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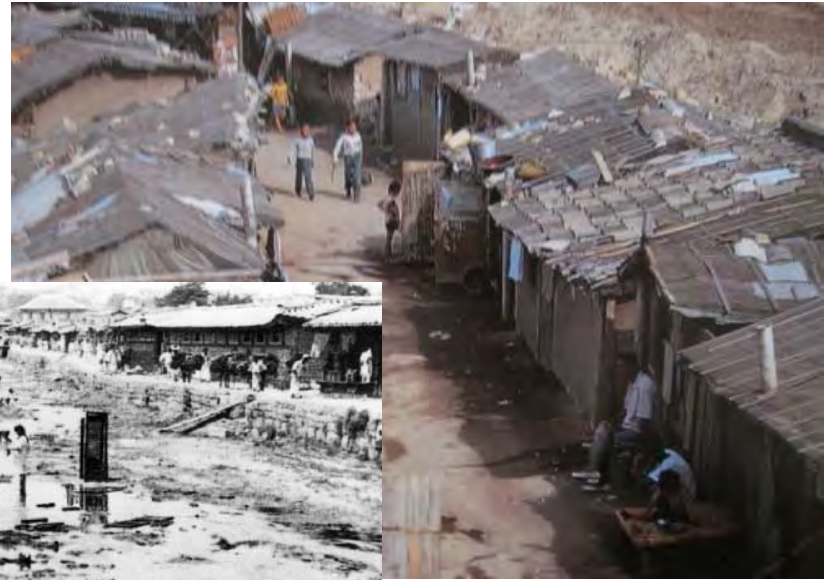


Experience of Seoul
Gangnam
Development

Seoul Today



Seoul, approx. 50 years ago



Universality and Specificity in Urban Development



London 1880's



Seoul 1960's



Jakarta 2010's

What are needed for Growth?

- $Y = f (K, L, I \mid N)$
 - K(Capital): Finance, Capital Goods,
Land, Buildings, Infrastructure, etc.
 - L(Labor): Labor, Expertise, Creativity,
Entrepreneurship, Attitude, etc.
 - I(Institution): Organization, Regulation,
Social Capital, Market, Equality, etc.
 - N(Natural Endowment): Natural Resources,
Geographical Proximity, Climate, etc.
- Black: can be borrowed
 - Red: should be built locally
 - Orange: can be borrowed in early phase, later should be built locally
 - Blue: nothing can be done

What did Korea (Gov't) do?

Supplier(Investor):

Heavy Up-front Investment

Long-term Payback (if possible)

High Risk

User :

Hard to Apply Benefit Principle

-> Public/Common Goods & Services

Market vs. Gov't

- $Q = f (K, L, I \mid N)$

- K(Capital): Finance, Capital Goods,
Land, Buildings, Infrastructure, etc.

**Cities and Infrastructures
(Making Land Work)**

- L(Labor): Labor, **Expertise, Creativity,**
Entrepreneurship, Attitude, etc.

**Education
Catching-Up**

- I(Institution): **Organization, Regulation,**
Social Capital, Market, Equality, etc.

**Lowering Uncertainty
(Increasing Predictability)**

- N(Natural Endowment): **Natural Resources,**
Geographical Proximity, Climate, etc.

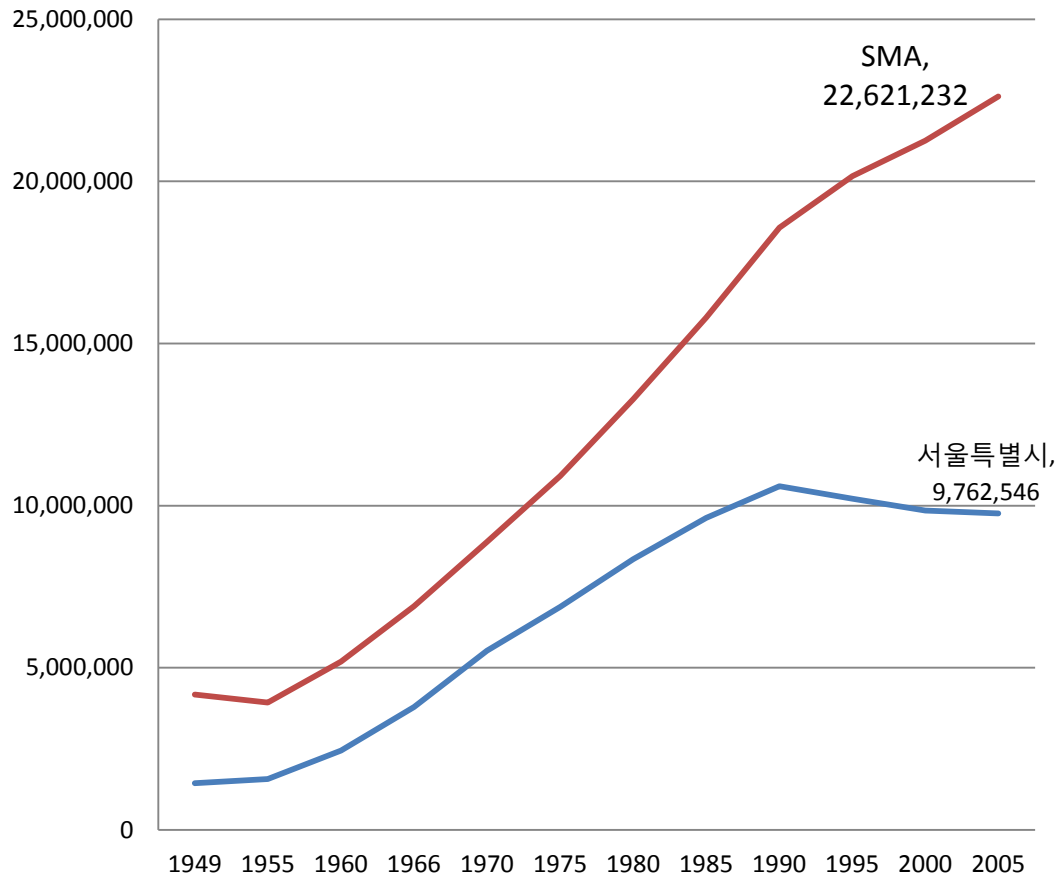
- **Black**: can be borrowed
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Surging People to Seoul



People Surging to Seoul

Population Explosion



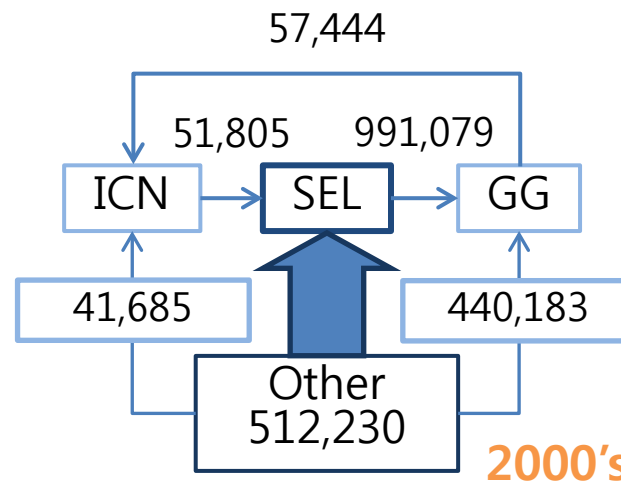
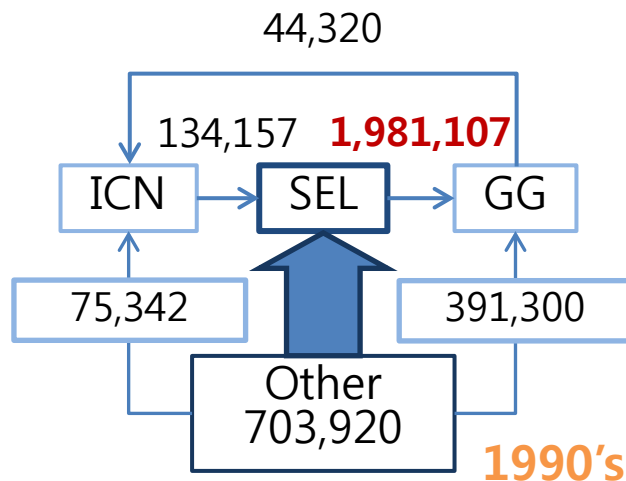
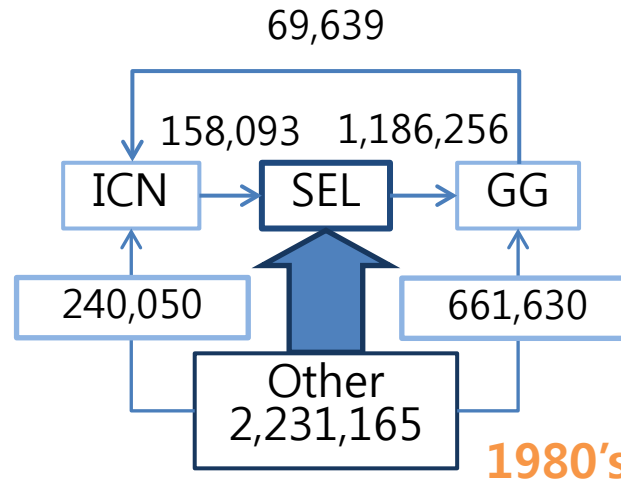
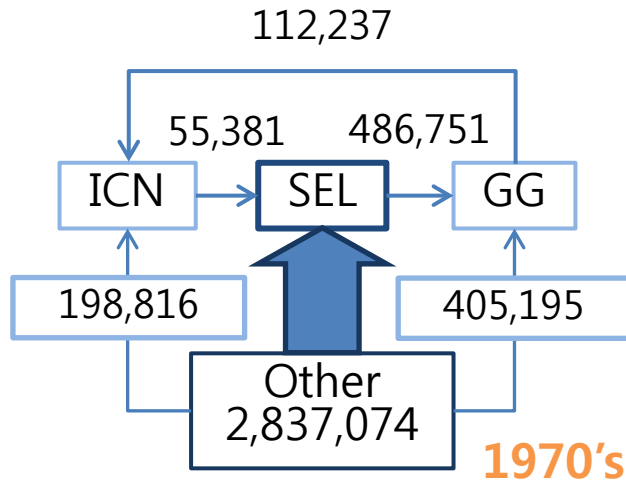
- Population increased from 2.4 million in 1960 to 10 million in 1990
- During this period, 270,000 more people have been being added every year (43% of City of Boston, MA)
- New cities completed around 1990 outside of Seoul stabilized population of Seoul



Ilsan New City, Target population was 270,000.

People Surging to Seoul

People Migration



- Until 1990, migration to Seoul was surging
- New cities outside of Seoul relieved the population pressure of Seoul

Source: Kim&Suh (2009)

Spatial Expansion of Seoul

Expansion of Boundaries

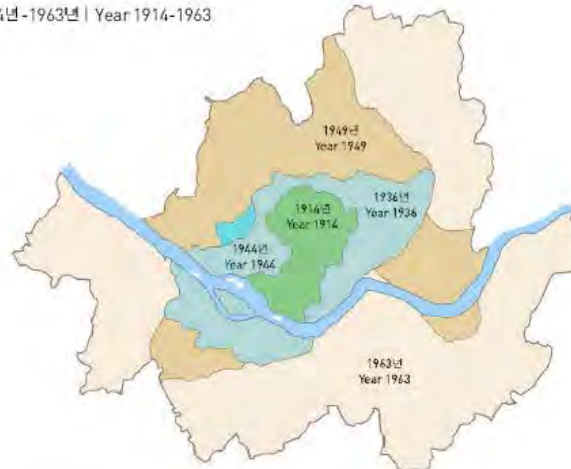
행정구역 변천 1394-1995

Change in Administrative District, 1394-1995

1394년 - 1913년 | Year 1394 - 1913



1914년 - 1963년 | Year 1914-1963



1973년 | Year 1973



1995년 | Year 1995



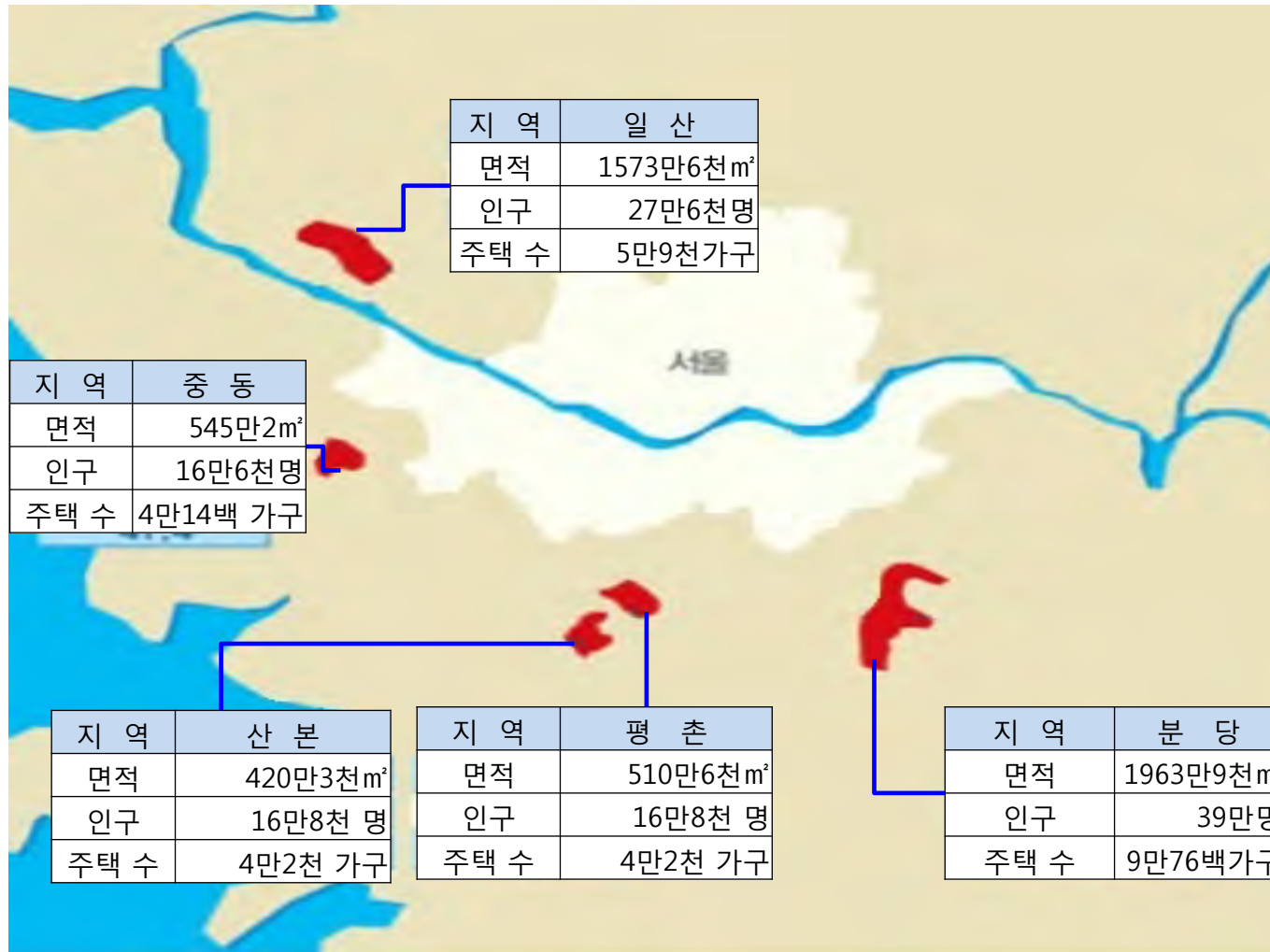
- Seoul doubled its administrative area in 1963 to resolve the urban problems, including southern area of Han river (In Korean, Gang means river and Nam means south)

Date	Area(km ²)
1946. 10. 18	136.00
1949. 08. 13	288.35
1963. 01. 01	613.04
1973. 07. 01	627.06
1988. 01. 01	605.40*

*the area did not shrink, but was merely readjusted by survey

Expansion to neighboring areas

New Cities completed around 1990



	Total
Area	50 Km ²
Pop	1.2 M
Housing	292,000 (Condo 281,000)

- The main purpose of new cities of 1990 was dispersion of Seoul population and supply of housing

Rising Urban Problems



Housing shortage and Low Quality of Living

Cheonggyecheon Informal Settlements circa 1960



60

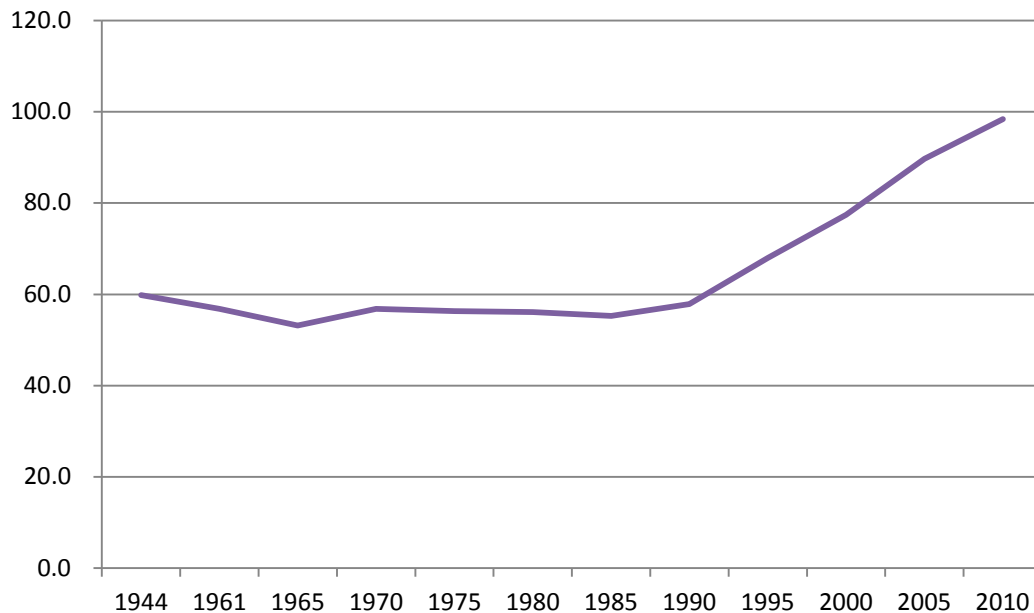


Housing shortage and Low Quality of Living

Housing Shortage

- Number of household increased by 370,000 during 1965-1970
- Number of housing unit supplied was 240,000 during 1965-1970
- Housing stock was less than 60% of # of households

Housing Ratio



	HUs	HHs	Ratio
1944	132,000	220,938	59.8
1961	275,436	485,129	56.8
1965	345,657	649,290	53.2
1970	584,000	1,029,000	56.8
1975	744,000	1,321,000	56.3
1980	968,000	1,724,000	56.1
1985	1,176,000	2,126,000	55.3
1990	1,458,000	2,518,000	57.9
1995	1,728,000	2,541,000	68.0
2000	1,973,000	2,548,000	77.4
2005	2,321,949	2,587,500	89.7
2010	2,576,041	2,617,000	98.4

서울연구원, 지표로 본 서울
(2010)

1. 기존산정방식의 경우 70년 이전까지 주택부족률,
그 이후 주택보급률이 조사되어 해당부분 음영처리
2. 인구주택총조사가 이루어지지 않은 연도의 주택보급률은 추정치
3. 70년~04년은 기존산정방식, 05년~10년 변경된 산정방식에 의한

Soaring Land Price

Land Price Change of Seoul

- Land price soared by 26 times 1964-1974 due to population and income growth
- Soaring land price became the biggest burden on households and firms

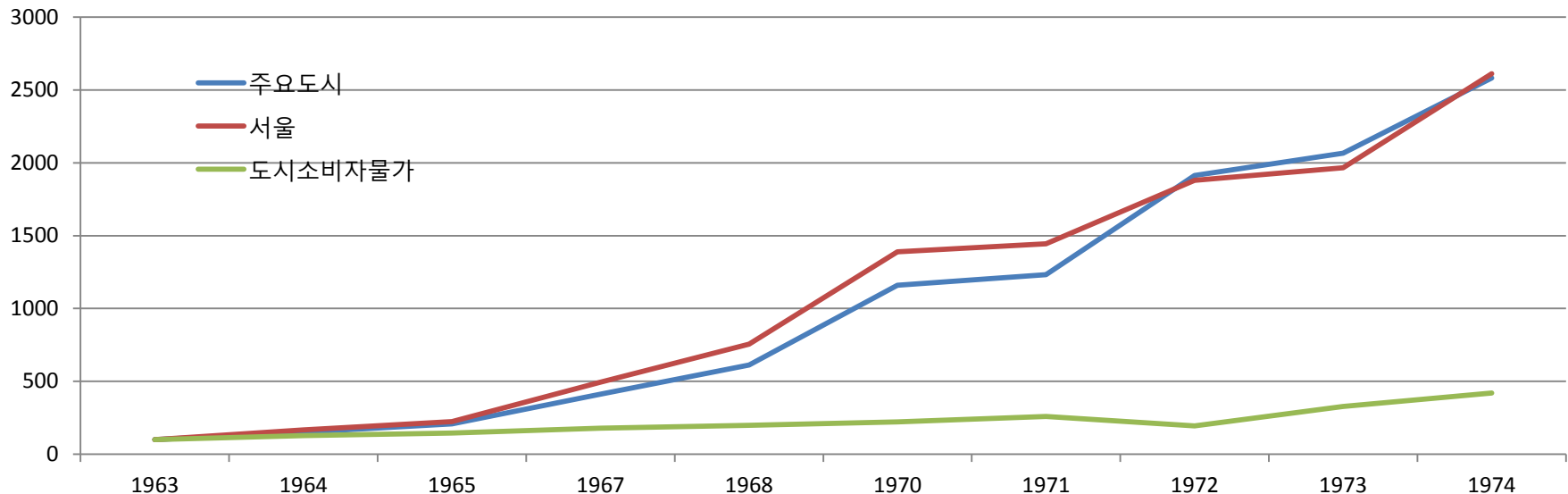
Land price change 1963~1974

	1963	1964	1965	1967	1968	1970	1971	1972	1973	1974
Major Cities	100	151	208	412	612	1160	1233	1912	2066	2582
Seoul	100	168	225	495	755	1390	1445	1880	1966	2610
Consumer Price Index	100	127.9	145.3	179	198.5	223.3	259.3	194.3	328.7	421.3

1963-1968년 대한금융단, 전국토지시가조사표,

1969-1974년 한국감정원, 토지시가조사표를 기준으로 지수화함

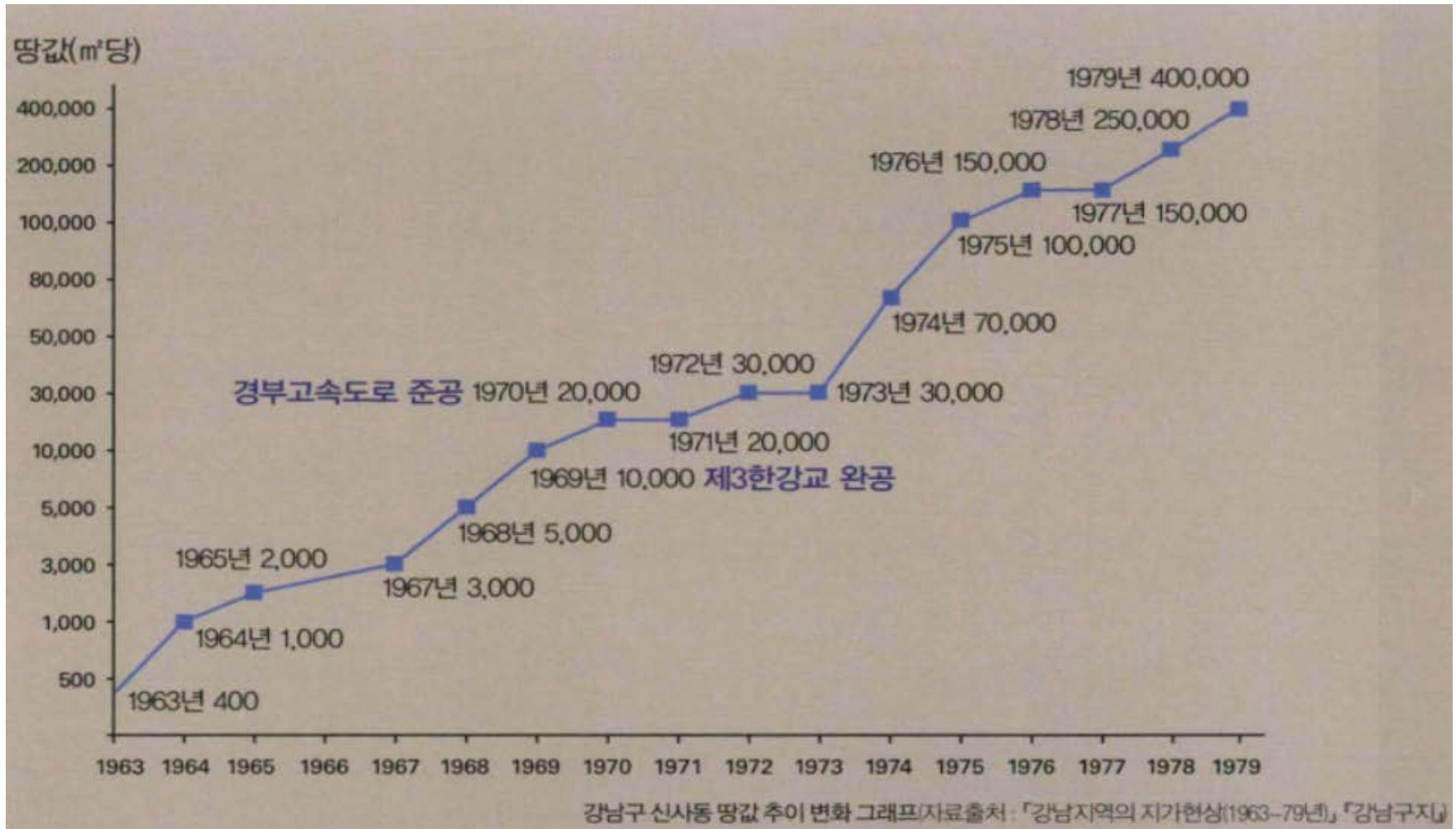
주요도시 : 서울 부산 대구 광주 대전 인천 춘천 전주 수원 청주 마산 제주



Soaring Land Price

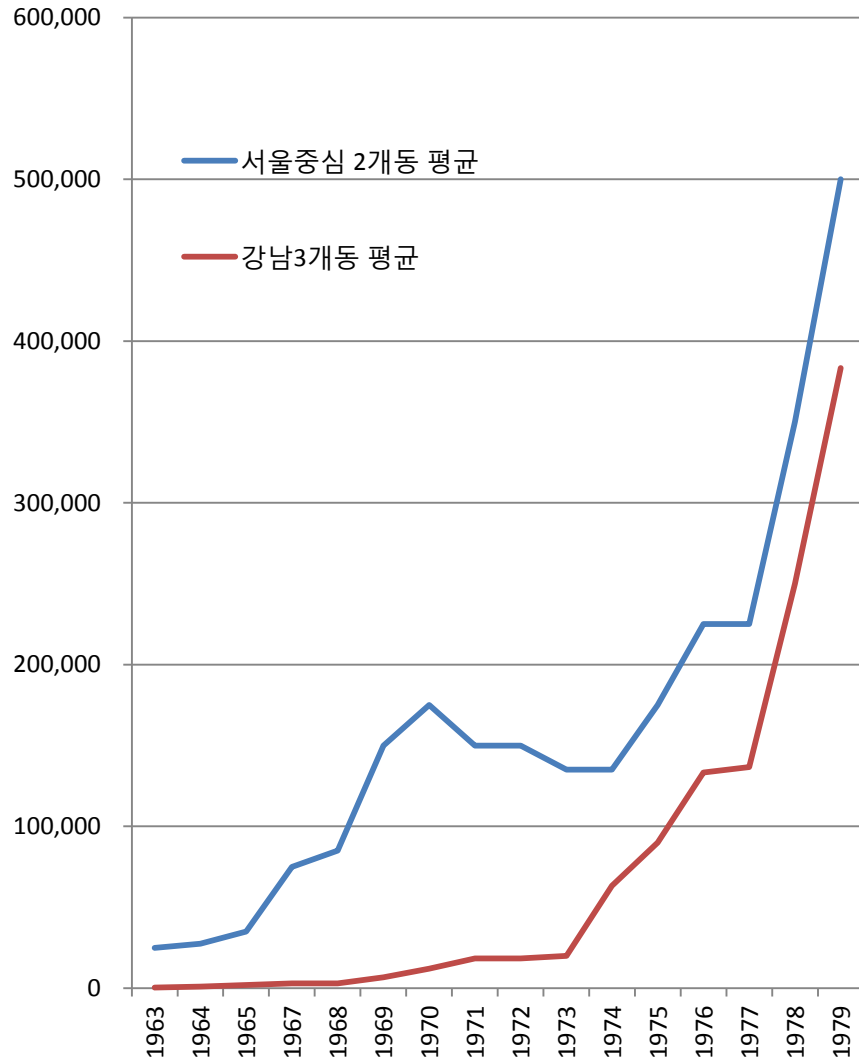
Land Price Change of Gangnam

- Gangnam land price soared by 1,000 times from 1963 to 1979



Soaring Land Price

Land Price Change of Gangnam



- Land Price of Gangnam began to increase around 1970, narrowing the gap btw G & C
- Land Price of Gangnam was 1/100 of Center early 1960's

	시청 5km이내	시청 5km이내	5~10km	5~10km	5~10km
	중구 신당동	용산구 후암동	강남구 학동	강남구 압구정동	강남구 신사동
1963	30,000	20,000	300	400	400
1964	30,000	25,000	1,000	1,000	1,000
1965	40,000	30,000	2,000	2,000	2,000
1967	80,000	70,000	3,000	3,000	3,000
1968	100,000	70,000	3,000	3,000	3,000
1969	200,000	100,000	5,000	5,000	10,000
1970	200,000	150,000	6,000	10,000	20,000
1971	150,000	150,000	10,000	15,000	30,000
1972	150,000	150,000	10,000	15,000	30,000
1973	150,000	120,000	15,000	15,000	30,000
1974	150,000	120,000	70,000	50,000	70,000
1975	200,000	150,000	100,000	70,000	100,000
1976	250,000	200,000	150,000	100,000	150,000
1977	250,000	200,000	150,000	100,000	160,000
1978	350,000	350,000	250,000	250,000	250,000
1979	500,000	500,000	400,000	350,000	400,000

토지개발, 1980, 6

Aggravating Traffic Congestion

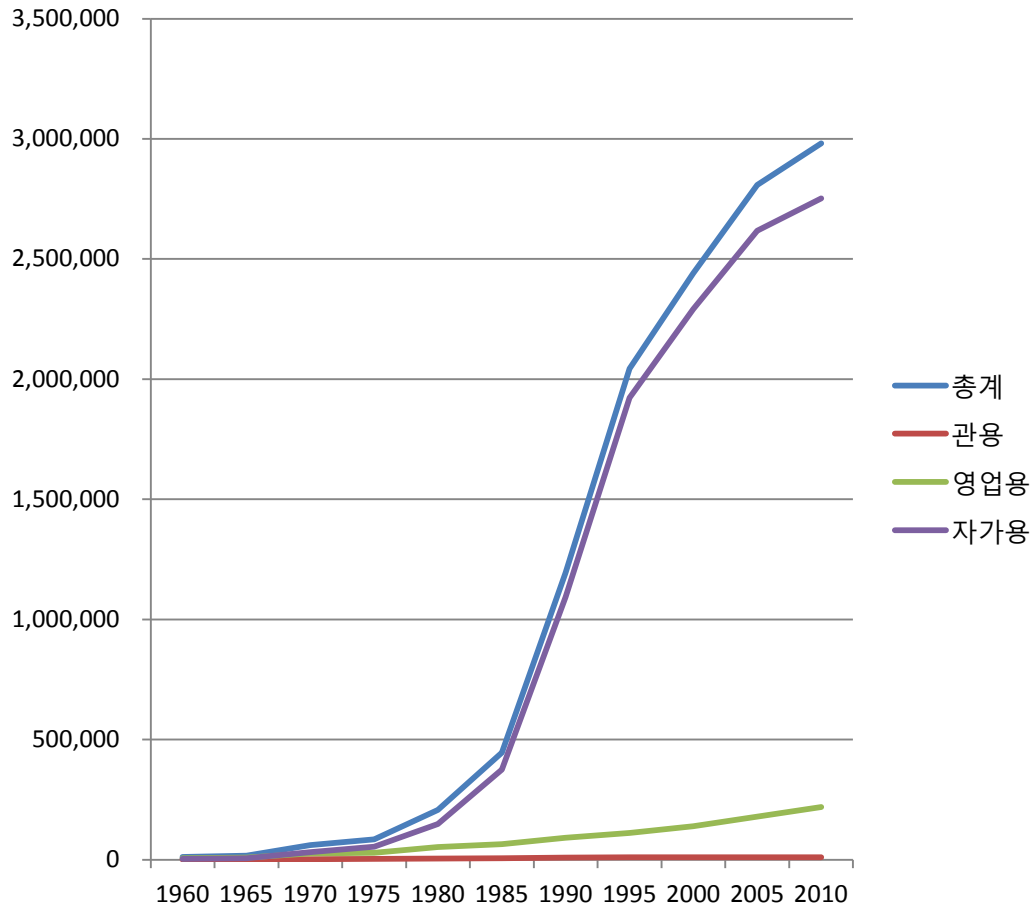
Traffic Congestion

- Number of cars exponentially increased from 1970



Aggravating Traffic Congestion

Number of Cars



- Number of cars doubled every five years from 1975 until mid 1990's

	총계	관용	영업용	자가용
1960	11,411	1,372	6,817	3,222
1965	16,624	1,353	8,581	6,690
1970	60,442	2,648	25,833	31,961
1975	85,407	3,346	28,526	53,535
1980	206,778	5,291	53,050	148,437
1985	445,807	6,403	64,373	375,031
1990	1,193,633	8,821	92,083	1,092,729
1995	2,043,458	10,260	111,216	1,921,982
2000	2,440,992	9,648	139,426	2,291,918
2005	2,808,771	10,510	179,929	2,618,332
2010	2,981,400	10,499	219,281	2,751,620

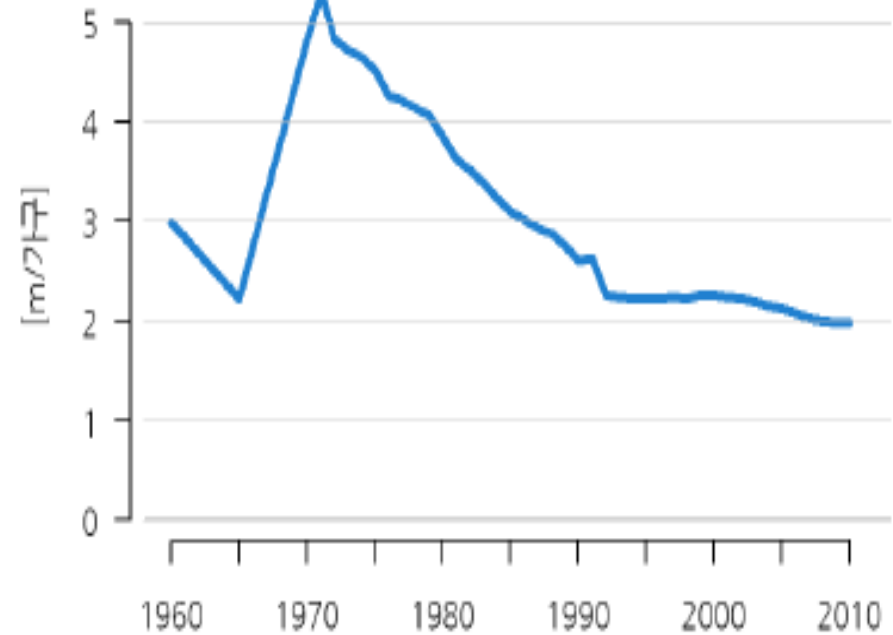
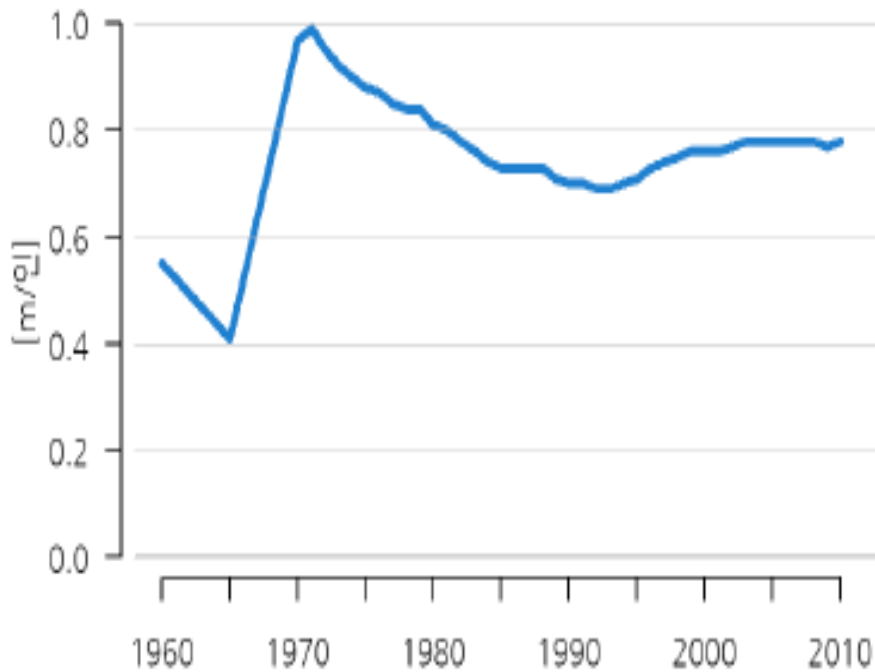
서울연구원, 지표로 본 서울(2010)

1. 관용 : 정부, 공공기관 등에 소속되어 운행되는 자동차
2. 영업용 : 일반사업용 및 대여용 자동차

Aggravating Traffic Congestion

Road Supply

- Road supply jumped when Gangnam developed
- Road supply in Gangnam was criticized at the beginning
- Several years later, road became in short again

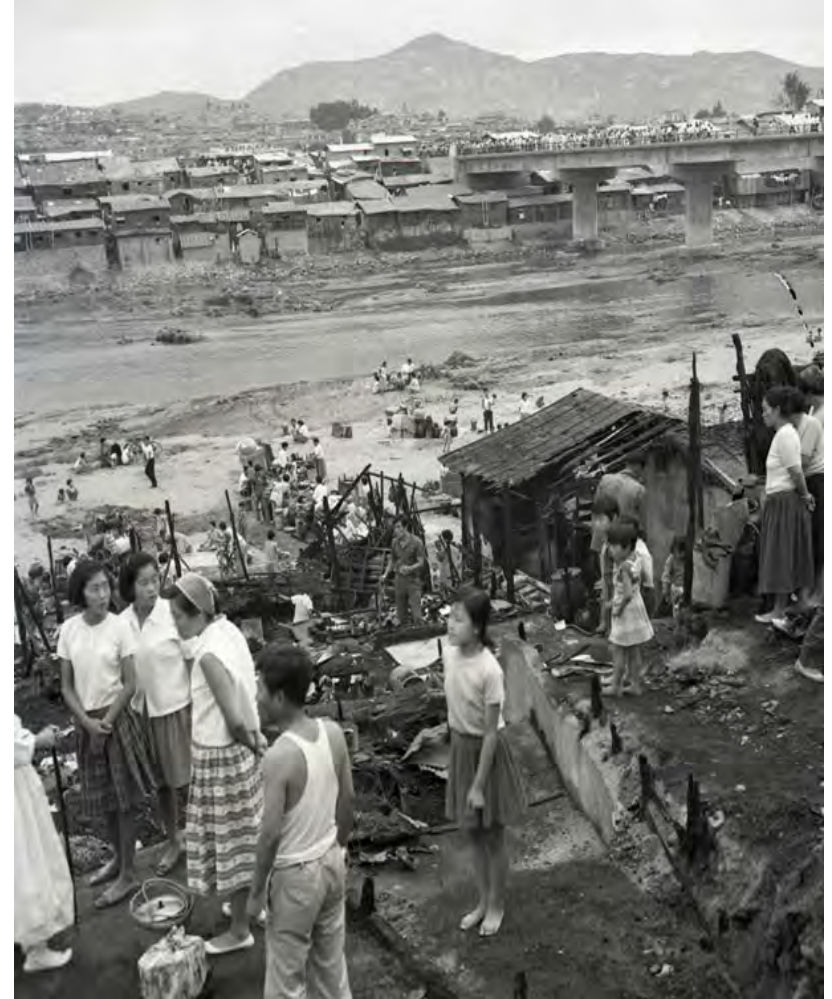


Water Supply and Sewage

Wells and Public Toilets



1960

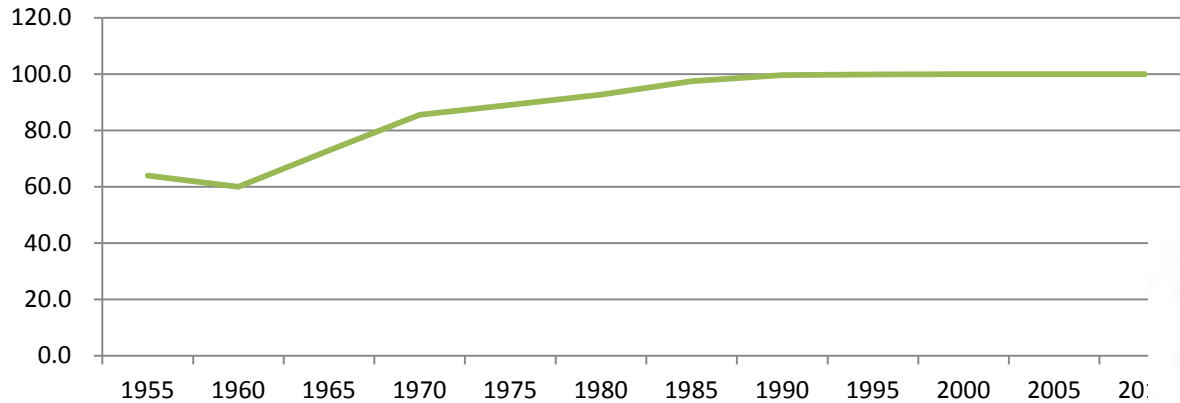


사진출처:

, , 20 100

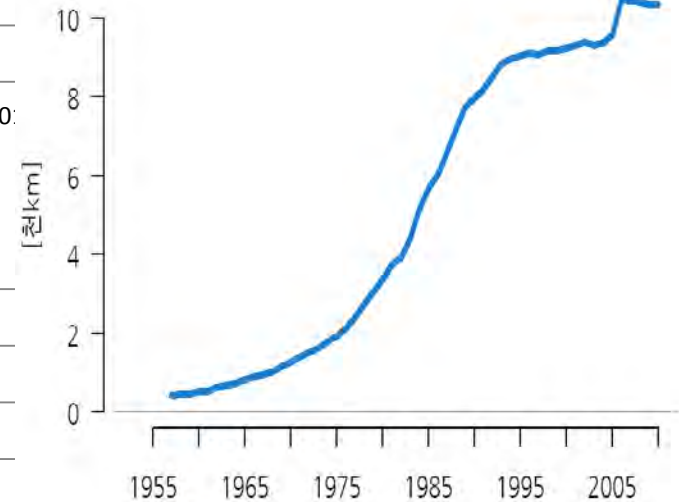
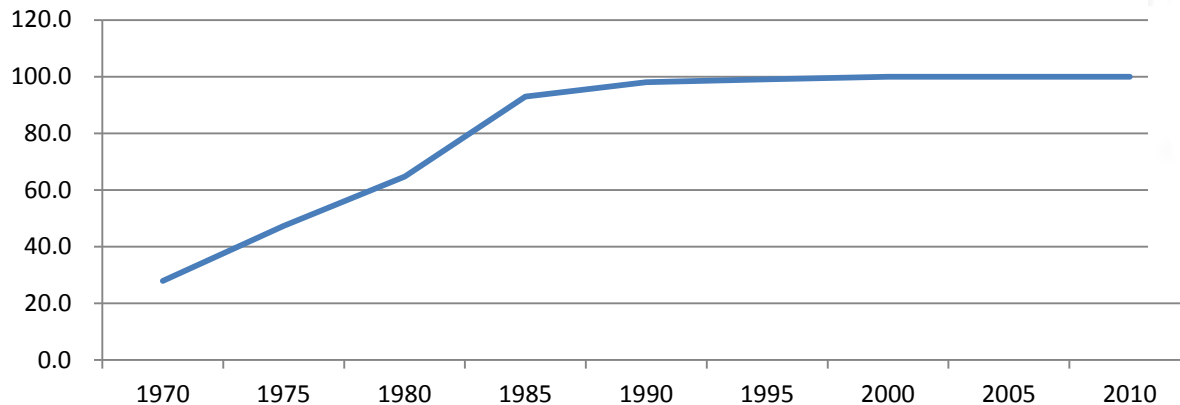
Rate of service

Water Supply Rate



- Water Supply Law 1961
- Length of water supply pipeline was built about 200~400 km per year on average until 1990

Sewage Rate



- Sewage Law in 1966

Responses of Seoul



Until mid 1960's

- 재건주택, 부흥주택, 희망주택, 시영주택, 영단주택, 후생주택, ...
- 후생주택: 주택난을 해소하기 위한 정책의 하나로 일반 서민들이 어렵지 아니하게 구입할 수 있도록 지은 주택."



Until mid 1960's

- Many critiques blamed Seoul for urban problems
- Mayor Yoon (1963-66)
 - “The reason I don’t do urban planning is to prevent immigration to Seoul from rest of the country.”
 - “Seoul population increases by 3.5 million, which is the same size as Gwangju [another major city in Korea]. Consider a permission law which mandate those who want to come to Seoul to receive a permission from Mayor and Governor.”
(Cabinet)

정책 기조의 변화

주택정책의 변화

Before

1960's

After

Policy Direction

Welfare

- ✓ Short-term, Relief
- ✓ Office in charge: Ministry of Welfare

Construction

- ✓ Housing Supply
- ✓ Office in charge: Ministry of Construction (1963년)

Development

self-help

- ✓ Site & Service, Upgrading

Low Cost Mass Production

- ✓ Large scale, high-rise

Land Readjustment

Main Agent

Government

Private

Financy

Aid

Loan

National Housing Fund

Market

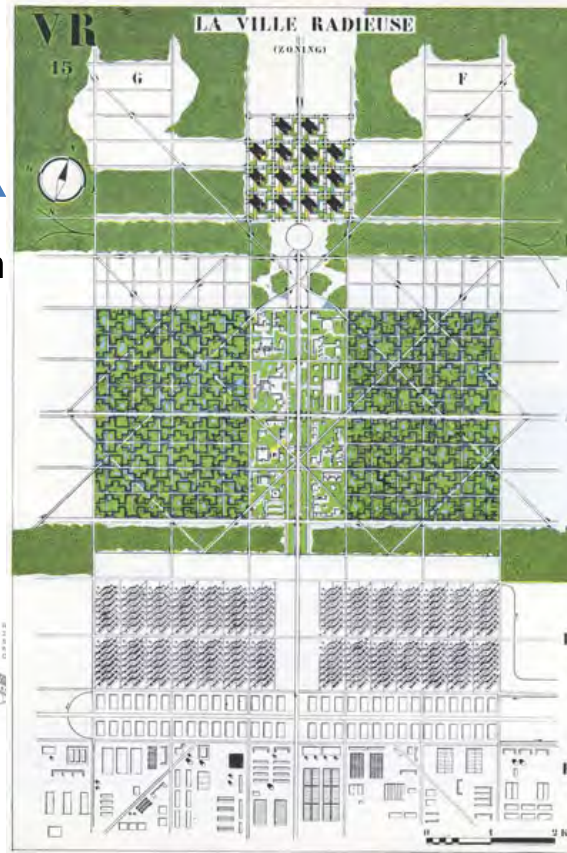
Low-density
Large land consumption



Sprawl
Not sustainable
Or, overcrowding high rise/density

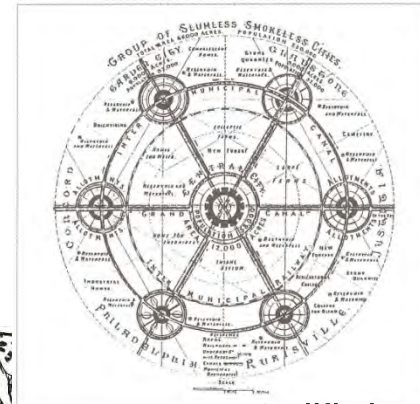
도시의
인구 폭증

High-density
Small land consumption



Compact City
Towers in the Park
(Le Corbusier)

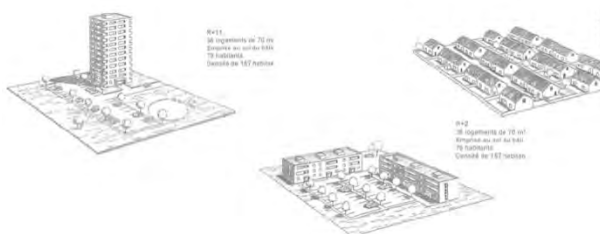
+



Modified
Garden City



Planning + Market



Which one is preferred? Low vs. High density

convenience
safety
Sanitation (water, toilet)
Lower Price, housing supply



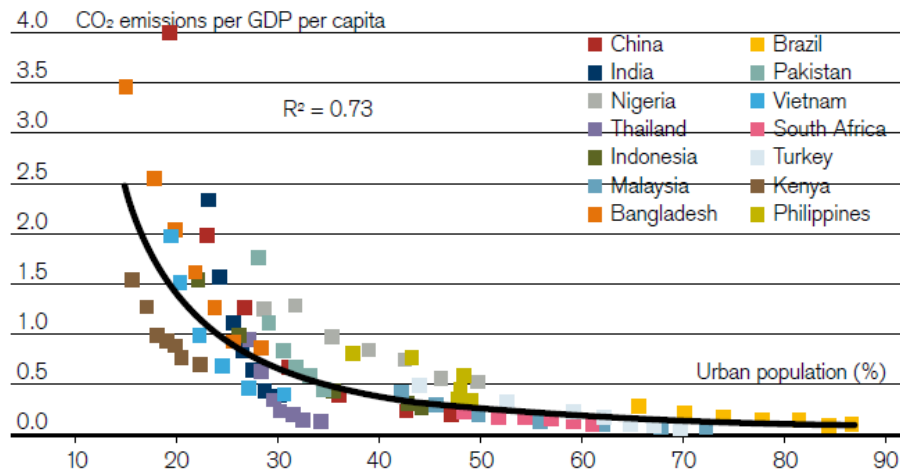
Which one is greener?

Un-developed area?



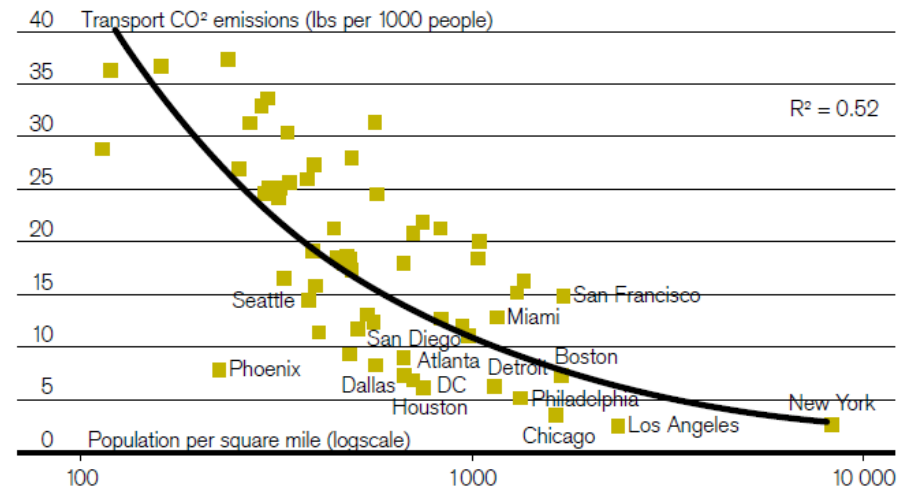
Total CO₂ emissions versus urban population rate in emerging markets (1980–2010, 5-year intervals)

Source: World Bank Development Indicators, Population Division of Department of the Economic and Social Affairs of the United Nations Secretariat, Credit Suisse



Emissions from transportation (public and private) versus population density for US metropolitan statistical areas

Source: US Census Bureau 2000 Census, Credit Suisse

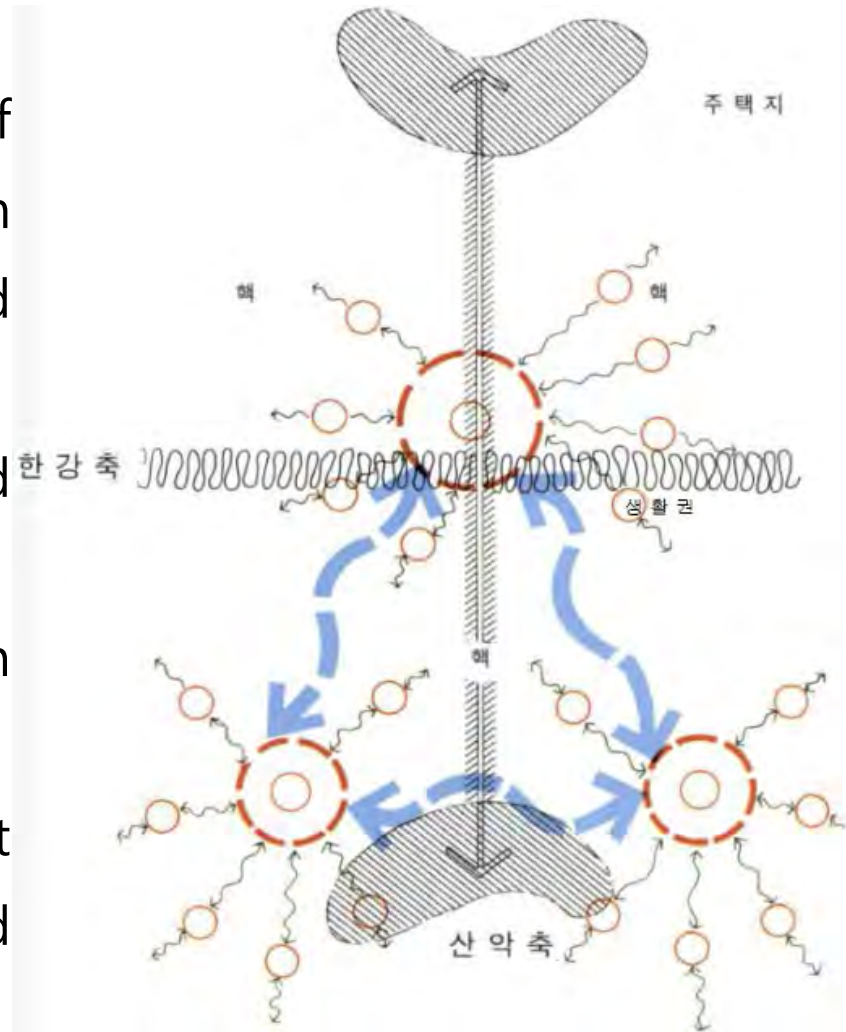


Gangnam Development



Location

- Continuous inflow of large number of people into Seoul, Seoul suffered from crowding and congestion around 1960s.
- New urban development was in need to disperse population and functions
- Political reasons: away from the north because of North Korea's threat
- Economic reasons: Gangname was not a initial candidate, but its low land price was attractive



It used to be ...

- Farm land of mainly rice, vegetables and fruits



▲ 1970 (:)



1971 (:)



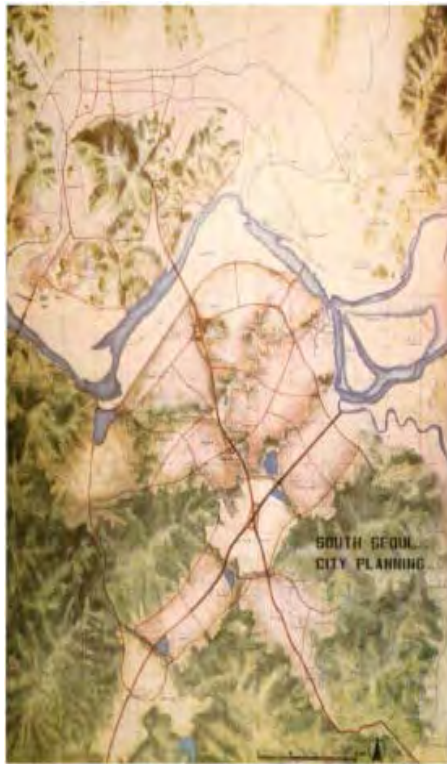
1973 (:)



(1970) : , 2011, 40

South Seoul Plan

- South Seoul Plan was released in 1966, which was proposed by an entrepreneurship
- It was one of ideas, but inspired Gangnam development



▲ 박홍식의

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, 2011,

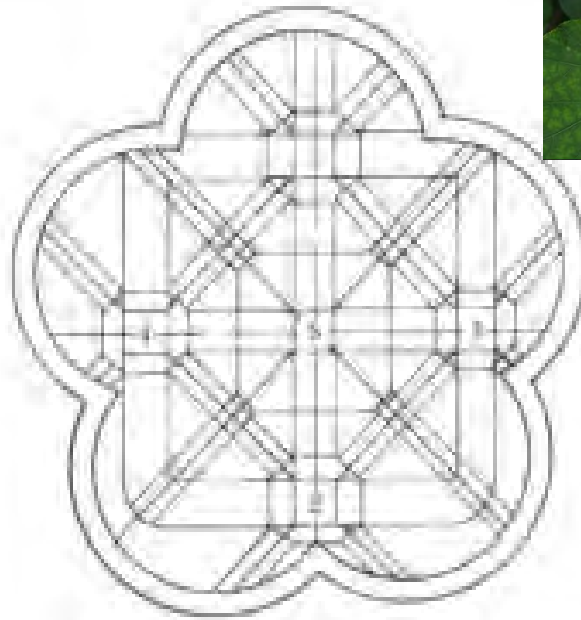
40

New Seoul White Paper Plan

- New Seoul White Paper Plan was proposed by an architect in 1966
- Later, Mayor Kim proposed a Master Plan



1966. 8.

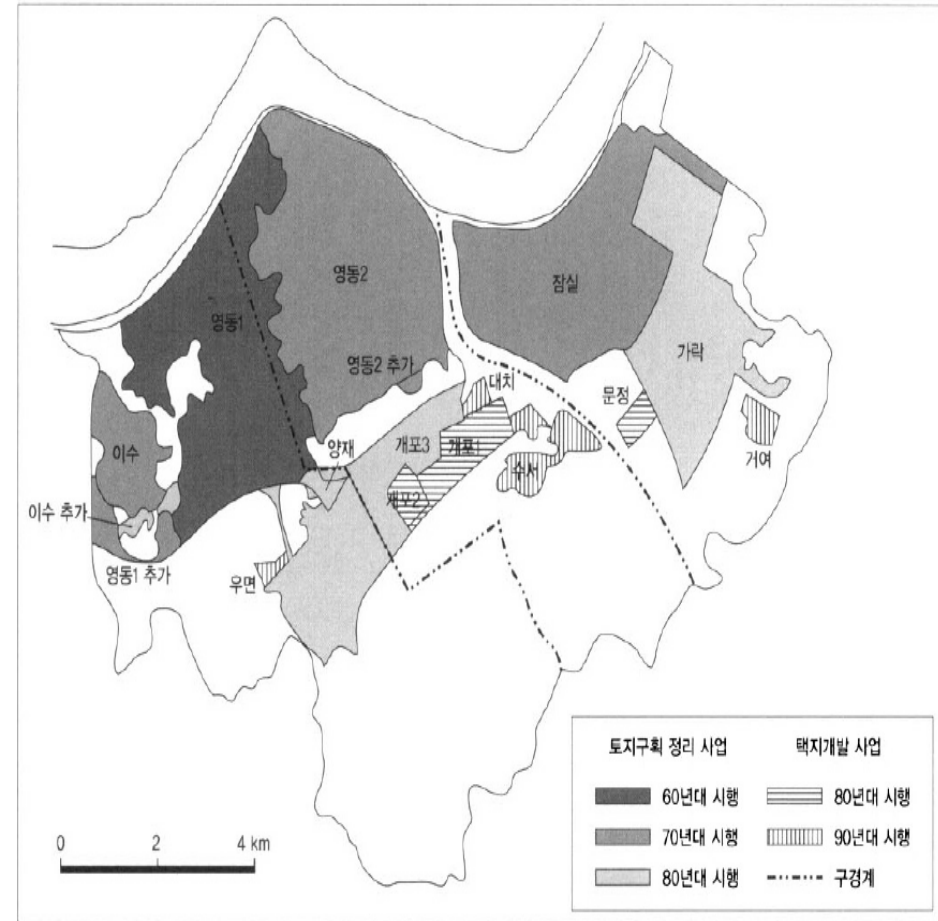


(1,2,3,4: / 5:)

사진출처: , 2011, 40



Plan

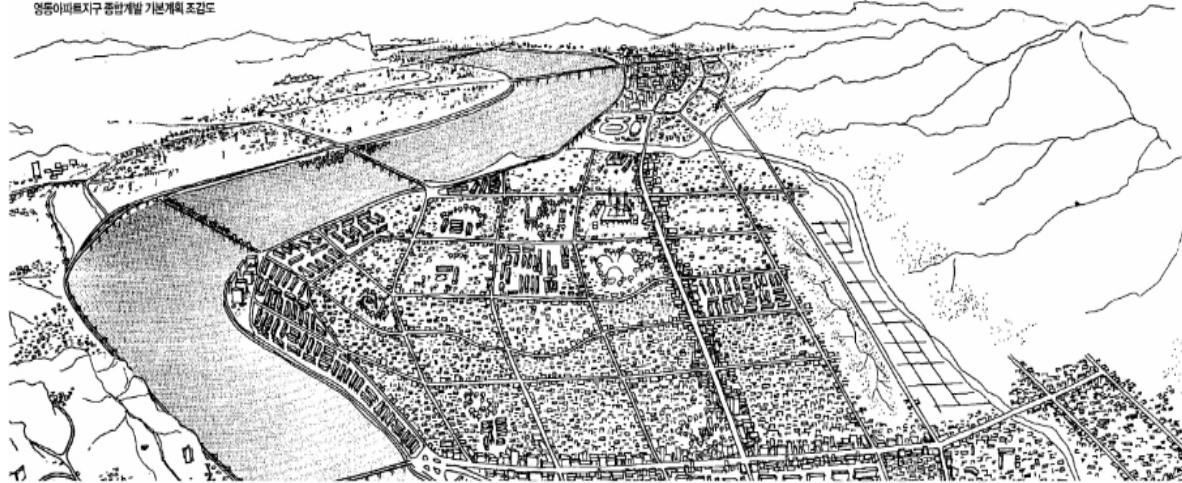


▲

(:)

Plans and Images

영동아파트지구 종합개발 기본계획 조감도



Phasing Issue



AID

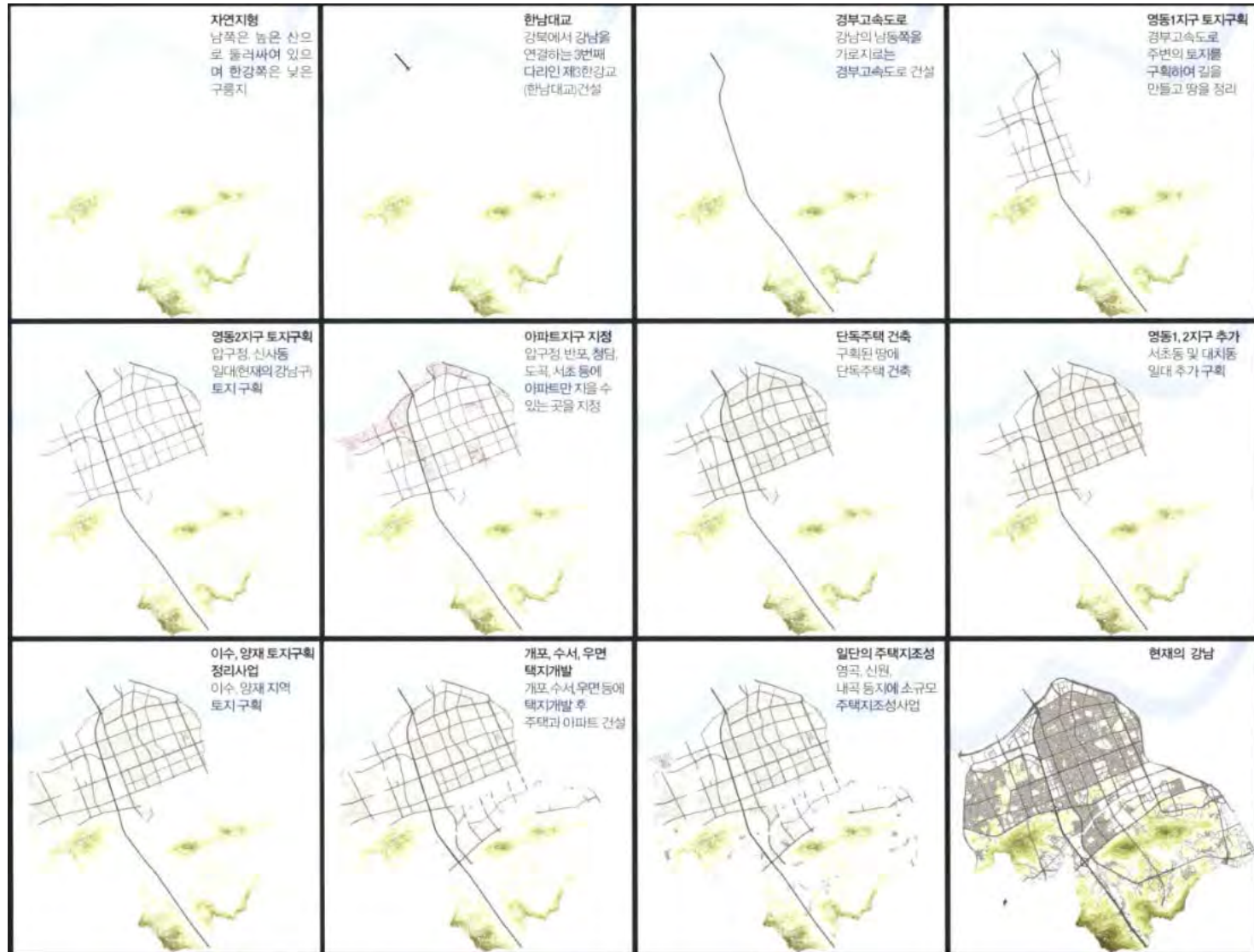
(AID)



1971. 12. 28

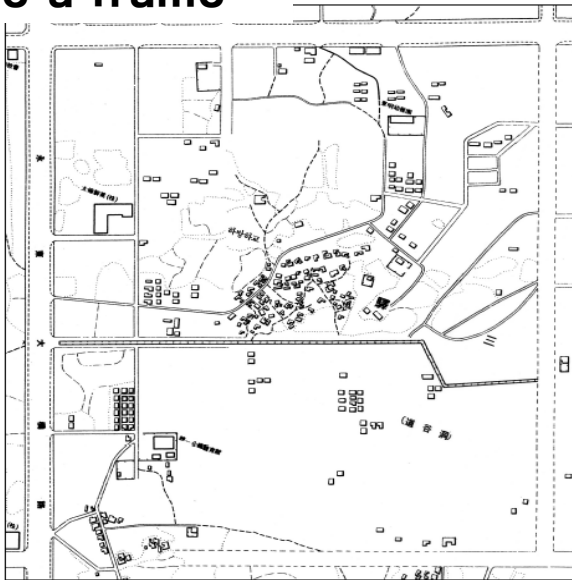
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Gangnam over 40 years

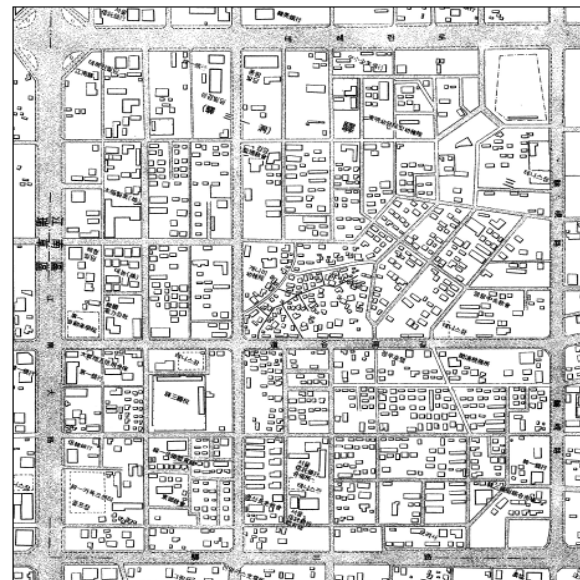


Plan provide a frame

1976



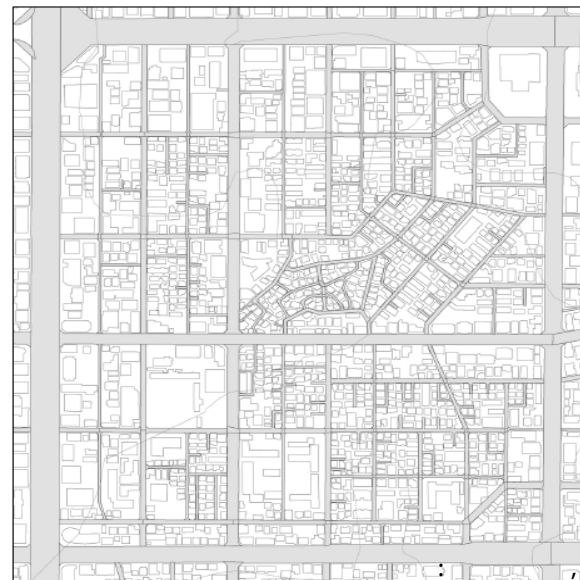
1987



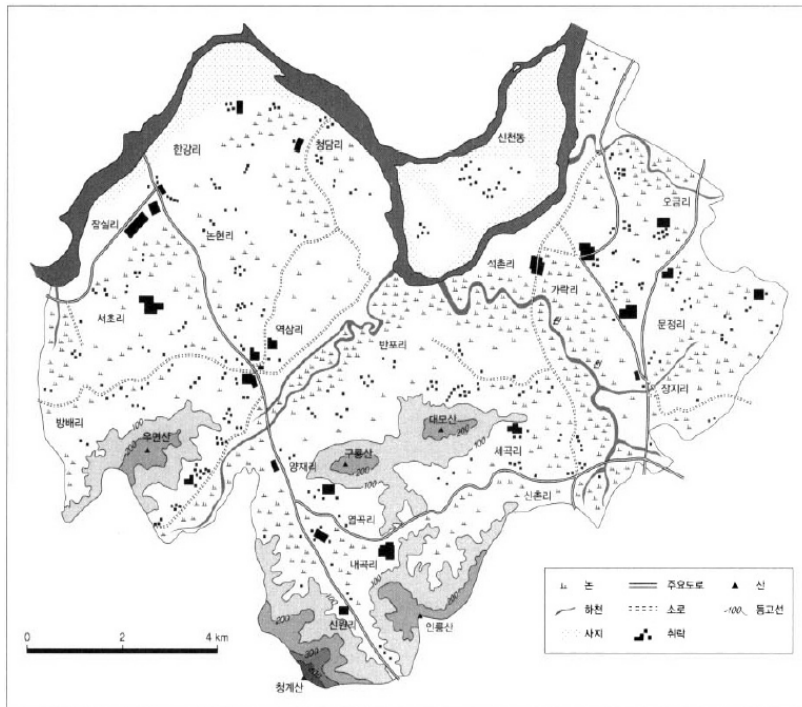
1995



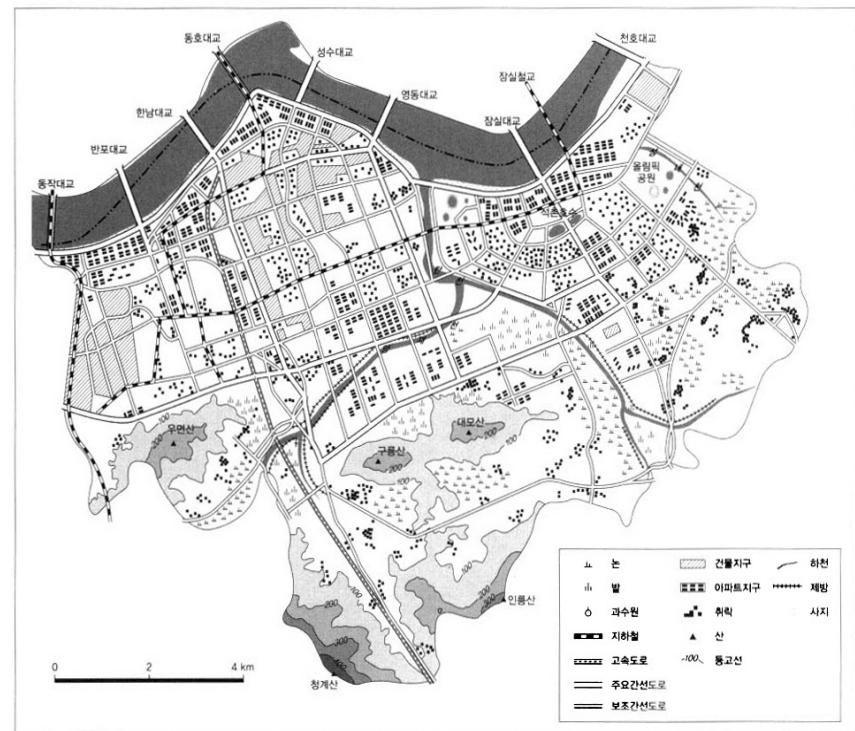
2009



- Gangnam was a farming area of vegetables, fruits, and rice.
- Land readjustment was applied to Gangnam area in the 1970's and infrastructure including roads, parks, etc were built
- In the 1980's commercial and office buildings were built along major arteries.
- Housing were developed inside of blocks
- Gangnam became a city center



출처 : 1957년 미육군국동지도국에서 작성한 「서울」, 「독도」 1:10만 도폭에서 재작성
1957



1988

: 이옥희(2006), 서울 강남지역 개발과정의 특성과 문제점, 한국도시지리학회지

concluding Remarks



Summary

- Rising urban problems: urban poverty and slums; climate change
- There are various measures to tackle those issues for urban development
- Seoul tried many different measures through trials and errors
- Seoul has been literally a lab of urban development
- Magnitude and speed of urbanization may require more creative approaches
(Send not for a hatchet to break open an egg; but to break big problem we need to send a ax)

Role and Importance of Infrastructure

- Infrastructure provides the playing field for people to do what they want to do

Google
Data
Center



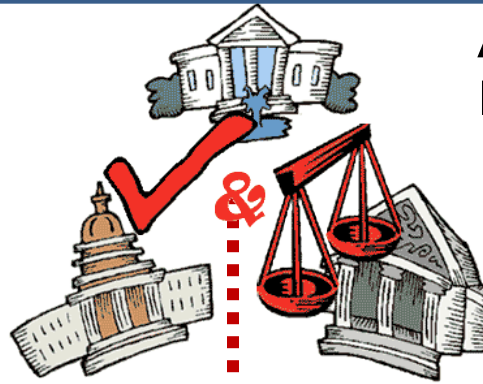
To Make a Result ...

44

Three Indispensable factors

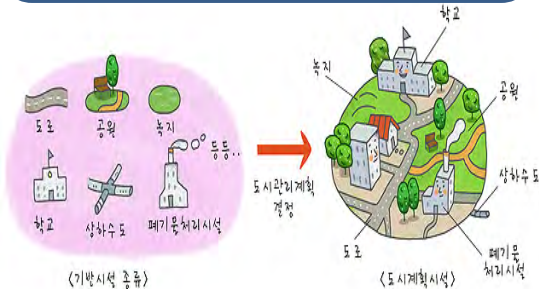
Institution

Active Learning
Institution Building



HURPI

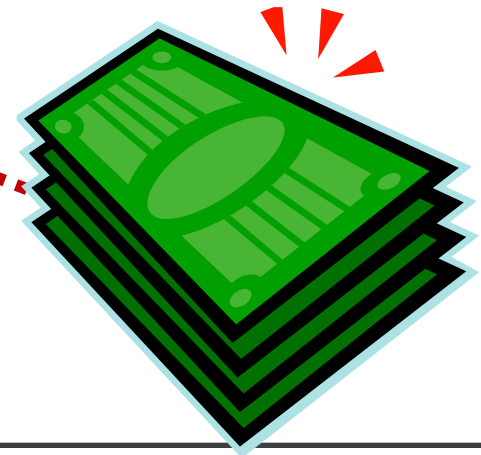
Technical
Expertise



Result

World Bank (IBRD)

Finance



International Urban Development Partnership

Long-term
Commitment of
Collaboration
among partners





Thank You

Myounggu Kang

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