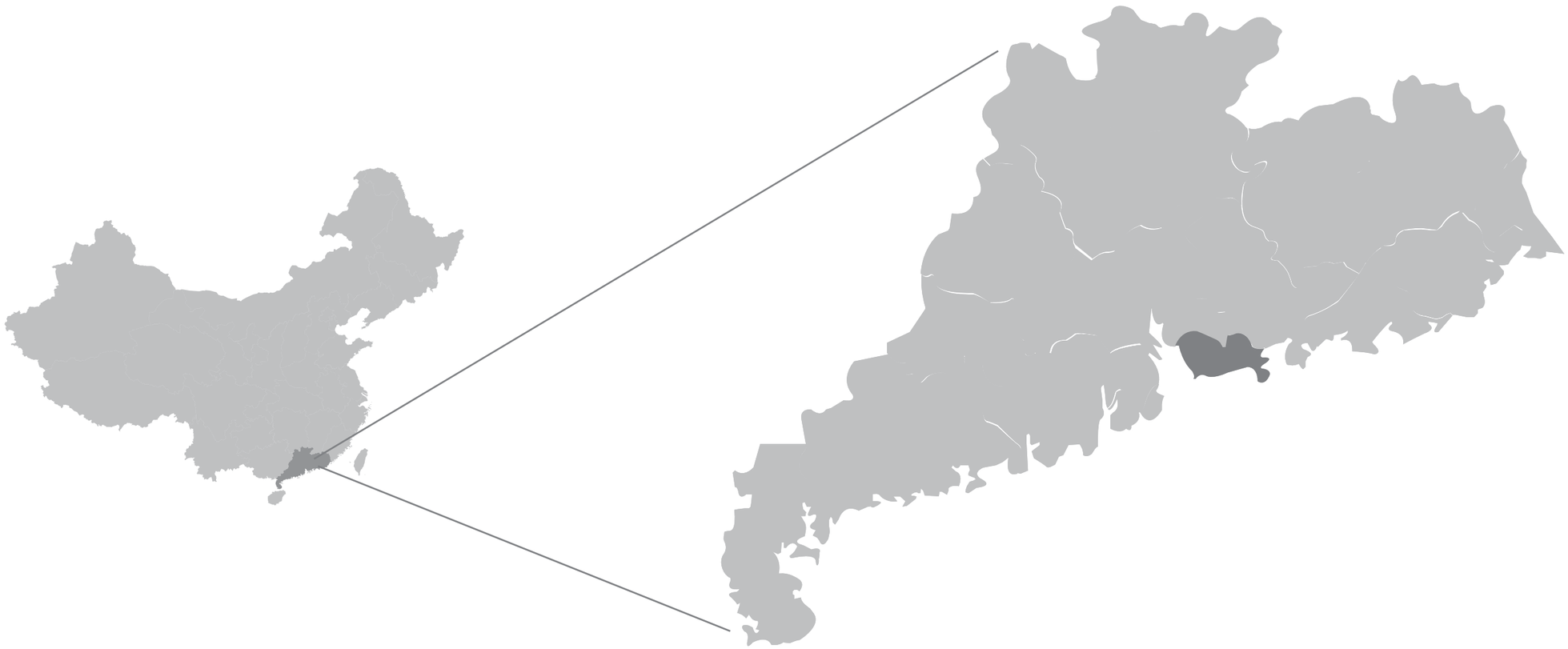
Livability in a growing Shenzhen

How to make Shenzhen a more migrant-friendly city to young graduates?

Jiangzhou Song
28.06.2018

Introduction

Location



Source: http://699pic.com/tupian/shetuwang.html

District

Guangming
Longhua
Pingshan
Bao'an
Longgang
Yantian
Dapeng
Luohu
Nanshan
Futian

Guangming

Longhua

Pingshan

Bao'an

Longgang

Yantian

Dapeng

Luohu

Nanshan

Futian

Guangming

Longhua

Pingshan

Bao'an

Longgang

Yantian

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Guangming

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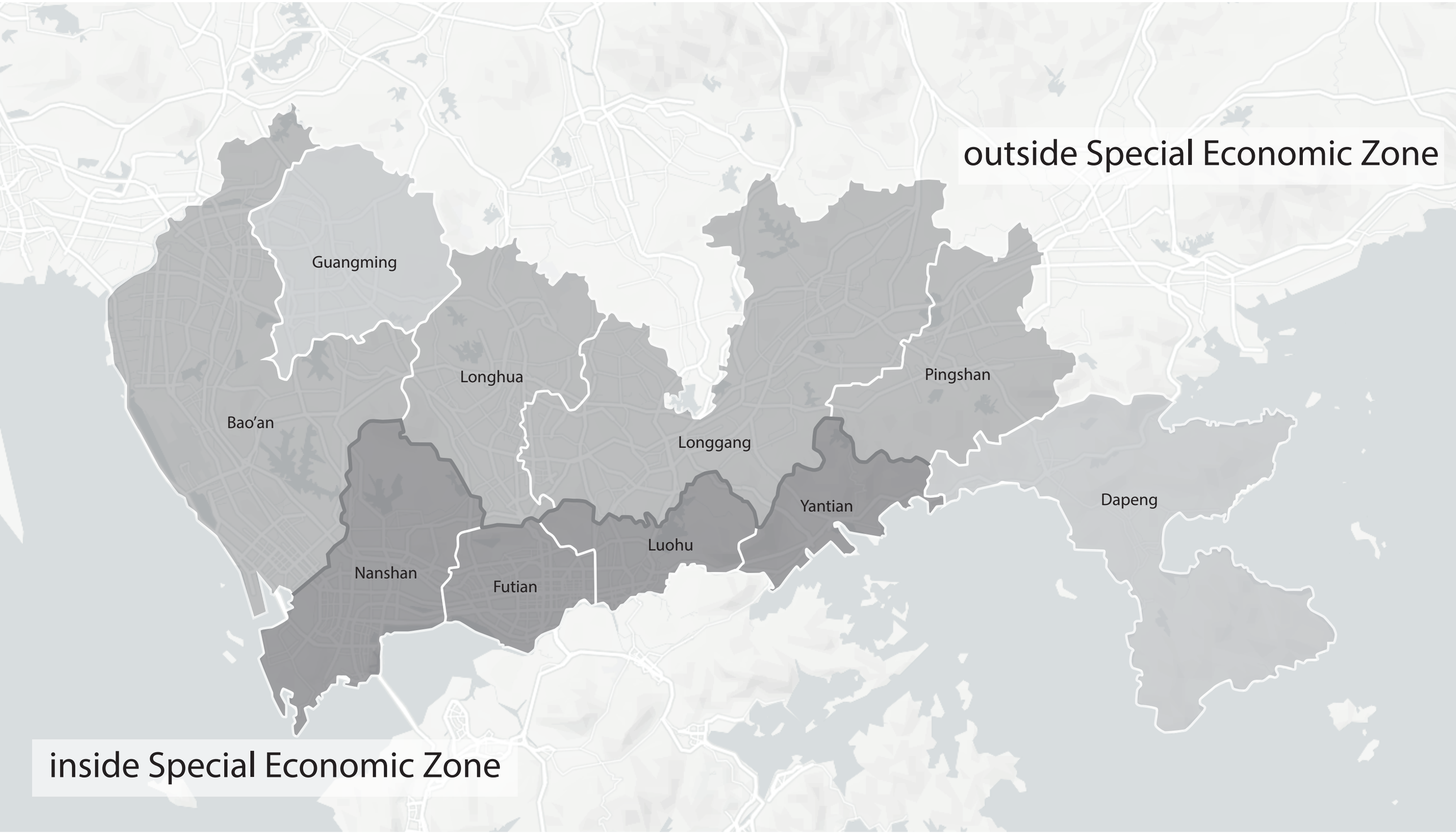
Nanshan

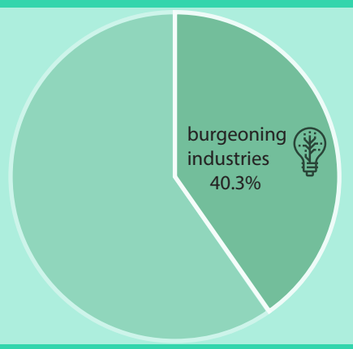
Futian


outside Special Economic Zone
Guangming
Longhua
Pingshan
Bao'an
Longgang
Yantian
Dapeng
Luohu
Nanshan
Futian
inside Special Economic Zone

1978 Special Economic Zone was created

Three plus one model—intensive low-value added manufacturing

SHENZHEN DESIGN WEEK 深圳设计周

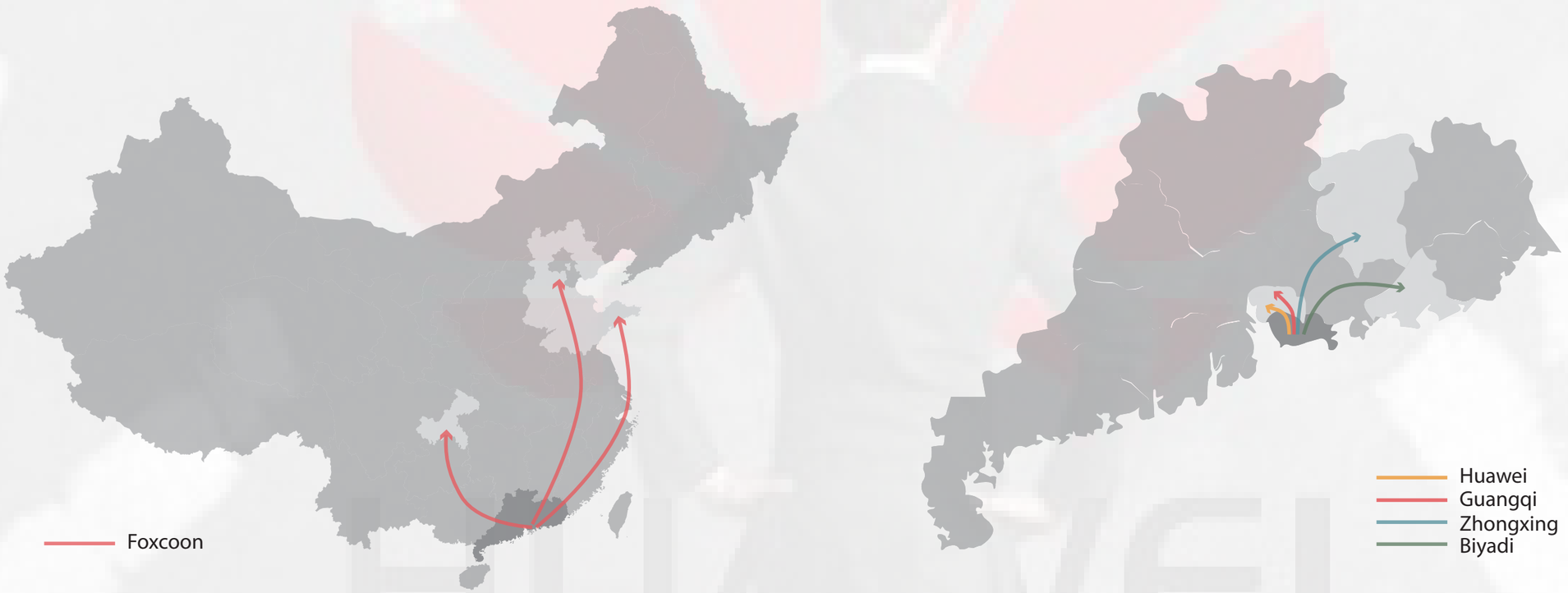


1994 Shenzhen masterplan 1996-2010

A new image of National Innovation city

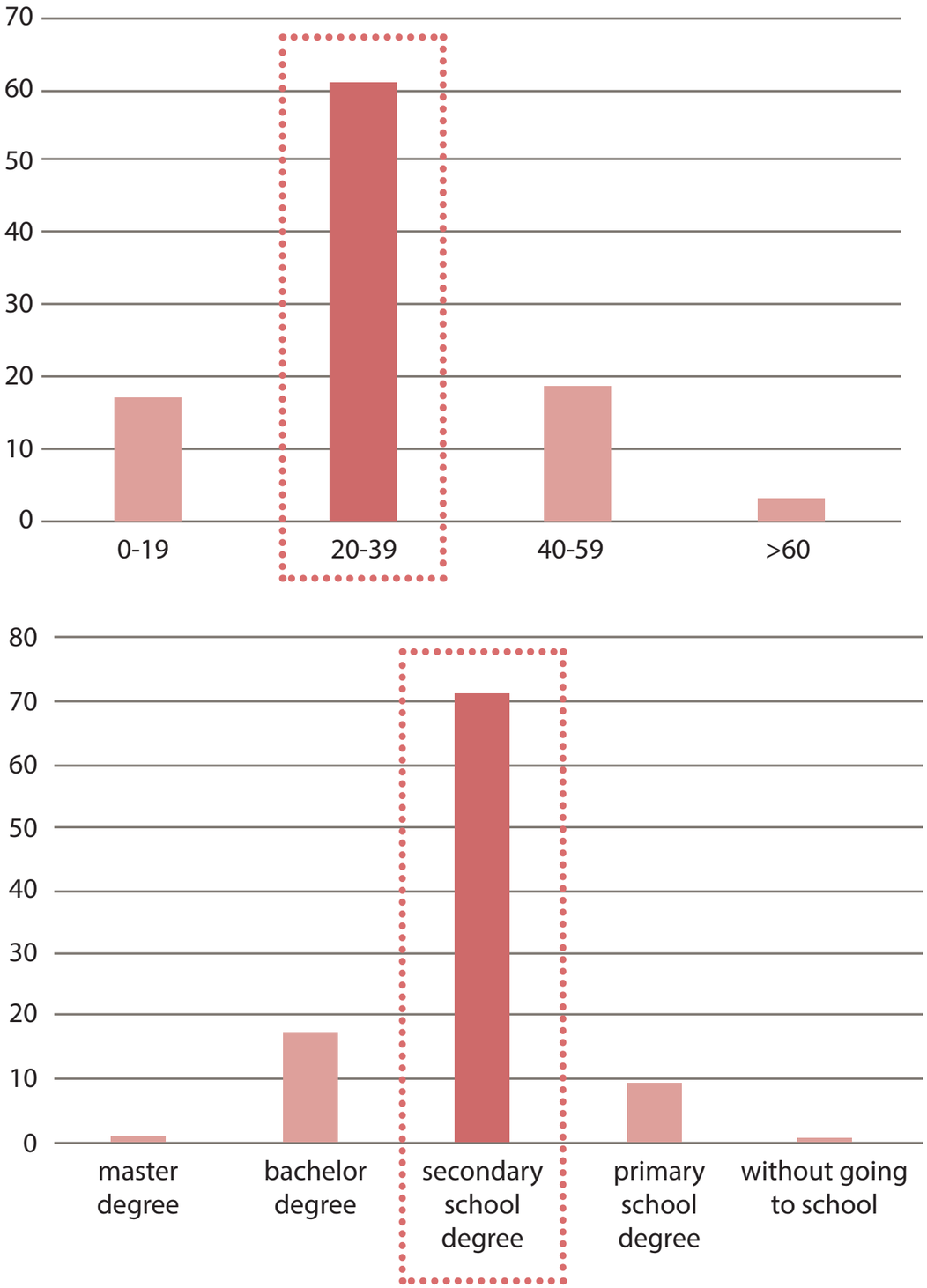
2016 Industrial upgrading

Traditional manufacture sector movement



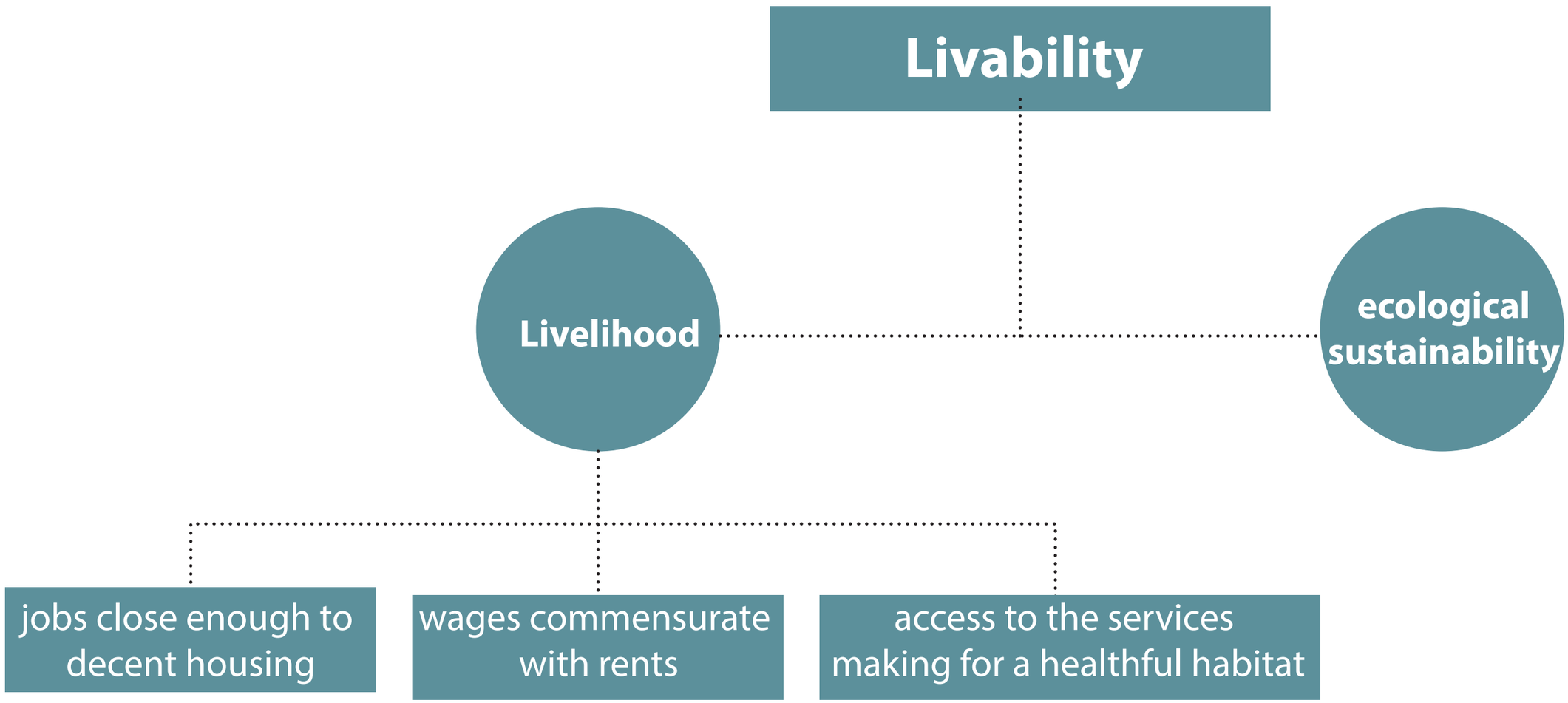
Continuous industrial upgrading needs young graduates

Current population and policy

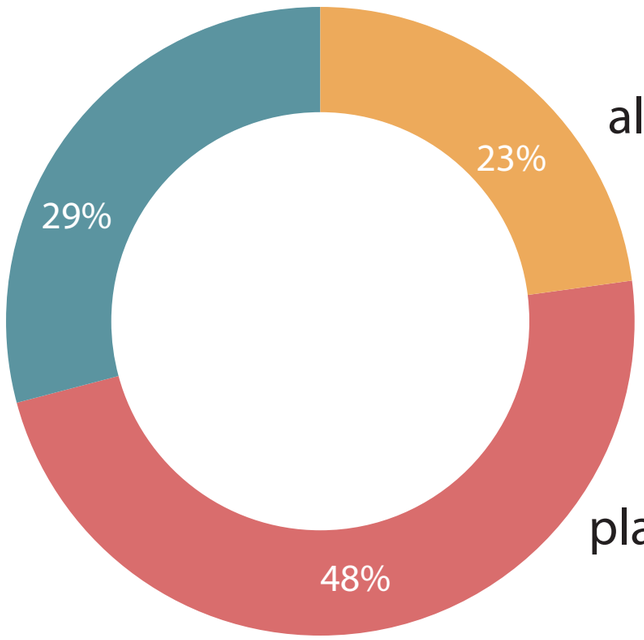


Young people with **secondary school degree** is dominant

Definition of livability



P. Evans, ed. 2002. Livable Cities? Urban Struggles for Livelihood and Sustainability

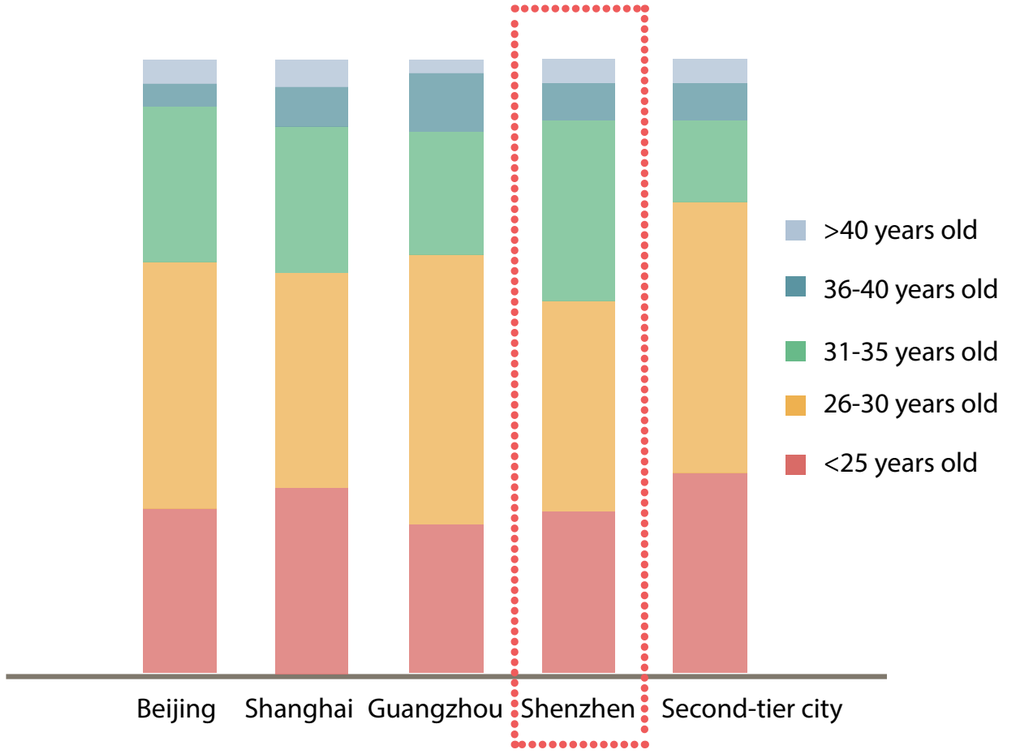


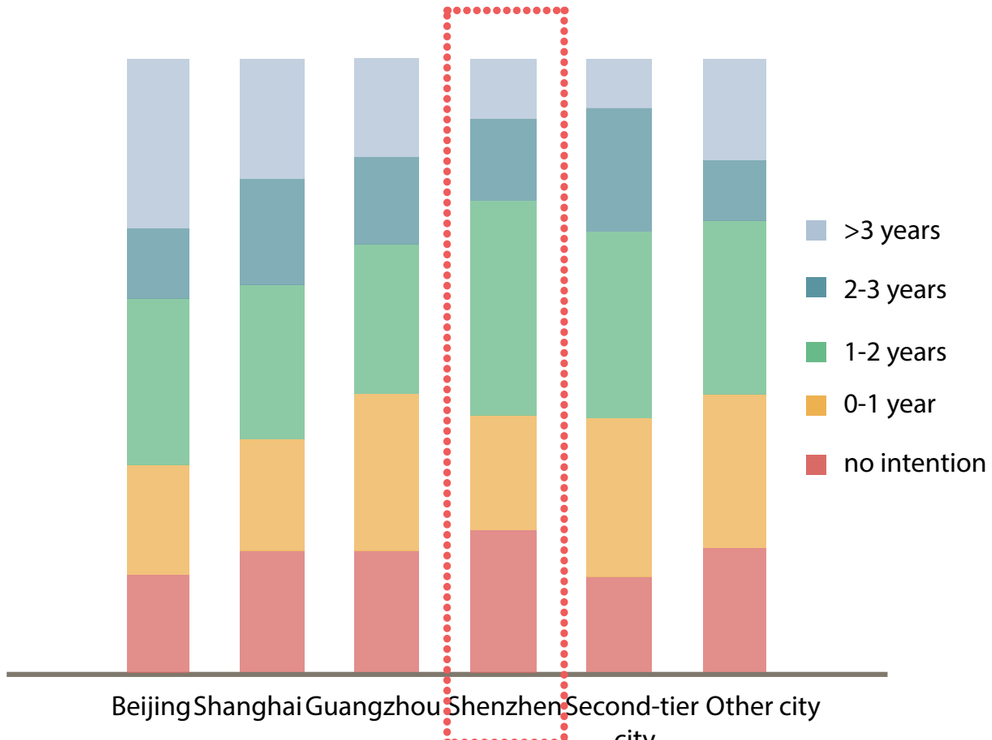
already left

planning to leave

over **70%** of young people were planning or had already left mega cities, **64%** named **high housing prices** as their main reason for leaving

Compare 4 mega cities in China





Housing price & job opportunities

Housing price inside Special Economic Zone, where is the jobs agglomeration area, is generally higher.

Legend

- >80,000 yuan/m²
- 60,000-80,000 yuan/m²
- 50,000-60,000 yuan/m²
- 40,000-50,000 yuan/m²
- <40,000 yuan/m²
- no data
- administration
- finance and business
- high-tech industry
- high-tech industry under construction
- logistics and business under construction
- factory under construction

Housing quality

Buxin 71.5 yuan/m²

Shixia 83.4 yuan/m²

affordable
bad housing quality

Legend

- >80 yuan/m²
- 60—80 yuan/m²
- <60 yuan/m²

good quality — bad quality

0 2 5 10km

N

Housing quality

Xili 67.0 yuan/m²

High-tech center 90.8 yuan/m²

Baishizhou 66.6 yuan/m²

Chegongmiao 117.4 yuan/m²

Shangsha 76.9 yuan/m²

unaffordable
good housing quality

Legend

- >80 yuan/m²
- 60—80 yuan/m²
- <60 yuan/m²

good quality — bad quality

0 2 5 10km

N

Fanshen 55.9 yuan/m²

Bao'an Center 79.5 yuan/m²

Minle 68.5 yuan/m²

Buji 60.8 yuan/m²

Pingzhou 62.6 yuan/m²

affordable
good housing quality

0 2 5 10km

N

Legend

- >80 yuan/m²
- 60—80 yuan/m²
- <60 yuan/m²

good quality — bad quality

Accessibility

Line 11

Line 3

Line 4

Line 1

Line 5

Line 7

Line 9

Line 2

0 4 10 20km

N

long-time and crowded commuting between areas inside and outside Special Economic

Legend

- the busiest metro line
- middle busy metro line
- less busy metro line
- least busy metro line
- top ten busiest metro stations

Conclusion

0 4 10 20km

N

Legend

- good living conditions with high price and short-time commuting
- bad living conditions with low price and short-time commuting
- good living conditions with low price and long-time commuting
- agglomeration of jobs
- commuting direction

0 2 5 10km

N

Legend

- good living conditions with high price and short-time commuting
- bad living conditions with low price and short-time commuting
- good living conditions with low price and long-time commuting
- agglomeration of jobs
- commuting direction

Housing preference: Buy or rent?

Access to public facilities of renting is low, especially good **educational resources**

	Owners	Tenants
possess	✓	
make use	✓	✓
rent	✓	
benefit	✓	
educational resources	✓	
sale	✓	

Opportunities

New testing policies of enjoy the **same access to public facilities**

	Owners	Tenants
possess	✓	
make use	✓	✓
rent	✓	
benefit	✓	✓
educational resources		
sale	✓	

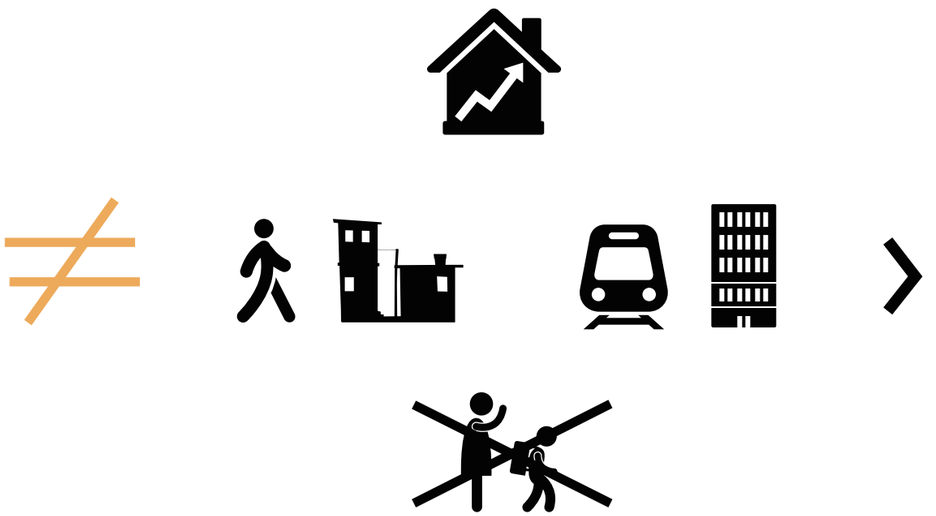
Vision of the government

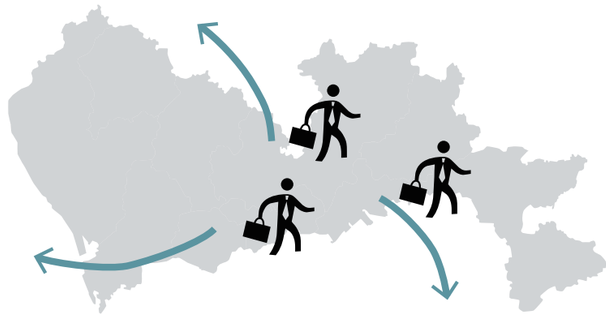
innovation city
headquarters & R&D
industrial upgrading
economic growth
more young graduates

≠

Current situation

High housing price
Job-housing unbalance
Lack of access to public facilities





Livability of young graduates in Shenzhen is **low**

So...

How to get **job-housing balance**

and **improve livability**

of young graduates in Shenzhen through

urban regeneration

and **new policies**

?

Theoritical Framework

General indicators of livability

Livability

- Environmental aspect
  - air
  - water
  - energy
  - resources
  - biodiversity
  - ecosystem
- Socio-economic aspect
  - safety
  - infrastructure
  - jobs
  - housing
  - public space
  - facilities
  - social equity
  - identity

Spatial elements creative class values

high-educated people

thick labor markets

lifestyle

social interactions

tolerance

identity

authenticity

job opportunities

necessary amenities

accessibility to public space

mixed-use & multi functions

unique characters preservation

Florida, R. (2002). The Rise of the Creative Class, Basic Books.

identity

lifestyle

basic need of living

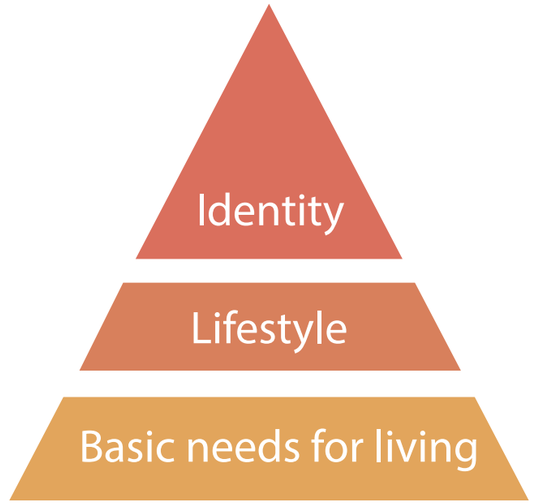
unique characters
of places preservation
social equity

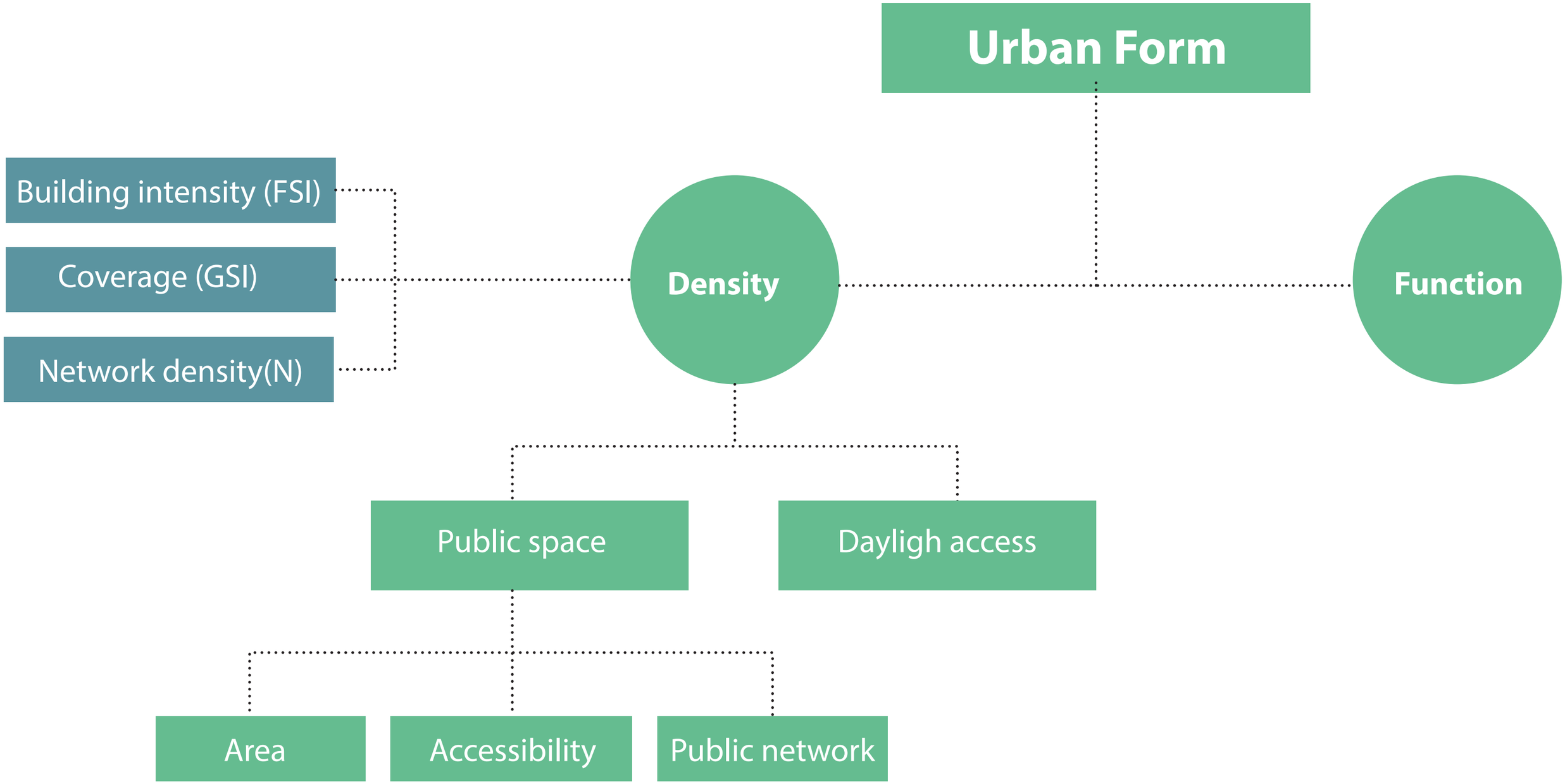
less social segregation
and exclusion

diverse housing types
more amenities
more public facilities
access to green space and their vitality
access to public open space and their vitality
Job-housing balance

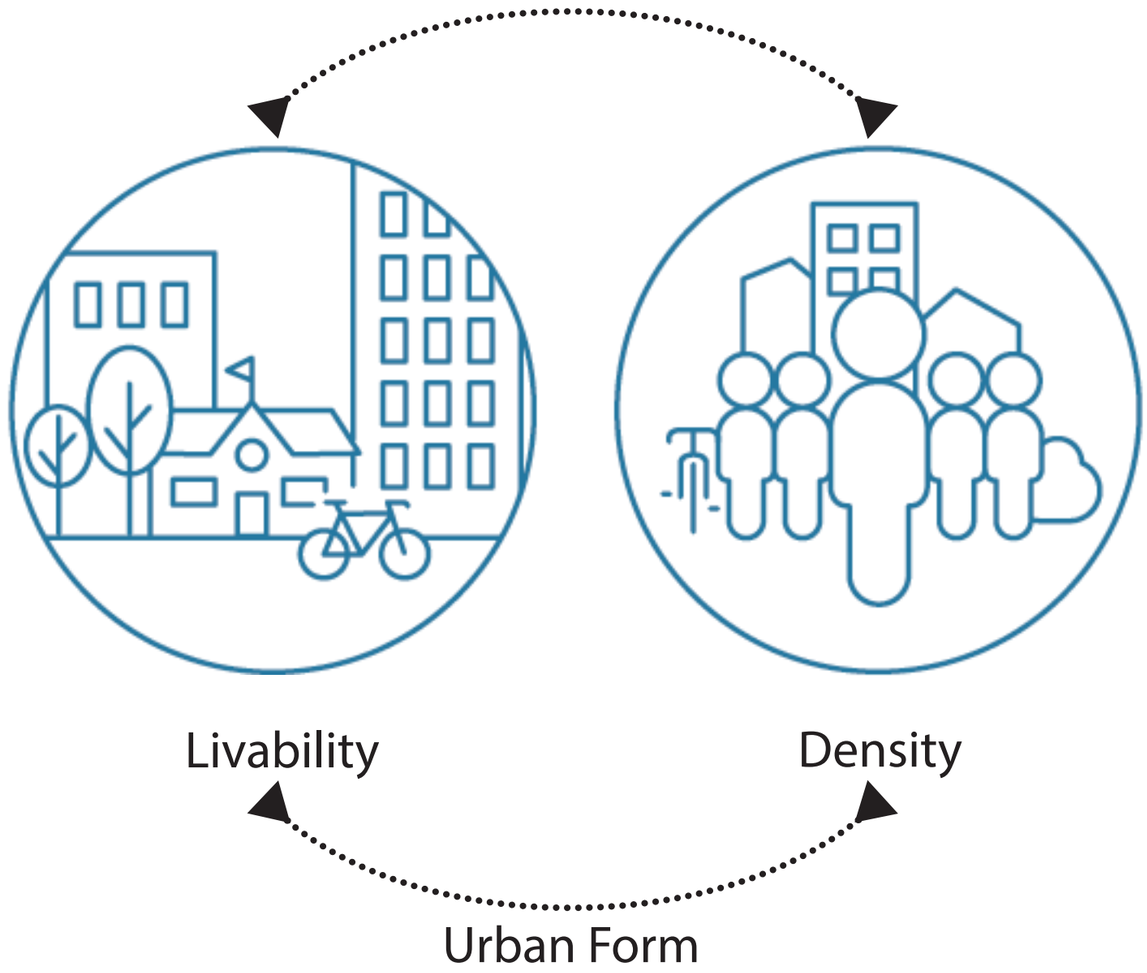
good walking and cycling environment
less traffic congestion and parking problems
Convenient public transport

more affordable housing
more employment opportunities
safe living space





Berghauser Pont, M. Y., & Haupt, P. A. (2009). Space, density and urban form. Doctoral dissertation, TU Delft, Delft University of Technology.


Livability
Density
Urban Form

Site Analysis & Vision

Location

Luohu

0 4 10 20km

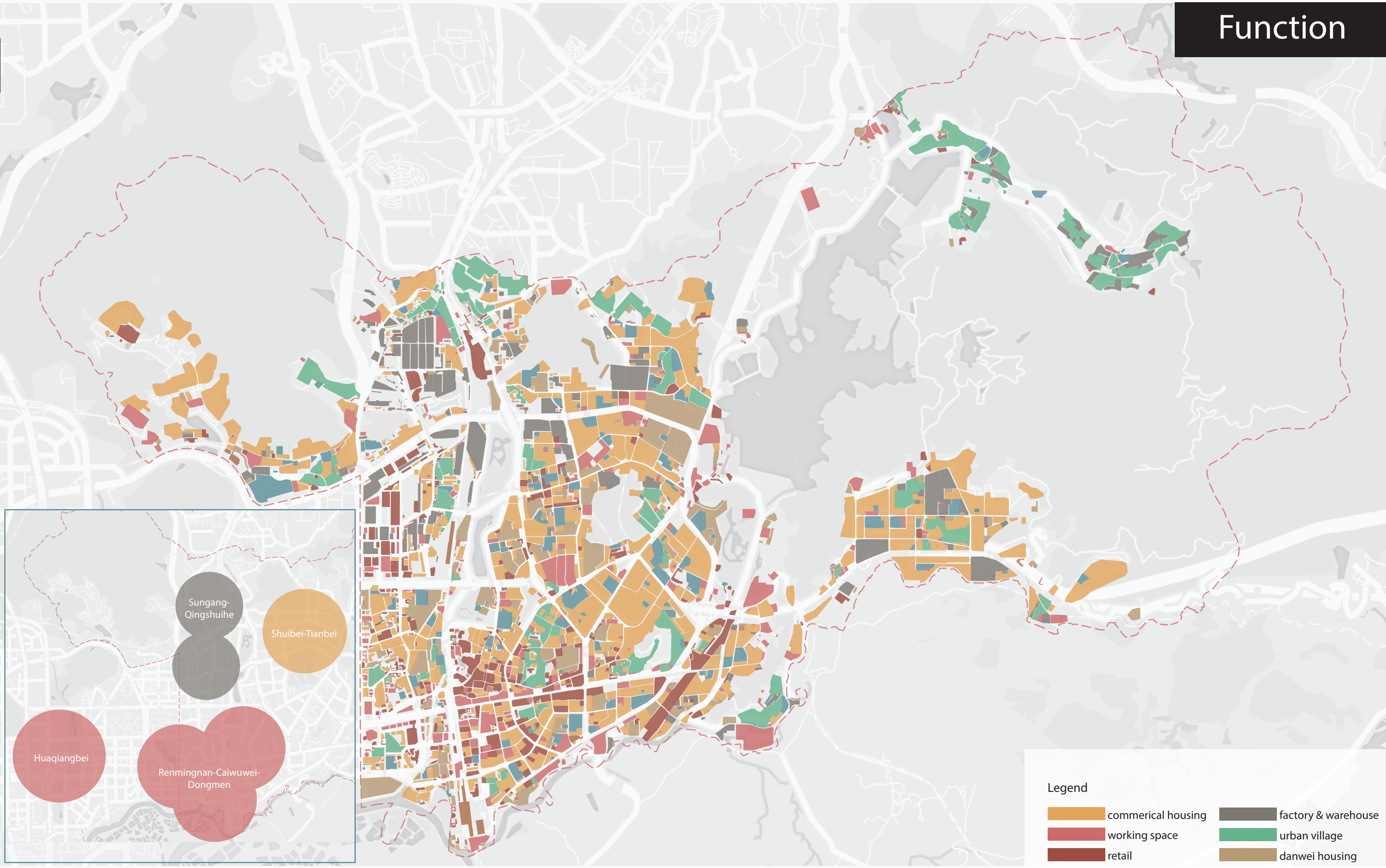
N

financial and economic center of Shenzhen

Legend

- administrative district
- Luohu District
- boundary of "guannei" and "guanwai"
- business and economic center
- Huaqiangbei
- Shenzhen Railway Station

Function


Sungang-Qingshuihe
Shuibei-Tianbei
Huaqiangbei
Renmingnan-Caiwuwei-Dongmen
Legend
commerical housing
factory & warehouse
working space
urban village
retail
danwei housing
school
station
boundary

Urban regeneration programs

worst building quality

lower density

unitary property right

close to economic center

Qingshuihe
High-tech zone of eastern Shenzhen

Chahuadi
Demonstration area of urban village regeneration

Sungang
High-end business district

Shuibei-Buxin
Jewellery and fashion industrial area

Buji River
Corridor of creativity and leisure

Caiwuwei
Center of economy and business

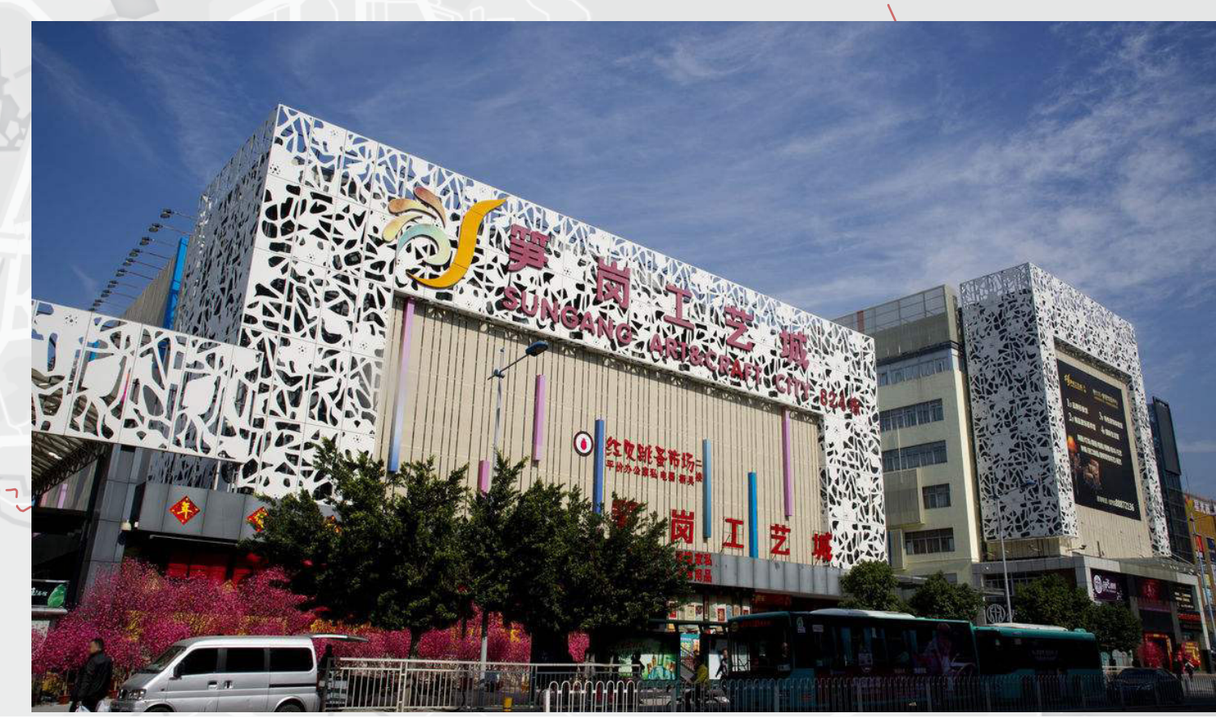
Hubei
Modern comprehensive business district

Eastern Shennan
Fashionable and vital business district

Wutong Mountain
Leisure and cultural district

Liantang
Burgeoning industrial area

Location



Shenzhen East Railway Station

Yinhu Mountain

Qingshuihe

industrial & storage area

residential area

residential area

Sungang

Bijia Mountain Park

residential area

Renmin Park

Huaqiangbei electronic devices wholesale

Lizhiwan Park

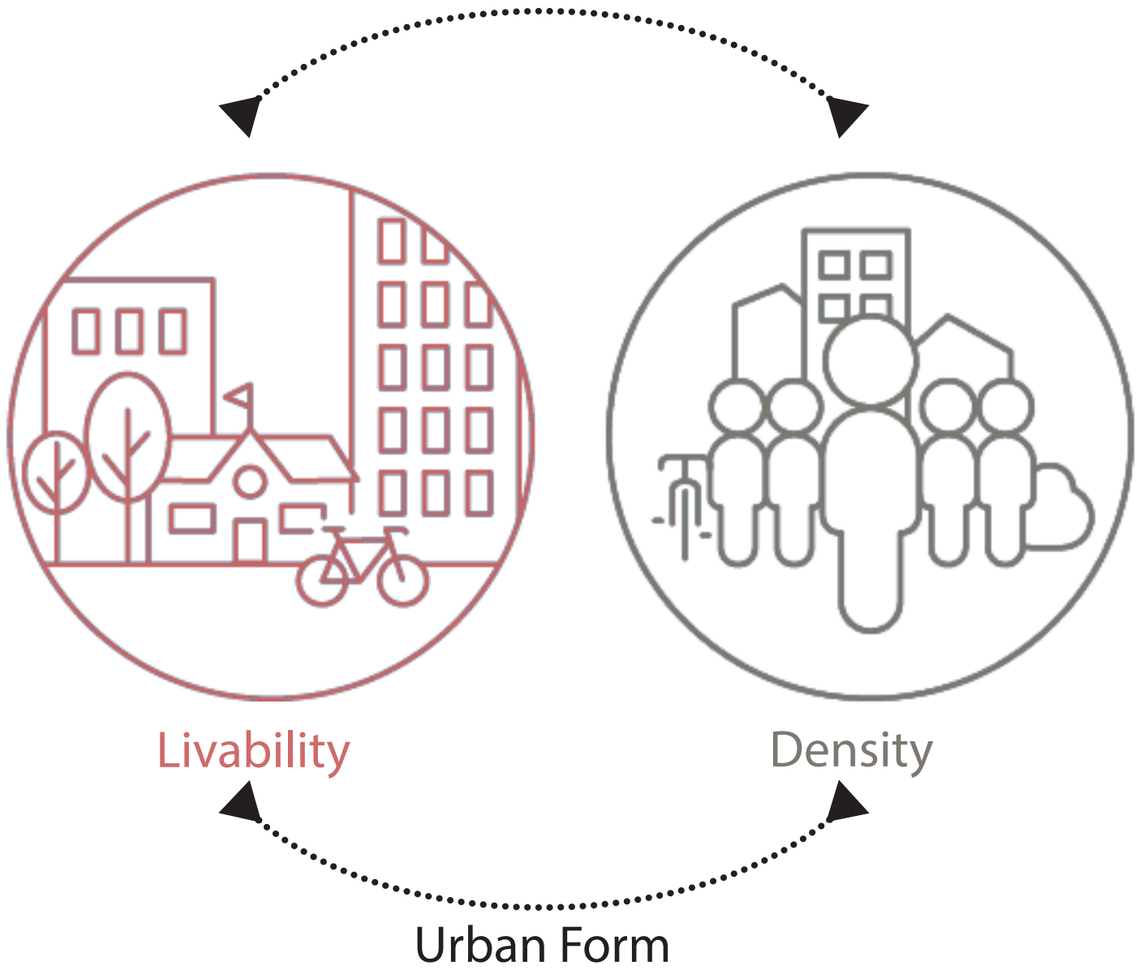
residen-tial area

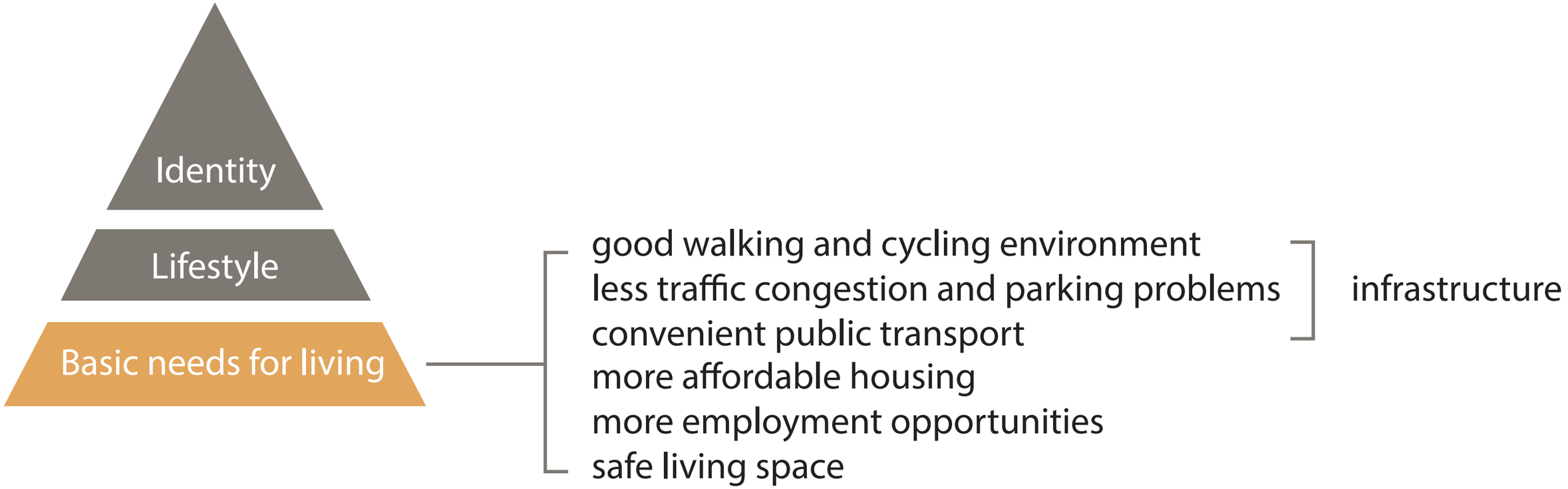
Caiwuwei center of economy & business

Dongmen

center of retail

residential area


Livability
Density
Urban Form

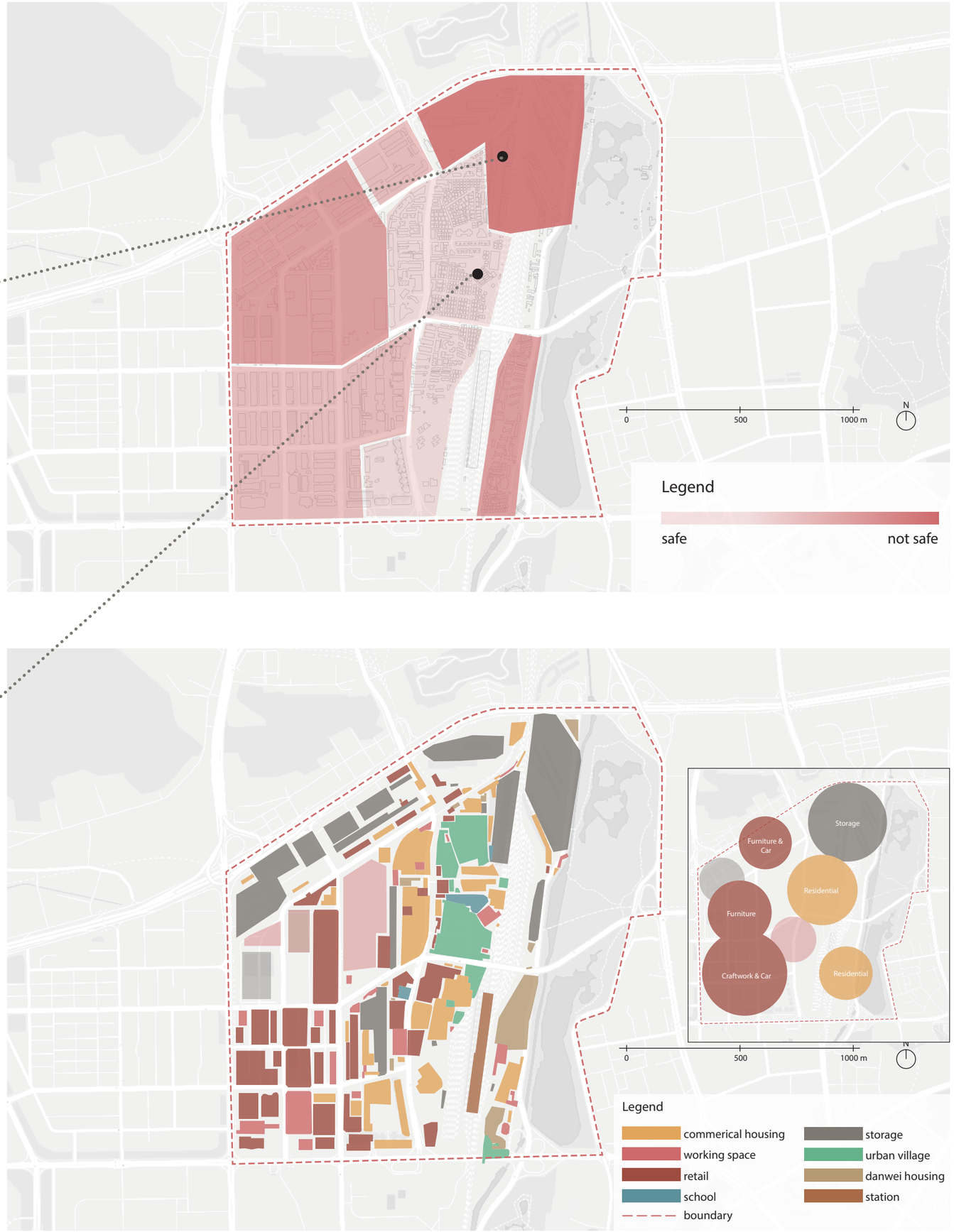

Identity
Lifestyle
Basic needs for living
good walking and cycling environment
less traffic congestion and parking problems
convenient public transport
infrastructure
more affordable housing
more employment opportunities
safe living space

Safe living space

More employment opportunities

More affordable housing

infrastructure



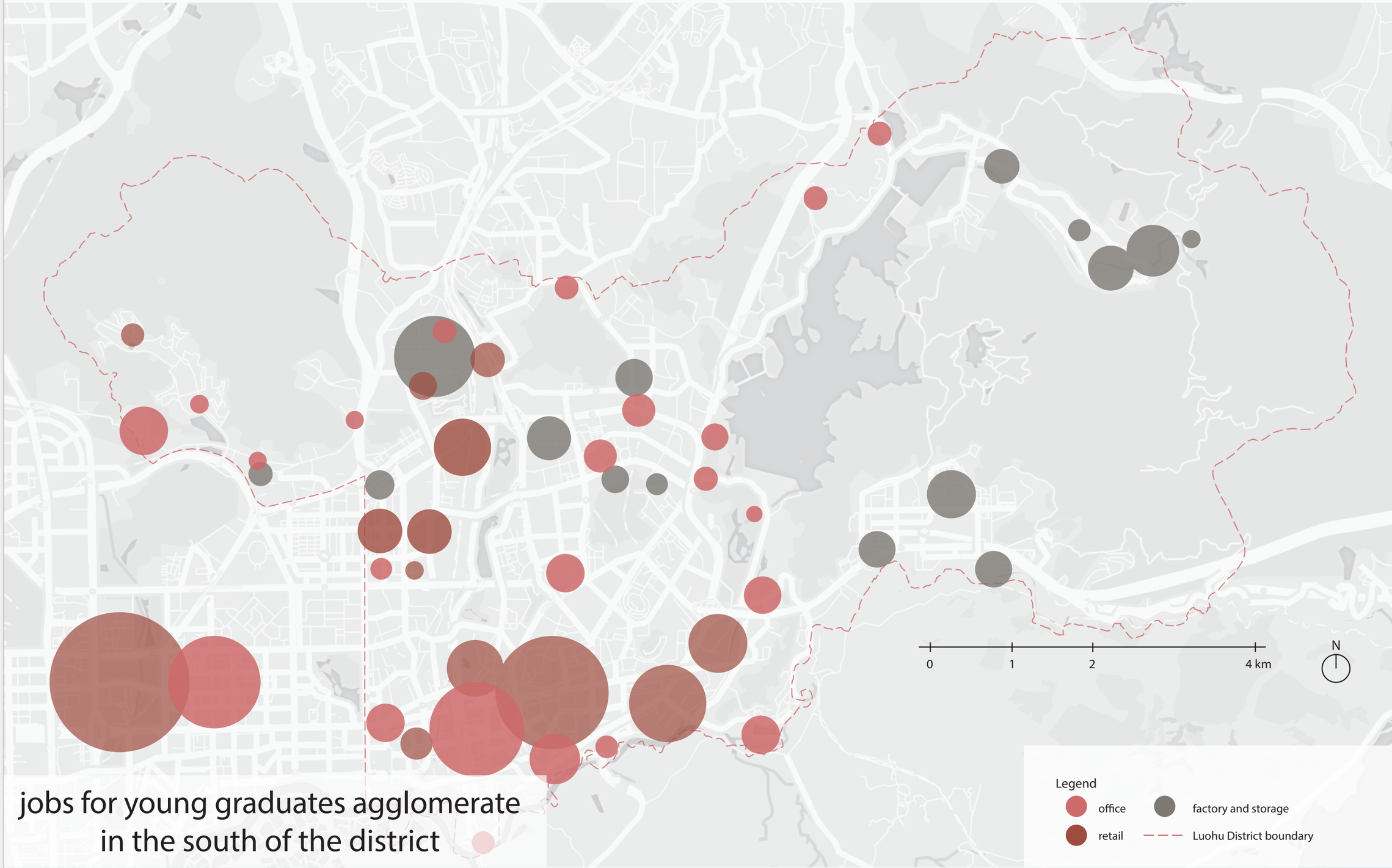
density and function matter most in relation to safety

Safe living space

More employment opportunities

More affordable housing

infrastructure

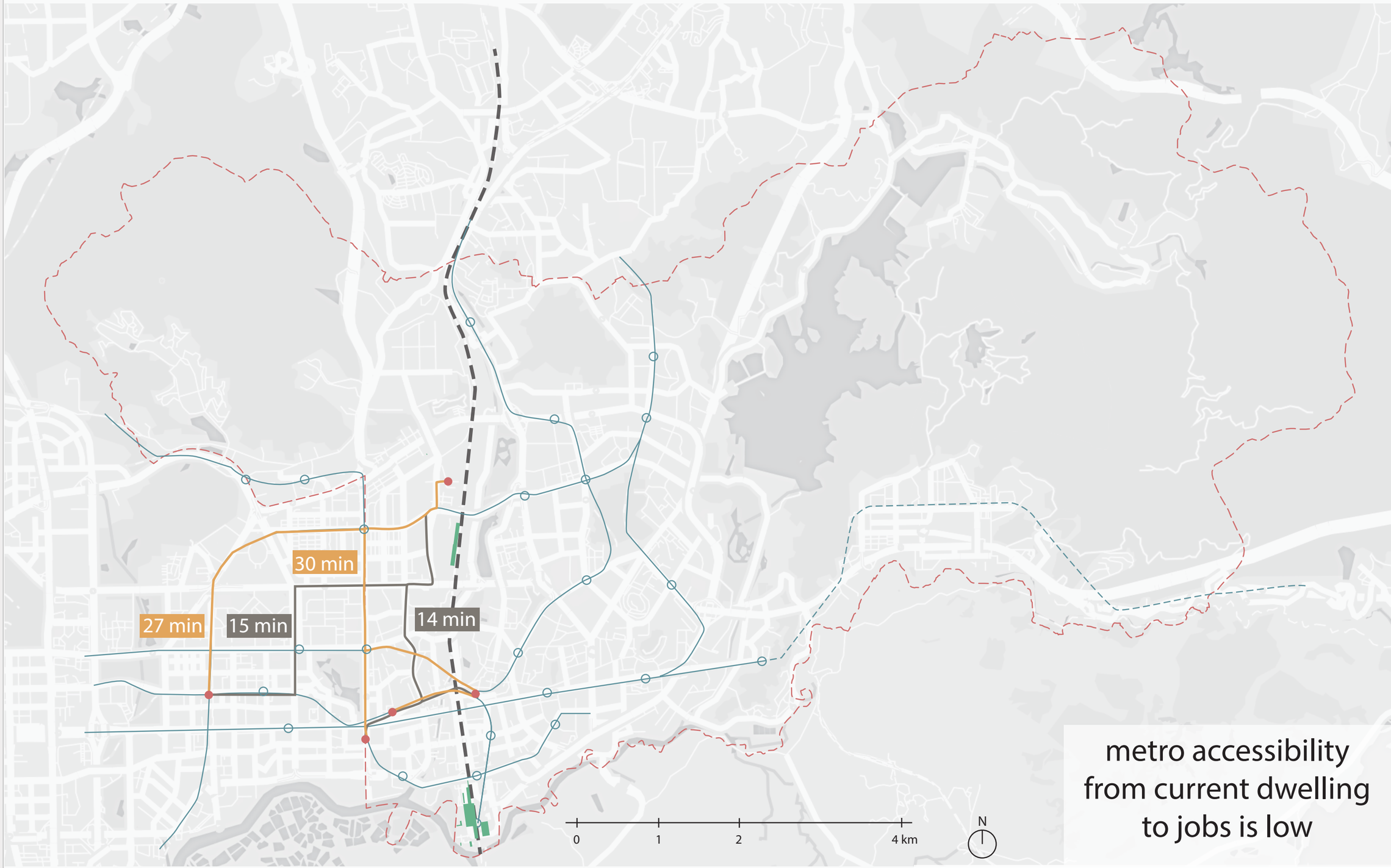


Safe living space

More employment opportunities

More affordable housing

infrastructure

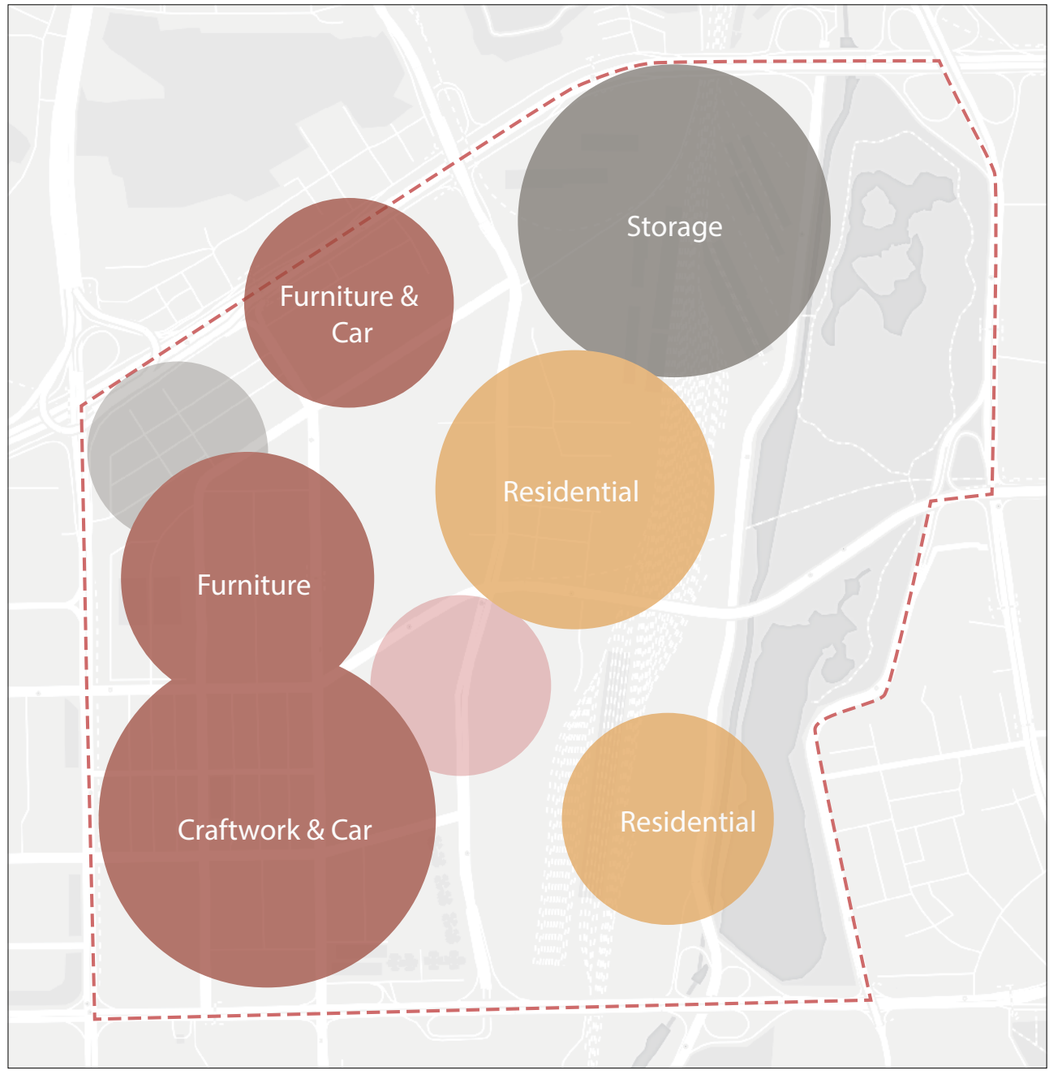


Safe living space

More employment opportunities

More affordable housing

infrastructure



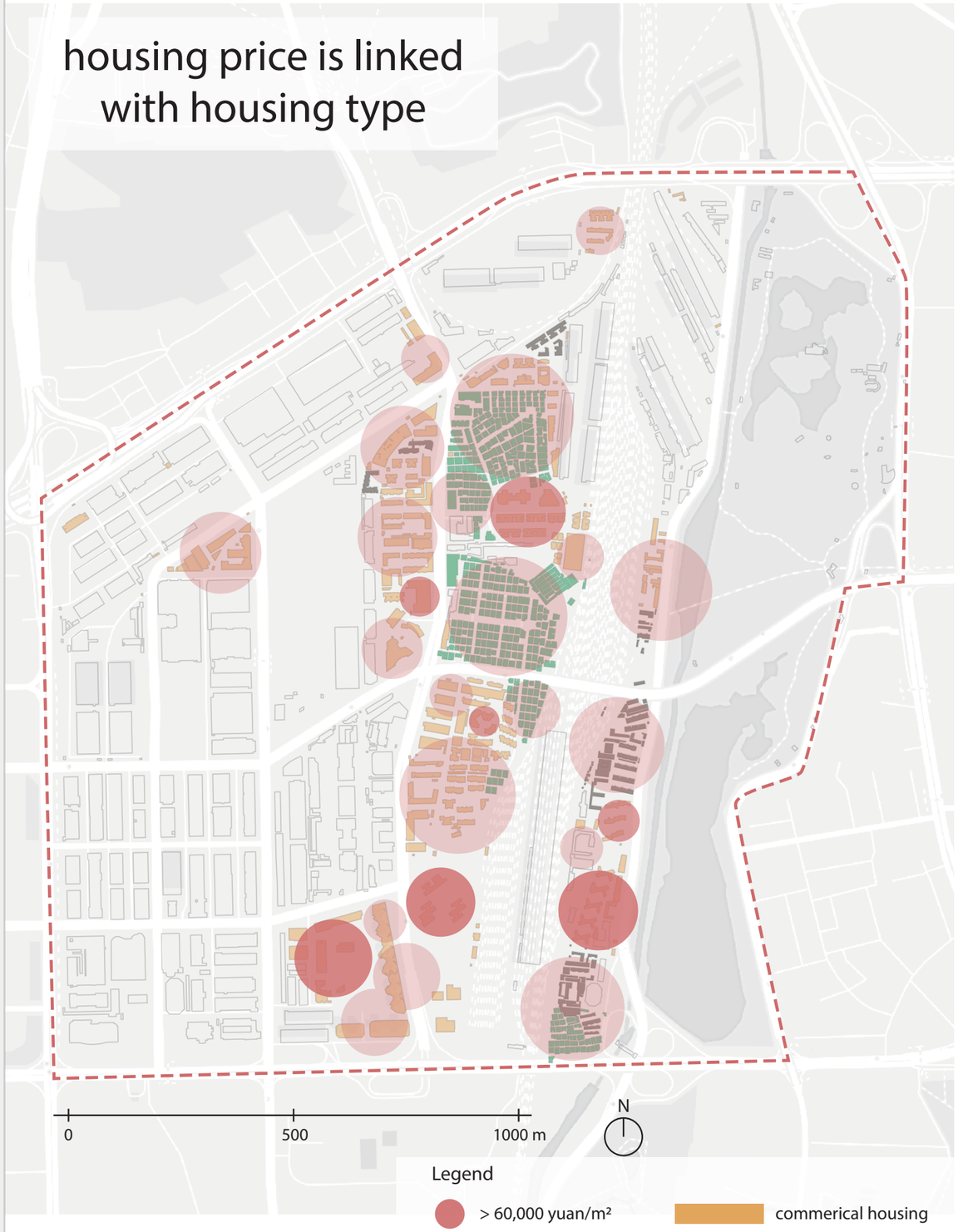
Safe living space

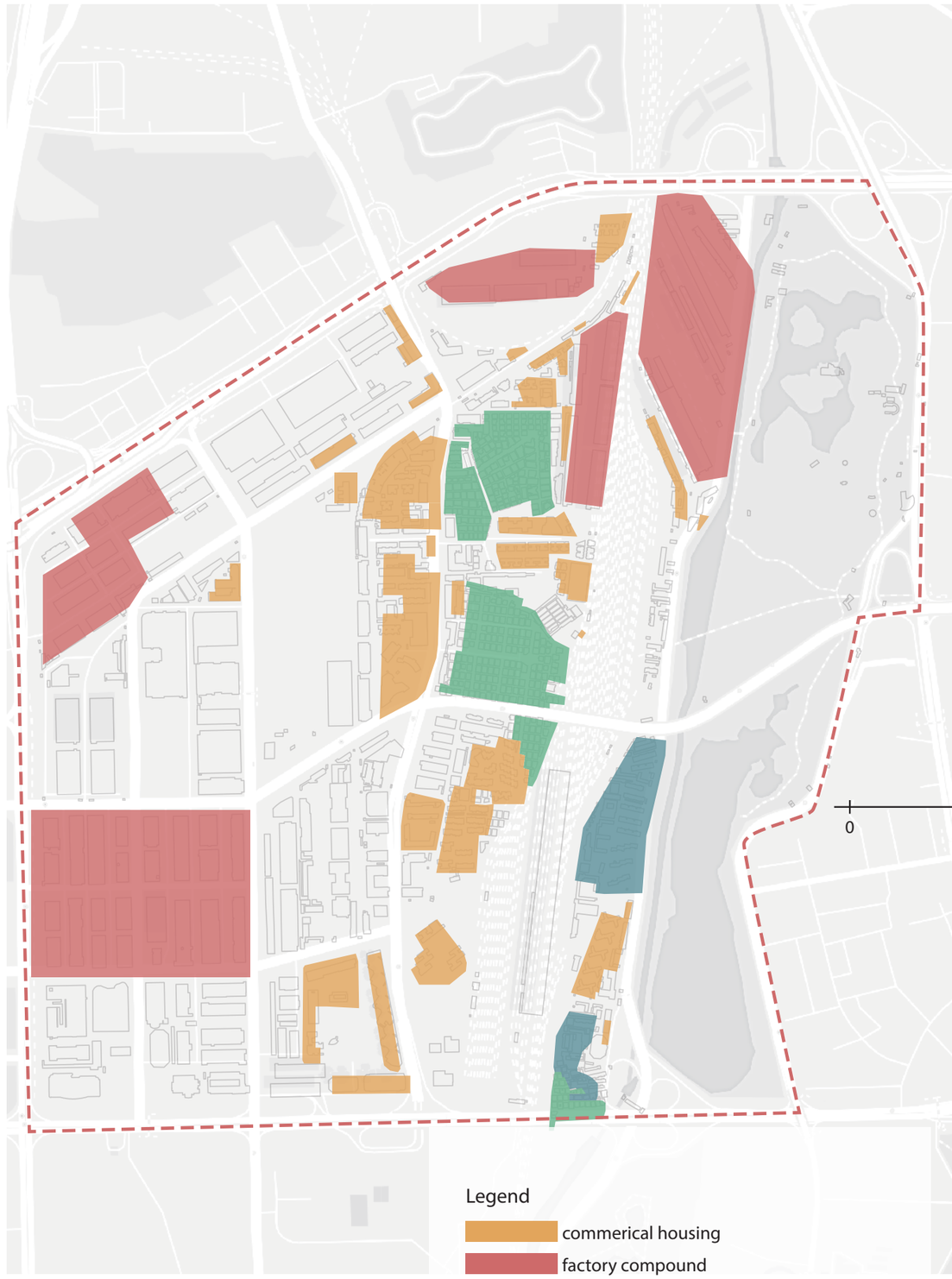
More employment opportunities

More affordable housing

infrastructure

housing price is linked with housing type





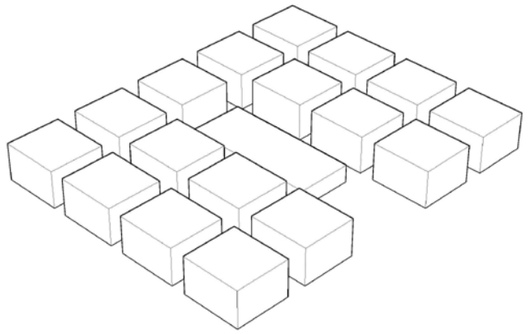
Safe living space

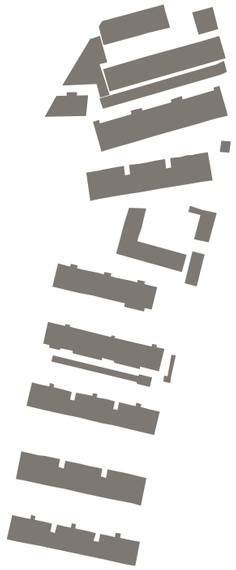
More employment opportunities

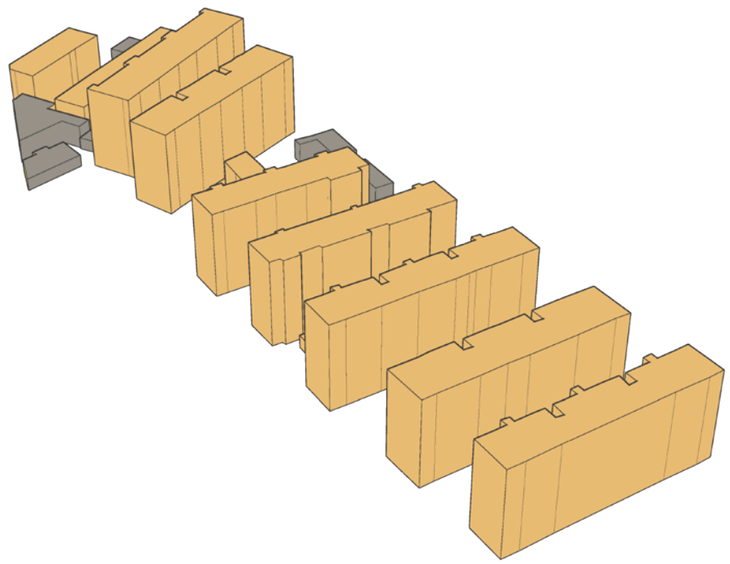
More affordable housing

infrastructure

Danwei housing







41,000 yuan/m^2 / affordable

Employees in particular enterprises or work unit

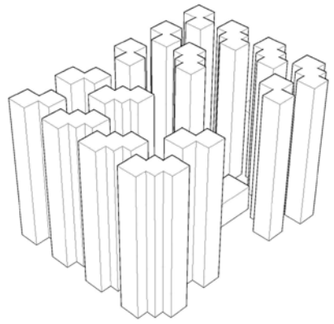
Safe living space

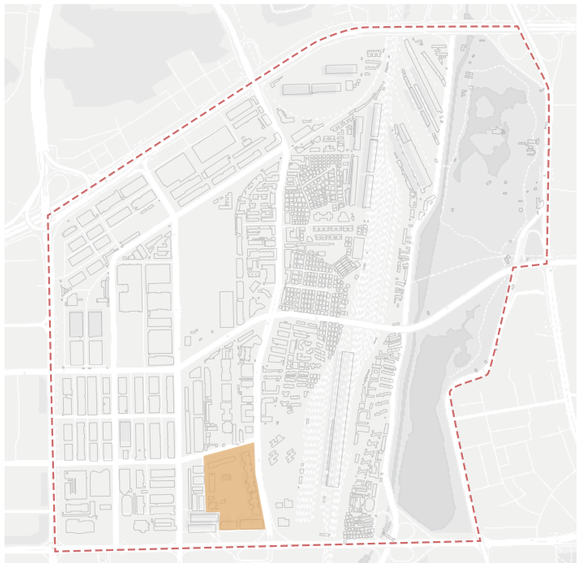
More employment opportunities

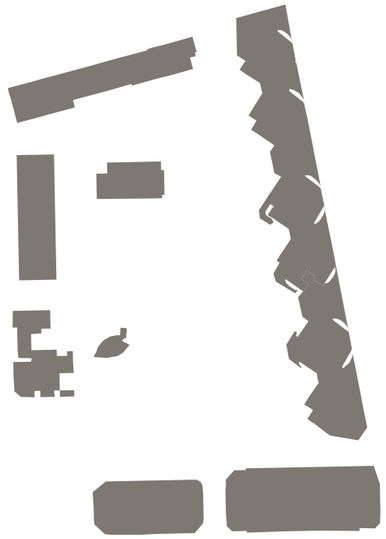
More affordable housing

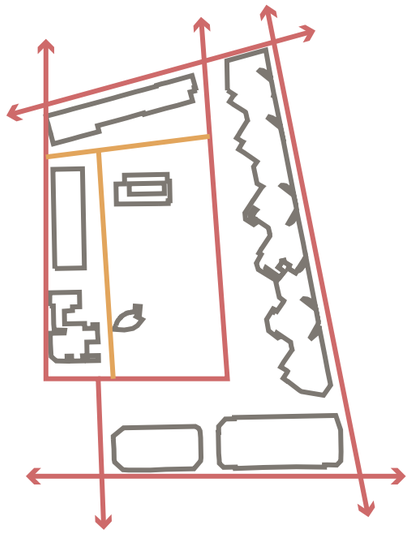
infrastructure

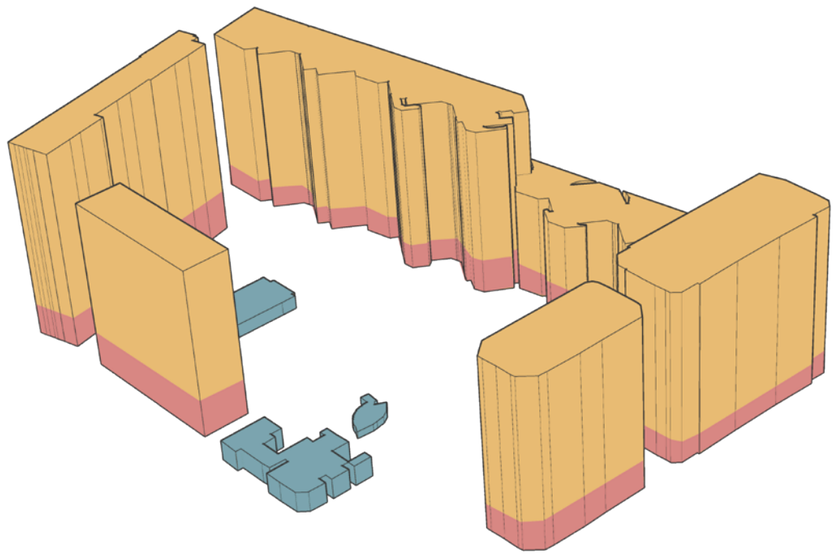
Commercial housing











61,000 yuan/m^2 / unaffordable

People with higher income

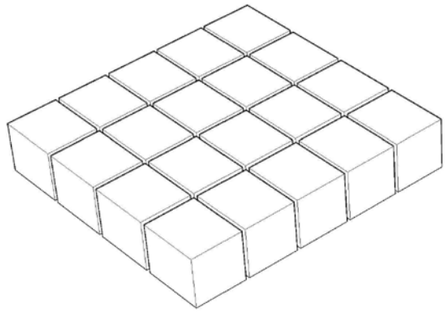
Safe living space

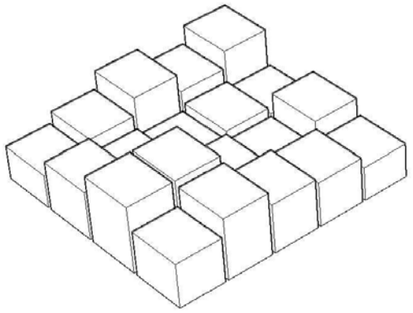
More employment opportunities

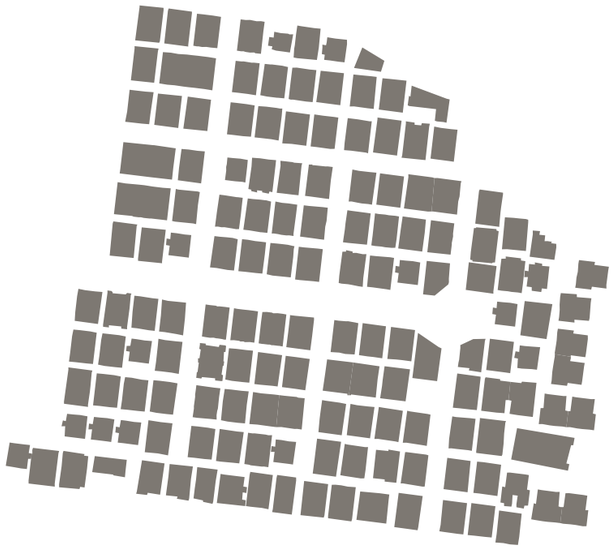
More affordable housing

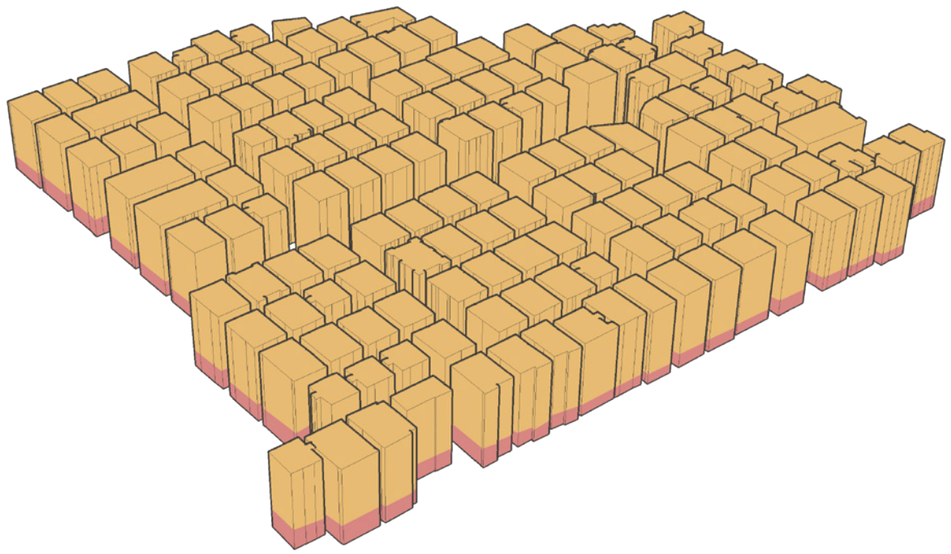
infrastructure

Urban village









7,000 yuan/m^2 / affordable

Migrants with low income

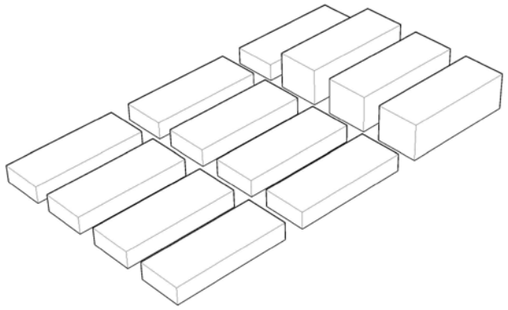
Safe living space

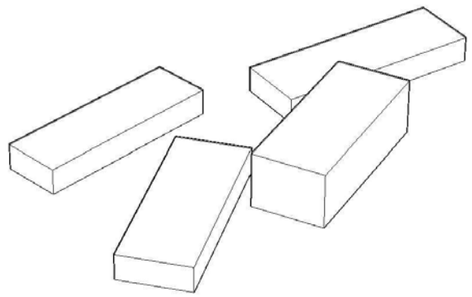
More employment opportunities

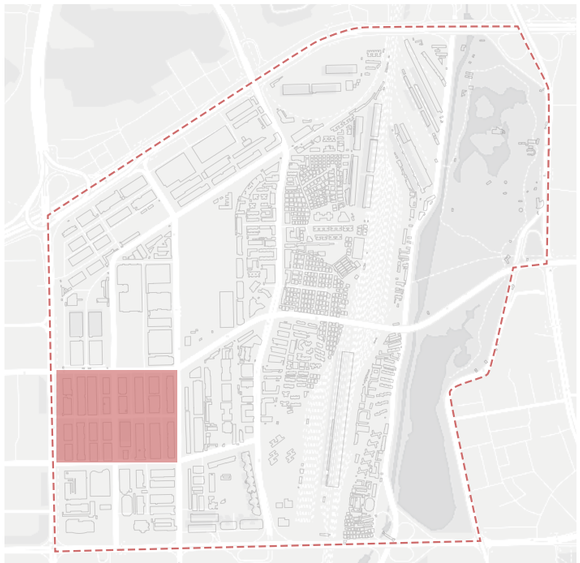
More affordable housing

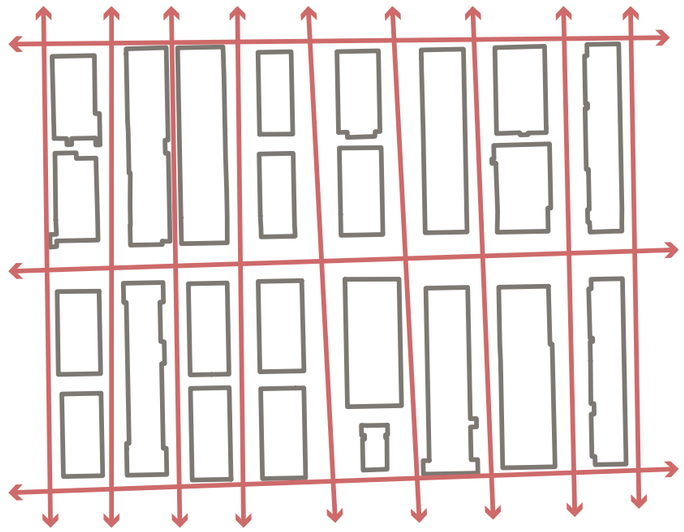
infrastructure

Factory compound



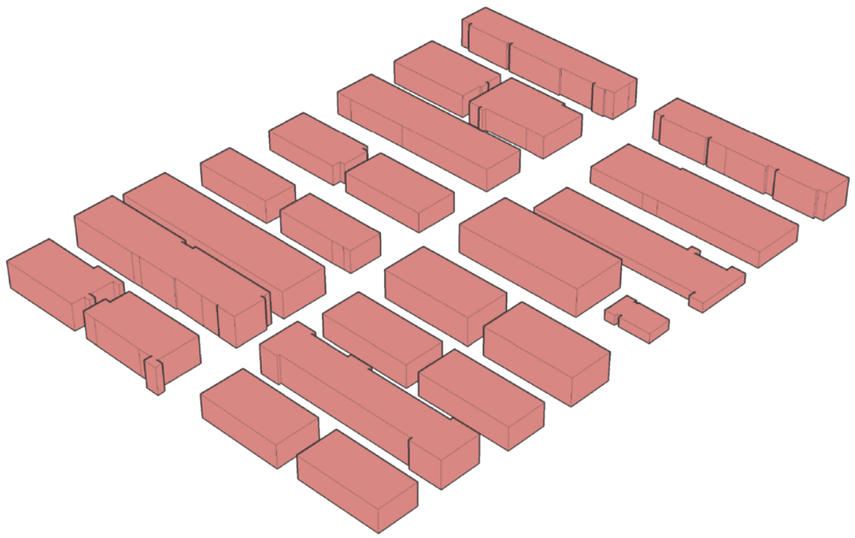






car

pedestrian



No dwelling

have the potential to be transformed into mixed-use

Safe living space

More employment opportunities

More affordable housing

infrastructure

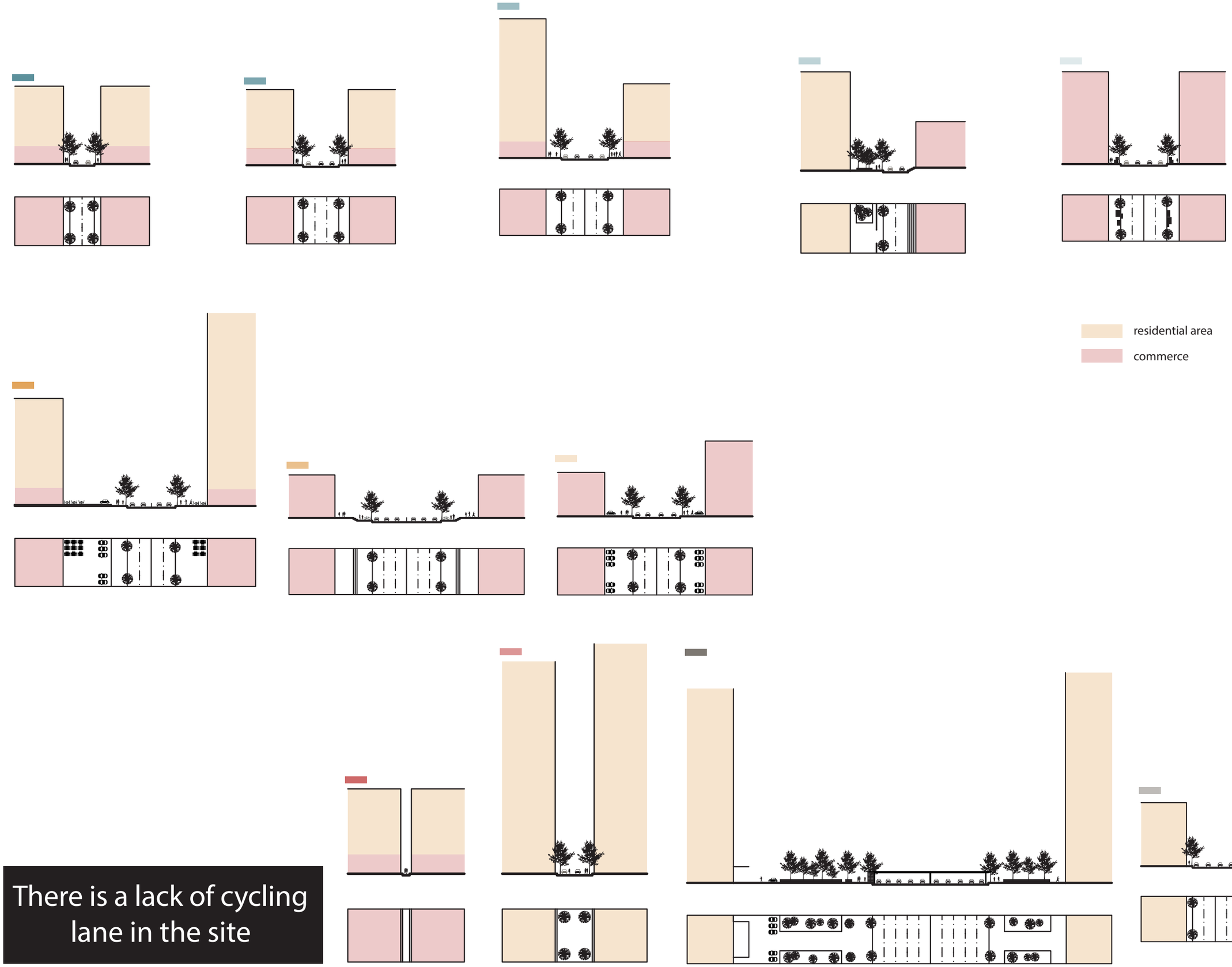
commerce is spread in most streets in the site

Safe living space

More employment opportunities

More affordable housing

infrastructure



There is a lack of cycling lane in the site

Safe living space

More employment opportunities

More affordable housing

infrastructure

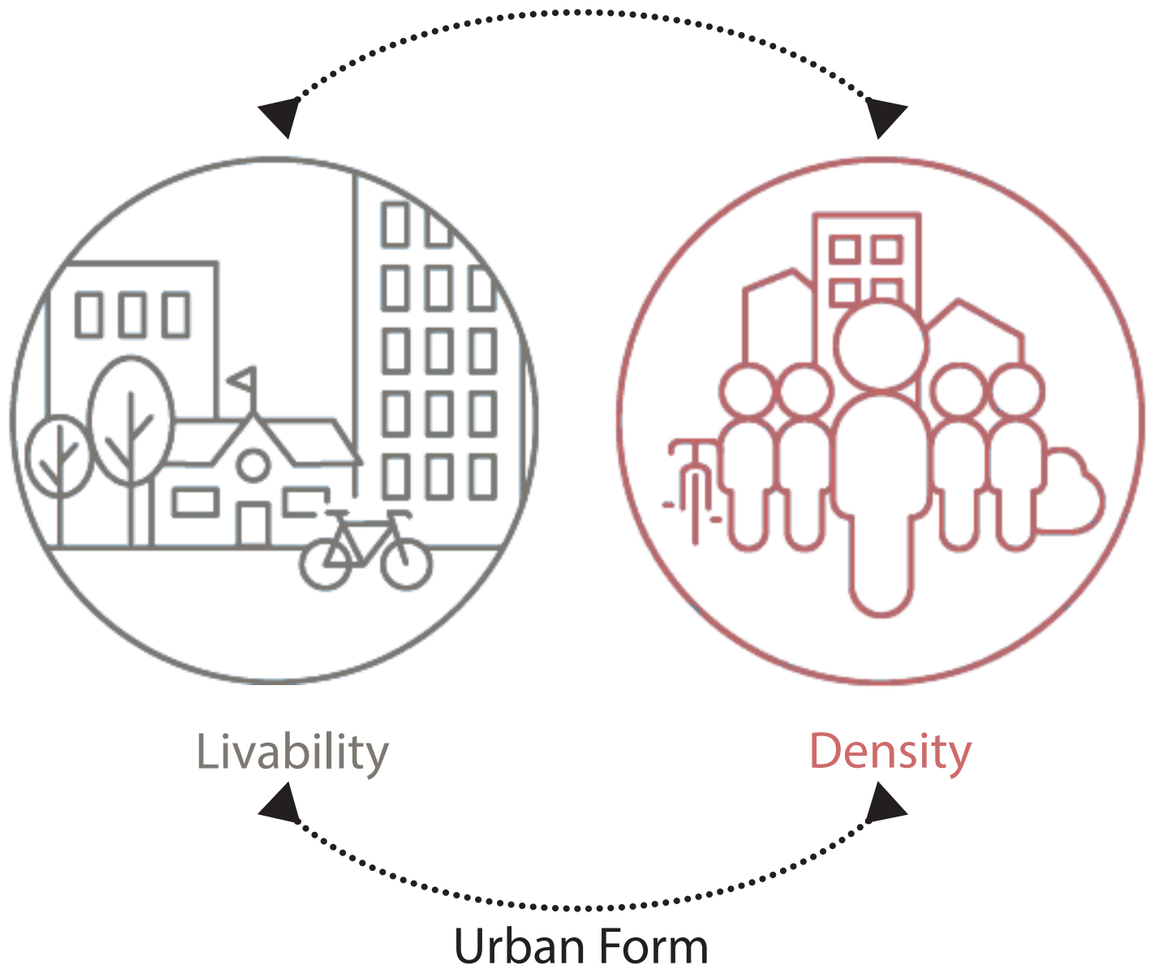
Unique characters of places preservation

Factory compound

Unique characters in the site are not made use to create identity

Railway track

Historic site


Livability
Density
Urban Form

Density

0 0.5 1 2 km

N

Legend

Type 1
Type 2
Type 3
Type 4
Type 5
boundary

Type 1

Type 2

Type 3

Type 4

Type 5

Type 1- inside natural habitats
Type 2- dwelling
Type 3&4- high rise, mainly located in financial and economic center
Type 5- most dense, mainly in urban village

Type 2- dwelling
Type 5- most dense,
in urban village &
retail area

Legend

- Type 1
- Type 2
- Type 3
- Type 4
- Type 5
- boundary

Mono-function and distances between different functions are large

Jobs in the site are not for young graduates

Walking and cycling environment are bad

Affordable housing price without good living quality

Do not make use of unique characters of the site

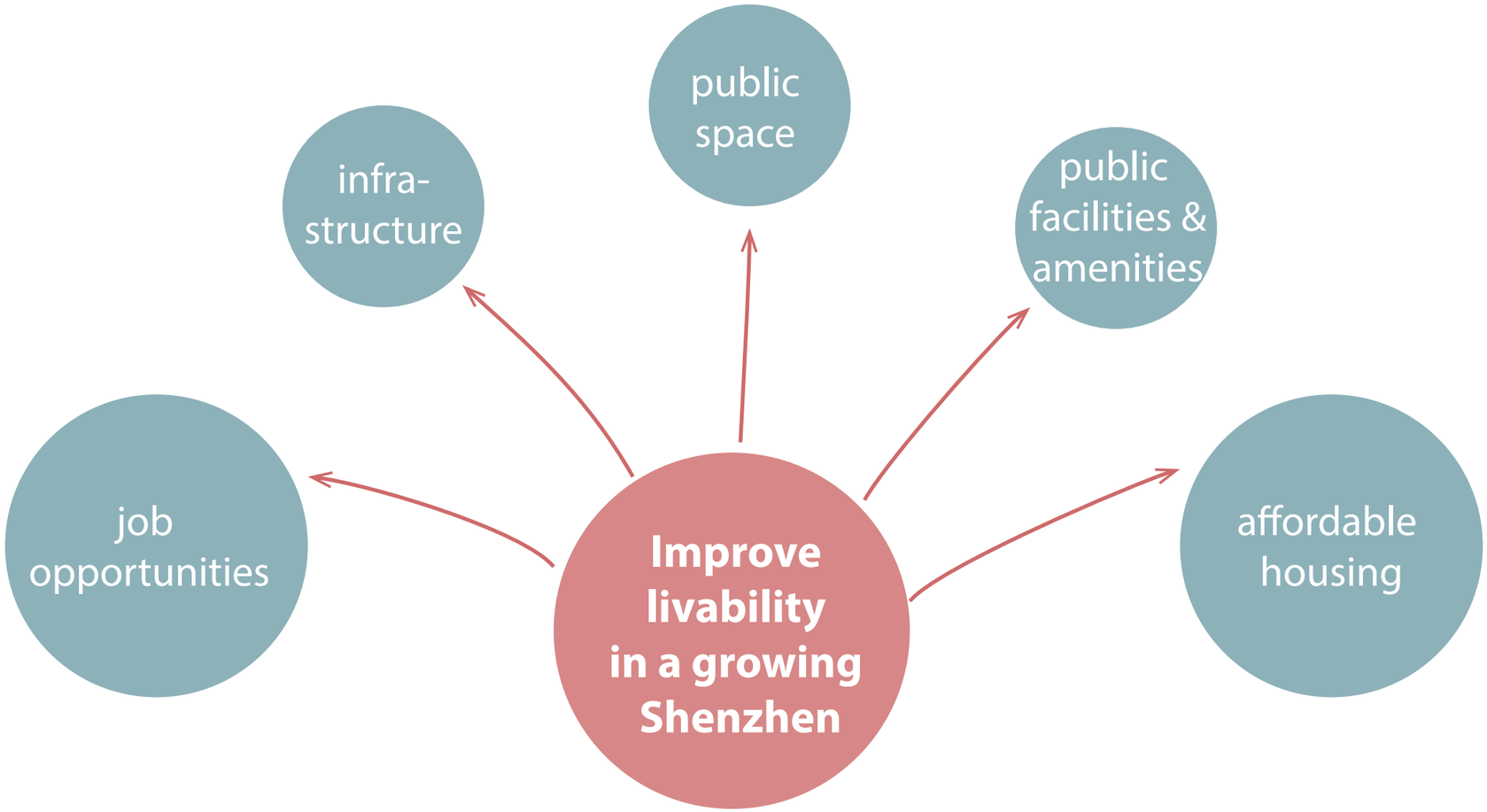
Super high density in retail area and urban village

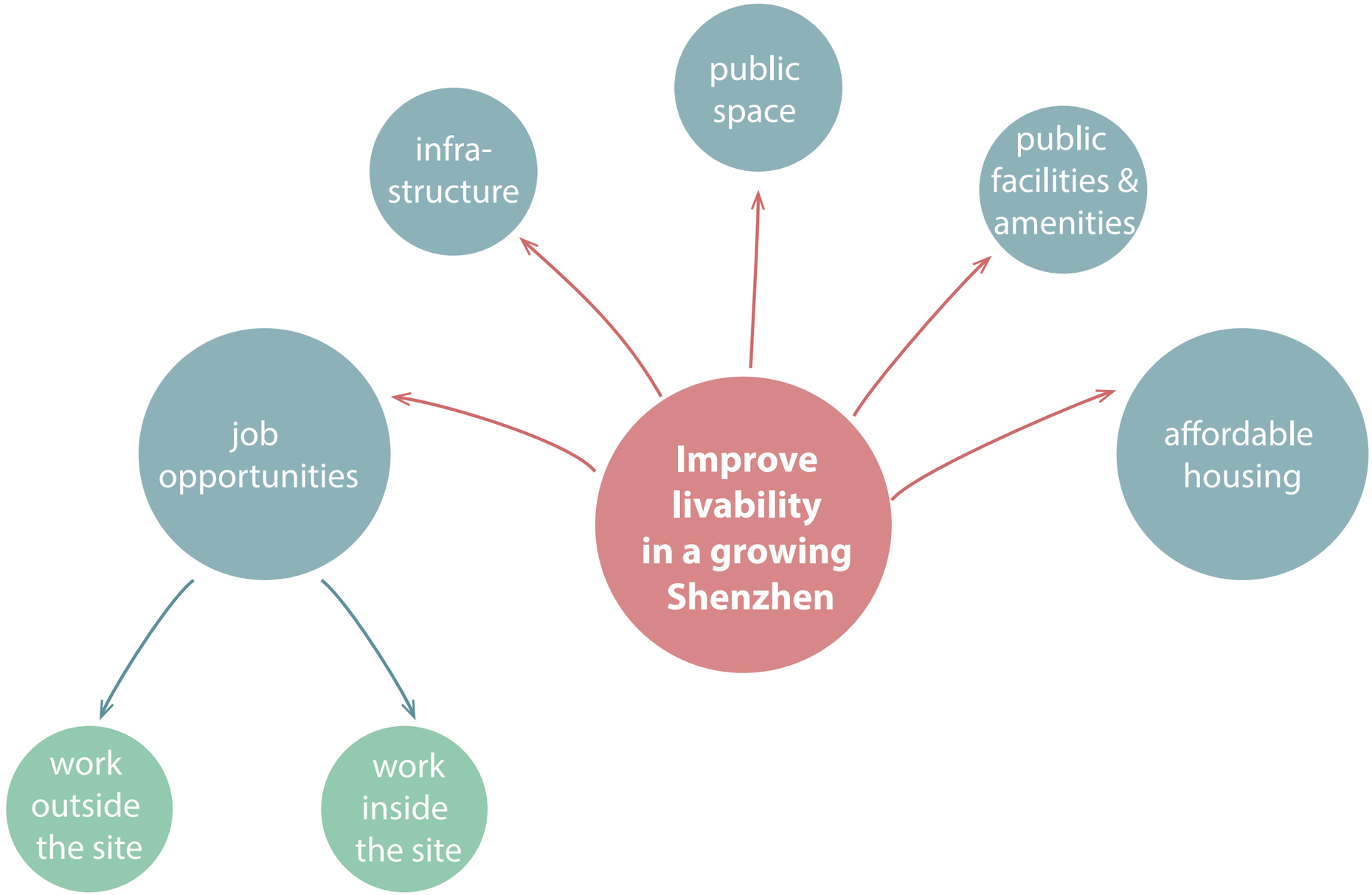
Livability of young graduates in Sungang is **low**

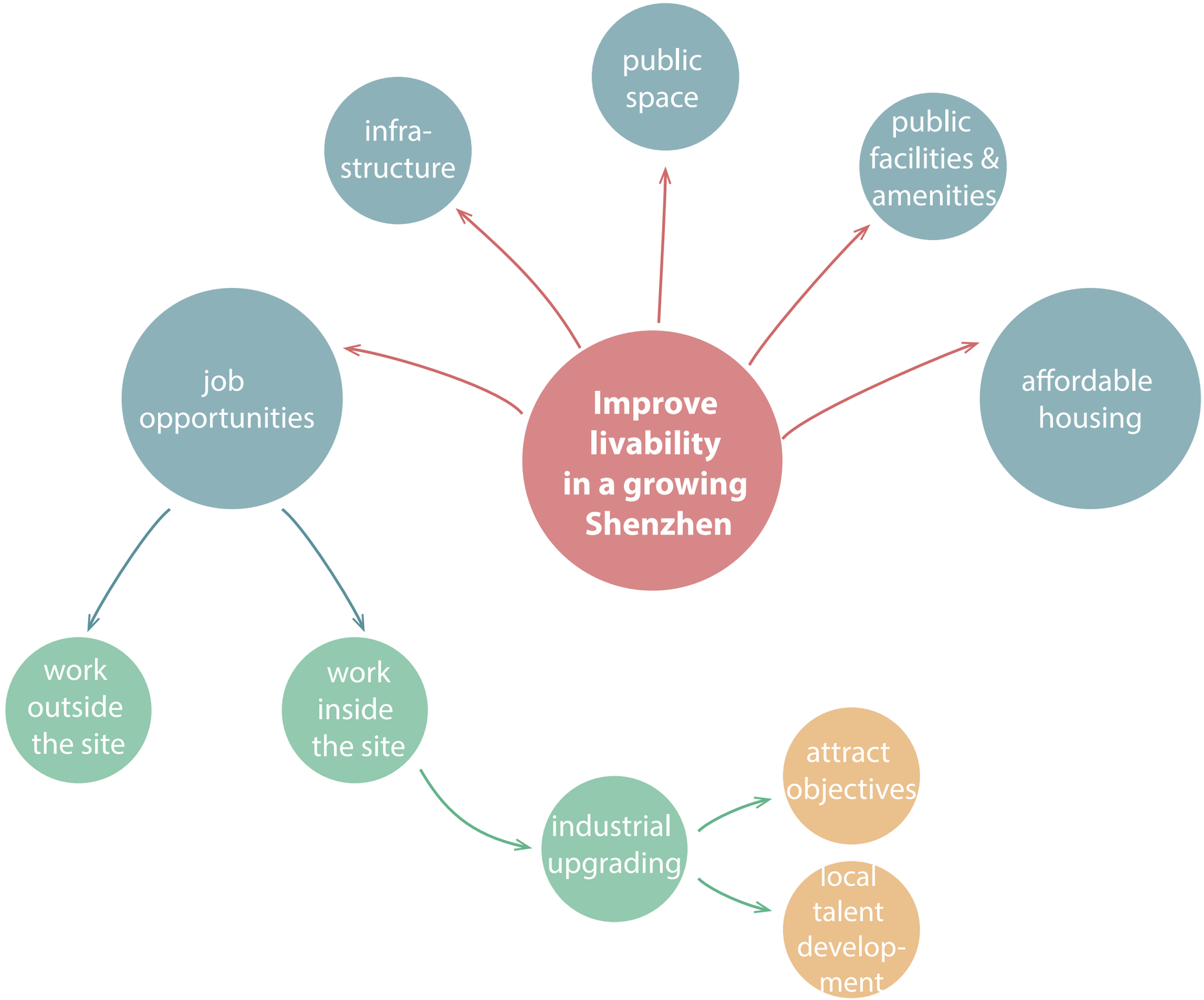
Vision 1:
Diverse and adaptable economy for more job opportunities close to diverse and affordable housign with rich and accessible public facilities and amenities

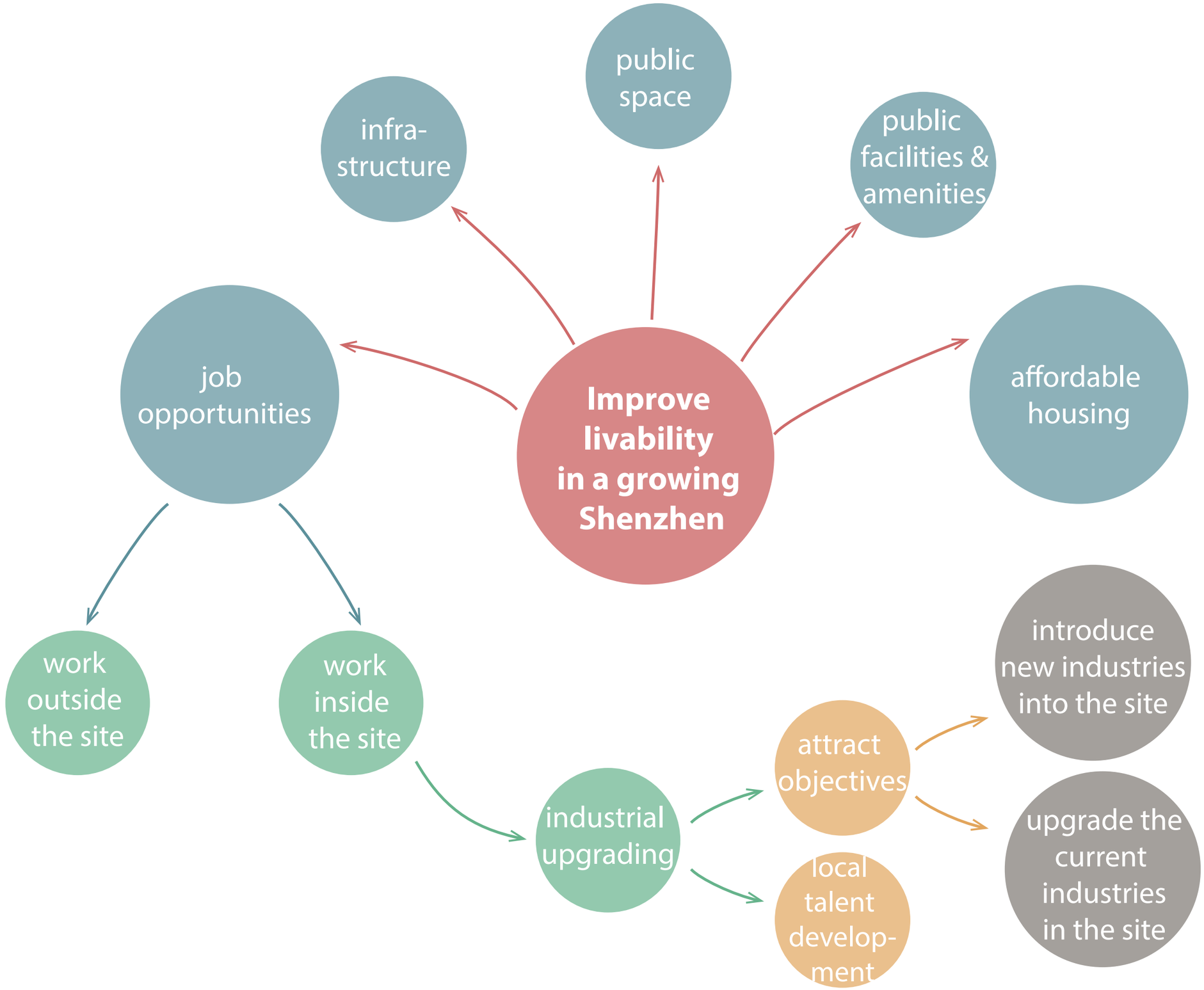
Vision 2:
Good walking environment and cycling environment to accessbile, inclusive and rich public life, making use the characteristics of places

Strategy


public space
infra-structure
public facilities & amenities
job opportunities
Improve livability in a growing Shenzhen
affordable housing


public space
infra-structure
public facilities & amenities
job opportunities
Improve livability in a growing Shenzhen
affordable housing
work outside the site
work inside the site


public space
infra-structure
public facilities & amenities
job opportunities
Improve livability in a growing Shenzhen
affordable housing
work outside the site
work inside the site
industrial upgrading
attract objectives
local talent develop-ment

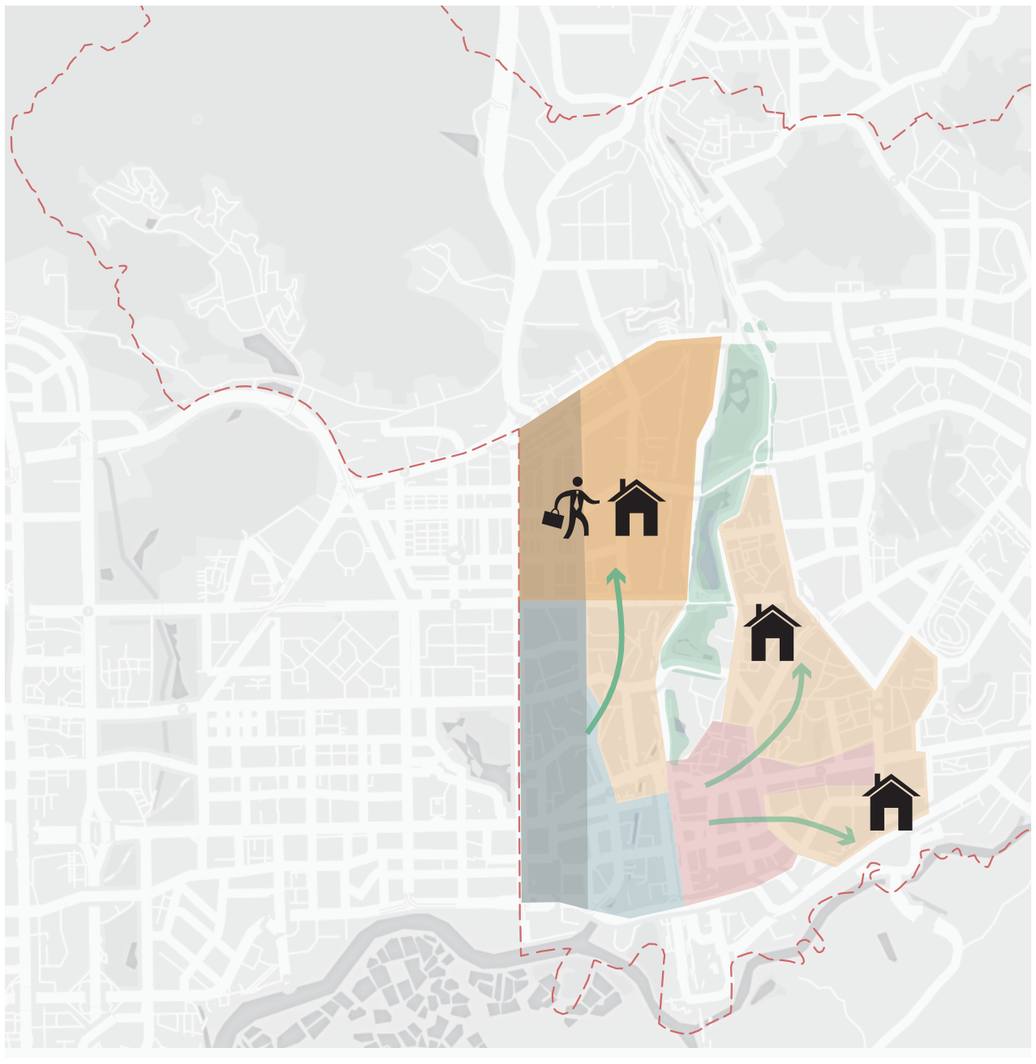

public space
infra-structure
public facilities & amenities
job opportunities
affordable housing
Improve livability in a growing Shenzhen
work outside the site
work inside the site
industrial upgrading
attract objectives
introduce new industries into the site
upgrade the current industries in the site
local talent develop-ment

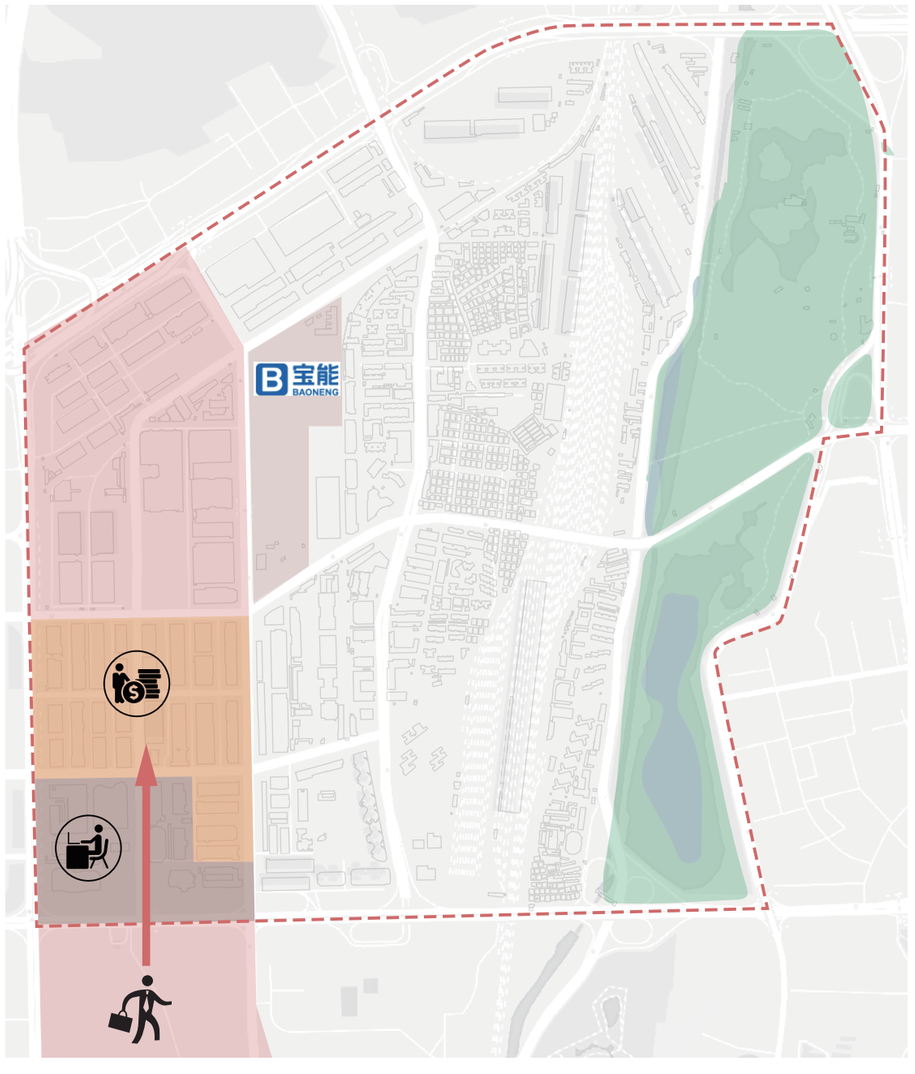
economic and financial sector

introduce new industries into the site

attract objectives

upgrade the current industries in the site

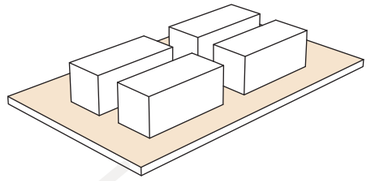




Shenzhen BAONENG
Investment Group Ltd

financial and economic sector

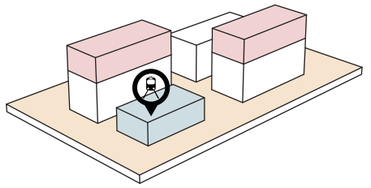
1



Identity
Lifestyle
Basic needs for living

Keep the current typical warehouse morphology

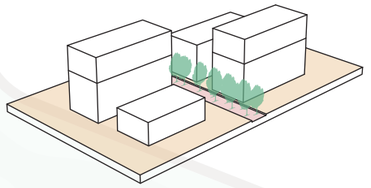
2



Identity
Lifestyle
Basic needs for living

TOD densification and mixed-use

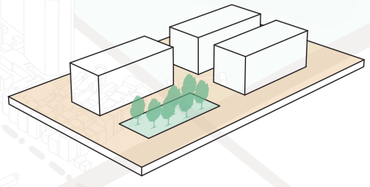
3



Identity
Lifestyle
Basic needs for living

Transform some roads into pedestrian-oriented

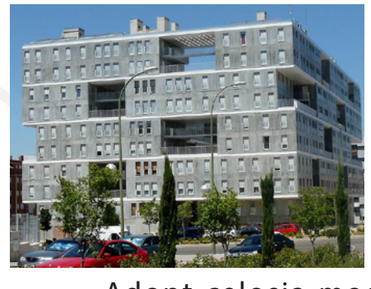
4



Identity
Lifestyle
Basic needs for living

Add pubilc space to create good working and living space

5



Identity
Lifestyle
Basic needs for living

Adopt celosia model for current buildings without sunlight access

attract objectives

introduce new industries into the site

upgrade the current industries in the site

smallware retail (such as stationary)

auto and auto parts retail, auto clean

warehouse

rely on logistics

have a big and bad impact on living environment

move out to areas which are closer to highway or railway station

costume retail

handicraft and jewellery retail

furniture retail

have less impact on living environment

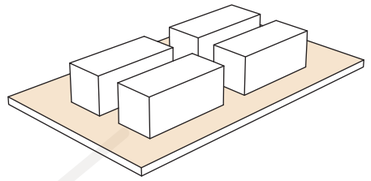
have the potential to be transformed into retail combined with design and manufacture

local community and local residents

interior design/ furniture design/ industrial design
retail and manufacture

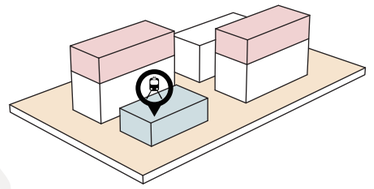
fashion and jewellery design
retail and manufacture

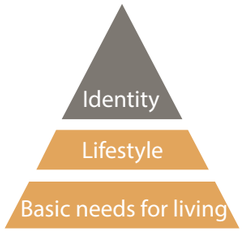
1



Keep the current typical warehouse morphology

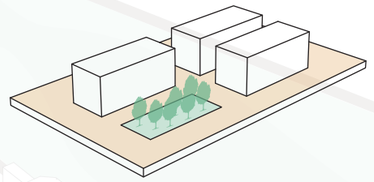
2





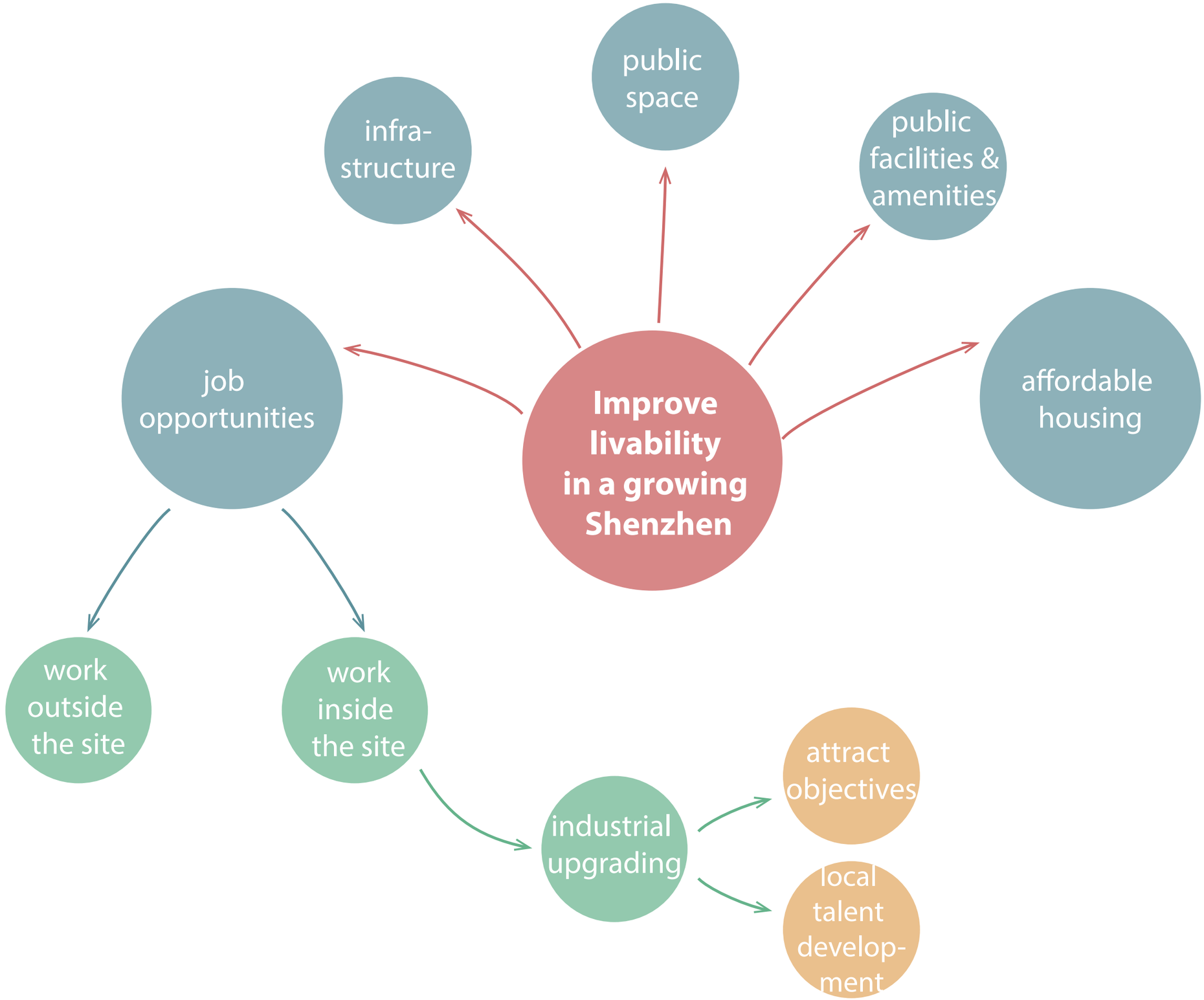
TOD densification and mixed-use

4



Add pubilc space to create good working and living space

Source: http://520west20.com/


public space
infra-structure
public facilities & amenities
job opportunities
Improve livability in a growing Shenzhen
affordable housing
work outside the site
work inside the site
industrial upgrading
attract objectives
local talent develop-ment

local talents development

local community

new schools or multifunctional neighbourhood centres that aim at specialised talent development

enterprise

provide attractive and visible business space for enterprises to encourage and reward

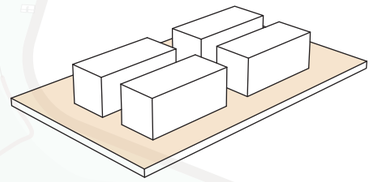
enterprises which contribute to local community

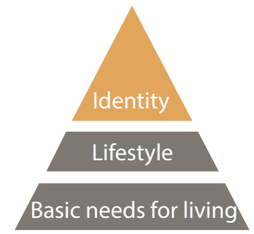
1

neighborhood center/ schools

2

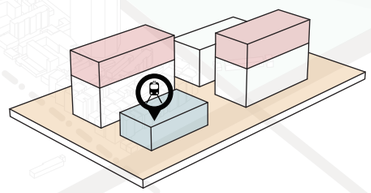
1

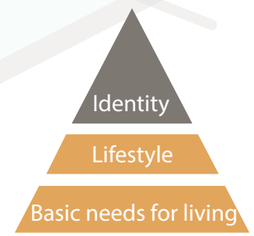




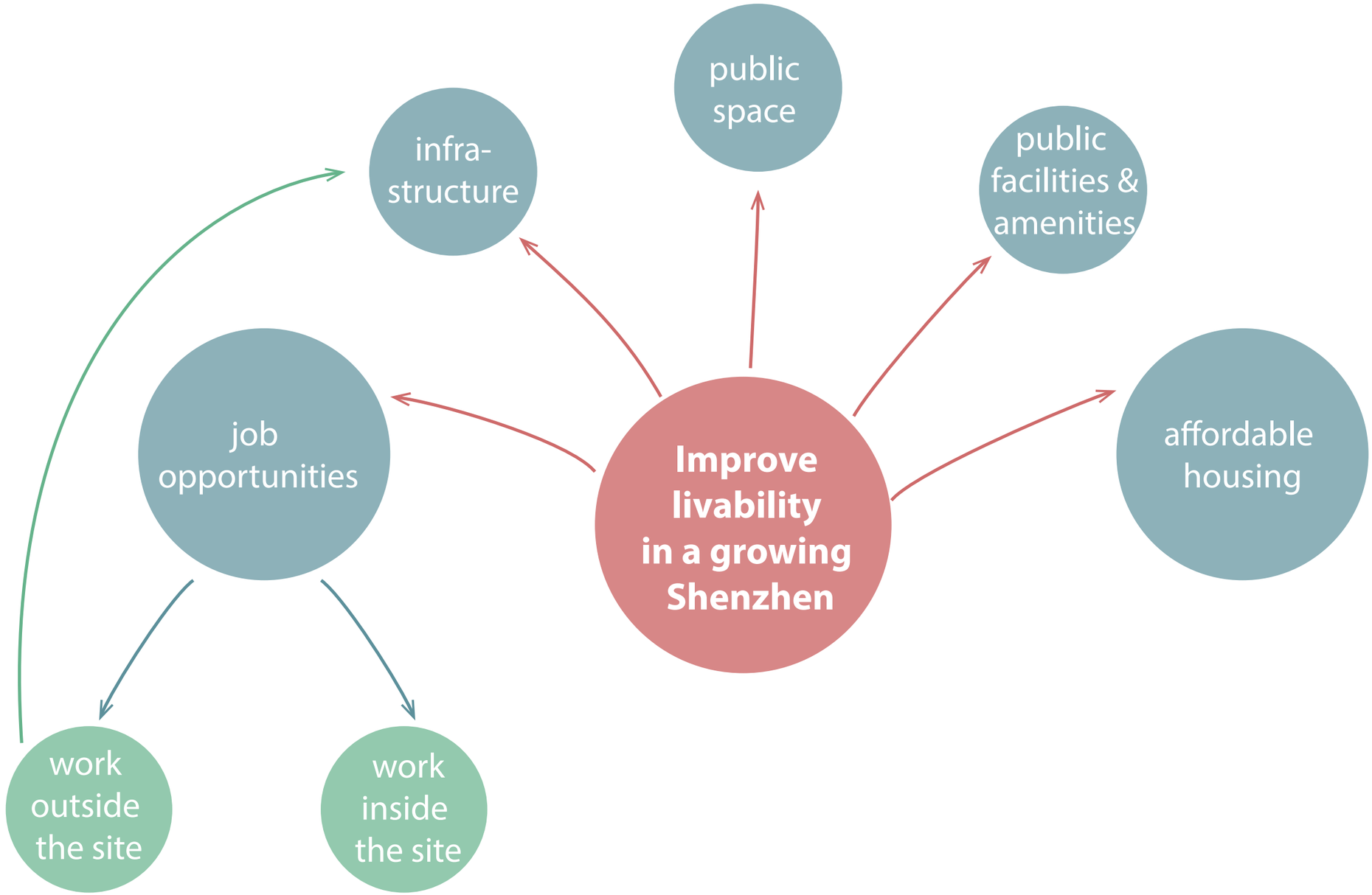
Keep the current typical warehouse morphology

2



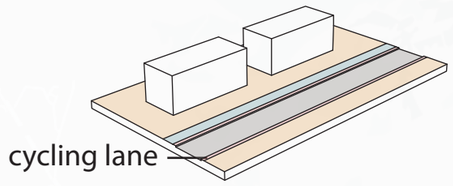


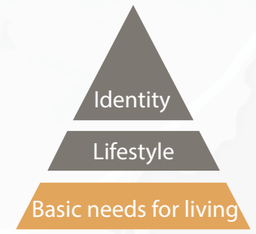
TOD densification and mixed-use

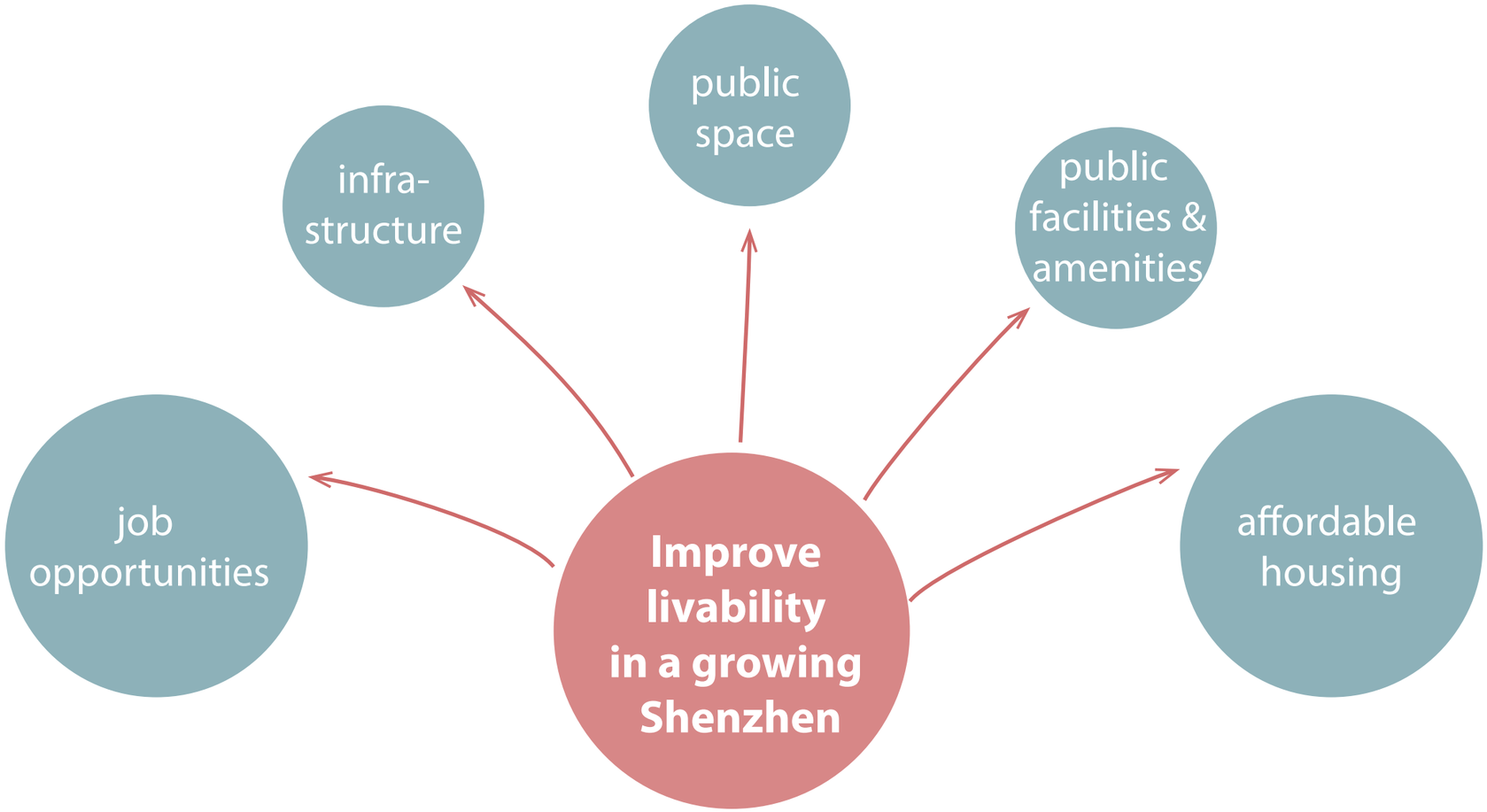

public space
infra-structure
public facilities & amenities
job opportunities
Improve livability in a growing Shenzhen
affordable housing
work outside the site
work inside the site

0 0.5 1 2 km

N





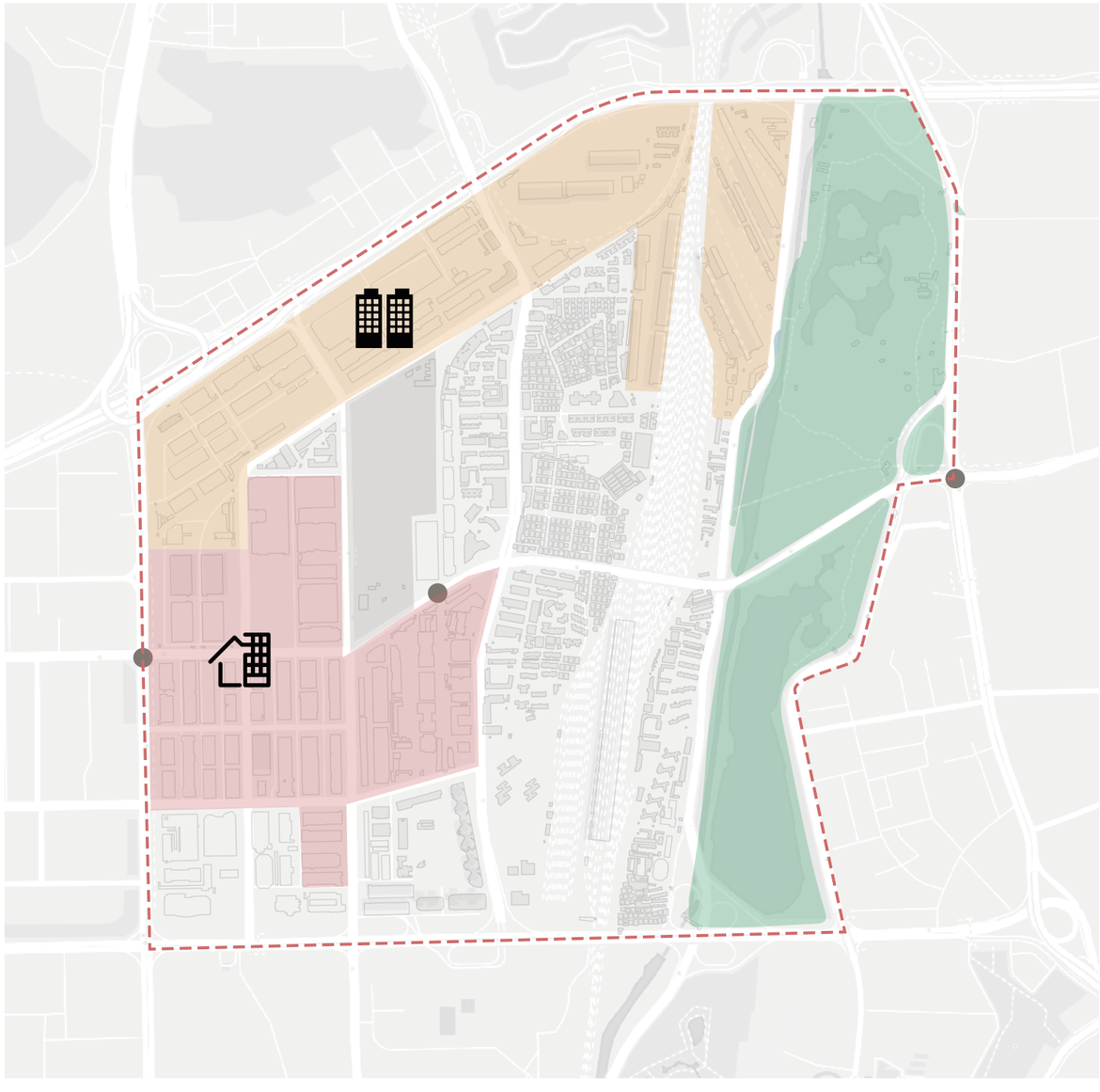

public space
infra-structure
public facilities & amenities
job opportunities
Improve livability in a growing Shenzhen
affordable housing

public space
infra-structure
public facilities & amenities
job opportunities
Improve livability in a growing Shenzhen
affordable housing
provide new residential areas
transform current residential areas
advocate long-time renting

provide new residential areas

move out current transport-oriented warehouse to build new residential areas

mixed-use areas



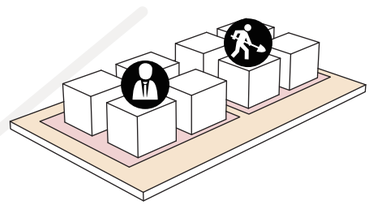
2

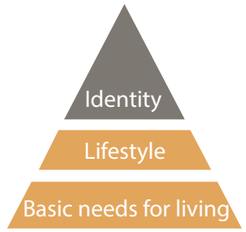
6

7

8

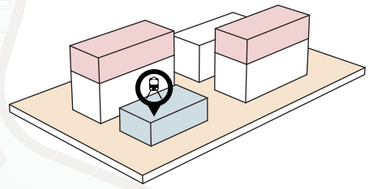
6





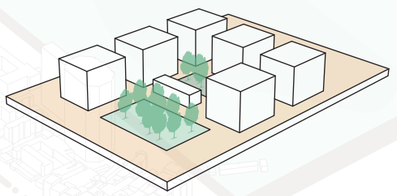
Divide a superblock into small plots, focusing on different groups of people and social housing should cover at least 30% of the whole newly built housing

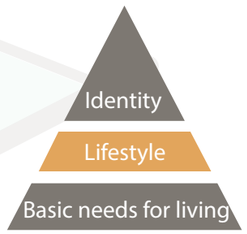
2



TOD densification and mixed-use

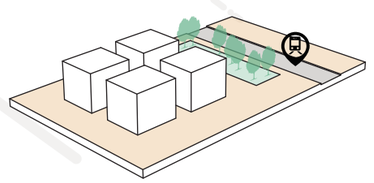
7

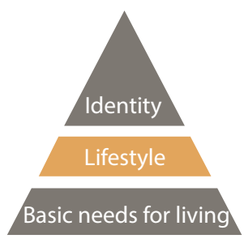




Mix public space and collective space

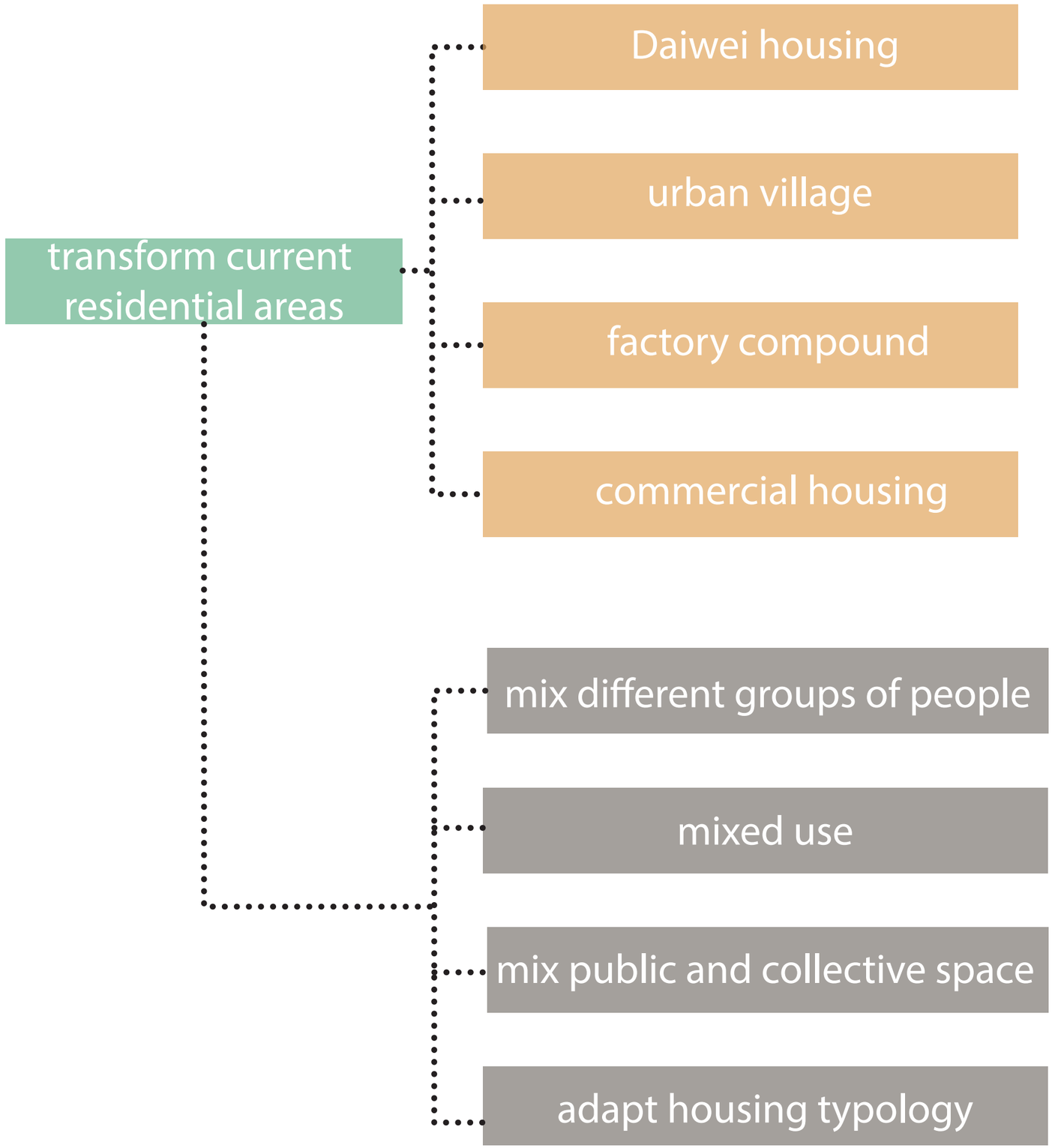
8





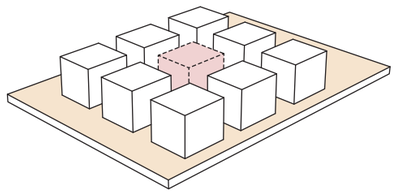
Create soft barriers as a noise-proecting landscape

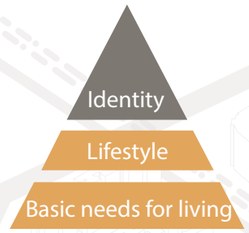
affordable housing
provide new residential areas
transform current residential areas
advocate long-time renting


transform current residential areas
Daiwei housing
urban village
factory compound
commercial housing
mix different groups of people
mixed use
mix public and collective space
adapt housing typology

Urban village

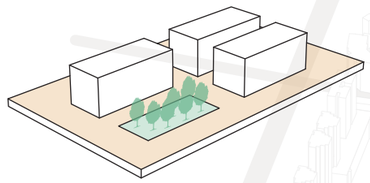
10

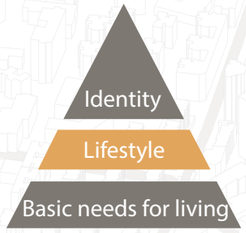




reduce the density of urban village

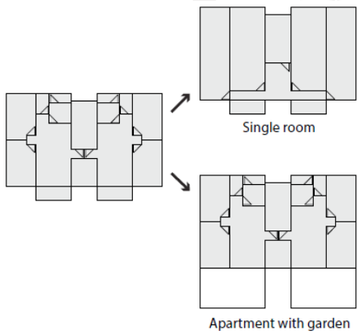
4

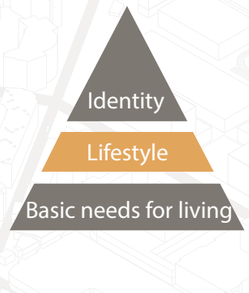




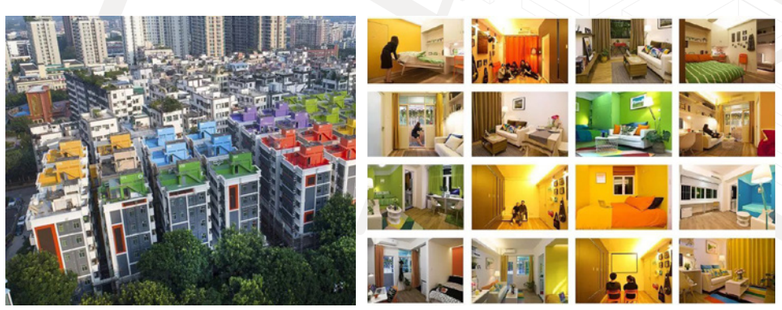
Add more public space for social interaction

9





Adapt housing typology



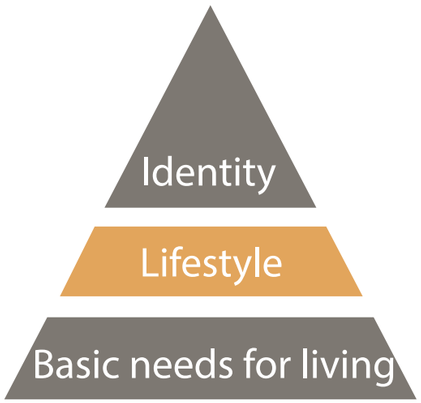
Source: http://www.gooood.hk/lm-youth-community-china-by-doffice.htm

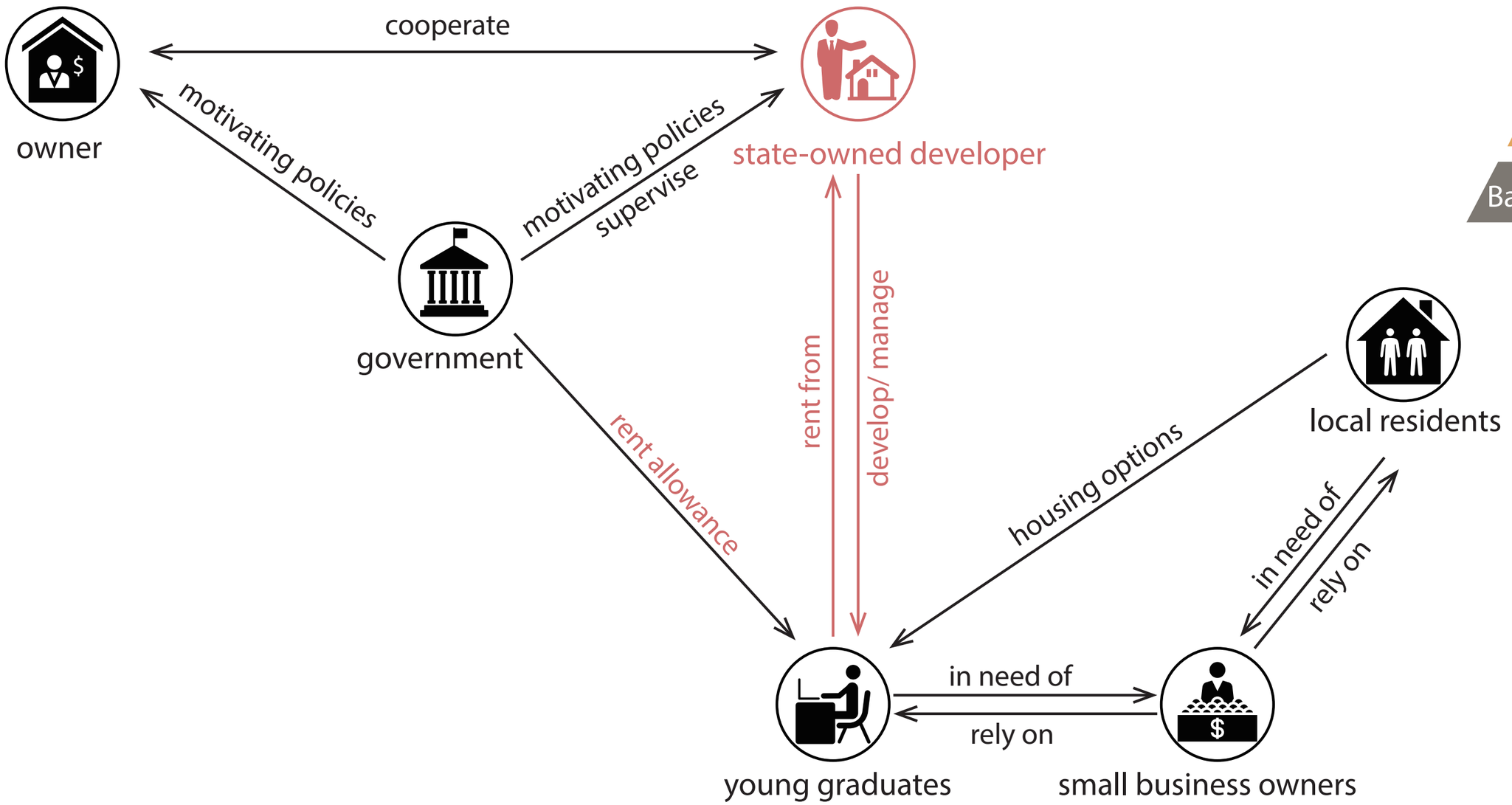
7

10

adovate long-time renting

- government and state-owned developers
- private developers and bank

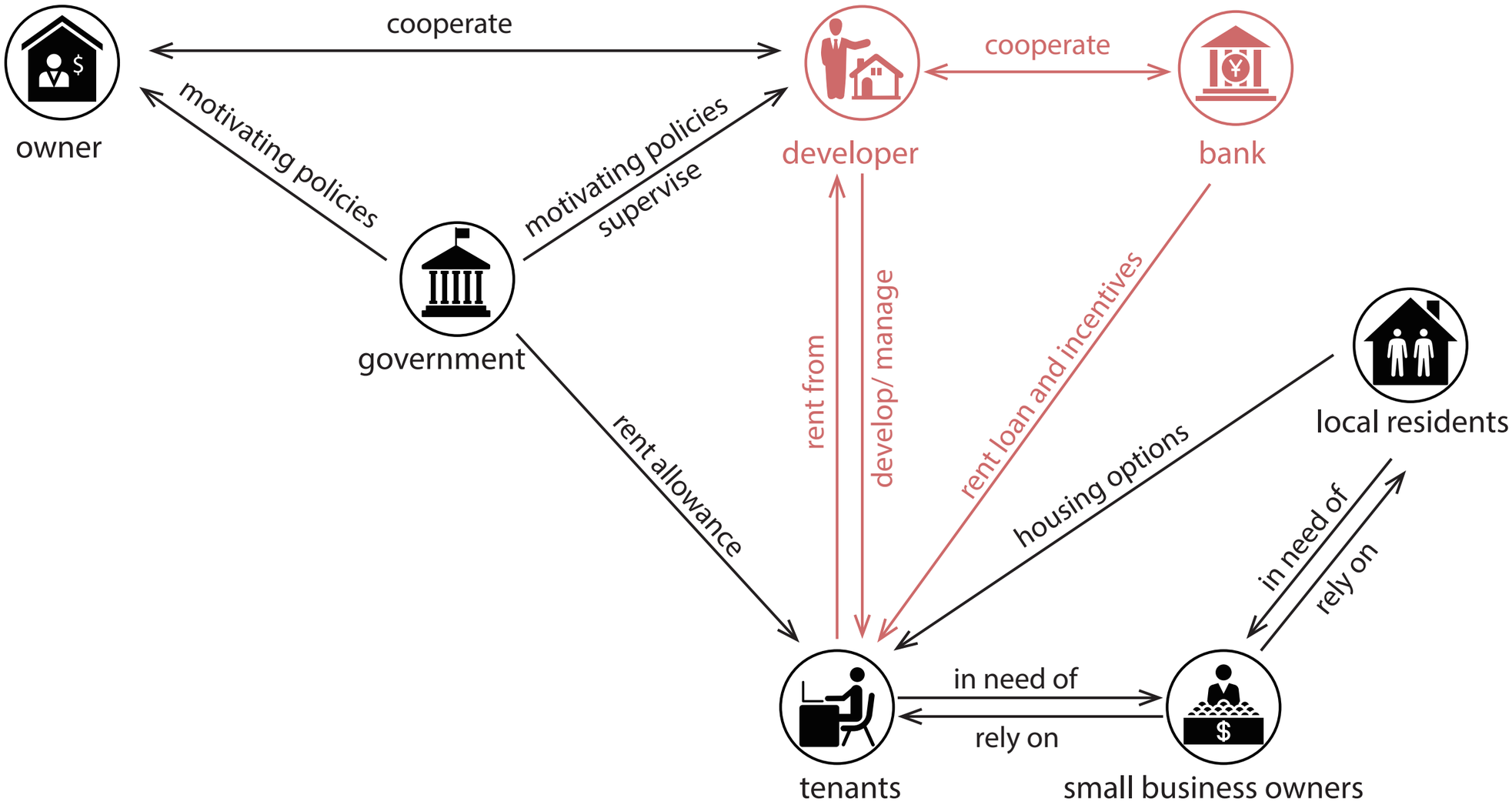




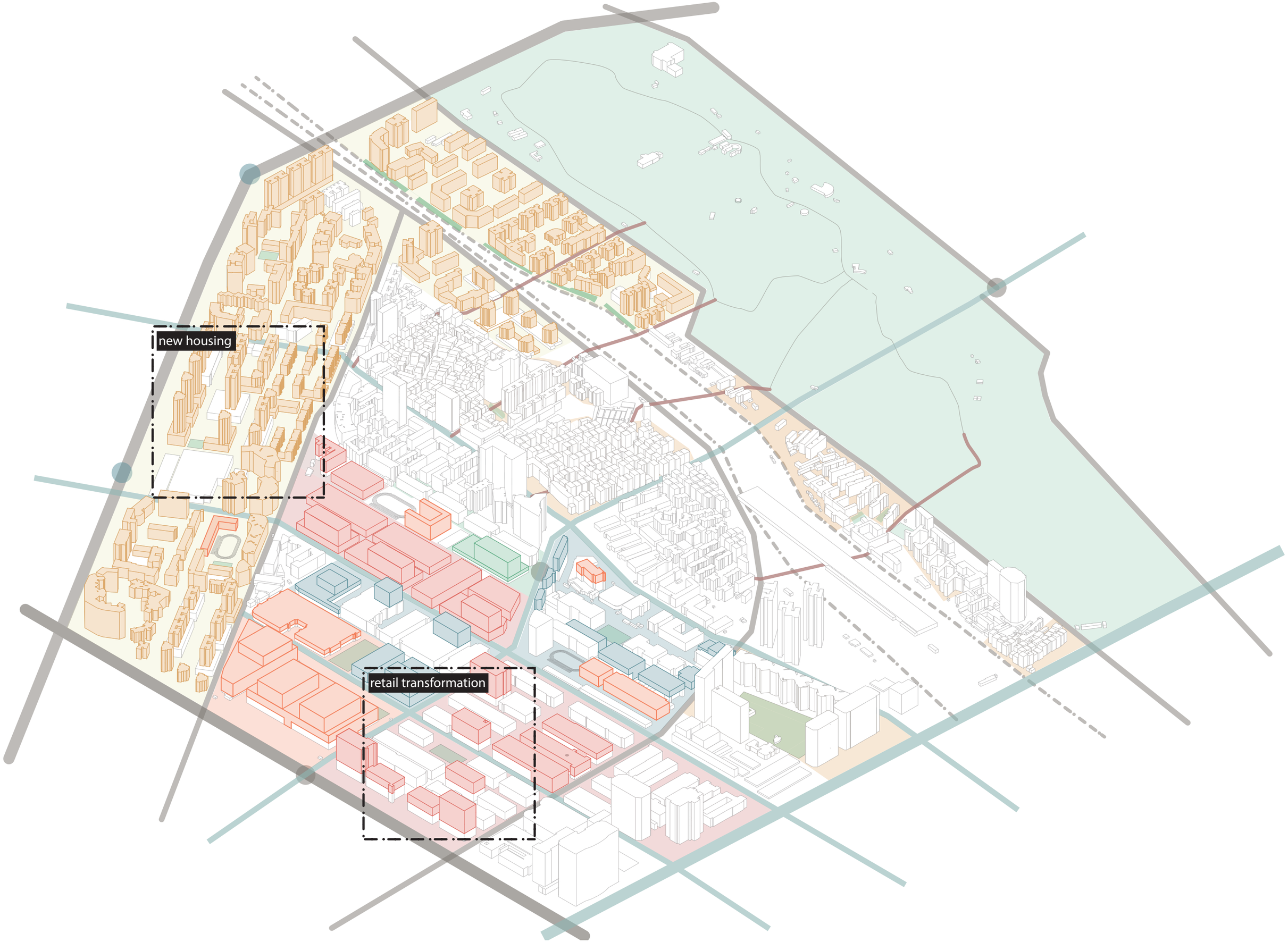
adovate long-time renting

government and state-owned developers

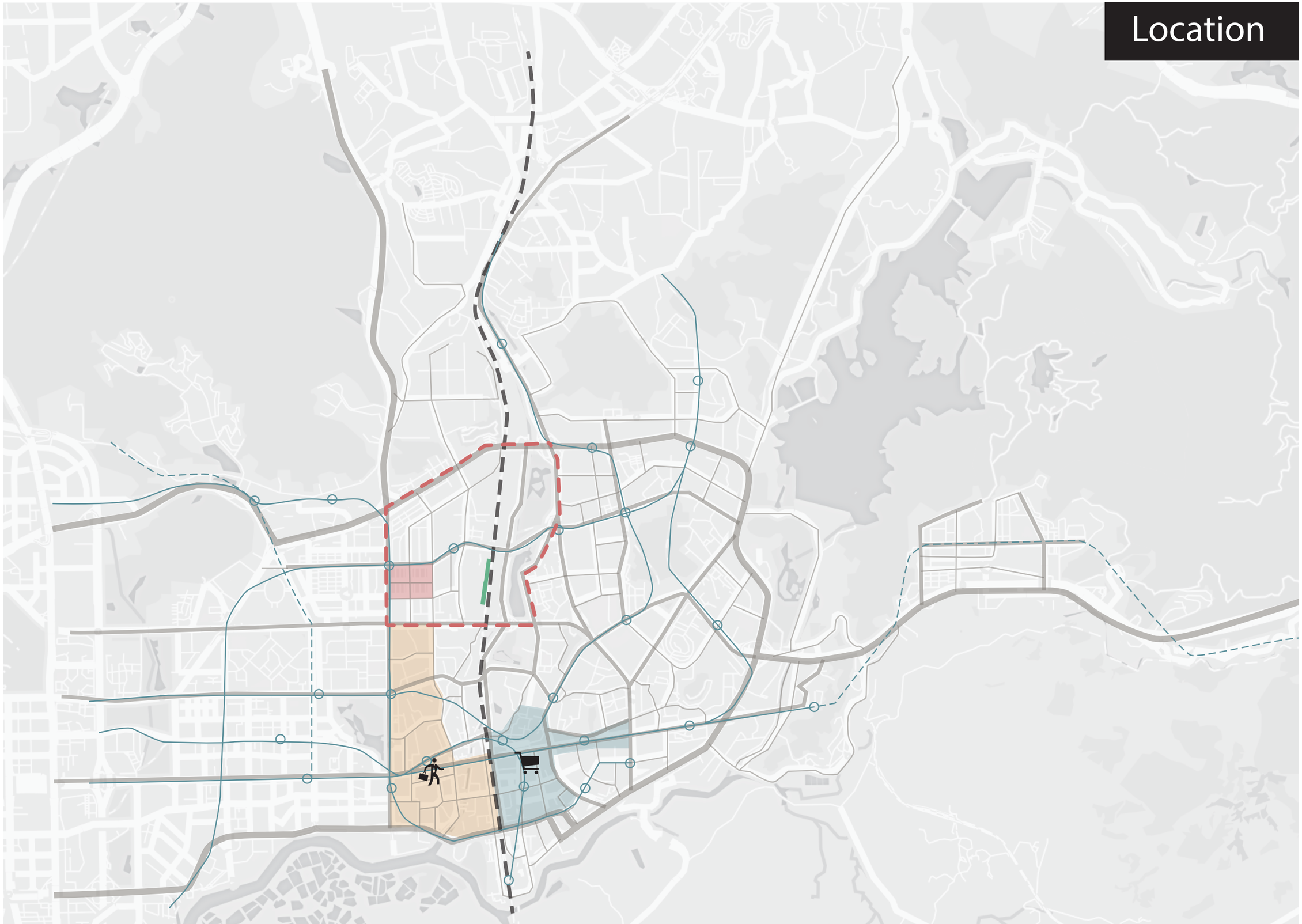
private developers and bank



Pilot project


new housing
retail transformation

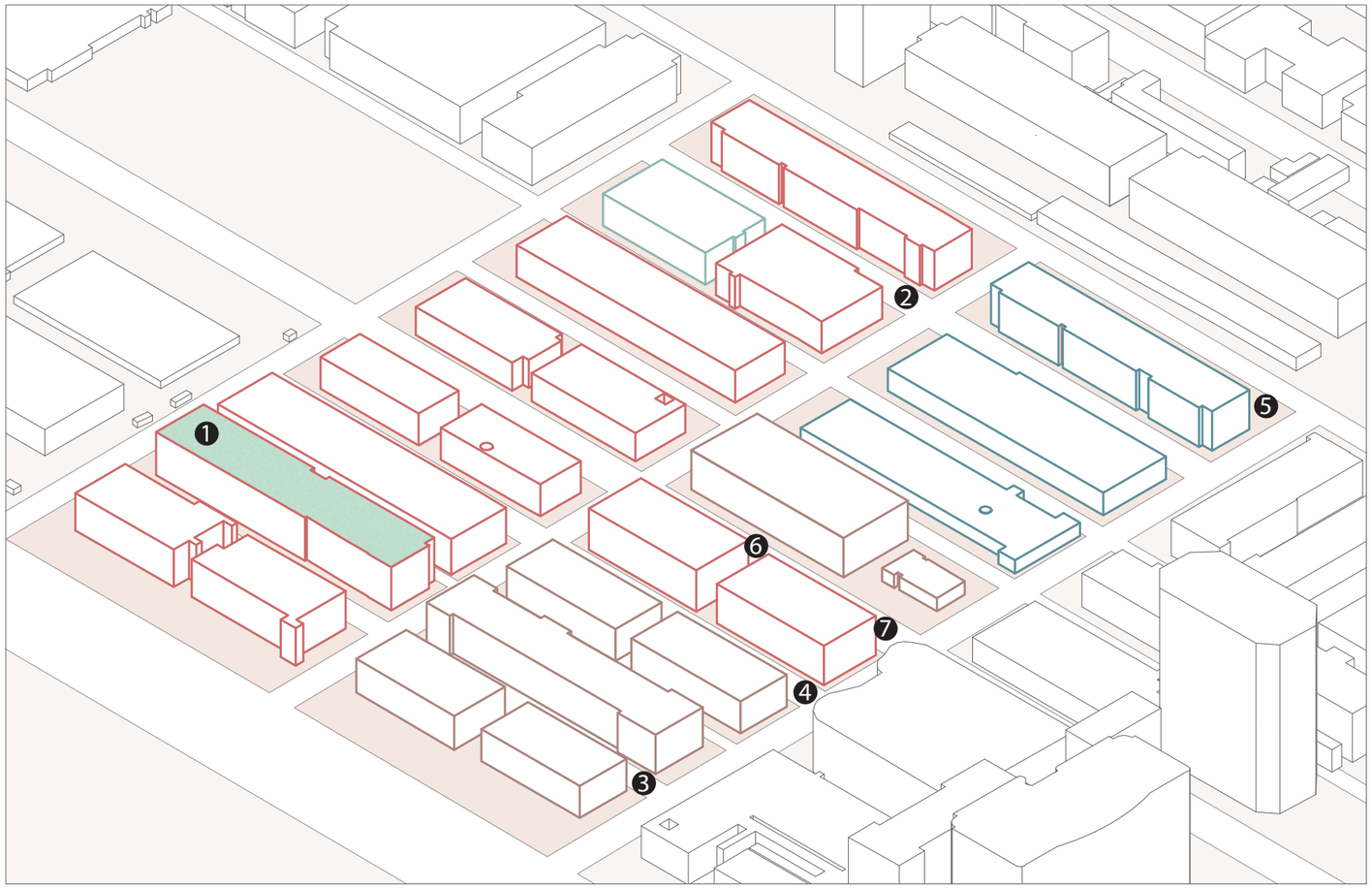
Location



Current situation

Lack of public space

Unattractive street

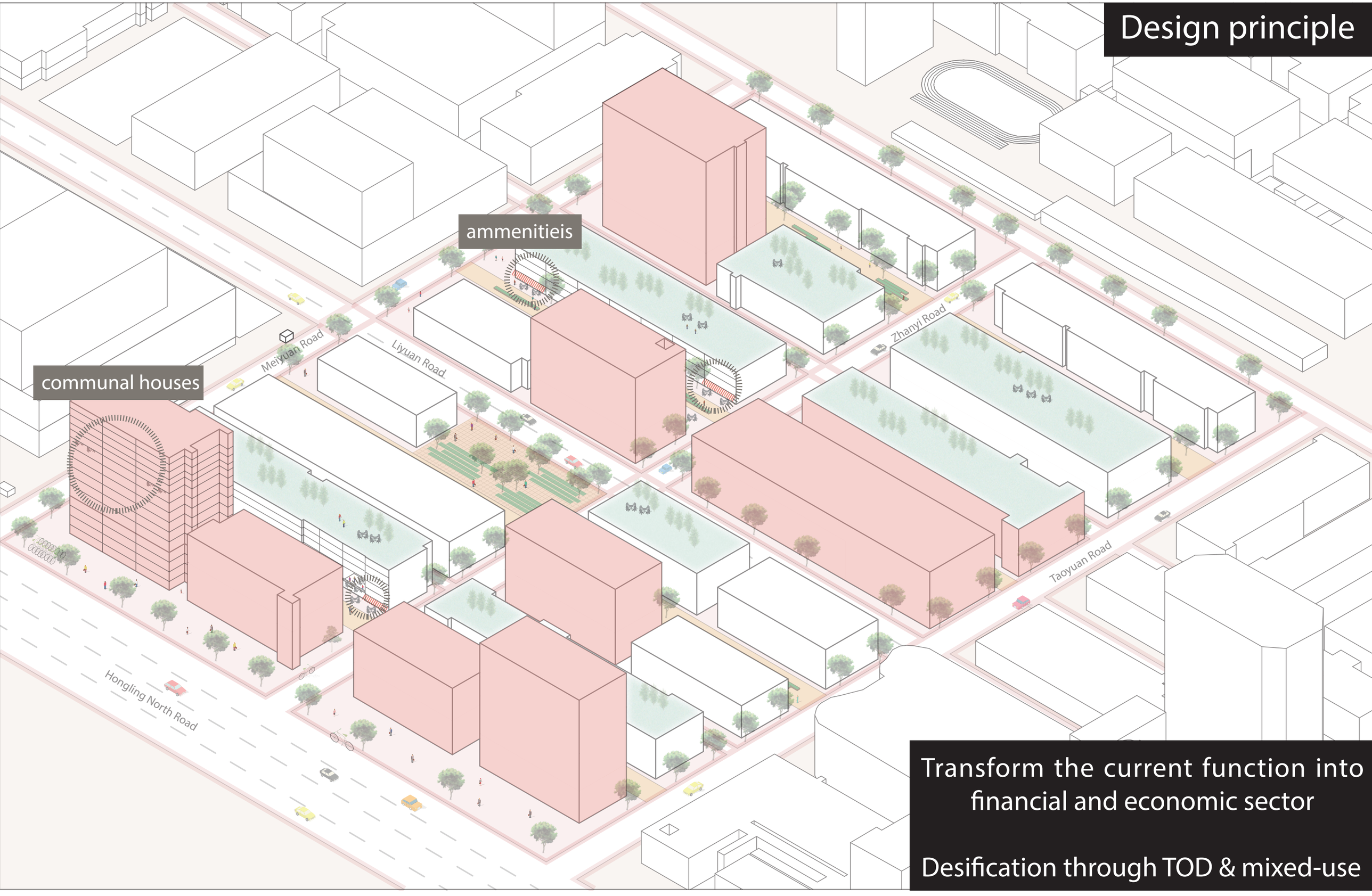


High density

Mono-function

Unique urban fabric

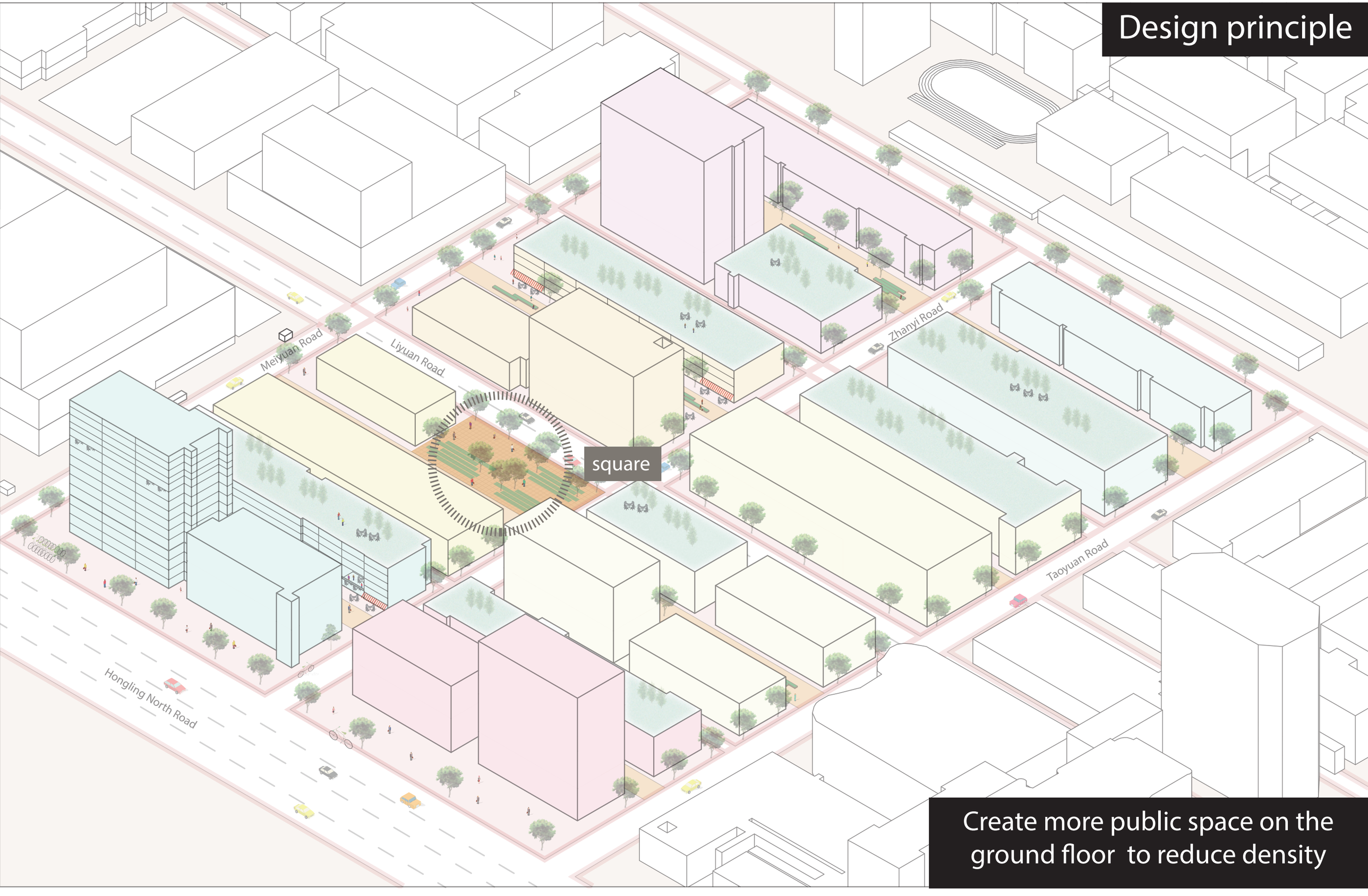
Design principle



Transform the current function into financial and economic sector

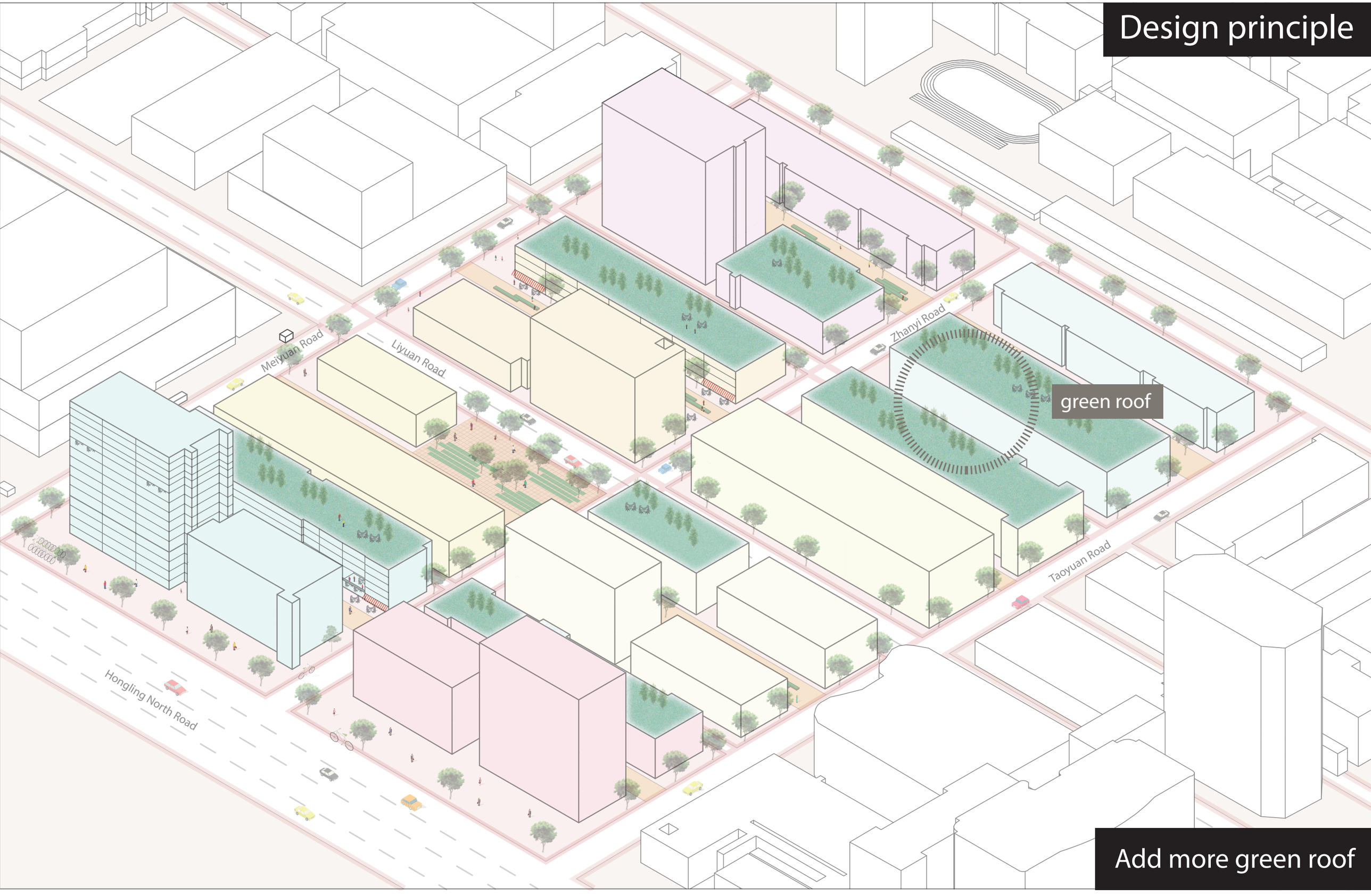
Desification through TOD & mixed-use

Design principle



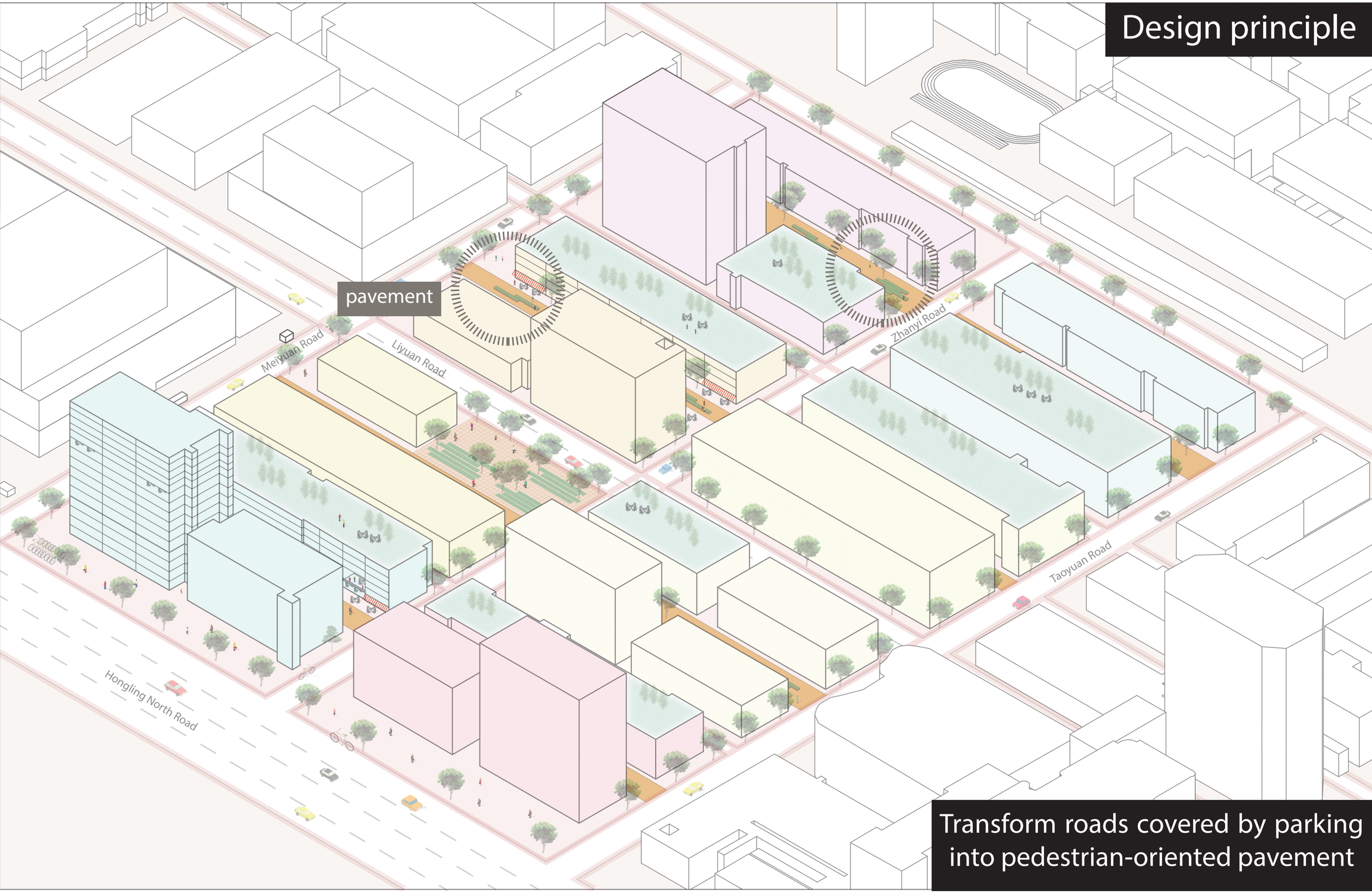
Create more public space on the ground floor to reduce density

Design principle



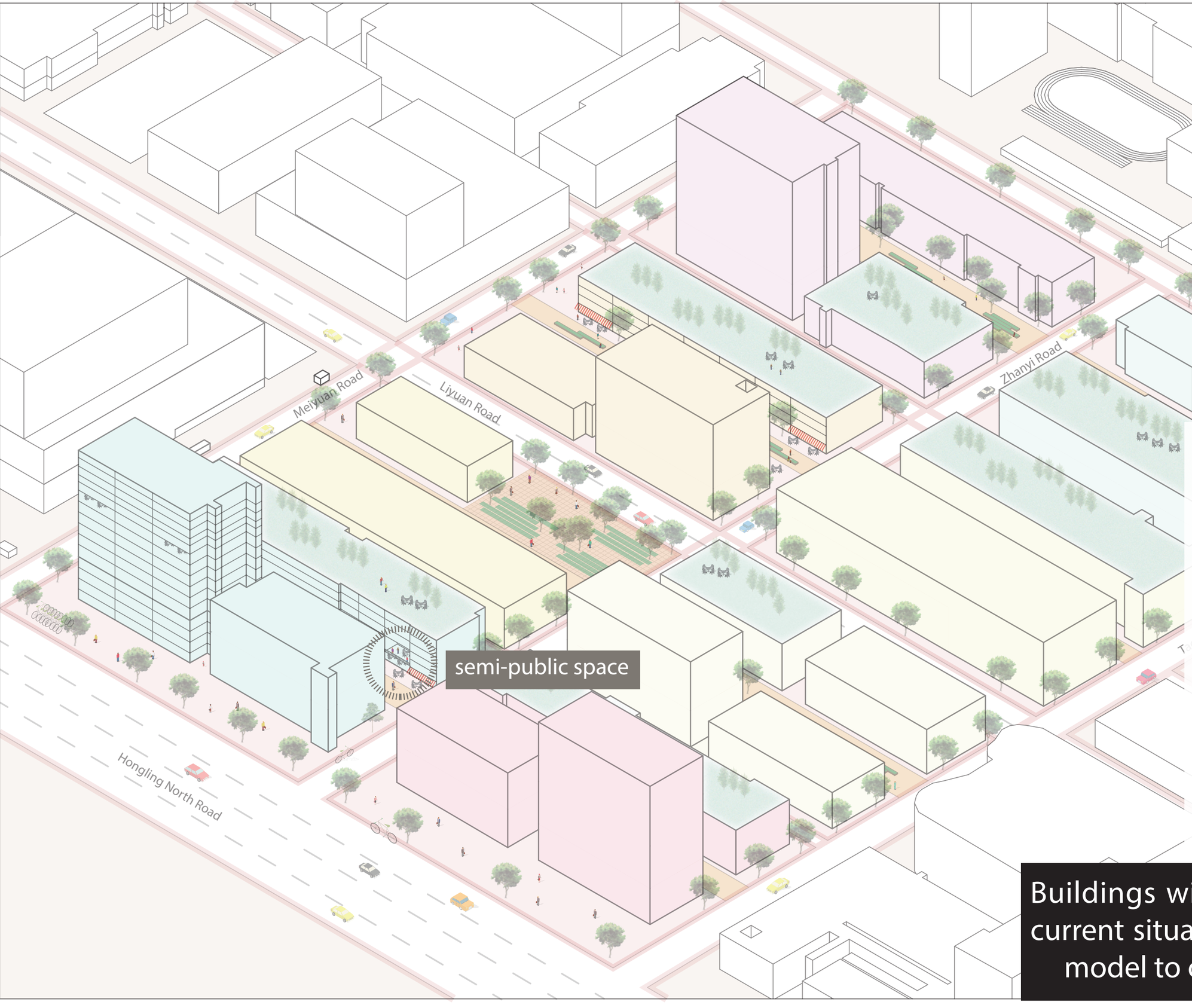
Add more green roof

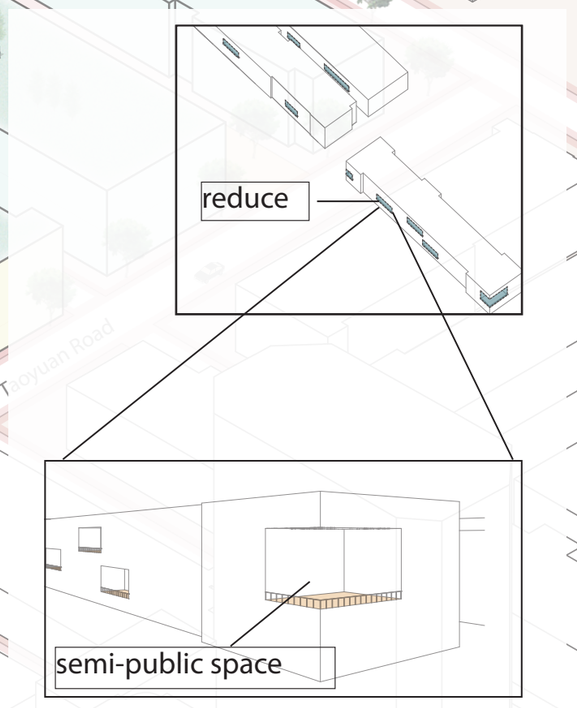
Design principle



Transform roads covered by parking into pedestrian-oriented pavement

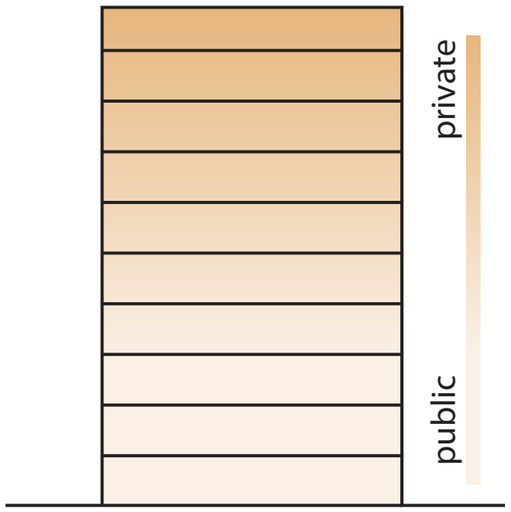
Design principle

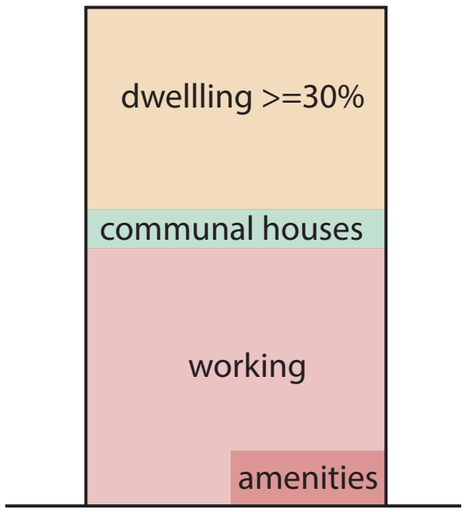


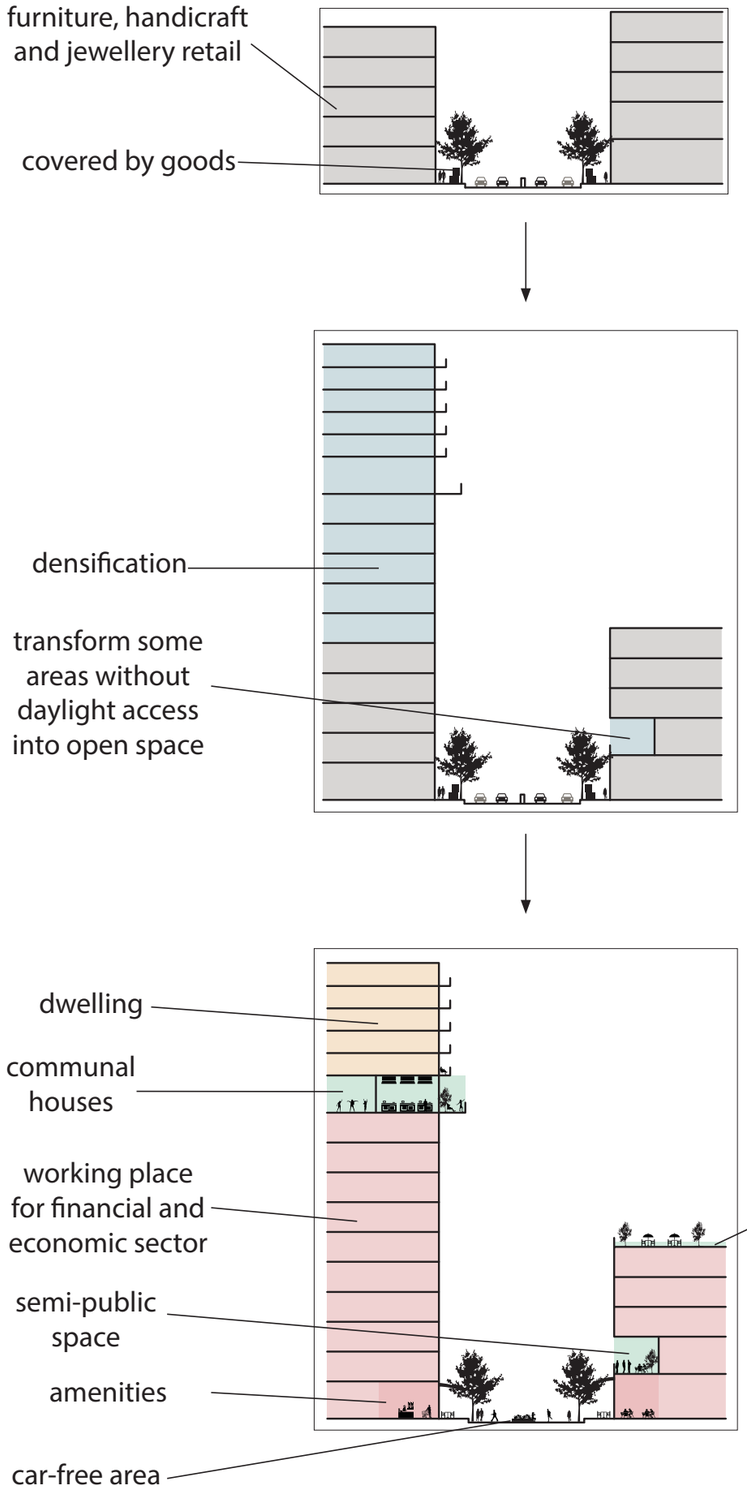


Buildings with bad sunlight access in current situation would adopt "celosia" model to create semi-public space

Detail design



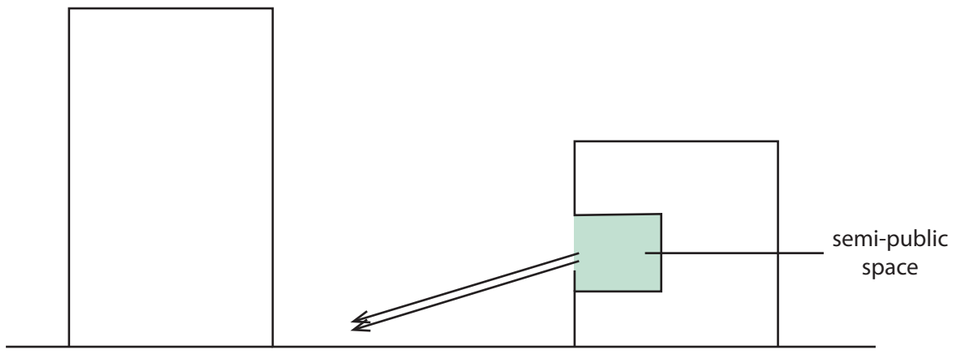




current situation

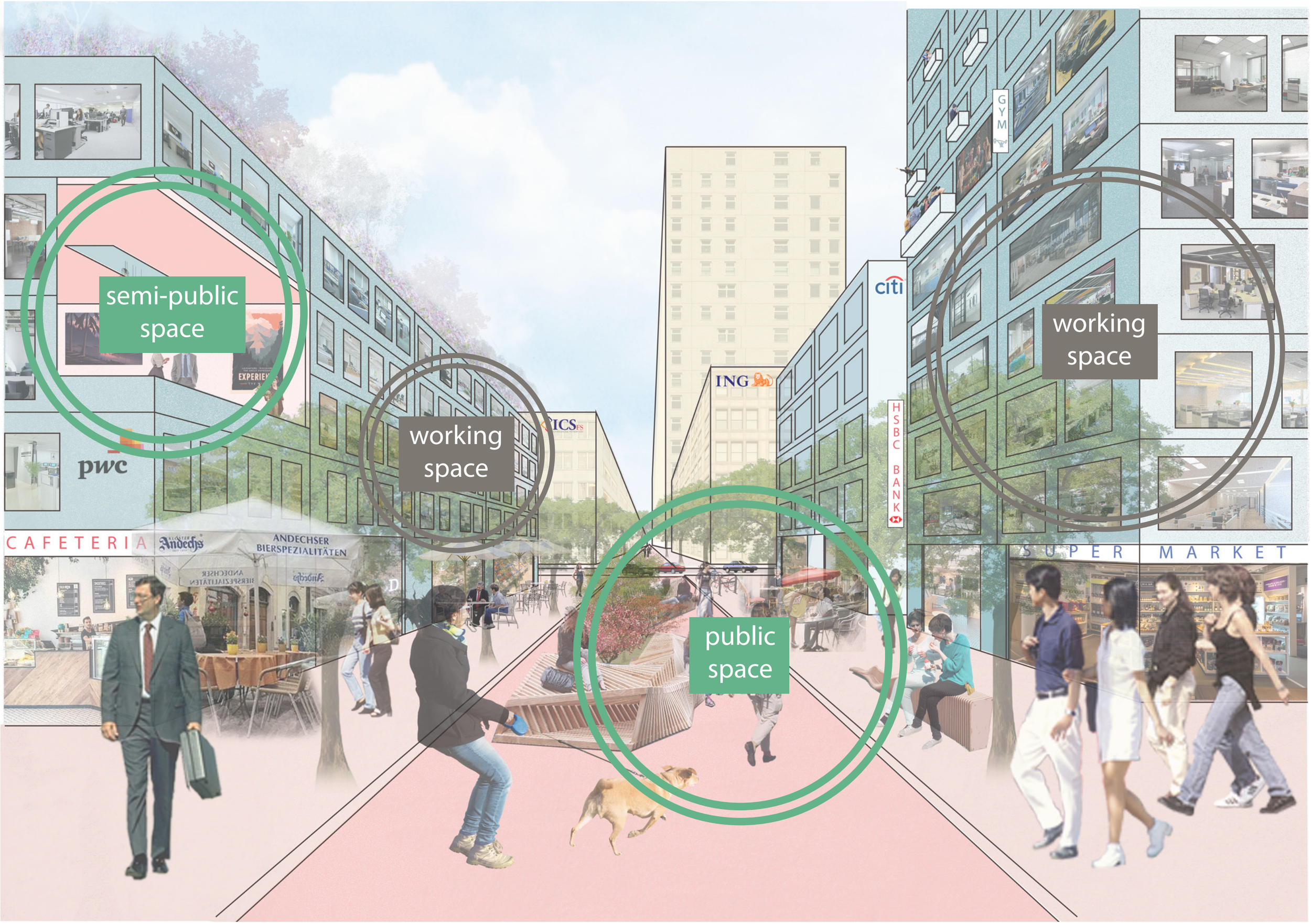
densification and 'celosia' model

function transformation and car-free transformation



EY
Building a better working world
EXPERIENCE
ICS FS
pwc
GYM
citi
ING
HSBC BANK
CAFETERIA
Andechs
ANDECHSER BIERSPEZIALITÄTEN
SUPER MARKET

dwelling
communal houses
amenities
CAFETERIA
SUPER MARKET
ANDECHSER BIERSPEZIALITÄTEN
pwc
EY
EXPERIENCE
ICS
ING
citi
HSBC BANK


semi-public space
working space
working space
public space
pwc
ICS
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GYM
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ANDECHSER BIERSPEZIALITÄTEN
SUPER MARKET

dwelling

dwelling

communal houses

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Building a better working world

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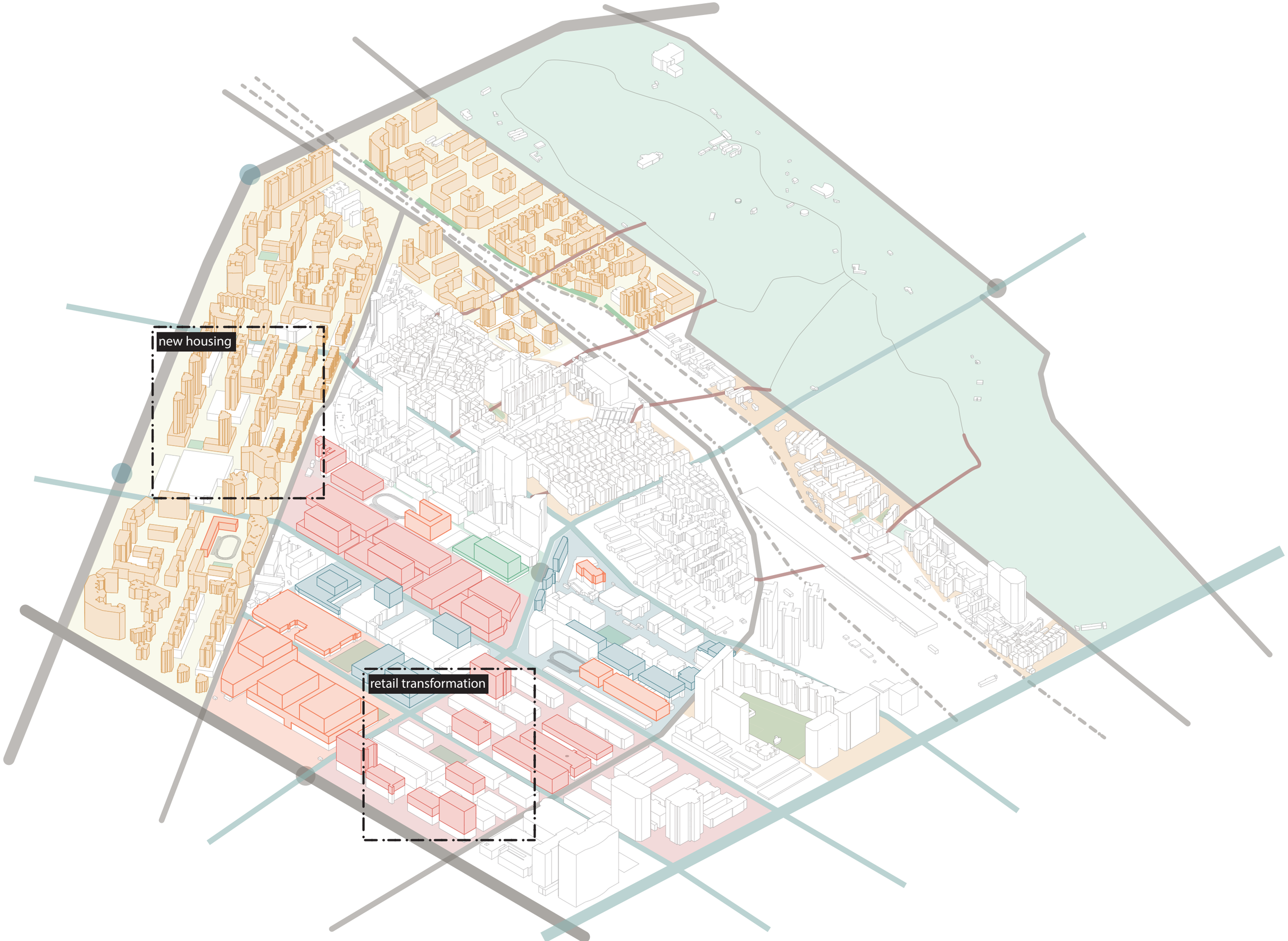
Andechs

ANDECHSER BIERSPEZIALITÄTEN

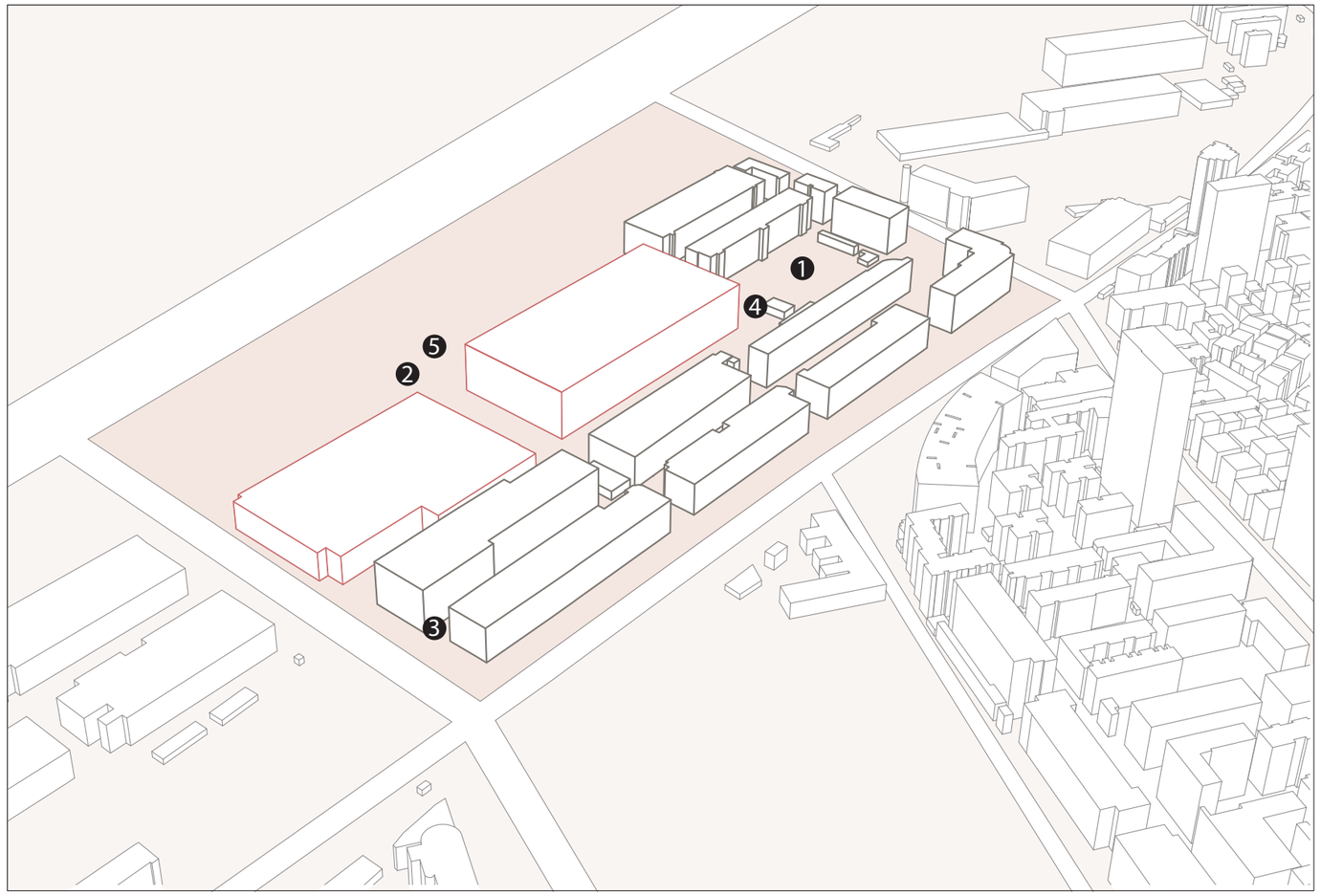
SUPER MARKET


new housing
retail transformation

Location

Lack of public space

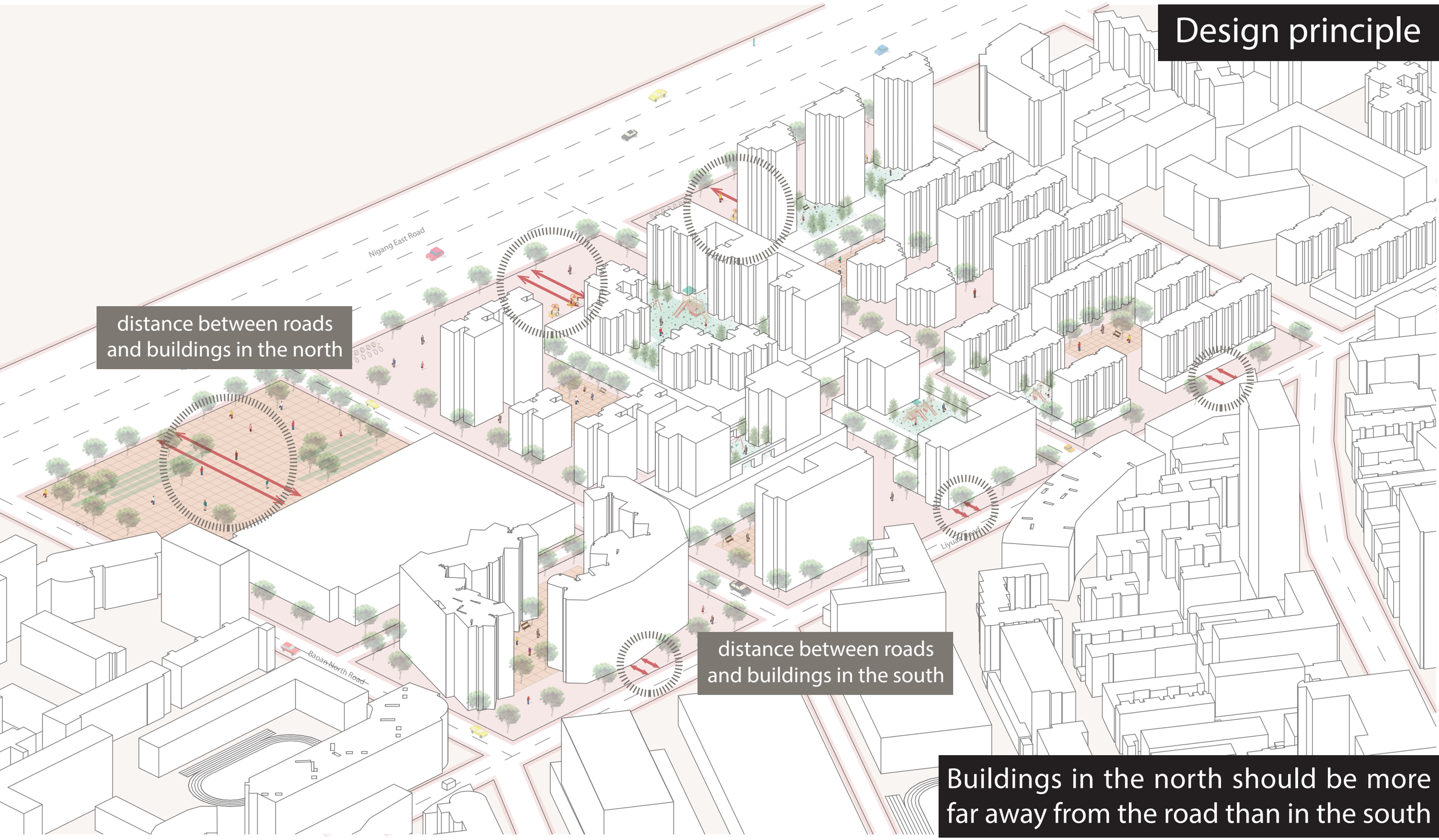
Mono-function



Unattractive street

Urban fabric is not suitable for dwelling

Design principle

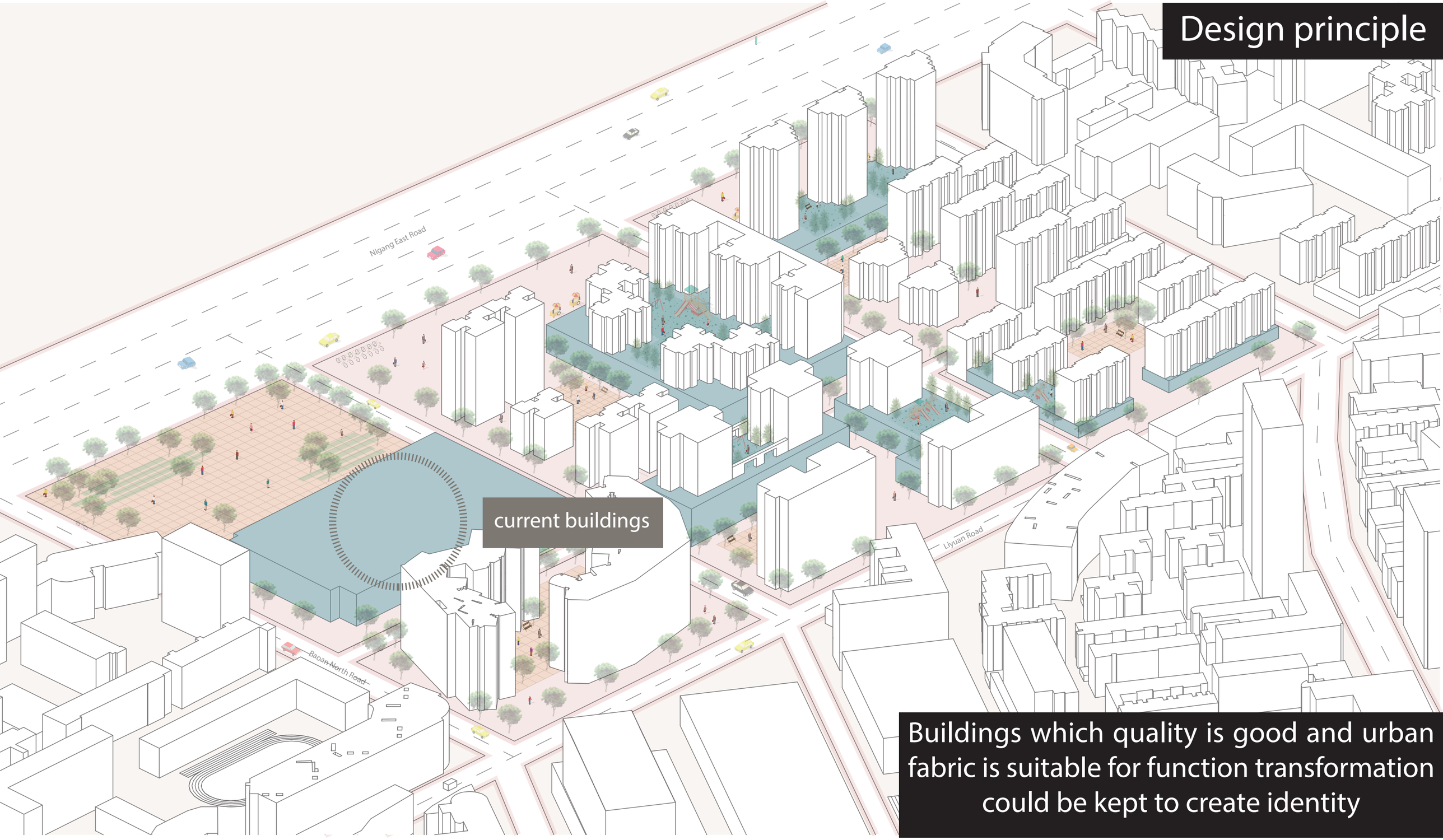


distance between roads and buildings in the north

distance between roads and buildings in the south

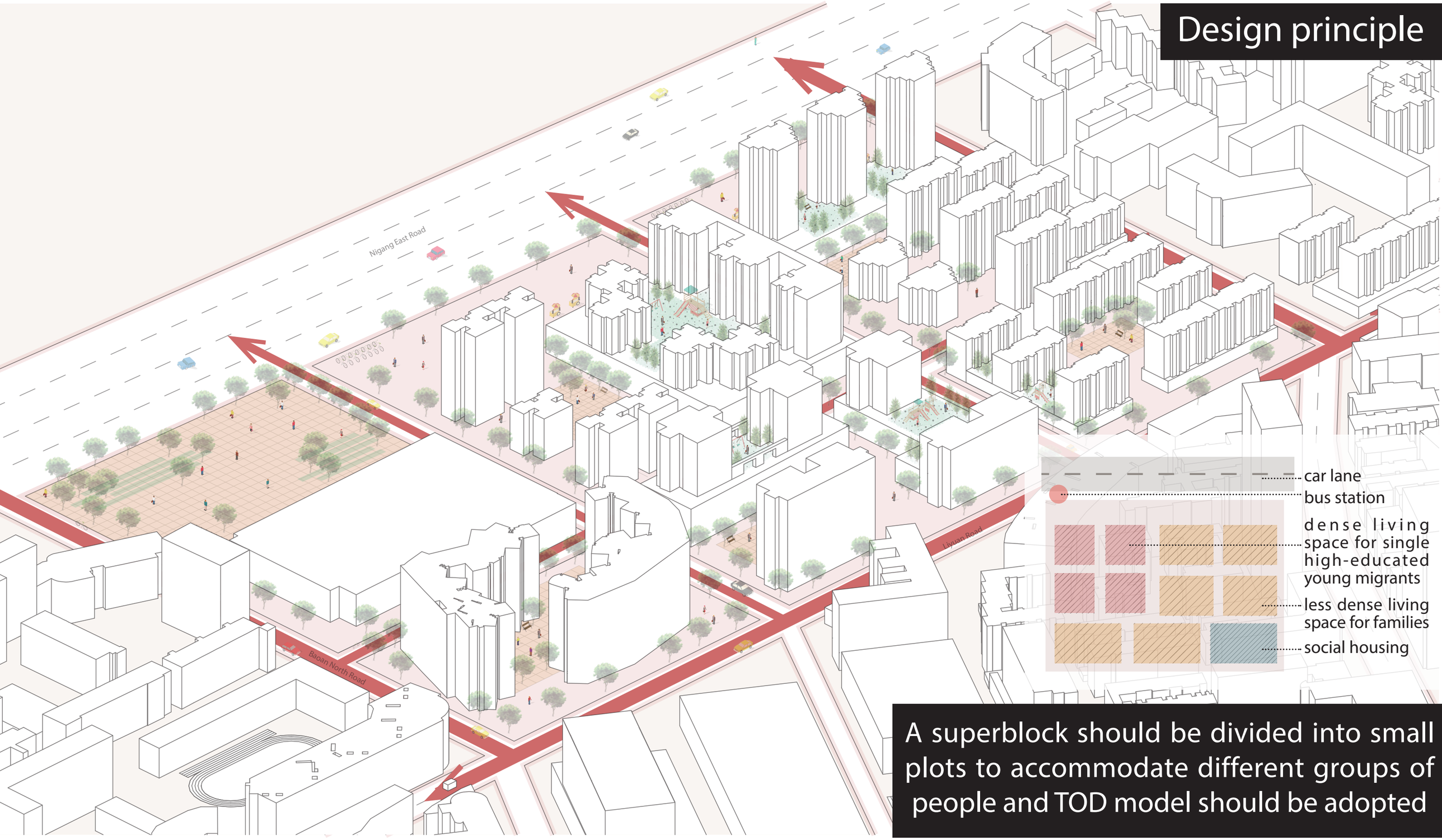
Buildings in the north should be more far away from the road than in the south

Design principle



Buildings which quality is good and urban fabric is suitable for function transformation could be kept to create identity

Design principle

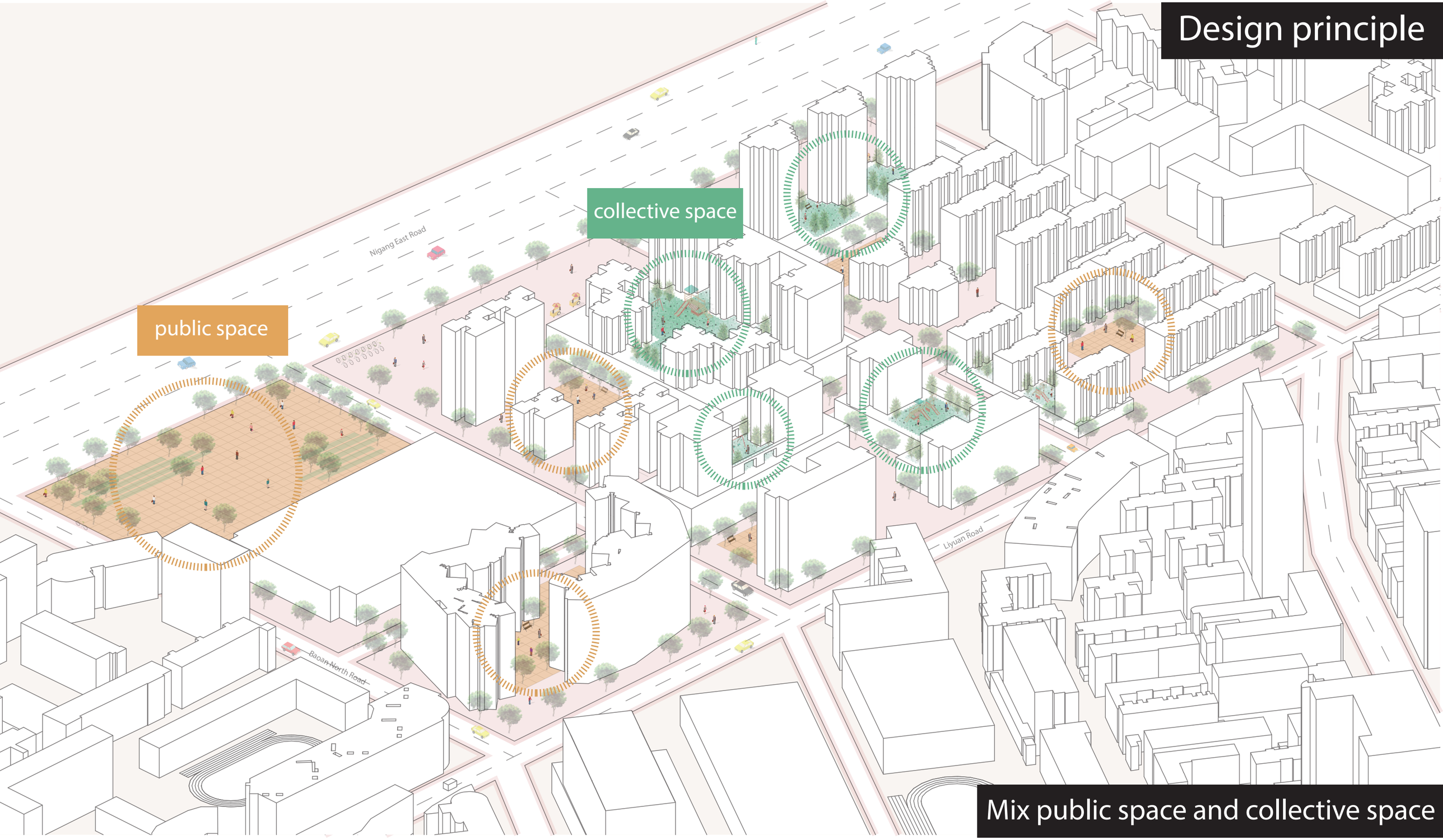


A superblock should be divided into small plots to accommodate different groups of people and TOD model should be adopted

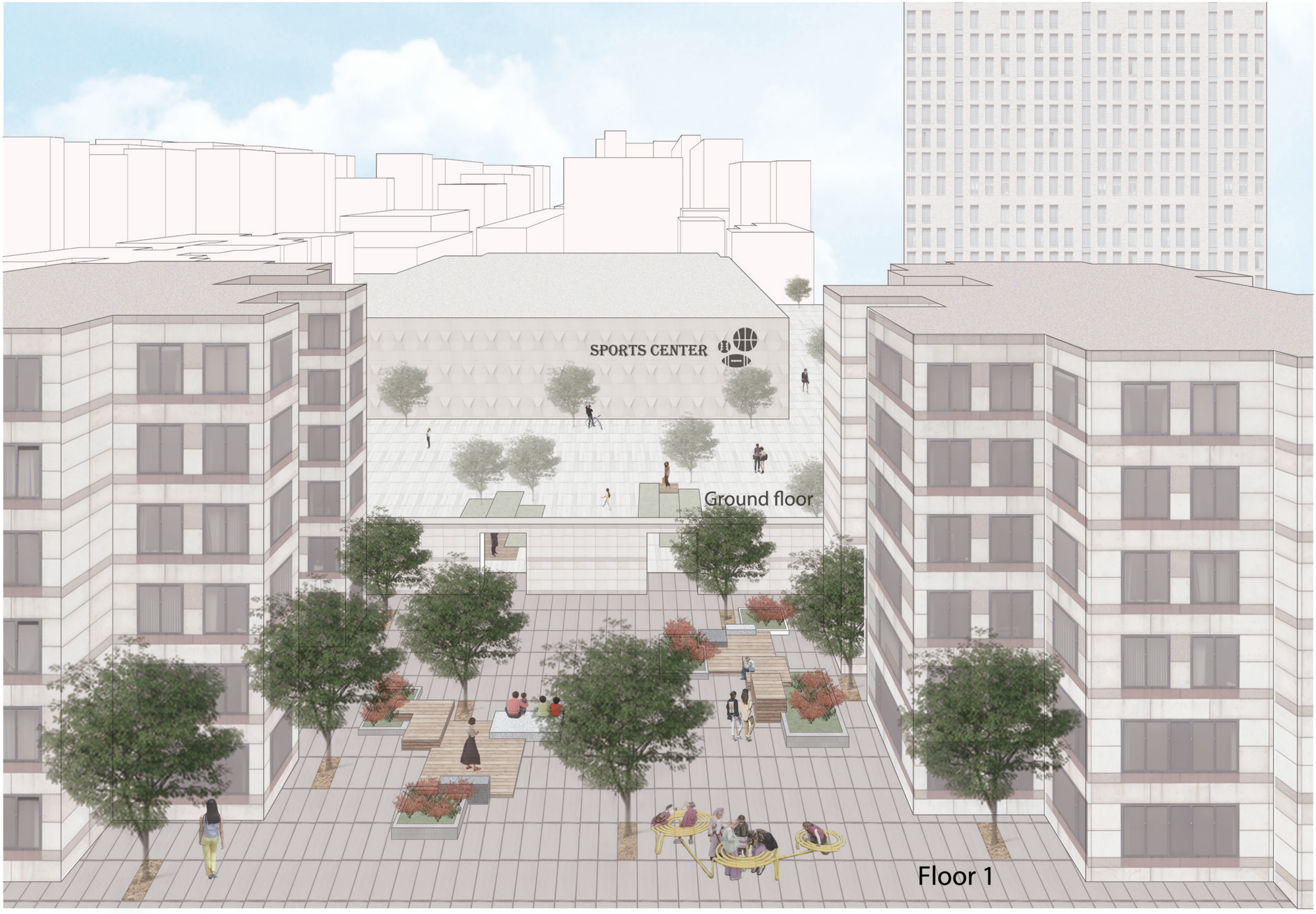
Design principle

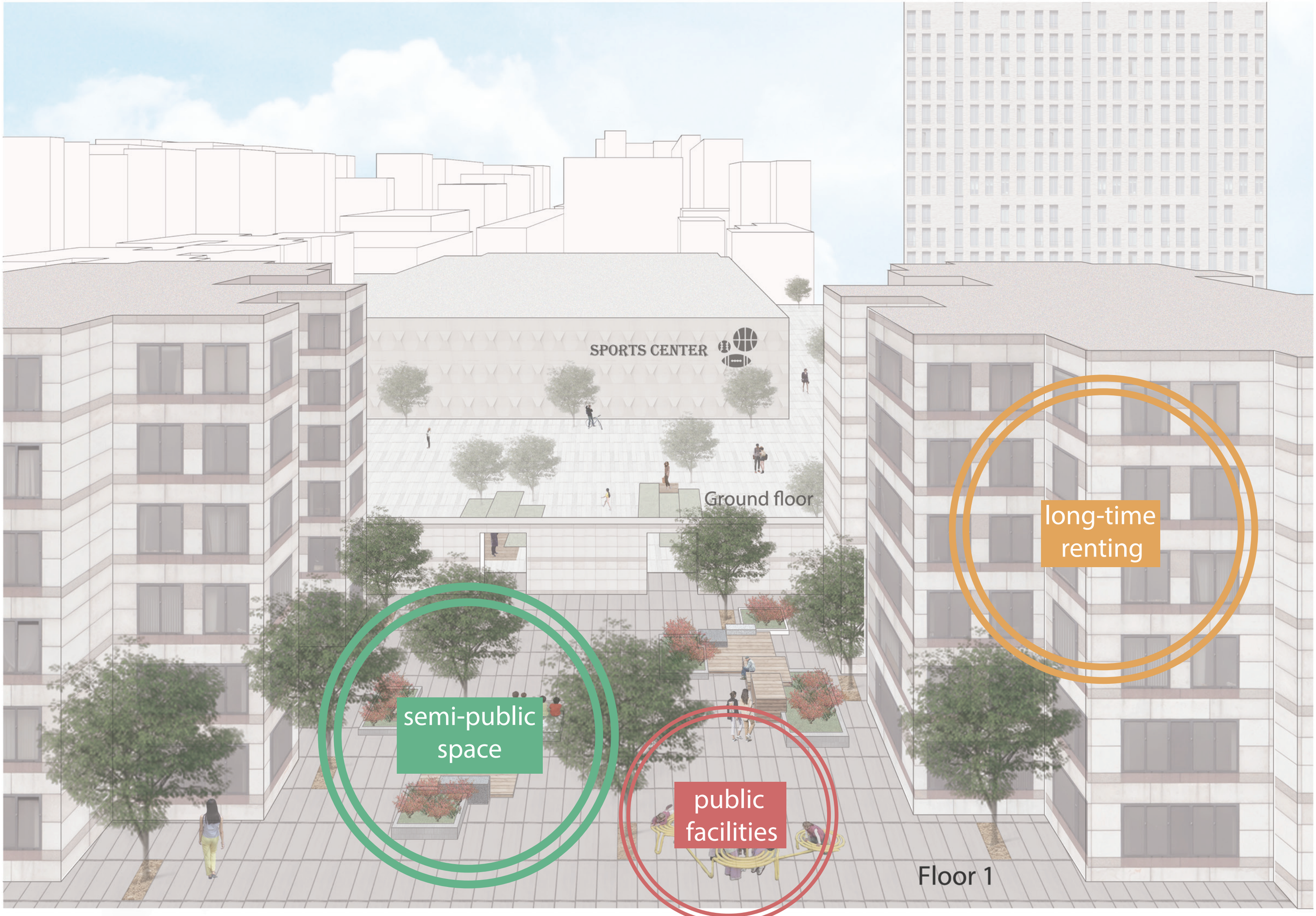
Social housing should cover at least
30% of the whole newly built housing

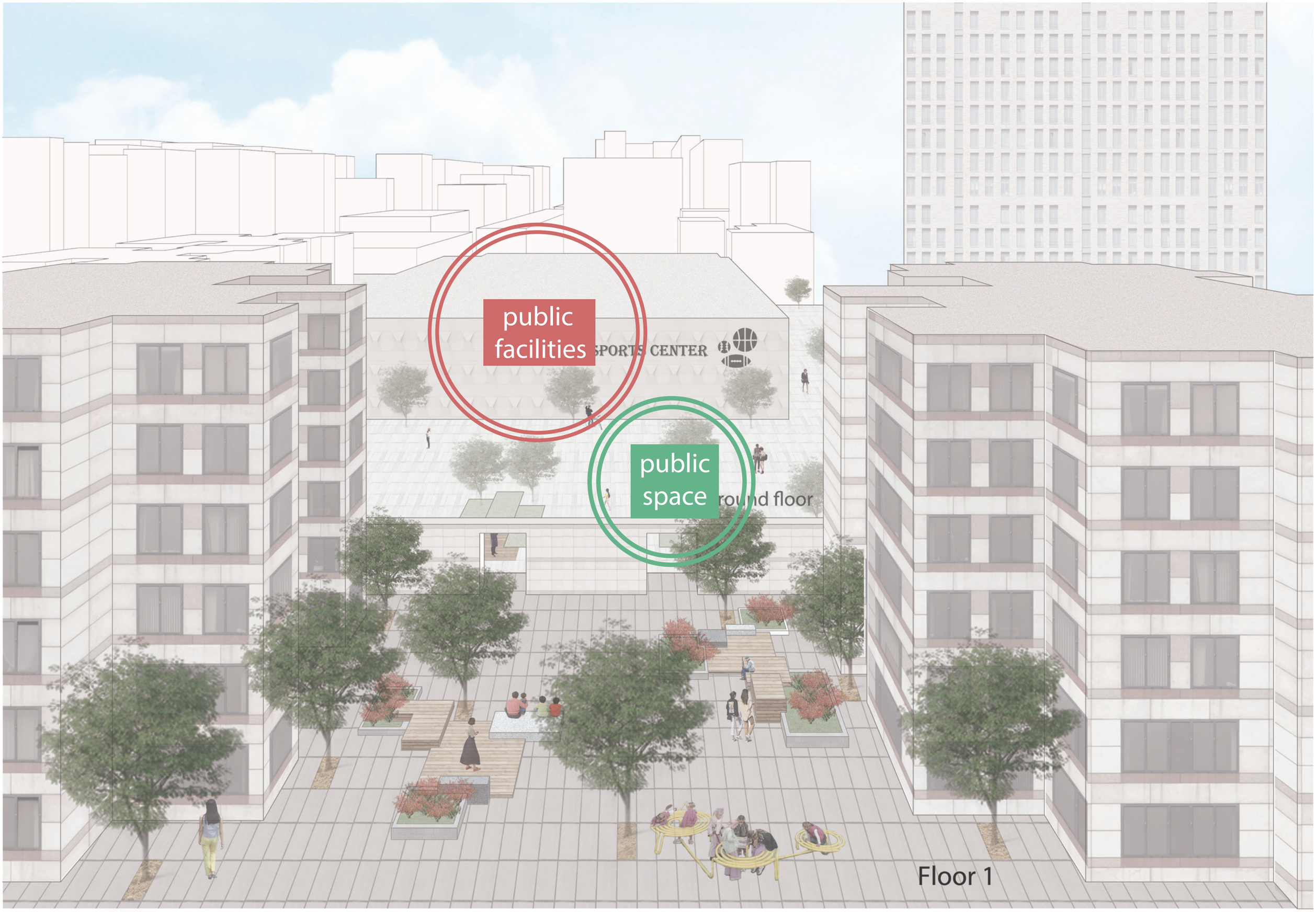
Design principle



Mix public space and collective space

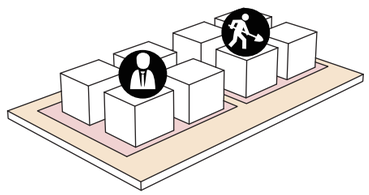

SPORTS CENTER
Ground floor
Floor 1


SPORTS CENTER
Ground floor
long-time
renting
semi-public
space
public
facilities
Floor 1


public facilities
SPORTS CENTER
public space
round floor
Floor 1

Danwei housing

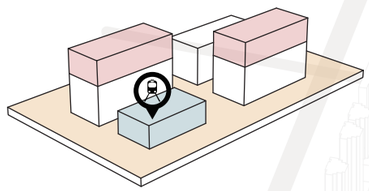
6



Identity
Lifestyle
Basic needs for living

Mix different groups of people

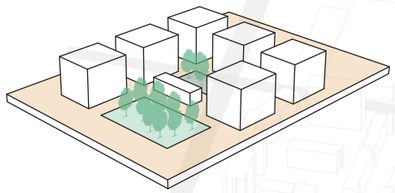
2



Identity
Lifestyle
Basic needs for living

mixed-use

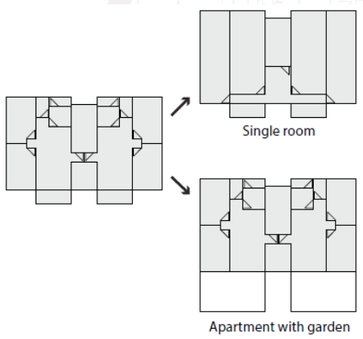
7



Identity
Lifestyle
Basic needs for living

Mix private and public space

9



Identity
Lifestyle
Basic needs for living

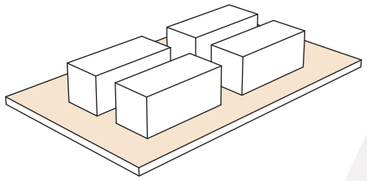
Adapt housing typology

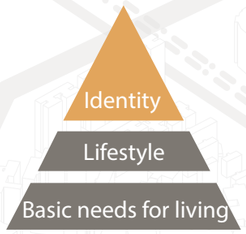
6

7

factory compound

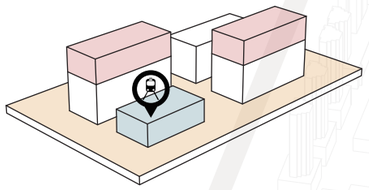
1

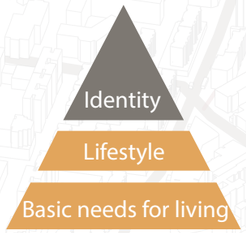




Keep the current typical warehouse morphology

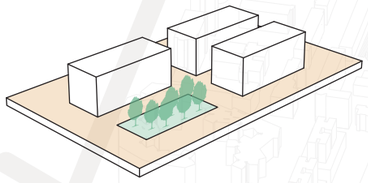
2

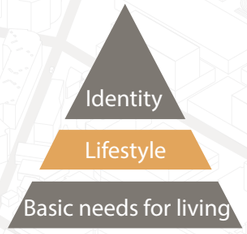




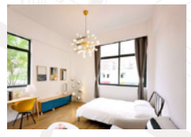
TOD densification and mixed-use

4

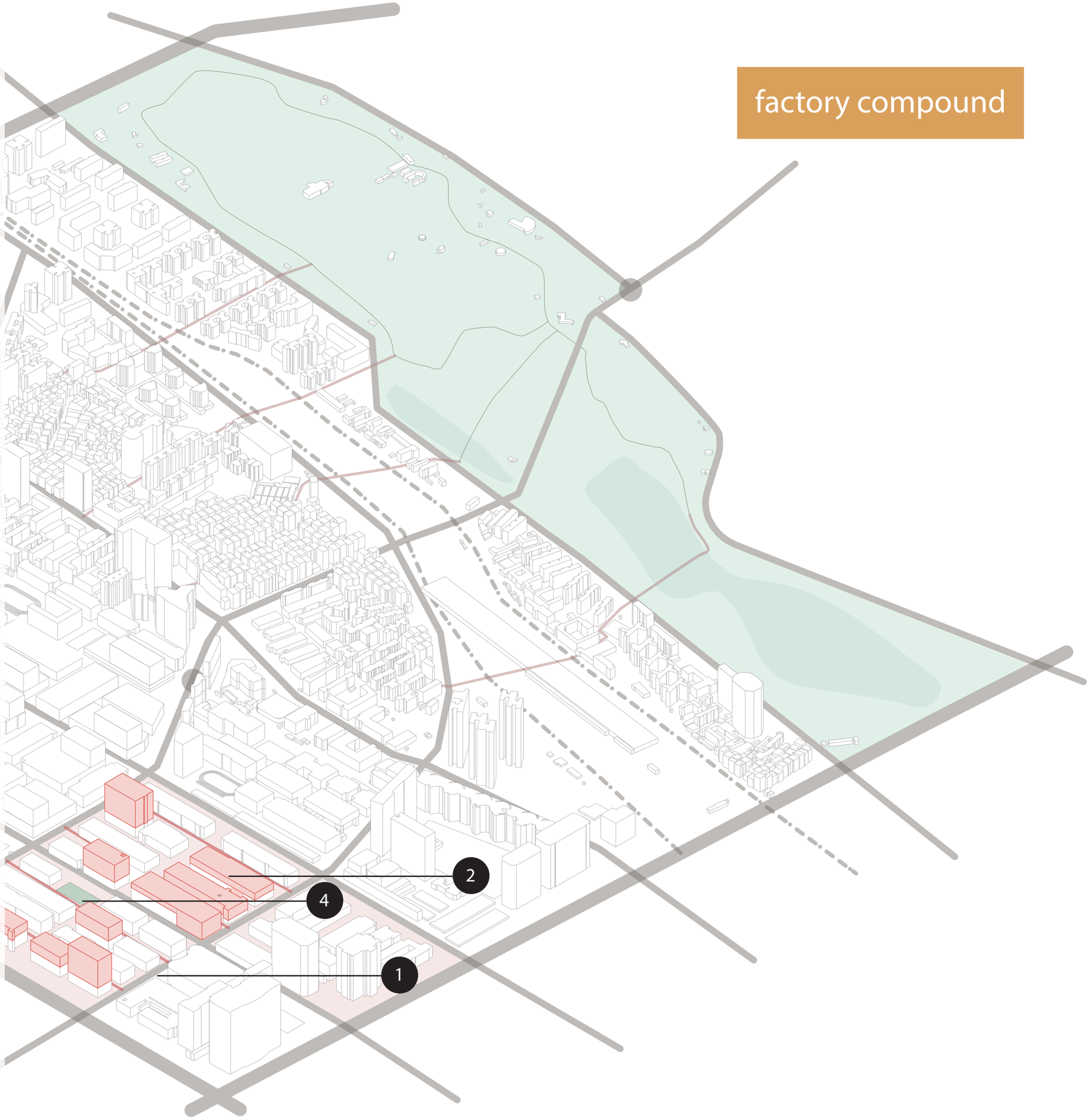




Add pubilc space to create good living space



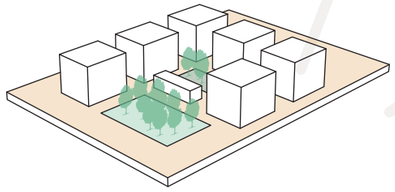
Source: http://www.sohu.com/a/157809240_448680

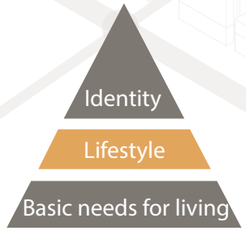


commercial housing

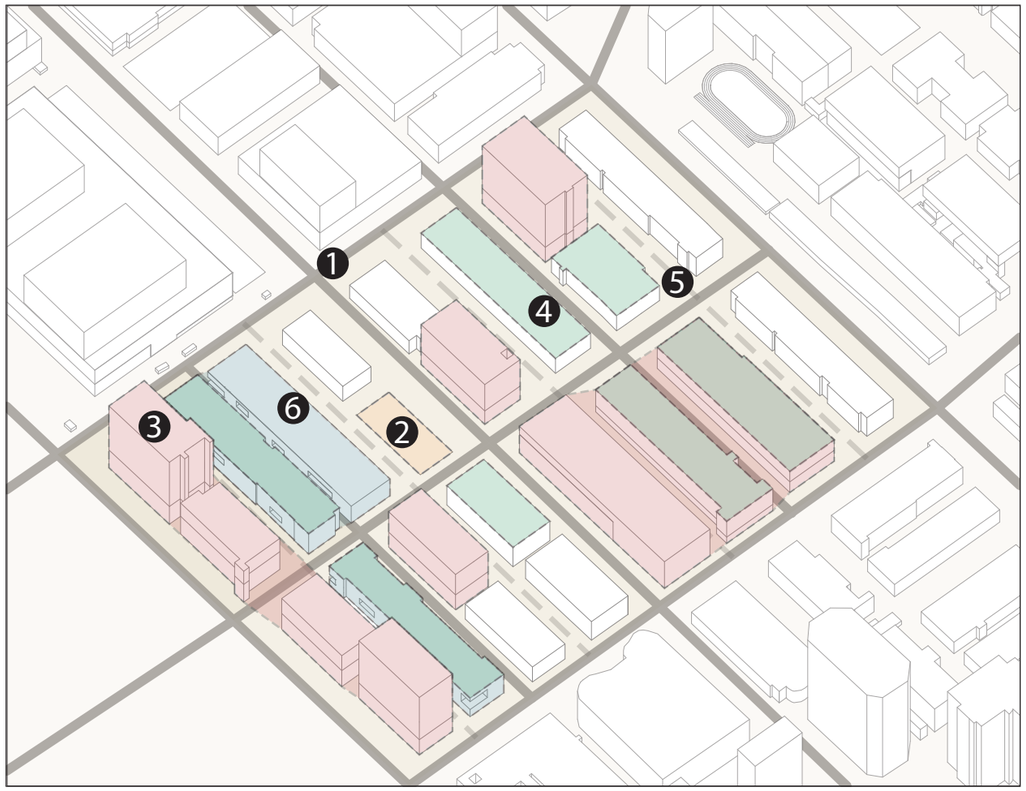
7

7





Mix private and public space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2
3
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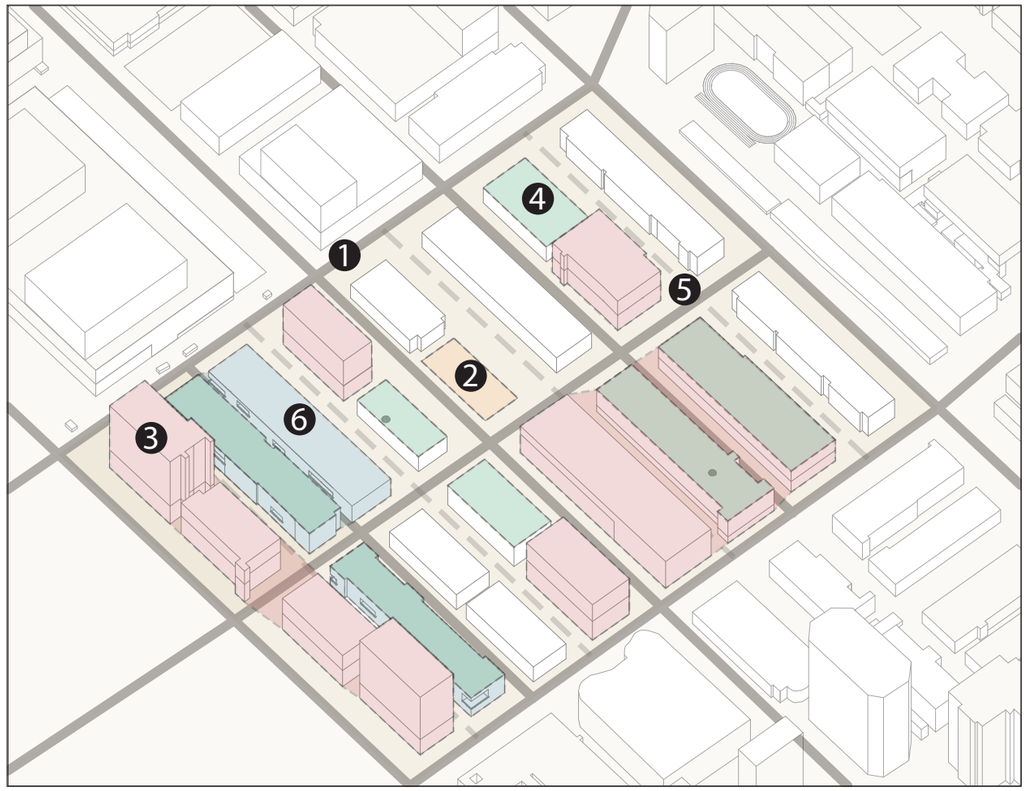
6


1
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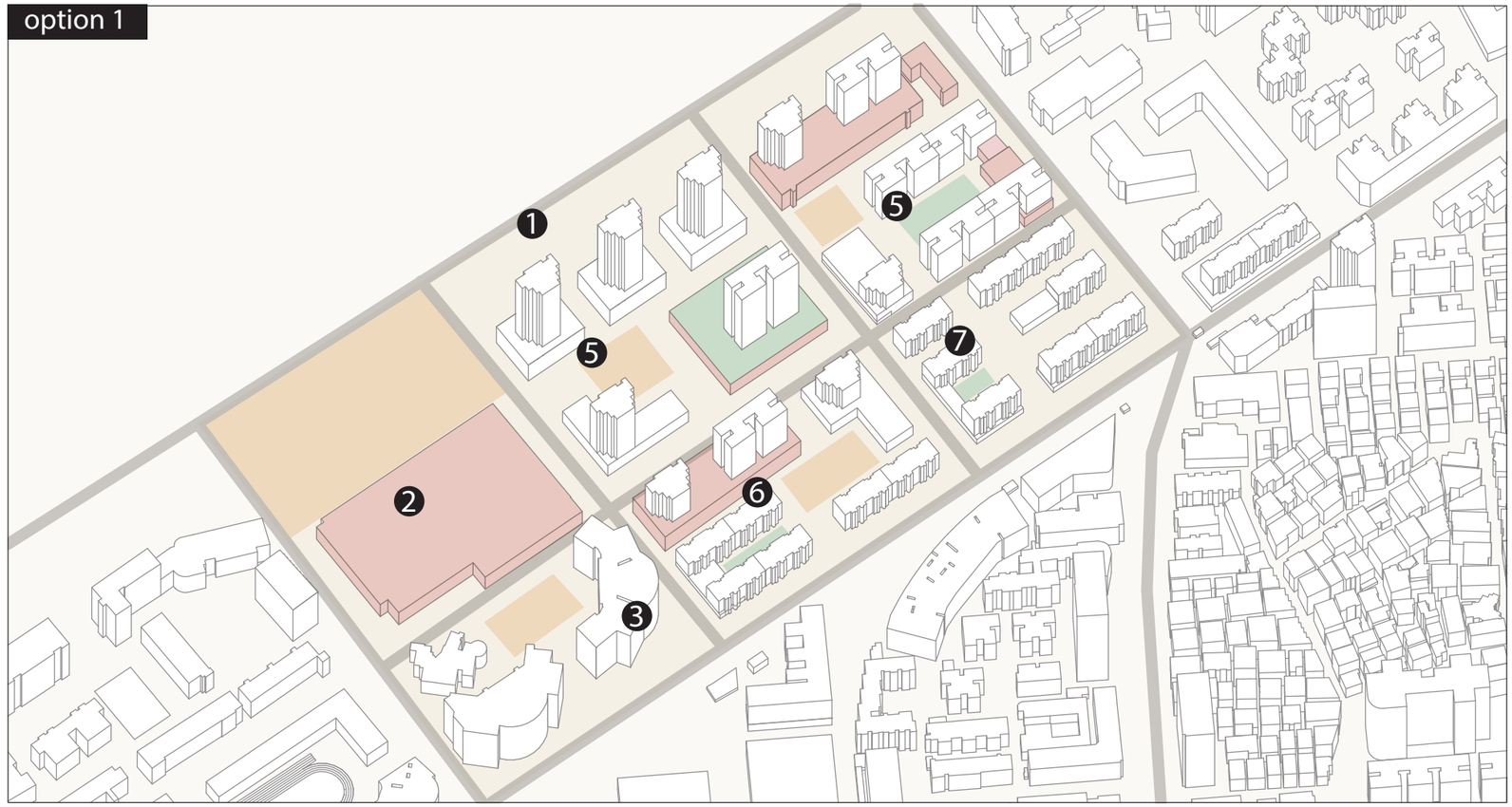
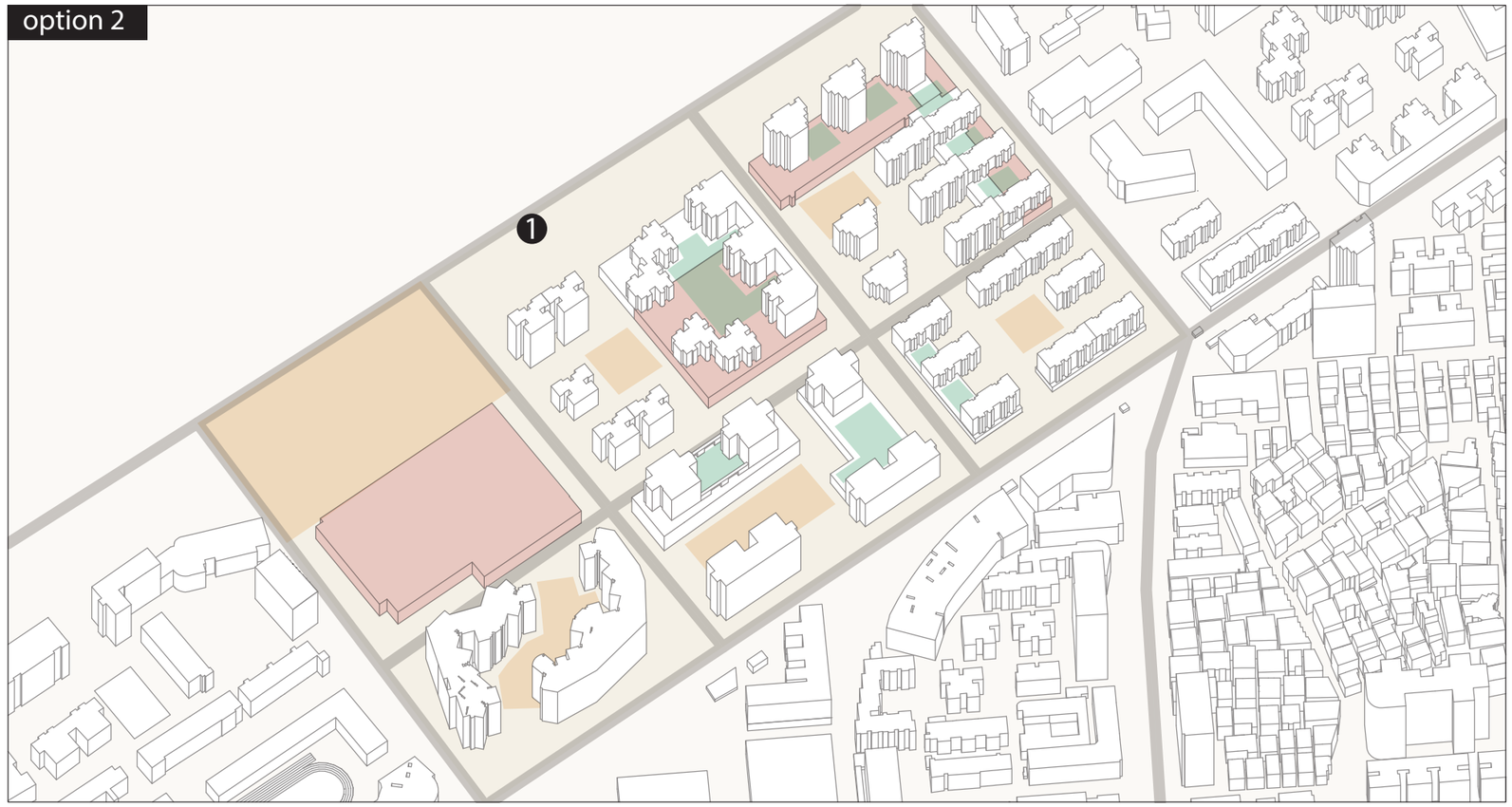
6

option 1



option 2

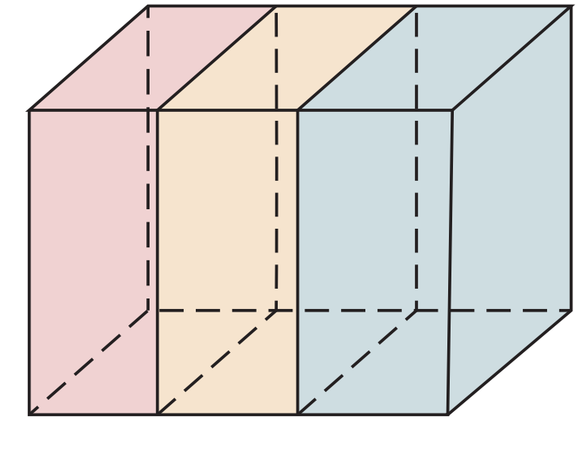


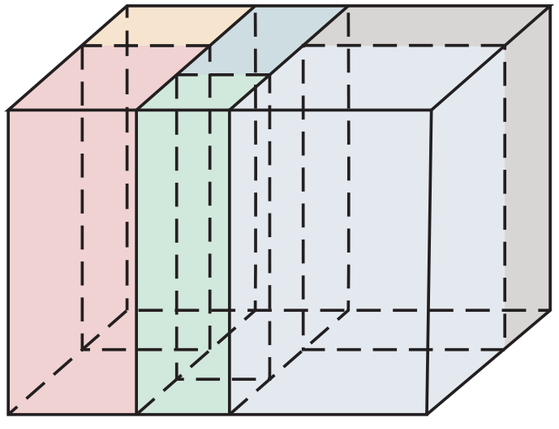
maker space

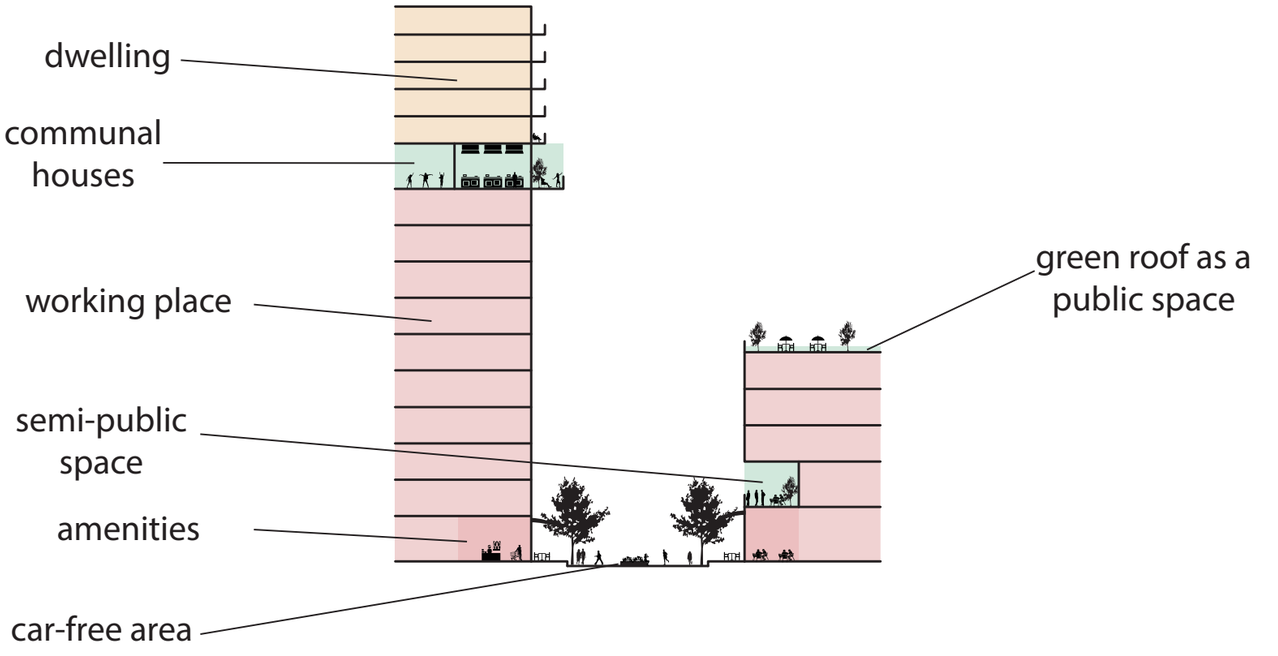
high-tech industry

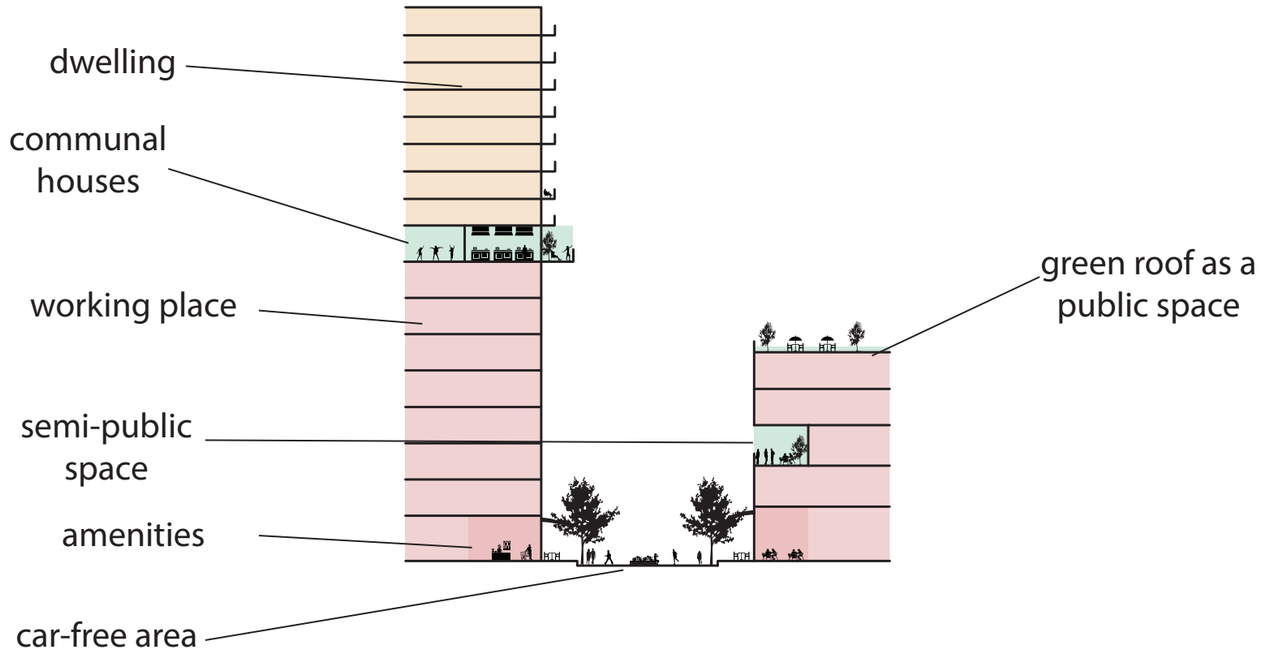
small business start-up

wholesale center






dwelling
communal houses
working place
green roof as a public space
semi-public space
amenities
car-free area


dwelling
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green roof as a public space
semi-public space
amenities
car-free area