The Open Ended City

“Our aim is to propose a development that is able to retain the authenticity of the city while extending the dialogue between what is already existing and what is to come.”
All across Asia, the number of people age 65 and above is expected to grow dramatically over the next 50 years. For the region as a whole, the population in this age group will increase by 314 percent - from 207 million in 2000 to 857 million in 2050. Changes that occurred over 50 years in the West are being compressed into 20 to 30 years in Asia. The competition seeks innovative design solutions for a balanced environment for urban life addressing and anticipating the challenges of a rapidly ageing society. It encourages new positive approaches to ageing society that identify opportunities for maintaining capacities and well-being over the life course. Concepts such as “active ageing” and “ageing in place” with new approach to accessibility, social care and support for elderly are expected to affect design solutions and programs which exceed the standard community club repertoire and incorporate a range of opportunities to activate the elderly and bring them back to workforce, and to develop appropriate environments, especially the built environment, for both older and younger generations, which is crucial to successful ageing within the community.

The designstudio is part of the Vertical City Asia Competition. This international competition is organized for five successive years - 2011 - 2015 - by the School of Design and Environment of the National University of Singapore, financially supported by the World Future Foundation. Every year contents of a new location with a different kind of theme, this year the location is Yongsan, Seoul, South Korea. The main theme of the competition is “Everyone Ages”. The competition brief:

“Every year a one square kilometre territory will be the subject of the competition. This area, to house 100,000 people living and working, sets the stage for tremendous research and investigation into urban density, verticality, domesticity, work, food, infrastructure, nature, ecology, structure, and program - their holistic integration and the quest for visionary paradigm will be the challenges of this urban and architectural invention. In the second of this series of competitions, the theme of “Everyone Ages” will be explored. Population aging is unique in Asia given the speed at which it is occurring and the immense social and economic changes that the region is experiencing at the same time.

The competition seeks innovative design solutions for a balanced environment for urban life addressing and anticipating the challenges of a rapidly ageing society. It encourages new positive approaches to ageing society that identify opportunities for maintaining capacities and well-being over the life course. Concepts such as “active ageing” and “ageing in place” with new approach to accessibility, social care and support for elderly are expected to affect design solutions and programs which exceed the standard community club repertoire and incorporate a range of opportunities to activate the elderly and bring them back to workforce, and to develop appropriate environments, especially the built environment, for both older and younger generations, which is crucial to successful ageing within the community.”
A competition for the masterplan of Yongsan was won by Daniel Libeskind in 2009.

US Military base located directly next to Yongsan will be transformed into a park designed by West 8 & Iroje Architects

The participating teams are design studios from schools of architecture:

Asia
National University of Singapore
Tsinghua University, Beijing
Tongji University, Shanghai
University of Tokyo
The Chinese University of Hong Kong

Europe
Eidgenossische Technische Hochschule/eth, Zurich
Delft University of Technology

North America
University of Michigan
University of Pennsylvania
University of California at Berkeley

Each participating school can nominate two competition entries. One teacher and two students are invited to the award seminar in Singapore, with lectures by the five members of the international jury and the ten international teachers. Each year, the proceedings of the seminar will be published together with the twenty students projects.

The TU Delft multidisciplinary studio will involve students in the last year of their Master studies in Urbanism, Architecture and Real Estate & Housing. The start in January 2012 will be an intensive design workshop where the competition entry has to be sent in by the 30th of June 2012. The design workshop consisted of four groups of four or five students.

Our project, The open ended city, contained five students:
· Claudio Saccucci (Architecture)
· Samuel Liew (Architecture)
· Stef Bogaers (Urbanism)
· Erjen Prins (Urbanism)
· Jan marten Mulder (Architecture)

During the second semester students will finish their Master thesis in their chosen discipline of Urbanism, Architecture or Real Estate & Housing.
Introduction

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Social-economics

History timeline
Urbanisation
Society
Proposal

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Seoul

Yongsan in broader context
Streets of Seoul
Seoul towers vs mountains

Site research

Site conditions
Case studies
Preservation
Korean block

Program

Chapter 2

Design

Connection to its context
Organic Community

Streets of Korea
Community by the Bay

Flexibility
Community by the Park

Event core
Highrise Community

Section
Phasing
Chapter 9

Organic Community

adds

Chapter 4

Chapter 5
The Open Ended City
The architecture or master plan does not have to announce itself or to be sensationalised, but to primarily focus on creating the ideal backdrop for the flourishing of activity. We sought to uncover and intensify what already exists, renewing the pattern of the city based on the city itself. Our master plan hinges on the premise that not just “everyone ages” but rather, everything ages; we addressed the ageing issue in a holistic way, understanding the needs of elderly people in Korea and catering to this need by the provisioning of easy access to program and the creation of more opportunities for interaction all within the broader framework of the fact that cities are constantly ageing and growing too.

Community
A substantial amount of time was given to understanding the needs of Korean people, and the importance of strengthening community ties. We explored the idea of community through programmatic circles as a means to organize programs in a meaningful way which would provide for the needs of an ever ageing population within a walkable radius of five minutes. The potential of these communities is that they disperse functions as opposed to creating agglomerations of one particular kind of activity. At the heart of the communities are the hybrid centers which cater for elderly healthcare/education/housing and the changing demographic balance between elderly and children.

The archetype of the ‘public square’ in European urban planning was present in Korea in the form of the school yards, which amidst a sea of tight knit developments, were the only open plots. This was an interesting overlap because it was not just an opportunity for a new form of mixed program utilizing the existing open space, but also because of the high priority that Korean society places on education; which really made a case for it to become the heart of these communities. Serving as a catalyst for urban regeneration and growth, these centers would attract more people to live in surrounding areas whilst serving the people and allowing the elderly to share their experience and knowledge with younger generations.
Growth
By prioritizing the long term growth of Yongsan in the design process, the strategy primarily focuses on creating conditions and rules that will guide the growth of the city. By varying this set of rules: the permeability of the block, the height of buildings, setbacks and plot coverage according to the specificity of the site; we were able to define and differentiate four communities. This broad framework allows for the preservation of qualities that make cities interesting and at times unpredictable and unique places whilst embracing the high densities required in the brief.

Leisure
Among the different user groups that Yongsan is aimed at, the leisure seekers going to the newly formed park and surrounding museums and water front will liven the whole area and create a buzz that most residential neighbourhoods do not have. By creating easy connections to the park and the water front from the station, Yongsan will become a conducive place for outdoor activities too.

Open Endedness
As opposed to having a masterplan defined by grand and formal gestures, one of the cornerstones of our project is prioritizing the long term growth of Yongsan in the design process.

How exactly do cities grow?
They usually contract or expand as a result of the flow of people in and through a certain area as a result of the program of that place. The sizes of developments and resulting urban conditions are a result of the policies and rules that are set in place by municipalities.

By clearly defining a broad set of rules and regulations we aim to preserve qualities that make cities interesting and at times unpredictable and unique places. By doing so, we allow the city to take on a life of its own whilst gently preserving the qualities that make Asian cities interesting and at times unpredictable and unique places.
Independence from Japan
Korea annexed by Japan
1945
1910
1st economic development plan
Democratic movement
Seoul Asian games
Seoul Olympics
Joins the UN
Economic crisis
South and North Korea summit
Korea hosts World Cup
Military coup d'etat
S.Korea joins Vietnam war
2nd economic development plan
Protest the FTA
KOR-US FTA
KOR-EU FTA
Korean War
Korea is divided at 38th parallel
President Park Chung Hee
N.Korea oil shock
Park Chung Hee assassinated
Kim Jong Il in power
2.9% of population over 65
3.8% of population over 65
Avg height of 7 yr old: 116cm
3.5 million people live in apartments
0.8 million people live in apartments
Fertility rate: 2.9%
Fertility rate: 4.5%
Fertility rate: 1.2%
7 million people live in apartments
Population in Seoul reaches 10 million
Mcdonalds opens store in Korea
Unemployment: 8%
In 40 yrs Korea went from 80% rural population to 80% urban population
Urban population reaches 47%
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<th>Architect</th>
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<td>Lord Richard Rogers</td>
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<td>César Pelli &amp; Association Architects</td>
<td>S.O.M</td>
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South Korea has gone through a period of rapid urbanization from 1960 to 1990, and currently 82% of the population lives in cities while only 18% of the population remains in rural areas. The influx of people into cities was a result of the push by the government into the manufacturing sector, with factories located near cities, and people moving to get higher wages. Strong emphasis on education has become an economic success, and now has the 13th largest economy, and a strong IT and technology based industry. This can be largely attributed to the hardworking ethic of the Korean people and the strong emphasis that their society places on education, with families spending increasingly more amounts on school fees and extra tuition.

However, the increase in urbanization has been accompanied by social problems, with the country having one of the highest suicide rates in OECD, high rates of alcoholism, plastic surgery and addiction to computer games & pornography.

“Korea is the only OECD country in which a college educated woman is less likely to work than a woman without a college degree”

McKinsey & Company, Korea 2020

Socio-economics
Morphology of Seoul

- 1958: 2.4 million population
- 1965: 5.5 million population
- 1972: 8.4 million population
- 1978: 9.6 million population
39

HISTORY OF SEOUL
Negative effects of urbanisation

Percentage of people who are daily smokers:
- Korea: 26.3%
- Japan: 25.7%
- United States: 16.5%
- Italy: 22.4%
- Denmark: 23%
- Netherlands: 23.3%

OECD Health Data 2011

Plastic surgery procedures per 10,000 ppl per annum (2009):
- Korea: 74
- Japan: 55
- United States: 32
- Italy: 42
- Denmark: 9

Plastic surgery Procedures per 10,000 ppl per annum (2009)
OECD Health Data 2011

2006 Worldwide Pornography Revenues (per capita)

KOREA $526
JAPAN $156
FINLAND $114
AUSTRALIA $98
U.S. $31
NETHERLANDS $12

Source: http://internet-filter-review.toptenreviews.com

41
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16% of the population is above 65 in 2020

36% of the population is above 65 in 2050

U.S. Census Bureau, www.census.gov/
Proposal

By 2050 the convergence between the percentage of elderly (38%) and the working class (52%) is quite alarming. However rather than seeing the elderly as a liability, we see an opportunity to address several issues that S.Korea is currently facing.

1. Strengthen and build communities
2. Mobilise women into the workforce
3. Integrate Elderly into society
4. Organise communities to allow for convenient distribution of shops and amenities, prioritising walkability.

Walkable Communities

As people grow older, their ability to travel long distances diminishes. It is therefore a priority that functions and amenities be placed within a walkable radius of 5 minutes, so that people are able to continue living in one neighbourhood their whole life without having to move to an elderly home once they get older.

The idea of community is being explored through the programmatic circles which are not a formal gesture, but rather a means to organize programs in a meaningful way which would provide for the needs of an ever ageing population in a walkable 400m radius.
The Korean Block

Our design has tackled ways in which to densify the urban block, integrating highrise and lowrise typologies as well as informal routing through the blocks. This allows for high densities and the informal qualities of the street life that we recognised as being vital for a livable city after our experience in Seoul.

Hybrid Centres

At the heart of the communities are the hybrid centers which cater for elderly healthcare, schooling and community functions.

They will serve as catalysts for urban regeneration and growth, these centers will attract more people to live in the surrounding areas while serving the people and facilitating exchange.
Chapter 2
Yongsan in broader context

Yongsan is situated between the 3 other Central Business Districts in Seoul, namely Jongno, Teheran and Yeouido, and is well connected to them with the current metro system and the proposed monorail.

It is located next to a US military base that is going to be transformed into a large park that will be designed by West 8 and Iroje Architects.

Due to its central location and proximity to the new park and the Han River, Yongsan is in a prime location for leisure activities, providing an escape for people located nearby and in the other CBDs.
Current Masterplan - Libeskind’s YongSan

Architect Daniel Libeskind has designed the current proposal for the new landmark city of YongSan which consists of a series of archipelagos, and features many iconic towers, each to be built by different architects from around the world by invitation only. These include proposal by BIG, MVRDV, SOM, KPF to name a few big names.

The design bears many similarities to plan voisin by LeCorbusier - with the way in which it is totally out of scale with the surrounding parts of the city, and reinforces the isolation of the new design, as a separate enclave and entity from the rest of the city.
During our trip to Korea we came across an area called HongDae which had a very vibrant street life. Unlike some other parts of the city, the scale of the street in relation to its surrounding buildings was a lot more humane.

As seen in the image below, the height of buildings are around 4 to 4 storeys and the streets more narrow, this was conducive for informal activities and gatherings to take place. We watched several street performances by buskers as well as other small street vendors selling food and other paraphernalia.
We highlighted the various aspects of the street that we found to be of interest.

These included the way in which the shop fronts bled out onto the street, not adhering to any strict boundary, the variety of building heights and materials, the variety in alignment of the facades, variety in the programs and the spontaneous activities that would take place on the street itself.

The street life at night greatly varied from what we saw during the day, transforming the place and giving it a totally new identity defined by its street presence.
On our visit to Korea, the most fascinating and lively places were the streets.

The streets were varied in their appearance, but the most interesting ones had a lot of informal stalls spilling out from their allotted space, selling a wide variety of stuff ranging from clothing and electronics to fried skewers of meat and warm spicy soup.

The contrast between the main roads and the back streets was astonishing. While the main streets were mostly empty and barren, just the next street off from the main street was full of life, little stalls, and a lot of people gathering together to watch performances and play games.

Due to their smaller plot sizes, it allowed for a lot of small shops owners to configure their shop fronts in distinct ways that added a certain richness to the streets.

The variety in the alignment of shop fronts also allowed for different informal gathering spaces and for people to have spontaneous events.

Taking a look at Korea at a more zoomed out urban level, it became clear that amongst the tightly knit urban fabric of Seoul, the only open plots of land were the playing fields of the schools.

These open patches were of particular interest, as they resembled the open squares found in European urban planning. These open public squares are the main form of public space that people congregate in and where activities happen.
Block studies

Connecting Courtyards / Immanuelkirchstrasse, Berlin

Closed Streets / fixed grid, chaotic parcels, Yongsan

Organic Block / Seoul
Private/collective space in the traditional Korean house.

The madang is the central space of the house. It is enclosed and restrained for the inhabitants of the Hanok.
Collective space in modern residential complexes.

The public space in many cases is a resulting space in between the buildings.
Number of Floors / height: 12 floors, 34m
Total Number of Dwellings: 1224
Total Project Area: 133911 sqm
Number of buildings: 17
Total Building Lots: 90783sqm
Total Building Footprint: 25545sqm
Total Building Footprint (Dwelling): 20.740sqm
Gross Floor Area(Dwelling): 248880sqm
FAR:1.85
Usable open Space: 69165sqm
Total Parking Area: 18600.5sqm
L: 48.2 sqm
K: 11.3 sqm
B: 5 sqm
R1: 21.6 sqm
R2: 11.2 sqm
R3: 13.2 sqm
R4: 12.3 sqm
t: 4.6 sqm
b: 4 sqm

Balconies:
7.7 x 10
Number of Floors / height: 2-29 floors, max 81m
Total Number of Dwellings: 3410
Total Project Area: 133911sqm
Number of buildings: 44
Total Building Lots: 182921sqm
Total Building Footprint (Dwelling): 23973sqm
Gross Floor Area(Dwelling): 248880sqm
FAR:2.7
Usable open Space: 117744sqm
Total Parking Area: 29405sqm

1980s: Banpo Mido ‘The First’
Banpo Mido "The First" Year: 1980s

Balconies: 12
Number of Floors / height: 15 floors, 50m
Total Number of Dwellings: 1305
Total Project Area: 118570 sqm
Number of buildings: 13
Total Building Lots: 74524sqm(tot proj area-streets)
Total Building Footprint (Dwelling): 14534sqm
Building Lot Coverage: 12.2%
Gross Floor Area(Dwelling): 218010sqm
FAR:1.8
Usable open Space: 7489sqm
Total Parking Area: 22023sqm
Number of Floors / height: 72 floors, 216m
Total Number of Dwellings: 648 (9 per floor)
Total Project Area: 17829 sqm
Number of buildings: 1
Total Building Lots: 13317sqm
Total Building Footprint: 7509sqm
Total Building Footprint (Dwelling): 2824sqm
Building Lot Coverage: 42.1%
Gross Floor Area (Dwelling): 203328sqm
FAR: 11.4
Usable open Space: 8152sqm
Total Parking Area: 0

1980s: Banpo Mido 'The First'
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</tr>
<tr>
<td>Balconies:</td>
<td>7.7+10</td>
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<table>
<thead>
<tr>
<th>Room</th>
<th>Size</th>
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<tbody>
<tr>
<td>L</td>
<td>48.2sqm</td>
</tr>
<tr>
<td>K</td>
<td>11.3sqm</td>
</tr>
<tr>
<td>B</td>
<td>4.5sqm</td>
</tr>
<tr>
<td>R1</td>
<td>21.6sqm</td>
</tr>
<tr>
<td>R2</td>
<td>11.2sqm</td>
</tr>
<tr>
<td>R3</td>
<td>13.2sqm</td>
</tr>
<tr>
<td>R4</td>
<td>12.3sqm</td>
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<tr>
<td>Balconies:</td>
<td>7.7+10</td>
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<table>
<thead>
<tr>
<th>Room</th>
<th>Size</th>
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<tbody>
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<td>L</td>
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<td>K</td>
<td>20sqm</td>
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<td>B</td>
<td>3.4sqm</td>
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<tr>
<td>R1</td>
<td>13.5sqm</td>
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<td>R2</td>
<td>12.6sqm</td>
</tr>
<tr>
<td>R3</td>
<td>9.8sqm</td>
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<tr>
<td>R4</td>
<td>33.6sqm</td>
</tr>
<tr>
<td>b1</td>
<td>1.3sqm</td>
</tr>
<tr>
<td>b2</td>
<td>11.2sqm</td>
</tr>
<tr>
<td>b3</td>
<td>3.4sqm</td>
</tr>
<tr>
<td>Balconies:</td>
<td>2.5+13.4+5.8+10.7+7.5</td>
</tr>
</tbody>
</table>
PERCENTAGE OF APARTMENT HOUSING IN RESIDENTIAL BUILDINGS IN 1975: 1%

400,000 APARTMENT UNITS ARE BUILT EVERY YEAR IN KOREA THAT IS EQUAL TO THE 3.5% OF THE EXISTING HOUSING STOCK.

SOURCE: KOREAN STATISTICAL INFORMATION SERVICE 2007
Chapter 3
Case studies

Yongsan, Seoul
GFA: 1,900,000 m²
Site: 311,500 m²
FAR: 2.35

GFA: 4,000,000 m²
Site: 1,700,000 m²
FAR: 2.35

GFA: 3,267,940 m²
Site: 502,760 m²
FAR: 6.5

11% 80% 7% 18%
11% 80% 7% 18%
81% 4% 11% 4%

offices, restaurants, commercial, hotels, conference center, commercial, markets & food, clinic, recreation
collage cities and parks
In February 2012, our studio visited YongSan in Seoul, the experience on the ground was very different to all the research that we had conducted prior, mainly using google earth and street view.

We discovered that the “site” was not one cohesive site at all, but rather separate patches of urban tissue that happened to be located within a boundary line that was determined in the competition brief.

As such, there were some areas that had old scraggly buildings and other areas with new high rises. The contrasts were great and varied. We traveled on foot around the site to determine key architectural moments within the area.

The built fabric that we found on site can be classified into a few broad categories

1. New highrise towers
2. Old low rise shophouses

Train Station
The train station was a very large and dominating building within the landscape of the site. Its sheer size and presence blocked the connection between the east and west part of the rail way and was more of an obstruction between the two sides rather than a connector.

We propose to create a better east and west connection by opening the ground floor to allow for a visual connection from both sides, that would serve to unify Yongsan and integrate the two halves.
Preservation

Preservation of Buildings
Our proposal seeks to preserve and re-use the buildings on the site that had architectural significance. These included the museums and electronic market that had cultural value to the people living around the area and the broader population of Seoul. Many of the newer higher rise towers that are structurally sound and can accommodate large amounts of people, these will also be preserved and re-used.

Preservation of Infrastructure
In addition to preserving buildings, the roads are also going to be preserved, this will maintain the crucial flows of traffic that connect YongSan to its surroundings.

At times, roads are widened to allow for the new influx of traffic and people that would accompany the new high densities that are to be accounted for.

Preservation of Atmosphere
By analysing and investigating the conditions that surround our site, we were able to understand the textural qualities that make a city interesting and livable. The atmospheres were a result of the variety of building heights, width of streets, and the varying amounts of open space, that were present in the city fabric.
Selection of buildings that were preserved
Site conditions

Grid of 50m x 100m plots
Number of plots: 56

Scenario:
Primary roads (40m)
Secondary roads (20m)
and Tertiary roads (10m)

The plots are grouped in clusters. Some plots enlarge and interrupt the secondary roads, in order to protect residential areas from the traffic.
The district is characterised by narrow streets that are formed by 5-6 storey apartment buildings with small footprints.

Apartment buildings create vibrant street spaces that offer glimpses to the sea at the end of each city block.

Relief to the dense city structure is provided by a series of public spaces that are lined with lively restaurants and cafes specialising in the local seafood.
Vancouver Block. Canada
35-80 X 198m

High-rise and low-rise co-exist within the same block.

Tertiary roads cross through the block, creating informal routes and allow for more informal activities within the blocks.
Portland Block . USA
61 x 61m

Network of streets: great way to make more walkable, mass-transit-friendly neighborhoods.

The scale of many projects is relatively small, due to the grid.

Strict height restrictions enacted to protect views of nearby Mount Hood from Portland’s West Hills.

High length of road infrastructure.
Access to the mews is at the openings away from the sight-line of the front facades, in side streets.

From the nineteen sixties onwards, mews has undergone a rediscovery as urban, low-rise accommodation.

They offer central locations but away from traffic and noise.
Cerda’s Plan for extending Barcelona was based on social and morphological equality.

Very mixed program

The public space has remained the most constant factor in space as well as time.

Hence, within the framework of the street pattern, each period has adhered to its rules and its own style of architecture.
All streets are equal and one-way only.

The square grid removes the experience of a difference in the north-south versus the east-west directions.

Very strong building-alignment. The only exceptions are a couple of public squares.

The buildings do not require set backs.
### Site conditions

<table>
<thead>
<tr>
<th>Location</th>
<th>Building Height</th>
<th>FAR</th>
<th>Floors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oido</td>
<td>70%</td>
<td>5%</td>
<td>&gt; 8.0 Floors</td>
</tr>
<tr>
<td>Portland</td>
<td>57%</td>
<td>43%</td>
<td>&gt; 9.8 Floors</td>
</tr>
<tr>
<td>Chicago</td>
<td>59%</td>
<td>41%</td>
<td>&gt; 9.5 Floors</td>
</tr>
<tr>
<td>Barcelona</td>
<td>70%</td>
<td>30%</td>
<td>&gt; 8.0 Floors</td>
</tr>
</tbody>
</table>

**Block Area:**
- 2.700 m²
- 3.721 m²
- 10.000 m²
- 12.546 m²

**FAR:**
- 5.6

**Floors:**
- > 8.0
- > 9.8
- > 9.5
- > 8.0
Vancouver

Block Area: 13.446m²
FAR: 5.6
> 8.9 Floors

New York

Block Area: 13.500m²
FAR: 5.6
> 7.9 Floors

Mews London

Block Area: 14.770m²
FAR: 5
> 7.3 Floors
In Seoul, the highrise and lowrise typologies are seen as separate elements. The life of a neighbourhood, with all its micro economy happens in the low rise areas, while the towers become isolated blocks for “living”.

Our design has tackled ways in which to densify the urban block, integrating highrise and lowrise typologies as well as informal routing through the blocks. This allows for high densities as well as the informal qualities of the street life that we find vital for a livable city.

As opposed to having a masterplan defined by grand and formal gestures, one of the cornerstones of our project is prioritizing the long term growth of Yongsan in the design process.
1. Programmatic distribution
2. Existing vs. New Secondary roads
3. Tertiary Roads adapting to context
4. Hybrid Centers placed at key nodes
Site conditions
40 x 40 x 250m
71 stories
113 600 m²
57 pieces

40 x 40 x 192.5m
50 stories
88 000 m²
78 pieces
40 x 40 x 150m
43 stories
68 800 m²
94 pieces

40 x 40 x 120m
35 stories
56 000 m²
104 pieces
30 x 30 x 165m
47 stories
42 300 m²
154 pieces

30 x 30 x 120m
34 stories
30 600 m²
212 pieces
30 x 30 x 105m
30 stories
27 000 m²
240 pieces

40 x 40 x 250m
71 stories
113 600 m²

40 x 40 x 192.5m
40 x 40 x 150m
50 stories
43 stories
88 000 m²
68 800 m²
<table>
<thead>
<tr>
<th>Size</th>
<th>Stories</th>
<th>Area</th>
<th>Pieces</th>
</tr>
</thead>
<tbody>
<tr>
<td>30 x 30 x 165m</td>
<td>47</td>
<td>42 300 m²</td>
<td>43 pieces</td>
</tr>
<tr>
<td>30 x 30 x 120m</td>
<td>34</td>
<td>30 600 m²</td>
<td>40 pieces</td>
</tr>
<tr>
<td>30 x 30 x 100m</td>
<td>29</td>
<td>27 000 m²</td>
<td>55 pieces</td>
</tr>
<tr>
<td>20 x 20 x 45.5m</td>
<td>13</td>
<td>5 200 m²</td>
<td>143 pieces</td>
</tr>
<tr>
<td>15 x 60 x 70m</td>
<td>19</td>
<td>18 000 m²</td>
<td>8 pieces</td>
</tr>
<tr>
<td>30 x 30 x 165m</td>
<td>47</td>
<td>42 300 m²</td>
<td>43 pieces</td>
</tr>
<tr>
<td>30 x 30 x 120m</td>
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<tr>
<td>15 x 60 x 70m</td>
<td>19</td>
<td>18 000 m²</td>
<td>8 pieces</td>
</tr>
</tbody>
</table>
The Vertical Cities Asia competition brief calls for an emphasis on the ageing “problem” in Korea and left the programmatic requirements open to interpretation.

The proposed program mix is concentrated around healthcare, education and cultural/leisure facilities, whilst taking into account the high densities of people that are required to live and work in this area.

We did not see YongSan as another CBD, where the activities are bounded by the working hours of people. Instead we tried to create communities where people are able to live, work and play, this kind of mixed environment something new and exciting people in Seoul.

According to the typologies and characteristics of each neighbourhood, the program bar has been customised to embrace the existing atmosphere and ensure that the site maintains an overall FAR of 5.

The changing balance in demographics between the elderly and children has been accounted for in the program bars that vary between 2030 and 2050, catering to more healthcare facilities in the future.
Chapter 4
Each community will be formed and shaped by the existing conditions on that particular part of the site. It will reinforce the connections that are present and strengthen the links that it has to its surroundings. i.e. The park, the Han river, the adjacent architectural fabric.

Resulting in 4 differentiated neighbourhoods as a direct result of 4 different critical adjacencies.

Design Strategy: *The Open Ended City*

As it is impossible to predict the needs of the future citizens of YongSan, it was vital for us to cater for flexibility in the urban plan, whilst forging policies and rules that will shape and come to characterise each of the communities.

Our proposal, is merely one developmental scenario based on the open framework of urban rules that we have put in place to define YongSan.

Different policies were implemented in each community to amplify the good qualities of each area whilst creating different environments.

Each area and its surroundings was investigated in detail to understand the urban fabric and for contextual opportunities to enhance the quality of life in each area.
Organic Community

By taking the existing fabric as a starting point and intensifying and densifying it, we were able to maintain the cosy and open atmosphere that was present, and allow for more people to live there.

As such, we maintained the existing road structure and added several larger roads to allow for higher flows of traffic through to service the area.

An old rail track that has been left unused for several years will be transformed into a pedestrian park connector, tying this community with the train station and allowing for inhabitants to exercise during the day. The permeability of the block and the informal routes of the surrounding fabric has been continued through into the neighbourhood, preserving the informal qualities that were characteristic of this area.
By connecting these open chunks of space to the informal activities that happen along the street, then a new form of public space could be created in Seoul. The schools could therefore take on a greater and more diverse role in serving the community around it.

By upgrading the schools into multi-functional hybrid centres, that provide not only education but also day care services that are provided free by the elderly, after school programs, sporting and cultural activities such as drama and performing arts classes, and many community based activities.

The Hybrid centers will serve as the heart of each community, supporting the education of the children, giving more opportunities to the lives of the elderly and mobilising the women to work if they so wish.
Community by the Bay

Informal routes within the blocks
In this community, it was important to create a strong connection with the water, Green Boulevards that flow from the community continue down all the way towards the waters edge, providing residents with easy access to all their favourite water front activities.

A lot of spontaneous activities will happen in the pedestrian streets that are carved between all the blocks, away from the traffic and busy-ness of the main roads.

A policy was derived to preserve 20% public space on the rear side of each block to allow for informal activities.

The Hybrid centres are placed within the heart of the community, allowing a strong point of connection between people of all ages as they engage in creative activities such as music performances and other sporting competitions.

Community by the Bay
The primary and secondary roads are fixed and thus allow for some elements on the site to be permanent, maintaining the flows of traffic that will pass through YongSan to the surroundings CBDs.

However, the tertiary roads can be modified and reconfigured in the future, which will allow blocks to be enlarged or reduced according to the needs of the people living in the area.

The rules for each community will guide the growth of the area and result in different possible variations within the block structure.
Community by the park

It was important that the openness toward the park be a defining characteristic of this neighbourhood that would allow inhabitants to have good views and more space to do outdoor activities.

The gradual increase in open green space toward the park was facilitated by gradually decreasing the allotted plot coverage for the blocks, creating pedestrian friendly streets and pockets of space for informal activities to happen.

The built environment and the landscape are equally important, the urban block slowly disintegrates, until the point where there are free standing towers in the park.

<table>
<thead>
<tr>
<th>Park Neighbourhood</th>
<th>urban block</th>
<th>tower in park</th>
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</thead>
<tbody>
<tr>
<td>block cov. 90%</td>
<td>block cov. 70%</td>
<td>block cov. 50%</td>
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<tr>
<td>green cov. 0%</td>
<td>green cov. 10%</td>
<td>green cov. 30%</td>
</tr>
<tr>
<td>height restr.: 120m</td>
<td>block cov. 10%</td>
<td>tower in park</td>
</tr>
<tr>
<td>setbacks: -</td>
<td>green cov. 90%</td>
<td>height restr.:</td>
</tr>
</tbody>
</table>

“the urban fabric is gradually dissolving towards the park”
“DooHo, a 67 year old resident, practices Tai Chi in the park, 100 m. from his apartment.”
YongSan will primarily be catering to 2 large user groups: The residents of the communities and the leisure seekers that will come to enjoy the outdoor activities in the park as well as the water sports that will be happening along the newly invigorated river front.

As YongSan becomes the point of arrival for the 2 main outdoor destinations, it is important that there are interesting cultural programs, entertainment and shopping areas that are strategically placed to encourage people to linger and have a good time.

The event core, will serve as a mixing ground and a place of exchange between the residents of YongSan and the leisure seekers, creating an exciting environment with its own unique blend of warmth and vibrance.
Highrise Community

Within the context of the city, this area had no strong connection to the water or to the park, and was cut off from the rest of the site due to the 6 lane primary road that ran through it.

However there were many office towers that were already existing in this area and the surrounding plots, therefore it lent itself quite well to be the area of extreme verticality. We embraced the existing high density towers and incorporated to the program mix of this community. In total, preserving 500 000 m² of floor space.

The roads have been widened to accommodate for heavier traffic flows and a large pedestrian connector has been inserted to unify this area with the eastern side.
Sungmin (37) is picking up his children from the hybrid centre.
Phasing

Existing site

Phase 1

Phase 2

Phase 4
荷兰学生规划“垂直城市”最棒

孙伟伦
sonvl@sph.com.sg

城市规划师和建筑师如果要确保迅速老龄化的10亿人口能在舒服的环境和如滨海花园一样的土地上生活，会面对什么样的挑战？

来自荷兰代尔夫特理工大学（Delft University of Technology）的两支参赛队伍“克服”了这些城市人口规划的挑战。在新加坡国立大学举办的亚洲“垂直城市”国际设计竞赛“Vertical Cities Asia”中，一起上冠军宝座。

评审团指出，代尔夫特理工大学所提交的两个方案都展示出学生对荷兰的团队了解和能设计好作品，特别是香港实地考察，了解当地人风情，结果在“亚洲垂直城市国际设计竞赛”中获得第二届“亚洲垂直城市国际设计竞赛”冠军。

24岁）日前受访时说，所有参赛队伍副主席说，之后要应付参赛要求，香港。

她透露，一组建筑设计得更“灵活”校，让它也能充当乐另一组则设计在该区位为前提，兴建乐龄住宅。

代尔夫特理工大学大将队员陈敏贤（24岁）说，参赛作品必须符合“每个人都会老”（Everyone Ages）的比赛主题，把迅速老龄化的城市人口的生活需要也考虑内。

代尔夫特理工大学得奖队员之一斯玛玛（Maria Starnas）表示，这旨在激发设计师和建筑师的创意。
Studenten TU Delft winnen Vertical Cities Asia

Twee studententeams van de Faculteit Bouwkunde van de Technische Universiteit in Delft hebben de gedeelde eerste prijs gewonnen in de internationale ontwerpwedstrijd Vertical Cities Asia. Voor de prijsvraag moesten de teams een oplossing bedenken voor de toenemende vergrijzing in Asië in het algemeen en in de wijk Yonghyeon van het Zuid-Koreaanse Seoul in het bijzonder.

Overal in Asië neemt het komende vijftig jaar het aantal mensen van 65 jaar en ouder sterk toe. Voor de specifieke regio zal de bevolking in deze leeftijdsgroep toenemen met 314 procent. De jury beoordeelde de inzendingen op vijf factoren: duurzaamheid, kwaliteit van leven, haalbaarheid, context en technische innovatie.
Chapter 5
South Korea has gone through a period of rapid urbanization from 1960 to 1990, and currently 82% of the population lives in cities. This increase in urbanization has been accompanied by success like the 13th largest economy and a strong technology based industry. However, it also created social problems; having one of the highest suicide rates in OECD, high rates of alcoholism, plastic surgery and addiction to computer games and pornography. Furthermore the elderly population in Korea is growing and into their society.
South Korea has gone through a period of rapid urbanization from 1960 to 1990, and currently 82% of the population lives in cities. This increase in urbanization has been accompanied by success like the 13th largest economy and a strong technology based industry. However, it also created social problems; having one of the 52% of the working class. Embracing these social-economic problems, I designed a community that will allow for convenient distribution of shops, residences, amenities and prioritized walkability.
Residential towers
Site area: 55,400m²
5 apartment types
25 floors
FAR 2.5

South Korea has gone through a period of rapid urbanization from 1960 to 1990, and currently 82% of the population lives in cities. This increase in urbanization has been accompanied by success like the 13th largest economy and a strong technology based industry. However, it also created social problems; having one of the highest suicide rates in OECD, high rates of alcoholism, plastic surgery and
Existing program
South Korea has gone through a period of rapid urbanization from 1960 to 1990, and currently 82% of the population lives in cities. This increase in urbanization has been accompanied by success like the 13th largest economy and a strong technology based industry. However, it also created social problems; having one of the highest suicide rates in OECD, high rates of alcoholism, plastic surgery and
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NEW PROPOSAL

Existing appartements
Community learning centre

The location of my architectural design is precisely where the pedestrian strip is penetrating the high-rise area. This not only allows the design to mediate - in a volumetric way - between the low-rise building blocks and high-rise towers, but it also continues and reunites the two different kinds of public spaces. My design embodies a new roofed public space for community activities and will accommodate the place for a ‘Community Learning Centre’. In this way the design forms a new approach to experiencing street life. Moreover, the design focuses on the broader social problems of Korea by combining space for study, leisure – like sports and karaoke - tutoring and creativity into one design.

Every component in the design - the floor, the roof, the façade and the rooms - can be seen as isolated elements. Therefore the roofed public space creates a feeling of roughness and openness, wherein every room gets his own identity by way of materialisation. These materials have a natural impression – like stone, steel and wood – in order to create a differentiation in expressions but a feeling of coherency. Besides, it provides for a transition from the urban area to the park. The inside of the rooms are more sensitive and related to its specific program.
“On November 10th South Korea went silent. (...) Every year the country comes to a halt on the day of the exams, for it is most important day in most South Koreans lives”

The Economist, The One-shot society, December 2011

“There is a saying in Korea: If you sleep for 3 hours a day, you will pass the exam. Sleep for 4 hours, you will fail.”

McKinsey & Company, Korea 2020
Hanok is a term to describe Korean traditional houses. Korean architecture lends consideration to the positioning of the house in relation to its surroundings, with thought given to the land and seasons.

The interior structure of the house is also planned accordingly. This principle is also called Baesanimsu, literally meaning that the ideal house is built with a mountain in the back and a river in the front, with the ondol heated rock system for heating during cold winters and a wide daechoeng front porch for keeping the house cool during hot summers.

“Madang” (traditional innercourt)
At this time, the house has to be a shelter from the outer world. It is necessary to contact with nature which brings the urban house rich changes and variation during its life time (i.e., witnessing the blossoming and decaying of flowers). “Madang” (open court yard) was the very “nature” in ancient Korea.
43. Illustration: The layout of a mium-shaped (square) house. Because the roofs joined at several corners, this layout required sophisticated architectural techniques and was considered the most advanced. Generally, people did not adopt such a floor plan from the beginning of the construction. Rather, they started with a tiguk (rectangle) shaped house, and then added the last component when improved finances made such remodeling possible.
## Community Learning Centre

<table>
<thead>
<tr>
<th>Facilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tutor rooms (useable for school)</td>
</tr>
<tr>
<td>Small lecture hall</td>
</tr>
<tr>
<td>Large lecture hall</td>
</tr>
<tr>
<td>Graphical rooms</td>
</tr>
<tr>
<td>Music room</td>
</tr>
<tr>
<td>Library</td>
</tr>
<tr>
<td>Reading room</td>
</tr>
<tr>
<td>Community space</td>
</tr>
<tr>
<td>Bookshop</td>
</tr>
<tr>
<td>Cafe</td>
</tr>
<tr>
<td>Restaurant</td>
</tr>
<tr>
<td>Gallary space</td>
</tr>
<tr>
<td>Sitting space</td>
</tr>
</tbody>
</table>
South Korea has gone through a period of rapid urbanization from 1960 to 1990, and currently 82% of the population lives in cities. This increase in urbanization has been accompanied by success like the 13th largest economy and a strong technology based industry. However, it also created social problems; having one of the highest suicide rates in OECD, high rates of alcoholism, plastic surgery and
Public Space

Hanok is a term to describe Korean traditional houses. Korean architecture lends consideration to the positioning of the house in relation to its surroundings, with thought given to the land and seasons.
Hanok is a term to describe Korean traditional houses. Korean architecture lends consideration to the positioning of the house in relation to its surroundings, with thought given to the land and seasons.
curved glass

glass tubes
Hanok is a term to describe Korean traditional houses. Korean architecture lends consideration to the positioning of the house in relation to its surroundings, with thought given to the land and seasons.
Volumes
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Volumes

White-Forsythia (Abeliophyllum distichum)
Korean Fir (Abies koreana)
Calamagrostis brachytricha (Korean Feather Reed Grass)
Zoysia Tenuifolia (Korean grass)
Korean Angelica

Dwarf Korean lilac

Korean rock fern
(Polystichum tsus-simense)

Magnolia sieboldii
(Oyama magnolia)