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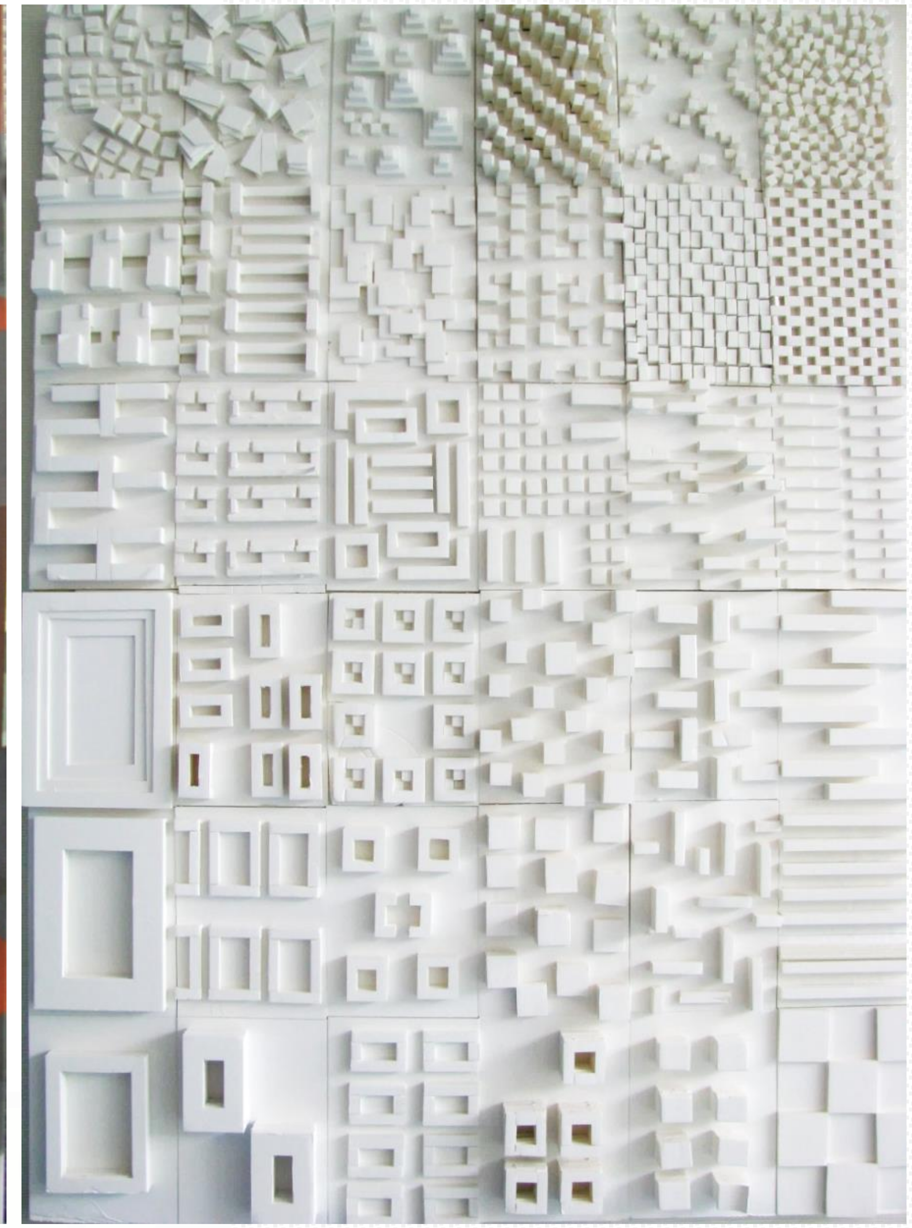
First we made our cities. Then our cities made us



YIMBY
YES IN MY BACK YARD

Density and urban fabric
Cities Full of Space

-Density Diversity:
Quantity Quality

-City is a market/theatre/Forum: a Conversation
-Public Comfort- and Private Comfort
-Urban fabric and the Cell
-Footprint Management
-Mathematics of the Ideal City

There is accelerating demand for urban living by too little supply.
Resulting in wrong money threading an inclusive affordable and vital city.

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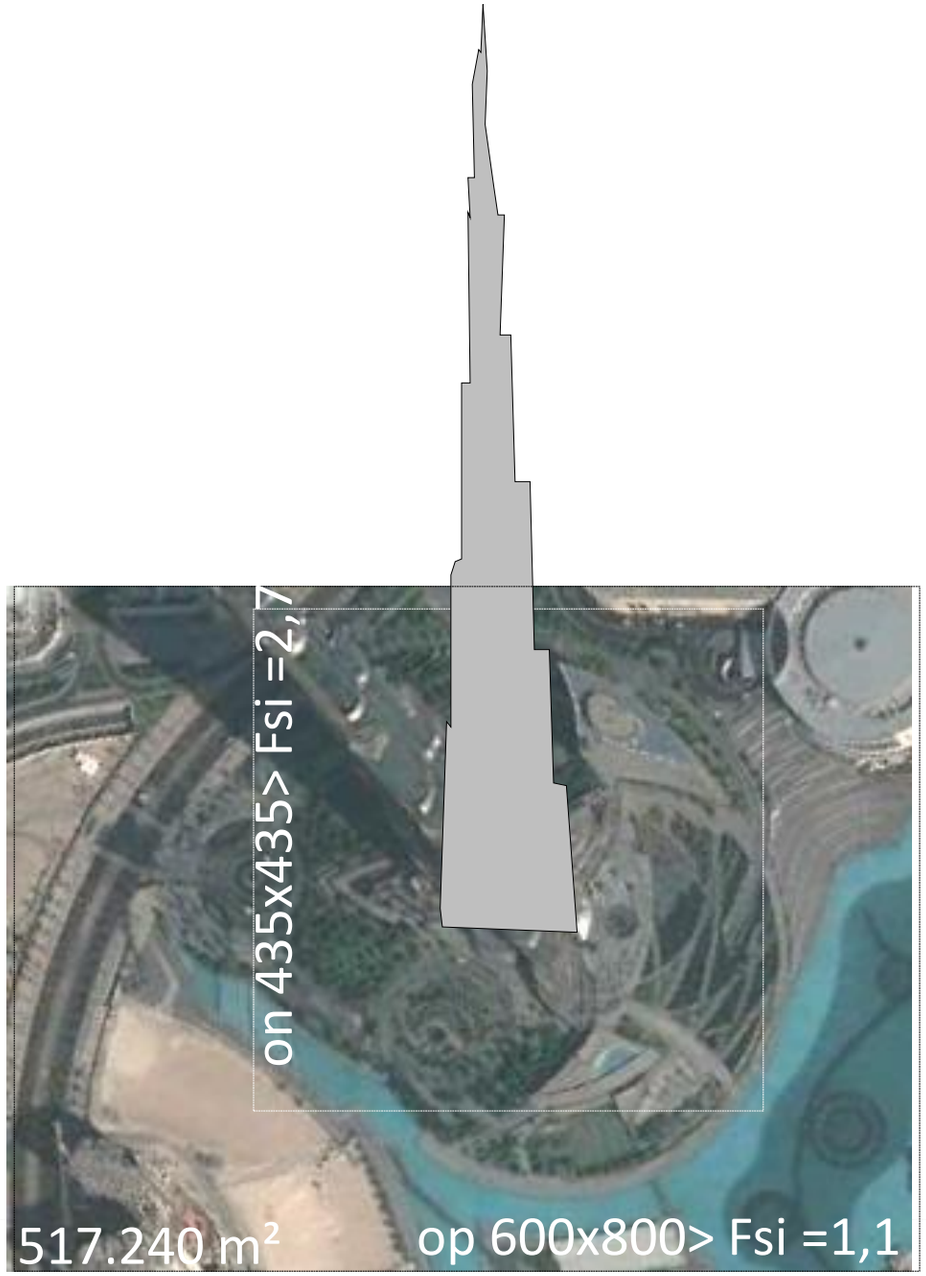
`The urgency of densification is clear

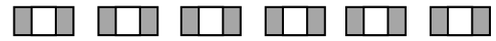
Quantity of Quality !

How to enlarge the affordable supply?

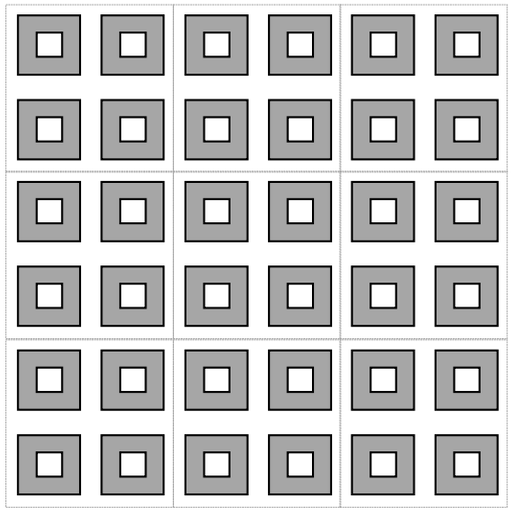
How to make a diverse and inclusive city?

High rise is not the only solution, even overestimated!
Footprint management is a forgotten tactic.





Rue la Fayette 21m



compare 22 dwe of 115 m2 >2270m2 /floor
8 floors x 4blocks >32x> 74.000m2 gross floor
145x145= 21.000m2 terrain
Fsi = 3,5

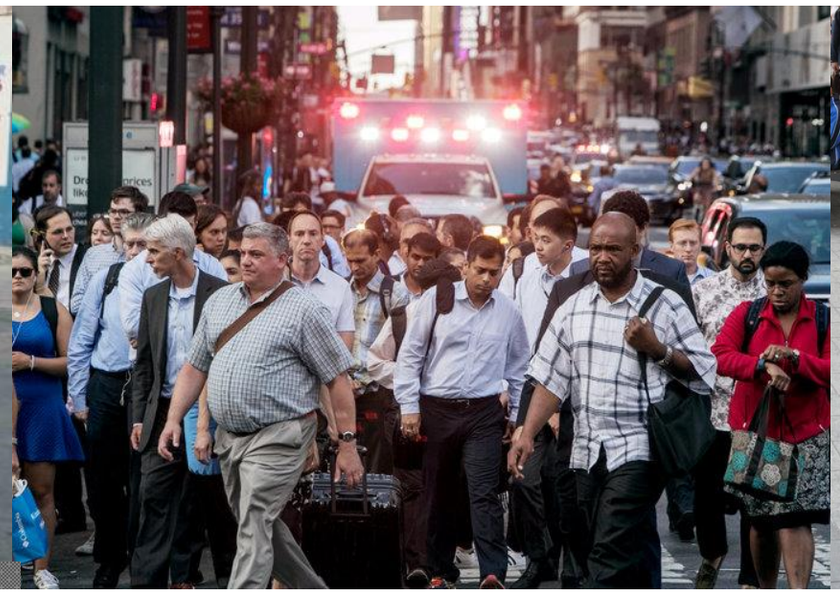
Burj Arab <> Paris

Need for qualitive density that is an answer on new urban lifestyles based on concrete proximity to ‘their’ range of cultures.

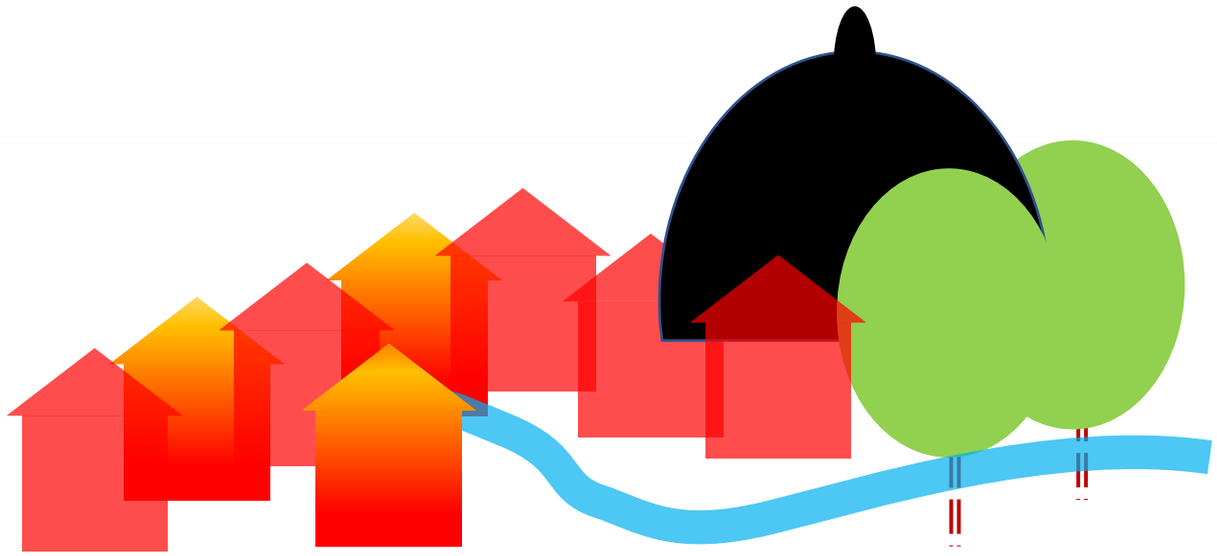
Urban atractivity relies on diversity.
Leading to interaction inbetween different identities.
The opportunity to mirror yourself to others and there choices.

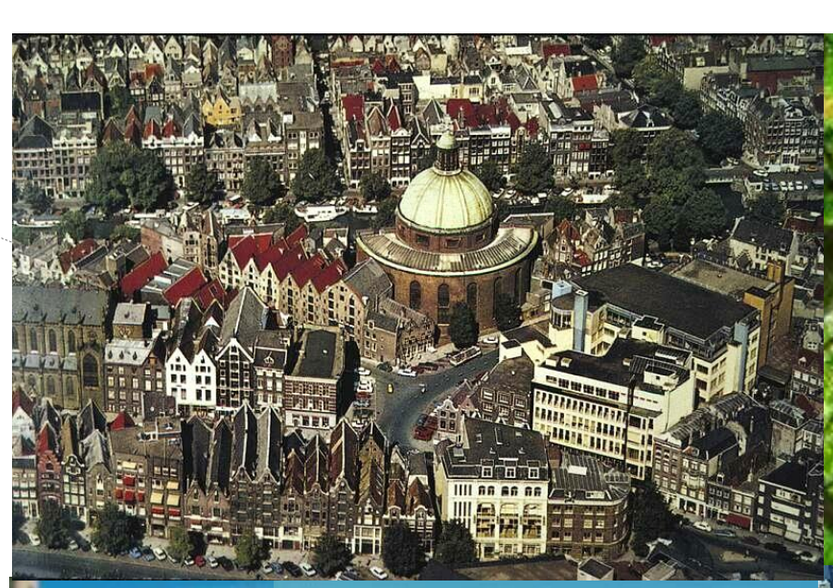
The urban fabric is the home of the demographics.
By transforming and developing the fabric we do influence the city-population which will be attracted and bound. (city-attraction)

How to realize that vital societal city of Richard Florida Jane Jacobs, Jan Gehl?




City is a theatre of humanity





Transport Economics Exchange

Yellow vests Banlieu Traffic Child Gentrification

Undermining: Tourism Childs Affordability Congestion Traffic-jam Nature Polllutions

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Demographic

culture society economics for who?

urban public comfort

Human capital

A market of.....

Context

We do....

Urban Cells

private comfort <> typology

Diversification of the private realms

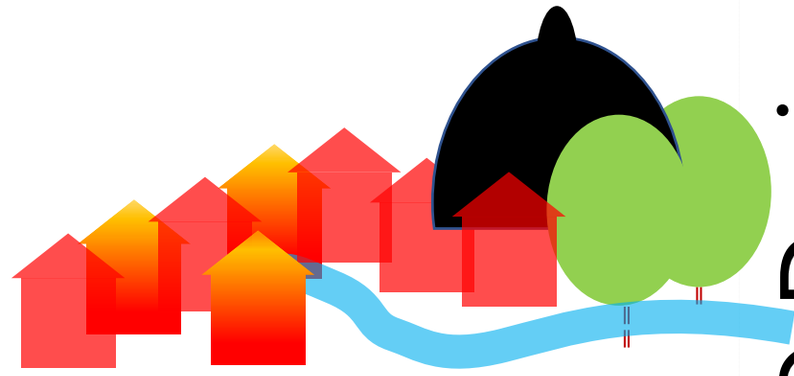
Urban Fabric

public comfort <> typology

Diversification of the public realms

Layered Cities

Red Black Blue and Green

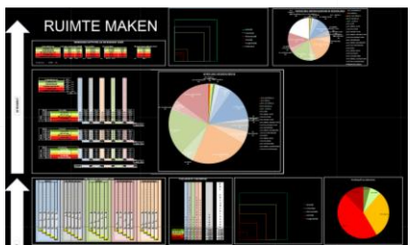


Q Design

Mathematics of the ideal city

Numbers

figures



Program Q Control

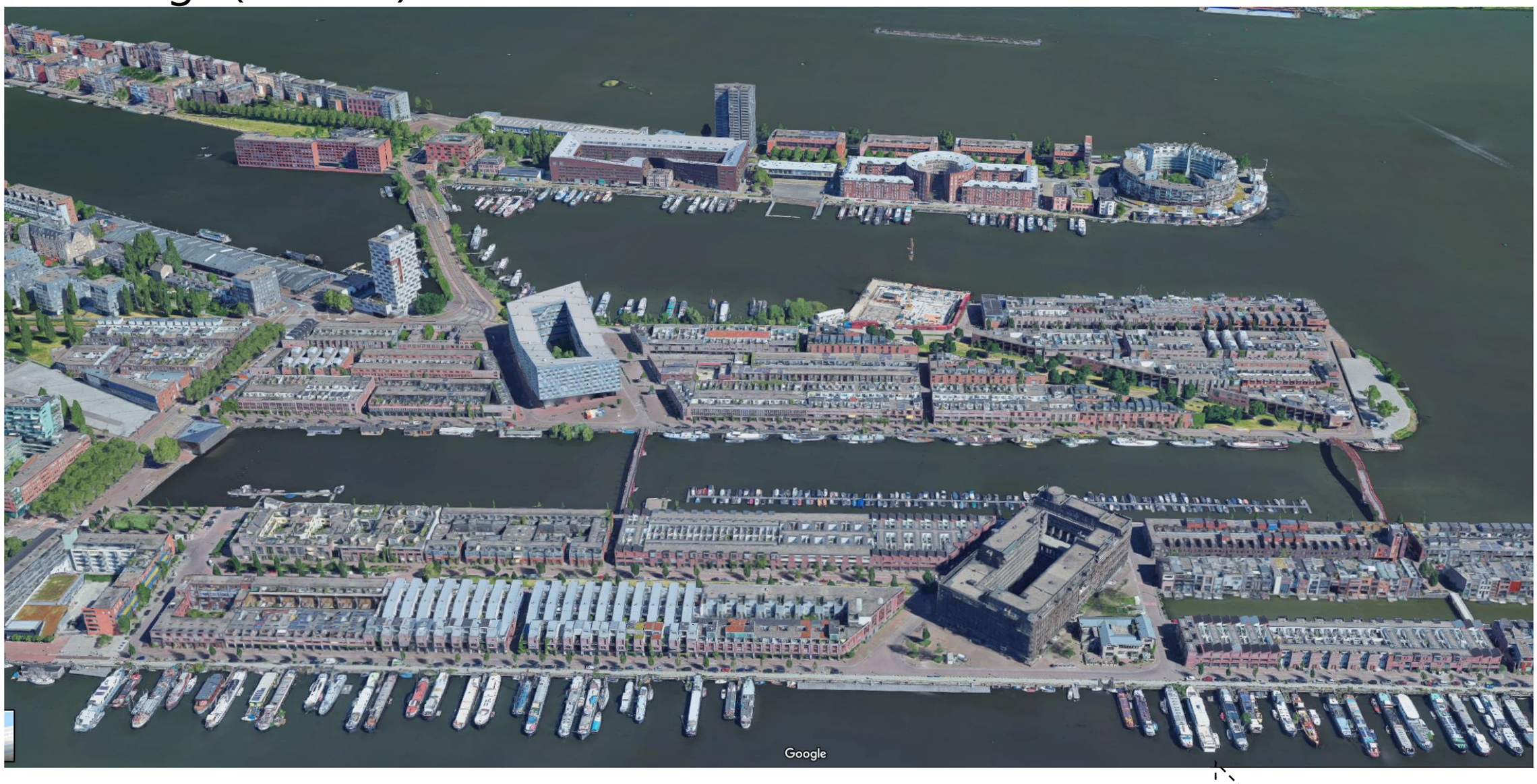
Proximity to Q+Q

Experience and connection to Diversity Dynamics

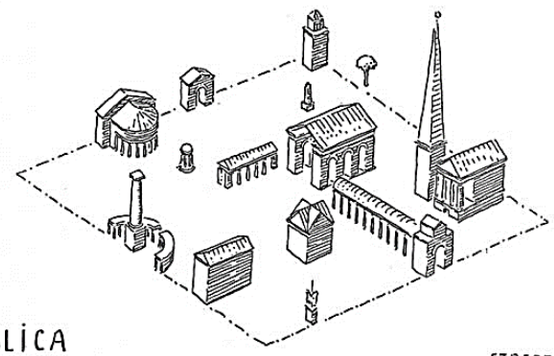
The quantity and quality of its cells – *size, rooms, spatial comfort> private comfort- that serve as the density of the cells addressing themselves to the public realm of the city and its society* - forms the system and value of the addresses.

A cell starts to be something in connection to the fabric of the organism: location and connections define its identity

A vital city needs diversification of its fabric.
Our time asks for a city as a diverse composition (mix?) of urban characters
A diversity of urban fabrics should be based on “the chemistry of dwellings (its cells)”.

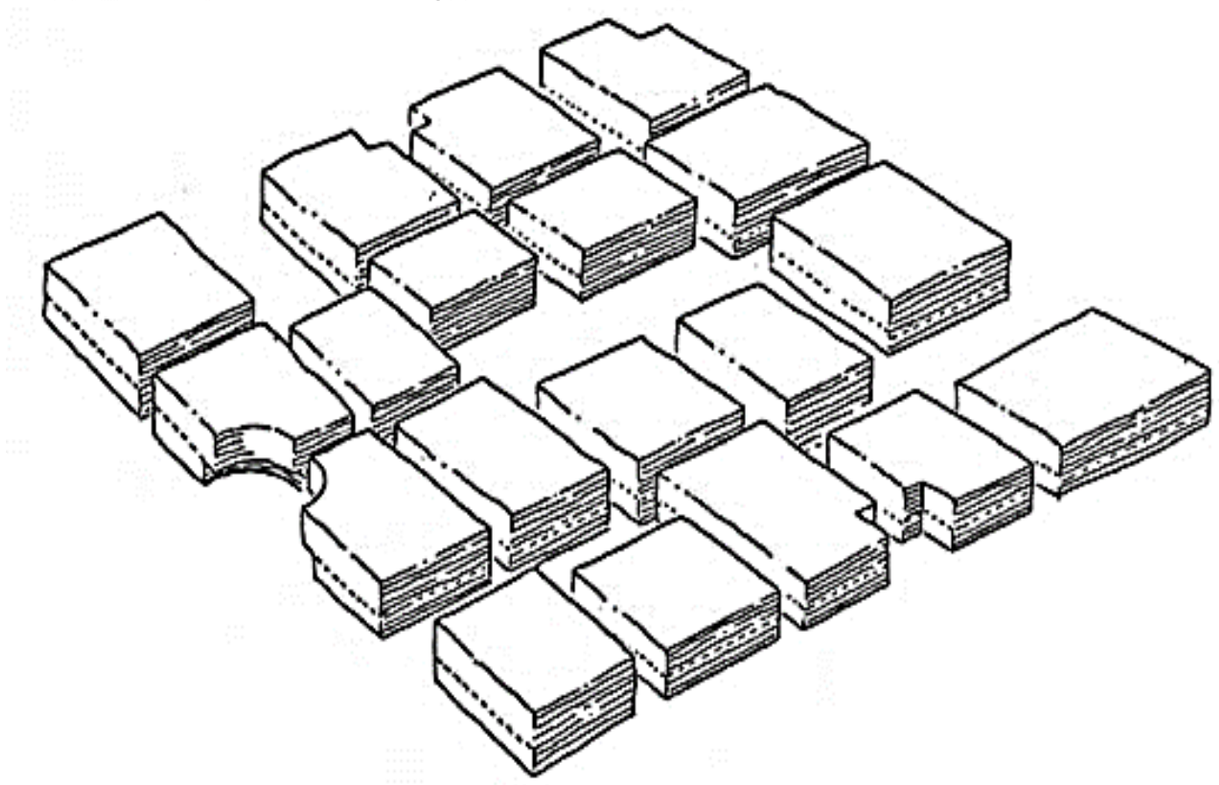


Spatial Values >>>>Typology differentiation



RES PUBLICA

MONUMENTS
WITHOUT
STREETS or SQUARES

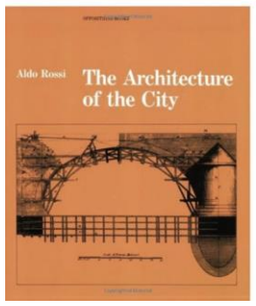


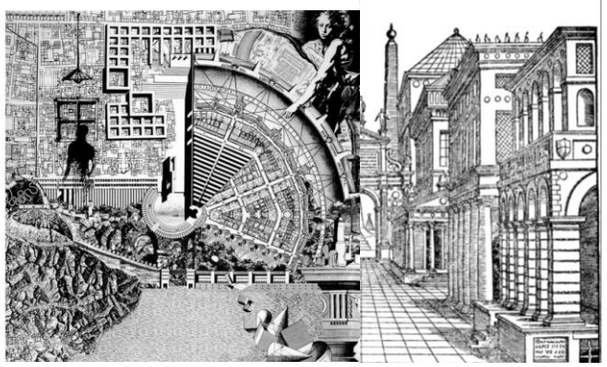
CIVITAS

LK 83

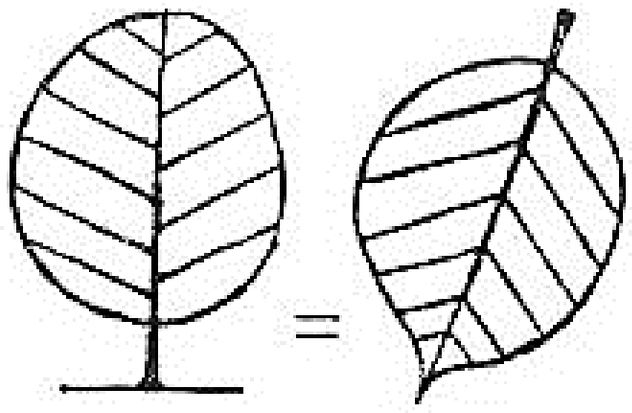
TRUE CITY

THE ARCHITECTURE OF THE CITY
ALDO ROSSI, the first published in 1966



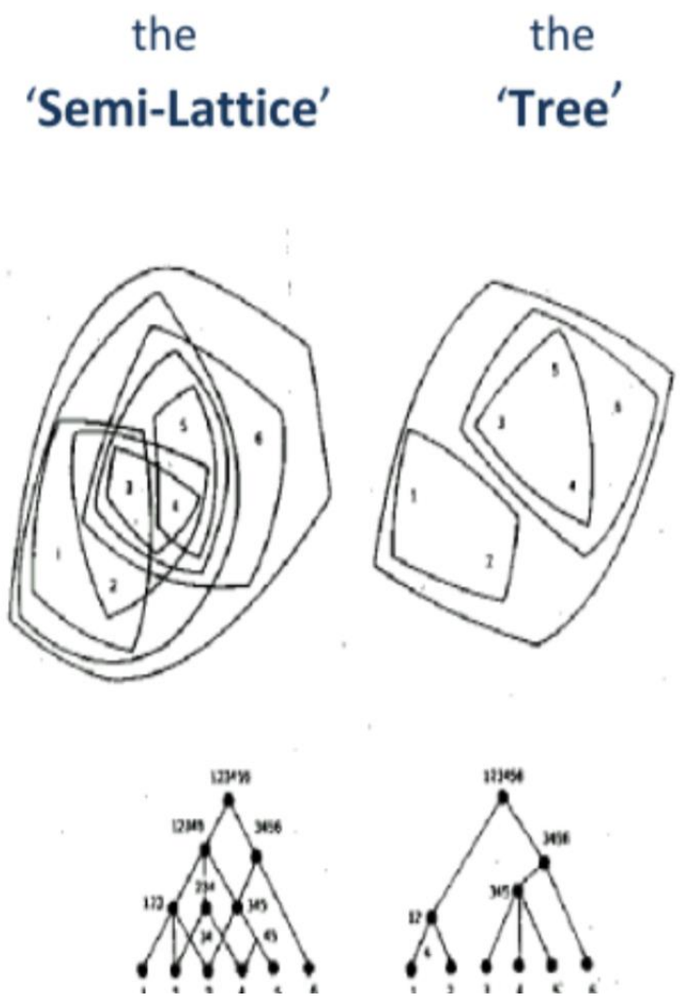


A city is like some large house and a house is in its turn is like a small city."
[fromAlberti L.B., De re aedificatoria On the art of Building (Ten Books) 1452



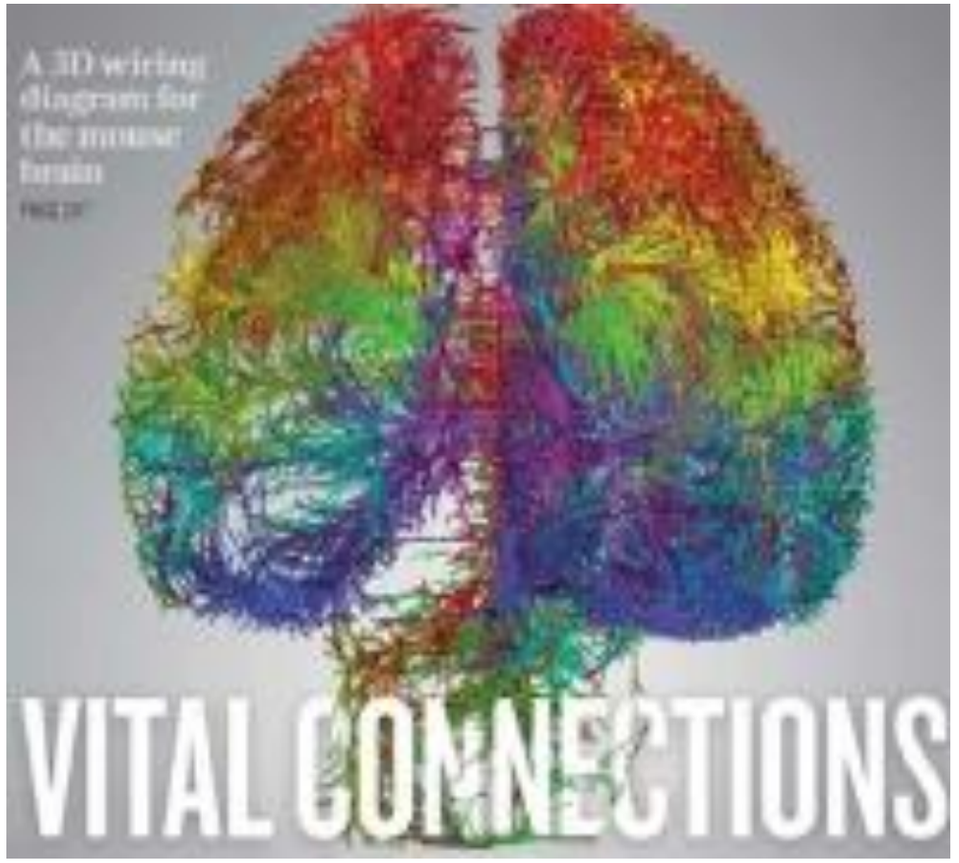
tree is
leaf and leaf
is tree - house is
city and city is house
- a tree is a tree but it
is also a huge leaf - a
leaf is a leaf, but it is
also a tiny tree - a city
is not a city unless it
is also a huge house -
a house is a house
only if it is also
a tiny city

Aldo van Eyck
Tree is leaf leaf is tree



Alexander
A city is not a tree

Density is not about mass, in the contrary: about access.
Not about quantity in itself but about relations, connections and diversity.



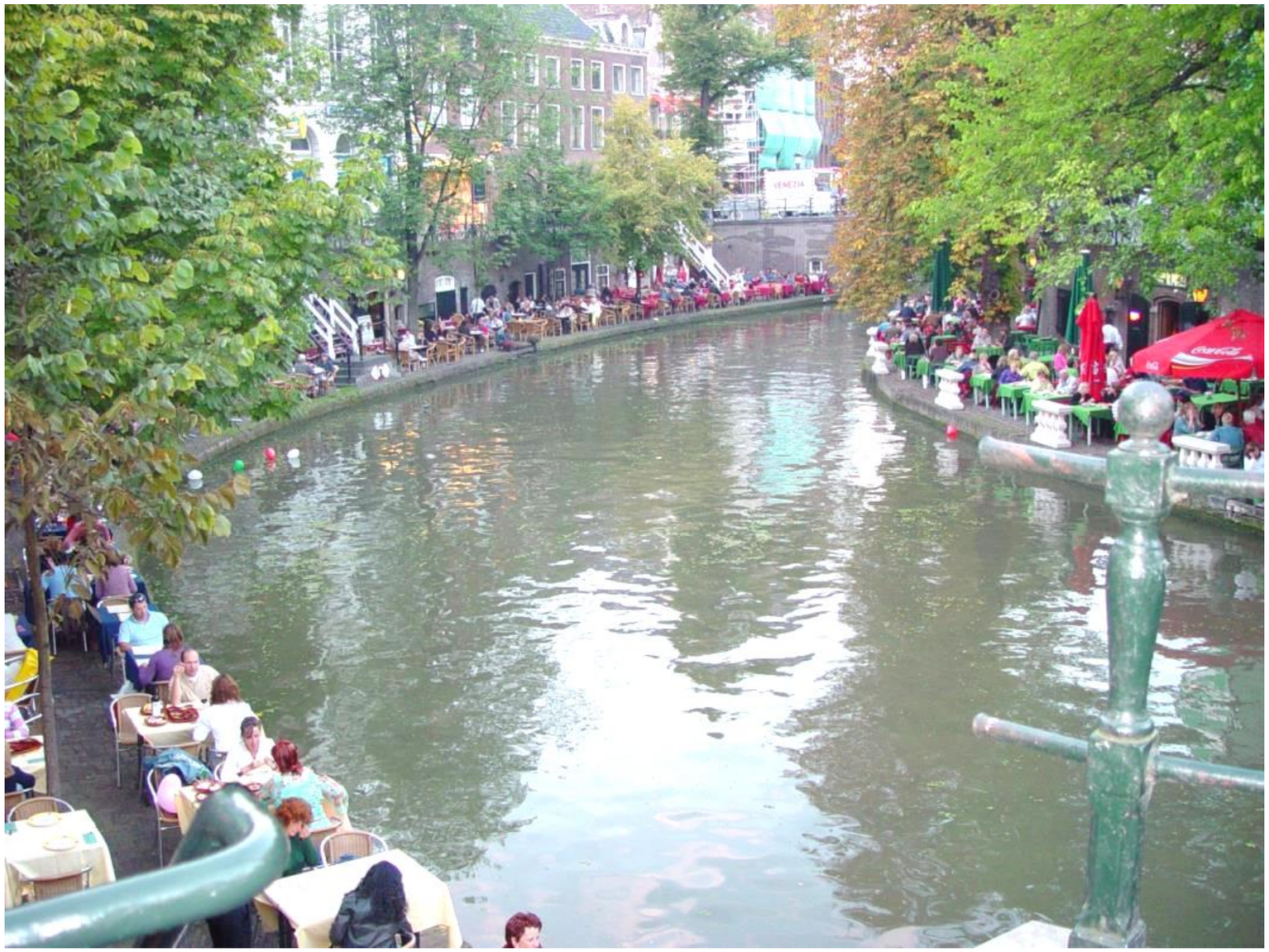
Collage City
Colin Rowe
Type and history value

Simple House Complex City

The art of the distribution of volume and void> Scaling spaces

"if the wonder of density is in function the city is full of space."

Relief by the scenografic

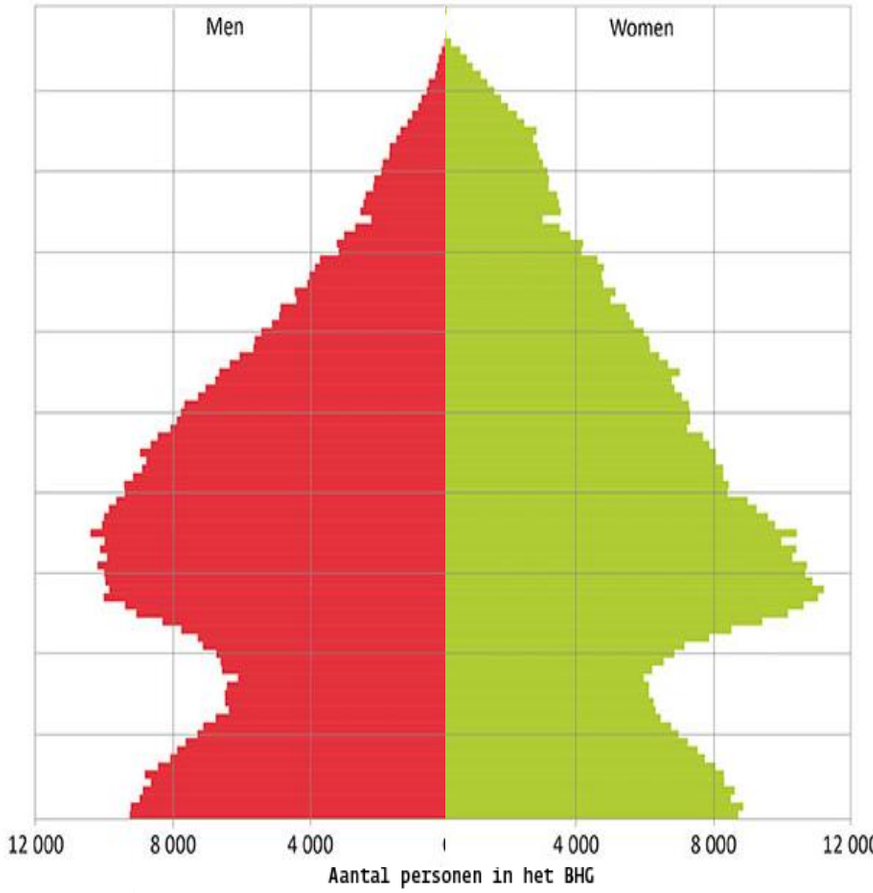


"if the wonder of density is in function the city is full of space."

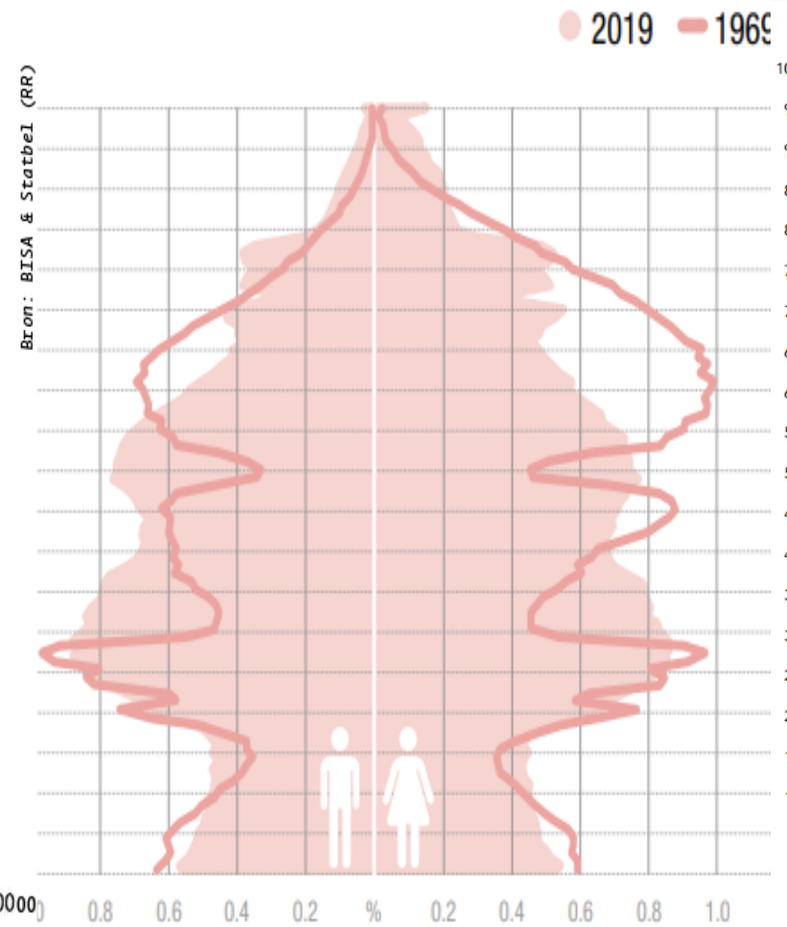
Relief by the scenografic


City scaling
Google

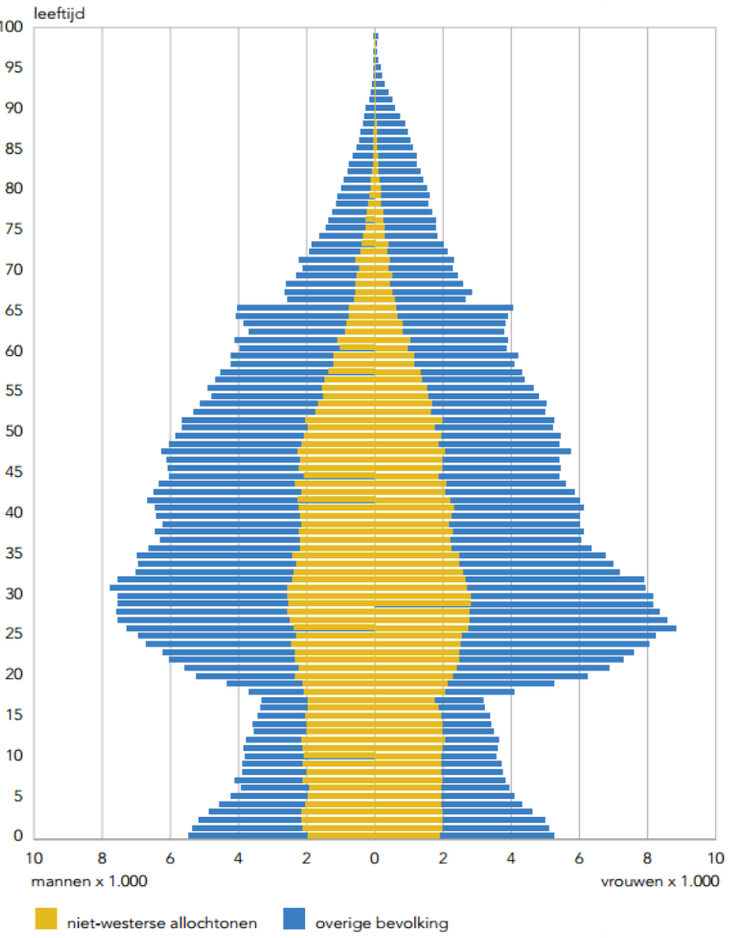

Kaart
Google



Brussels

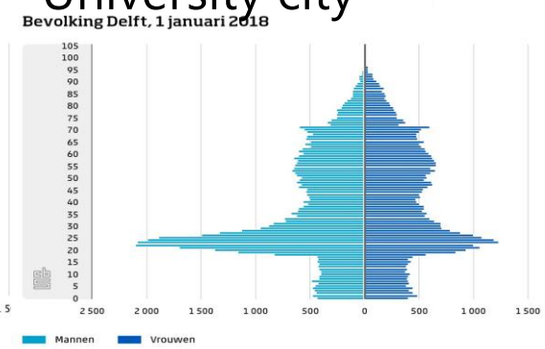


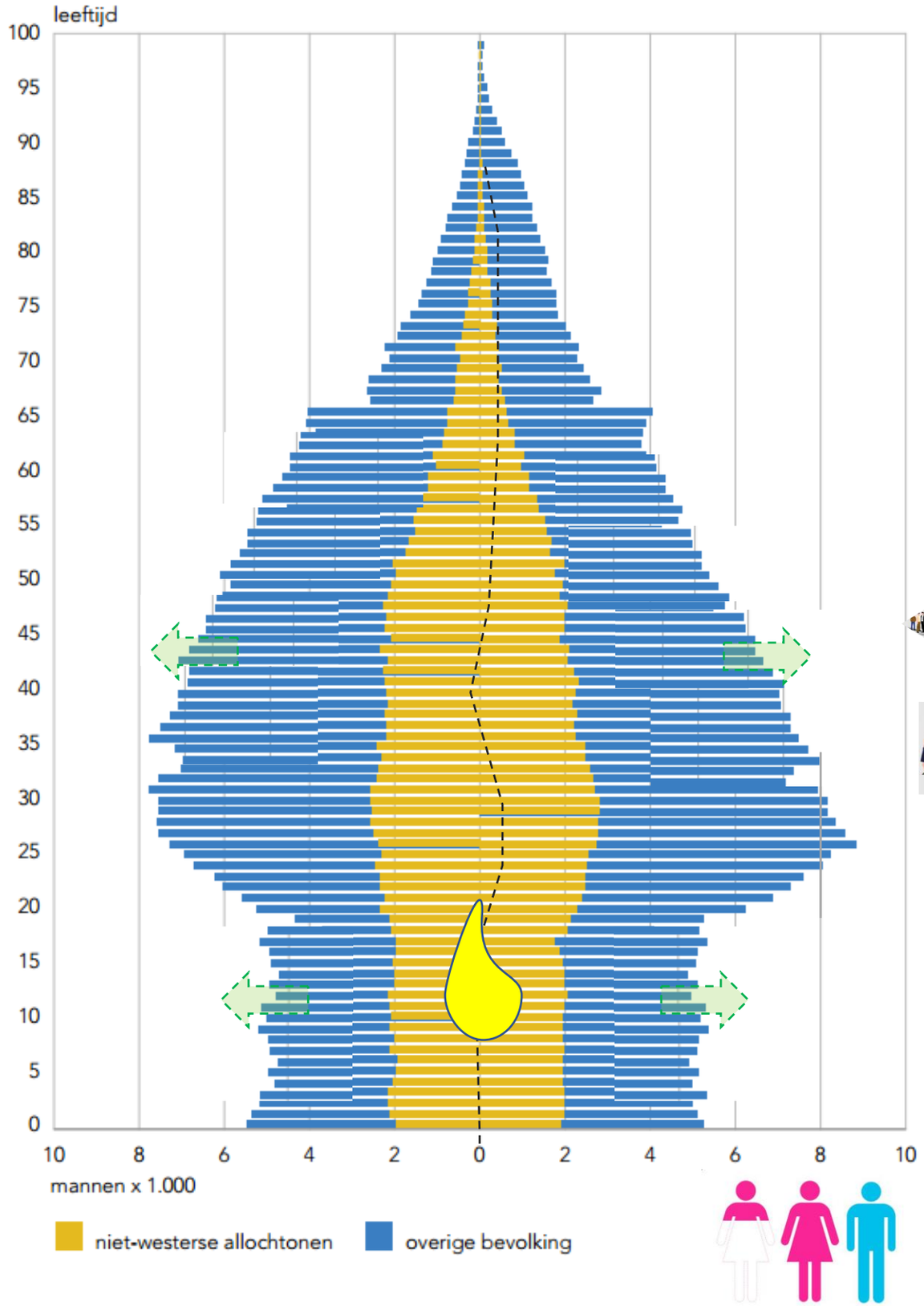
Vienna



Amsterdam

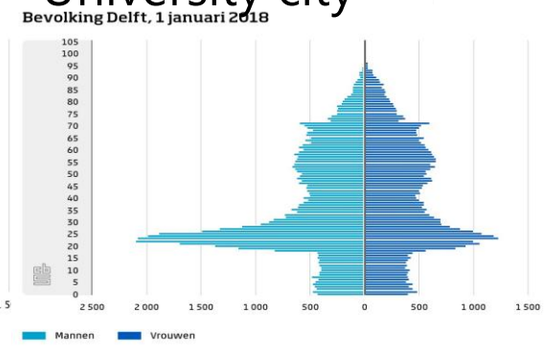
Province <> University city





In powercouples)
Generating gentrification accelerating prizes

Province <> University city



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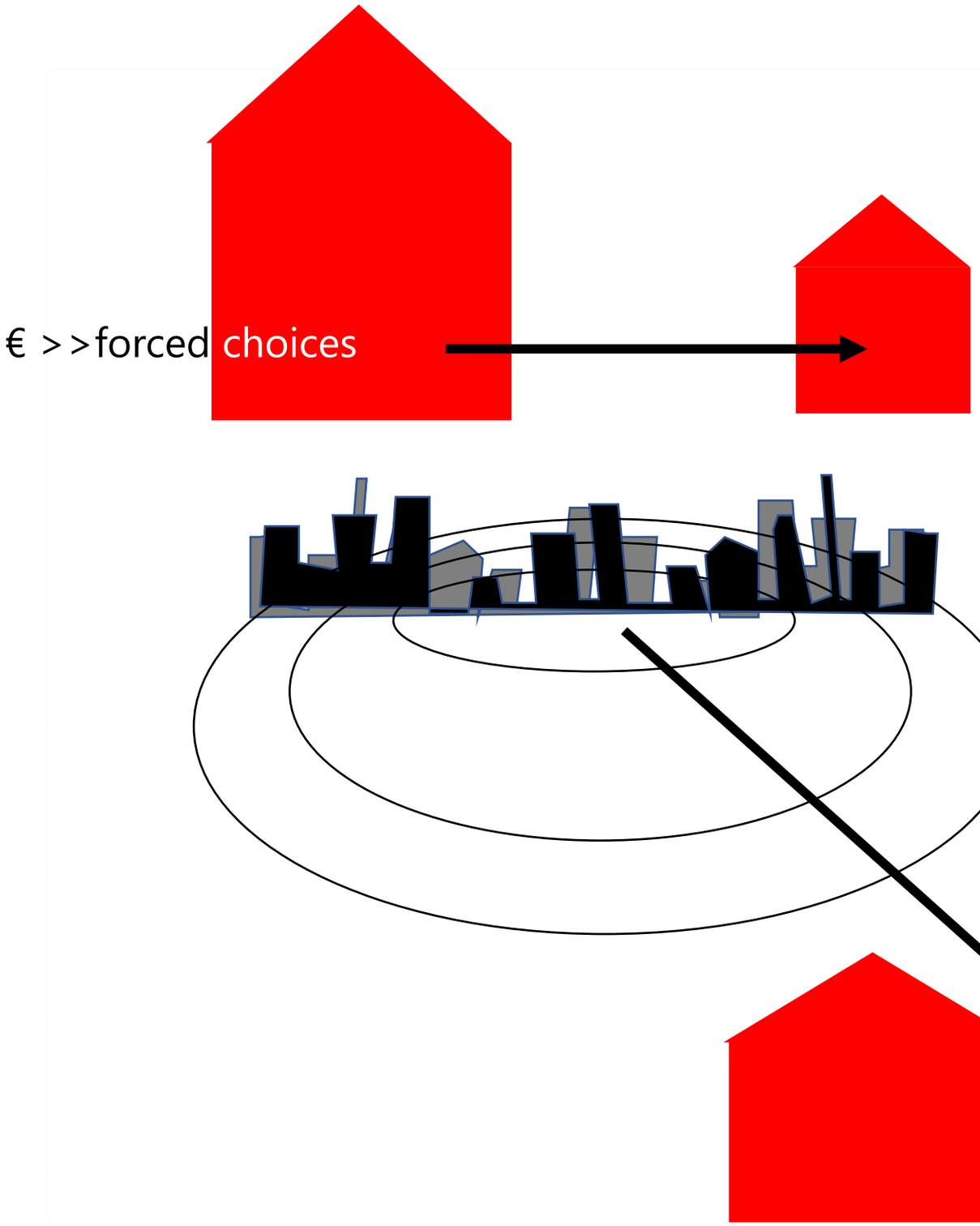
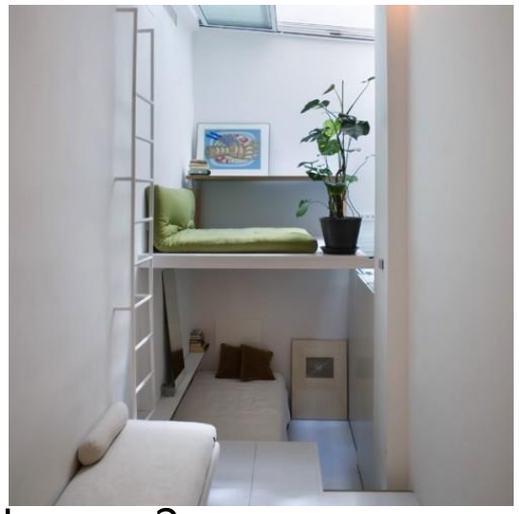



Less m2


Shared/ co-living


More distance

Location : Proximity to….
Urban Public comfort …..Private comfort

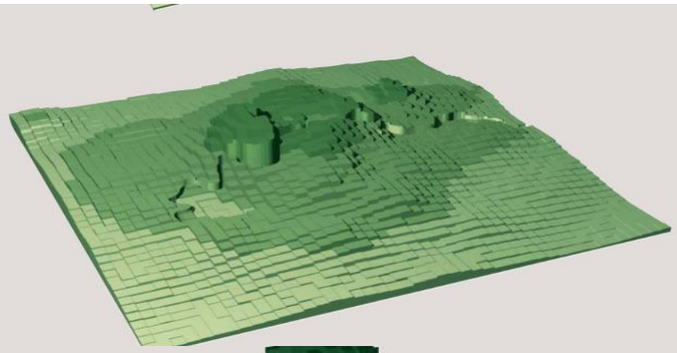
Solving movingcity Greencity Bluecity Foodcity
Inclusive exchange Socialupward moving city
participation - innovation clean healthy city

Public space + amenities + urban texture with quality and capacity
Density acces proximity diversity> scale\
Chemistry of dwelling by Parametric Prototyping

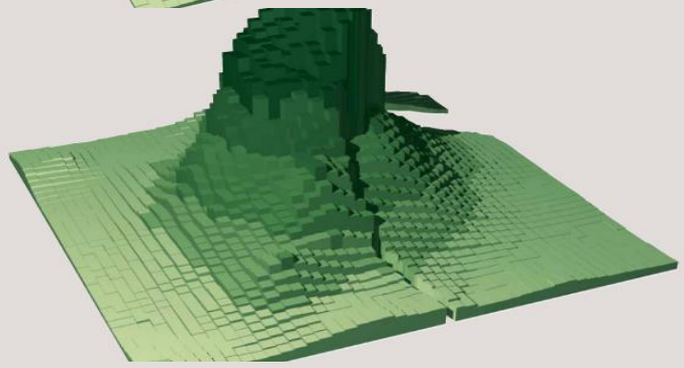
- Brussels *181.726/32,6km>* *5.573* inh./km²
- 1,3milj/ 161 km² 7.500 inh./km²
- hypothesis 33% living area > 22.500 inh/km²
- hypothesis 50 m² BVO/inh > 1.125.000 m²BVO/ km²

actual needed Overall FSI: 1,25/net. living environment

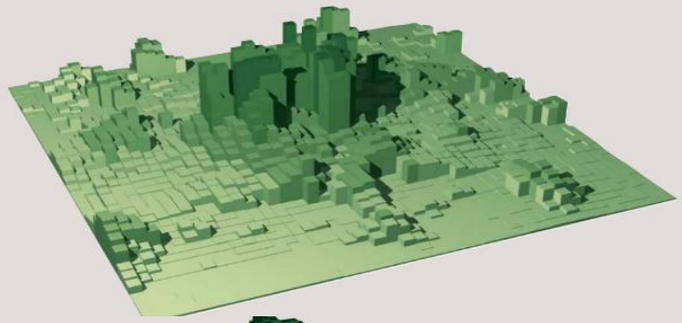
LONDON



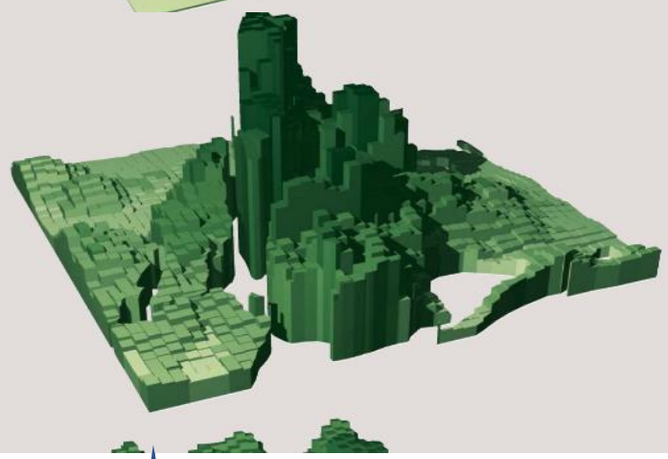
SHANGHAI



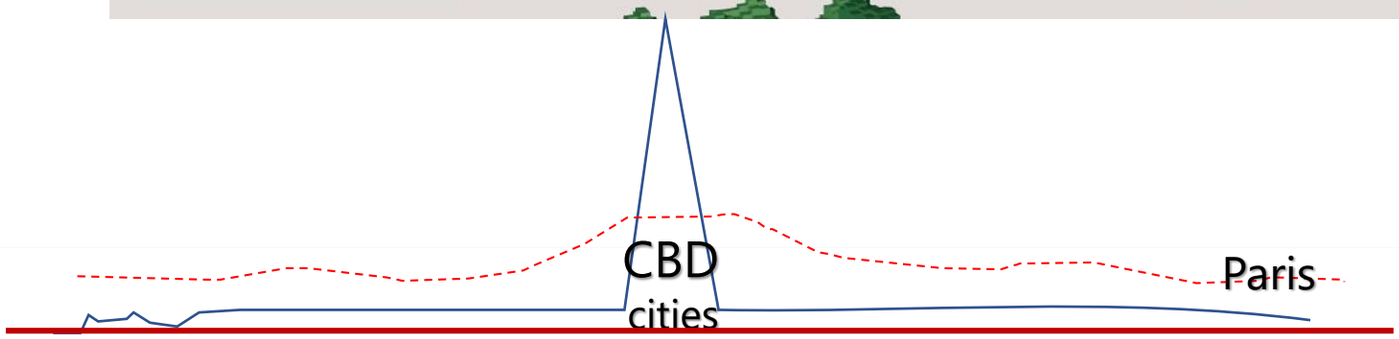
BERLIN

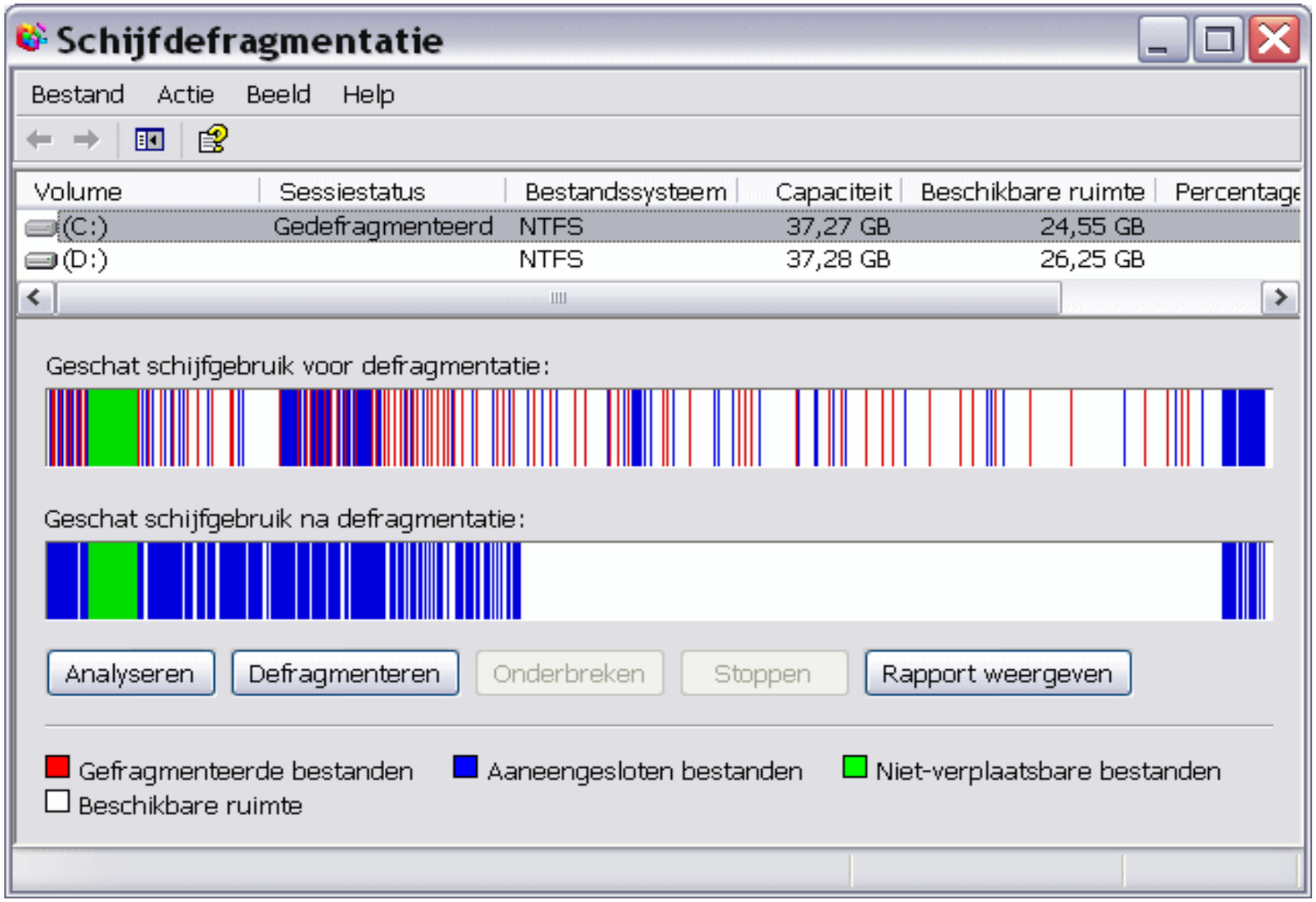


NEW YORK



One thing the results make clear is that high-rise city cores are not good predictors of overall urban densities.

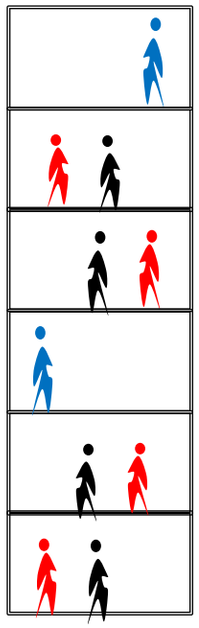


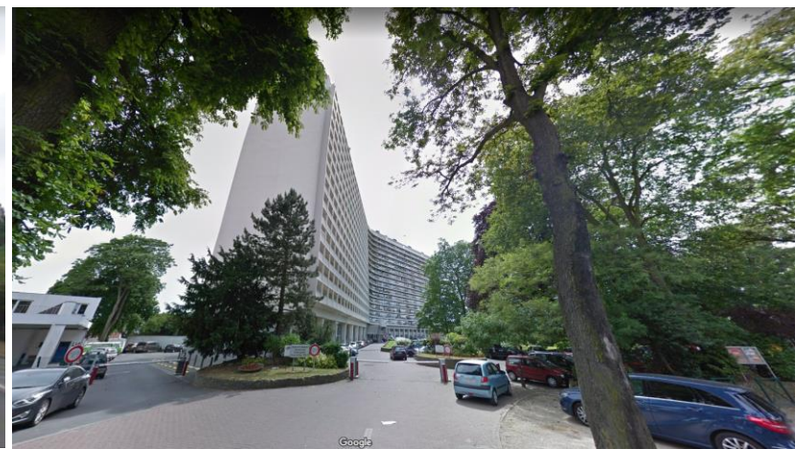

Schijfdefragmentatie
Bestand Actie Beeld Help
Volume Sessiestatus Bestandssysteem Capaciteit Beschikbare ruimte Percentage
(C:) Gedefragmenteerd NTFS 37,27 GB 24,55 GB
(D:) NTFS 37,28 GB 26,25 GB
Geschat schijfgebruik voor defragmentatie:
Geschat schijfgebruik na defragmentatie:
Analyseren
Defragmenteren
Onderbreken
Stoppen
Rapport weergeven
Gefragmenteerde bestanden
Aaneengesloten bestanden
Niet-verplaatsbare bestanden
Beschikbare ruimte


Ca 26% build up x 3,5 floors> Fsi=1,1
Ca 11% build up x 10 floors> Fsi=1,1

Ca 26% build up x 3,5 floors> Fsi=1,1

Ca 11% build up x 10 floors> Fsi=1,1





Slide 48

People gathered in a block or in public space

What's making a community?

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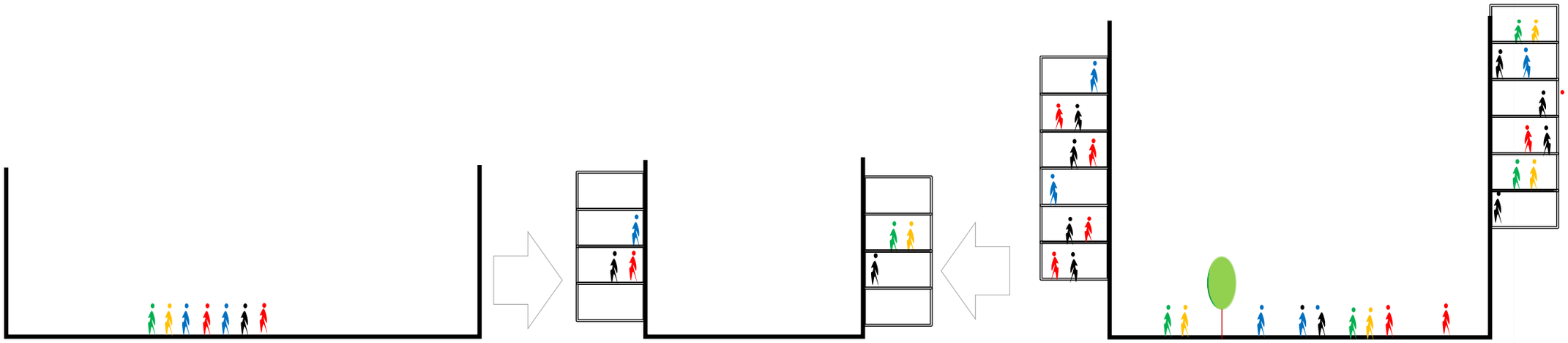
partners architecten

Meet the ground

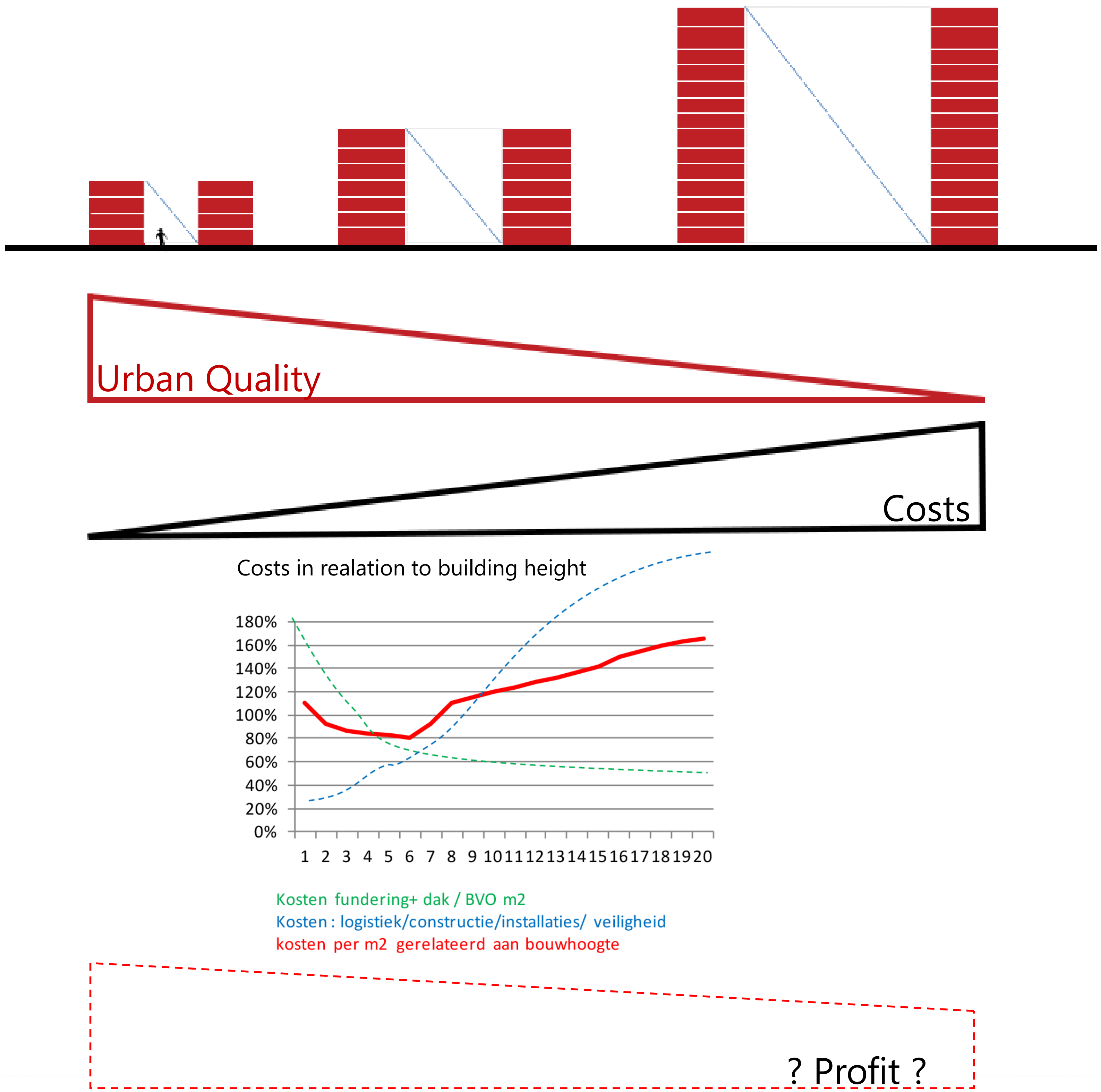
Visibility Study

Densifying does not imply automatically interesting cities that are attractive.
High density also creates a loss of qualities



How to make attractive cities in which spacious dwellings feed a concentrated public domain of high quality and vice versa?

Attractive urban density = the product of the quality of the public space x the quantative density of qualities
>critical mass of quality = Q*Q



- Density = Sky-high ??

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FSI
0.85

GSI
0.045

OSR
0,90

Antwerpen Luchtbal

FSI
0.77

GSI
0.77

OSR
0.30

Quarter in Jakara, Indonesie

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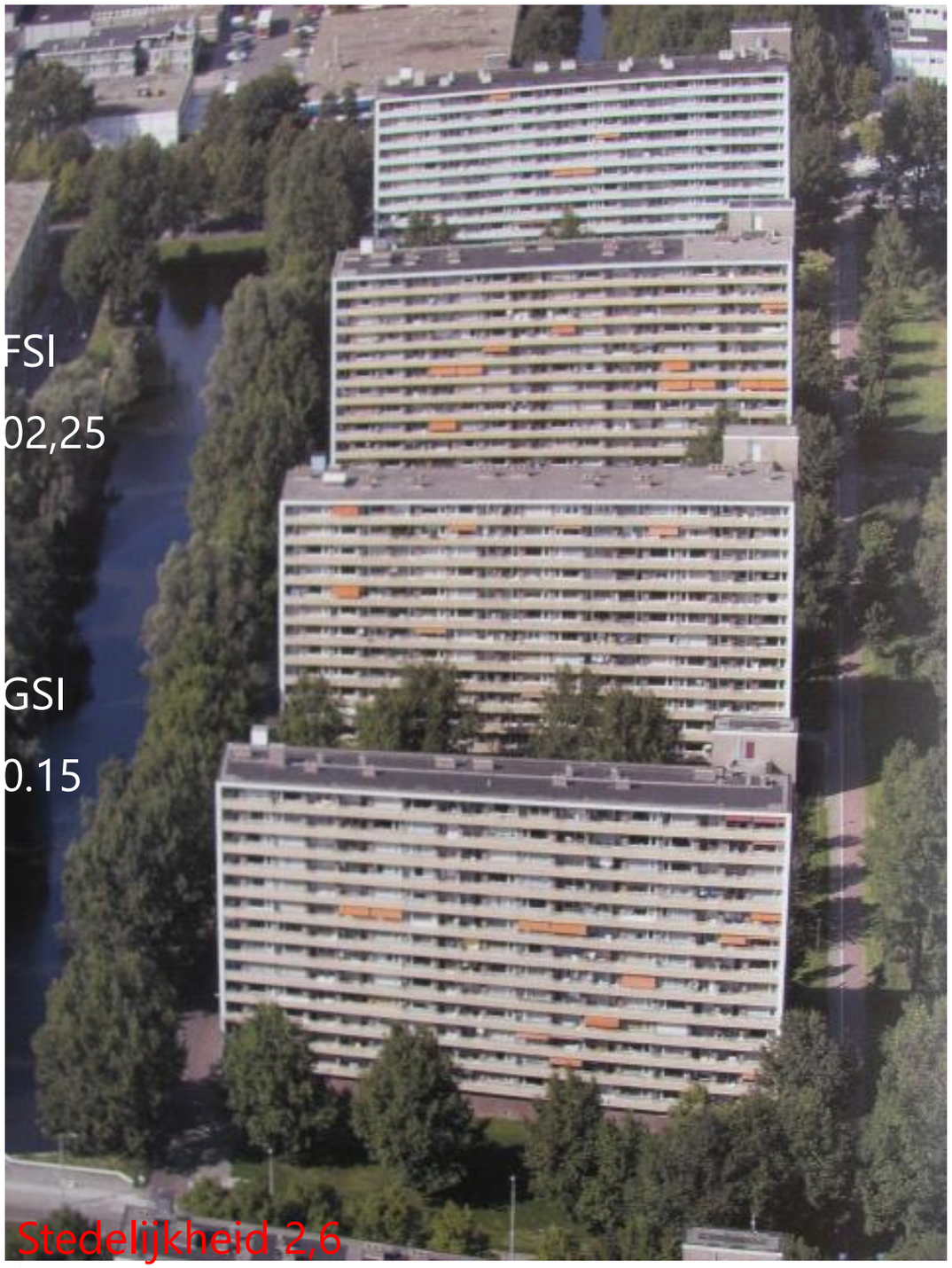
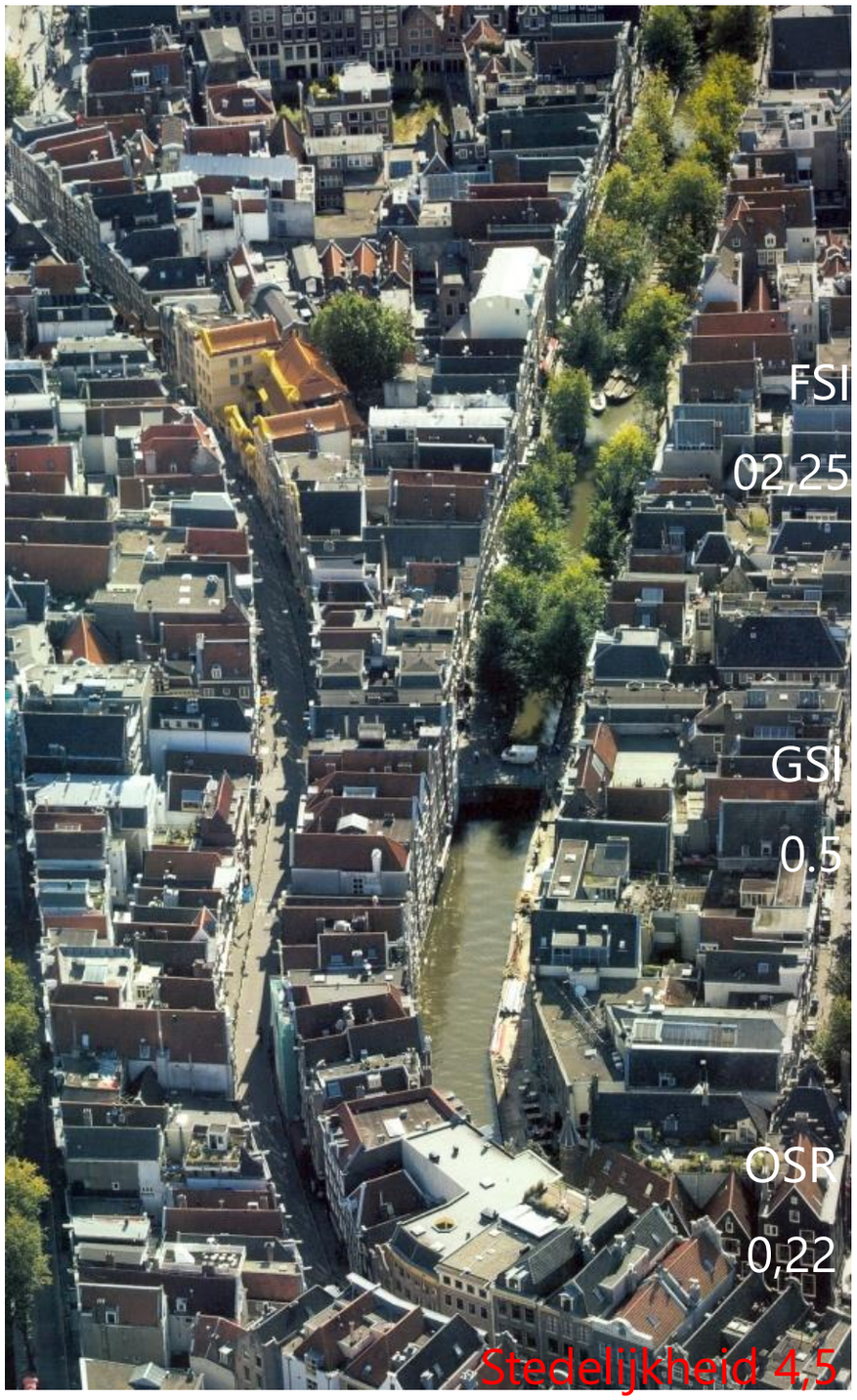

FSI
02,25
GSI
0.15
Stedelijkheid 2,6

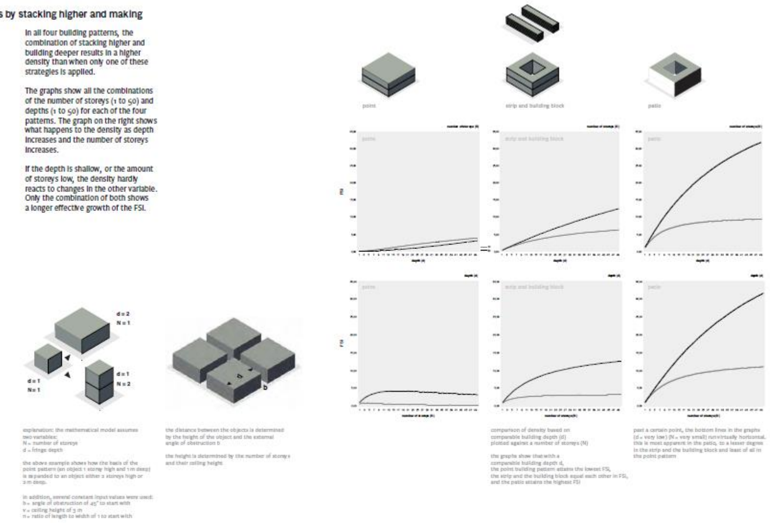

FSI
02,25
GSI
0.5
OSR
0,22
Stedelijkheid 4,5

law 1
the density (FSI) increases by stacking higher and making buildings deeper.

In all four building patterns, the combination of stacking higher and building deeper results in a higher density than when only one of these strategies is applied.

The graphs show all the combinations of the number of storeys (1 to 50) and depths (1 to 50) for each of the four patterns. The graph on the right shows what happens to the density as depth increases and the number of storeys increases.

If the depth is shallow, or the amount of storeys low, the density hardly reacts to changes in the other variable. Only the combination of both shows a longer effective growth of the FSI.



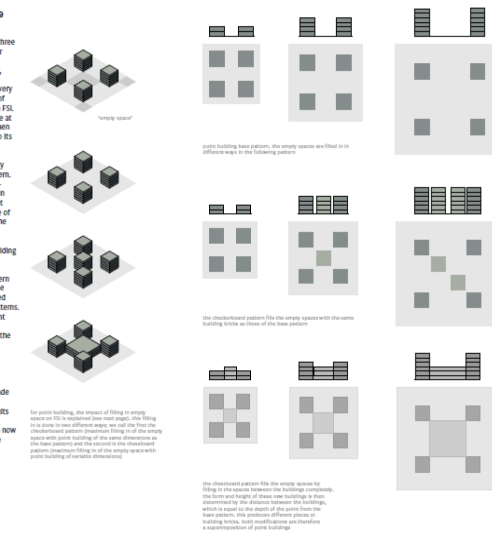
law 4
point building, optimized as a checkerboard, produces the highest FSI.

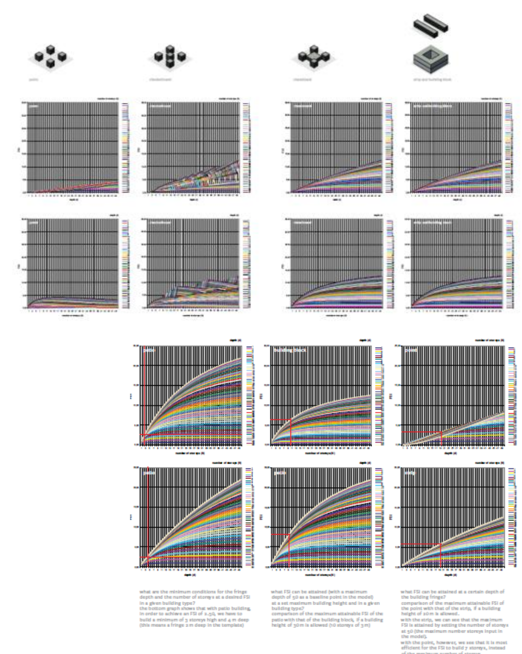
In point building, as in the other three patterns, making buildings deeper always produces a higher density. Making buildings higher, however, does not always result in a higher density with point building. For every depth, there is a certain number of storeys that produces a maximum FSI. The FSI reaches its maximum value at an angle of obstruction of 45°, when the depth of the object is equal to its height.

This maximum is caused by 'empty spaces' in the point building pattern. These 'empty spaces' at the intersections of the imaginary streets in the pattern grow as the towers get higher, and, with a constant angle of obstruction, distances between the towers must be increased.

In order to optimize the point building pattern, we looked at how these 'empty spaces' might be filled by increasing the density of the pattern at the intersections. This was done in two different ways, the so-called checkerboard and chessboard patterns. Both showed that an FSI equivalent to that of strip building can be achieved by increasing density at the 'intersections'.

We then looked again at how the FSI that can be attained with the checkerboard pattern behaves in a comparison based on equal façade indices and therefore equivalent primary natural light quality. Results show that the checkerboard, in certain combinations in ratio, can now produce even higher FSIs than the other three building types.

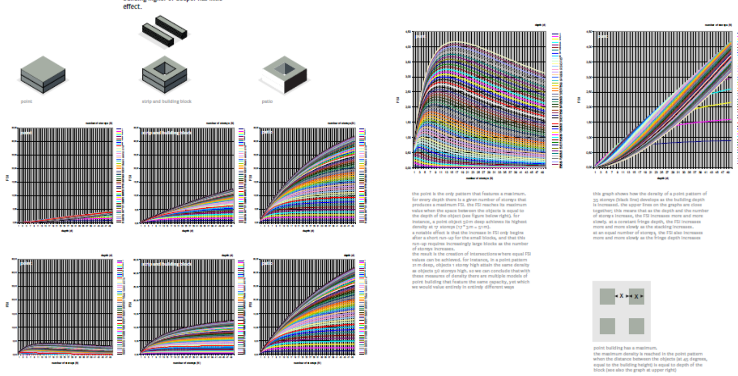




law 2
with a constant angle of obstruction, the increase in density (FSI) slows down as stacking or building depth increases.

In the strip, the building block and the patio, building higher and\or deeper always produces a higher FSI. As the depth and the number of storeys increase, however, the increase in the FSI slows down. From this point on, building higher or deeper has little effect.

In point building, building deeper always produces a higher density, but with a noticeable trend. Lower blocks produce a higher density with lesser depth than higher blocks. Only as the blocks get deeper, therefore, it is worthwhile to build higher.



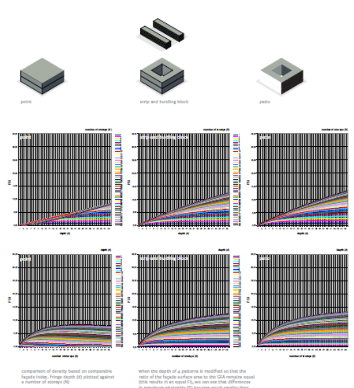
law 3
with a constant façade index, the three basic patterns of patios, strips and building blocks produce an equal density. tower blocks feature the lowest density.

In order to compare the four building typologies, the FSIs of the four patterns must first be laid out next to one another, based on a comparable building depth (Law 1 figure).
This shows that patio building (with a constant angle of obstruction and stacking factor) can attain the highest density, while point building produces the lowest density. The strip and the building block fall between the two. This is true of both FSI and GSI.

However, the internal corners in patio building result in an unequally dispersed quality of light. In the pattern for the patio, a relatively large quantity of mass is placed contiguously. The result is the creation of many dark spaces in this pattern. The high density of the patio is attained at the expense of the quantity of natural light than can penetrate the block. The next step, therefore, is to determine which building type produces the highest density when the same potential 'quality of natural light' operates in all.

Rather than compare the building depth of the four patterns, their Façade Index was compared. The Façade Index (GI) is the ratio between the surface of the façade and the gross floor area (GFA). This ratio has an impact on the potential to draw in natural light through the façade and therefore serves as a baseline reference for the primary 'natural light quality' level. This makes the Façade Index a crucial factor in the potential density of equivalent urban tissues.

If the depth is corrected according to a consistent Façade Index (and constant stacking and angle of obstruction), the strip building pattern, building block pattern and patio pattern produce equal FSI values. Only the point building pattern stands out with a lower density. The potentials of the point pattern were therefore examined in greater detail in Law 4.



law 7
with a constant exterior angle of obstruction, the depth of penetration of natural light increases as the street width decreases. formula:
the theoretical depth of penetration of natural light = street width * ceiling height / (facing building height – height of own ceiling in relation to ground surface level)

The combined effect of obstruction and ceiling height is studied by varying the building height, depth and angle of obstruction.
This way, we can study the impact of the number of storeys on the density with a set angle of obstruction (or the ratio of street width to building height). The ratio of building depth to ceiling height was also kept constant. It plays a role in determining the degree of natural light penetration.

Say the angle of obstruction is 45°, as in earlier analyses. This produces the following formula, derived from the formula for profile density:
$FSI/m^1 = d.N / (d + N.v)$
In which:
N = number of storeys
v = ceiling height
d = building depth

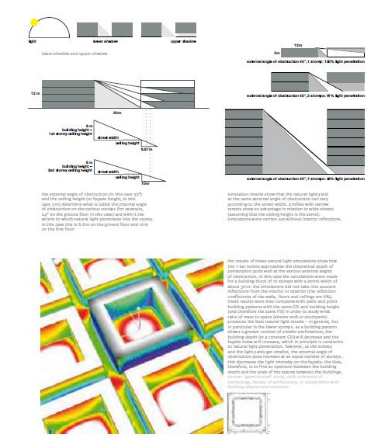
The relation between the angle of obstruction and the penetration of diffuse natural light is explained in the illustration on the following page. The maximum penetration of natural light is defined by:
– the street width from façade to façade;
– the height of the opposite building;
– the ceiling height of the specific storey;
– the location of the floor of the specific storey in relation to the ground surface level.

Up to now, we assumed that a constant angle of obstruction allows us to compare density results, but now we will differentiate between external and internal angles of obstruction.

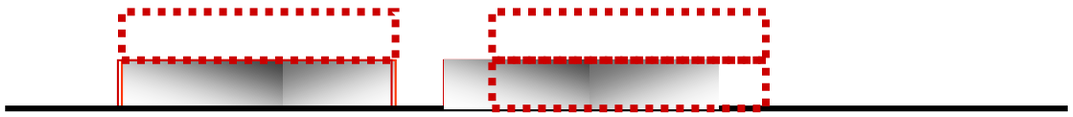
The external angle of obstruction is determined by the street width and the height of the building across the street. The internal angle of obstruction depends on the ceiling height and the external angle of obstruction, as well as on which storey of the building you are on.

From this, the following mathematical relationship can be established:
Theoretical depth of penetration = street width * ceiling height / (opposite building height – height of ceiling in relation to ground surface level)
Or, put another way:
Theoretical depth of penetration = street width * ceiling height / (street width * tang external angle of obstruction – height of ceiling in relation to ground surface level)
The formula demonstrates that the same external angle of obstruction and ceiling height can produce a different output of natural light, as a result of a different street width and building height. Take a street width of 10 m and an external angle of obstruction of 45°. At a ceiling height of 3 m, the theoretical depth of penetration on the ground floor is 4.3 m. At a street width of 20 m, an external angle of obstruction of 45° and a ceiling height of 3 m, the penetration depth is 3.5 m.

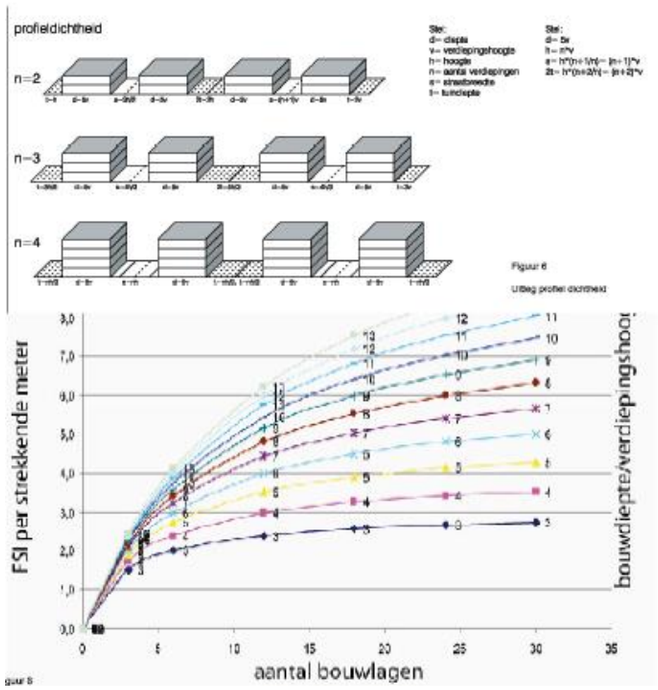
natural light simulation
Natural light simulations clearly show that the higher the storey, the higher the incidence of natural light. The results of the natural light simulations also show that the 1 Lux ISO line closely approximates the theoretical penetration depth if the reflections of walls, floors and ceilings are excluded (in other words, if they are black).
Simulations also show that, at the same external angle of obstruction and ceiling height, there can be different natural light outputs as a result of a different street width. An effect we expected based on mathematical relationships. The simulation results are explained on the following page.

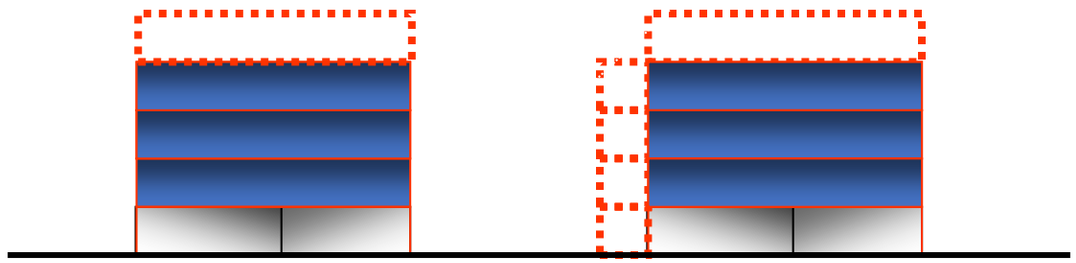


Density laws



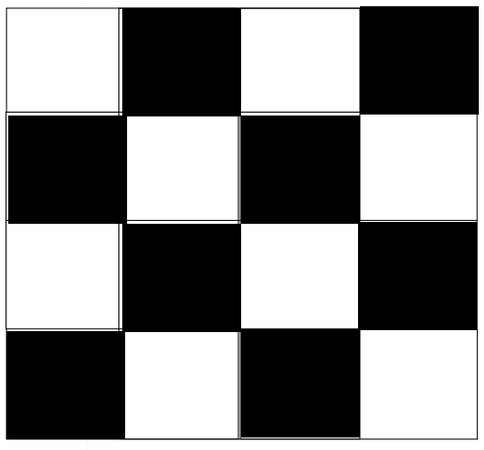
- Adding an extra floor to a block with depth 10 meter nearly doubles the FSI.
  Just by adding 3 meter to the streetwidth

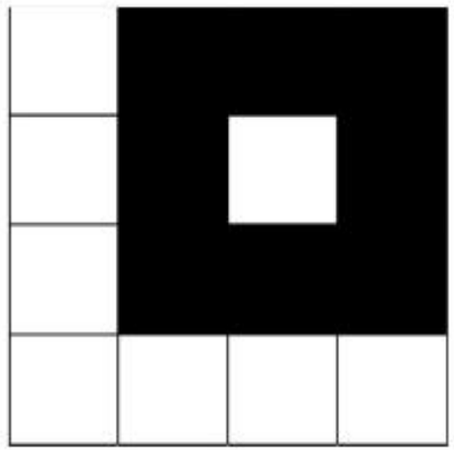




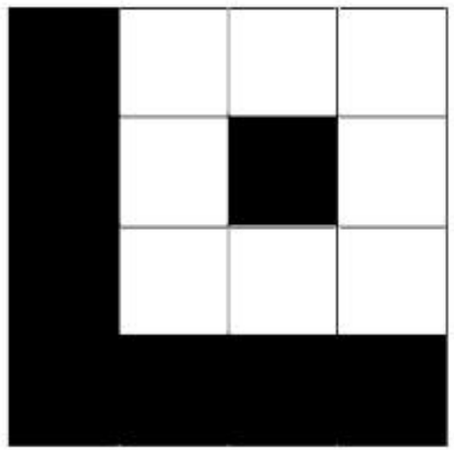
- But after 4 stores in stead of adding an next floor the same densification is reached by enlarging the 4 first floors

Step 1:
Footprint 50% with FSI > 2 à 3

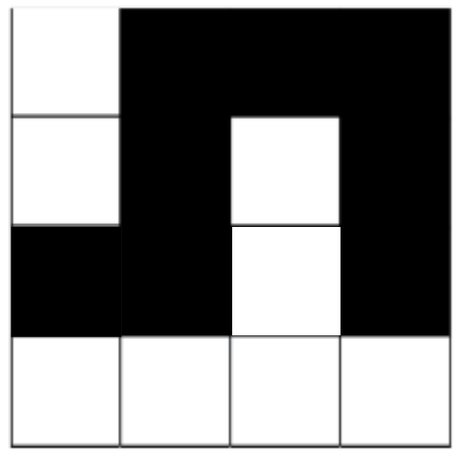




50%



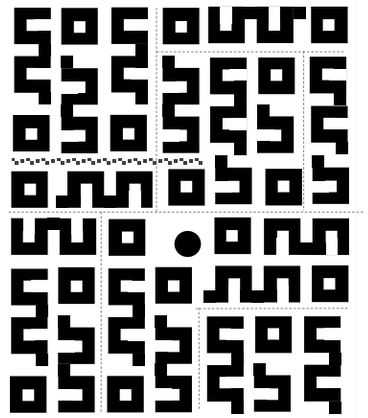
50%



50%

>50% (Italië)

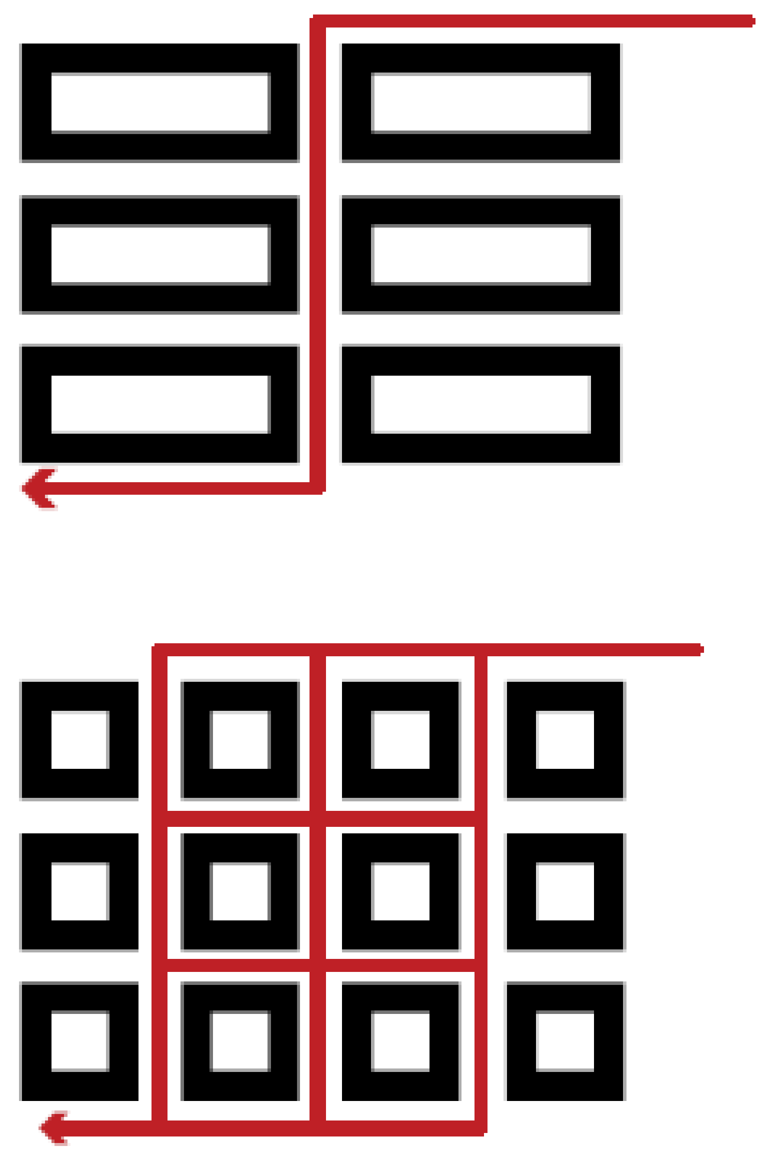
8% Corbusier



!

Step 2:

Smaller blocks >>diversity aan routes



More routes >> more proximity:
Simple houses, complex city

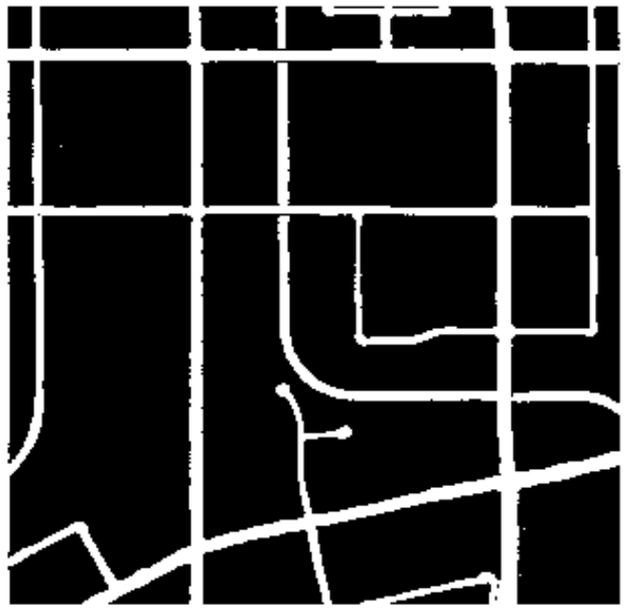
Step 2:

Street Maps at the Same Scale

Venice, Italy
1.500 intersections/square mile

Los Angeles, CA
150 intersections/square mile

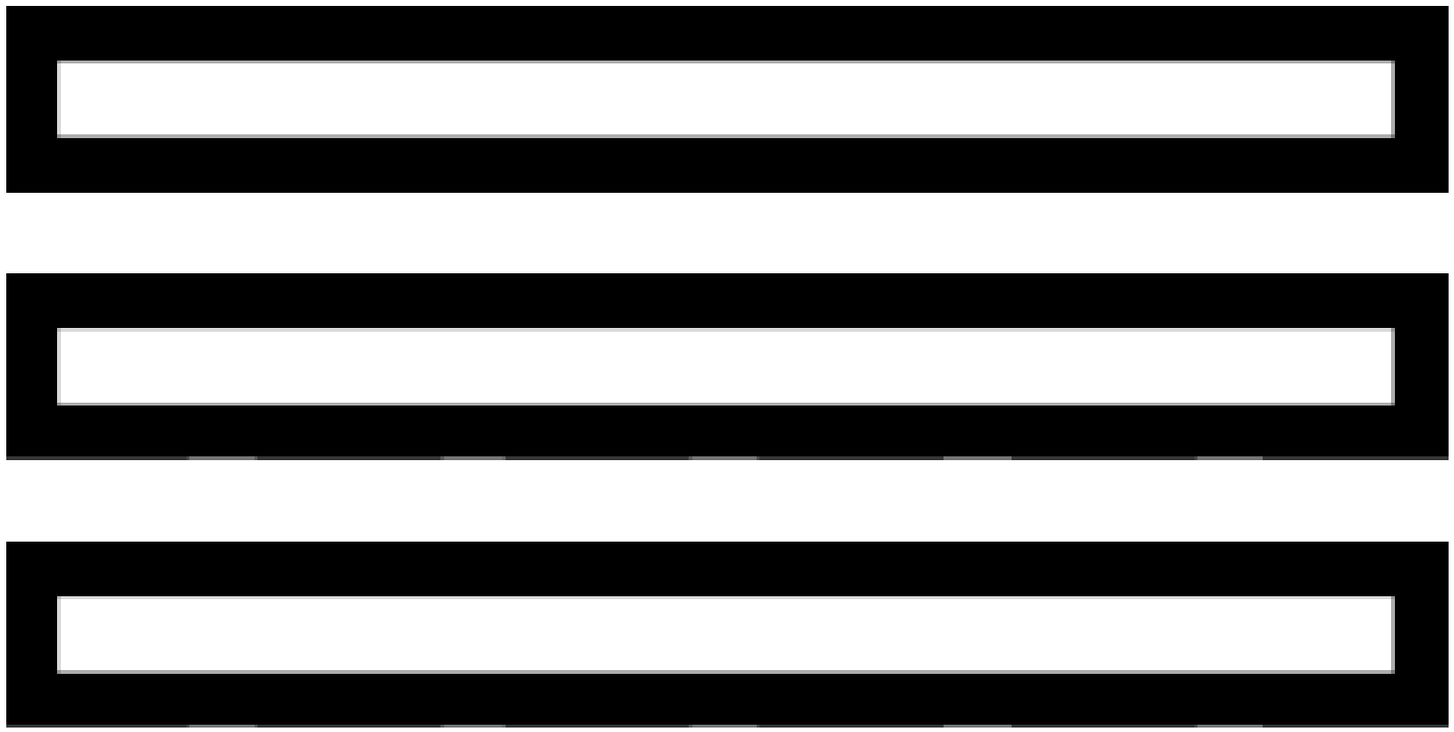
Irvine, CA
15 intersections/square mile



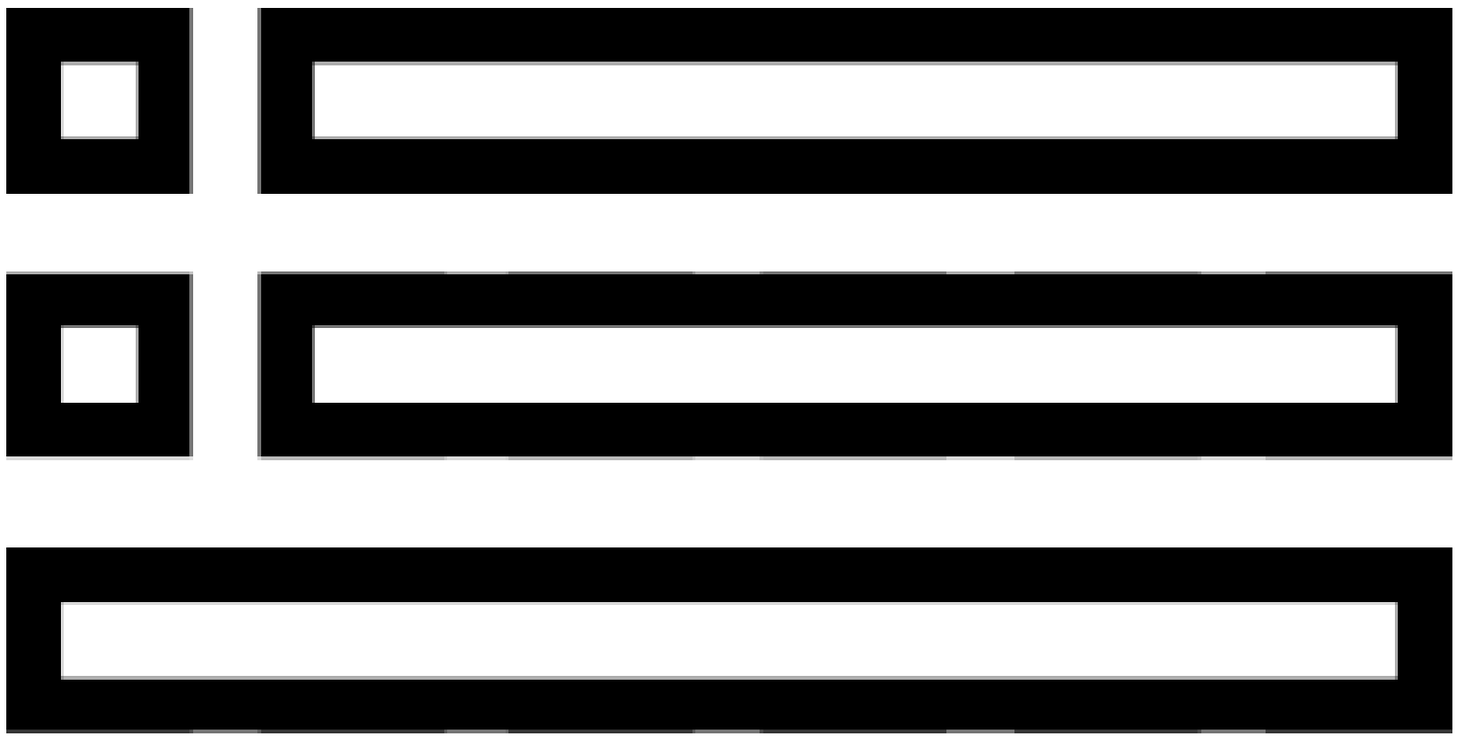
Source: Allan B. Jacobs, *Great Streets*. MIT Press, Cambridge, MA, 1993, pp. 221, 225, 249. Reprinted in Reid Ewing, *Pedestrian and Transit-Friendly Design: A Primer for Smart Growth*. Smart Growth Network, August 1999, p. 4. <http://www.epa.gov/dced/pdf/pfd_primer.pdf>

Step 2:

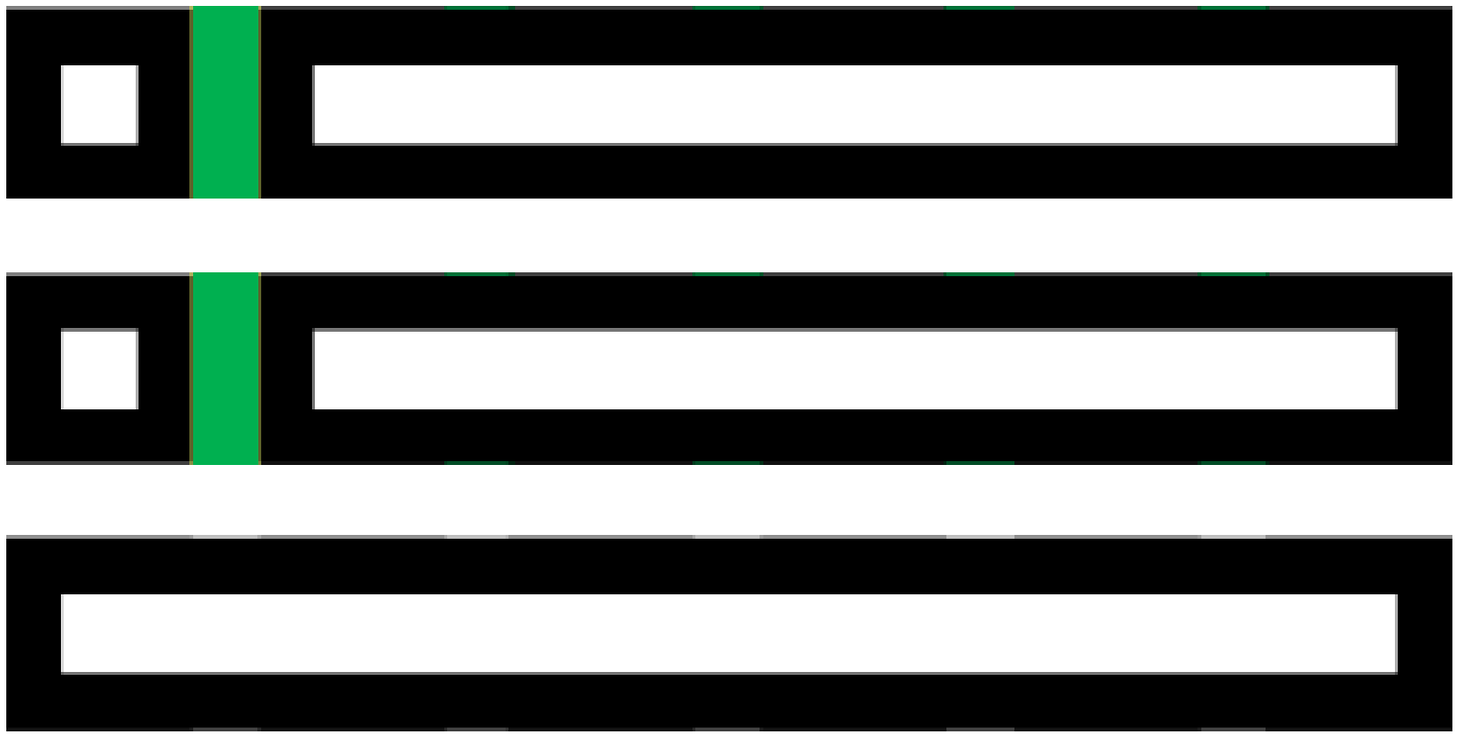
Existing Amsterdam “Pipeblock” + street



Step 2:
More public realm

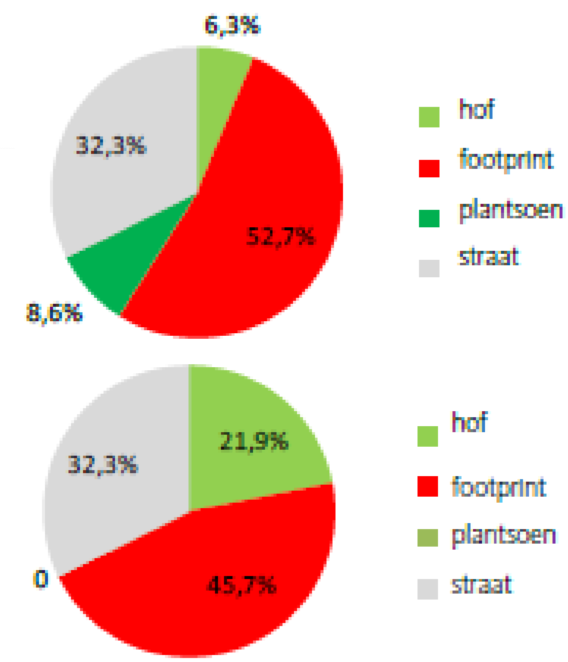


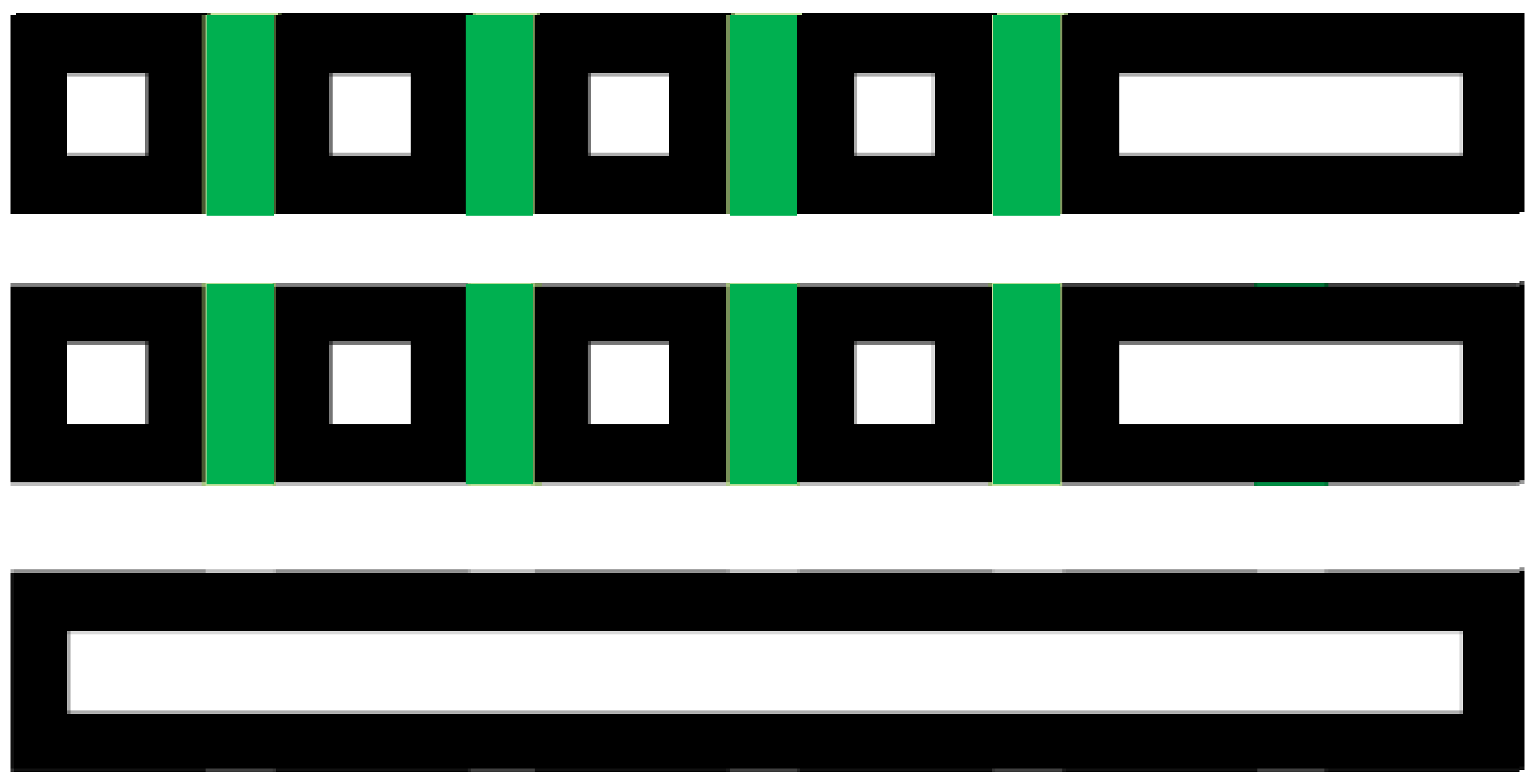
Step 2:
More public realm



Step 2:

More public realm





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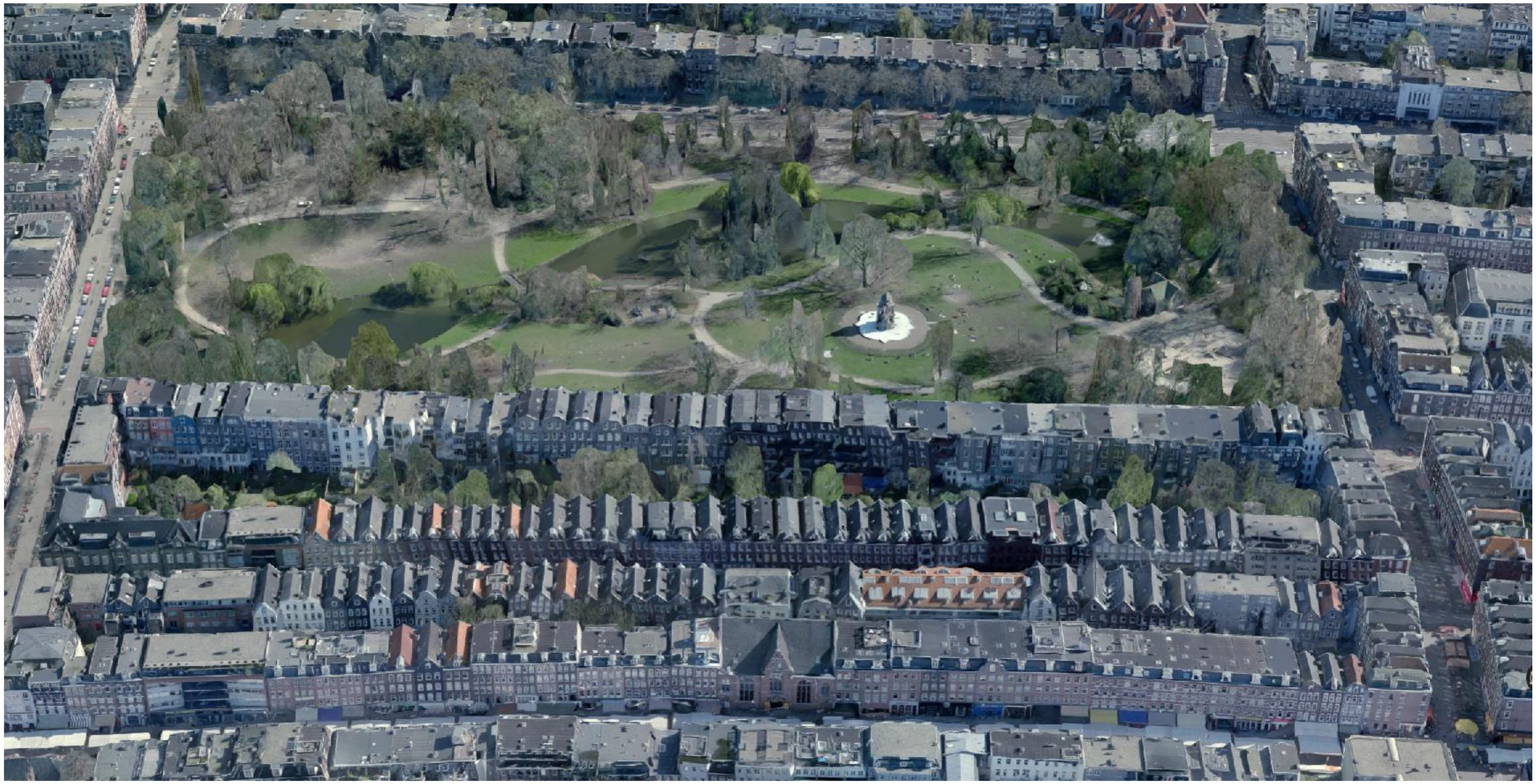
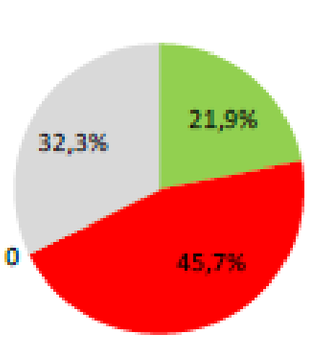
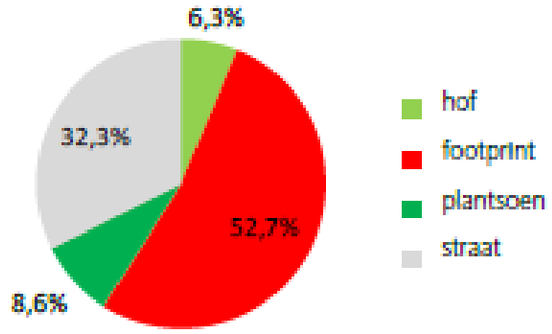
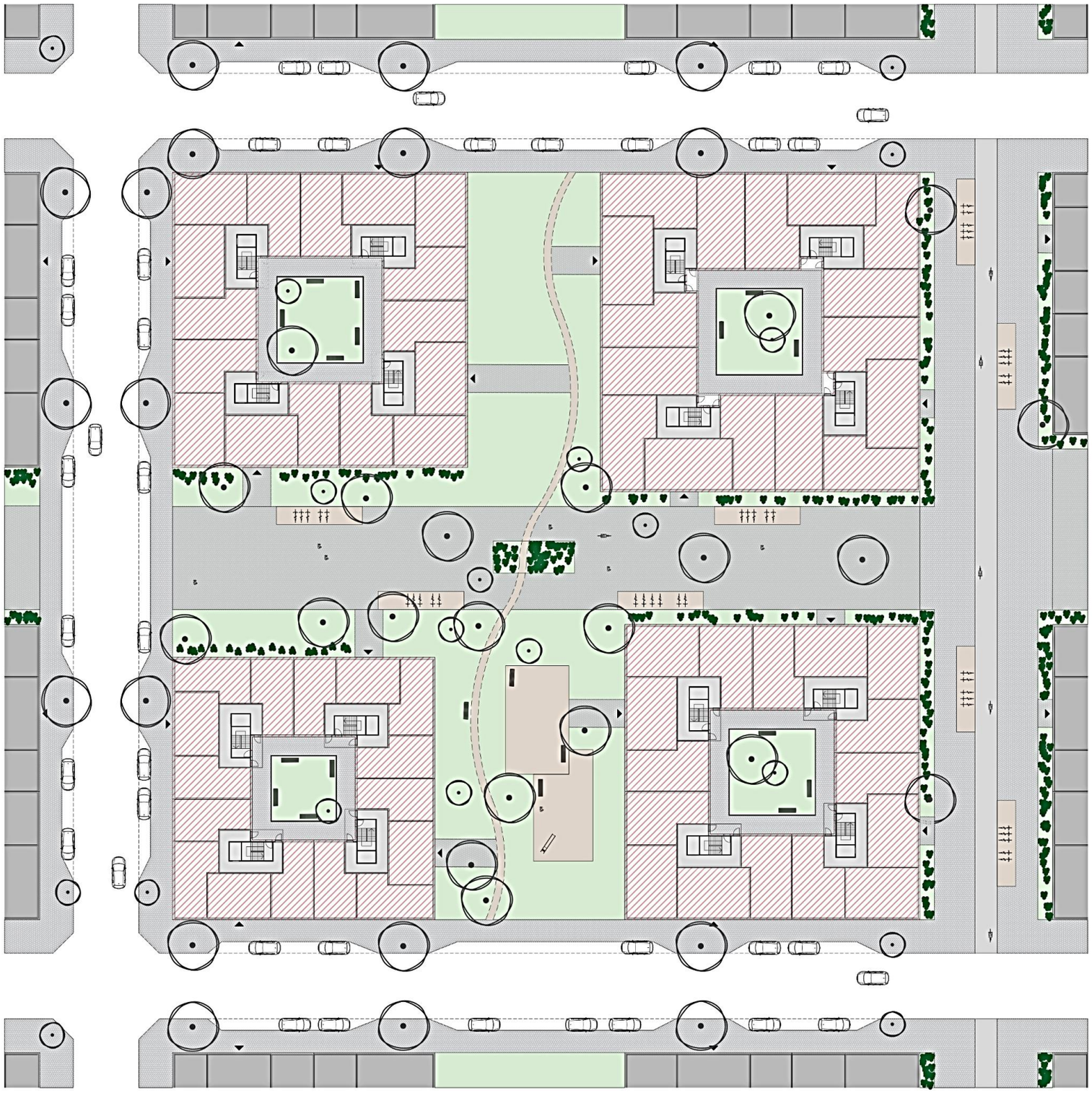
partners architecten



rudy uytenhaak
partners architecten

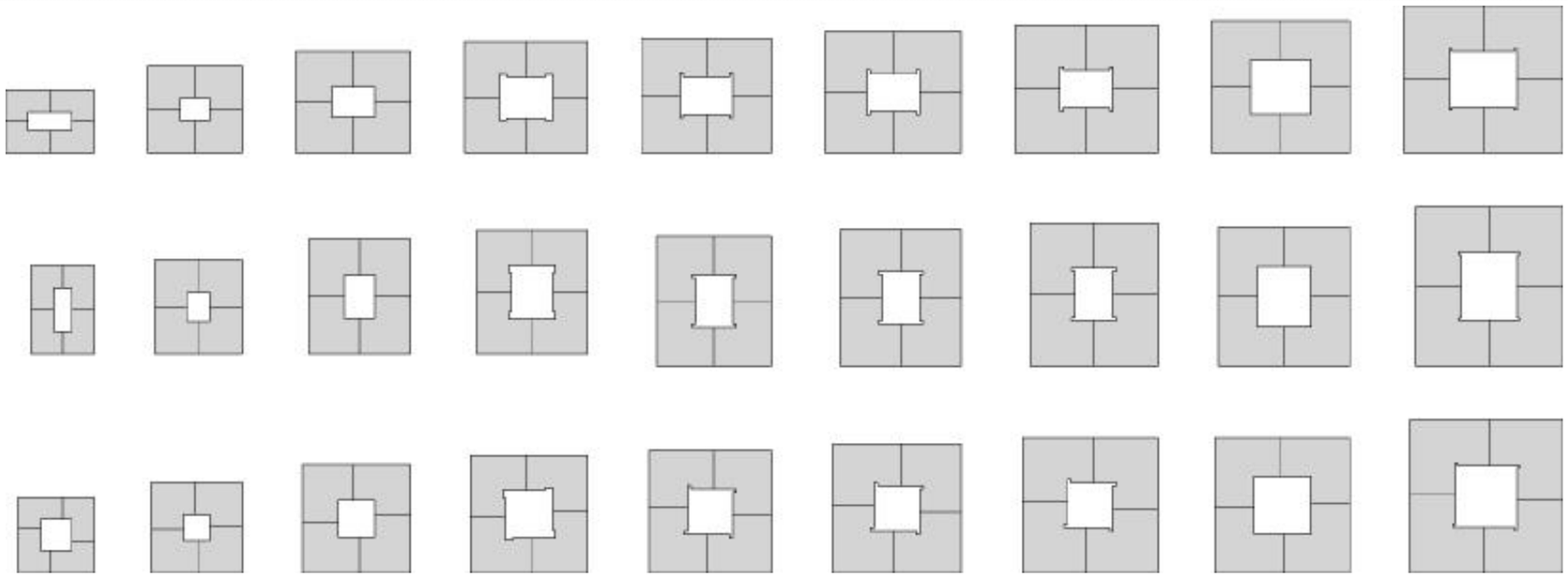




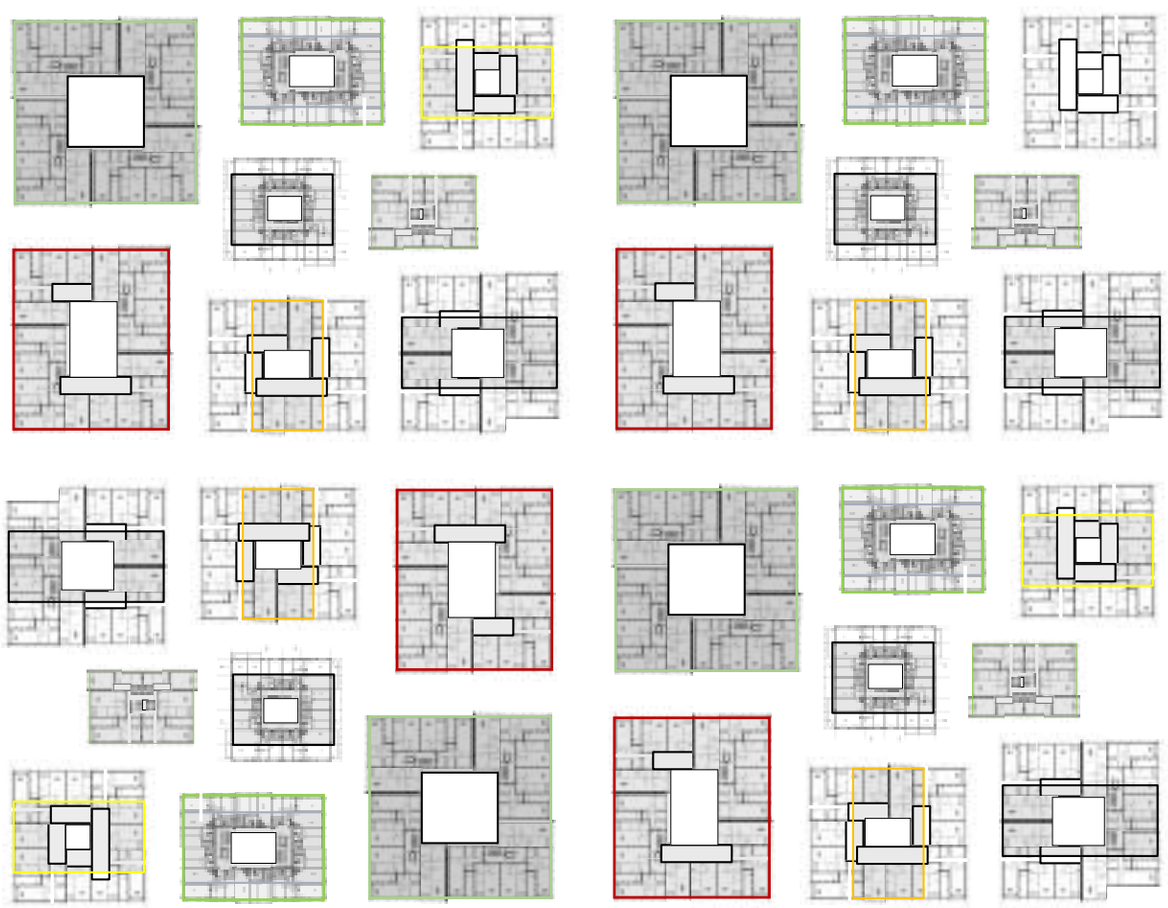


Simple house Complex city

Scaling the network: Urban fabrics



Library to compose Urban fabricks



4x 625 = 2500 woningen *nominaal* op 9,5 ha > 260wo/ha

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partners architecten

Attractive urbanity = the quality

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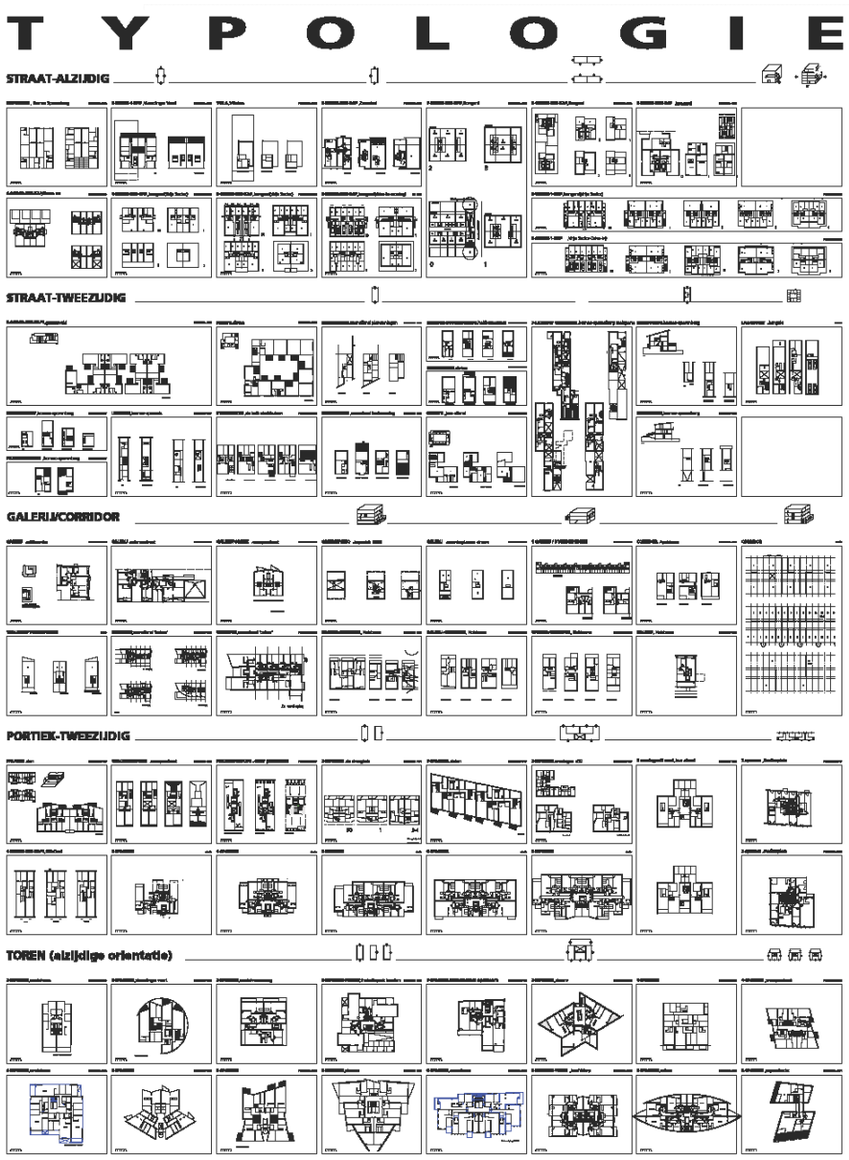
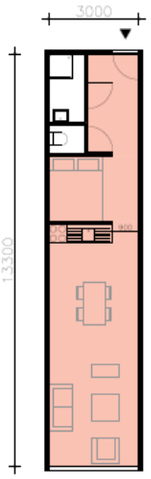
partners architecten



private comfort <> typology

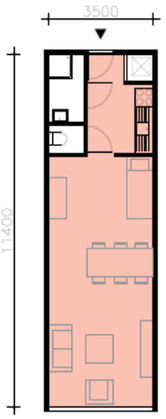
Diversification of the private realms

breedte = 3m



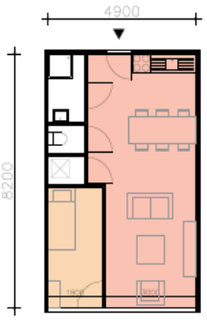
- Bouwbesluit
- Goed Wonen
- Dienst Huisvesting

breedte= 3,5m



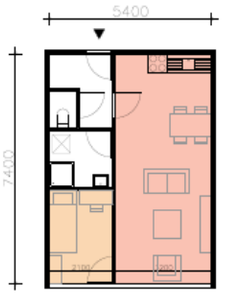
- Bouwbesluit
- Goed Wonen
- Dienst Huisvesting

breedte= 4,9m



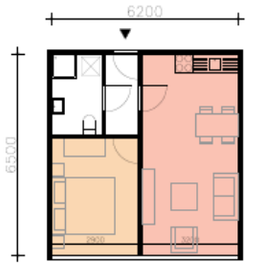
- Bouwbesluit
- Goed Wonen
- Dienst Huisvesting

breedte= 5,4m

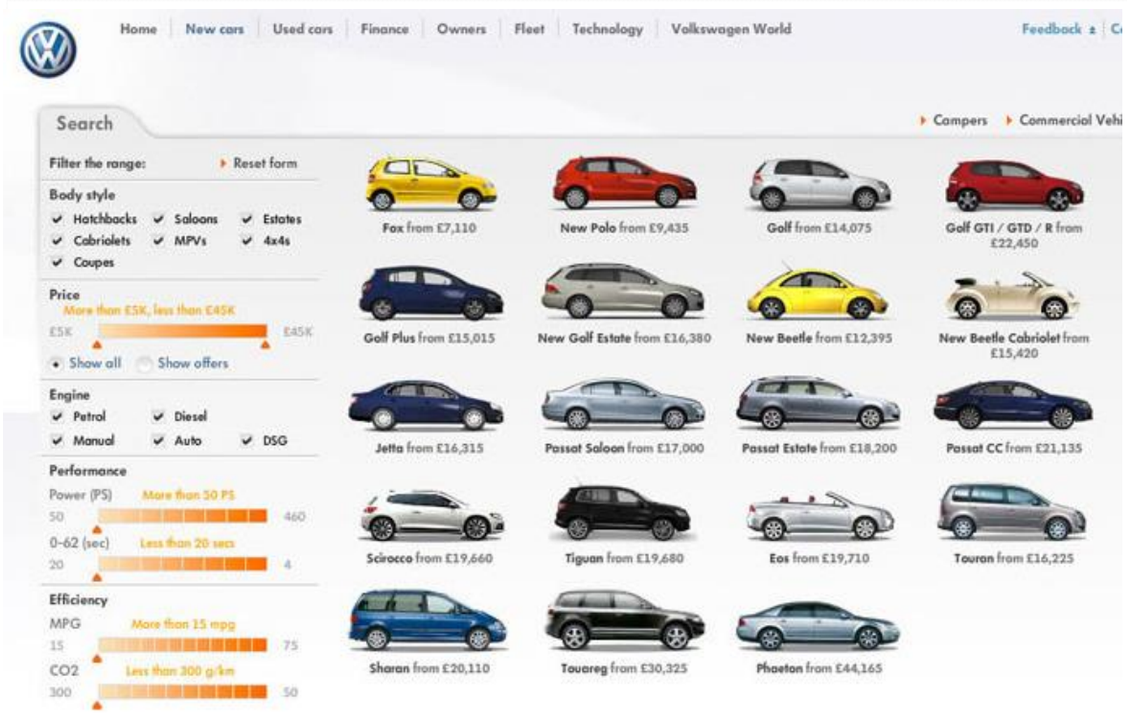


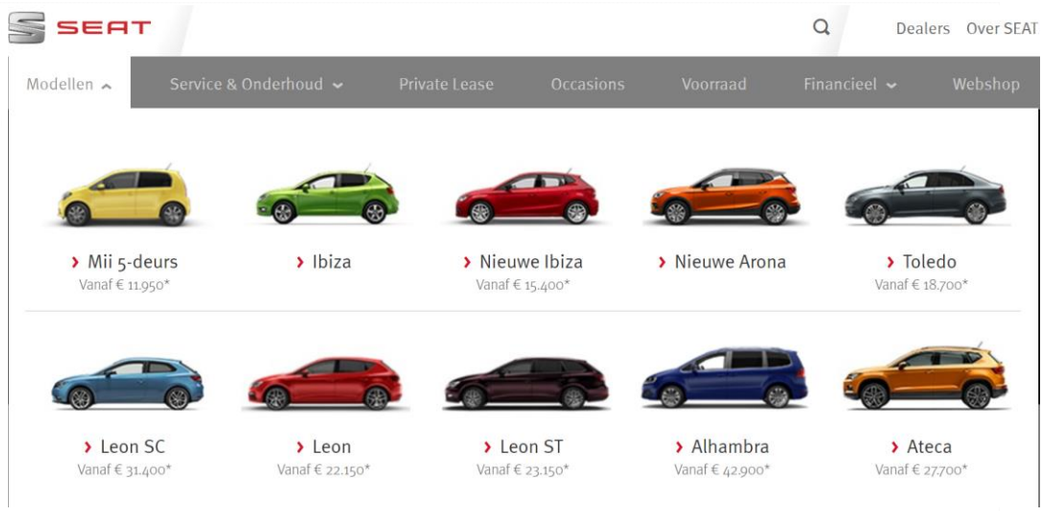
- Bouwbesluit
- Goed Wonen
- Dienst Huisvesting

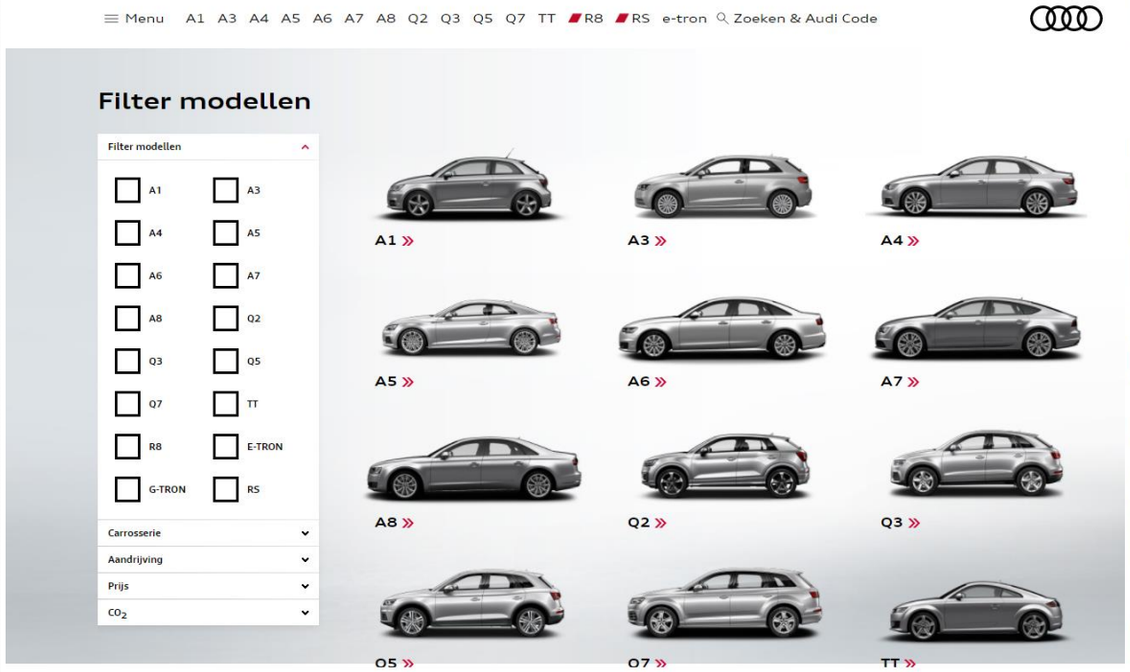
breedte=6,2m

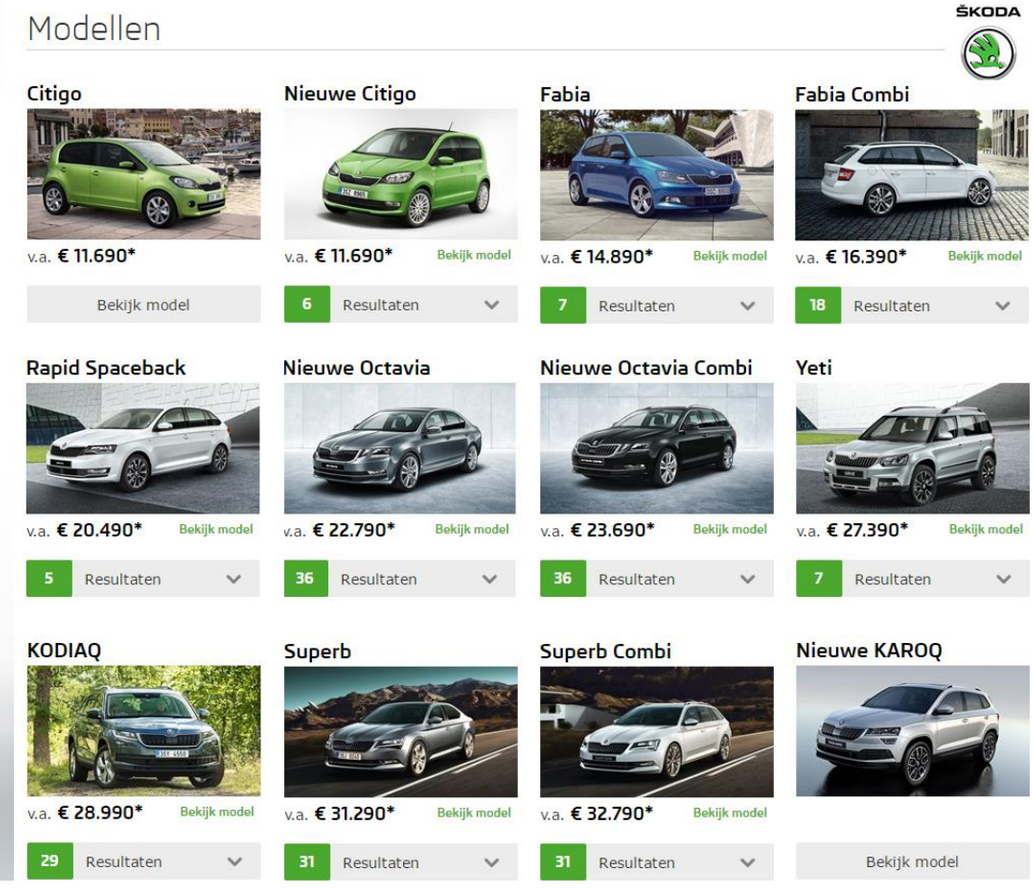


- Bouwbesluit
- Goed Wonen
- Dienst Huisvesting





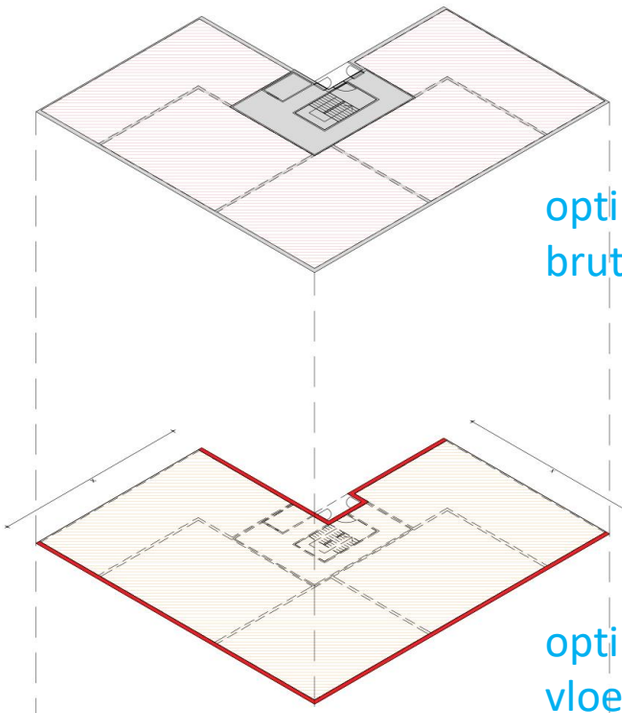




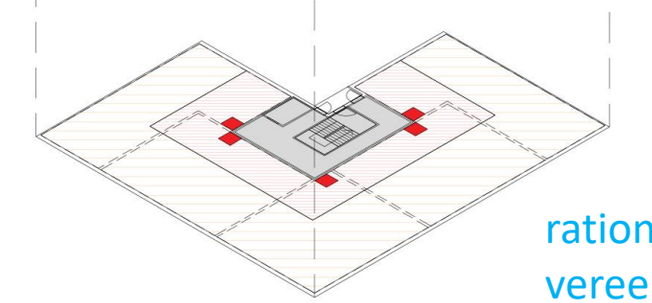
5 optimized carplatforms >>52 models by the volkswagen concern

52 models Volkswagen concern on carplatforms

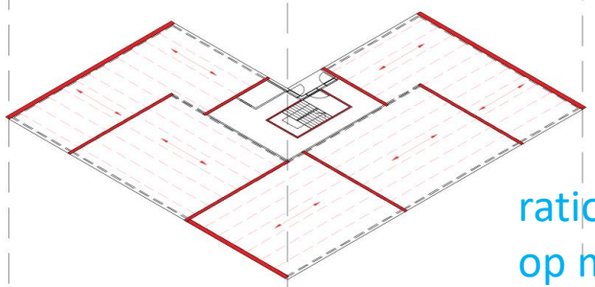
integrale benadering -> intelligent casco



optimalisatie
bruto / netto verhouding



optimalisatie
vloer gevel verhouding

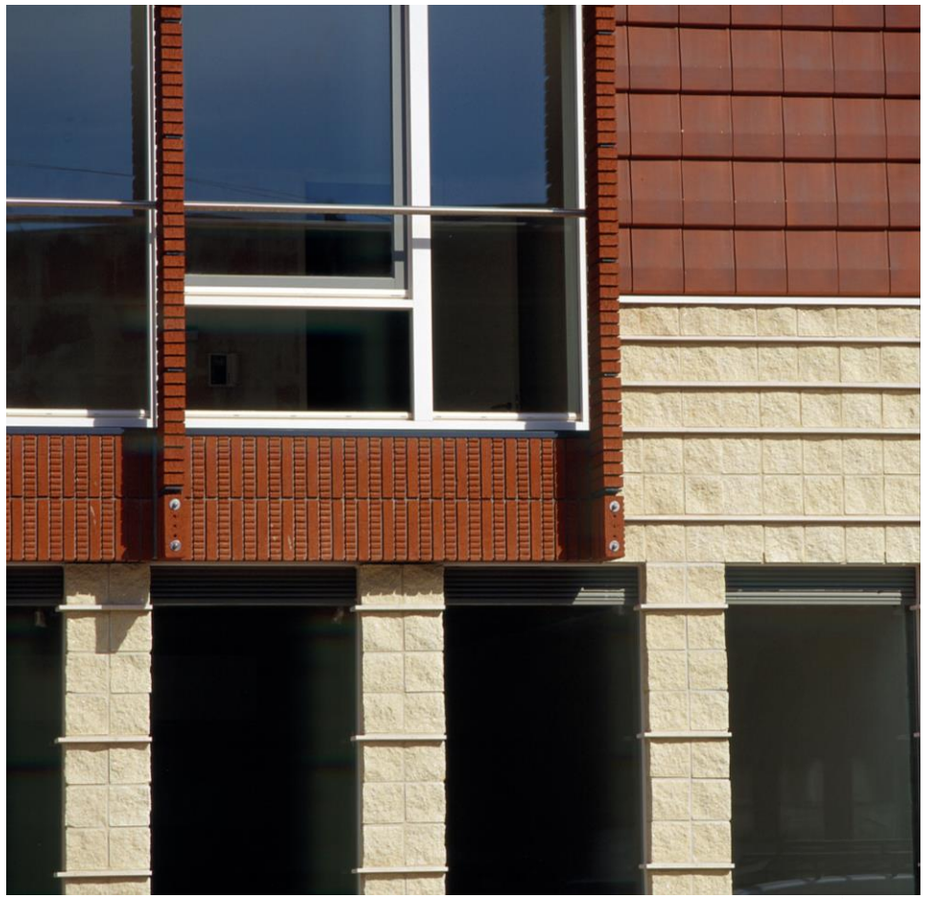


rationele constructie afgestemd
op module maten

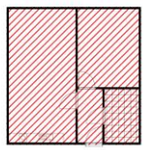
rationele zonering
vereenvoudigde installaties

>>geld kunnen inzetten voor

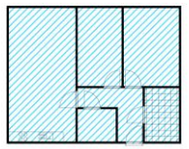
kwaliteit



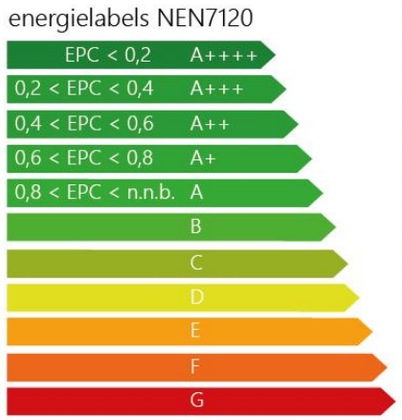
Woninggrootte Architectuur Duurzaamheid

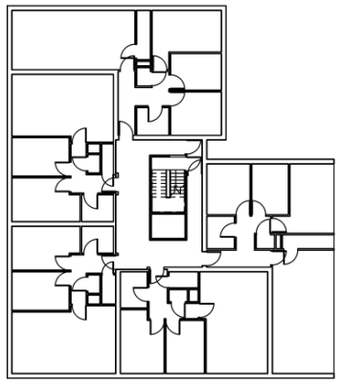


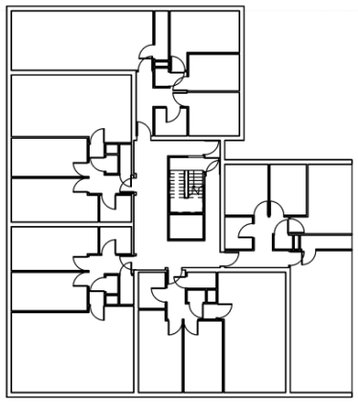
1 slaapkamer

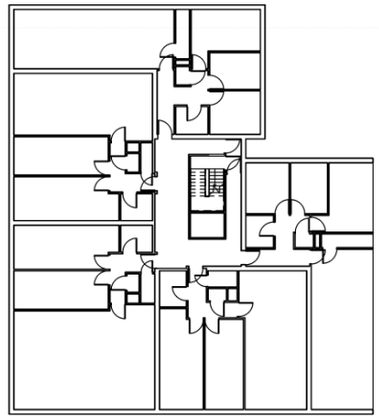


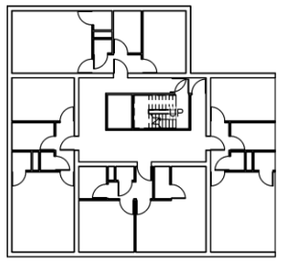
2 slaapkamers

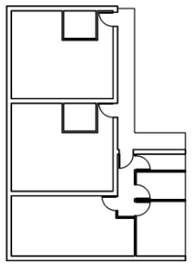


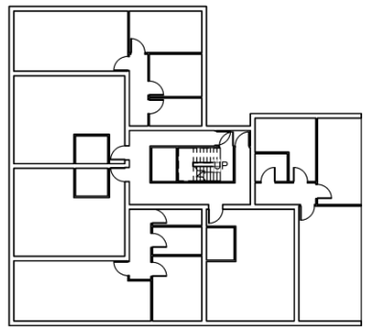


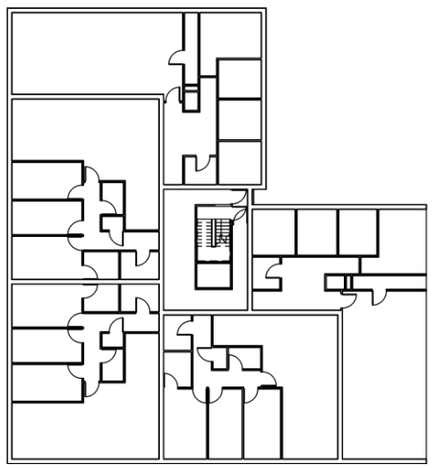




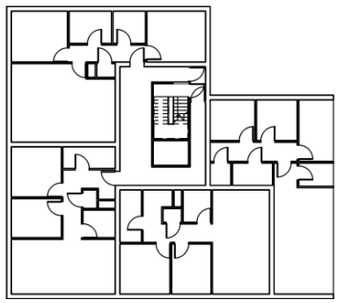


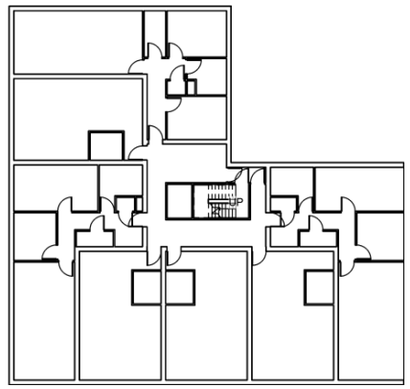




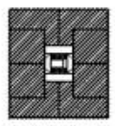
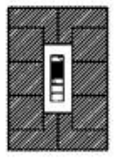
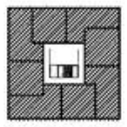
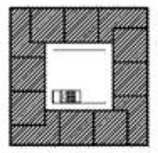
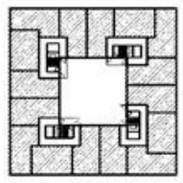
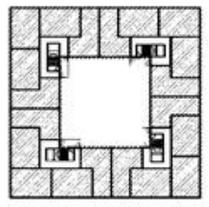
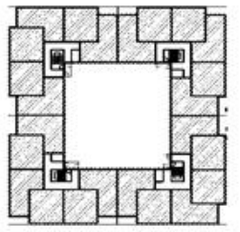
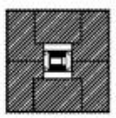
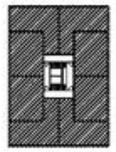
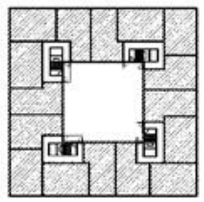
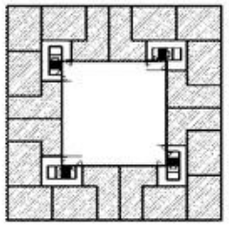
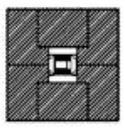
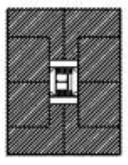
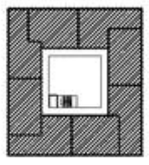
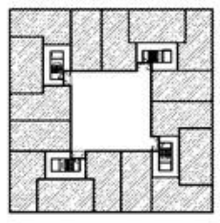
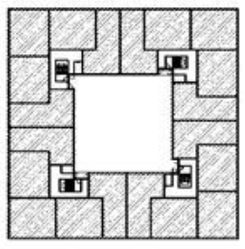
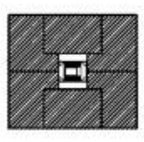
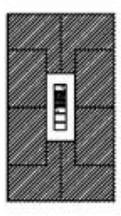
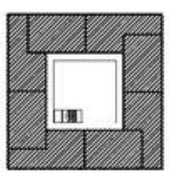
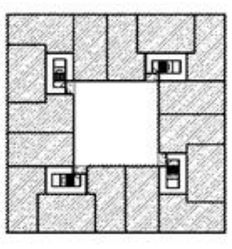
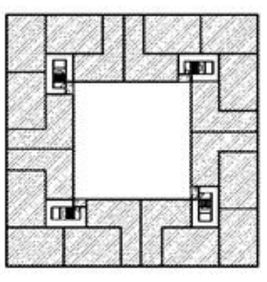


27,2x 29,4

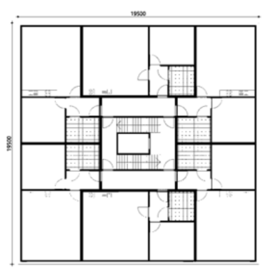


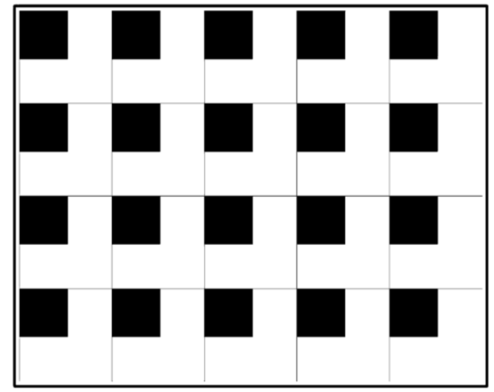


Library to compose Urban fabricks

	punt bebouwing	punt bebouwing	punt bebouwing	hof bebouwing	hof bebouwing	blok bebouwing	blok bebouwing	blok bebouwing
	6 woningen	8 woningen	10 woningen	8 woningen	12 woningen	16 woningen	20 woningen	24 woningen
50 m2 woning								
65 m2 woning								
80 m2 woning								
95 m2 woning								

Parametrische bouwblok bibliotheek





28.125 m2

oppervlak woning: 50 m2
aantal woningen per verdieping: 6

GBO per verdieping: 300 m2
BVO per verdieping: 380 m2

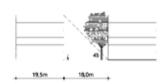
netto/bruto oppervlak: 79%

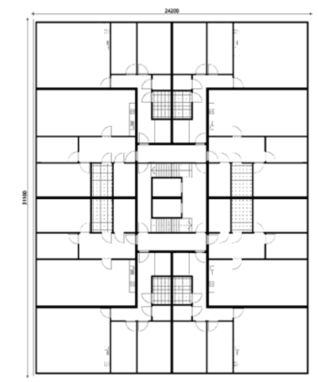
gevellengte: 78,00 m
gevel/vloer verhouding: 0,62

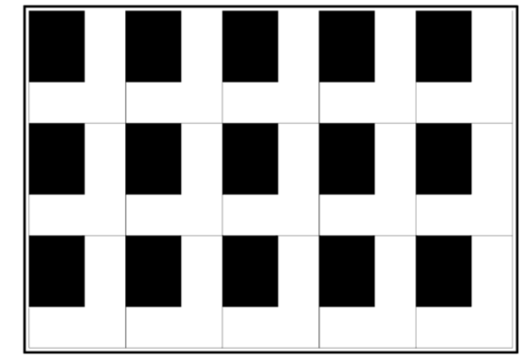
BVO totaal: 20 x 380 m2 x 6 verdiepingen = 45.600 m2
op een gebied van 28.125 m2

FSI = 1,62

GBO totaal 20 x 300 m2 x 6 verdiepingen = 36.000 m2







31.080 m2

oppervlak woning: 80 m2
aantal woningen per verdieping: 8

GBO per verdieping: 640 m2
BVO per verdieping: 753 m2

netto/bruto oppervlak: 85%

gevellengte: 110,6 m
gevel/vloer verhouding: 0,44

BVO totaal: 15 x 753 m2 x 6 verdiepingen = 67.770 m2
op een gebied van 31.080 m2

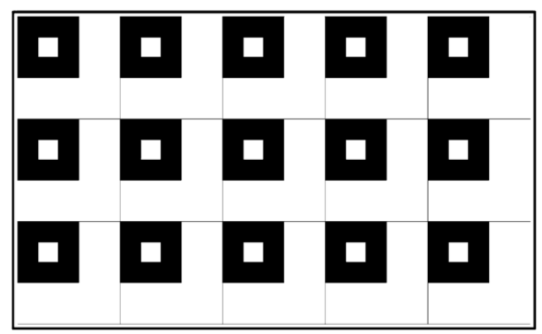
FSI = 2,18

GBO totaal 15 x 640 m2 x 6 verdiepingen = 57.600 m2
op een gebied van 31.080 m2

FSI nuttig = 1,85

footprint bebouwd gebied: 15 x 753 m2 = 11.295 m2

GSI = 11.295 / 31.080 = 0,36



29.971 m2

oppervlak woning: 65 m2
aantal woningen per verdieping: 8

GBO per verdieping: 520 m2
BVO per verdieping: 576 m2

netto/bruto oppervlak: 90%

gevellengte: 153,6 m
gevel/vloer verhouding: 0,80

BVO totaal: 15 x 576 m2 x 6 verdiepingen = 51.840 m2
op een gebied van 29.971 m2

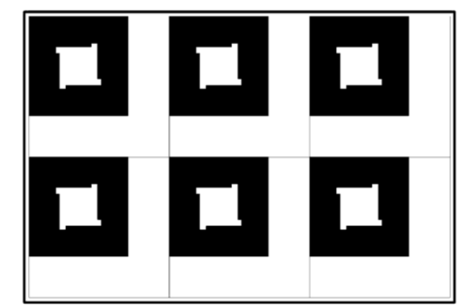
FSI = 1,73

GBO totaal 15 x 520 m2 x 6 verdiepingen = 46.800 m2
op een gebied van 29.971 m2

FSI nuttig = 1,56

footprint bebouwd gebied: 15 x 576 m2 = 8.640 m2

GSI = 8.640 / 29.971 = 0,29



22.546 m2

oppervlak woning: 80 m2
aantal woningen per verdieping: 16
aantal verdiepingen: 6
aantal woningen per blok: 96
GBO per blok: 7.680 m2

GBO per verdieping: 1.280 m2
BVO per verdieping: 1.578 m2

netto/bruto oppervlak: 81,1%

BVO totaal: 6 x 1578 m2 x 6 verdiepingen = 56.808 m2
op een gebied van 22.546 m2

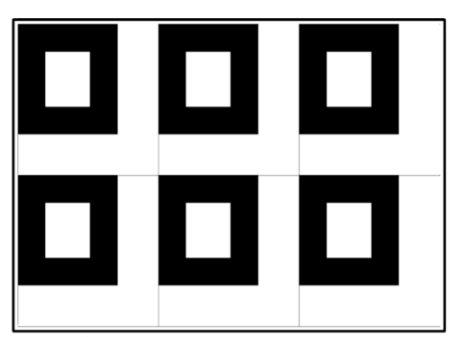
FSI = 2,52

GBO totaal 6 x 1280 m2 x 6 verdiepingen = 46.080 m2
op een gebied van 22.546 m2

FSI nuttig = 2,04

footprint bebouwd gebied: 6 x 1578 m2 = 9.468 m2

GSI = 9.468 / 22.546 = 0,42



24.314 m2

oppervlak woning: 65 m2
aantal woningen per verdieping: 20
aantal verdiepingen: 6
aantal woningen per blok: 120
GBO per blok: 7.800 m2

GBO per verdieping: 1.300 m2
BVO per verdieping: 1.608m2

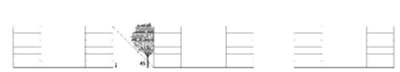
netto/bruto oppervlak: 81%

BVO totaal: 6 x 1.608 m2 x 6 verdiepingen = 57.888 m2
op een gebied van 24.314 m2

FSI = 2,38

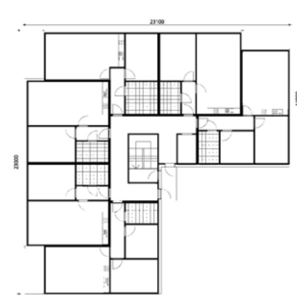
GBO totaal: 6 x 1.300 m2 x 6 verdiepingen = 46.800
op een gebied van 24.314 m2

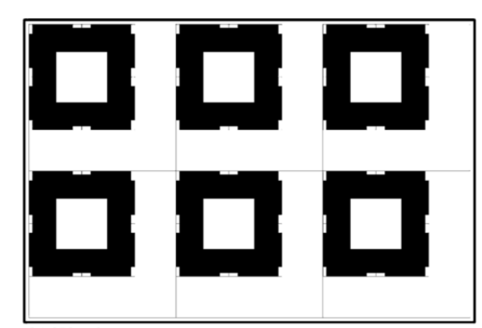
FSI nuttig = 1,92



footprint bebouwd gebied: 6 x 1608 m2 = 9.648 m2

GSI = 9.648 / 24.314 = 0,397





24.653 m2

oppervlak woning: 4x 50 m2 en 2x 55 m2
aantal woningen per verdieping: 24
aantal verdiepingen: 6
aantal woningen per blok: 144
GBO per blok: 8.520 m2

GBO per verdieping: 1.240 m2
BVO per verdieping: 1.548 m2

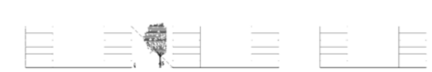
netto/bruto oppervlak: 80%

BVO totaal: 6 x 1.548 m2 x 6 verdiepingen = 55.728 m2
op een gebied van 24.653 m2

FSI = 2,26

GBO totaal: 6 x 1.240 m2 x 6 verdiepingen = 44.640
op een gebied van 24.653 m2

FSI nuttig = 1,81



footprint bebouwd gebied: 6 x 1548 m2 = 9.288 m2

GSI = 9.288 / 24.653 = 0,377

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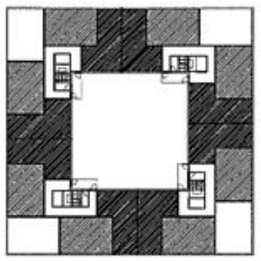
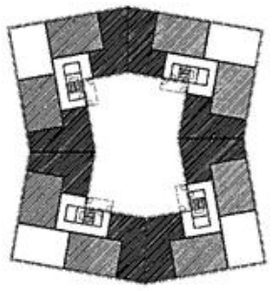
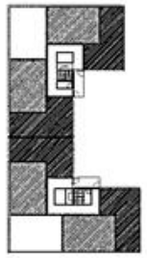
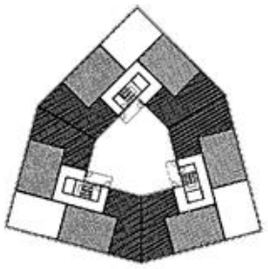
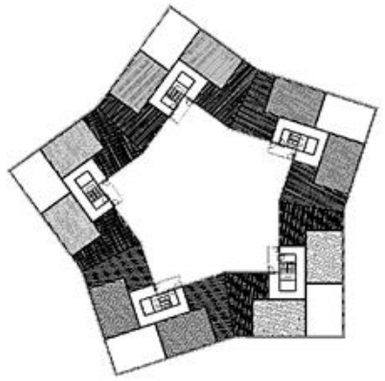
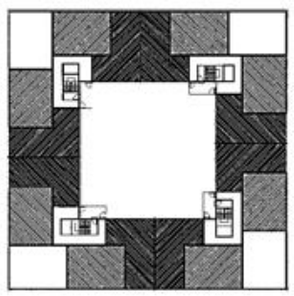
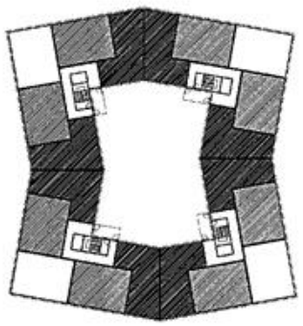
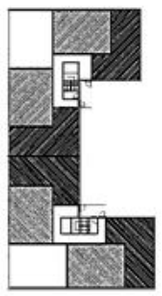
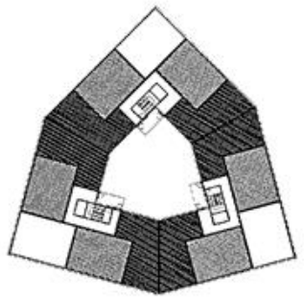
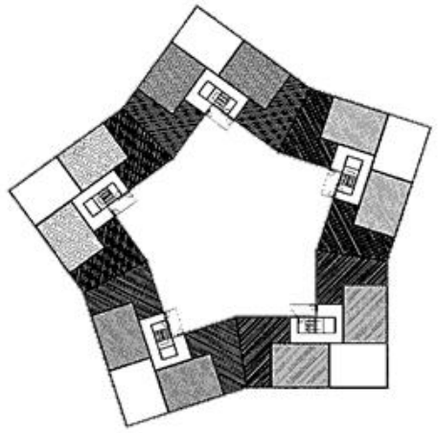
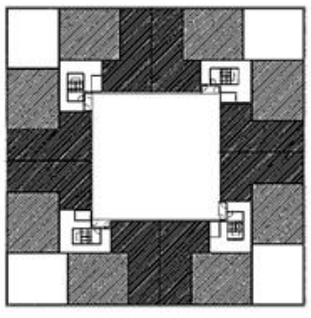
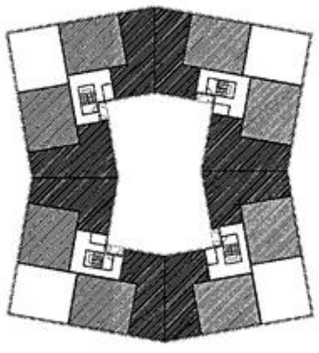
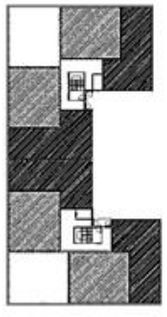
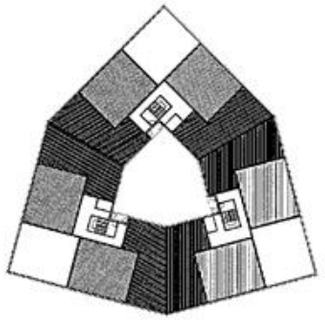
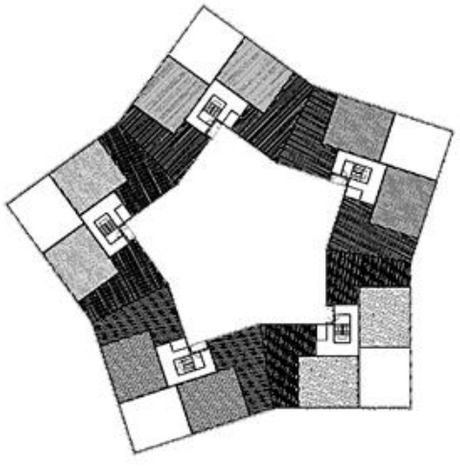
	vierkant blok 20 woningen	geknikt blok 20 woningen	U-stempel 10 woningen	driehoek blok 15 woningen	ster blok 25 woningen
50 m2 woning					
65 m2 woning					
80 m2 woning					

Elzenhagen studie: blokmaat <> stedelijk weefsel

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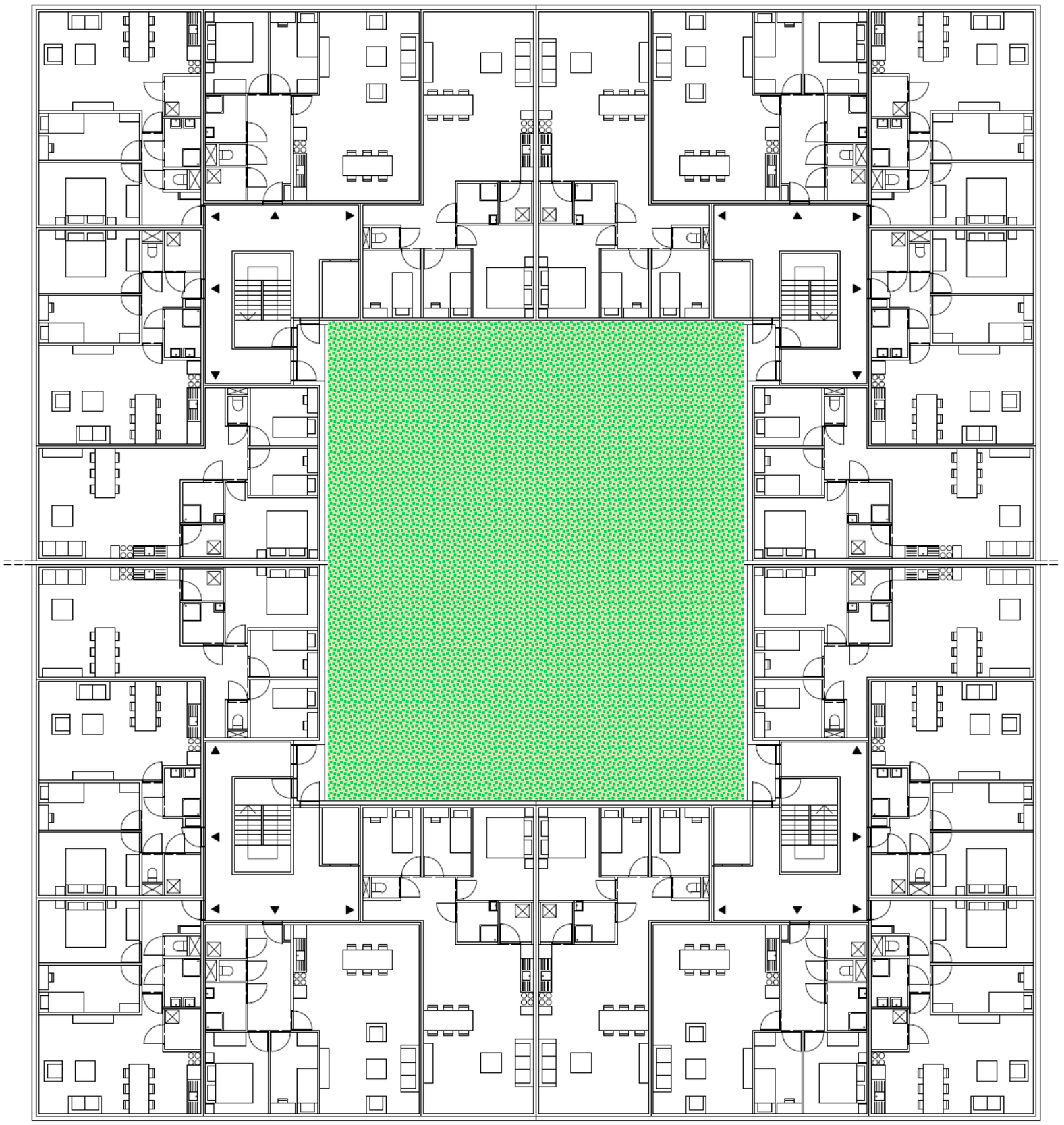
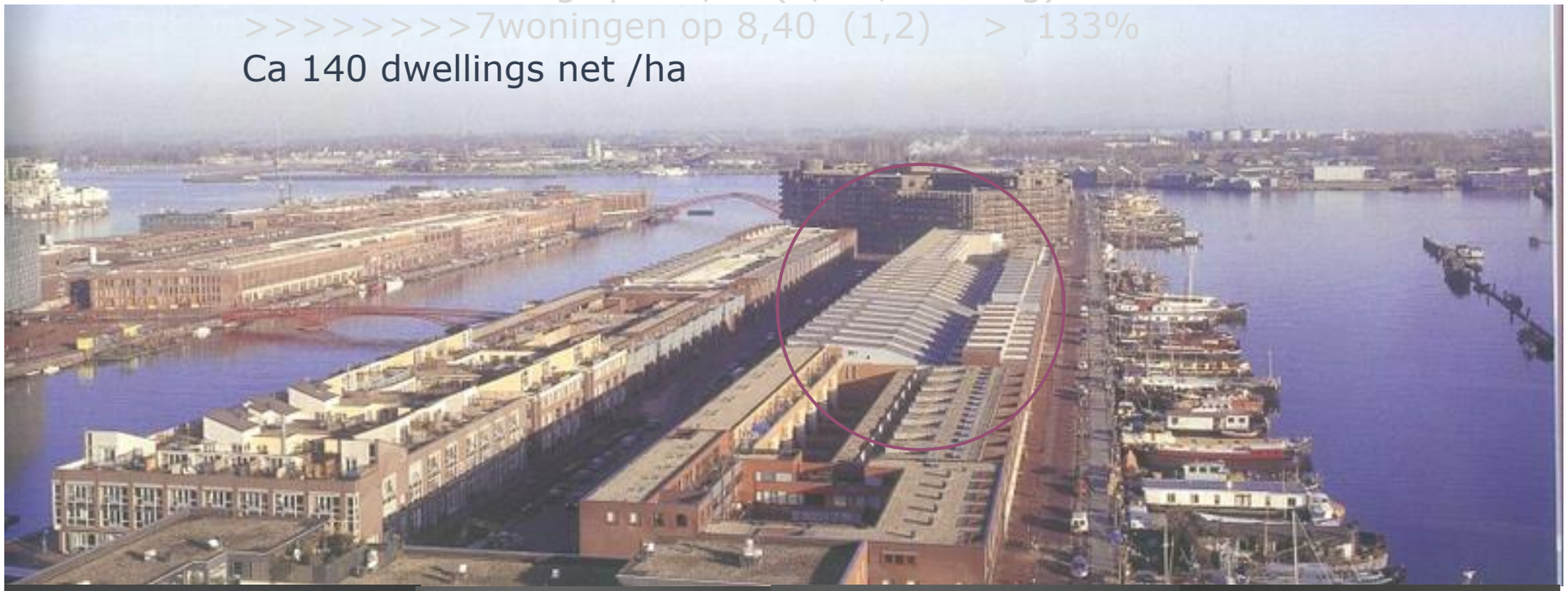
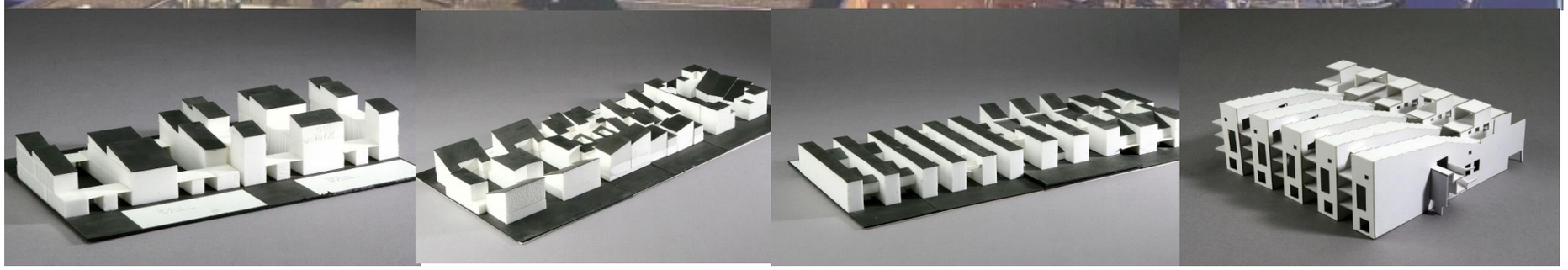
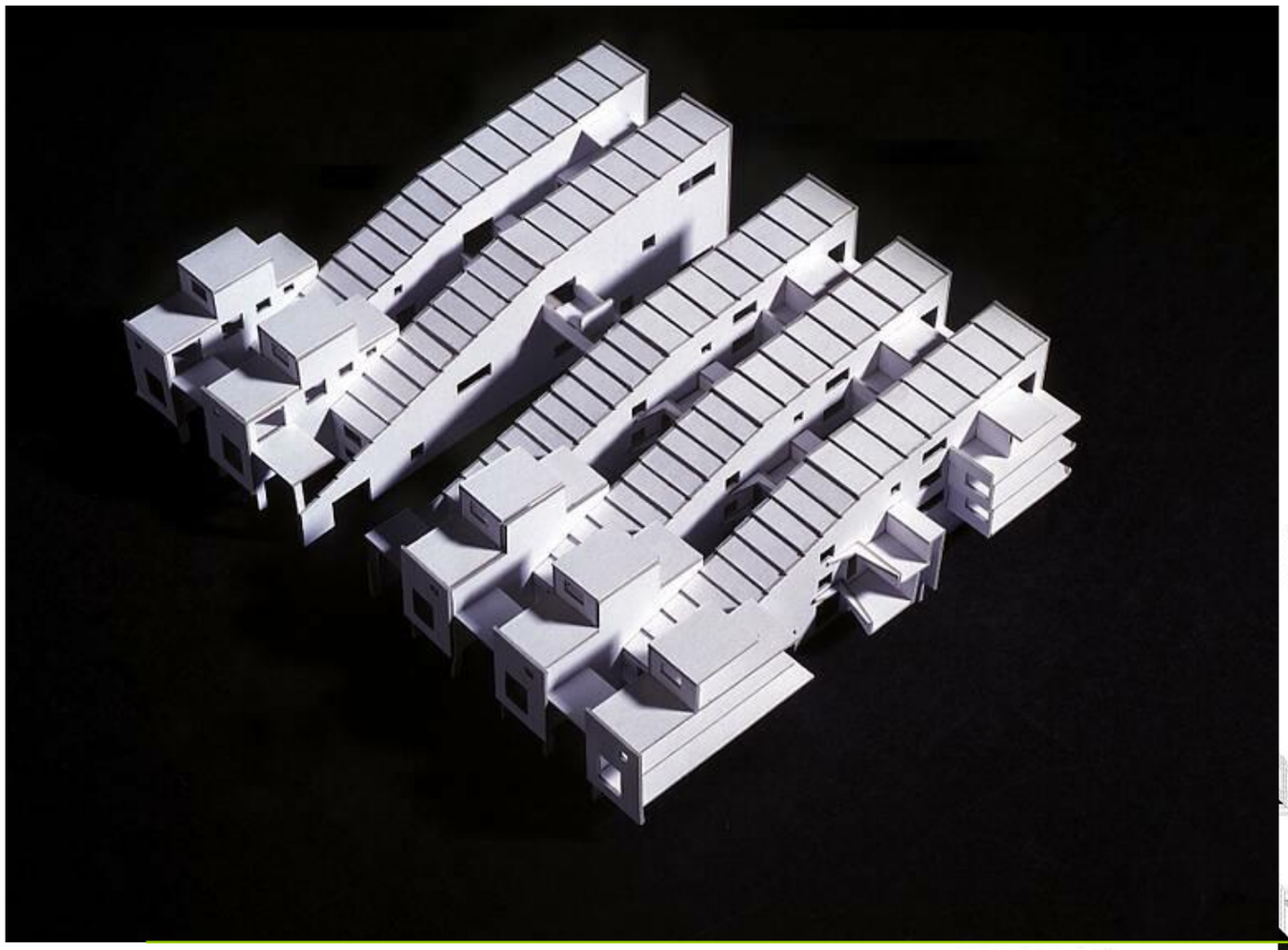


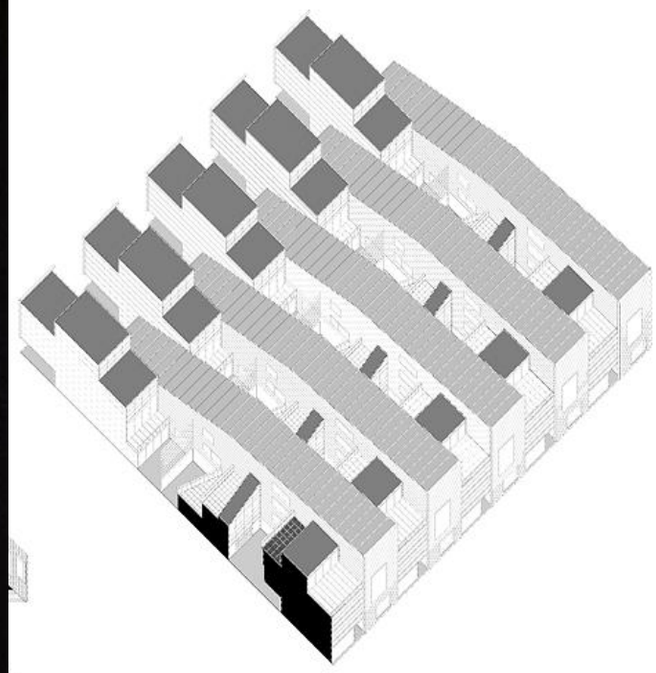

A
B
B
A

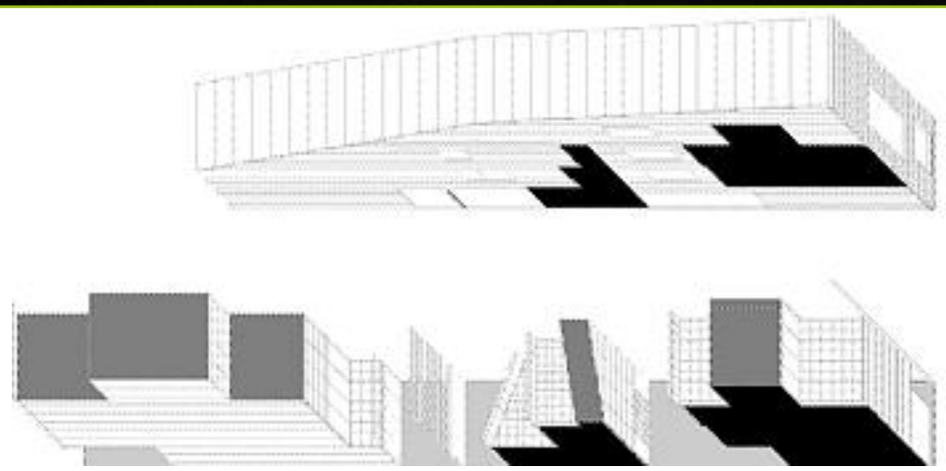
Borneo: 6 dwellings pro 9,60 (1,6m/dwelling)
>>>>>>>>>7woningen op 8,40 (1,2) > 133%
Ca 140 dwellings net /ha

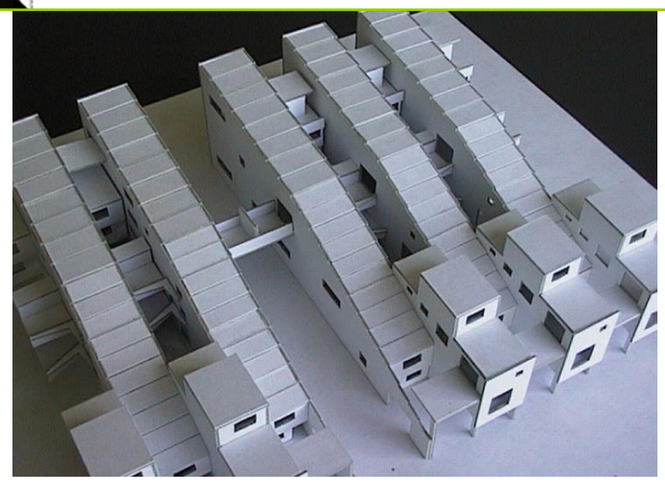




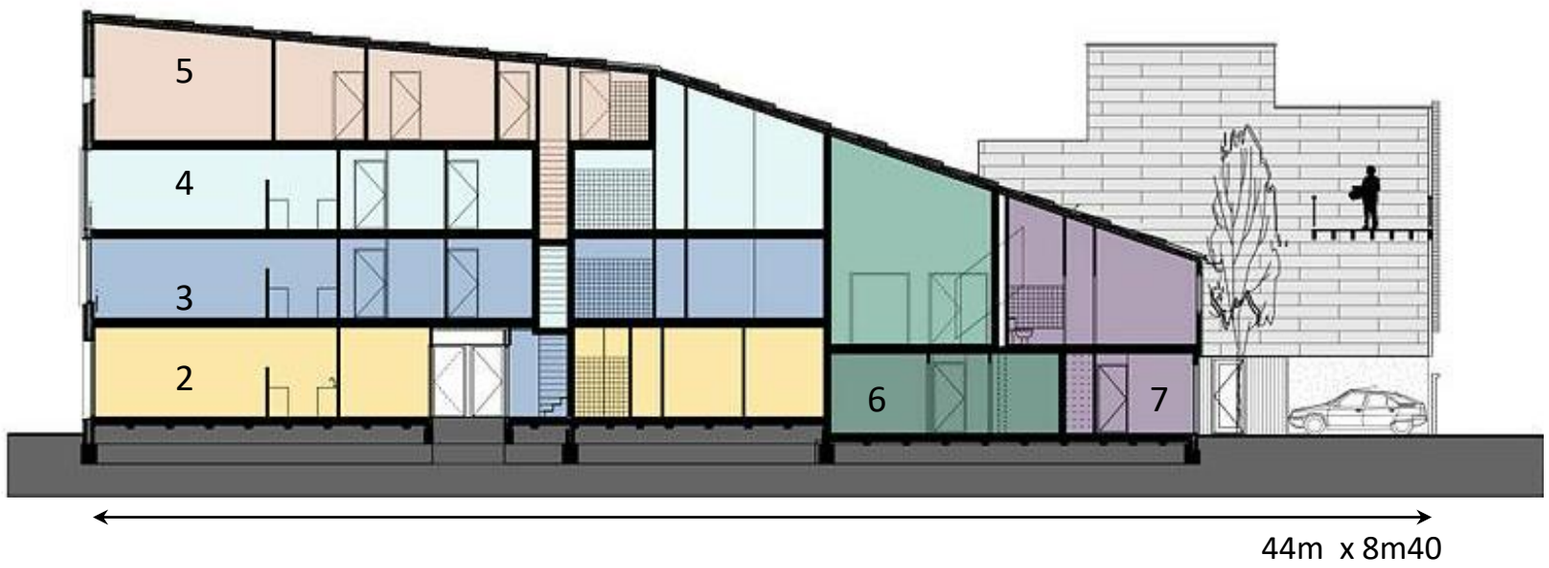


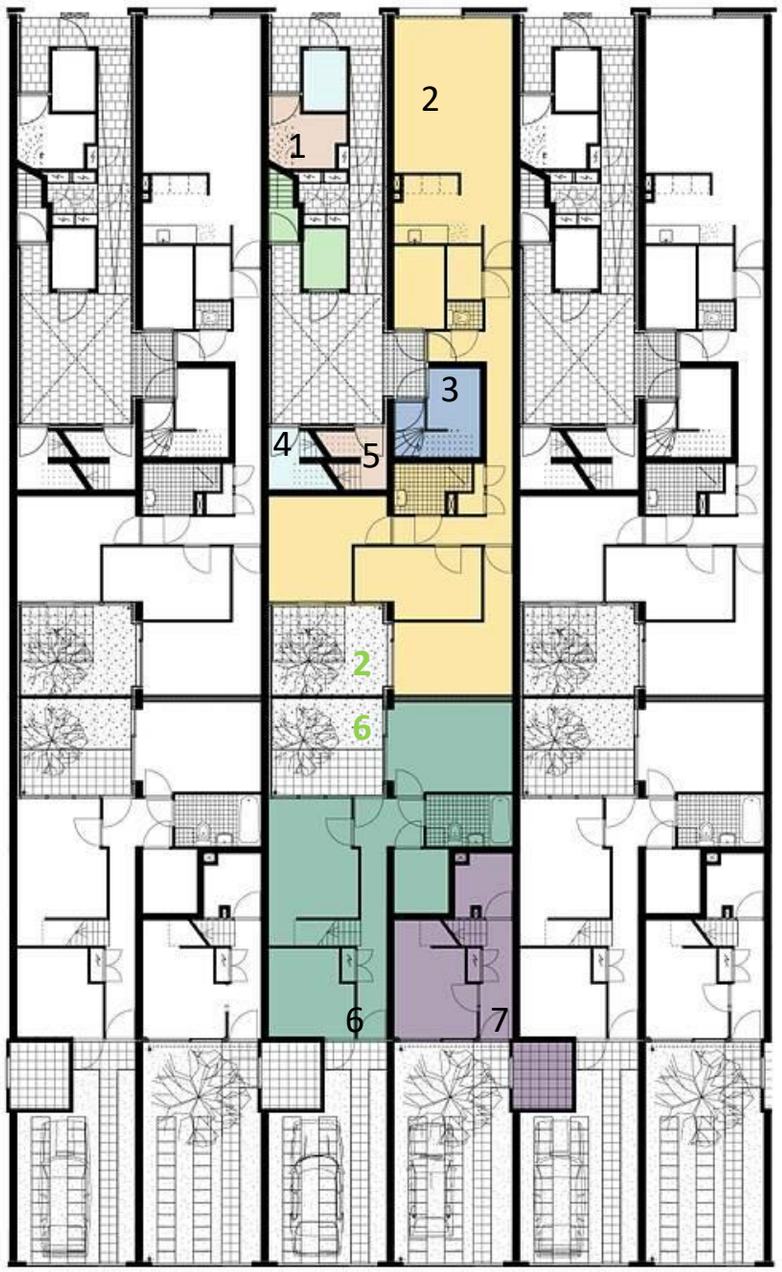






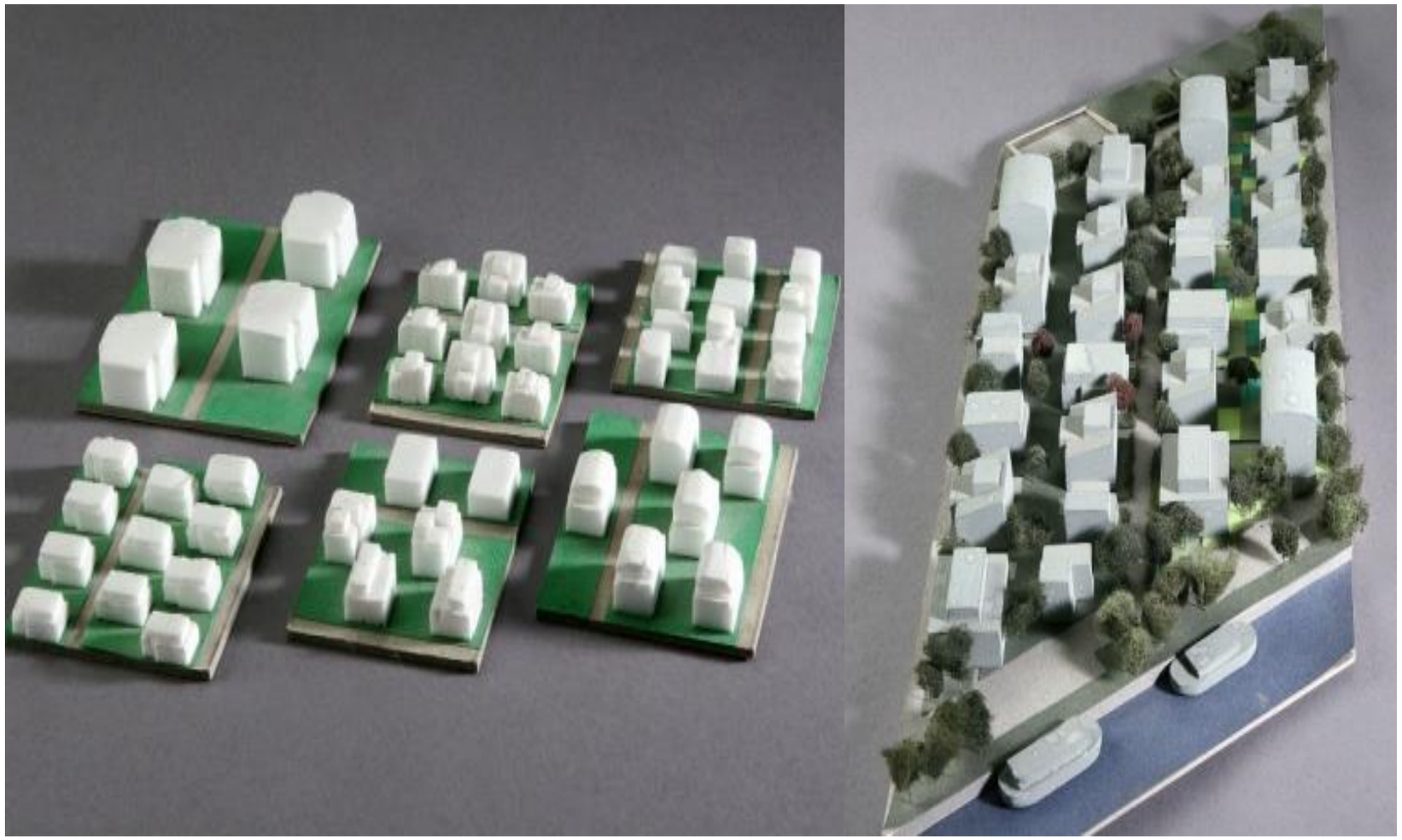

1
7
6


5
4
3
2
6
7
44m x 8m40



45*4,2+4,2m

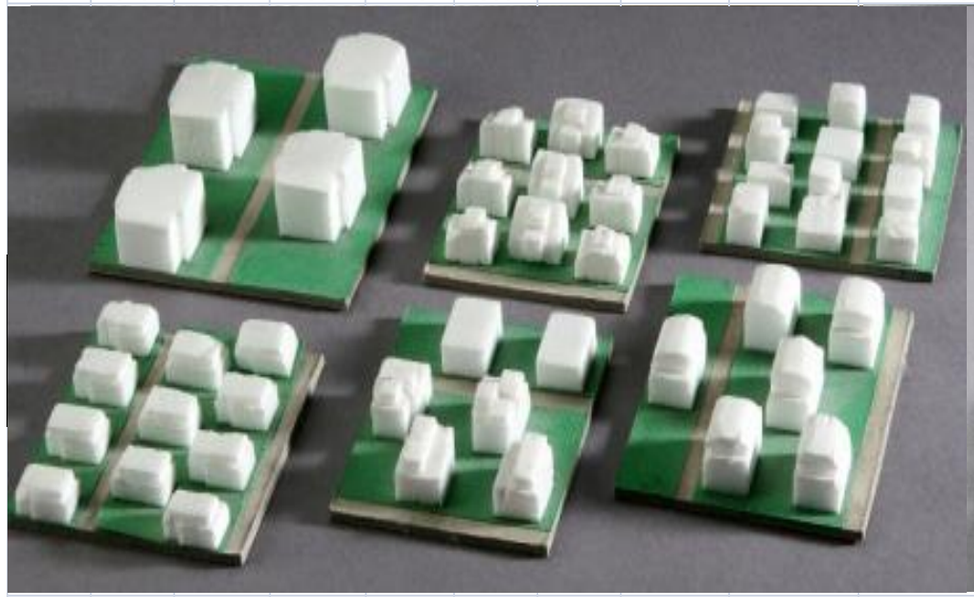
1
2
3
4
5



27 september 2002

PER **WOONGEBIED** BONGERD

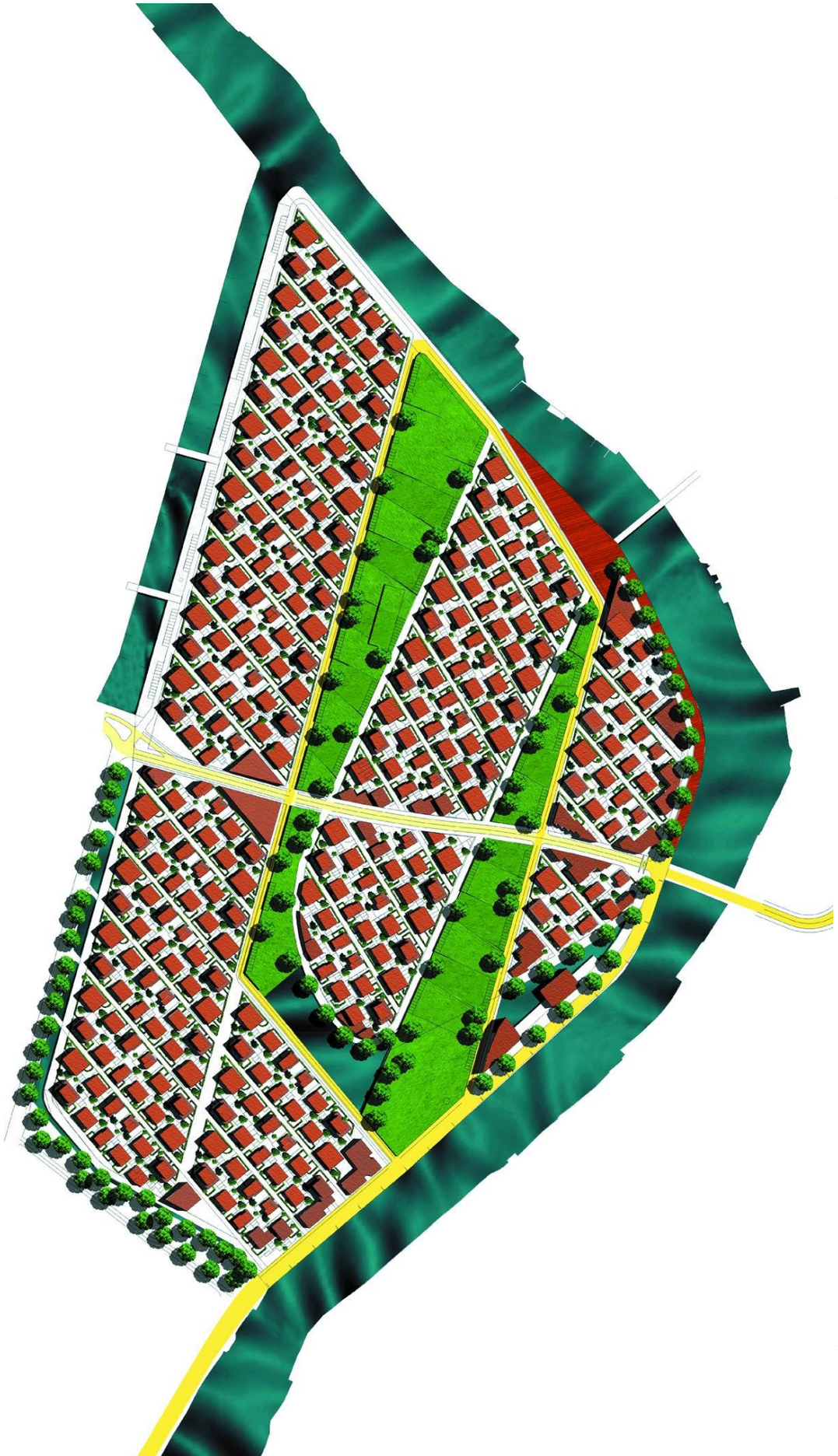
8-VS	8-SH	StV-vs	StV-sh	TUIN	PT	diversen	woningen	grondbeslag	grond	BEWONERSPAR erf	driv								wo AAL
0	80	60	0	3	4	0	**403**	43355	44103	249	5								**7**
0%	29%	14%	0%	27%	27%				27%										
0	0	0	0	0	2	0	**30**	4812	5233	30	1								**5**
0%	0%	0%	0%	0%	13%				3%										
8	40	23	0	2	3	0	**218**	27837	28198	133	2								**6**
25%	15%	6%	0%	18%	20%				17%										
0	0	25	0	0	0	0	**25**	1500	1500	0	0								**3**
0%	0%	6%	0%	0%	0%				1%										
16	72	79	0	3	2	0	**426**	42769	44092	235	6								**0**
50%	26%	19%	0%	27%	13%				27%										
0	32	71	21	1	1	0	**180**	14395	14680	66	21	6	0	12	21	0	125	18	**269**
0%	12%	17%	100%	9%	7%				9%										
8	48	159	0	2	3	0	**336**	28550	28299	119	33	10	0	36	31	0	258	34	**521**
25%	18%	38%	0%	18%	20%				17%										
8-VS	8-SH	StV-vs	StV-sh	TUIN	PT	diversen	woningen	grondbeslag	grond	erf	drive-in	carport	PG-7	PT	straat	PG-7+	PG	STRAAT	TOTAAL
610	570	60	50	225	360			163218	166105	831	222	82	0	176	272	0	687	162	**2432**

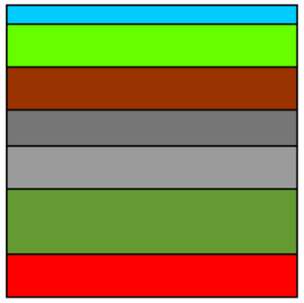


17 0,00 0,42 0,10 1,50

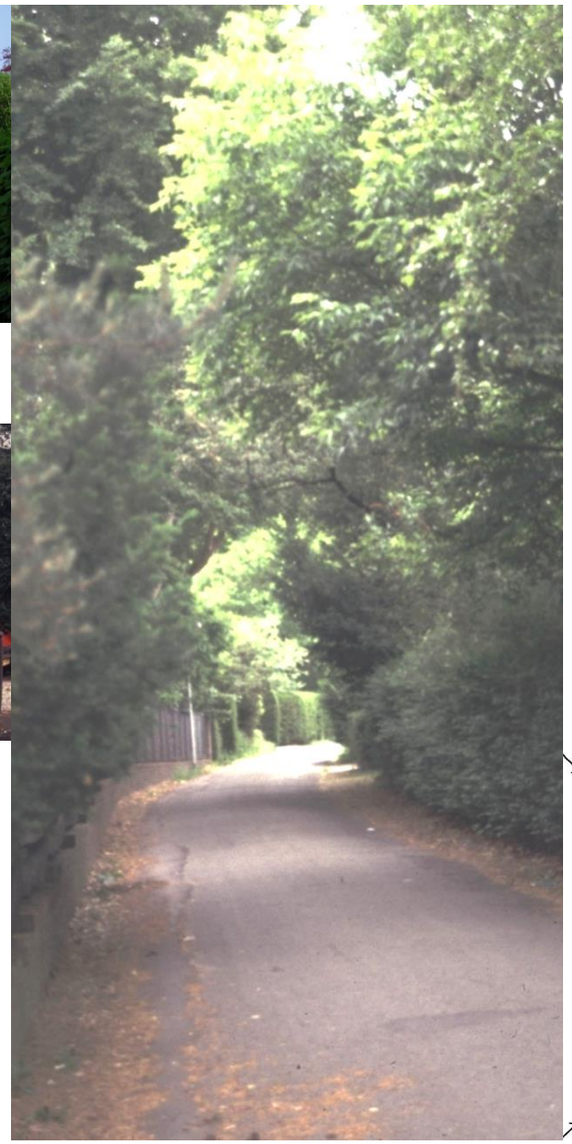
pp/wo

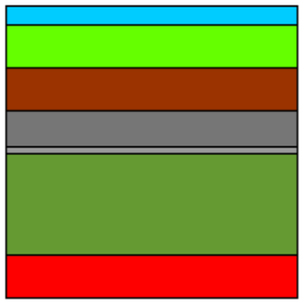
8-VS	8-SH	StV-vs	StV-sh	TUIN	PT	extra	woningen	grondbeslag	grond	erf	drive-in	carport	PG-7	PT	straat	PG-7+	PG	STRAAT	TOTAAL
					1														
				1															





Minimale (auto)ontsluiting





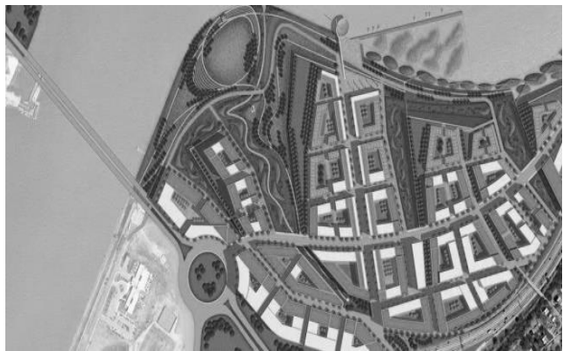
Minimaal parkeren op maaiveld

75 dwellings per hectare Fsi$_{fabrick}$= 1

De Bongerd, Amsterdam

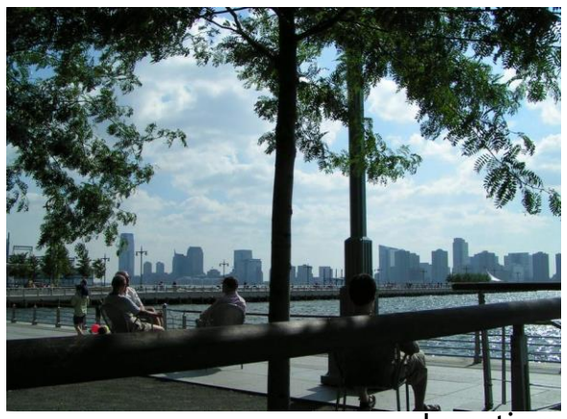
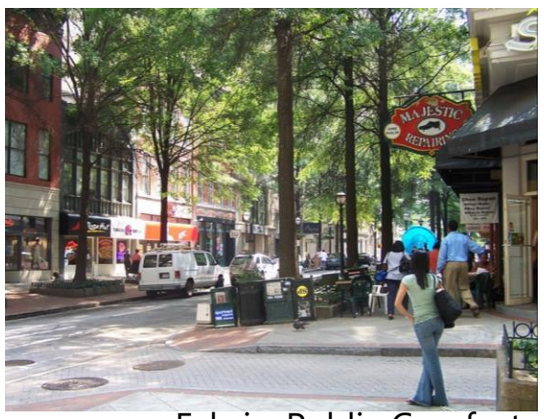
De Bongerd, Amsterdam

How to make attractive cities in which spacious dwellings feed
a concentrated public domain of high quality and vice versa?








Location Fabric: Public Comfort Private Comfort

Comfort < Density > Stress

Balance between inspiration and relax.

Like music

Distribution of comfort + activities

Quantity **Quality**

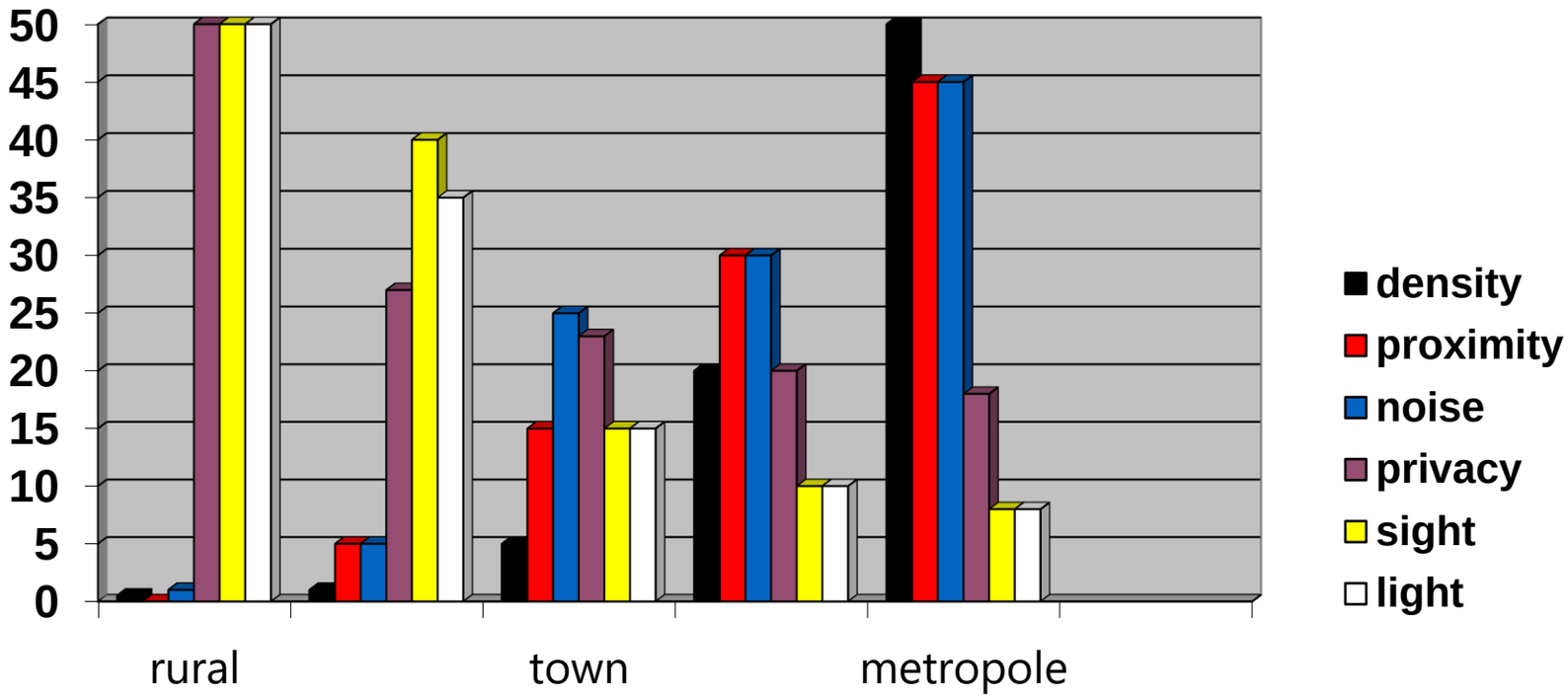
People
Meters
Functions
Activities
Happenings/occasions
Opportunities

Public Comfort **Community**
Amenities, Work, Cultural, transit, Park, Sports,Grandeur,
Mix - Access being connected -Diversity

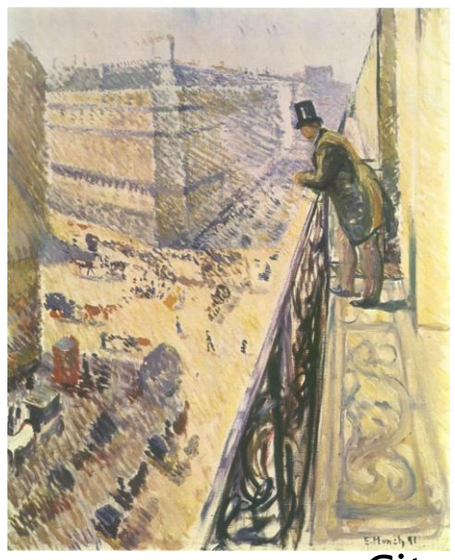
Private Comfort **Privacy**
Size m2xh, light, Acoustics, Sight, outdoor,
Facilities
Proximity <> Distinction
Privacy
Stimuli<Concentration> Relaxing

Definition Density=Mass/Volume.
But what mass?? People or m2/ area. Functions? Diversity?

Density= **QxQ/ area = Places / Space**
Density = QxQ/ accessible open, daily territories (grain web)

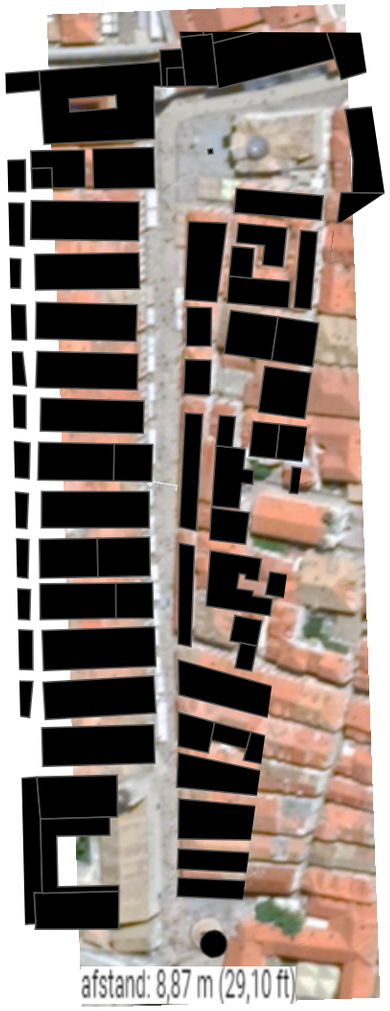


Village



City

Density and spatial quality >>comfort


afstand: 8,87 m (29,10 ft)


WWW.NEWS.CN

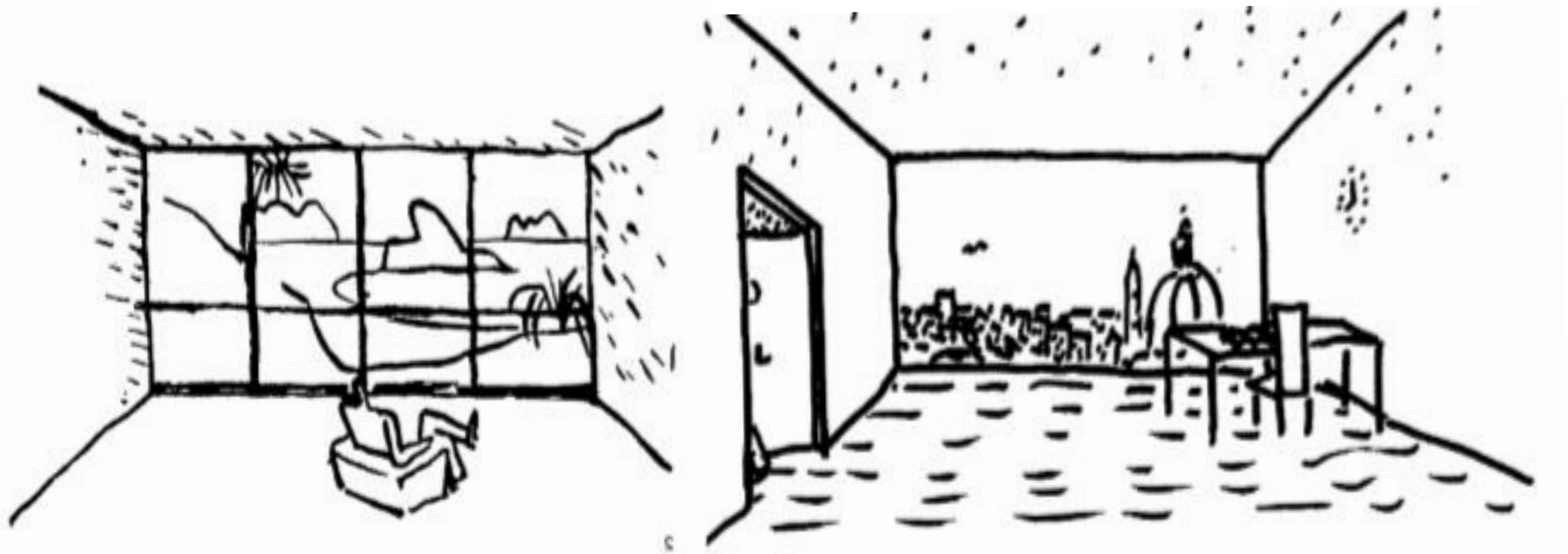

KAV
KEVIN LAMOUREUX


DÉCORS DES CORPS

rudy uytenhaak
partners architecten

Architecture can eliminate negative oppresive spatial effects and compensate them with allure.

Privacy light view *Comfort*

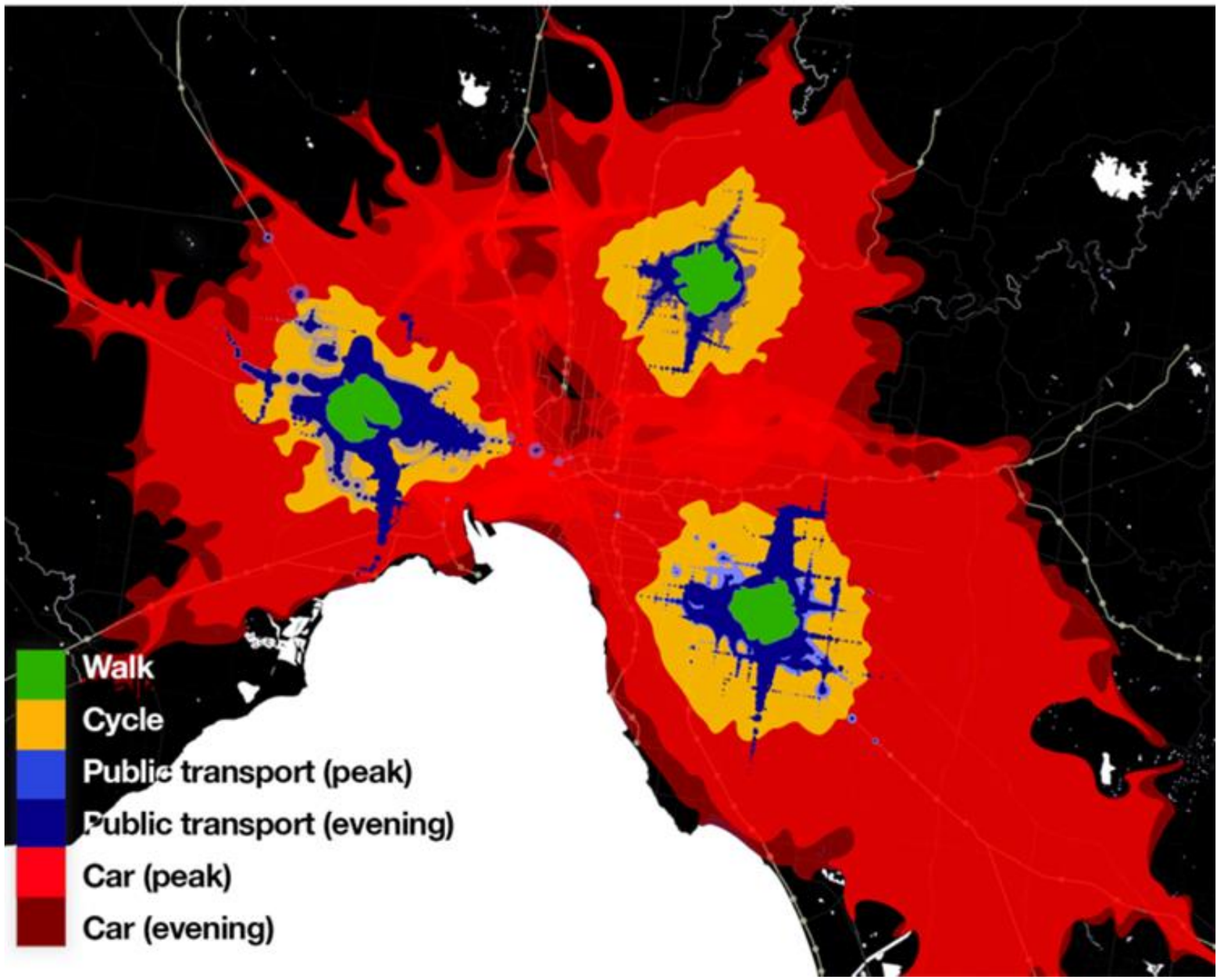


The paradox of the city: diversity and density of qualities provide space in the form of proximity to opportunities

rudy uytenhaak
partners architecten

How far can you travel in 30 minutes in Melbourne?

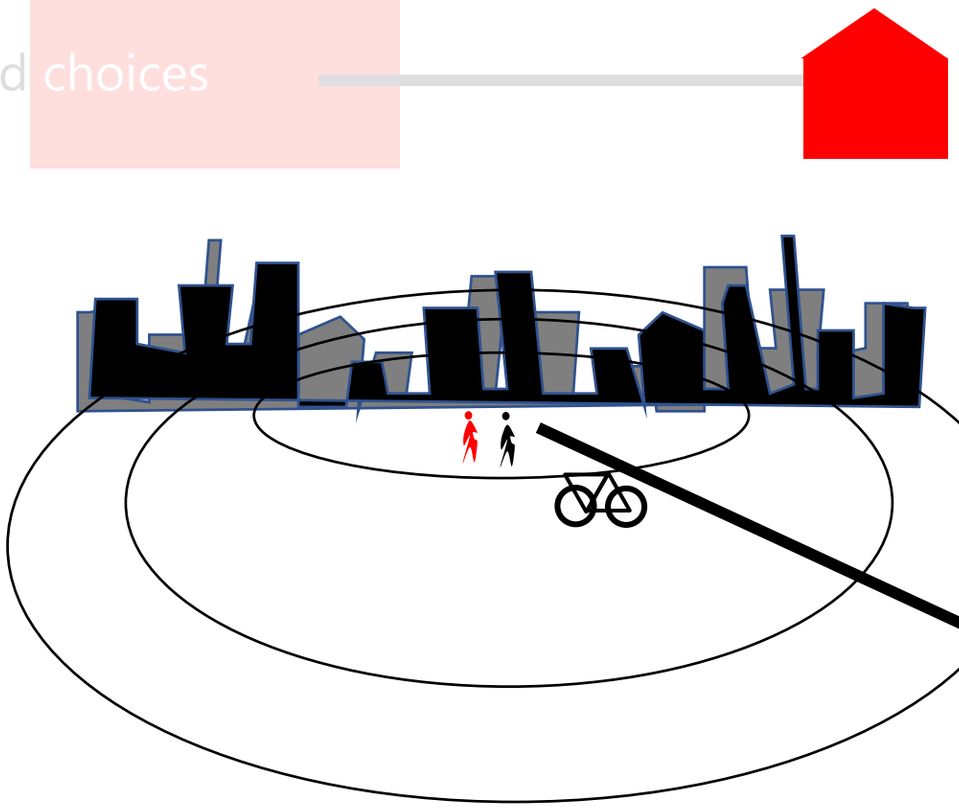
Access networks determine how much of a city we can get to in a given period of time. The below isochrone map shows the distances people can travel on different modes of transport within 30 minutes from three key locations in Melbourne: Sunshine, LaTrobe University and Chadstone.



Location : proximity

Location : Proximity to….
Urban Public comfort …..Private comfort

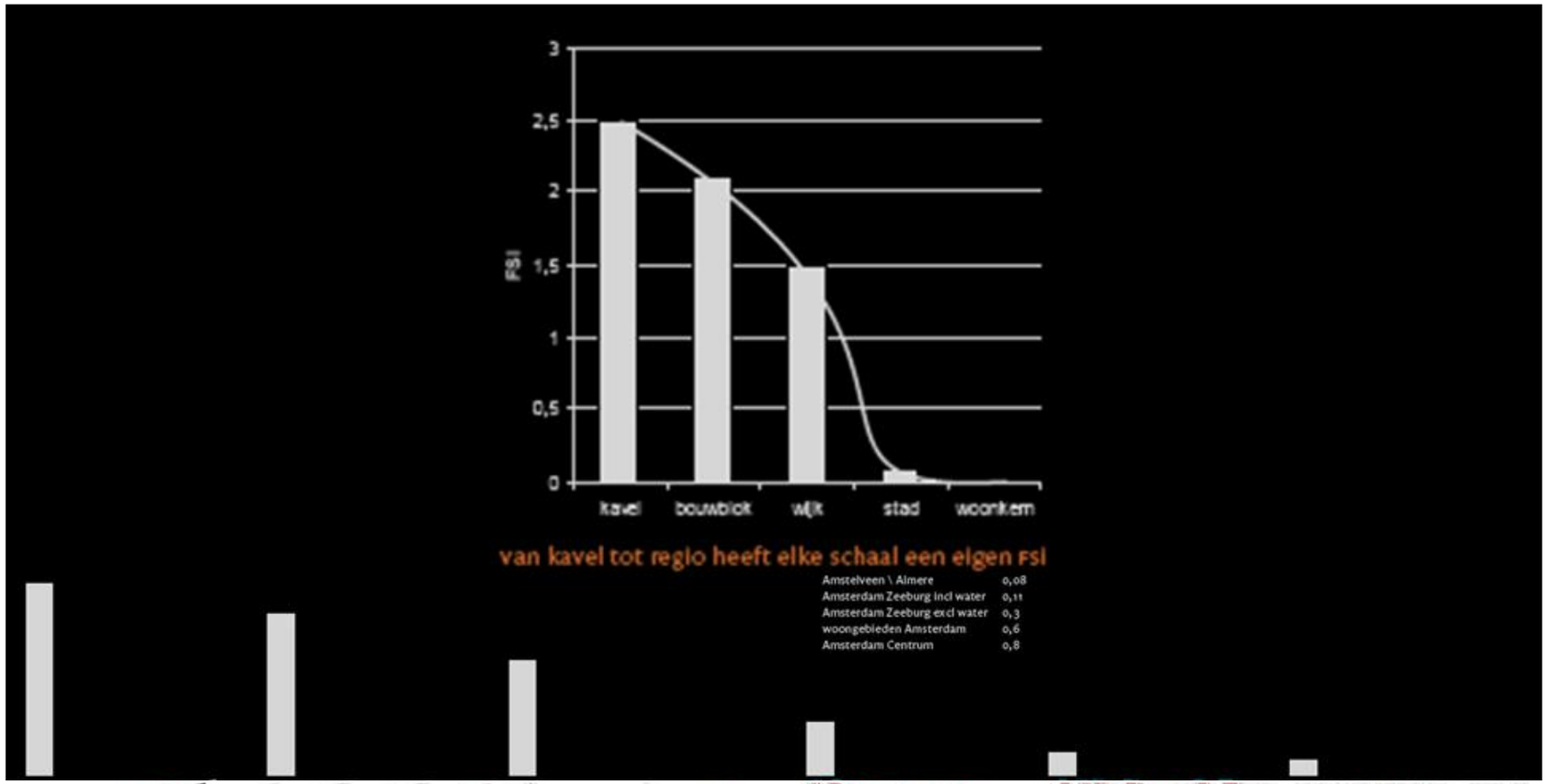
€ >>forced choices

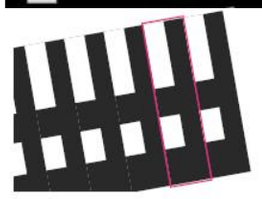


Less m2

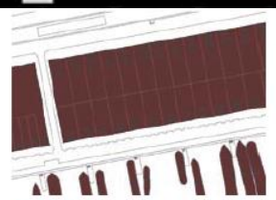
Shared/ co-living

More distance





FSI kavel = 2,5

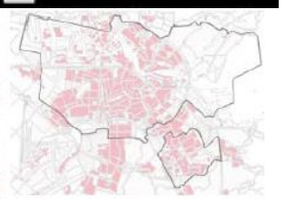


FSI bouwblok = 2,1

FSI wijk (borneo eiland) = 1,5

FSI oostelijk havengebied = ± 0,7

FSI zeeburg (excl water) = 0,3



FSI amsterdam totaal = 0,2
(4,3/219 = bvo/grondgebied in km²)

FSI reeks borneo malaparte uitzoomend van kavel naar steeds groter stadsgebied

URBAN Plot

Surface Plot	230	m²
Stores	4	
Footprint	125	m²
Plot FSI	2,174	

URBAN Fabric

Water	10%
Street	17%
Parkeren	22%
Park	12%
Squares	2%
Totaal	63%

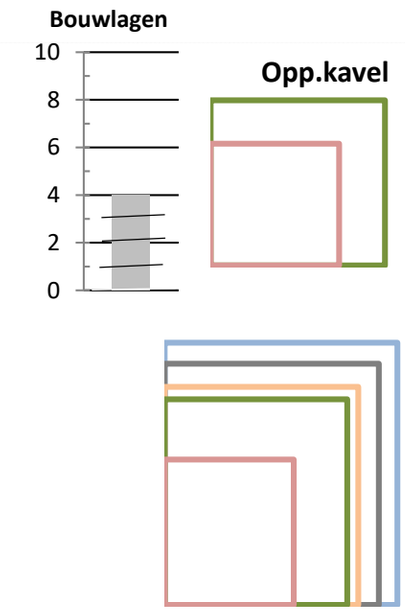
URBAN Quarter

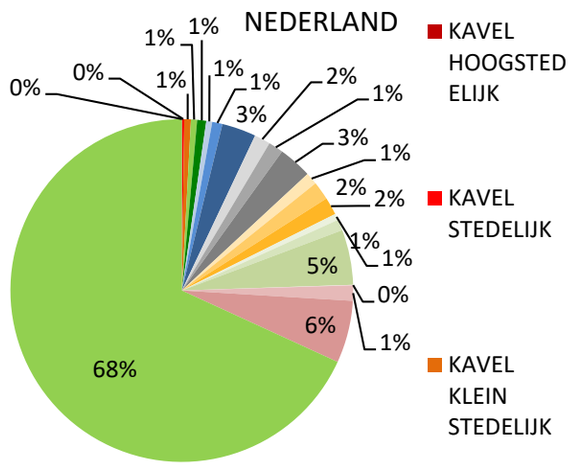
Water	12%
Netwerk/infra	19%
amenities	20%
Green	25%
Work	30%
Totaal	106%

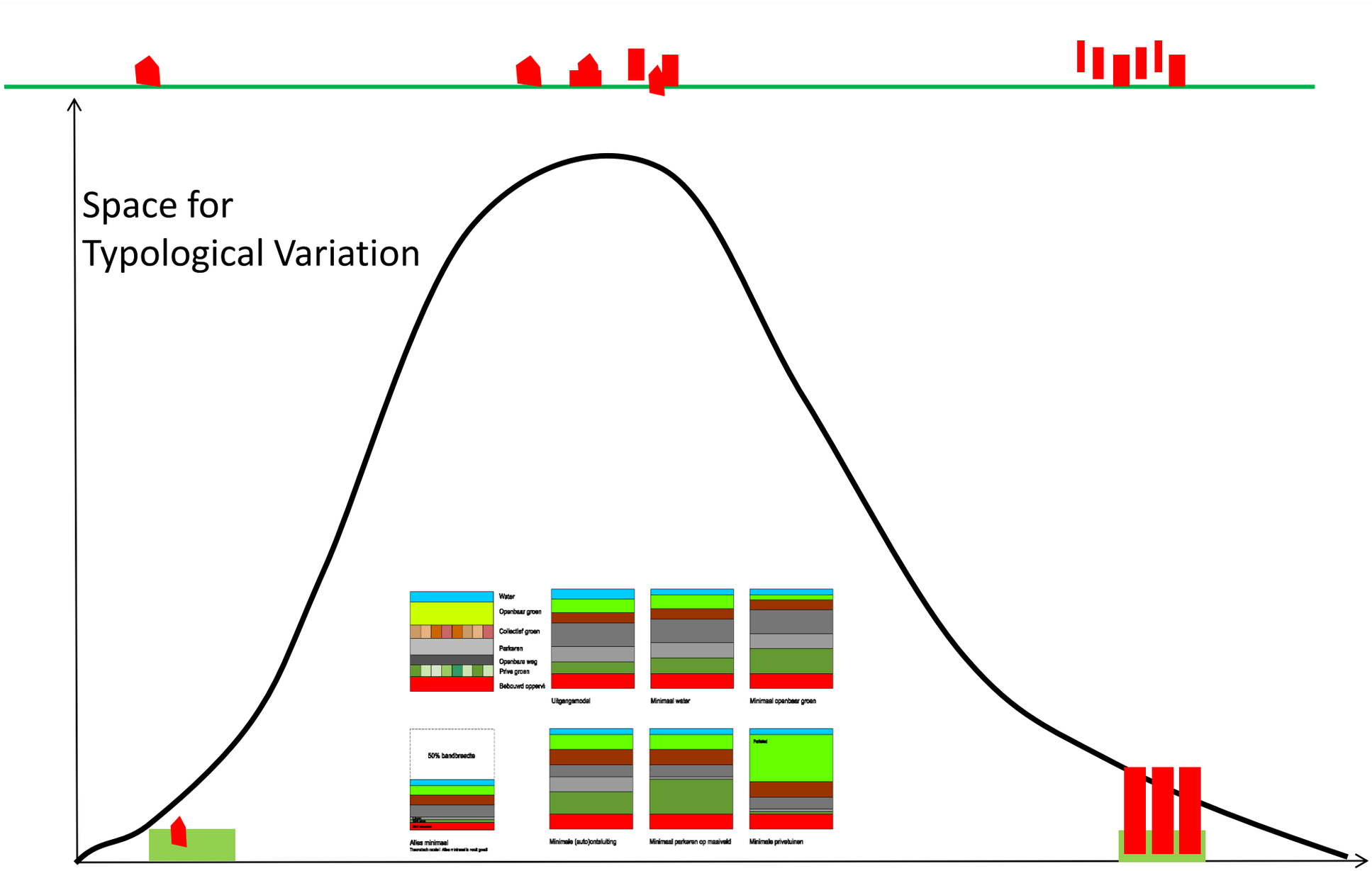
URBAN Urbanized area

Water	20%
Netwerk/infra	20%
Voorzieningen	10%
Green	40%
Work areas	40%
Totaal	130%

	FSI plot	FSI fabric	FSI quarter	FSI urban area
Urban	2,174	1,334	0,647	0,281

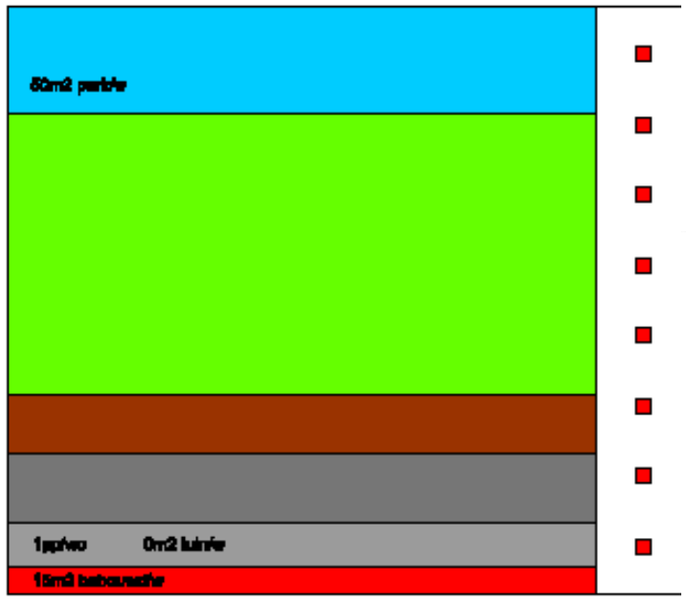






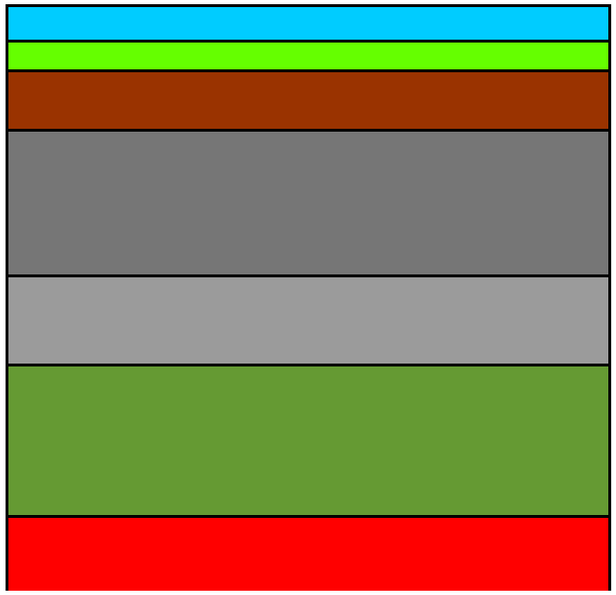
Density Gsi Fsi Fabric

Gsi 50% and Fsi of about1 to 1,5 delivers maximum variation



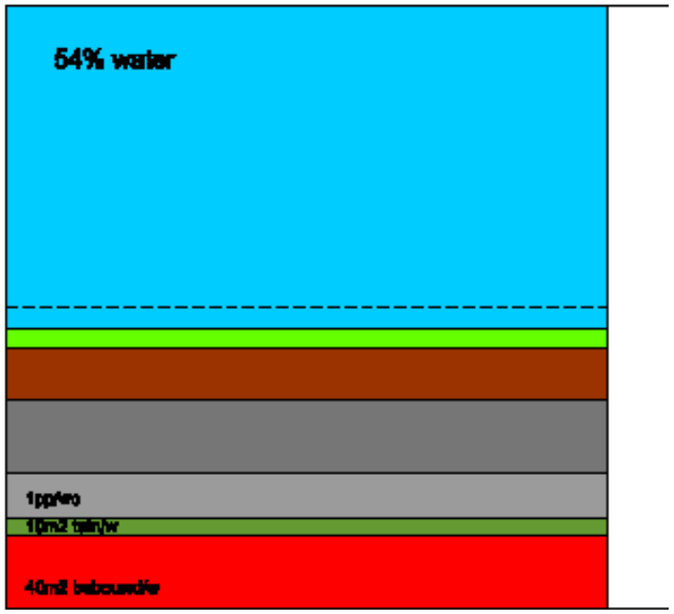
Park-city KWP

100% appartements maximum park +view



Garden-city

Minimal publicgreen



Borneokade Amsterdam

100% Laagbouw. 200w/ha (netto). Maximaal open ruimte.