

# Changes in Urban Planning Policies and Urban Morphologies in Seoul, 1960s to 2000s

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**Abstract** The purpose of this paper is to highlight the main policies of the last half century that have shaped the urban architectural fabric of Seoul today, and explore whether a modified approach might better address the current socioeconomic conditions in Korea. The paper defines and examines urban planning in Korea through an overview of the four main urban project policies implemented in Seoul from the 1960s to the present: Land Readjustment (LR), Housing Site Development (HSD), Urban Redevelopment (UR), and Housing Reconstruction (HR). While the fundamental ideology behind these policies served well during a prolonged period of high economic growth, evidence is growing that these policies are losing steam under today's conditions. A growing legacy of stalled and incomplete urban projects from the mid-2000s—the New Town Project is an example—begs the fundamental question as to whether an alternative urban planning paradigm is needed for Korea in an age of low economic growth, low birth rates and a fossil fuel energy crisis. Through the urban morphologies of the three residential areas in Seoul developed by LR projects, this paper looks at the possibility of urban regeneration through the sustainment of urban architecture in those residential areas that have not been affected by HSD, UR, and HR

*Keywords: Seoul, Urban Planning Policy, Urban Morphology, Urban Architecture, Urban Project, Urban Regeneration*

## 1. INTRODUCTION

The cities of most developing countries have gone through massive urban transformation through the dual influence of industrialization and urban concentration. In particular, Asian cities whose countries have experienced rapid economic growth have gone through a host of significant changes over a short period of time. Seoul was the capital city of one of the world's poorest nations only half a century ago and is now the 11th strongest economic power in the world, making it a good example through which to examine such changes. But in order to do this, special attention must be given to the Korean conception and articulation of terms like urban planning, urban development, redevelopment, reconstruction, and regeneration, which are elusive and not clearly distinguished in the literature. When added to the difficulties of the proper transference of meaning in translating from Korean to English and vice versa, it is hard to avoid misrepresentation, which dampens efforts toward comparative research in the differing contexts.

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While today's Seoul appears relatively new to outsiders, it has a longer and more eclectic history than many capital cities in Asia, notably Beijing, Tokyo, Hanoi, Kuala Lumpur, New Delhi, Hong Kong and Singapore. The city's boundaries have steadily expanded over the last century, and today the expanded area is 16 times larger than the old city center in 1910, when Korea was colonized by Japan (SMG, 2012). Many of the traditional and historic buildings were destroyed during the Korean War and after. And since micro-scale architectural disciplines and macro-scale urban planning disciplines were imported and adopted from and by outsiders, the two have manifested as independent lines of inquiry through most of this expansion. Hence, to examine changes in the city in direct relation to changes in its architecture is not an easy task here.

Seoul is surrounded by two layers of mountains, four inner mountains and four outer mountains and ridges. The city has expanded into the relatively flat ground between steep topographies and thus the shape of the urbanized areas became irregular and discontinuous. The city consists of 25 municipal districts, and it is often divided into Gangbuk (North of the Han River) and Gangnam (South of the Han River). Gangbuk and Gangnam are almost equal in size. The urbanized areas (36,250 ha) are nearly 60% of the total administrative area (60,540 ha) (SMG, 2012). Large parts of the urbanized areas were developed well into the 20th century, where the city boundaries almost doubled in the early 1960s. A series of urban planning techniques were used for the reorganization of existing urban areas and the development of new land, and also for the replacement of the small, older residential buildings by larger, higher and denser complex buildings.

This rapid expansion and increasing urban concentration accelerated development without the proper coordination of long-term macro-scale urban planning and micro-scale architectural

design. Each technique was haphazardly implemented to respond to the specific problems of the period, and sometimes this conflicted with the comprehensive existing legal framework. The introduction of different kinds of techniques from outside Korea—particularly from Japan, Germany, and the US—made regulatory policy more complicated. Of the few English research materials that deal with the urbanism of Korea in a broader context, many employ a literal translation of terminologies between Korean and English, leading to misconception, confusion, and even contradiction. And so, before an examination of the main urban planning policies that have shaped today’s Seoul, this paper need to briefly outline how urban planning is defined and how it is regulated by Korean law.

The main body of the paper consists of three parts. First, there is a review of the regulatory system of urban planning policies in Seoul, particularly the National Land Planning and Utilization Act. Second, the paper examines literature on four main urban projects and discusses their historical background and characteristics. Third, there is an analysis of three selected areas in Seoul, comparing their morphologies based on previous field studies.

**2. THE STRUCTRE OF URBAN PLANNING POLICIES**

Urban planning policies in Korea are primarily based on the National Land Planning and Utilization Act (NLPUA), which had been modified on an ongoing basis from the first Urban Planning Act in 1962, then entirely amended and reestablished in 2002. The NLPUA defines the structures, hierarchies, relations, establishment and execution of the various types of urban plans and projects. In this paper, ‘urban planning’ is used as a general term encompassing the two legally defined terms, ‘urban plan’ and ‘urban project.’ Thus it refers to both the ‘establishment of a plan’ and the ‘execution of a project’ within the legal framework.

Urban planning in the NLPUA is structured in three levels covering land and population size, legal status, and responsibility for implementation: the Metropolitan Plan (MP, Gwangyeok dosi gyehoek), the Basic Urban Plan (BUP, Dosi gibon gyehoek), and the Urban Management Plan (UMP, Dosi gwalli gyehoek). The MP is the highest level, comprising a 20-year plan for the development and management of the large metropolitan regions such as Seoul, Busan, Daegu, Kwangju, Daejeon and 15 other cities as of 2008. Below the MP, the BUP covers cities and provinces (Si and Gun in Korean) with smaller administrative areas. The BUP is established every twenty years, and modify every five years as necessary. The BUP is considered a guideline and it is not compulsory for mayors, provincial governors, or local administrators to strictly adhere to it. By contrast, the UMP, which directly regulates urban and architectural morphologies, is compulsory and legally binding. The UMP must be made every ten years and can be modified after five years.

The UMP includes spatial structures of the area, land use planning (zoning), phased development planning, cityscape planning, and most importantly a District Unit Plan (DUP, Jigudanwi gyehoek). The DUP coordinates the two-dimensional land use plan with the guidelines for three-dimensional architectural space and form. The DUP was regulated in the NLPUA for the first time in 2002, by consolidating two similar but different lines of urban policy—Urban Design (Dosi seolge), introduced in the Building Act of 1980, and the Urban Detail Plan (Sangse gyehoek) introduced

in the Urban Planning Act of 1991. The former was from the American urban design model, while the latter was influenced by the German ‘B-Plan’ (Bebauungsplan). (Oh, D.S. & Mun, H.K., 2000, 253, 313-314; UDIK, 2000, 18, 28). As a constituent of the UMP, the main objective of the DUP is to regulate the long-term, systematic, and holistic management of urban and architectural space and form for the betterment of the living environment. But the DUP has often been exploited and misused as a development tool, as in cases of zoning upgrades, where plot sizes are enlarged for larger scale development or for developers to gain incentives for larger floor areas.

The driving forces behind the reshaping of Seoul over the last several decades have come more from the various urban projects themselves rather than the urban plans. As of 2012, at least six different urban projects are active, and they are positioned somewhere between the BUP and the UMP in the legal hierarchy. Theoretically a ‘plan’ (program) precedes a ‘project’ (action), such that without a plan, a project cannot be initiated. However, the history of urban planning in Korea often demonstrates this relationship in reverse, where a policy and project begins first, and then a corresponding law and plan follow. Thus in Korea the urban project is legally under the guidance of the urban plan, but in practice the project has sometimes affected the legalization of the urban plan.

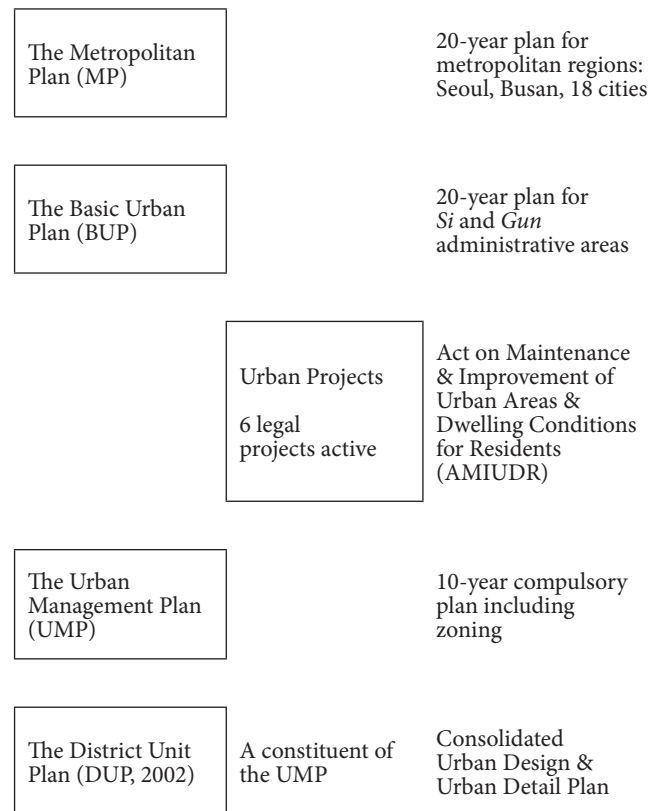


Figure 1. The structure of urban planning policies in Korea based on the National Land Planning and Utilization Act (NLPUA)

In terms of the size of the areas implemented, the four most important kinds of urban projects used between the 1960s and the 2000s were Land Readjustment (LR), Housing Site Development (HSD), Urban Redevelopment (UR), and Housing Reconstruction (HR).

### 3. FOUR MAIN URBAN PROJECTS

Land Readjustment (LR, Toji guheok jeongli) is an urban planning tool used to consolidate disparate and fragmented land parcels into contiguous tracts, while building public infrastructure that included roads, parks, rivers, and sites for public buildings. A LR project was implemented in Seoul for the first time during the colonial period by Japanese civil servants and engineers. It is commonly known that LR was first practiced in the city of Frankfurt to reorganize irregular agricultural plots, to subdivide land into urban parcels, and to get roads and other infrastructure built (SMG, 1996, Vol.6, 857). LR has been widely adopted for both agricultural and urban areas in most developed countries except for the U.S. and England (Ewing, R., 2000). Japan learned LR from Germany at the turn of the century and used it for the rehabilitation of Tokyo and Yokohama and later for suburban expansion into Kanagawa, Saitama, and Chiba in the early 1980s. Japan experimented with LR in their colonized territories before they had fully absorbed the technique, Seoul being a prime example (Sorensen, A., 2000, 52; Muller-Jokel, R., n.d.)

There are advantages to LR both from a private and public standpoint. For private land owners, the reorganized plots become more regular with wider and straighter adjacent roads, although the remaining area becomes smaller. The land values are enhanced, and so are the profits. The central and municipal government can resolve infrastructure insufficiencies without the direct investment of public money. In the developed countries, LR is described as a consensual, bottom-up planning tool, even though it has generally been initiated by the central and local governments. Seoul, which does not have sufficient public funds but is under enormous pressure for infrastructure, relies heavily on LR. The main point of contention centers around the percentage of land taken from private land owners for infrastructure.

In Korea, the first Urban Planning Act (Joseon sigaji gyehoekryeong) in which LR was specified was enacted in 1934, as 34 districts in Seoul were designated for LR projects. It has been confirmed by the historical records of the Seoul Metropolitan Government and related research materials that the Japanese learned LR from Germany, and later adopted it in Seoul during the Japanese colonization period. So the LR projects in Seoul were indirectly influenced by German planning tools and were directly implemented by Japanese planners.

The project areas were just outside of the old center along the east-west axis; Daehyun, west of the old center, and Donam, northeast of the center, were the largest ones. Yeongdeungpo was the exception as it extended across the Han River southwest following the Gyeongbu (Seoul-Busan) railway line. Projects in only 10 designated districts (about 1,800 ha) were executed by the end of colonization in 1945 (Sohn, J. M., 2003, Vol.1, 97; Kim, J. Y. & Ishida J., 2009; SMG, 1996, Vol.6, 856-857).

The Korean government reestablished the Urban Planning Act (Dosi gyehoek beop) in 1962, but it still followed prior Japanese regulatory models. The Building Act (Geonchuk beop) was established in the same year. Between the two realms—the former for the planning and management of the two dimensional land-use pattern, the latter for the regulation and control of the three dimensional spaces—there was no comprehensive regulatory system. The concept of urban design, consolidating urban blocks,

plots, and buildings, was not employed until the 1990s.

LR projects were actively implemented during the first 5-year Economic Development Plan Period (1962-1966). Seventeen districts with a total of 5,855 hectare were completed during that decade. Most of them (15) were within a 5-15 km radius of the city center. During the second and third 5-year Economic Development Plan Periods (1967-1976), LR projects expanded across the Han River. Eleven districts amounting to 4,003 hectares were completed in the 1970s. Gangnam was the single largest area (2,688 ha) to undergo LR in Korea, and it became the new commercial and business center while supporting upscale residential areas. Gangnam is considered Seoul's 'Manhattan' today. The LR projects continued until the mid-1980s. The total area of Seoul affected by LR from the colonial period to the 1980s was about 14,000 hectares. This figure is 38.6% of the total urbanized area (36,250 ha), and 23% of the Seoul Metropolitan Area (60,540 ha) (SMG, 1996, Vol.6, 856-857). LR was considered a synonym for urban planning in the 1960s and 1970s in Korea.

Table 1. LR projects implemented in Seoul

Source: SMG, 1996, Vol.6, 856-857

Period	Area(ha)	Location
1930s - 1950s	1,815	Daehyun, Donam, Yeongdeungpo
1960s - 1970s	10,740	Mangu, Gyeongin, Yeongdong
1980s	1,445	Guro, Yeongdong,
Total	14,000	

Although LR played an important role in resolving land shortage issues, it caused serious social problems. Land owners reaped enormous profits from LR projects, and it led to a flurry of land speculation. Land values in the LR project areas increased rapidly, particularly in Gangnam. Research showed that Seoul's land prices grew 1,176 times between 1963 and 2007, while real monthly income only increased 15 times during the same period. Hypothetically the land value of South Korea in 2007 was equivalent to the entire land value of Canada, which is 100 times larger than South Korea (Sohn, N. G., 2008). Urban planning and land speculation became two sides of the same coin.

From the early 1980s, the Korean government abandoned LR for two reasons. First, LR project areas were building up too slowly as owners waited for the value of their land to increase. Second, the government still preferred to minimize public financial burdens but now wanted to reap the profits from development in the name of the public interest, which the LR Act did not allow. And so they introduced an alternative planning tool, Housing Site Development (HSD, Taegji gaebal), which allowed the government to profit and helped to expedite land development to provide more housing for a growing urban population. And this was needed—between 1965 and 1991, about 286,000 people moved into Seoul every year, meaning that 780 people were moving there every day.

The Housing Site Development Promotion Act (HSDPA) was established in 1980. The HSDPA was special legislation that could override 19 related laws including the former Urban Planning Act

(Sohn, J. M., 2003, Vol.4, 285). HSD follows four steps: the purchase of entire land areas, the development of residential properties, the construction of residential buildings, and the sale of housing units to individuals. The projects were administered by quasi-governmental agencies such as the Korea Land Corporation (KLC) or the Korea National Housing Corporation (KNHC), which merged into the Korea Land & Housing Corporation (LH) in 2009. The KLC/KNHC had the option of selling certain portions of developed land at the third step to private housing developers. The Sanggye District in northwest Seoul is one example, where a total of 41,874 apartment units were provided within a 371.5 ha area (Sohn, J. M., 2003, Vol.4, 293). The government carried out a very ambitious plan between 1988 and 1992 through HSD, constructing two million apartment units. The five major satellite towns of Seoul - Bundang, Ilsan, Pyeongchon, Jungdong and Sanbon - were also developed by HSD.

If LR was the tool to reorganize plots for single detached houses, HSD was the means of providing high-rise apartment complexes for a growing urban population. In most cases, the HSD project obliterated the existing urban fabric and, from this tabula rasa, planned and developed a complete distinct if not fairly monotonous urban pattern. In this sense the HSD has an anti-urban bent as compared with LR. The top-down approach and the speed of HSD projects reflected the governing style of military regimes which lasted until 1993.

While the urbanized area of Seoul expanded, the inner city deteriorated. Behind the main street, many old timber structure buildings and makeshift shacks remained. From the late 1960s, the city government was under pressure to improve the spatial and visual qualities of the urban center. The city government also needed to replace the low rise buildings to supply more office and commercial spaces. And so an Urban Redevelopment (UR, Dosi jaegaebal) plan was launched, formalized with the establishment of the Urban Redevelopment Act in 1976. The first UR project to be completed was the construction of the Plaza Hotel across from City Hall in 1976. About 50 small plots were purchased and merged for the project. Subsequently, most of the high-rise office buildings erected in the center of Seoul, including Samsung Headquarters and the Kyobo Building, were the results of UR into the 1980s. Since the execution of UR required money and organization for the purchase of land from many owners and the construction of large buildings, only the conglomerates (chaebol) such as Samsung, Hyundai, and Daewoo could handle and complete UR projects (Sohn, J. M., 2003, Vol.2, 168-177).

In the early 1980s, UR projects shifted from the inner center to the outer residential areas. One and two story houses were demolished and replaced by high-rise apartment buildings. UR is legally initiated by an association of land owners, but it was actually led and controlled by the large construction companies. The goal of UR was to resolve the housing shortage and enhance living conditions, but the underlying driving force was the economic profit from its development. The construction industries, land owners and potential buyers could all gain advantages from the UR because of the rampant inflation of land prices. The government also reaped benefits, as it could provide infrastructure without public investment, as seen in LR and HSD. Because of these merits, UR quickly deviated from redevelopment of crumbling low-rise inner-city houses to the demolition of medium-rise apartments

less than 30 years old for the reconstruction of larger and higher apartments. This new strategy was termed 'Housing Reconstruction (HR, JutaeK jaegonchuk)' as opposed to Urban Redevelopment (UR). The areas developed by both UR and HR from the 1970s to 2010 cover about 4,080 hectares in Seoul (SMG, 2012). Despite serious shortcomings, the UR and HR projects expanded into residential areas and the average size of the projects grew larger through the mid-2000s, during President Lee Myung Bak's term as mayor of Seoul.

Embellished as the 'New Town Project', politicians exploited this reconstruction in their election campaigns in 2007 and 2008. Many of the projects initiated in a hurry and experienced major problems during implementation. When the 'New Town' boom collapsed after the financial crisis of 2008, many of the projects fell into gridlock. Opposition to the New Town projects grew amongst land and home owners at the designated areas. Some wanted the expedition of redevelopment, whereas others wanted the cancellation of the projects. The more serious problem was that UR, HR and the New Town project did not retain the original community of landholders even though the project was successfully completed financially. Today, of a total of 1,300 districts that were designated for UR, HR, or New Town projects, only 434 were completed, while 866 districts are under the process of reexamination, reappraisal, and conflict resolution (SMG, 2012).

Table 2. Four main urban projects implemented in Seoul from the 1960s to the 2000s

Urban Project	Year	Area (ha)
LR (Land Readjustment)	1930s-1980s	14,000
HSD (Housing Site Development)	1980s-2000s	3,870
UR (Urban Redevelopment)	1970s-Present	2,490
HR (Housing Reconstruction)	1970s-Present	1,590
New Town	2002-Present	2,580 (designated)

The main urban planning strategies that have been employed in Seoul since the 1960s can boast some success during a high economic growth period. The continuous increase of land price has led to a construction boom and produced stable economic profit. The central and municipal governments, public agencies, construction companies, developers, and individuals were all involved in real-estate development for the last several decades. Today, nearly 70% of the urbanized areas in Seoul were developed, redeveloped, or reconstructed after the 1930s. It should not be a surprise that the 600-year-old capital city appears neither traditional nor colonial to outsiders. The ratio of construction investment to the total GDP (gross domestic product) was more evidence of a construction boom in Korea. Just before the global economic crisis of 2008, the ratio was 17.9%, about 6-8% higher than that of other OECD developed countries, such as Germany (9.7%), the US (10.0%), France (10.1%), Italy (10.2%), England (10.5%), the Netherlands (11.5%), and Japan (12.1%) (OECD Statistics). Another statistics show that the Korean government continued to invest in the construction of housings and urban



infrastructure as well as supporting private construction industries even after the economic crisis of 1997 (Kim, S. H., 2011, 216-217).

By 2007, signs of a Korean real-estate market bubble and the oversupply of residential and commercial spaces started to surface, as the ratio of housing supply against demand reached 100%. By 2010 there were 150,000 unsold and unoccupied high-rise apartment units. (Data from MLTM; Korea Economic Daily, March 10, 2010). Many real estate experts agreed that expensive commercial spaces were also oversupplied (Kim, S. H., 2011, 211). Amid recent criticism and debate over large-scale development and construction of high-rise apartment complexes, there is growing consensus that urban planning policy needs to be altered from development to regeneration (Kim, S. H., 2012, 127). The shift to an alternative paradigm is even more urgent since Korea has entered an era of low economic growth and low birth rates. If this premise holds, the first research task would be to reexamine the urban and architectural morphologies in the areas that have been unaffected by the development-oriented approach of the previous planning tools.

As shown above, the LR project encompassed the largest land area among the four main urban projects implemented in Seoul. LR project areas were also the oldest planned areas. But because of the nature of the planned urban fabric—the grid pattern of streets, blocks, and plots—they remained relatively untouched by the subsequent planning tools. Therefore, it is important to examine the LR project areas closely before we discuss the possibility of urban regeneration in Seoul.

**4. URBAN MORPHOLOGIES OF THE LR PROJECT AREAS**

According to the NLPUA, the city of Seoul consists of four zoning areas—Residential, Commercial, Industrial and Green areas. As of 2006, the Residential areas comprised 50.4% of the total administrative area (605.4 square kilometers), more than the three other zoning areas combined—the Green (40.9%), Industrial (4.6%), and Commercial (4.1%). The Residential areas are subdivided into the Exclusive Residential (1.0%), General Residential (47.8%), and Quasi-Residential areas (1.6%). The General Residential areas are further classified into the Class-1 Residential (10.8%), Class-2 Residential (22.2%), and Class-3 Residential areas (14.8%). The General Class-2 Residential areas thus span almost a quarter of the city, and so are considered the prototypical urban spaces in Seoul. These areas are mostly deep inside blocks adjacent to narrow secondary roads.

Over the last 40 years, these areas have gone from containing one or two-story single-family detached houses to three to four-story multi-family housing and mixed-used complexes. These urban buildings are not favored by the upper middle class, who want to own the more profitable apartment unit. If the real estate speculation and construction boom lasted, this smaller urban architecture would have been replaced by high-rise apartment complexes or commercial buildings. The 866 incomplete districts designated for UR, HR, or New Town projects are evidence of that. It was the bursting of the real estate bubble in 2008 that finally brought the question, which had been ignored by both by the public and private sectors, as to how to sustain and improve urban areas without relying on redevelopment and reconstruction. This is why a reevaluation is needed of the LR project areas, which

constitutes the largest portion of urbanized Seoul today <Fig 2>

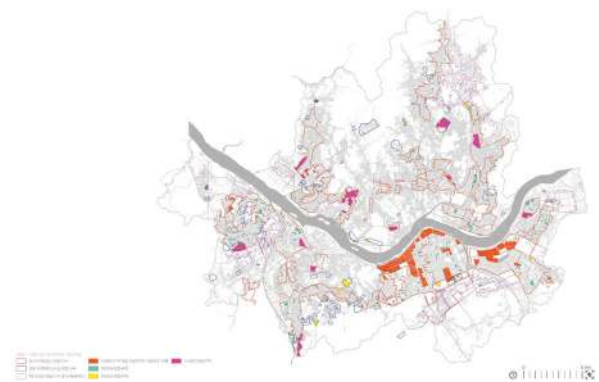


Figure 2. Various urban projects in Land Readjustment (LR) project areas in Seoul, 1930s-1980s (LR projects indicated by red lines; urban projects by color tones and lines) Source: Seoul Development Institute. (2009). Urban Form Study of Seoul, p.81

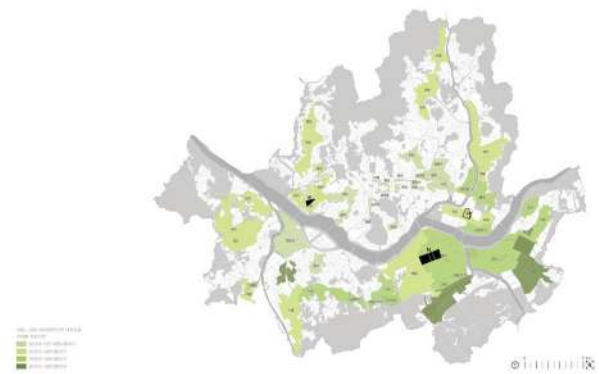


Figure 2a. Three LR project areas studied in Seoul (LR Project areas indicated by lighter tones; studied areas by darker tones) Redrawn for this study. Source: Seoul Development Institute. (2009). Urban Form Study of Seoul, p.9

A preliminary study of the LR projects areas revealed common urban morphological features—street layout, plot arrangement and size, and building types—despite locational variations. The study selected three areas for further comparative examination: Seogyo-dong within the Seogyo LR project area, Hwayang-dong within the Hwayang LR project area, and Nonhyeon-dong within the Yeongdong LR project area < Fig 2a; Table 3 >.

Table 3. Three LR project areas studied

Area Studied	Years	Average Plot Size (m2)	Sub-Block with Streets
Seogyo-dong (Seogyo LR)	1960-1967	150-160	2-4 layers of plots
Hwayang-dong (Hwayang LR)	1967-1972	150-160	surrounded by 6-10 meter-wide roads
Nonhyeon-dong (Yeongdong LR)	1971-1985	250-300	or penetrated by 4 meter-wide alleys

The study focuses on the plot sizes and building types in the three areas to see what 'typical urban architecture' is in Seoul today. The premise of this investigation is that the sizes of the sub-blocks and plots are one of the most critical variables for urban regeneration.

All three selected areas were developed between the 1960s and the 1980s, Seogyo from 1960 to 1967, Hwayang from 1967 to 1972, and Yeongdong from 1971 to 1985. The project areas were 172 hectares for Seogyo, 211 hectares for Hwayang, and 2,688 hectares for Yeongdong. As described earlier, Yeongdong was the single largest LR project in Korea and occupies the central part of Gangnam today.

These projects moved away from the irregular and discontinuous urban fabric of earlier times. If the block is defined as the area surrounded by the roads of at least 2 lanes with a separate pedestrian sidewalk, the relatively new urban fabric of Seoul is also characterized by the polarization of super blocks and layers of smaller sub-blocks (Kim, S. H., 2011, 100; Kim, S. H., 2012, 127). Considering these circumstances, the studied areas differ in block size - three rectangular blocks at Nonhyeon-dong (300 sub-blocks), two trapezoidal blocks (42 sub-blocks) at Seogyo-dong, and one small sub-block at Hwayang-dong. But despite the variant block sizes, the sub-blocks are commonly comprised of 2 to 4 layers of plots surrounded by 6 to 10 meter-wide roads or penetrated by 4 meter-wide alleys. The average lot sizes are between 150 to 160 square meters at Seogyo-dong and Hwayang-dong, and between 250 to 300 square meters at Nonhyeon-dong (Kim, S. H., 2012; Lee, J. Y. & Kim, S. H., 2013; Kim, Y. Z. (2013).

This finding confirms the implementation of the planning policy in the 1960s and 1970s to make plots at Gangnam twice as large as those at Gangbuk (SDI, 2010). It is interesting to compare this figure with the average plot size of Seoul in general. As of 2005, the average plot size excluding public building sites was 267 square meters, while the average building height is only about 2.5 stories (Kim, S. H., 2009, 286). It indicates that the plot sizes in the Gangnam LR project areas approximate the typical urban element in Seoul today.



Figure 3. Seogyo-dong within the Seogyo LR project area in Seoul  
Source: Kim, Y. Z. (2013).



Figure 4. Hwayang-dong within the Hwayang LR project area in Seoul  
Source: Retrived and Redrawn from Lee, J. Y. (2009). p.30.



Figure 5. Nonhyeon-dong within the Yeongdong LR project area  
Source: Base map was retrived from the Seoul Development Institute (2010) and redrawn for this study.

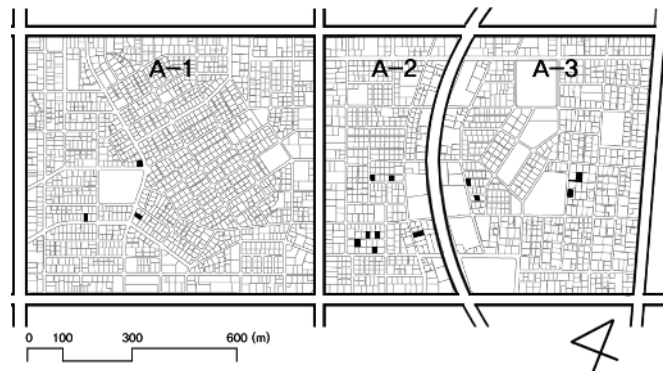


Figure 5a. Nonhyeon-dong (A1~A3) within the Yeongdong LR project area,  
Source: Retrived and Modified from Kim, S. H. (2012)



The three areas studied consist of more than two zoning areas. The perimeters of the blocks are surrounded by either Commercial or Quasi-Residential areas in a linear pattern, whereas the inner blocks are divided into Class-1, Class-2, or Class-3 Residential areas. This horizontal shift of zoning within a block can be compared to the layers of an onion. The largest portions are Class-2 Residential areas within secondary roads. These areas were planned for single detached houses by LR projects. The research confirms that one-story single family houses were built from the 1960s to the 1970s at all three areas. The average floor areas of the houses at Nonhyeon-dong are about twice the size of those at Seogyo-dong and Hwayang-dong, in direct proportion to their plot sizes.

Between the 1970s and 1980s, two-story single family houses began to be built, and at the same time the existing one-story houses were partially modified or vertically expanded for more floor space. In the 1990s, three and four story multi-family housing, called 'dagagu jutaek' and 'dasedae jutaek,' (maximum 660 square meters and maximum 19 units) replaced the existing houses. At the three studied areas, these two types comprised the largest percentage of the buildings. It was due to a governmental policy to promote the construction of medium-rise housing for middle-class dwellers who could not afford the purchase or rent of the high-rise apartment. These buildings were planned, constructed, and sold by small-scale developers and builders who usually did not collaborate with licensed architects or urban designers. Although they played an important role in relieving the shortage of middle-class urban housing, they were criticized for the low quality of their architectural design and the absence of urban design coordination. The compact buildings, narrow adjacent roads and insufficient parking spaces led to their being considered undesirable living spaces.

With the conversion from the single family houses to multi-family housing, Class-2 Residential areas in the inner blocks were infiltrated by commercial interests after the 1980s. Enforcement of the Decree of Building Act prohibited large scale commercial buildings in Residential areas, but small retail shops, restaurants, office space, and miscellaneous quasi-commercial businesses, all classified as 'Neighborhood Living Facilities (geullin saenghwal siseol),' were allowed in residential areas. The zoning principles defined by the National Land Planning and Utilization Act were circumscribed by the building policies in the Building Act to enable quasi-commercial spaces to encroach into the residential areas and generate an eclectic urban landscape.

All three areas were infiltrated by this commercialization but in different ways. At Hwayang, most of the converted houses became restaurants, bars, and nighttime entrainment spots as the Subway Line 2 opened from 1980 to 1984. By comparison, the houses at Seogyo were renovated into small offices for book design and publication companies, under the influence of the Hongdae area across the street, known for its urban arts and indie music culture. At Nonhyeon the renovated single family houses were turned into shops and offices for the music and visual entrainment industries. These are due to the locational advantages of a high urban culture, a quieter working environment and a less expensive rental fee compared to the buildings on block perimeters.

It is worth noting that the District Unit Plan (DUP) was used to address development pressure for larger floor areas at Hwayang. It increased maximum plots sizes and changed the zoning from a

General Residential to a Quasi-Residential area so that large retail stores and offices could be constructed. As mentioned earlier, the DUP is the long-term, systematic, and holistic management plan for the betterment of the urban environment. As exemplified at Hwayang, however, the DUP has often been used for the acceleration of commercialization, which increases land value. More recently, the Special Plan District (teukbyeol gyehoek guyeok) under the DUP has often been exploited as a tool to develop large commercial complexes quickly. The study of the three LR projects areas shows that there was continuous market pressure to convert the existing buildings into larger, higher, and more complex buildings in Seoul, as the previous Urban Management Plan was not successful in dealing with it.

The global recession in 2008 served a deadly blow to the construction market, primarily on high-rise apartments and mega-scale urban projects. As development profits are not guaranteed, construction companies hold off on decisions for new projects to avoid financial risk. The government is also cautious about making changes to existing residential areas, as its policies move from development to regeneration. The Act on the Maintenance and Improvement of Urban Areas and Dwelling Conditions for Residents (AMIUDR), the former Urban Redevelopment Act, was launched in 2003. The government added two new urban projects within AMIUDR in 2012—the Residential Environment Management (Jugeo hwangyeong gwali) Project and the Street Housing Rearrangement (Garo jutaek jeongbi) Project. The adoption of these two urban projects reflects a shift of urban policy from demolition to regeneration, and from private-initiative development to public-initiative planning. The Seoul Metropolitan Government selected a number of residential areas from LR projects areas outside the city center in an attempt to improve urban neighbourhoods using these new planning tools.

It is too early to predict if this new urban planning policy will be fully realized. The large construction companies still favor development, and many land and buildings owners as well as the public have yet to understand or give consent to the new paradigm of urban policy. As an urban management plan, the DUP is not able to integrate with urban projects yet. But it is hard to dispute there has been a growing consensus that alternative urban planning approaches are required in an era of economic uncertainty. It appears the LR projects areas would be the first and best candidates for this new urban planning experiment.

## 5. CONCLUSION

Seoul is one of the few capital cities that has a long history but has seen most of its major transformation occur over a relatively short period of time. Nearly 70% of its urbanized areas were transformed after the 1930s. Various types of urban projects were used to address the shortage of residential and commercial space. The map showing where such projects were implemented reveals a rag quilt pattern of many different layers, where four urban projects—Land Readjustment (LR), Housing Site Development (HSD), Urban Redevelopment (UR), and Housing Reconstruction (HR)—have had a fundamental impact on the formulation of urban morphologies in Seoul today.

The areas affected by Land Readjustment represent nearly 40% of the total urbanized areas in Seoul, as LR was considered a synonym

for urban planning in the 1960s and 1970s in Korea. LR was the most effective tool to transform irregular urban and agricultural lands into development areas for single detached houses.

Housing Site Development was used as an alternative to LR to expedite the construction of high-rise apartments for a growing urban population from the 1980s. Urban Redevelopment was used to demolish deteriorating buildings and construct high-rise office buildings in the inner city, while Housing Reconstruction was later used to replace medium-rise apartments with apartments of higher floor-area ratios from the 1970s. New Town projects, a derivation of Housing Reconstruction, fell into gridlock after the financial crisis of 2008. Although the UR, HR and New Town projects played an essential role in providing housings in a time of high economic growth, these projects also broke down the original community of landholders and obliterated the urban fabric.

The rapid urban concentration and growth in Seoul has been interfacing with urban planning policies for the last fifty years. Expedition was promoted in laws, policies, and projects, where a variety of new rules was established to speed up the execution of the urban projects. By consequence the proper relationship between 'plan' and 'project' was often backwards. The urban projects could bypass the Urban Management Plan (UMP) when they were implemented in the form of special legislation. One could argue that short-term urban projects took precedence over long-term urban plans in Seoul. This is related to the fact that two-dimensional land use plans were not fully coordinated with three-dimensional architectural designs until the 1980s. The District Unit Plan (DUP), the core constituent of the Urban Management Plan (UMP), was regulated in 2002 by combining the former Urban Design and Urban Detail Plan. Still the DUP is often used as a development tool for architectural projects at individual plots rather than as a management tool for larger urban areas.

A full 99% of Seoul's total residential area (30,500 ha) will have to face some form of regeneration by 2020 according to urban planning guidelines and requirements. The LR project areas represent the largest portion. The previous urban planning projects, particularly HSD, UR and HR, will no longer be sustainable as economic, social, and environmental conditions change.

In a comparative study of three LR projects areas, it was discovered that the urban morphologies consisted of regular patterns of street, sub-block, plot, and medium-size buildings. The average plot sizes at the studied areas in Gangbuk were about half as large as those in Gangnam, which approximate the average plot size within Seoul today. In all three areas, single-family houses had been continuously transformed into medium-scale housing and also had been infiltrated by commercial spaces over the last 40 years. The LR project areas are critical to the reorganization and restructuring of residential and commercial spaces in Seoul.

To enhance LR project areas as sustainable urban spaces, the current urban planning policies face the hard task of coordinating urban morphologies and architectural typologies. An alternative urban planning and design tool for Seoul is needed today, and a reevaluation of the LR projects areas is the place to start.

#### FOOTNOTES

The English translation of legally defined terminologies were obtained from the Korea Legislation Research Institute. <http://www.klri.re.kr/eng/category/main.do>

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