditions

Based on the Scenic Conservation Act, the Seoul government constructed a framework for landscape plans and prepared its management methods for each landscape type. However, the existing scenic conservation act did not have the full power of execution for landscape plans due to the absence of its management means and its overly wide scope of target business caused redundancy and confusion. Accordingly, the Ministry of Land, Infrastructure and Transport revised the Scenic Conservation Act as a whole in 2014 and the Seoul government launched the renewal of landscape plans according to changed situations. It established the plans for managing Hangang skylines and the historical center in the four main gates at the same time. So, it is necessary to review and reflect the related contents upon the renewal of landscape plans.

Laying the National Groundwork for Systematic and Integrated Landscape Management

- Due to the revision of the Scenic Conservation Act, the roles of the central government were newly established in terms of landscape policies. The Ministry of Land, Infrastructure and Transport established and executed the basic plans for landscape policies every five years, made it compulsory to establish and execute the landscape plans for do/si/gun that exceeds a population of 100,000 people, and laid the framework for the local government to secure its power of execution in landscape management.

Figure 10 - Main Contents of Revised Scenic Conservation Act

- Out of the revised Scenic Landscape Act, the matters that need to be considered during the renewal of Seoul landscape plans are the matters regarding the landscape and aesthetic districts.

  · In the previous scenic conservation act, landscape deliberation was limited only to landscape plans, project approval and landscape agreement's permission. In the revised scenic conservation act, the deliberation targets are extended to social infrastructures, development projects, buildings, etc., so it is necessary to map out plans for rational landscape deliberation.

· It becomes possible to manage and designate the landscape and aesthetic districts using landscape plans. It is required to set management directions for maintaining, changing and abolishing districts through the survey of actual conditions of the current landscape and aesthetic districts.

Hangang Riverside Skyline Management

- The Seoul government has carried out various policies from the 1980's recognizing the importance of Hangang River. In particular, it has promoted the policy for recovering Hangang River's public spirits in 2009, targeting the large-scale reconstruction and redevelopment project sites around the Hangang Riverside. However, it was impossible to execute the project due to the residents' objections against integrated development and land donation. It also caused social disputes over an excessive height (50 stories or so), excessive floor area ratio (330% level), the appropriateness of land donation, etc.
- Additionally, Hangang Renaissance Master Plan, which served as a policy attempt regarding Hangang River as a whole, did not lead to a long-term plan. It only revealed a limit to the comprehensive urban management in a view point of urban landscape, so there was a growing demand for systematic and long-term plans for Hangang Riverside. Therefore, the Seoul government announced directions for Hangang Riverside management that consisted of four principles and seven detailed management principles for managing Hangang River, and planned to materialize the "Hangang Riverside Management Master Plan" by the first half of 2015 based on the management direction.

  - With regard to the skyline, it has set the principles of "management for urban space structure and hierarchy," "management in harmony with Seoul's unique natural scenic resources," and "management for protecting historic and cultural heritages," and has prepared height standards according to space structures.

Table 6 - Heights by Hangang Riverside Skyline Management Principles

Use District	Downtown/Subcenter	Region/district-centered	Other Areas
Commercial/Semi-Residential	Multipurpose: 51 stories or more, Residential: 35 stories or less	Multipurpose: 50 stories or less, Residential: 35 stories or less	Multi-purpose: 40 stories or less
Semi-Industrial	Multipurpose: 50 stories or less, Residential: 35 stories or less		Residential: 35 stories or less
General Residential	General type III: 35 stories or less (residential), Residential: 35 stories or less, Multipurpose: 50 stories or less General type II: 25 stories or less		General type III: 35 stories or less General type II: 25 stories or less

Management of Historical Center within Four Gates Considering the Changed Downtown Conditions

- After the basic plan for Seoul downtown management (2000), the "downtown development plan according to Cheonggyecheon restoration" established in 2004 was a non-statutory plan, but has run so far as a plan with an administrative binding force. However, due to the changes in downtown conditions and the increase in awareness about history and culture, there has been a demand for new plans for reforming the existing plans since 2004.
- The Seoul government established "Basic plan for historic and cultural city management" in 2012 as a basic plan for managing the city within four gates as a historic and cultural city, and mapped out the "basic plan for downtown management considering history and culture" in 2014.

  - The basic plan for historic and cultural city management presented basic principles and directions for managing historic and cultural resources, and preserving and utilizing historical space and scope. On the other hand, the basic plan for downtown management presented the policy direction and guidelines for land use, space structure, development density, walking and transportation, dwelling, parks & green areas, landscape and height limit.

Promotional Details

Table 5 - Promotional Details of Landscape Management Policy

Year	Established laws, systems and plans	Content
1941	Plan for Joseon streets	· Designated the scenic districts to protect natural landscapes and prevent conurbation
1994	Removed Namsan Oein Apartments	· Removed apartments according to the Namsan Recovery Master Plan (1991)
1999	Seoul Architectural Committee Rules on Apartment House Construction Review	· Managed apartment house landscapes based on indexical deliberation criteria and derivative deliberation criteria
2000	Enacted the Urban Planning Act Revised the ordinance on Seoul urban plans	· Newly established landscape districts · Subdivided landscape districts (natural/visual/waterfront/cultural heritage surroundings/street/prospect right landscape districts)
2003	Enacted the Land Planning and Utilization Act Revised the ordinance on urban planning in Seoul	· Designated and subdivided landscape districts and restricted construction in landscape districts · Subdivided landscape districts (visual/cultural heritage surroundings/view)
2005	2020 Seoul Urban Basic Plan	· Landscape plan
2006	Introduced the average number of stories Revised Seoul's urban design ordinance Established basic plans for Seoul urban design	· Type II General residential area (7 stories or less) up to the average 11 stories · Type II General residential area (12 stories or less) up to the average 16 stories · Enacted and executed (July 2006) · Conceived the basic Seoul designs
2007	Enacted the Scenic Conservation Act Enacted the Framework Act on Building	· Enacted (May 2007) → Executed (Nov. 2007.11) · Enacted (Dec. 2007) → Executed (Jun. 2008)

2008	Enacted the Seoul ordinance on landscapes Established and systematized Seoul colors	· Enacted and executed (Aug. 2008) · Presented guidelines on Seoul colors and districts
2009	Established Seoul basic landscape plan Improvement plan for average number of stories	· Established Seoul basic landscape plan, street landscape plan and nighttime landscape plan simultaneously · Started a pilot operation of the landscape self-check system (Apr. 2009 - Mar. 2011) · Applied the differential criteria (hills, etc.) for alleviating the number of stories with local characteristics reflected
2010	Established specific landscape plans in Seoul	· Established Seoul natural green landscape plan, waterfront landscape plan and historic and cultural landscape plan
2011	Monitored the landscape self-check system Established Seoul basic construction plans Reformed Seoul urban design basic plan	· Study on landscape management evaluation and improvement plans according to Seoul landscape plan, Seoul Institute (Mar. - Aug. 2011 .3~8) · Top plan in the architectural policy based on the Framework Act on Building · Introduced and specialized design intensive districts
2012	Executed the compulsory landscape self-check system	· Renamed into the landscape self-check system (compulsory execution from Jan. 1, 2012)
2013	Improvement plan for average number of stories Hangang Riverside management direction	· 7 stories or less for constructing apartments in Type II general residential areas · Able to alleviate the number of stories to 13 according to land donation · Skyline management principle (Apr. 2013)
2014	2030 Seoul urban basic plan Revised the Scenic Conservation Act as a whole Enacted Seoul landscape ordinance Seoul landscape plan under renewal	· Landscape plan · Revised as a whole (Aug. 2013) → Executed (Feb. 2014) · Enacted as a whole and executed (May 2014) · Academic research on Seoul landscape plan renewal, Seoul Institute (May 2014 - Feb. 2015)

Results and Suggestions

Contribution to Establishing Seoul Identity

With a growing demand for protecting and managing the urban landscape, Seoul's landscape management policy started from the late 1990's and has been launched in earnest beginning in 2000. The Seoul government has made multilateral efforts by setting clear regulations on natural landscapes and historic/cultural landscapes that need protection and management, and operating flexible guidelines on street landscapes that need the creation of a new landscape, centering on inducement and support. For about 20 years, the Seoul government's landscape policies have made contributions to establishing Seoul's identity by keeping harmony with natural landscapes such as inner/outer mountains, Hangang River and main streams, and preserving and utilizing the historical and cultural resources spanning 600 years of history.

Presenting a direction for landscape plans

The landscape basic plan, which presented the urban future and goals for each landscape type, such as natural green, waterfront and historic/cultural landscapes, maintained the plan and basis for urban basic plan by landscape areas, and also presented a basic direction and principle for Seoul landscapes in urban influential areas such as urban planning, construction, design and park/green area. The non-statutory plan without administrative binding force laid the grounds for urban landscape management by establishing the basic landscape plan, and the Seoul government could promote consistent landscape management by establishing a consistent plan.

Improving urban landscapes and raising public awareness with the promotion of landscape agreement and project

The public-led landscape project serves as a means to realizing the basic concept and strategy of landscape plans. The promotion of the pilot project, which was proposed through the basic landscape plan, has made contributions to creating a visual landscape of Seoul. Furthermore, based on the post evaluation after the project, the landscape agreement project suggested that we would need a method for encouraging civic participation and a strategy for improving civil satisfaction. However, it was promoted based on civic participation, thus helping residents themselves feel the necessity for landscape management. By doing so, it has made great contributions to raising public awareness about urban landscapes.

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14. Changes to Seoul's Administrative Districts and Development of Urban Space

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Policy Field: Urban Planning

Natural and Climatic Environment in Seoul and Vicinity

Location

Seoul, which is the capital of the Republic of Korea, is located at the heart of the Korean Peninsula. It is surrounded by Namyangju-si, Guri-si and Hanam-si to the east; Incheon Metropolitan City, Goyang-si, Gimpo-si and Bucheon-si to the west; Seongnam-si, Gwacheon-si, Anyang-si and Gwangmyeong-si to the south; and Uijeongbu-si and Yangju-si to the north. Seoul is located at 126°45′~127°11′ east longitude and 37°25′~37°41′ north latitude. Seoul is located approximately 50km east from Incheon International Airport, to which it is connected by the airport railways and various routes of airport buses to Seoul Station at approximately 1 hour's distance.

Figure 1 - Geographic Location of Seoul

Geographic Features

Seoul is located in a basin surrounded by four outer mountains (Oesasan) and four inner mountains (Naesasan) and its major rivers include Hangang and its four branches as well as Cheonggyecheon.

To be more specific, the four outer mountains surrounding Seoul are Bukhansan (north), Deokyangsan (west), Gwanaksan (south) and Yongmabong (east). The four inner mountains located in the center of Gangbuk, where palaces from the Joseon Dynasty and main facilities of Hanseongbu used to be, are Naksan (east), Inwangsan (west), Namsan (south) and Bukaksan (north). Hangang River flows from the east to west through

these mountains and its four branches; Tancheon, Jungnangcheon, Anyangcheon and Hongjecheon flow in various districts. Also, Cheonggyecheon River, flowing between Jongno-Gu and Jung-gu, flows into Hangang at Jungnangcheon.

With great natural features like these, Seoul has a wonderful natural environment. Its outer and inner mountains and main rivers have long been used as key elements of the urban planning of Seoul with a history of changes throughout the years.

Figure 2 - 3D Terrain Map (2011)

Figure 3 - Terrain Map (2009)

Climate

Seoul climate is between the warm climate of the southern area of Korea and the microthermal climate of the northern area and has four distinct seasons and sharp year-round air temperature and precipitation fluctuations. Compared to 1910, the current temperature and precipitation of Seoul has increased; the annual average temperature and precipitation rose from 10.3°C to 12.2°C and 1,021 to 1,646 respectively between 1910 and 2012.

Figure 4 - Annual Average Temperature and Precipitation (1910-2012)

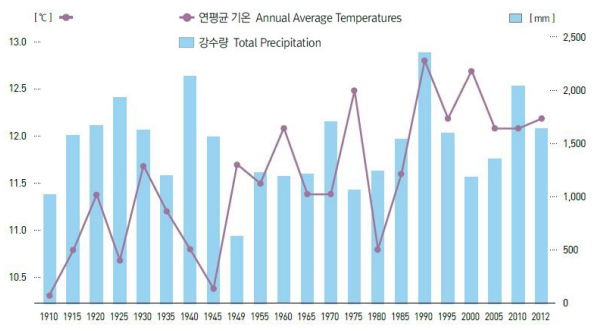
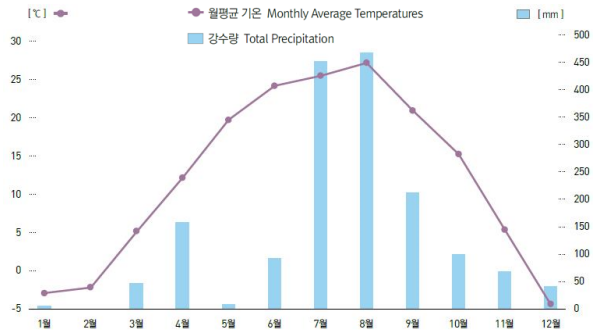
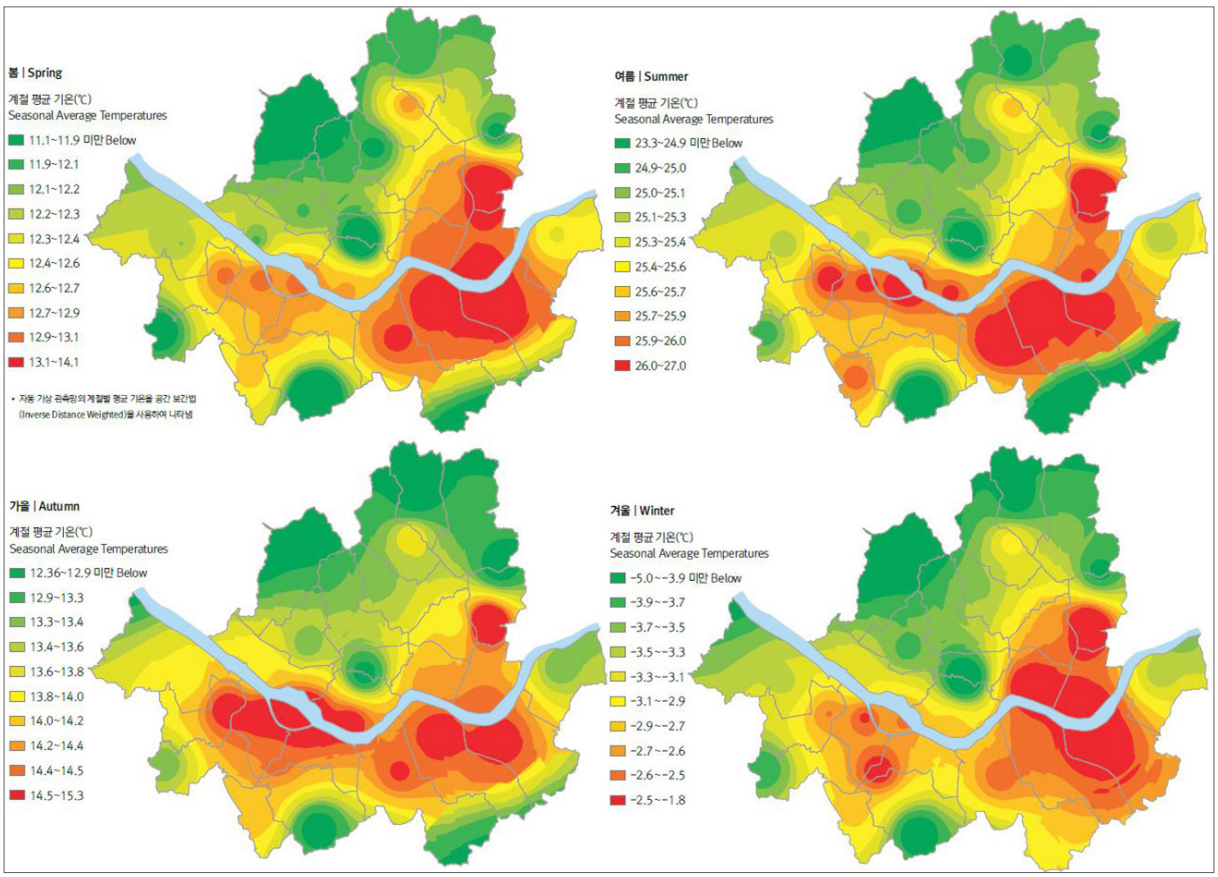


Figure 5 - Monthly Average Temperature and Precipitation (2012)



As of April 2012, Seoul's average temperature by season is higher in developed areas than the suburbs. This type of temperature distribution indicates the city is still under the heat island effect, despite efforts to provide more parks and green areas in the city. This is closely related to the changes in soil covered area caused by the increase of high-rise buildings, road pavement and the decline of green zones.

Figure 6 - Seasonal Average Temperatures (2012)



Changes to the Administrative Districts and Urban Planning Zones

Changes to the Administrative Districts

In the Joseon Dynasty, Seoul's administrative districts spanning 4km outside the city walls called "Seongjeoshimni" were extended to 134㎢ in 1939 as Yeongdeungpo was developed as one of Japan's military industrial bases. In 1945, Seoul had 8-gu (districts) and 268-dong (neighborhoods). After liberation from the Japanese regime, Seoul was renamed and upgraded to the Metropolitan City of Seoul. After that, 45-ri (small towns) were integrated into Seoul and organized into 9-gu along with the newly established Seongbuk-gu, and the

total area of Seoul increased to 268.35㎢. In 1963, Seoul integrated 5-gun (towns) and 84-ri nearby, expanding its area 2.3 times to a total of 613.04㎢. Additionally, in 1973, part of Gyeonggi-do (province) was integrated into Seoul, expanding the area of Seoul to 627.06㎢.

Afterwards, Seoul set up and adjusted the autonomous districts and slightly adjusted the total administrative area of the city, which was also readjusted due to physical measurements. In 1975, the area south of Hangang was separated from Seongdong-gu to form Gangnam-gu, and in 1977, part of Gangseo-gu was separated to form Yeongdeungpo-gu. In 1979, the number of gu grew to 15, including the newly formed Eunpyeong-gu and Gangdong-gu. The number increased to 17 with the addition of Guro-gu and Dongjak-gu. In 1988, Songpa-gu, Jungnang-gu, Nowon-gu, Seocho-gu and Yangcheon-gu were established, and in 1995, Gangbuk-gu, Geumcheon-gu and Gwangjin-gu were created in order to complete the current 25-gu organization of the city. As of the end of 2010, Seoul consists of 25 autonomous districts and 424 villages spanning an area of 605.25 ㎢, making up approximately 0.6% of the total area of the Republic of Korea (100,033㎢). In 2012, the number of villages decreased to 423 as Myeongryun3ga-dong, Jongno-gu was combined with Hyehwa-dong.

Figure 7 - Changes of Administrative Districts (1394-1995)

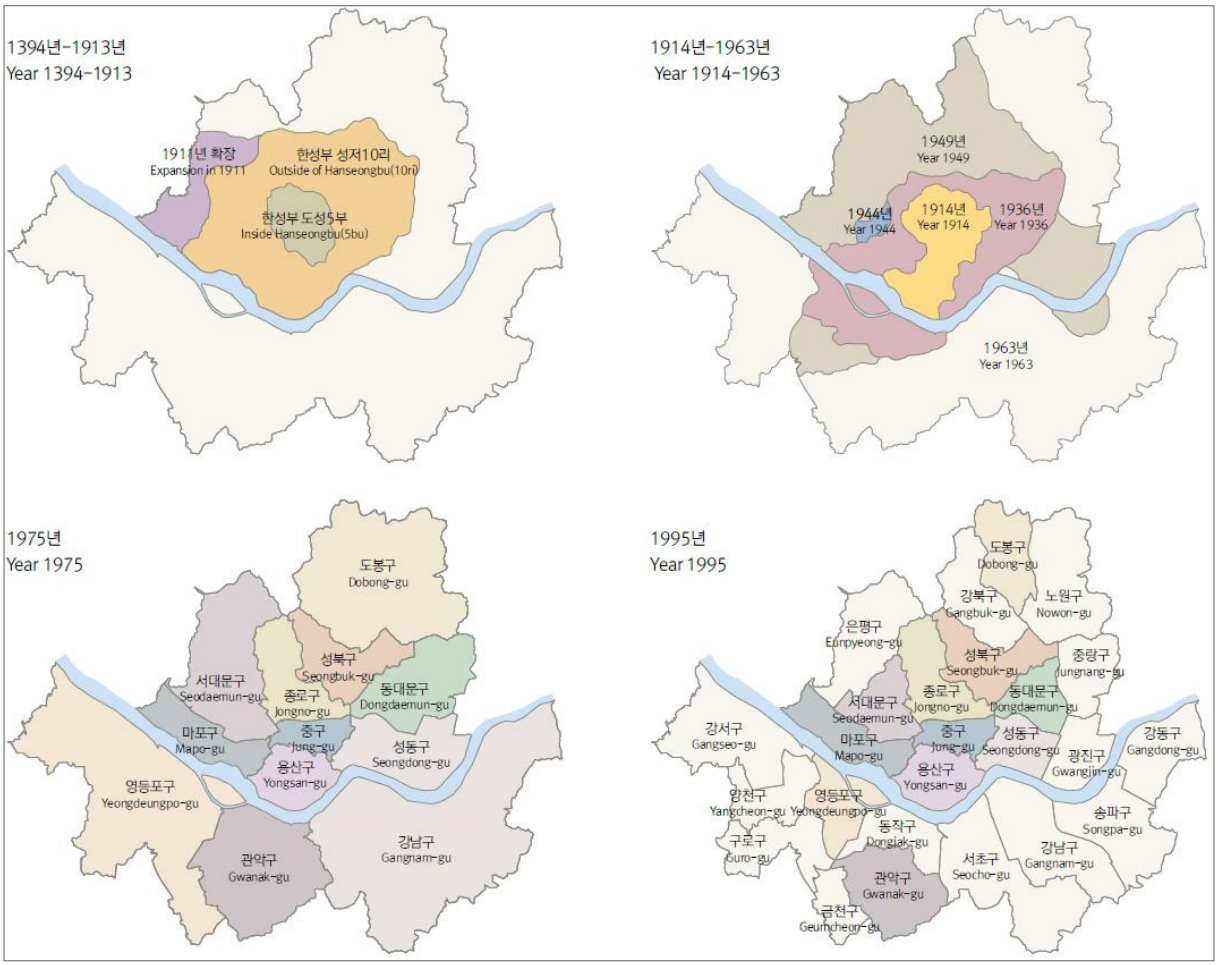
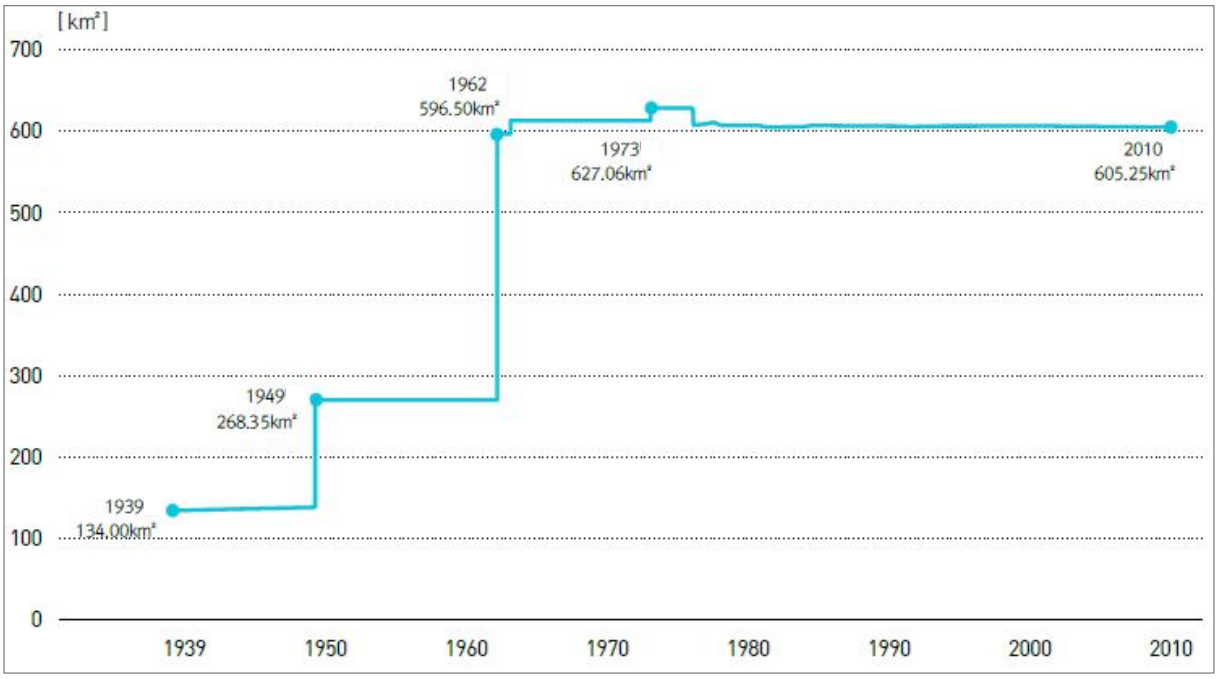


Figure 8 - Administrative Villages (2010)

Table 1 - Changes to Administrative Districts

Year	History
1945	· Gyeongseong-bu renamed to Seoul with 8 gu and 268 dong
1949	· Seoul upgraded to a Metropolitan City and the number of gu increased from 8→9 (area 268.35㎢) · * 1st city expansion (integrating Sungin-myeon, Dokdo-myeon and Eunpyeong-myeon of Goyang and Dong-myeon of Siheung-gun and the newly established Seongbuk-gu)
1963	· 9 districts (area 613.04㎢) · * 2nd city expansion (part or all of the area south of Hangang (Yangju-gun, Siheung-gun, etc.) integrated
1973	· 9 gu→11gu (area 627.06㎢) · * 3rd city expansion (Integrating Gupabal-ri, Jingwannae-ri and Jingwanwoi-ri, Sindo-myeon, Goyang, Gyeong-gi-do; Gwangak-gu and Dobong-gu newly established)
1975	· 11 gu→12 gu
1977	· 12 gu→13 gu
1979	· 13 gu→15 gu
1980	· 15 gu→17 gu
1988	· 17 gu→22 gu
1995	· 22 gu→25 gu
2000	· 25 gu 522 dong (area 605.50㎢)
2005	· 25 gu 522 dong (area 605.40㎢)
2010	· 25 gu 424 dong (area 605.25㎢)
2012	· 25 gu 423 dong (area 605.18㎢)

Figure 9 - Changes to the Area of Administrative Districts (1939-2010)



Changes to Urban Planning Zones

Starting from the first urban planning implemented in 1936 for Gyeongseong-bu, Seoul underwent 8 zone adjustments, including expansion of the city planning zones due to the increase of population and independence of some administrative zones. These zones are currently nearly identical with the administrative districts.

Seoul's urban planning zones were first determined by the Gyeongseong-bu urban planning zones of the Japanese Government General of Korea Notification No. 180 on March 26th, 1936; at that time the area of Seoul was 135.36㎢. In 1950, 4 zones including Sungin, Eunpyeong, Guro and Ddukdo were integrated into Seoul, which now expanded to 269.77㎢, double the area compared to before the plan.

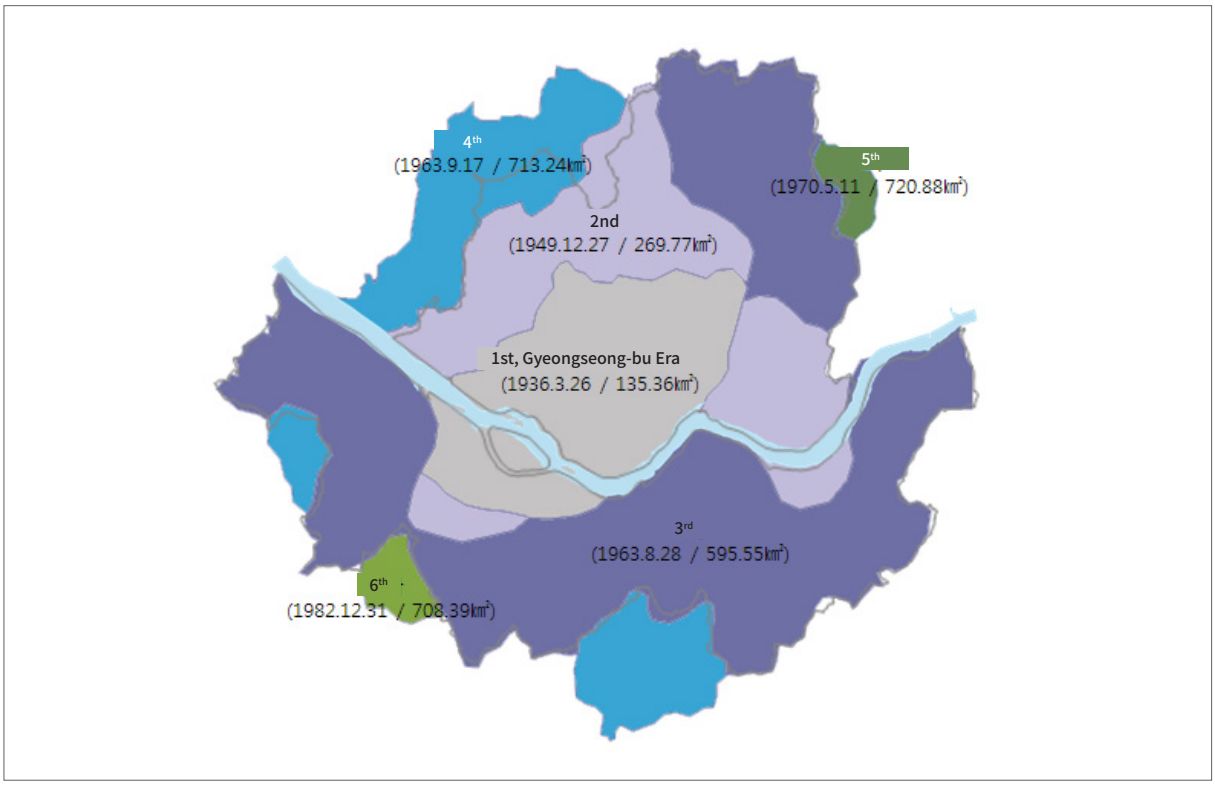
In 1963, the urban planning zones were expanded to all administrative districts, and part of Sindo-myeon, Pacheon-myeon, Ojeong-myeon and Seo-myeon of Gyeonggi-do were additionally integrated into Seoul's urban planning, which now expanded the city area to 713.24㎢. After that, the planned population was adjusted and adjacent areas including Hwacheop-ri and Galmae-ri, Yangju-gun, Gyeonggi-do were integrated into the city's planning zones, increasing the city area to 720.88㎢ in 1970.

However, Gwangmyeong-si was separated from Seoul in 1982 and Gwacheon-si and Bucheon-si were also removed from Seoul's urban planning zones in 1991, decreasing the city area to 605.96㎢ in 1995.

Table 2 -Changes to Urban Planning Zones

Effective date	Urban planning zones (㎢)	Remark
1936.3.26	135.36	Korea's first urban planning project (Gyeongseong City Plan).
1950.1.1	269.77	4 districts integrated (Sungin, Eunpyeong, Guro and Ddukdo).
1963.8.28	595.55	Total area expanded
1963.9.17	713.24	Part of Sindo-myeon, Pacheon-myeon, Ojeong-myeon and Seo-myeon of Gyeonggi-do were additionally integrated into the city plan.
1970.5.11	720.88	Hwacheop-ri and Galmae-ri of Yangju-gun, Gyeonggi-do were integrated into the city plan.
1982.12.28	708.39	Gwangmyeong-si separated from the city's planning zones
1991.7.15	665.98	Gwacheon-si (35.81㎢) and Bucheon-si (6.59㎢) removed.
1995.1.20	605.96	Wonneung zone and Guri-si (5.80㎢) removed; area reduced without changes to drawing (0.28㎢)

Figure 10 - Changes of Urban Planning Zones

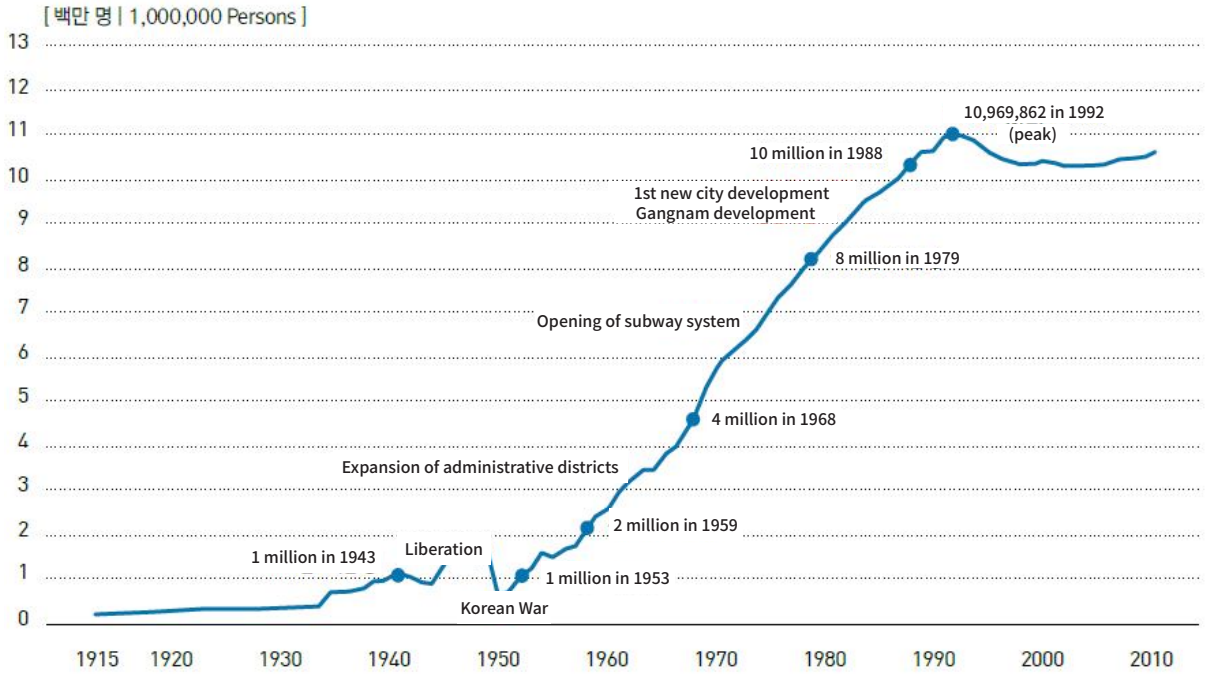


Growth of Population and Expansion of the Developed Area

Growth of Population

For the first time in history, Seoul's official population was recorded in 1915 in the yearly statistic report of Seoul, which stated its population was approximately 240,000. In 1936, its population increased 79.9% YoY to 730 thousand, which was the result of the expansion of administrative districts. It exceeded 1 million for the first time in 1942, and after Korea's liberation from Japan, it continued to increase as Koreans drafted for overseas labor by Japan as well as Koreans in Vietnam returned to Seoul. However, as the Korean War broke out on June 25th, 1950, Seoul's population decreased by 61.7%. As population began to increase again after the war, Seoul's population reached 1 million again in 1953. Thanks to the government's strenuous efforts to rebuild the city, Seoul's population became 2 million in just 6 years. It reached 4 million in 1968, and 8 million in 1979. In the 1980's as well, Seoul's population steadily increased during the development of Gangnam, but in 1990's, population growth slowed down. Seoul's population reached its record, 10.97 million in 1992 and began to decrease as suburbs were developed and birth rate decreased. As of 2010, Seoul's population is 10.58 million (registered residents only). After almost 100 years of steady growth during the last century, Seoul's population seems to have stabilized at a certain level.

Figure 11 - Population Growth (1915-2010)



The population density of Seoul sharply decreased in 1949 and 1962 due to the expansion of administrative districts, but it steadily increased until the late 1990's. In 1963, it was 5,309/㎢ when Seoul's administrative area was expanded to 613.04㎢, which is similar to that of today. However, Seoul's population sharply increased in the 1960s, and by 1973, the city's population density was 10,000/㎢ and again increased to 15 thousand/㎢ in 1983. Seoul's population density reached its peak, 18,121/㎢ when its population reached a record high in 1992. However, population growth slowed down starting in the late 1990's and the city's population density decreased to 17,473/㎢ as of 2010. Compared to other major cities, Seoul's population density (as of 2005) is one of the highest in the world. It is higher than Tokyo's (13,650/㎢), let alone New York (10,483/㎢) and Paris (8,401/㎢).

Figure 12 - Population Density Trend (1939-2010)

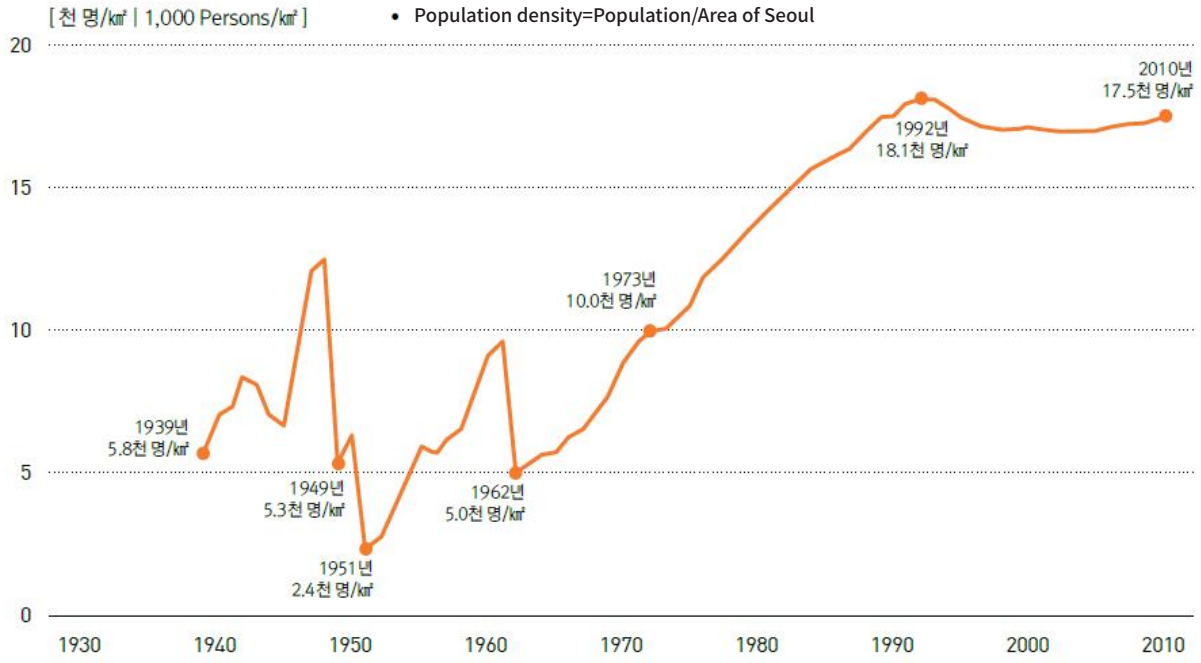
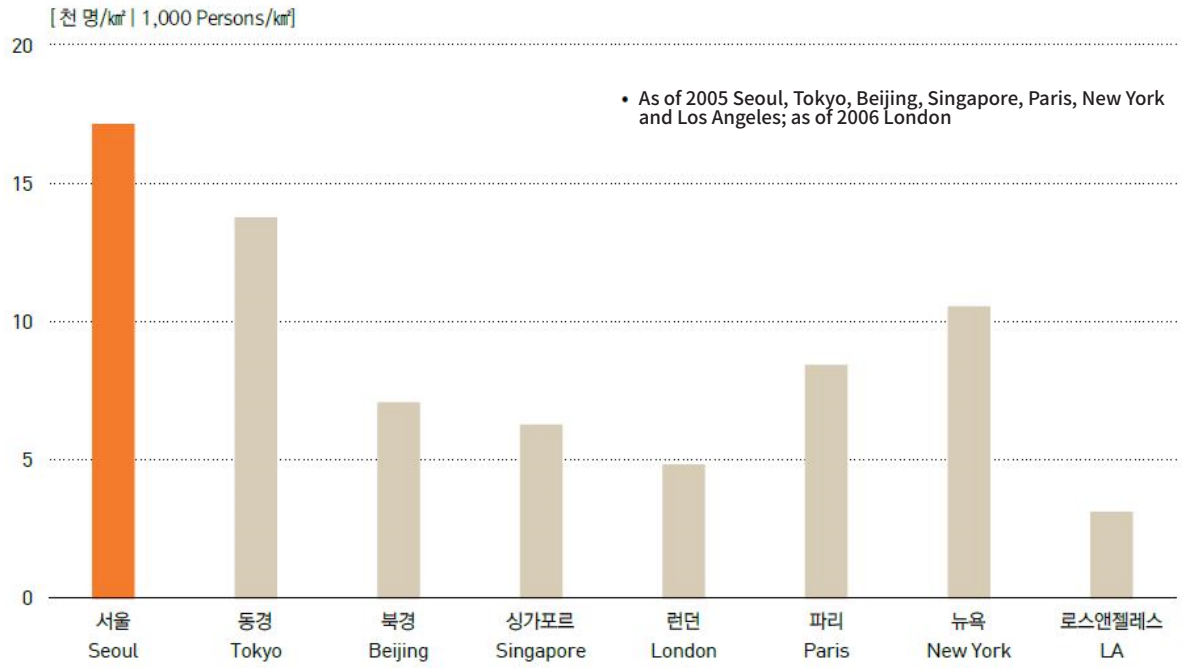


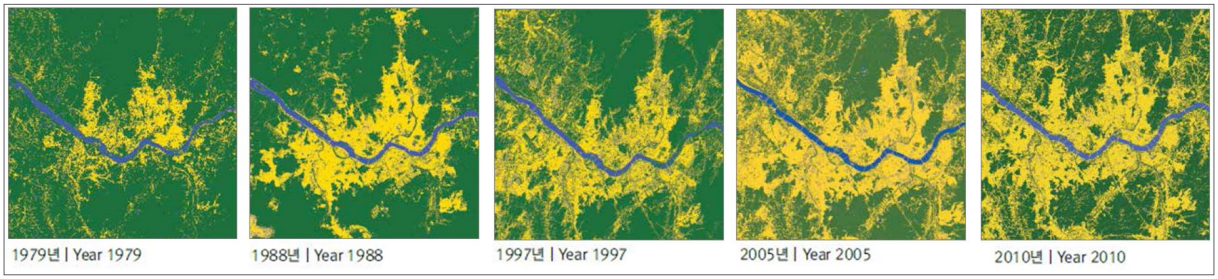
Figure 13 - Population Density Comparisons with the World's Major Cities



Expansion of the Developed Area

The developed area of Seoul during the Joseon Dynasty was limited to the area inside the walls of four gates. Towards the end of the 19th century, railways began to be developed as a modern means of transportation and as trains were operated, the developed area began to expand. Seoul underwent drastic expansion starting from 1963, when the city's administrative districts began to expand, which caused to accelerate drastic industrialization and large-scale land organization. In the 1980's, Korea changed from a single-core city to a multi-core one with Gangnam, Yeouido and Yeongdeungpo areas as the milestones. Seoul's expansion stimulated the development of adjacent areas. The 1st new cities (Bundang, Ilsan, Pyeongchon, Sanbon and Jungdong) were developed in the 1990's and the 2nd new cities (Seongnam Pangyo, Hwaseong, Gimpo, Paju, etc.) in the 2000's. With the development of the public transportation network, the metropolitan area of Seoul expanded even.

Figure 14 - Analysis of Developed Areas Using Satellite Images



Trend of City Development and Changes to Legal Regulation by Era[1]

As mentioned above, Seoul has expanded and developed in terms of size and urban development until today. In the 1960s in particular, Seoul overcame the devastation of the post-liberation and the Korean War and developed into a modern city. The following is an overview of Seoul's trend of city development and changes to legal regulations over 3 eras, which are the Infrastructure Building Era (1960-1979), the City Growth Era (1980-2000) and the Sustained Era (2001-2014).

Era 1: Infrastructure Building (1960-1979)

Population Growth Exceeding Development of Housing and Infrastructure (1960s)

In the 1960's, Seoul experienced an explosive growth under the national development policy executed by a powerful military government. At that time, Seoul's population increased by about a half million every two years, which was the population of Boston, U.S. During this period, many illegal settlements were formed throughout the city, and the suburbs of Seoul were quickly integrated into Seoul, and rebuilt as new residential areas. By 1963, Seoul's administrative districts absorbed Gangnam and the northeastern areas, and Seoul's sized doubled to 594㎢ and its population exceeded 3 million. Along with these expansions and developments came many problems including traffic congestion, environmental issues, poor public transportation, dense residential areas and illegal settlements. To alleviate traffic congestion, Seoul expanded and improved roads, building arterial highways, overpass and underpass ways. With an objective to prevent traffic issues caused by pedestrians, many pedestrian overpasses and underpasses were also built. During this period, Cheonggyecheon was filled with concrete, and Seoul's first overpass way, Cheonggye Overpass Way was built.

In 1967, Yeouido, an island which was flooded in the rainy season every year was raised and developed as part

1. Korea Planners Association, 2005, City Planning, Boseonggak, restructuring based on p.182-211

of the city spanning 3㎢. This area turned into a well-planned residential and business area, called Manhattan in Seoul, by the 1970's.

At the same time, as part of Seoul's major undertakings, illegal settlements were demolished and rebuilt as new developments. As a result, slums and red-light districts at the center of Seoul were decisively removed and replaced with department stores and large-scale high-rise apartments and stores like the Sewun Mall. In addition, the illegal settlements on the slopes around the downtown area were removed and replaced with apartment buildings for the citizens of 4 to 5 floors. As a result, in 1969 alone, approximately 400 apartment buildings were built. However, one of them collapsed due to poor construction, killing 73 people.

Seoul's land organization work that began after liberation intensified over a large area until the middle of the 1980's. This had had a profound influence on Seoul's formation as it is today. The land organization work mentioned here includes the measures to develop and maintain the city and provide the city infrastructure and framework. In the 1960s, land organization work was done on Seogyo, Dongdaemun, Suyu, Bulgwang and Seongsan districts. This work was intended to distribute population and industrial facilities more widely. Single houses were developed and division of lots was conducted.

During this period, new legal regulations for city planning were implemented to resolve issues of the city, e.g. economic poverty and shortage of housing, transportation and infrastructure, etc. Prior to the 1960's, the Japanese General Government of Korea enacted the "Joseon City Development Decree," but it was intended to contribute to Japan's invasive wars rather than city development itself. Until the end of 1950's after liberation, this decree was divided into the "City Planning Act" and "Construction Act" in 1962, which formed the first city planning system established by the government of Korea. The newly enacted "City Planning Act" had contents added regarding improvements for poorly developed areas and established a systematic mechanism that requires resolution by the central city planning committee for city plans. In addition, the "Land Division and Organization Project Act" was enacted in 1966 to minimize public costs while maintaining infrastructure such as roads and parks. In other words, regulations on the implementation procedure, method and expenses for the land organization projects were prepared to contribute to wholesome development of the city and advancement of public welfare.

Building of Residences and City Infrastructure (1970's)

The 1970's was an era of drastic development for Korea. Korea's national income increased from 250 USD to 1,000 USD between 1970 and 1977, most of which was the result of Seoul's growth. In the heart of Seoul, there were many sewing factories and exporters for Seoul's export-oriented light industry. More and more job-seekers flowed into Seoul for better lives, which stimulated the city's drastic growth. By 1975, Seoul's population reached 6 million.

During this period, the tension between North and South Korea grew stronger, necessitating a new set of national defense strategies and zones for development restrictions. In other words, the growth of Seoul, located within North Korea's missile shooting range was considered a risk to national defense, and measures

to restrict Seoul's growth were needed. In the same vein, the city functions concentrated in the Gangbuk area, which was also considered to be a risk, made it necessary to develop Gangnam. Accordingly, the land organization project was conducted on a large-scale area in Gangnam, and an arterial highway grid was built. Law enforcement facilities, high-end single house complexes, large-scale apartment complexes, gigantic shopping centers, high-rise business buildings and historic middle and high schools moving from Gangbuk were now located in this area. In addition, Yeouido's development, which started in the 1960s, intensified in this period and the National Assembly buildings, high-rise business buildings and residential facilities were built there.

In 1973, Seoul's administrative districts expanded to a total area of 605㎢, which is similar to that of today. Seoul's rapid growth made it necessary to improve the city's infrastructure and continued city development. Accordingly, the old-fashioned trains installed at the dawn of the 20th century were removed in 1968. In 1974, Seoul's first subway train line, Line 1, was built. Also, high-rise business buildings, luxury hotels, the trade center and Art and Culture Center were completed and large-sized facilities such as arterial highways, tunnels, bridges and sewage facilities were continuously built. Korea's drastic growth after the devastation of the Korean War marveled the world, which called Seoul's achievement the "Miracle of Hangang."

The 1970's was a period when drastic industrialization and economic growth began in Seoul, which necessitated a new city plan administration and legal regulations of various sectors. In particular, the "City Planning Act," which was thoroughly revised in 1971, required development restriction zones to control disorderly city growth and spread and complement the regional zoning system. It also upgraded the project to develop poorly developed areas to the redevelopment project and enacted a project implementation procedure. In addition, the "City Redevelopment Act" was newly enacted in 1976 to prevent aging of the city center and control illegal houses in the suburbs with the legal system. In addition, the "Act on Promotion of Residence Construction" (1973) and "Act on National Land Use Management" (1973) were newly enacted to provide fundamental solutions to residence shortage and effectively plan and manage the national land.

Era 2: City Growth (1980-1999)

Large-scale Developed Area and City Center Development (1980's)

In 1980, Seoul had grown into a metropolitan city of 8.5 million residents. Just 8 years later in 1988, the city had 10 million residents. Experiencing drastic economic growth, Seoul saw more diversified industrial structure compared with the past as well as the appearance of a predominant middle-income class. Although the powerful economic drive by President Park Jeong-hee seemed to have come to a sudden stop in 1979 when he passed away, Seoul's social and economic changes in the 1980's continued to drive city development beyond what was already present.

During this period in particular, Seoul hosted the Asian Games (1986) and Olympic Games (1988), which necessitated aggressive city improvements and cleaning. Seoul built a large arena, the Olympic Park and

residences for athletes in Jamsil to meet these needs and embarked on improving the Hangang area. With these efforts, high water channels were built on the Hangang beach and sewage pipes were installed on both sides of the river to prevent water pollution. Along the river, the city highway was built to connect the Gimpo International Airport, city center and the Olympic Arena. Subway facilities were also built to relieve Seoul's traffic issues and prepare to accommodate visitors to the Olympics. In 1984, Line 2 was made available and in 1985, Lines 3 and 4 were also completed.

To repair slums within the city center and respond to the need for increased business space, city center re-development became more active in the 1980's. During this period, Seoul permitted over 70 city center re-development projects for high development density and tax incentives. With this city center re-development, the center of Seoul was restructured, and its traditional city structure was reborn as a new city. Along with that, the city also implemented its city design projects along Eulji-ro and Teheran-ro of Gangnam to enhance its function and appearance.

The city also embarked on re-developing poor developments and building residences to meet the government's residence supply goals. Accordingly, large-scale farmlands and forests in Gangnam, Mokdong, Godeok, Gaepo and Sanggye were converted into residential areas accommodating large apartment complexes. To overcome the shortage of housing, apartment construction was considered to be a profitable business, which led to Seoul's apartment construction boom. This changed Seoul's outlook completely.

In the 1980's, Seoul began to see various issues caused by the concentration of population and industries in large cities. To provide a sustained supply of residences by making adjustments in residential areas and communities, the government revised the "City Plan Act" in 1981 to enhance the level of education, culture, medicine and social welfare and improve the city plan system. With the "City Basic Plan System" introduced, 3 steps of the system (Step: 1 Basic City Plan, Step 2: Re-organization of City Plan, Step 3: Annual Execution Plan) were established systematically and the "City Design System" was introduced to control land use more precisely. In addition, people were given more opportunities to participate in hearings and make comments. Furthermore, "Residential Land Development Promotion Act (1981)" and "Interim Measures Act on the Improvement of Residential Environment for Low-income Residents of Cities (1984)" among other sets of laws were established to supply a large amount of residences.

Improvements of City Infrastructure and Investments in Environment (1990's)

By the time the Seoul Olympics ended, Seoul had grown into a true metropolitan city of 10 million people with a 10 thousand USD national income per capita in the 1990's. Still, the city needed further improvements to meet the expectations of its citizens and the needs of the city's new economic outlook.

In the 1990's, several public projects were implemented, including expansion of the subway train system. Four subway lines (5-8) were added and new bridges, highways, museums and concert halls were developed by the government and Seoul City. High-rise buildings constructed by the private sector totally changed the skyline of Seoul's city center and Gangnam. In addition, Seoul's developed area expanded to the restricted

zones from the late 1980's due to ownership of passenger cars and construction of highway network. Therefore, 5 new cities including Bundang and Ilsan and suburbs continued to be developed as key locations of the metropolitan area. However, Korea faced a financial crisis and asked IMF for relief funds, which further led to unemployment and other urban issues related to labor relations, homelessness and social welfare.

In the meantime, the restoration of Namsan, which was undermined by excessive growth and development, was called for. As a result, the "Namsan Restoration" project plan was confirmed in 1990. This project was promoted thanks to the efforts of the civil counsel consisting of experts, general public and local residents and aimed to demolish the ugly apartment buildings for foreigners and move the National Security Planning Agency and the Capital Defense Command as its key objectives. The original location of the Capital Defense Command now accommodated the Namsan Hanok Village, which aimed to replicate the Namsan Village of the Joseon Dynasty. Celebrating Seoul's 600th birthday, the apartment buildings for foreigners were also demolished in 1994, making Namsan's beauty more visible. This showed how important it was to manage city centers that are rich with historic resources.

In addition, the local government system was also introduced, which changed the hierarchical city management and planning to a participation-based system. Seoul's 25 autonomous districts were now given considerable authority, which facilitated various district-oriented plans, facilities and activities.

As such, in the 1990's, the "Metropolitan Plan Zones" were newly established to install and manage facilities requiring repair and maintenance, e.g. roads, railways and a water supply system. Also, a "Detailed Plan System" was adopted to assign the purpose, number of floors and floor area of individual structures in certain areas. Democracy and locality were now more valued, and a large portion of the authority for urban planning originally held by the Minister of Construction and Transportation was now assigned to municipal and provincial governors. By requiring the Minister to hear the comments of the local parliament, it was now easier for local residents to voice out their thoughts on development.

Era 3: Sustained (2000-present): Sophisticated City Management and High-quality Participation (2000's)

Having completed the Olympic Games in 1988, Seoul became an international city. Her influence spread worldwide, and it became part of one zone with nearby localities. The local government era began and Seoul's ordinance for city planning was enacted in July 2000. In other words, matters assigned to Seoul's local governments were now handled by this ordinance. Along with this change, Seoul's city development policy changed from a growth-oriented policy to a sustained one.

After celebrating its 600th birthday in 1994, Seoul established a series of plans, including the City Center Management Plan (1999), City Center Development Plan (2004), City Center Integrated Re-creation Plan (2008) and Historic City Center Management Plan (2010). Seoul also conducted other various projects to return vehicle-dominated roads back to pedestrians. For instance, the Seoul Square, Sungnyemun Square and

Gwanghwamun Square were developed to restore the historical values of those locations and an open space was provided in the city center. Also, the restoration of Cheonggyecheon, development of parks around Dongdaemun Stadium, development of the Open Namsan, etc. created ecological city spaces for nature and humans, especially good for pedestrians. In addition, the Bukchon development project helped restore Bukchon as a key historical resource. Seoul's city walls were also restored for UNESCO's recognition as a world cultural heritage.

Seoul's New Town business helped close the gap between Gangnam and Gangbuk and repair and maintain infrastructure. In 2002, the pilot New Town project was implemented in Eunpyeong, Gireum and Wangshimni districts, and until 2007, a total of 26 districts benefitted from the New Town projects.

In 2002, Seoul converted the Nanjido Landfill located in Sangam district in the western area of Seoul and developed it into an ecological park and built the World Cup Main Stadium and Eco Village as a host of the 2002 World Cup. Presently, the city is also developing the Sangam Digital Media Complex, as an advanced digital media and entertainment cluster here.

Seoul also established the Hangang Renaissance, Northeast Renaissance and other zone-specific plans and is currently developing the Yongsan International Business District and Magok District. The City is also making strenuous efforts to improve its city design to enhance its appearance as an advanced city. Furthermore, it is developing parks, e.g. Dream Forest, Seoul Forest, Pureun Arboretum and various trails, e.g. Seoul Walls trail connecting parks and the Seoul Walls; Seoul Dulle trail connecting the outer four mountains and nearby hills; pedestrian and bicycle paths connecting Hangang and branch streams; and ecological and cultural trails. Through the Gangdong Greenway, Design Road, etc. the city is helping pedestrian traffic and assigned car-free streets for those who enjoy walking. These and other efforts made by Seoul have helped it to become a well-balanced historic and cultural city as well as an international city. During this period, participation and communication between citizens became more important. In fact, citizens of Seoul are now invited to participate in the 2030 Seoul Plan and other subsequent community development plans.

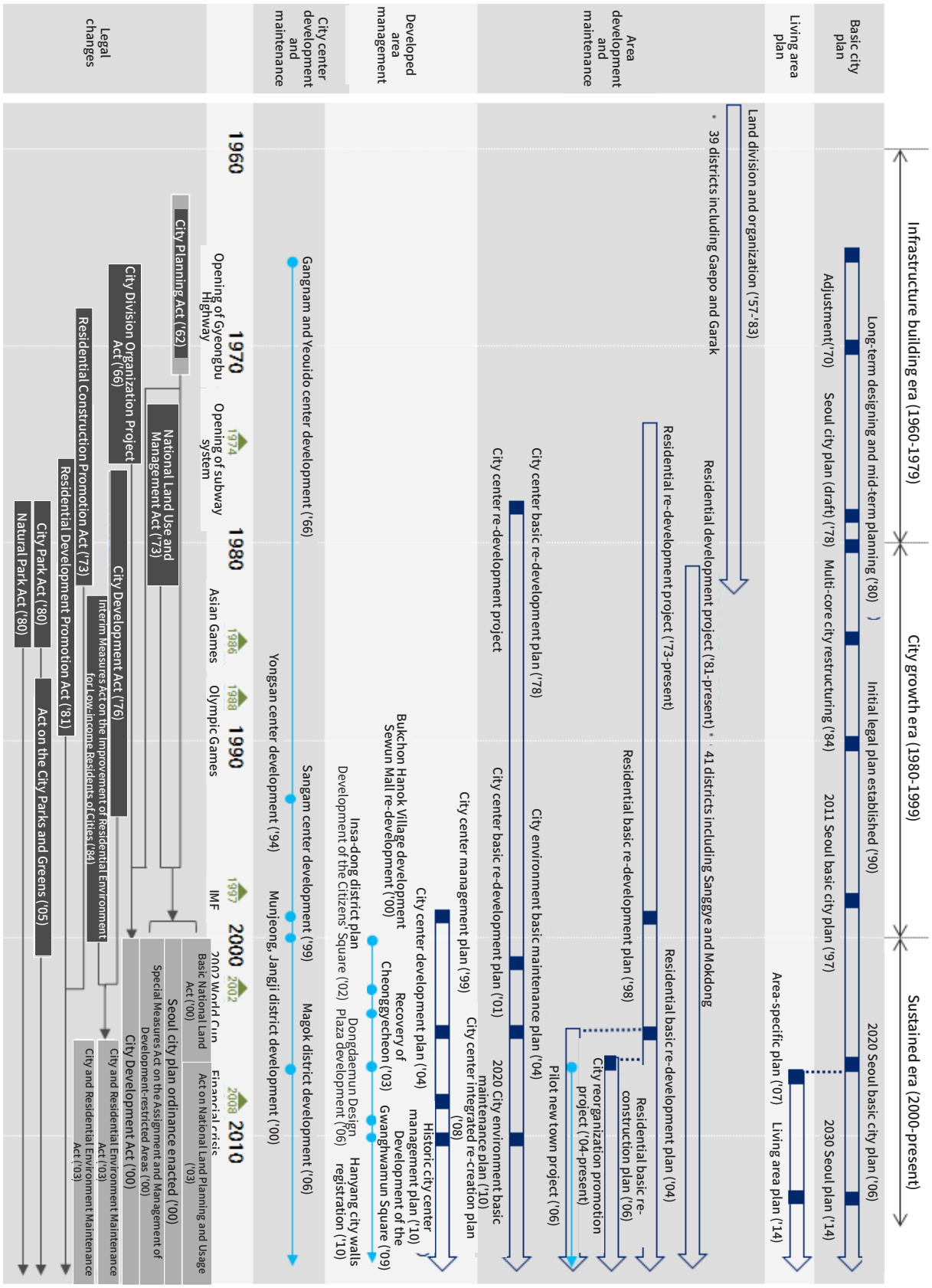
At the dawn of the new millennium, Korea's city planning system changed drastically, reflecting the changes made in the society. Accordingly, the City Plan Act (2000) was heavily revised. As cities expanded and transportation and communication developed, communities also expanded. To control growth, a metro-city plan was adopted to apply to at least two administrative districts. In addition, unreasonable restrictions were also removed by allowing people to claim land purchase halted by long-term city plans. To prevent arbitrary developments, development is now allowed only after the plan is confirmed. Also, development-restricted areas, including their assignment and changes to them are now separately governed by Special Measures Act on the Assignment and Management of Development-restricted Areas (2000).

These revisions made to the City Plan Act in the 2000's originated from a new trend of reconsidering urbanization and environmental damages and relieving unnecessary restrictions and excessive development after the financial crisis towards the end of the 1990's. In other words, the development and growth-oriented development paradigm has now shifted to a more ecological and sustainable one, thanks to legislative im-

provements.

At the same time, the City Plan Act for cities and the National Land Use and Management Act for non-city areas were combined and reorganized to centralize the land use management system. To be more specific, the City Plan Act (1962) and the National Land Use and Management Act (1973) were combined in 2002 into the Act on National Land Planning and Usage. Also, the city designs and detailed plans defined for similar objectives were combined into district-specific plans. Also, the city development provisions of the City Plan Act and Land Division and Organization Project Act were combined into the City Development Act (2000). The City Re-development Act (1976) and Interim Measures Act on the Improvement of Residential Environment for Low-income Residents of Cities (1984) were combined into the City and Residential Environment Maintenance Act. As such, correlated or redundant city plan systems were combined and centralized to make legal regulation simpler and more specific. In the 2010's, the need for restoration and maintenance of the old city infrastructure and residences emerged due to a decrease in population, change of the industrial structure, uncontrolled expansion of city areas and aging of the residential environment. To meet this need, the Special Act on City Restoration Promotion and Support (2013) was enacted.

Figure 15 - Changes to the City Plan System



Changes to the Center Structure of Seoul

Since its designation as the capital of the Joseon Dynasty, Seoul has been performing its role as the capital of the country. Seoul's spatial structure changed from a single-core to multi-core city from the Joseon Dynasty and Japanese regime to the modern era, which saw drastic increases in population, heavy industrialization and the demand for public services.

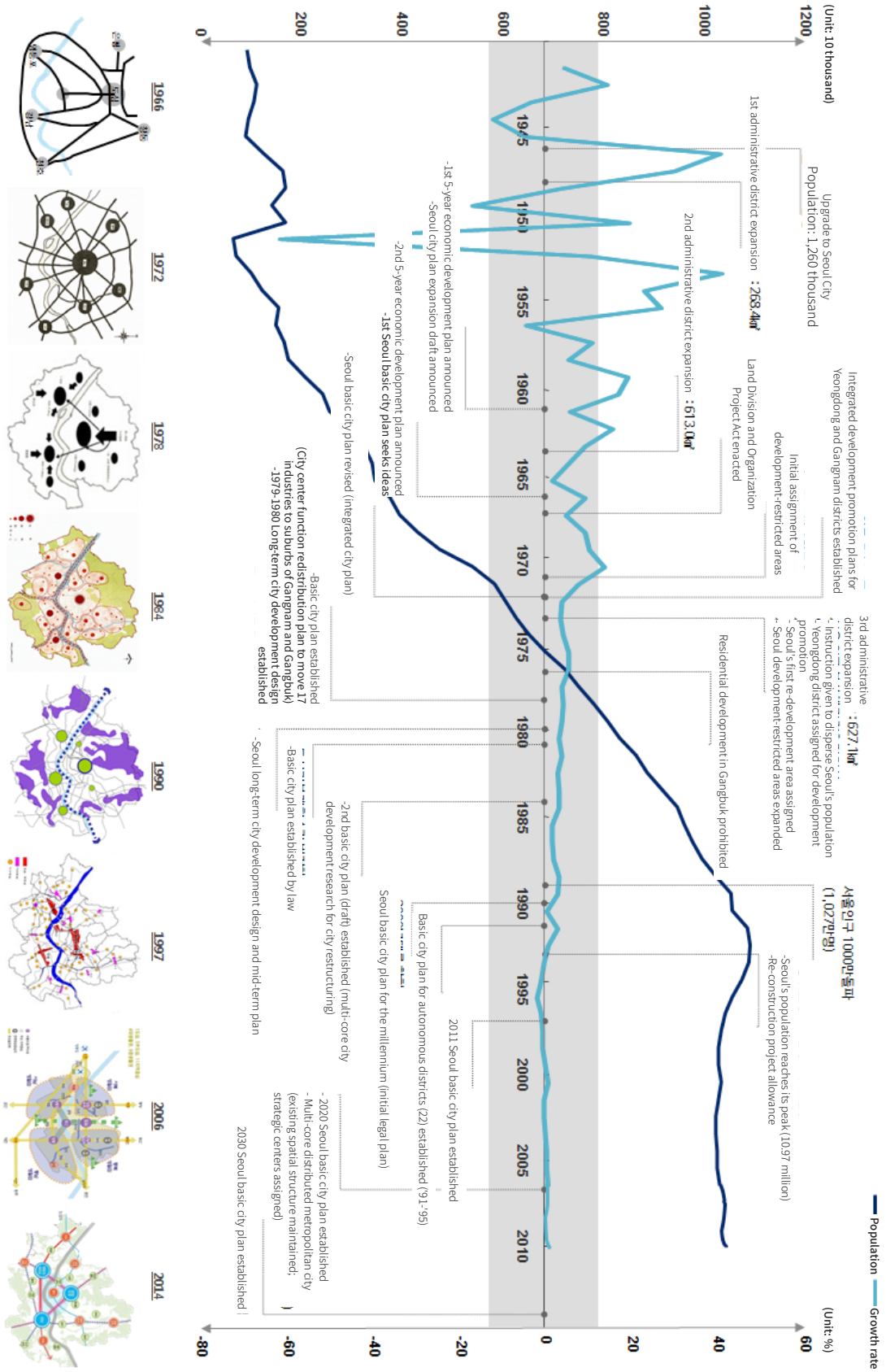
Since the 1960's, Seoul has gone through changes as a multi-core city as defined in Seoul's basic city plan. However, the number of city centers changed from 1 city center and 6 sub-centers in 1966, to 3 city centers, 7 metro-centers and 12 local centers.

Table 3 - Changes to City Centers as per Basic Seoul City Plan

	1966	1972	1978	1984	1990	1997	2006	2014
City center	1 city center (within 4 gates)	1 city center	1 national center	1 core (center)	1 city center	1 city center	1 city center	3 city centers (Hanyang Walls, Yeongdeung-po, Yeouido, Gangnam)
Sub-center	5 sub-centers (Changdong, Cheonho, Gangnam, Yeong-deungpo, Eunpyeong)	7 sub-centers (Mia, Mang-wu, Cheonho, Yeongdong, Yeongdeung-po, Hwagok, Eunpyeong)		3 cores (Yeongdong, Yeongdeung-po, Jamsil)	5 sub-centers (Sinchon, Cheong-nyangni, Yeo-ngdeungpo, Yeongdong, Jamsil)	4 sub-centers (Yongsan, Wangshimni, Cheong-nyangni, Yeongdong, Yeongdeung-po)	5 sub-centers (Yongsan, Wangshimni, Cheong-nyangni, Yeongdong, Yeongdeung-po, Sangam, Susaek)	7 metro-centers (Yongsan, Jamsil, Cheong-nyangni, Wangshimni, Changdong, Sanggye, Sangam, Susaek, Ma-gok, Gasan, Daerim)
Local center			7 local centers (Yeo-ngdeungpo, Yeongdong, Suyu, Jamsil, Janganpyeo-ng, Susaek, Hwagok)	13 sub-cen-ters		11 local centers	11 local centers	12 local centers
				(7 in Gangbuk, 6 in Gangnam)				(Dongdaemun, Mangwu, Mia, Seongsu, Sinchon, Mapo/ Gongdeok, Yeonsinnae, Bulgwang, Mokdong, Bongcheon, Sadang, Isu, Suseo, Munjeong, Cheonho, Gildong)

District center			27 district centers 157 neighborhood centers	50 district centers	59 district centers	54 district centers	53 district centers strategic developments (Yeonsinnae, Sanggye, Mangwu), Strategic developments (Sangam/Susaek, Magok, Munjeong)	Same as the existing plan

Figure 16 - Growth and Spatial Structure Changes of Seoul



Implications

Since 1394 when it was designated as the capital of the Joseon Dynasty, Seoul has been Korea's capital city. Between 1910 and 1945, Seoul experienced various spatial changes due to Japanese control. Between 1950 and 1953, Seoul suffered material devastation as the Korean War broke out and destroyed residences, commercial structures and public agencies. In the 1960's, however, a powerful military regime appeared and enabled remarkable growths. Explosive increase of population and expansion of administrative districts resulted in illegal settlements, extreme density, traffic congestion and environmental pollution, etc., but Seoul continued to grow in a material point of view. New areas and countless roads were built in Seongbuk and Gangbuk, and Gangnam began to be developed to disperse functions concentrated in Gangbuk. In addition, development restrictions were imposed in the capital area to control excessive external growth of Seoul. Seoul's growth continued in the 1980's as well. In 1986 and 1988 in particular, Seoul hosted the Asian Games and Olympic Games, which stimulated the city to embark on aggressive improvements. A large-scale stadium was built in Jamsil, Hangang was improved, and the re-development plans of subway system and city center were implemented among others. To improve the city's image, poor developments were re-developed and residences were built in Gangnam, Mokdong, Godeok, Gaepo and Sanggye to meet the sharply increasing demand. In the 1990's, the subway system was expanded and various other public projects were started to change the city's outlook completely. However, Seoul faced a financial crisis in 1997 and the need for even more changes emerged. From the 2000's until now, the trend changed to value quality rather than quantity of development. As the host of the 2002 World Cup, Seoul developed the Sangam district, restored Cheonggyecheon and began the city center re-creation and Hangang Renaissance projects to enhance the quality of development.

In the future, Seoul will continue to grow. First, Seoul needs to improve quality of development because the population will stay at the current level due to the trends of lower birthrates and aging. In other words, it is imperative that Seoul enhances the quality of its city infrastructure. To that end, Seoul needs to select and focus on improvement opportunities rather than initiate large-scale development projects. Second, Seoul must seek sustainable development to preserve the environment and resources for future generations, rather than continue to waste resources. In fact, many green areas, open spaces and farmlands have been damaged in the name of development. However, resources are always limited and need to be preserved for future generations. Therefore, Seoul needs to improve parks and green areas and become a pedestrian-friendly city to ensure sustainable and systematic management is implemented. In other words, traditional hierarchy must be rejected, and participation of the citizens in the development of the city should be encouraged. In addition, the planning system should also be improved to ensure main and sub plans work together harmoniously. To meet these needs, Seoul is making extra efforts to hear the voices of the citizens as it pursues the 2030 Seoul Plan and community plans.

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Applicable Laws

- Act on National Land Planning and Usage
- Enforcement Decree, Act on National Land Planning and Usage
- City Development Act
- City and Residential Environment Maintenance Act
- Seoul City Plan Ordinance, Seoul Metropolitan Government

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15. Sewun Mall Development Plan

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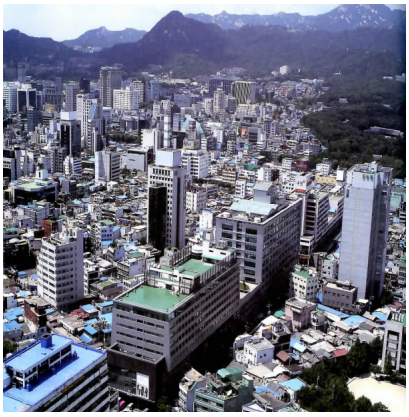
Policy Field: Urban Planning

Introduction

Significance of Sewun Mall

When Korea's national income per capita remained at USD 114 in 1967, a large mall complex totaling 205,536㎡ in floor area and sophisticated 17-story apartment buildings were constructed along Cheonggyecheon, where radio repair shops and brothels were previously located. Sewun Mall[2], spanning 1 km north-south from Jongno to Toegyero, was a marvel to people.[3] It was Korea's first large-scale construction project and is still a successful business area, although it has been challenged by its new competitors such as Yongsan Electronics Mall and Gangbyeon Technomart. While it is notorious as a major source of surreptitious videos and pornography, it is still known as a place where electronics and parts are available at the cheapest prices.[4]

Figure 1 - A View of the Sewun Mall



Source: Seoul Museum of History (2010), Sewun Mall and Neighborhood

Historical Background of the Sewun Mall Site

To prevent damages to city infrastructure by possible incendiary attacks by combined forces, the Air Defense Act was revised in 1937. In 1943, regulations were put in place to allow existing structures to be moved or demolished by force if it was necessary for air defense to prevent a fire from spreading from one building to another. According to these regulations, an empty space of 50m in width and 1,180m in length between Jongmyo and Pildong would later become the site for the Sewun Mall.[5]

However, as Imperial Japan collapsed and the Korean War broke out, this area was left without proper management and administration,

Figure 2 - Inhyeon-dong Area

Source: Seoul Government Promotion Picture (August 10, 1966)

2. The stores and apartment buildings in the Sewun Complex are in 4 buildings and 8 stores: Hyundai Mall on the north, Sewun Mall Ga-dong towards Cheonggyecheon, Sewun Cheonggye Mall and Daerim Mall towards the south of Cheonggyecheon, Sampoong Mall and Poongjeon Hotel towards the south of Euljiro and Sinseong Mall and Jinyang Mall towards the south of Mareunnaegil.

3. Jeon, Wu-yong and six others (2001), Cheonggyecheon: Time, Place and People, Institute of Seoul Studies, p.85

4. Kim, Jin-ae (2003), Praise Our City, pp.215-216

5. Hankook Kyungje, June 26, 2013 "The Sewun Mall, tarnished pearl of electrics and electronics of the 1970's on the appearance of the Yongsan Mall", www.hankyung.com

which resulted in many illegal shacks occupied by refugees and fugitives from North Korea. In addition, unlicensed prostitutes increased in this area, and by the late 1960's they formed a community called "Jongsam."

Background of the Project

Between the late 1950's and early 1960's, the plans for constructing the National Assembly building were set up, and the choices for the site were either Namsan or Jongmyo. Residents illegally occupying the empty area between Jongmyo and Pildong began asking the government to drop the plan to build roads and transfer the ownership of the occupied government-owned land to people. As the military government was set up, the plan for constructing the National Assembly building in Namsan was withdrawn, the illegal residents' demands continued in Jongmyo and Pildong. During this period, the Ministry of Finance transferred the ownership of 50% of the occupied land to civilians.

As the granted land and illegal shacks were left uncontrolled and prostitutes increased in this area, a need to manage this area emerged. Therefore, the Jung-gu Office set up the "Daehan Theater – Cheonggyecheon4-ga Planned Street Maintenance Plan,"[6] and submitted a draft plan to build roads 20 m in width in the center and buildings 15 m in width on the sides of the planned street 50 m in width to Seoul Metropolitan Government. However, Seoul City rejected this draft plan due to a possibility to cause losses for the existing businesses and lack of road capacity.

After that, Seoul City requested O. Negler, a U.S. city planner working for HURPI[7] to prepare an alternative option for the plan. The alternative option was to set up a building area 20 m in width in the center and roads 15 m in width on both sides. However, Negler's plan was considered limited in that land rearrangement was difficult and too much empty space would be generated, raising the construction cost.

In July 1966, Mayor of Seoul Kim Hyeon-ok studied various options and consulted Architect Kim Su-geun for the design of the Sewun Mall and instructed Jongno-gu and Jung-gu to demolish the illegal buildings. At the same time, the city submitted a "Request for Assignment of Redevelopment Districts and Improvement of Poor Developments" to the Ministry of Construction. At the end of August of the same year, a site 50 m in width, 893 m in length, 44.650㎡ in total area was prepared by implementing an illegal settlement demolishment strategy promising compliant occupants rights to apartment residences and warning incompliant occupants that demolishment would be forced. On September 8th, a ground-breaking ceremony for the Asia Mall was held. On October 21st, Seoul City signed a design commissioning contract for Zones A, B, C and D of Sewun Mall with Korea Engineering Consultants Corporation. In November, the resolution for cancelling

6. The key content of the plan is to build roads of 20 m in width in the center and buildings of 15 m in width on sides of the planned street of 50 m in width. The residents occupying the street of 50m in width and the land owners would form a landlord union and construct buildings on both sides and donate the owned land of 20m in width in the center to Seoul City.

7. HURPI(Housing and Urban Regional Planning Institute) is a housing, city and regional planning lab established under the Ministry of Construction, funded by the financial support from the U.S.-Asia Foundation.

the planned street 50 m in width and assigning the improvement districts of poor developments passed by the central city planning committee.

Key Content of the Project

Design of Sewun Mall

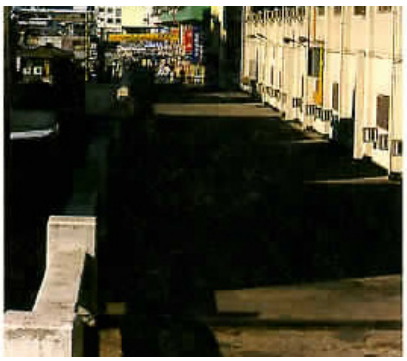
Sewun Mall was planned to be a 1 km-long pedestrian-friendly mall with its pedestrian deck on the third floor of the buildings. On the first underground level, roads and parking lots were prepared to separate vehicle and pedestrian traffic. To connect the mall with nearby commercial areas in Jongno and Myeongdong, stairs were installed and connected with the pedestrian deck at connection points in Jongno, Cheonggyecheonro, Mareunnaegil and Toegyero.

Sewun Mall was designed as a business-residential complex, floors 1 to 4 were designed for businesses and the 5th – 8th floors were made into apartments. On the 5th floor in particular, an open space was prepared to include a park, playground and market. To make the residential space more comfortable, an atrium was built and apartments were designed with terraces.

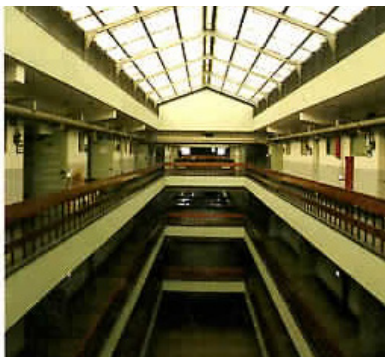
The complex's floor area ratio was 300%, but the net ratio excluding roads was planned to be up to 500%. The height of all buildings was kept at 8 floors, with part facing the arterial roads raised higher as a tower for a visual variation. To implement the "city in the city" concept, coffee shops, restaurants and clinics were placed on the 2nd and 4th floors with lower access and shopping malls were located on the 3rd floor to facilitate pedestrian traffic and sales. On the top of a building, an elementary school was built, to complete the complex as a city-like community.

Figure 3 - Actual View of the Sewun Mall Design

Street vendor on the pedestrian bridge at Sewun Mall
1977. Seoul in Photo 5.5, p197 (Donga Ilbo)



Pedestrian deck of Sewun Mall (2000) (Wowphoto)



3rd floor pedestrian deck Atrium (2010)

Source: Seoul Museum of History (2010), The Sewun Mall and Neighborhood

Construction of Sewun Mall

The redevelopment of the Sewun Mall District was the largest private-funded project at that time. Its total floor area was 205,897.52㎡ and its budget amounted to 4.4 billion KRW. Initially, the Integrated Planning Part, Housing Section, City Planning Office of Seoul City was responsible for the construction project, but as the work scope expanded due to the redevelopment construction boom, the Housing Section added the Business and Housing Part to be responsible for the Sewun Mall project.

In October 1966, Seoul City signed a design contract for Sewun Mall Zones A-D with Korea Engineering Consultants Corporation and went on to select the construction companies. Construction companies including Hyundai, Daerim, Poongjeon, Shinpoong, Samwon and Sampoong as well as the unions of land owners including the Asia Business Promotion Association and Cheonggye Business Corporation shared the expenses for purchasing the city-owned land and constructed facilities on it for sales and profit.

The Sewun Mall was constructed in 8 sections. In October 1967, the Hyundai Mall Apartments were completed. After that, the Asia Mall, Daerim, Cheonggye, Sampoong, Poongjeon, Sinseong and Jinyang Apartments and hotel were completed, and the construction of the whole district was completed in 1968.

Evaluation of the Project

① Positive Outcome

Immediately after completion, Sewun Mall became a new business area. Since the department stores like Sinsegae Midopa in Namdaemunro and Hwashin on the Jongno Intersection and Shinshin were quite old and rented out to individuals, Sewun Mall was more appealing because it was newly built and offered low pricing. In addition, Sewun Mall applied modern business administration strategies including product auction vouchers for TV ads and promotion and price-tag systems, which changed the outlook of business in Seoul.

In addition to general store facilities, Sewun Mall accommodated totally new facilities including offices for congresspersons, adult entertainment facilities, churches, saunas, supermarkets, aerobics rooms and indoor golf courses, which created Seoul's new culture in the 1970's. As Sewun Mall became a more active business area, the rent and land price rose and the apartments on higher levels gained value.

② Negative Outcome

Sewun Mall was not built as originally planned. Initially, there was a plan to build a pedestrian deck on the 3rd floor to make the Mall between Jongmyo and Toegyero a pedestrian-friendly one, but this plan was not implemented as the access stairs had a steep slope and the deck was not connected between the stairs and buildings. Accordingly, the plan to devote the ground area and the 3rd floor to vehicle and pedestrian traffic respectively was not implemented. On the ground area, the vehicle and pedestrian traffic got mixed, causing

confusion and disorder.

The plan to place an open space to separate and connect the commercial, residential and business functions on the 5th floor was not realized either. Public and convenience facilities such as the government office, police substation, schools, banks and top gardens planned for the "city in the city" concept were not implemented and the atrium and terraces originally planned were partly changed during construction.

Towards the end of the 1970's, criticisms arose against the Sewun Mall complex. Its unique appearance and size encroached on the city landscape. The green areas from Bukhansan to Namsan via Jongmyo were cut through, and issues were caused by the vertical separation of traffic without much consideration of horizontal traffic. This was considered to interfere with Seoul's city axis and functional connection between the blocks at the ends of the mall as well as further activation of neighboring blocks.

Main Conflicts and Resolutions

Functional Decline of Sewun Mall and Discussions on Redevelopment

① Functional Decline

In the 1970's, Sinsegae, Midopa and Lotte Department Stores were opened and Seoul's core business area moved back to Myeongdong, causing the decline of Sewun Mall. The newly opened department stores became high-end business places, causing general stores in Sewun Mall to suffer further damages. At the same time, electronics, sound equipment and musical instruments that Sewun Mall specialized in were classified as items inappropriate to be sold in the city center, and relevant businesses were forced to move to Yongsan Electronics Mall, causing a drastic downfall for Sewun Mall.

Due to the drastic decline of Sewun Mall, the apartments on top of it were occupied by small businesses. Hangang Mansions and other large apartment complexes were built in Gangnam beginning in the early 1970's, and the residents in Sewun Mall began to move. Sewun Mall's residential function sharply declined as its purpose gradually changed to business.

② Redevelopment Plan Established as a Solution to Functional Decline

Starting from 1979, 3 redevelopment plans were set up for this area. In the same year, the "City Center Redevelopment Project Plan Research: Sewun Mall Area" was set up, but became nullified due to the failure to make a cadastral notification. Later in 1984, the "Sewun Mall District Redevelopment Project Plan" was established for the east part of the mall and in 1988, the "Sewun Mall District, Sewun Mall Zones 2 and 3 Redevelopment Project Plan" was set up and included the west and east parts of the mall.

- City Center Redevelopment Project Plan Research: Sewun Mall Area (1979)

  A plan was suggested to redevelop the old Sewun Mall and vicinity and restore the CBD function of the city center. Moving electrics and electronics businesses to suburbs and introducing business and cultural facilities in this area to totally renovate the district. It was also suggested to place green areas vertically from Jongmyo to Namsan and install a pedestrian path. The roads were also going to be improved greatly. It was planned to build an arterial road 30 m in width on the east to connect the mall with Namsan Tunnel No. 1, and to build a pedestrian path 10 m in width, green areas and a shopping mall on the west, with the road under the deck used as a parking area. Along with that, connecting decks were planned to connect the mall with the vicinity.

  However, land lots were small and it was hard to obtain consent from land owners. Therefore, a plan was suggested to enable small lot development while small lots separation plan and block development were encouraged.

- Sewun Mall District Redevelopment Project Plan (1984)

  The plan suggested in the City Center Redevelopment Project Plan Research: Sewun Mall Area (1979) was nullified due to a failure to make a cadastral notification. The Ministry of Construction again set up a redevelopment project plan for only the east part of the mall in 1982. This plan suggested landscaping on the deck area to complement the green areas axis and create a resting area to attract pedestrian traffic.[8] Additionally, a large parking area was to be prepared to make the business area more active. Plans were set up to improve the inside of the buildings and convert them into officetels and residence hotels.

  At the same time, the vertical arterial road on the east side was changed to an access road with less functions. Instead, city parks and pedestrian paths were added to complement the metropolitan green areas axis. The vertical arterial road function was moved to Baeogaegil connected to Namsan Tunnel No. 1.

  However, it was difficult to convince small lot owners to participate in the project and finance the project. Therefore, it was suggested that the land division and organization method be used to proceed with the project and the total purchase option be introduced.

- Sewun Mall District, Sewun Mall Zones 2 and 3 Redevelopment Project Plan (1988)

  As the west part of the mall was designated as a new redevelopment district in 1987, the existing plan was readjusted, and new zones were added in the new redevelopment project plan. This plan suggested that Sewun Mall be left as is and activate the functions of the vicinity. The scope and density of the project was mid-size (within 1,000 pyeong) and mid-height (5-10 floors), similar to the existing Sewun Mall.

  To harmonize the horizontal arterial road and the Sewun Mall buildings, the construction line at both sides of the road 25 m in width was moved backward and public green areas were placed to complement the green areas axis. Beyond each road, a park was planned with underground public parking areas. Sewun Mall's deck was landscaped as a pedestrian path and connected with nearby business areas. Also, as suggested in the previous plan, the roads on both sides of the mall were changed to a mid-sized one-way

8. Hankook Ilbo (June 27, 2014), "The Sewun Mall Ruined by Arbitrary Redevelopment by Seoul City", www.hankookilbo.com

road 25 m in width.

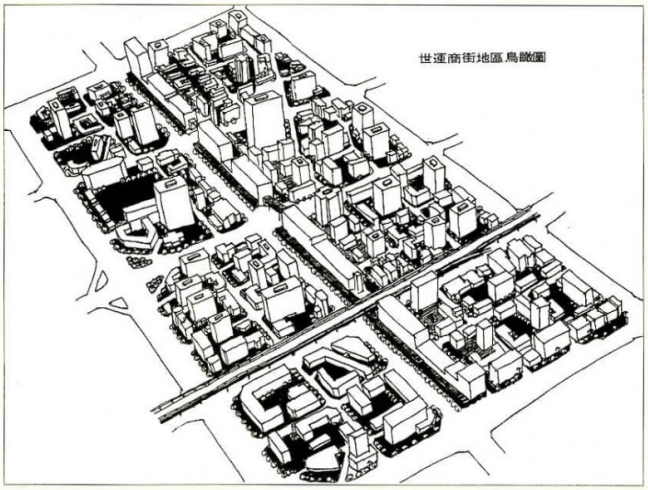
However, considering that the lots were small and owned by a large number of land owners, it was suggested that a redevelopment union be formed and a total development method be used as an improvement to the land division development method.

Table 9 - Redevelopment Plans for the Sewun Mall and Vicinity

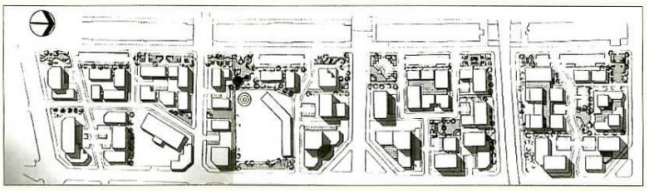
		· City Center Redevelopment Project Plan Research: Sewun Mall Area (1979)	· Sewun Mall District Redevelopment Project Plan(1984)	· Sewun Mall District, Sewun Mall Zones 2 and 3 Redevelopment Project Plan (1988)
Scope		· East and west areas of Sewun Mall	· East area of Sewun Mall	· West area of Sewun Mall, Zones 2 and 3 added to the '84 plan
Purpose		· Restoration of the new city center CBD function	· Total reorganization of purpose and structure for activation of Sewun Mall	· Preservation and activation of Sewun Mall · Public function enhanced after development
Main Goals	Green areas creation	· Creation of green areas vertically considering the pricing of the city center between Jongmyo and Namsan	· Addition of city parks and pedestrian paths to complement metropolitan green areas axis · Landscaping of the midair path deck to complement the green areas axis	· Putting the construction line of the horizontal arterial road 25 m in width backward to strengthen the green areas axis
	Pedestrian path building	· New addition of a pedestrian path 10 m in width on the west side of Sewun Mall · Connection of Sewun Mall deck with nearby developments	· Activation of the midair pedestrian deck and creation of a resting area	· Use of the midair deck as a pedestrian-only space · Smooth course planning with the business district
	Road and parking facility	· Installation of an arterial road 30 m in width on the east side of Sewun Mall and connection with Namsan Tunnel No. 1 · Expansion of Euljiro width · Use of the midair deck and road underneath as the parking area	· Expansion of Baeogae-gil and connection with Namsan Tunnel No. 1 · Reduction of function of the arterial road 30 m in width on the east side to the district access road · Preparation of a large parking area to activate business	· Planning of a mid-sized one-way road 25 m in width on both sides of Sewun Mall
Other		· Building a shopping mall on the west side of Sewum Mall to expand its business function	· Internal improvement of the Sewun Mall	· 3D design rather than planar design
Method of implementation		· Small lot division plan	· Land division and organization method · Effect of total purchase induced	· Land division and organization method · Total redevelopment

Figure 4 - The Sewun Mall Vicinity Redevelopment Plan

City center development project research /Seoul Metropolitan Government, 1979



Sewun Mall Redevelopment project plan /Seoul Metropolitan Government, 1984



Sewun Mall zones 2, 3 Redevelopment project plan /Seoul Metropolitan Government, 1988

Source: Seoul Museum of History (2010), The Sewun Mall and Neighborhood

Conflicts on Sewun Mall Reorganization Promotion Plan

① Background and Details of Sewun Mall Reorganization Promotion Plan

Although redevelopment plans were suggested as a solution to the mall's functional decline, the plans were not implemented. Since small lots were distributed over a large area and there were many landowners, agreement was hard to make. As several redevelopment attempts ended up in failure, the lots in Sewun district were further divided, land prices rose, and facilities degraded further. As Cheonggyecheon was restored in 2003, discussions began regarding the demolishment of Sewun Complex, creation of green areas and redevelopment. Later, Seoul designated this district as the Sewun Reorganization Promotion District in 2006, announced a plan to demolish the mall by 2015 and presented a plan to construct new buildings, create parks and green areas on 1 ㎞ of land from Jongmyo to Namsan. Seoul intended to secure city infrastructure

including metropolitan vertical green areas with large-scale development and conduct circular redevelopment with the participation of residents.

However, stakeholders disagreed on the redevelopment plan. The International Council on Monuments and Sites (ICOMOS) pointed out that the plan needed to be changed to preserve the cultural landscape of Jongmyo. Accordingly, Seoul City and Jung-gu Office created instructions for Sewun Zone 4 to resolve conflicts with that organization. Meanwhile, Jung-gu Office had conflicts with Seoul City regarding the height restrictions of skyscrapers. Seoul later promised to review this matter and alleviate restrictions if possible, thus resolving conflicts. Conflicts arose between Seoul City and the Office of Education over the site preparation for new schools in the district. These conflicts were resolved as the Office of Education accepted the plan to establish an additional elementary school on the Deoksu Middle School site. As such, conflicts were resolved, and the Sewun Reorganization Promotion Plan was confirmed in March 2009.

② Conflicts with ICOMOS and Resolution: Jongmyo

When the Sewun Reorganization Promotion District was designated, ICOMOS-Korea pointed out the heights of the buildings in the district may ruin the cultural landscape of Jongmyo. It expressed a concern that Jongmyo as a World Cultural Heritage could be graded at "Endangered Cultural Heritage." Accordingly, Seoul consulted the HQ of ICOMOS,[9] and ICOMOS pointed out height, purpose and landscaping of Sewun Zone 4 near Jongmyo should be considered in the construction plan.

After that, 3 meetings were held to obtain advice, and the plan was adjusted. Jongno-gu pointed out that delay of the construction due to the height restriction for Jongmyo was increasing the financial losses on the part of the landowners and argued that the existing plan be kept to ensure the project is conducted as soon as possible. At this point, ICOMOS-Korea suggested that the height restriction be reconsidered and asked Seoul City and Jung-gu Office to allow the maximum height presented in the basic city and residential environment reorganization plan. It also suggested that part of the upper floors be used as various cultural facilities.

Jung-gu Office accepted these suggestions and adjusted the height of the buildings and changed some of the residential facilities in the block to business facilities to make up for reduction of business facilities caused by the height adjustment.

③ Conflicts with Jung-gu Office and Resolution: Height Plan

When the Sewun Reorganization Promotion District was designated, Jung-gu was setting up Sewun Mall Zones 2, 3 and 5 City Environment Reorganization Plan. This plan pointed out the inefficient land use caused by the height restrictions, and lack of vertical space usage in the city and suggested a skyscraper as a solution to this issue.

9. ICOMOS is an international expert NGO with an objective to preserve historic monuments and ruins of the world, officially consulted by the World Heritage Committee and Unesco. It has national committees in 101 countries. www.icomos.org

Jung-gu submitted this plan and hosted the "City Regeneration and Role of Skyscraper Construction," promoting the need for skyscrapers. It also suggested that it was possible to create large open space through skyscrapers. However, Seoul City made it clear that it would adhere to the existing height restrictions. Conflicts between Jung-gu and Seoul City intensified as Jung-gu independently collected ideas for skyscrapers, promoted them through media and pursued a civil committee to ask for the removal of height restrictions in Jung-gu.

Later, Seoul negotiated with Jung-gu that it would consider alleviating height restrictions to enable skyscraper construction in Jung-gu, and reflect this plan in the Sewun Reorganization Promotion Plan and Jung-gu accepted this suggestion.

④ Conflicts with the Office of Education and Resolution: Provision of Schools

The Central Office of Education and Seoul City had 4 discussions to ensure the Sewun Reorganization Promotion District has schools. Seoul City requested the Central Office of Education to standardize the site for Deoksu Middle School and combine the elementary and middle schools. The Central Office of Education accepted the first request, but considered it appropriate to build an elementary school on a separate site. Considering the spatial need for the playground, it was made clear a site approximately 5,000㎡ in size was required.

Accordingly, Seoul City explained that the applicable laws required the superintendent to set up a plan to purchase sites for schools and the account of the project operator would pay the expenses as per the plans set up by the Ministry of Education and Human Resources. Seoul also requested that a feasible school installation plan be established, noting that it was not possible to demand the developer to pay for the school site since the land price of the area for the school was 50-100 million KRW per 3.3㎡.

After that, Seoul City and the Central Office of Education further negotiated 4 times to agree on a decision to set up a plan for Sewun reorganization promotion within the scope of the regulations on school establishment. As a result, it was decided that it was a feasible plan to standardize the site for Deoksu Middle School and establish an elementary school on a separate site.

Changes to the Sewun Reorganization Promotion Plan and Future Plan

Although the Sewun Reorganization Promotion Plan was established, the project did not see progress. The height of Sewun Zone 4 was lowered after the review of the Cultural Heritage Administration, and the real estate recession was on-going. Due to the increased risk of development, it was hard to select operators.[10] Furthermore, the internally created green areas axis in the promotion district was a heavy burden on the residents and the business conditions between Sewun Mall and the vicinity differed, causing conflicts. In

10. Seoul City Press Release, June 26, 2013 'The Sewun Mall Separated from Neighboring Reorganization Zones, Small-scaled Separate Developments in the Neighborhood'

addition, a movement arose to preserve the cultural and architectural value of Sewun Mall and historic value of the area, which caused Seoul City to consider making changes to the Sewun Reorganization Promotion Plan.[11]

Later, Seoul City organized an expert T/F team with the participation of Jongno-gu, Jung-gu and SH and conducted 14 discussions. It also conducted research on the reorganization and interviewed residents (15 times) and gained consensus on the need to change the promotion plan and development directions.[12] Finally, Seoul City cancelled the existing plan in 2009 and announced the Revision of the Sewun Reorganization Promotion Plan in 2013.[13] Later in 2014, the Revision to the Sewun Reorganization Promotion Plan was confirmed and announced.

① Main Points of the Revision

The revision had a vision of developing Sewun District as a center of creation and culture industry, and putting it in harmony with historic and cultural resources in the city center, while also preserving the local community.[14] The key point of the revision was the preservation of the original plan to demolish Sewun Mall and create a park. Also, to resolve conflicts for integrated development of Sewun Mall and vicinity, it was planned to separate the facility from the vicinity reorganization and renovate it as the residents wished.

The height of the new structures where Jongno and Toegyero meet was reduced from 90 m to 70 m, considering the cultural heritage in Jongmyo the landscape of Namsan and the building coverage ratio for zones where horizontal activation was needed or it was hard to secure a certain floor area ratio was revised from 60% to 80%. The floor area ratio was 600% for the city center business area, 100% incentive for the city center industrial activation area and 200% incentive for the area where the purpose needed to be converted.[15] Also, the plan to add an elementary school was cancelled and it was decided to keep the current Deoksu Middle School.[16]

② Plans and Operation

Seoul City plans to form a governance with the participation of residents, experts and the public to implement the Revision to the Sewun Reorganization Promotion Plan. To share the historical value of Sewun Mall and determine desirable options to utilize it, the city plans to conduct workshops with residents on a regular basis.

11. Seoul City (March 27, 2014), The Sewun Reorganization Promotion District Plan Decision changed

12. Seoul City Press Release, June 26, 2013 'The Sewun Mall Separated from Neighboring Reorganization Zones, Small-scaled Separate Developments in the Neighborhood'

13. Hankook Kyungje, June 25, 2013 'The Sewun Mall to be Remodeled in 34 Years', www.hankyung.com

14. Seoul City (March 27, 2014), The Sewun Reorganization Promotion District Plan Decision changed

15. Kookje News, March 4, 2013 'The Sewun Reorganization Promotion District to be Developed Soon', www.gukjenews.com

16. Seoul City (March 27, 2014), The Sewun Reorganization Promotion District Plan Decision changed

It hosted the "International Symposium for Sewun Mall in the Light of City Recovery" (December 2013)[17] [18] to reach a consensus with Seoulites, including local residents and relevant experts. It also plans to confirm the guidelines for renovation and options for public support, implementation plans, strategies and timings through agreement with the residents.[19]

17. Seoul City Press Release, November 13, 2013 'International Symposium for the Sewun Mall in the Light of City Recovery'

18. Kookje News, March 4, 2013 'The Sewun Reorganization Promotion District to be Developed Soon'

19. Seoul City Press Release, June 26, 2013 'The Sewun Mall Separated from Neighboring Reorganization Zones, Small-scaled Separate Developments in the Neighborhood'

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