

An aerial photograph of a city, likely Dalang, showing a complex road network and a large, dark, irregularly shaped lake or reservoir on the left side. The city is divided into several distinct urban areas by roads and green spaces. The text is overlaid on the right side of the image.

# Planning in a **RESTLESS LANDSCAPE**

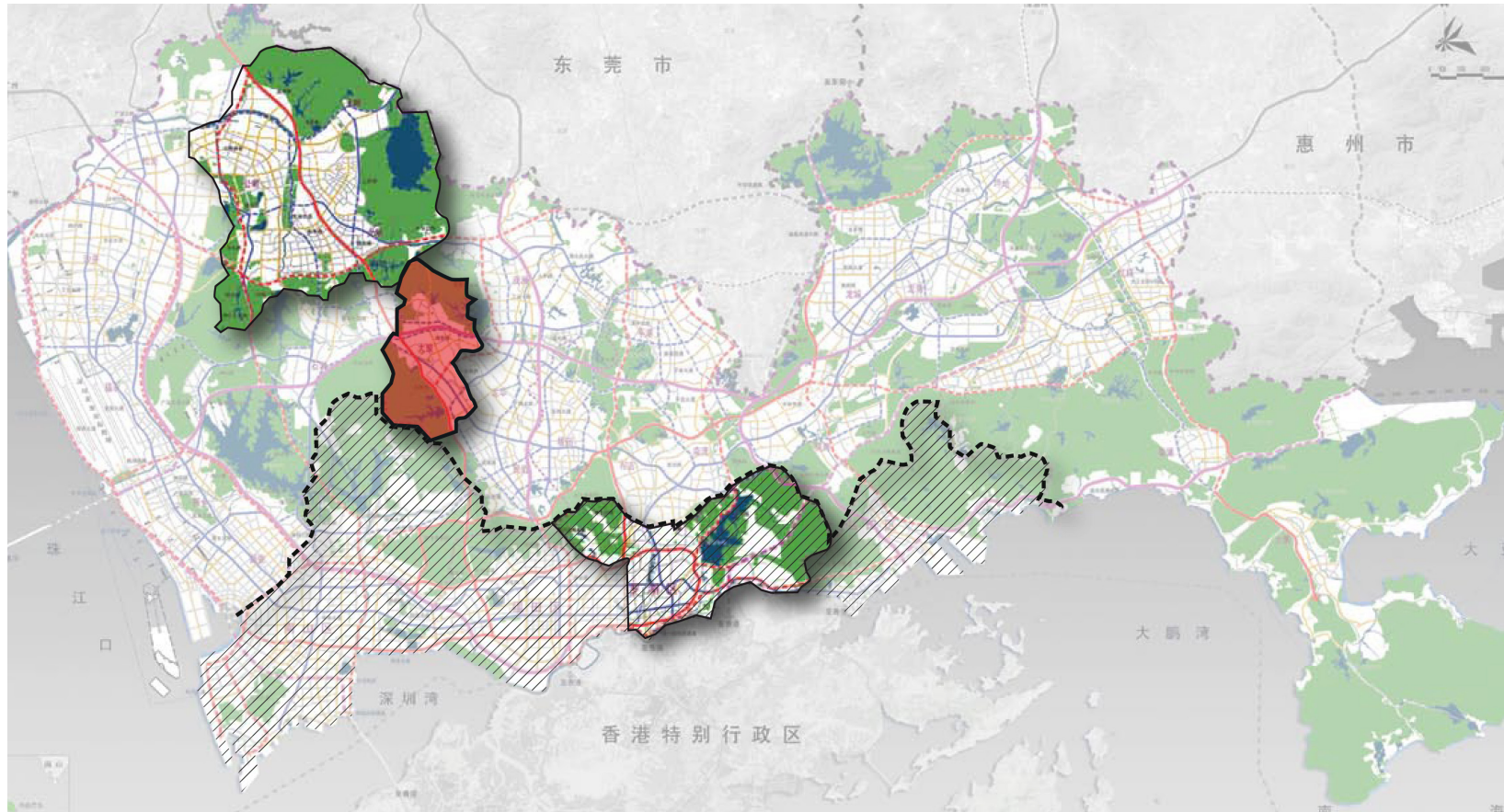
Restructuring Spaces of Mobility as framework  
for future development in Dalang



# DALANG

Peri-urban Area

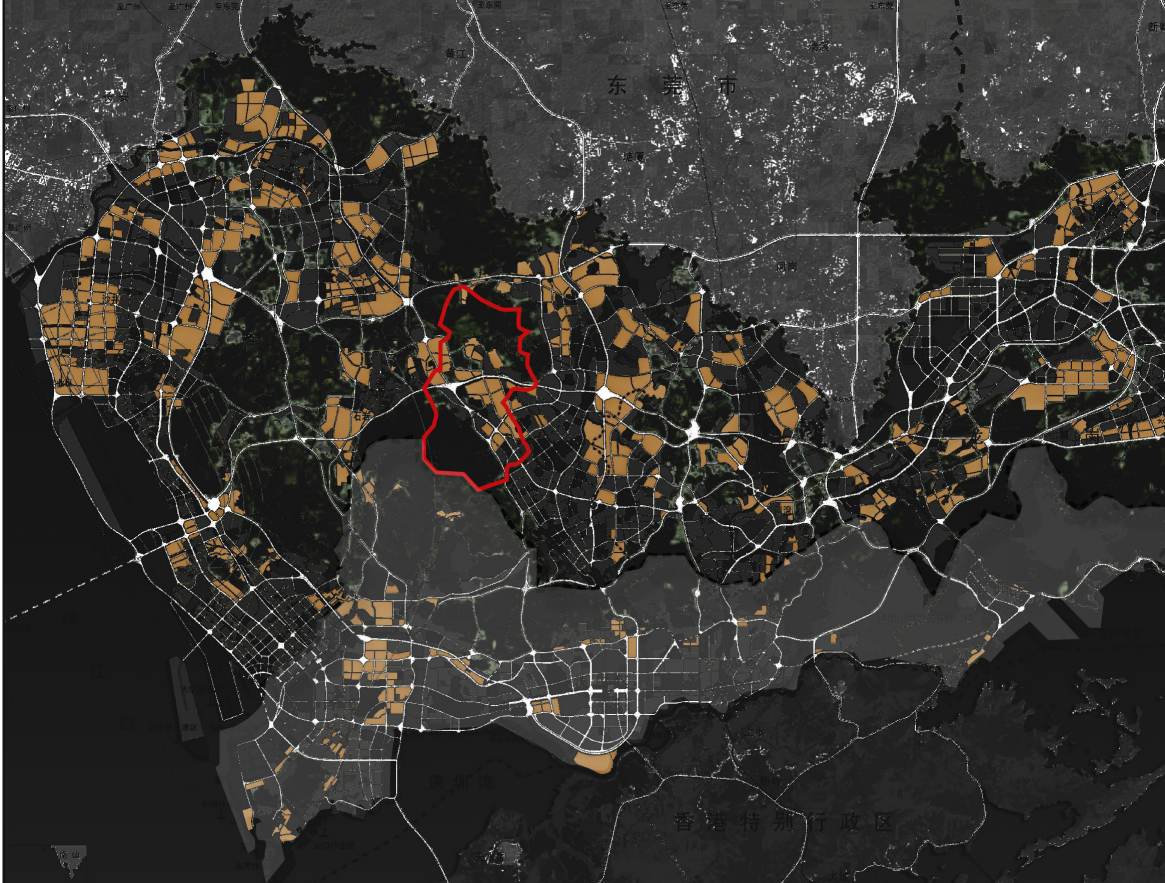
Population: **500,000**





# DALANG

Manufacturing town





# DALANG

Urbanized **20 years ago**



1990  
Rural

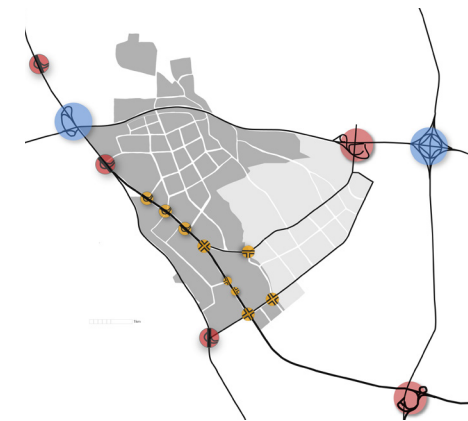
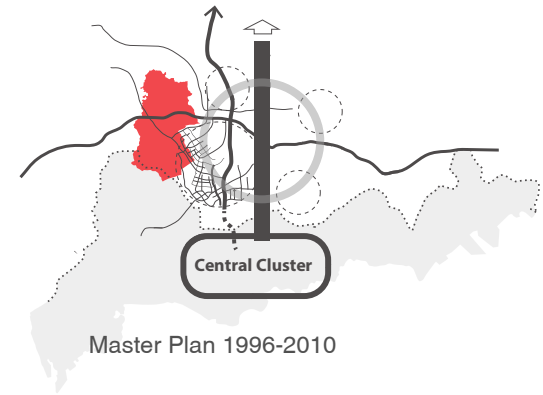


2011  
Completely Urban



# DALANG

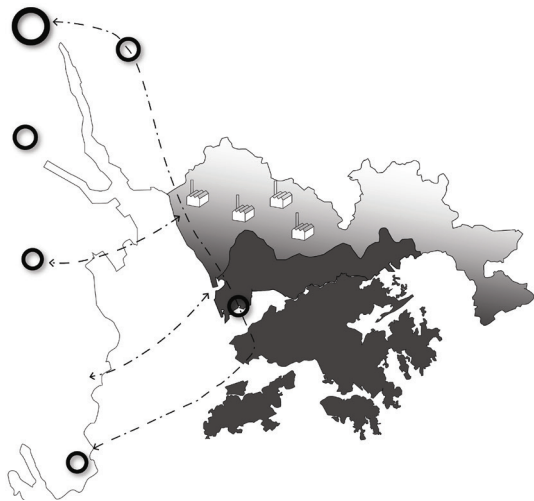
Case of rural urbanization by old villagers  
Capitalizing on regional flow





# DALANG

**NOW:** Factories leaving  
Under transition



# DALANG

Issue: **Upgradation of Industrial tissue**

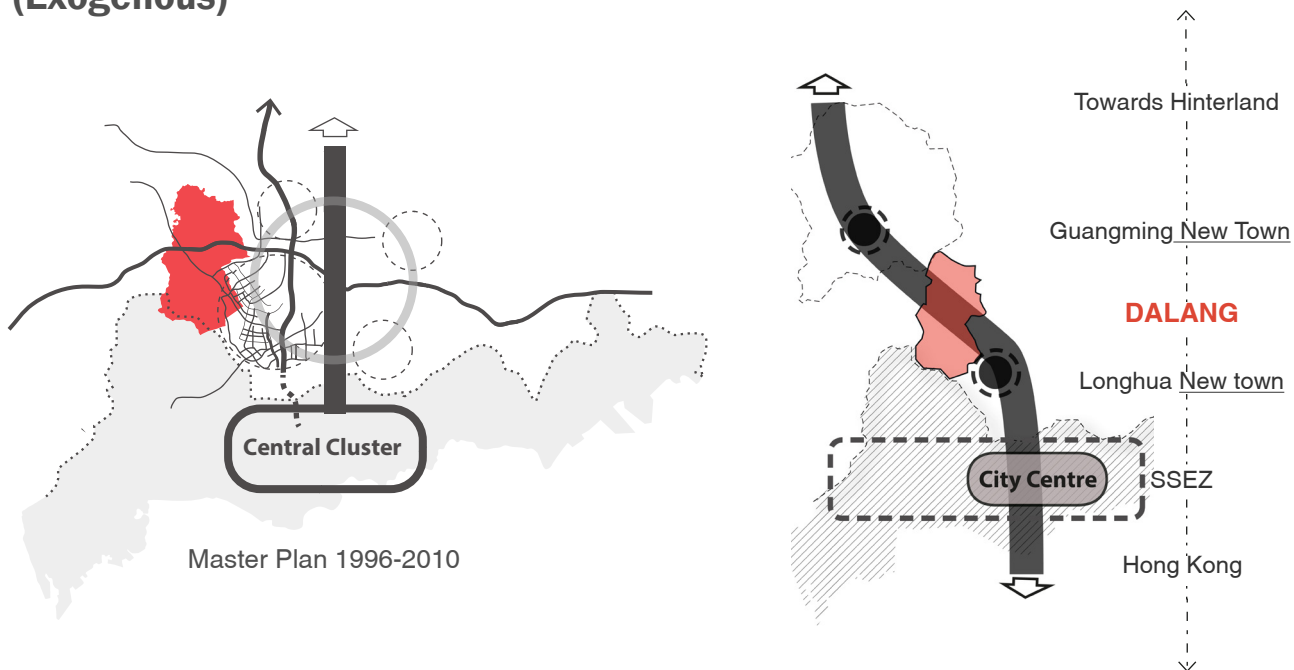
But how will such as tissue evolve ?

## (Endogenous)

Given that is a low quality industrial tissue, will it result in complete tabula rasa?

What of local population, **<50%** work in factories; **98%** landless workers

## (Exogenous)



**Q1** What are the tools required to deal with this restless landscape?

**Q2** How can infrastructure which has been the main agent of urban change mainly organizing flow, instead be used to form a spatial framework for future development

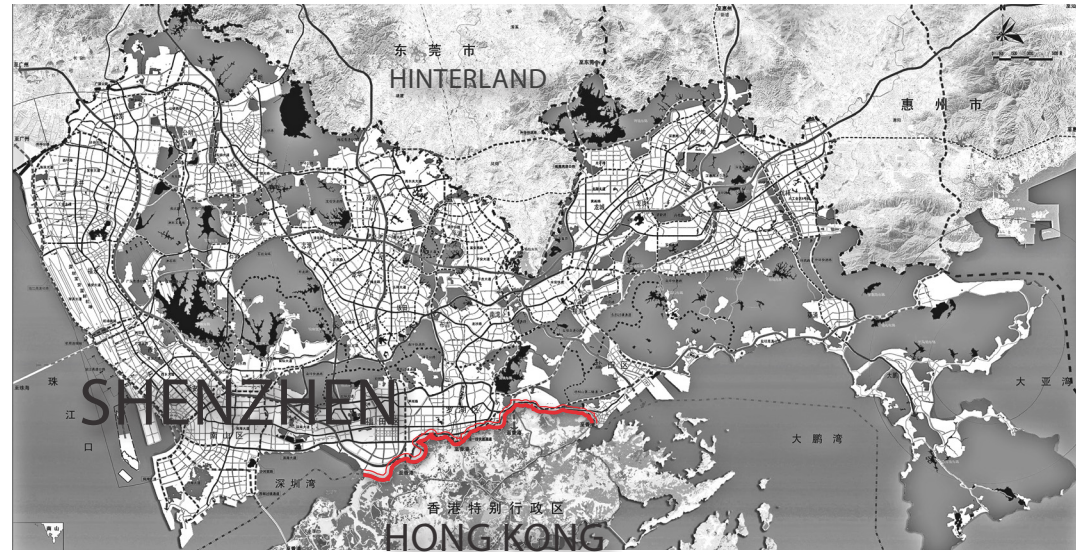


# SHENZHEN

1st SSEZ in post reform China



Located Next to Hong Kong



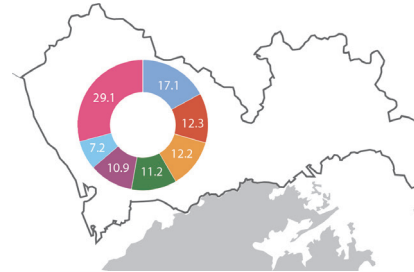
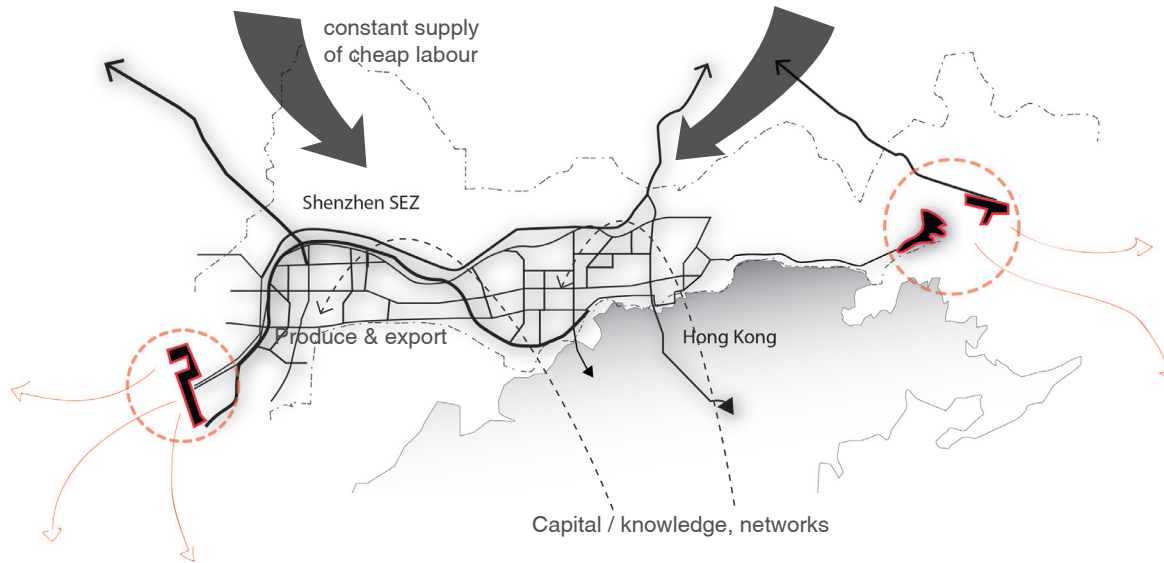
Pearl river delta



# BUILT AS AN EXPORT PROCESSING ZONE

'95% population **born elsewhere**'

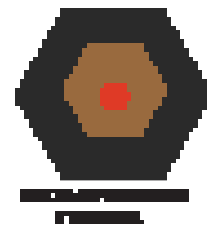
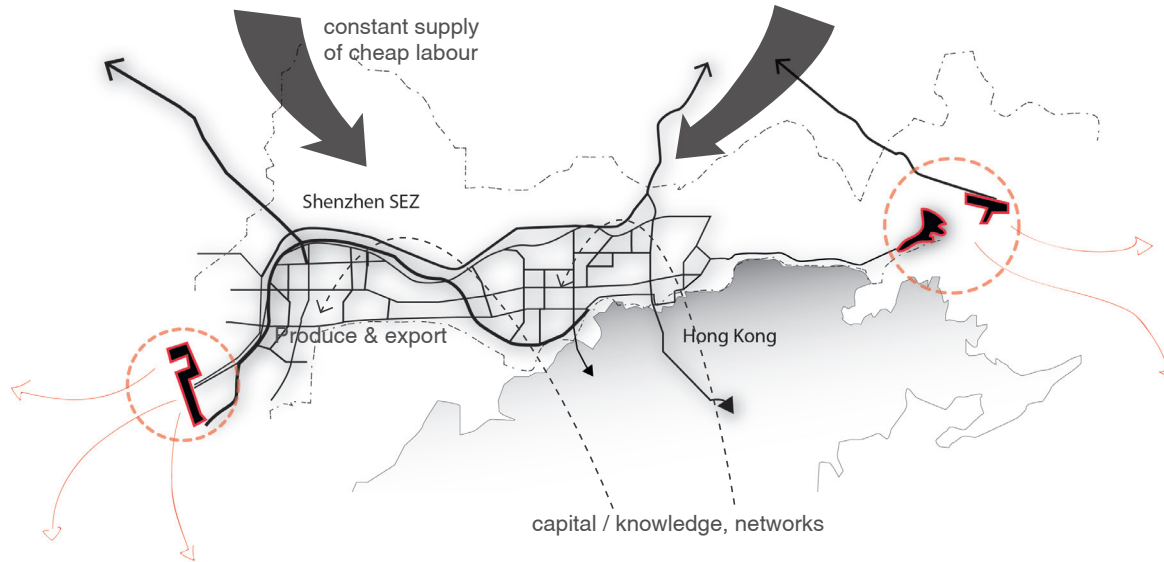
80% migrants now



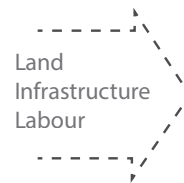


# BUILT AS AN EXPORT PROCESSING ZONE

## PRO-GROWTH coalition



Local City Government  
(Amphibious)



foreign investors

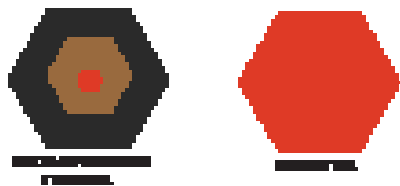
# NATURE OF URBAN DEVELOPMENT

**Flexibility** has been key to rapid development

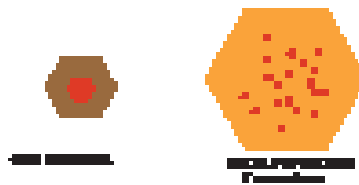


Infrastructure as frame to trigger 'INFILL' urban development

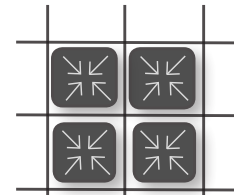
As 'FILL IN' laid to organize, control and regulate development



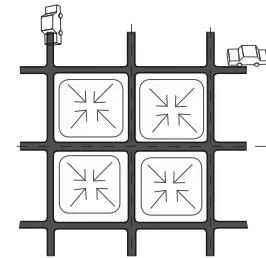
Formal



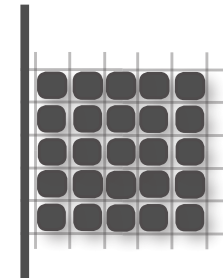
Informal



Large blocks



AUTO-based

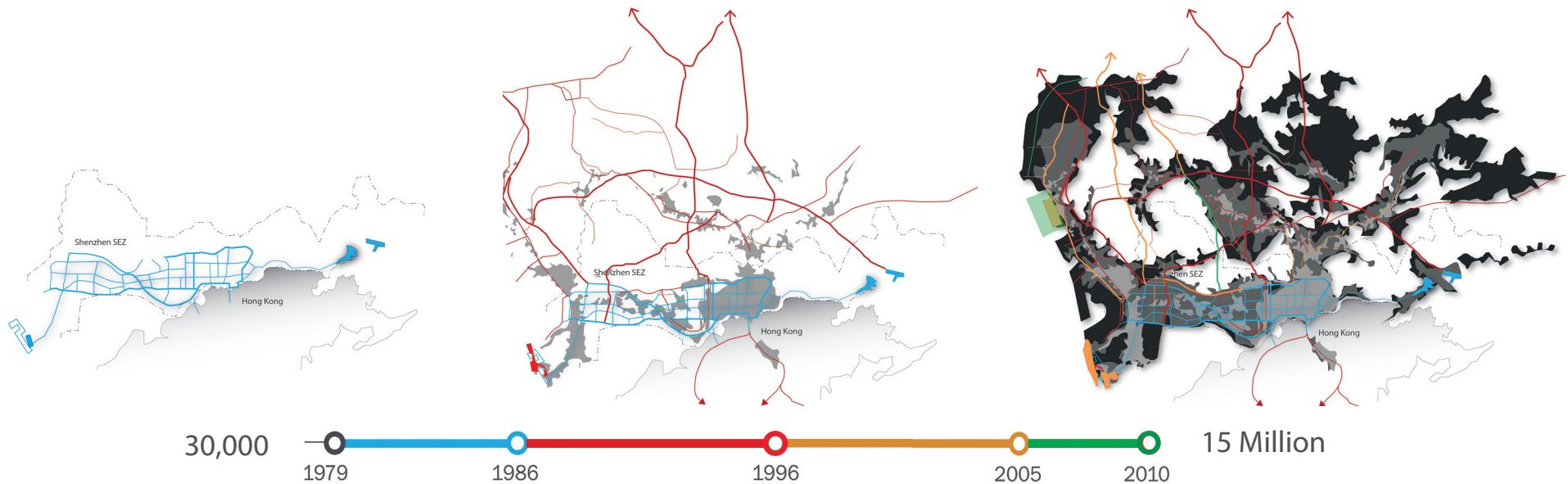


Islands structured by highways and express-ways into clusters

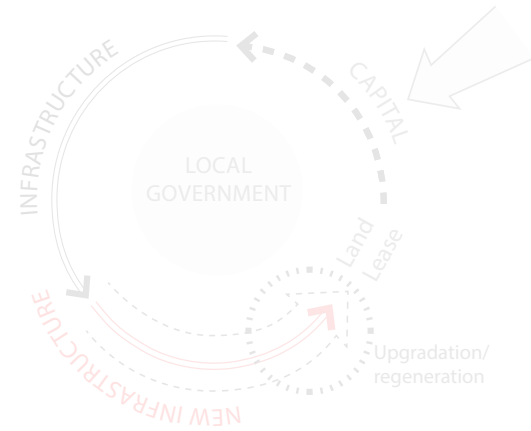
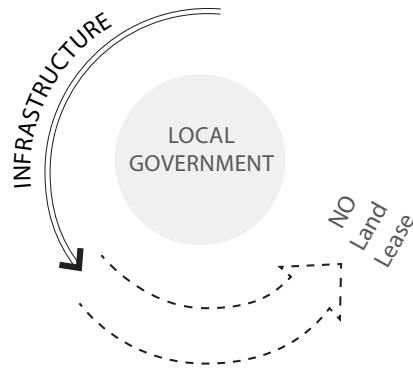
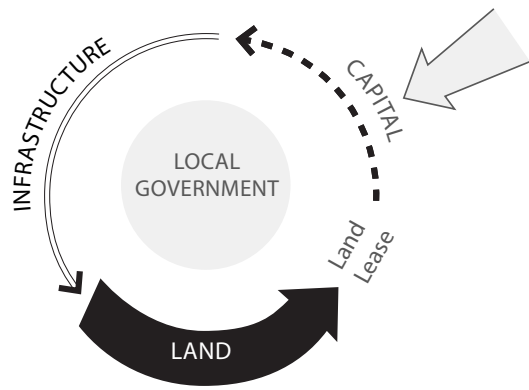


## NATURE OF URBAN DEVELOPMENT

- Growth rate **27%** for first 26 years
- Pop. growth **30,000 to 15 million**
- Area urbanized **850/1000km<sup>2</sup>**



# NEED FOR ECONOMIC RESTRUCTURING



Rapid urbanization → Land crunch

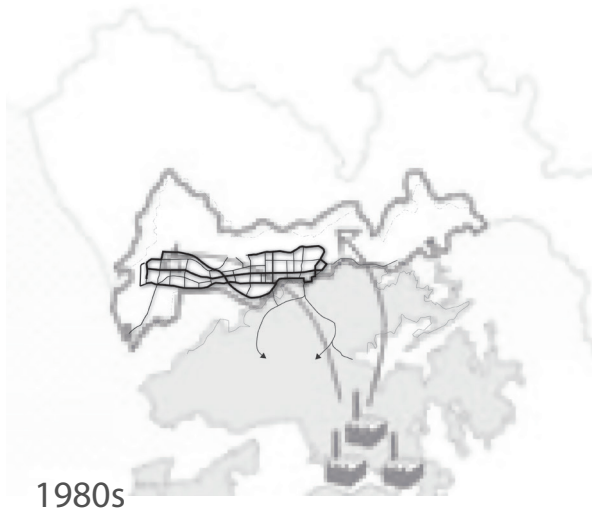
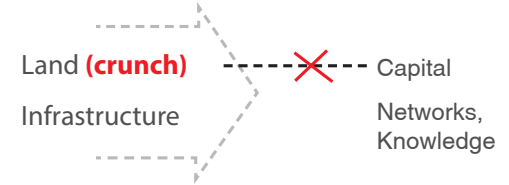


# NEED FOR ECONOMIC RESTRUCTURING

## Factories Moving out



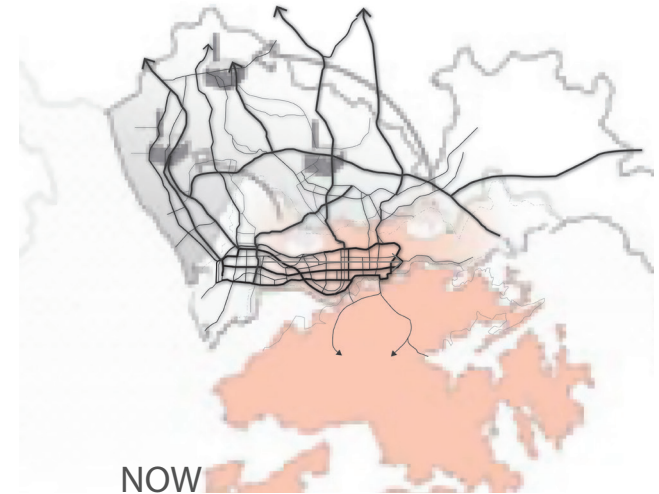
## No room, No land lease = No Money



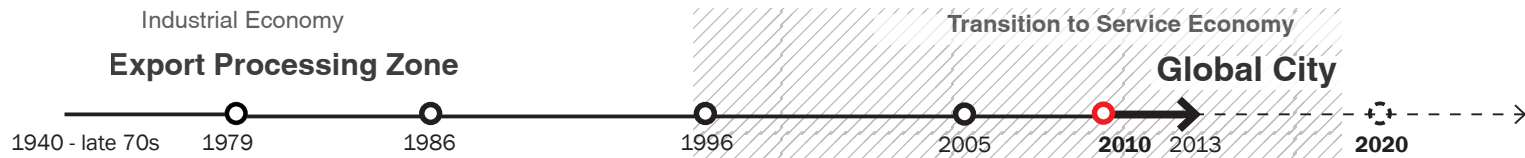
Factories move from Hong Kong to Main land lured by cheaper land and labour costs



Rural industrialization  
 Industries move from SEZ to periphery



Industries moving out of Shenzhen  
 Shenzhen transitions to Global City

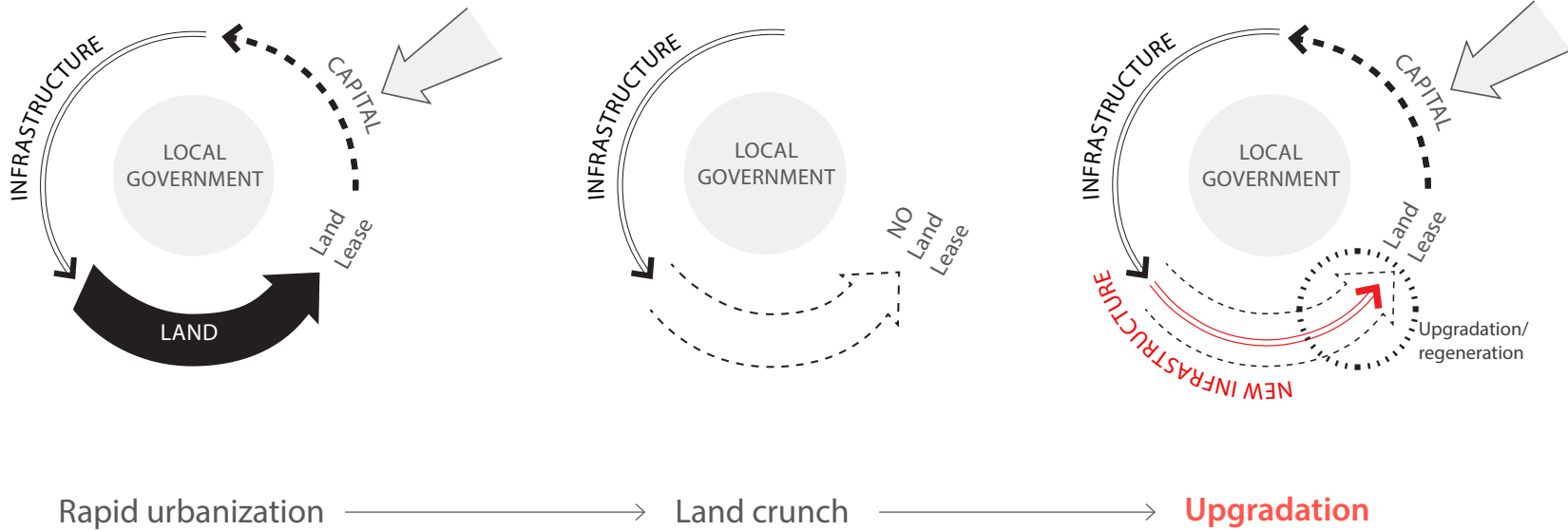


# TRANSITION

## On-going upgradation

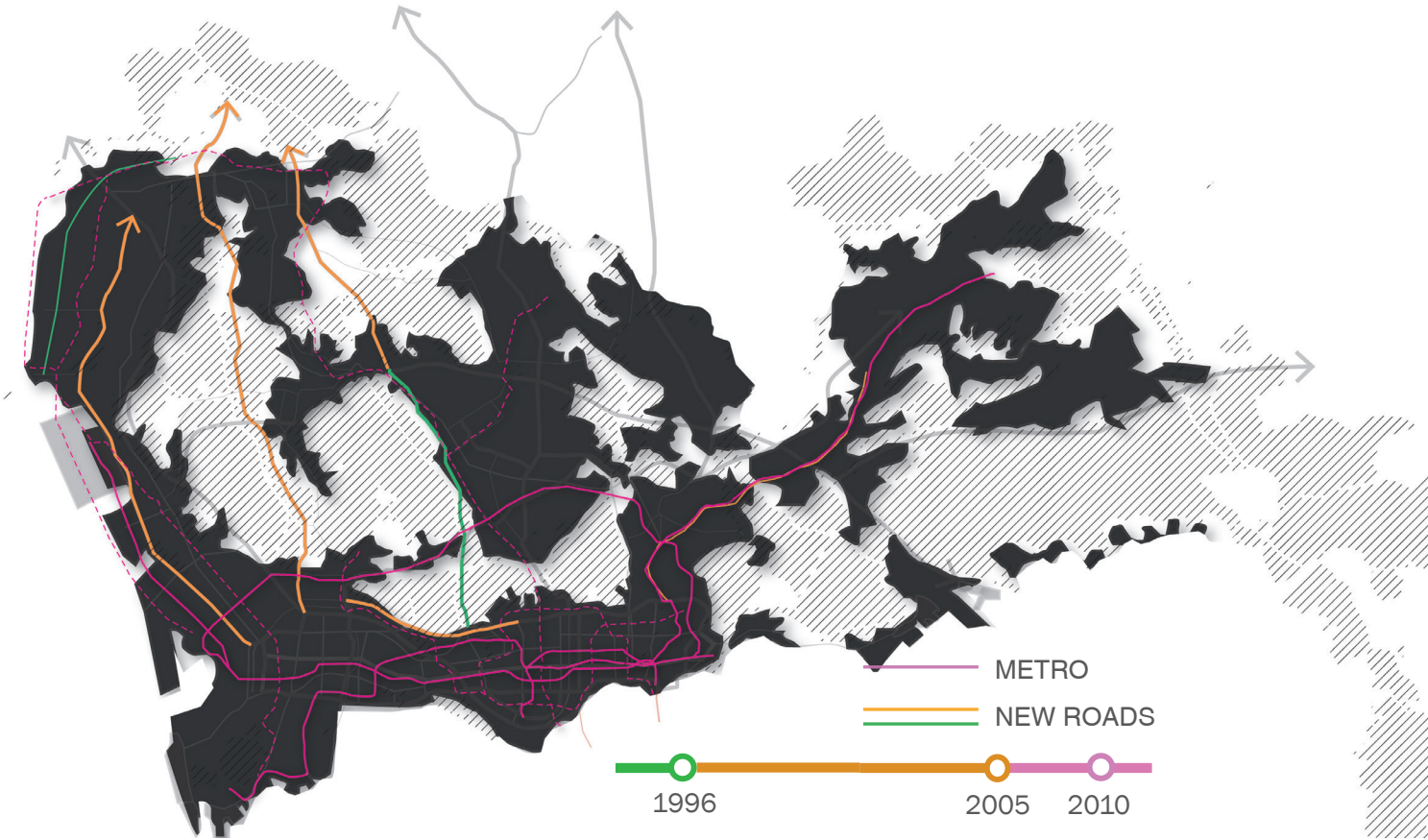
Main strategic focus:

“Planning in Shenzhen today is increasingly focused on consolidation of the urban fabric, spatial integration of urban districts and a multi-layered development of infrastructure.” (Zacharias & Tang, 2010)



# ON-GOING UPGRADATION IN THE REGION

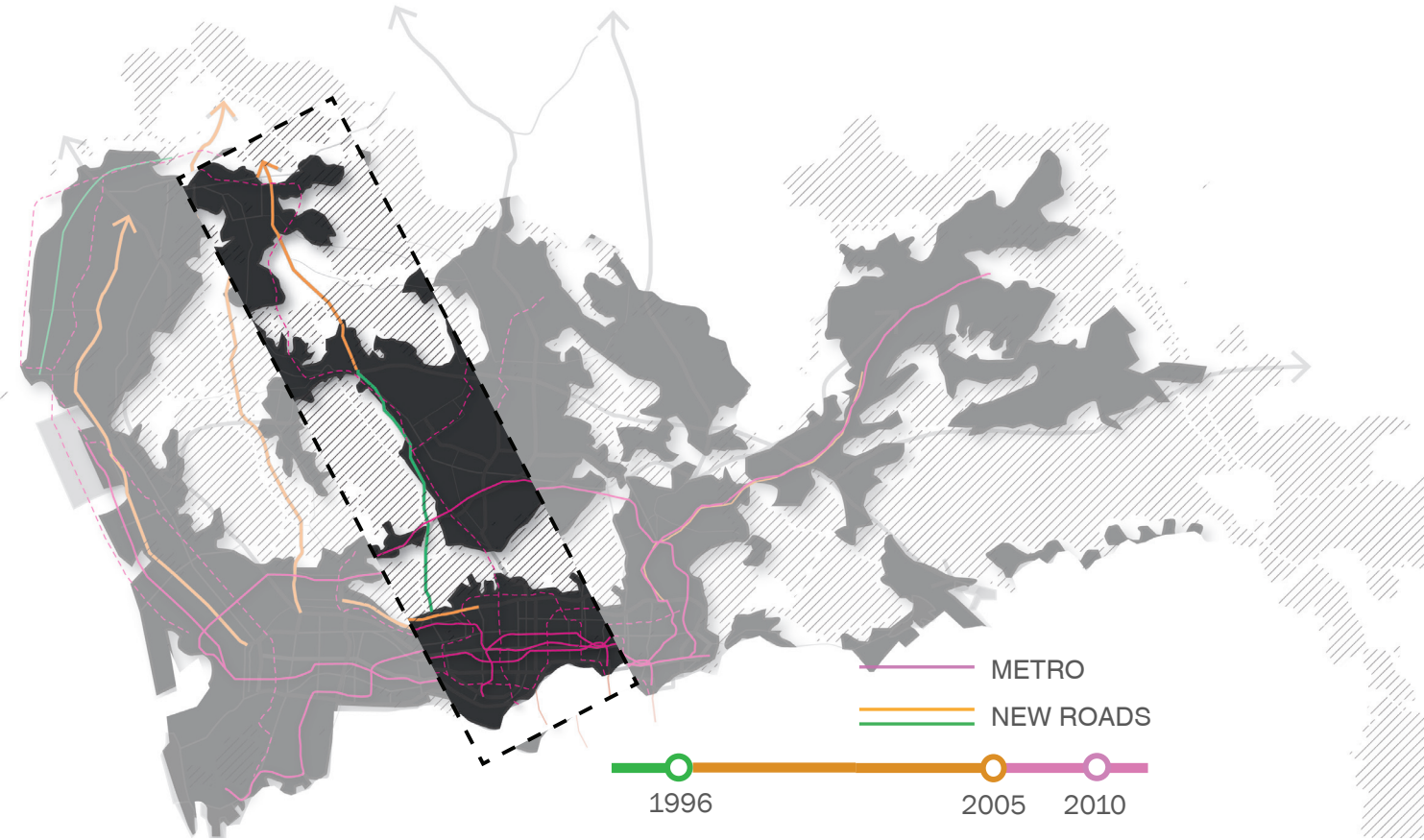
## New infrastructure





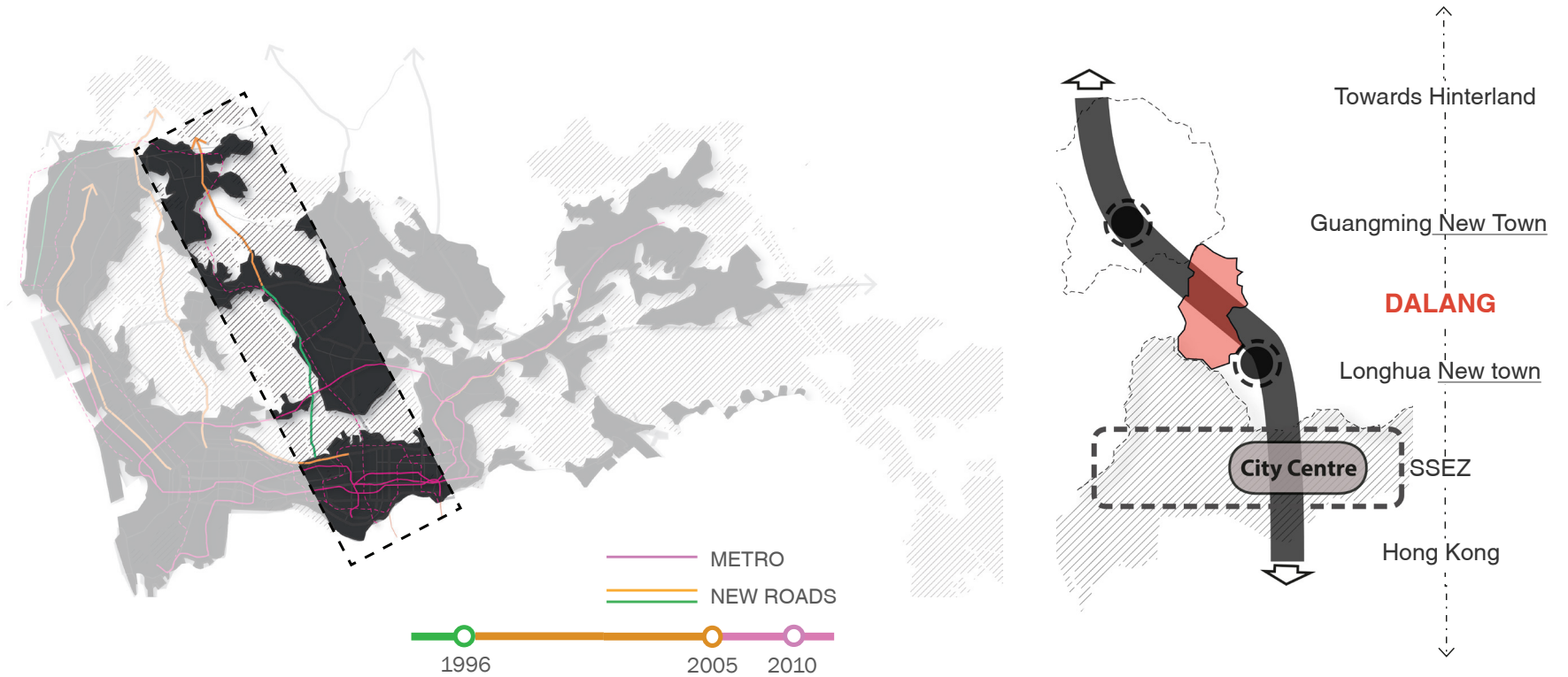
# ON-GOING UPGRADATION IN THE REGION

## New infrastructure



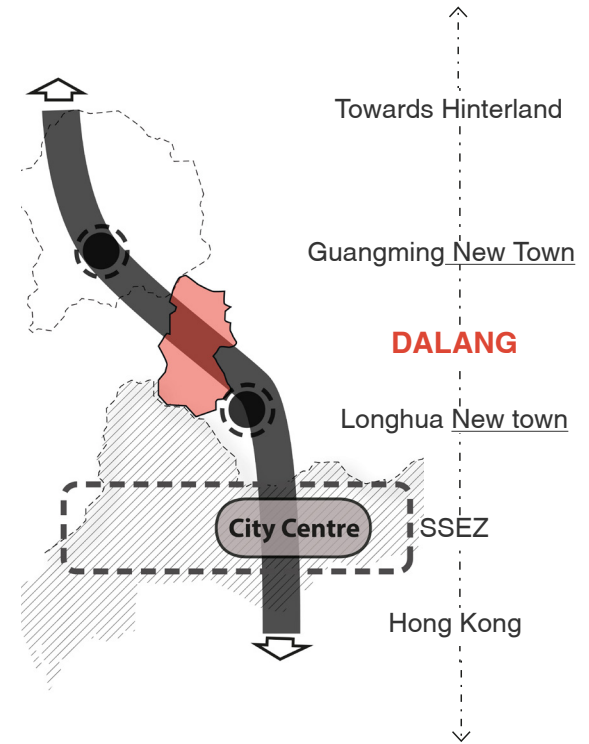
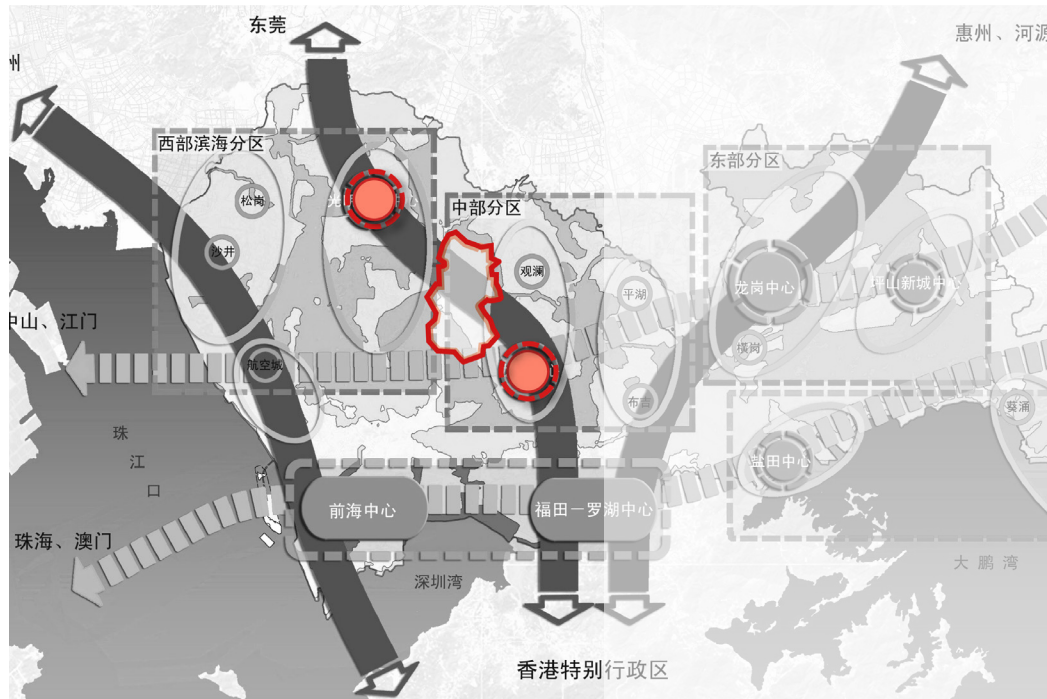
# ON-GOING UPGRADATION IN REGION

New infrastructure passing through Dalang changing its regional position



# ON-GOING UPGRADATION IN REGION

In line with central axis developmental corridor



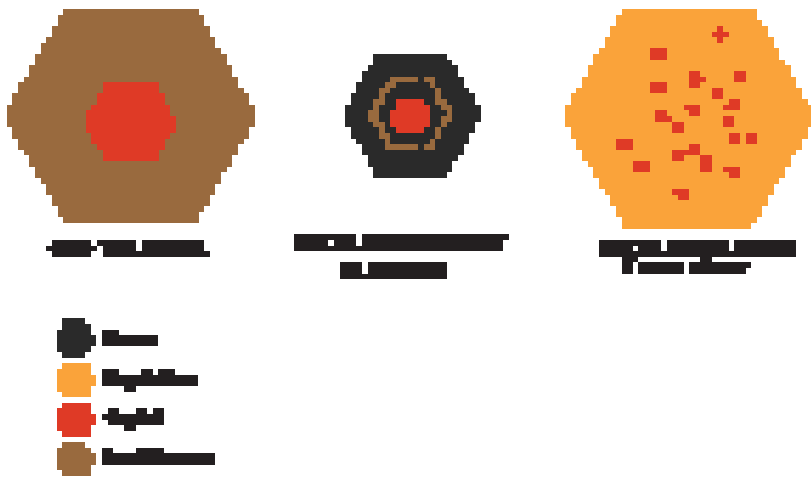




## ANALYSING DALANG

## Rural Urbanization

Most land owned by old villagers



Result: Haphazard urban development  
Especially in mixed use areas where factories and urban villages are developed together by the old villagers turned developer



## Rural Urbanization



Factories and dormitories



Urban Villages

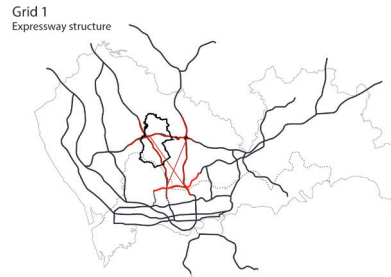


# INDUSTRIAL URBAN STRUCTURE

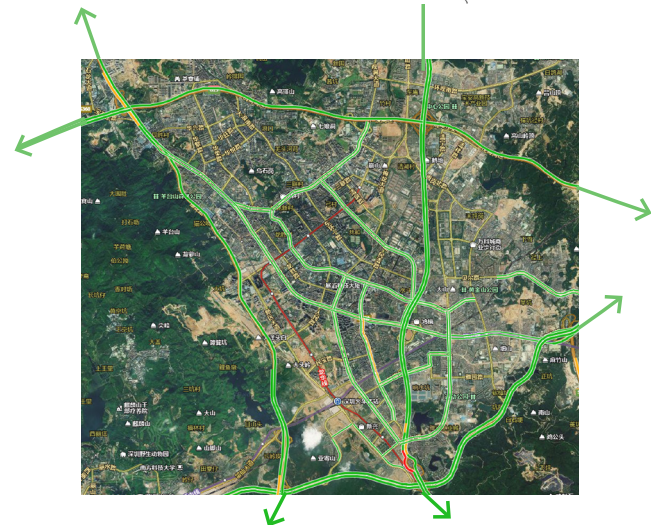
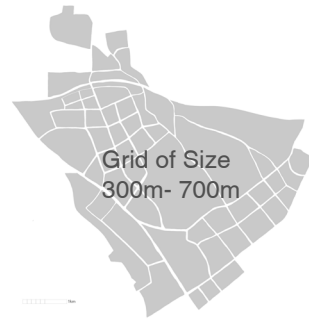
## Produce and get it out!

Large plots for maximum flexibility  
Infrastructure laid for efficiency of flow,  
Maximising access to large Industrial plots.

Large Industrial Plots



Autonomous Fragments



## INDUSTRIAL URBAN STRUCTURE

**Lack of public space** (inherent with development as manufacturing town)  
Over emphasis of flow

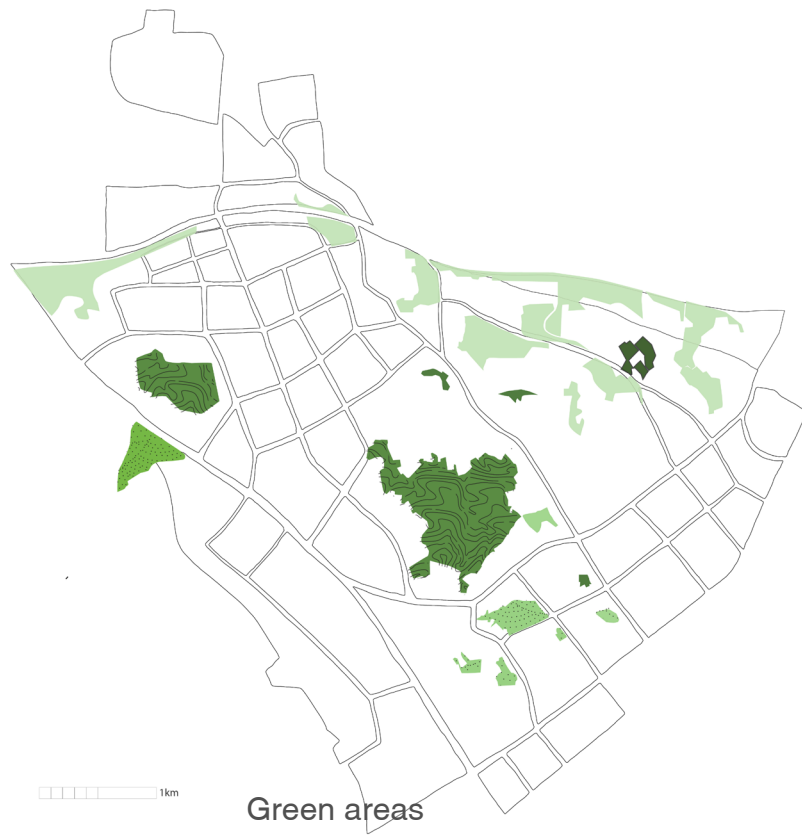






# INDUSTRIAL URBAN STRUCTURE

## Lack of integration of green and blue landscape

No attention to incorporating green areas and open space in residential areas.

Even the canal structure a legacy of the former farming landscape lies abandoned and unintegrated with the new built environment.



-  Hilly outcrop
-  Parks
-  Residual Green
-  Clusters of Urban Villages



# INDUSTRIAL URBAN STRUCTURE

Green blue landscape



# UPGRADATION IS REQUIRED

## UPGRADATION PARAMETERS

Source: Centre of Design, Dalang (Urban Research Cell)

- **Regeneration of industrial tissue for new uses**
- **Increasing liveability and diversity**
- **Better connection with region**

### RENEWAL OF INDUSTRIAL TISSUE:

- Redundant factory areas
- Lack of Public facilities (supply and proximity):
  - Recreation, education, health care etc
- Improve quality of built environment to adapt to changing demography  
(Workers getting families\* and changing post-industrial needs)

### SOCIAL ECONOMIC ISSUES:

- Community Integration is low (98% migrants)
- Lack of opportunities to develop life skills
- Developing new Industry

### DALANG IN THE REGION:

- Improve mobility and connection with City centre

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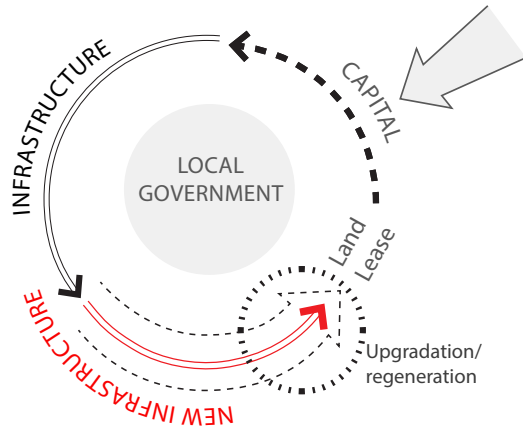
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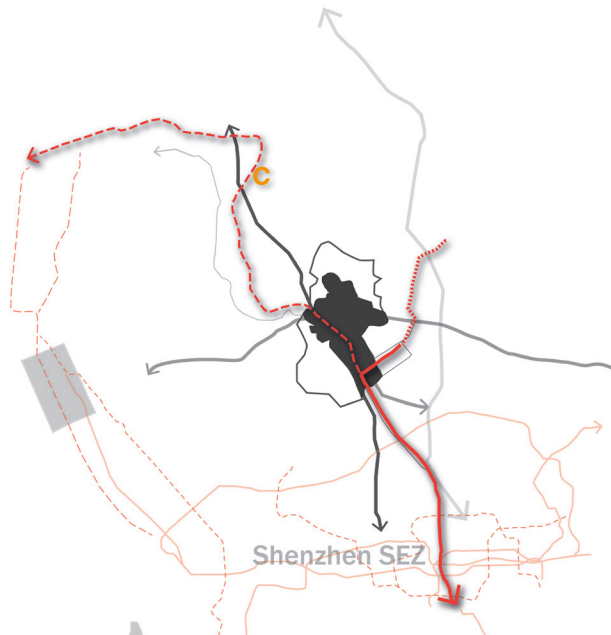


# NEW CONNECTION WITH REGION



## North-South AXIS

- A - 2008-09 **New express-way**
- B - 2010-20 **Proposed new Highway**
- C - 2010-20 **Proposed new Metro**



+

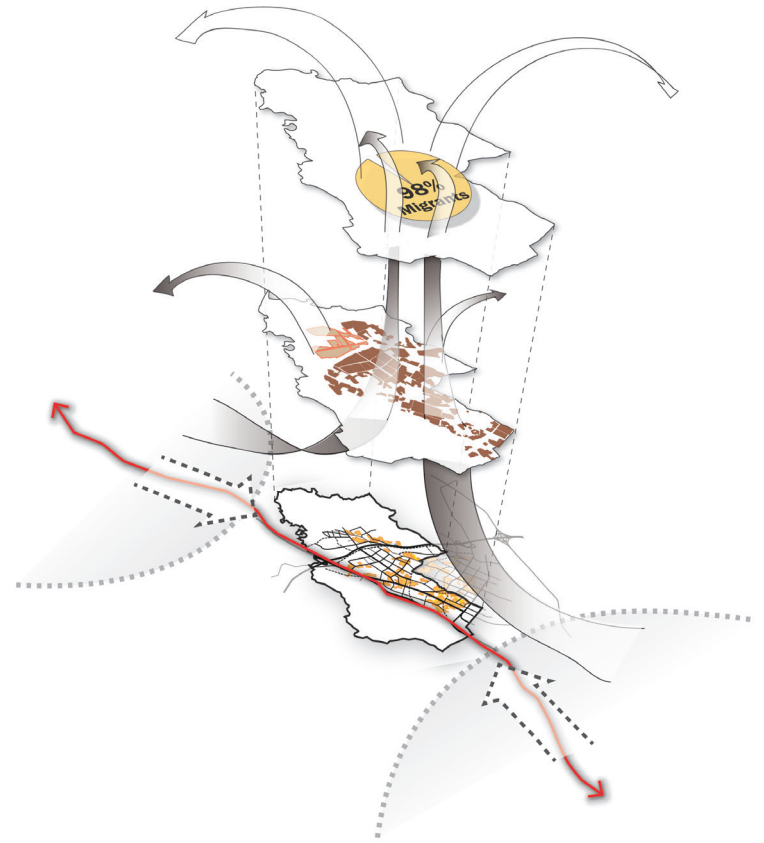
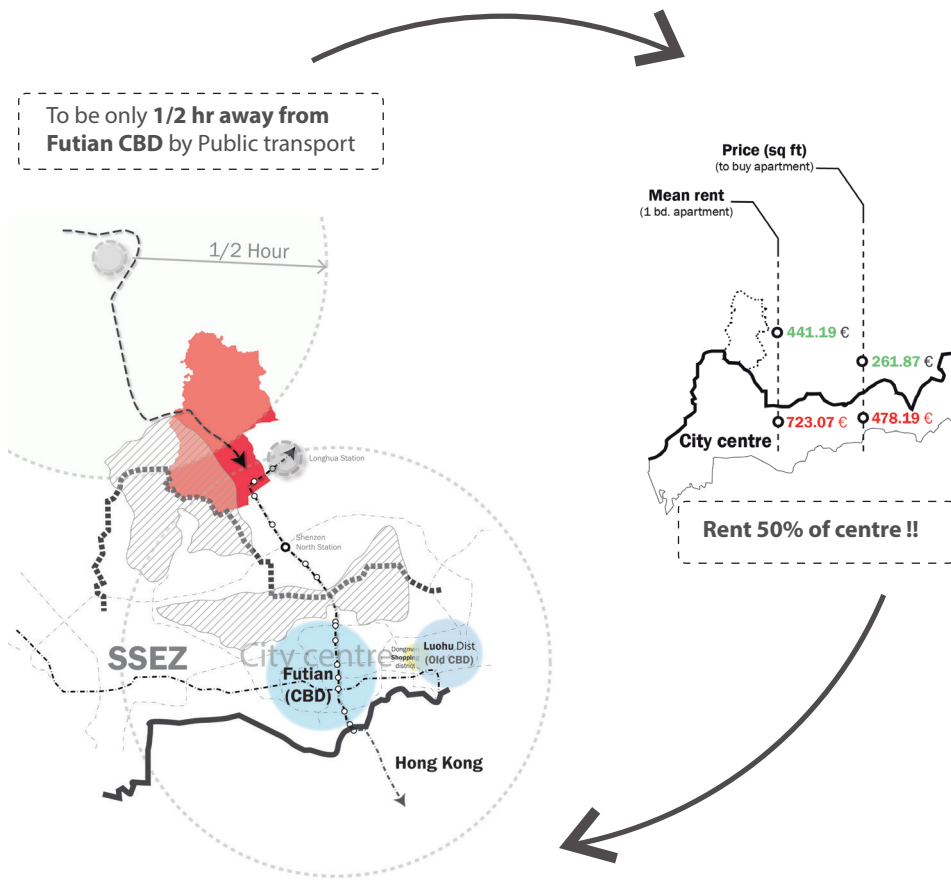


# URBAN CHANGE

## On-going Transition (Endogenous)

- Manufacturing moving out, service industry being attracted.
- Change in a homogeneous demographic from landless low educated migrants as majority population to new higher skilled service workers.

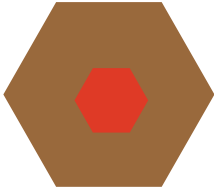
## New potential for the region (Exogenous)



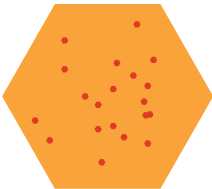
# PROBLEM

Accelerated urban Change & Uncertainty born from it

## STAKEHOLDERS



OLD VILLAGERS



LOCAL POPULATION  
Power of use



DEVELOPERS



LOCAL GOVERNMENT  
PLANNERS

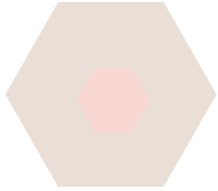
-  Power
-  Population
-  Capital
-  Land Owners



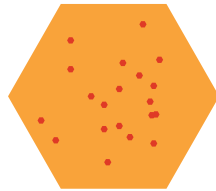
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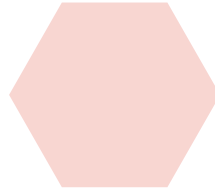
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OLD VILLAGERS



LOCAL POPULATION  
Power of use



DEVELOPERS



LOCAL GOVERNMENT  
PLANNERS

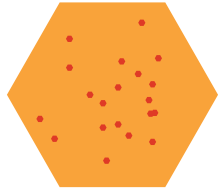
**MIGRANTS**  
Historically marginalized majority

**PLANNERS**  
Facing challenges to balance government ambitions and economic goals vs often conflicting ground reality.

# PROBLEM

Accelerated urban Change & Uncertainty born from it

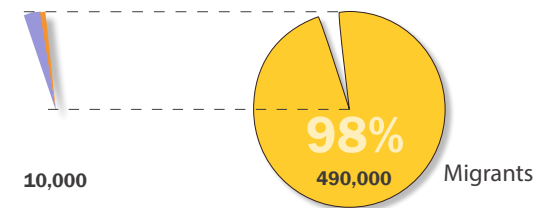
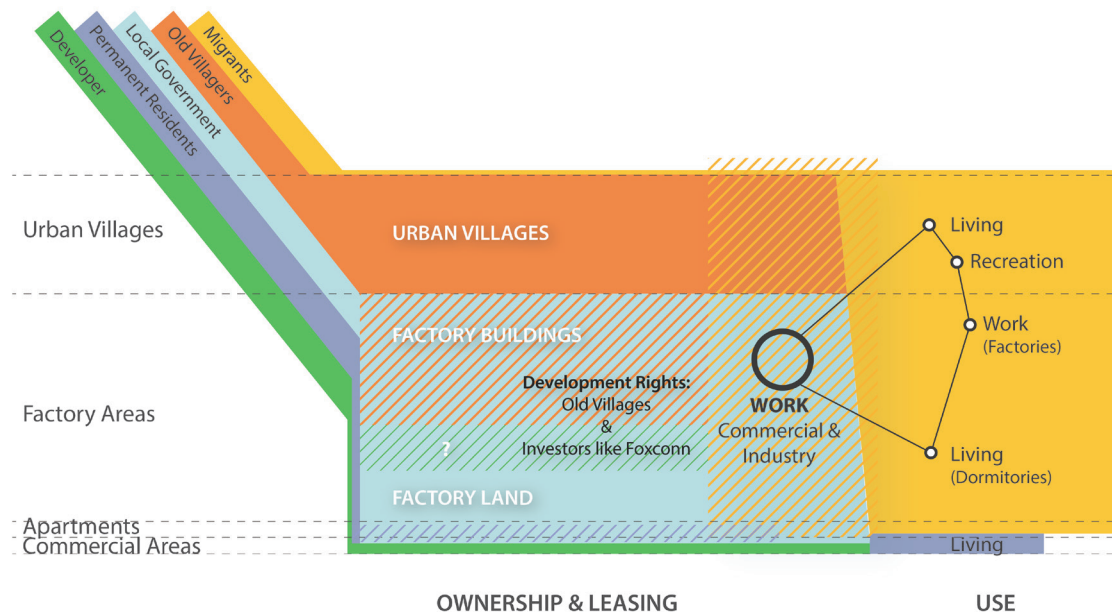
## STAKEHOLDERS



LOCAL POPULATION  
Power of use

### Migrants: Uncertainty of livelihood

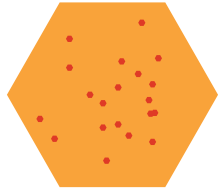
- Lack of skills to participate in service economy
- No land ownership to control future of on-going transformation
- Lack of social policies by government to support them.



# PROBLEM

Accelerated urban Change & Uncertainty born from it

## STAKEHOLDERS



LOCAL POPULATION  
Power of use

### Migrants: Uncertainty of livelihood

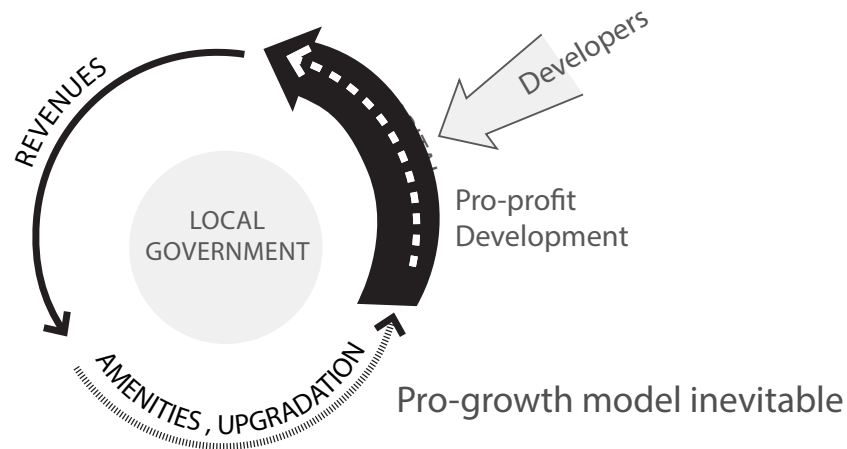
- Lack of skills to participate in service economy
- No land ownership to control future of on-going transformation
- Lack of social policies by government to support them.



LOCAL GOVERNMENT  
PLANNERS

### Planners: How should planning respond?

- How to plan in highly dynamic reality; regulate the rapid speed to transformation on ground?
- Who to plan for with an indeterminate population ?
- How to balance social objectives/needs especially with scarce funds and land crunch forcing pro-profit strategies.



### RENEWAL OF INDUSTRIAL TISSUE:

- Redundant factory areas
- Lack of Public facilities (supply and proximity):
  - Recreation, education, health care etc
- Improve quality of built environment to adapt to changing demographics (Workers getting families\* and changing post-industrial needs)



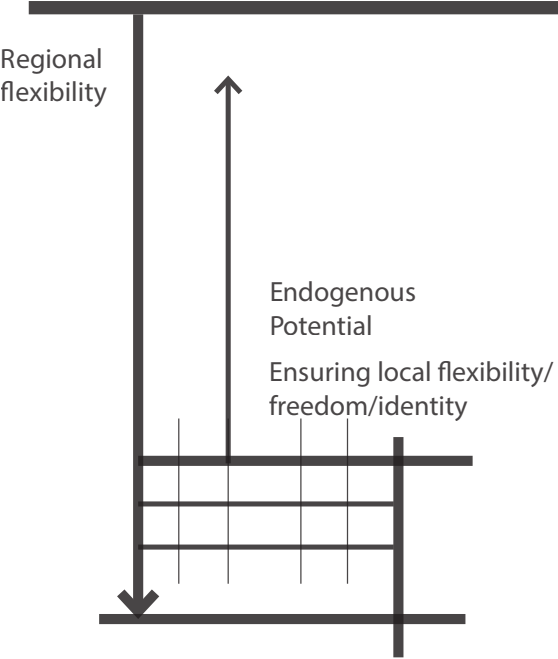
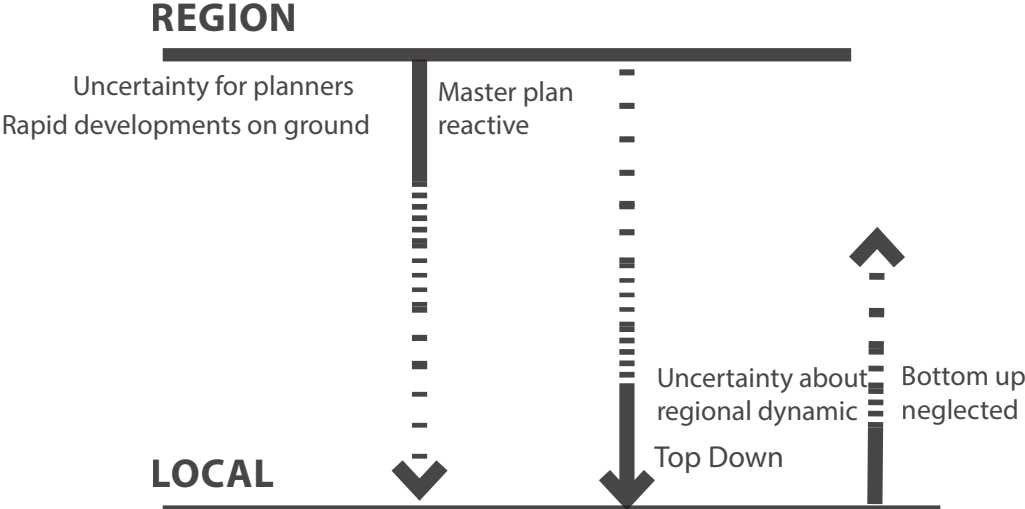
### SOCIAL ECONOMIC ISSUES:

- Community Integration is low (98% migrants)
- Lack of opportunities to develop life skills
- Developing new Industry



# POSITION

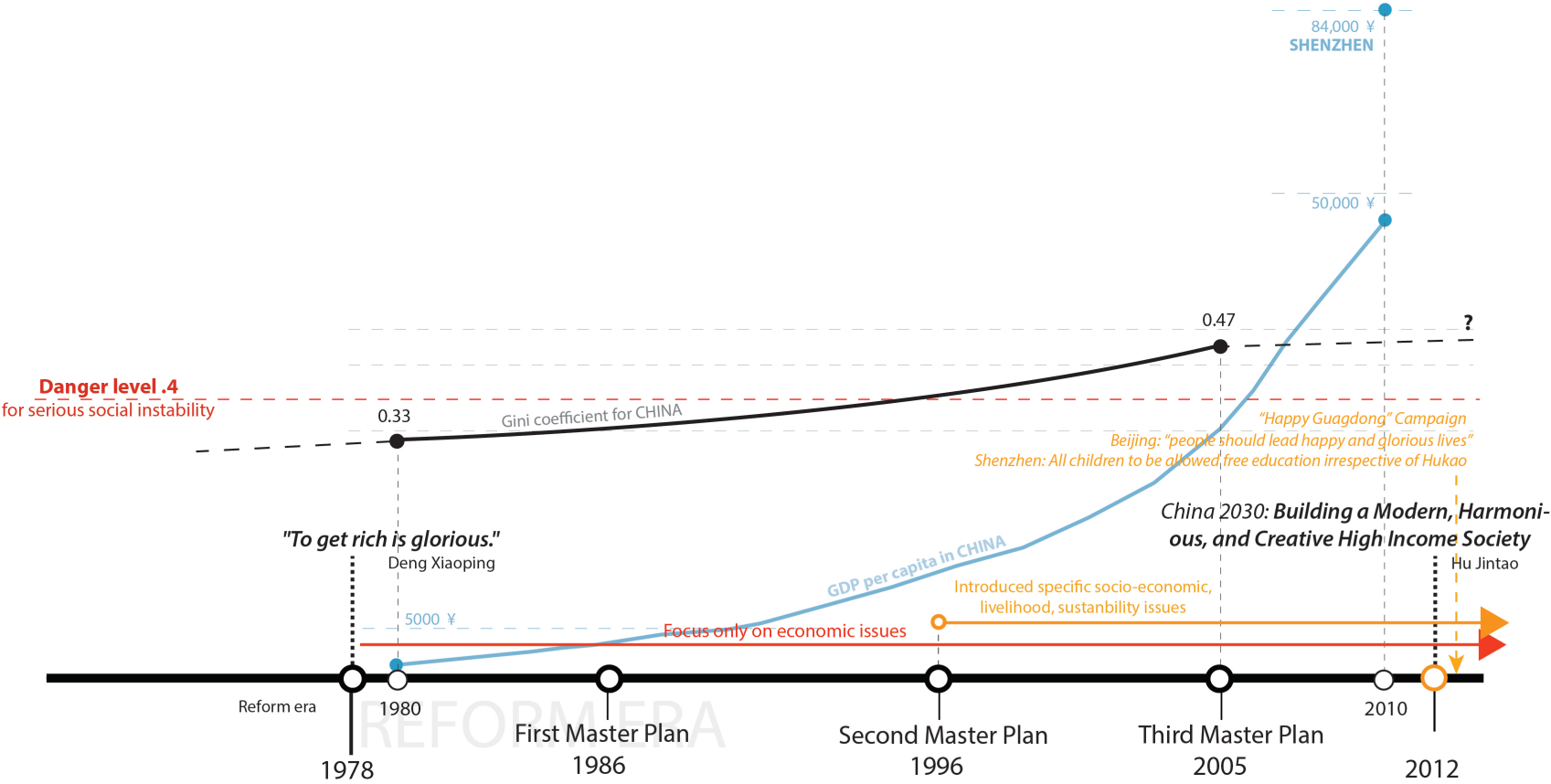
## LOCAL SUB-DISTRICT PLANNER



# AIM

## Accelerated urban development being the condition characteristic of Shenzhen

In the light of unbalanced development and deep inequalities and marginalization that has been synonymous with development in Shenzhen as an inevitable outcome.







# RESEARCH QUESTION

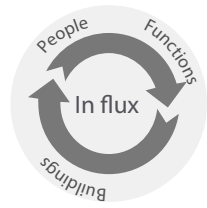
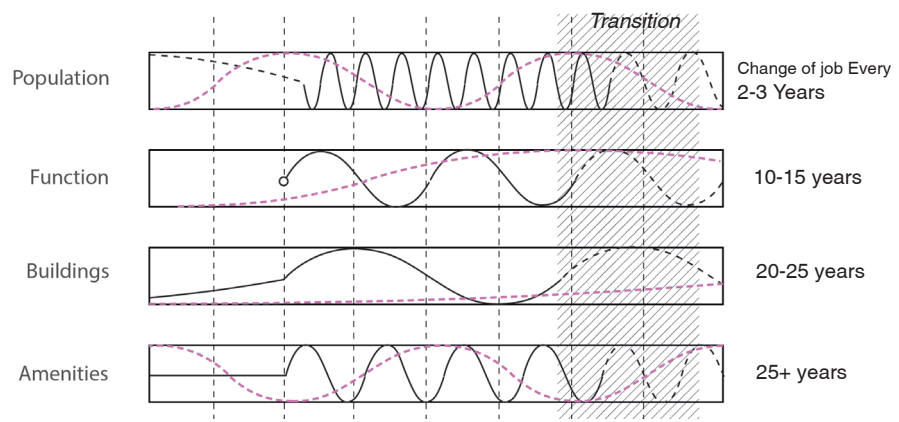
In the 'Restless Landscape' (Lin & Wei, 2002) where people, functions, social structure are in flux. What are the planning tools required to build an inclusive, yet flexible framework for future development of Dalang in context of uncertainty that allows for an evolutionary rather than revolutionary model to future planning?

## ANALYTICAL FRAMEWORK

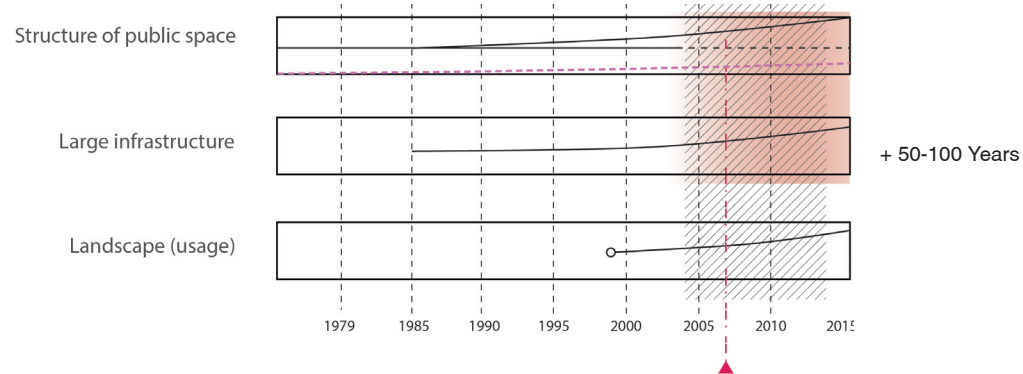
Evolution of the restless landscape

- 1** ELEMENTS STRUCTURING THE LANDSCAPE.  
As city evolves - 1) Which will stay on; 2) Should stay on 3) Which will change
- 2** Identifying and investing Public/ collective value
- 3** DEVELOPING RULES TO DEFINE SPATIAL FRAMEWORKS  
To supervise open development  
Allowing freedom/opportunity for change  
Allow for initiatives, spontaneity  
Flexibility ~~Rules~~ Chaos/Uncertainty

# TOOLS

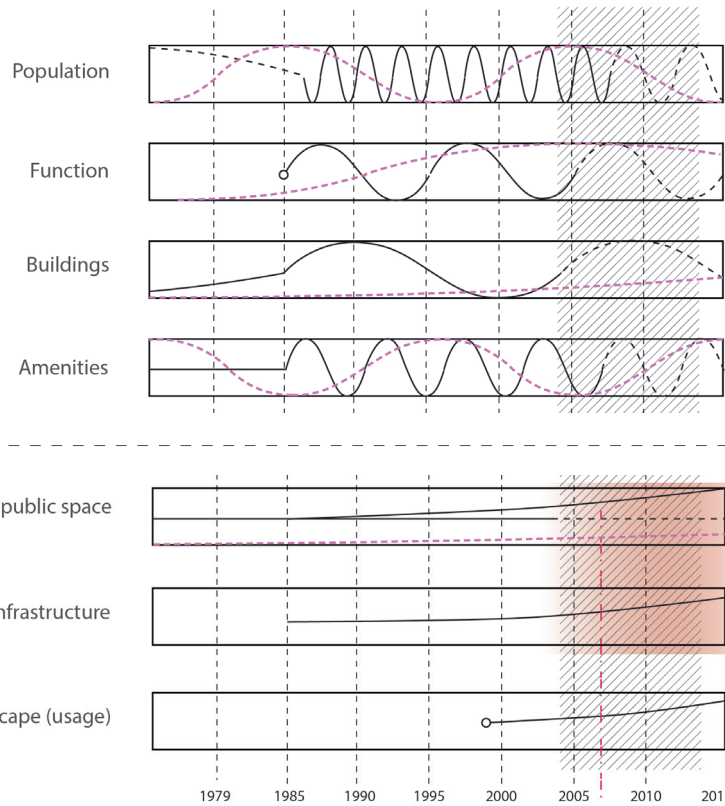


**DYNAMIC**



**'FIXED'**  
(Relatively)

# TOOLS



DYNAMIC

FIXED

Private Domain  
Future dictated by  
market forces

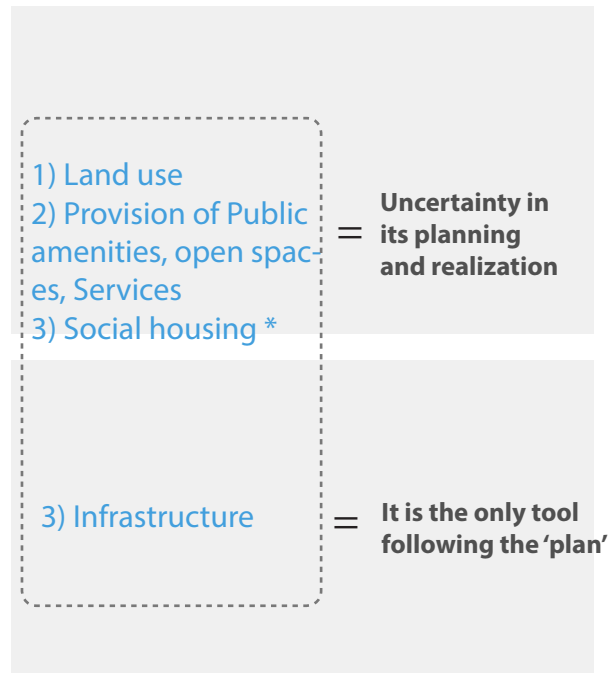
Inevitable pro-profit  
development\*  
+  
Land crunch



Public Domain



## EVALUATING PLANNERS' TOOLS



# VISION FOR DALANG



Legend as per document given by local planners

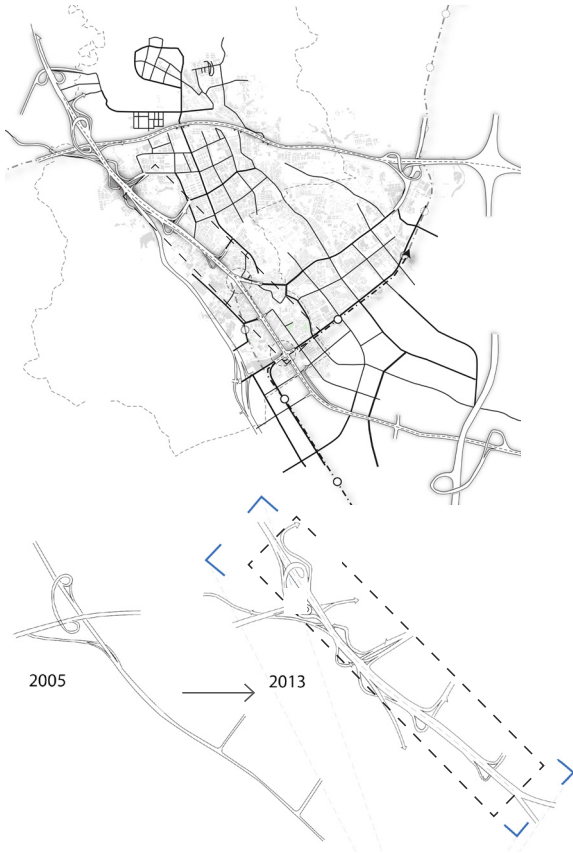
- Culture and Living
- Craft and sports
- Programs related to green environment
- Industry



# EVALUATING INFRASTRUCTURE AS A TOOL

## NEW INFRASTRUCTURE BEING PROPOSED

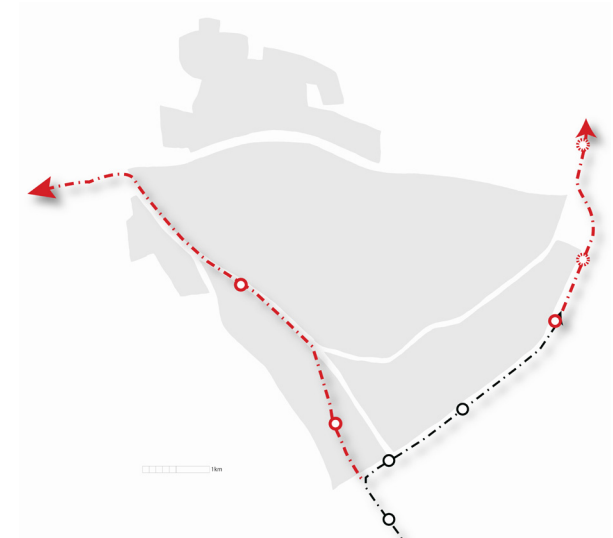
Continuing the technocratic approach



Changes in morphology of road in its meeting with local fabric to prioritise a specific direction of flow



Proposed road infrastructure merely completing master plan of 1990. Reinforcing dependency on car



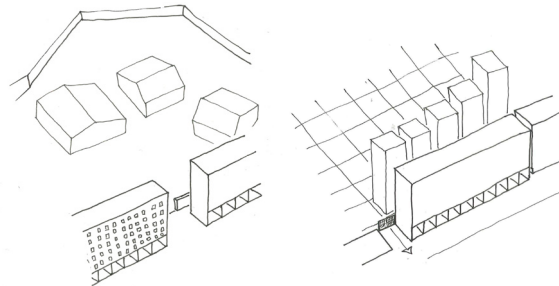
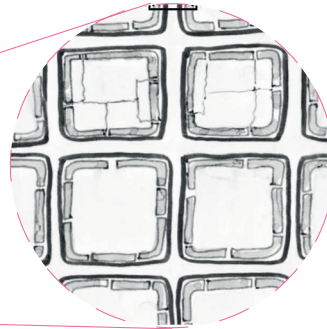
Proposed Metro line: despite being public transport, it is aligned with highways carrying regional flow rather than catering to Dalang as a place

- New infrastructure proposed in Current Land Use Plan
- Existing Roads

## REVELEVATION FROM GROUND SURVEY

### Infrastructure as generator of urban form

*Paul Rudolph - "... urban thorough-ways and city transport systems of all kinds should be recognized as a major generator of urban form, as meaningful - even fundamental - elements of urban design"*



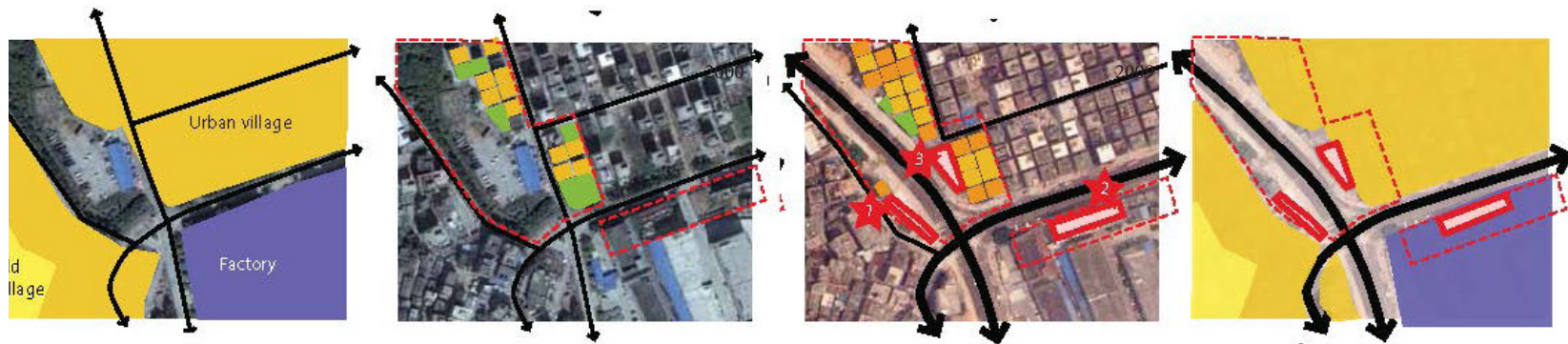
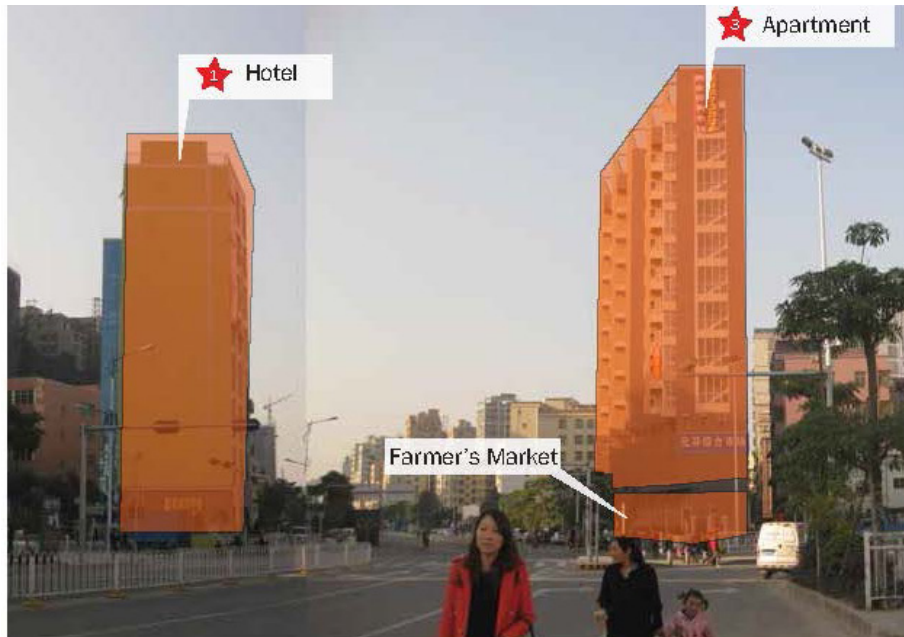
Congregation of city functions  
Edges of block - fringes of urbanity

These perimeter building key  
to entrepreneurial ability

- Restaurants and markets
- Businesses
- Clusters of micro industries

REVELEVATION FROM GROUND SURVEY

Places of hybridity



Place of hybridity in a rather mono-functional and fragmented landscape



## REVELEVATION FROM GROUND SURVEY

### Inadvertent Public Spaces

In seeing infrastructure '...not as a tube but as space'

*"Infrastructures of mobility are prime candidates for becoming public spaces, or, better yet, public forms that are true and proper to the exigencies and demands of a modern urban society." (D'Hoog, 2010)*



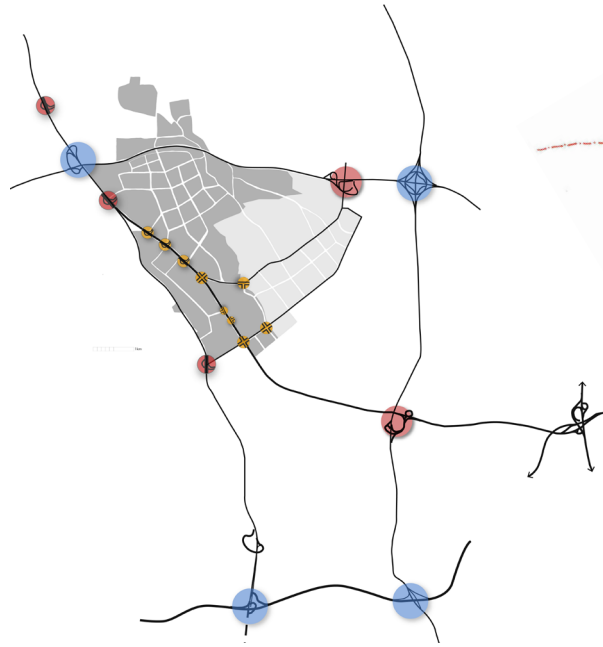


# Current and future structuring to be greatly determined by infrastructure connections



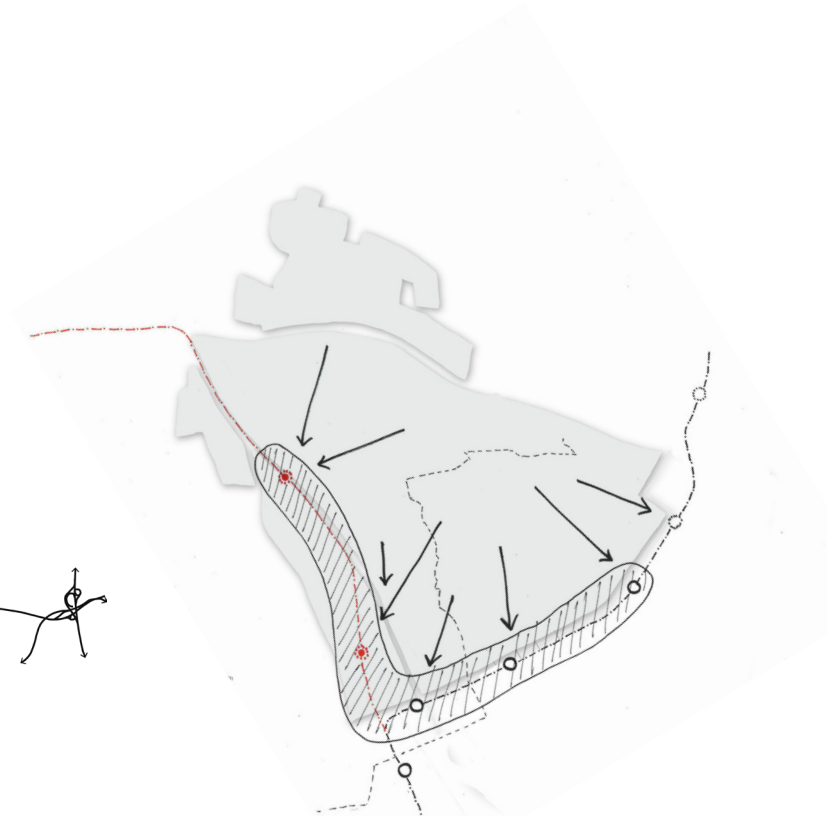
Lines of Flow

## PRIVATE TRANSPORT



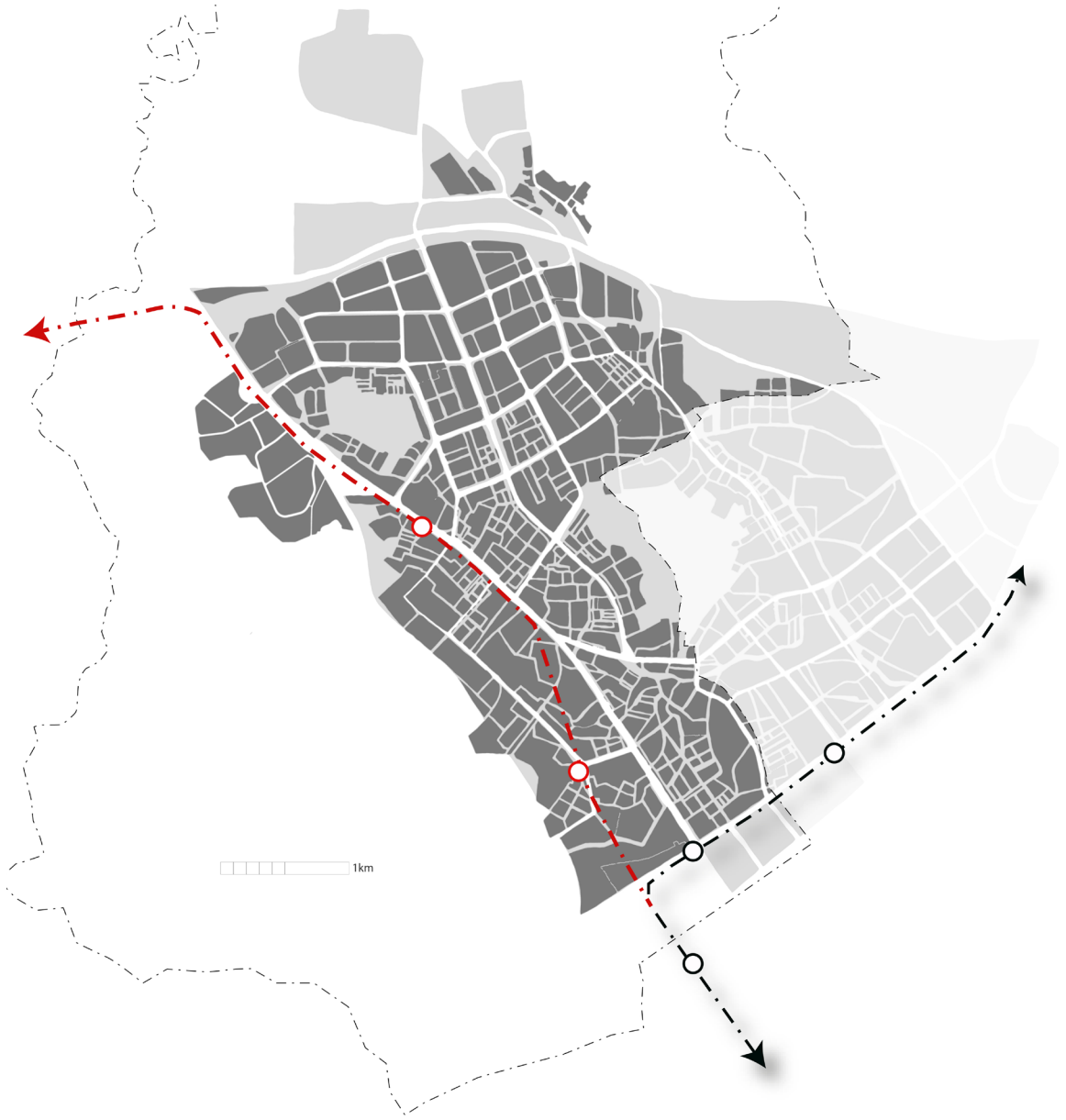
Points of Entrance & Exit  
Points of Global/local exchange

## PUBLIC TRANSPORT



## PROJECT APPROACH

- Location of the metro
- Path of Metro Line
- Regional Node in Local Tissue
- Making of a Spatial Framework

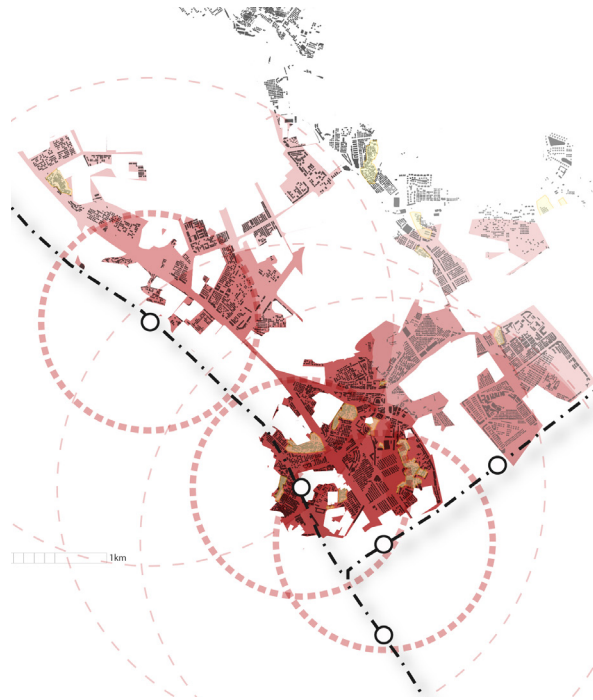


## LOCATION OF METRO Public access node to regional network in a local tissue

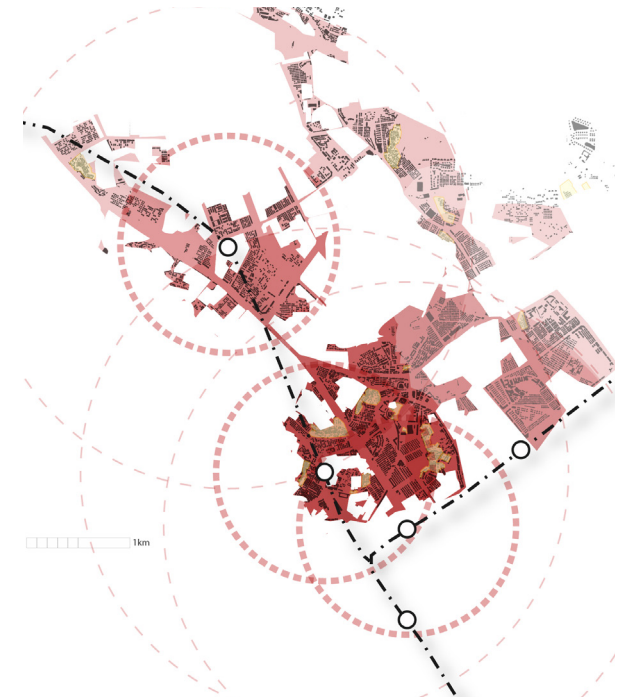
Accessibility: Walkability (1600km range, 800m radius of zone)



ORIGINAL  
PROPOSED BY GOVERNMENT



ONE SIDED



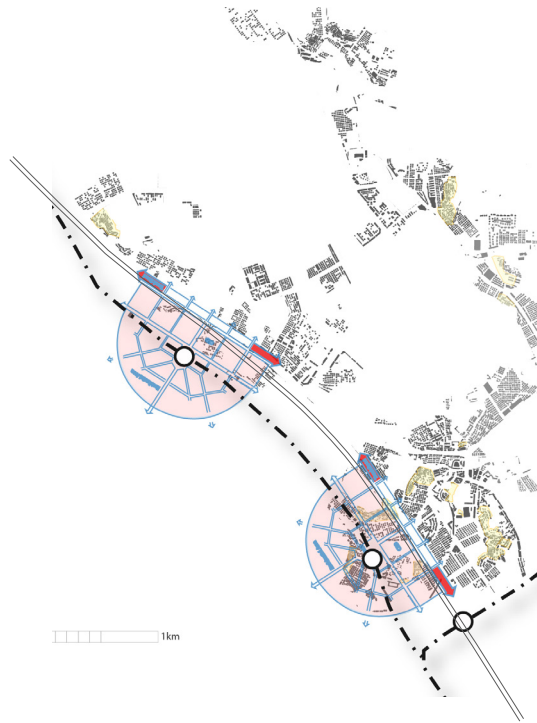
FLIP

## LOCATION OF METRO Public access node to regional network in a local tissue

### Development potential: TOD model



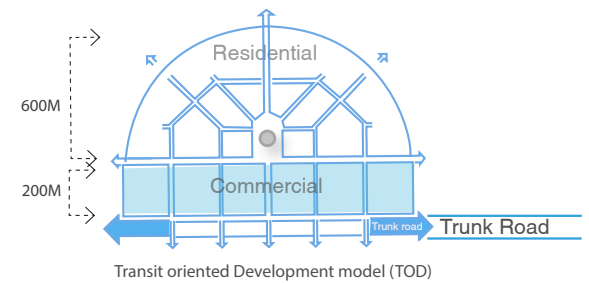
Original  
Proposed by government



One sided



Flip

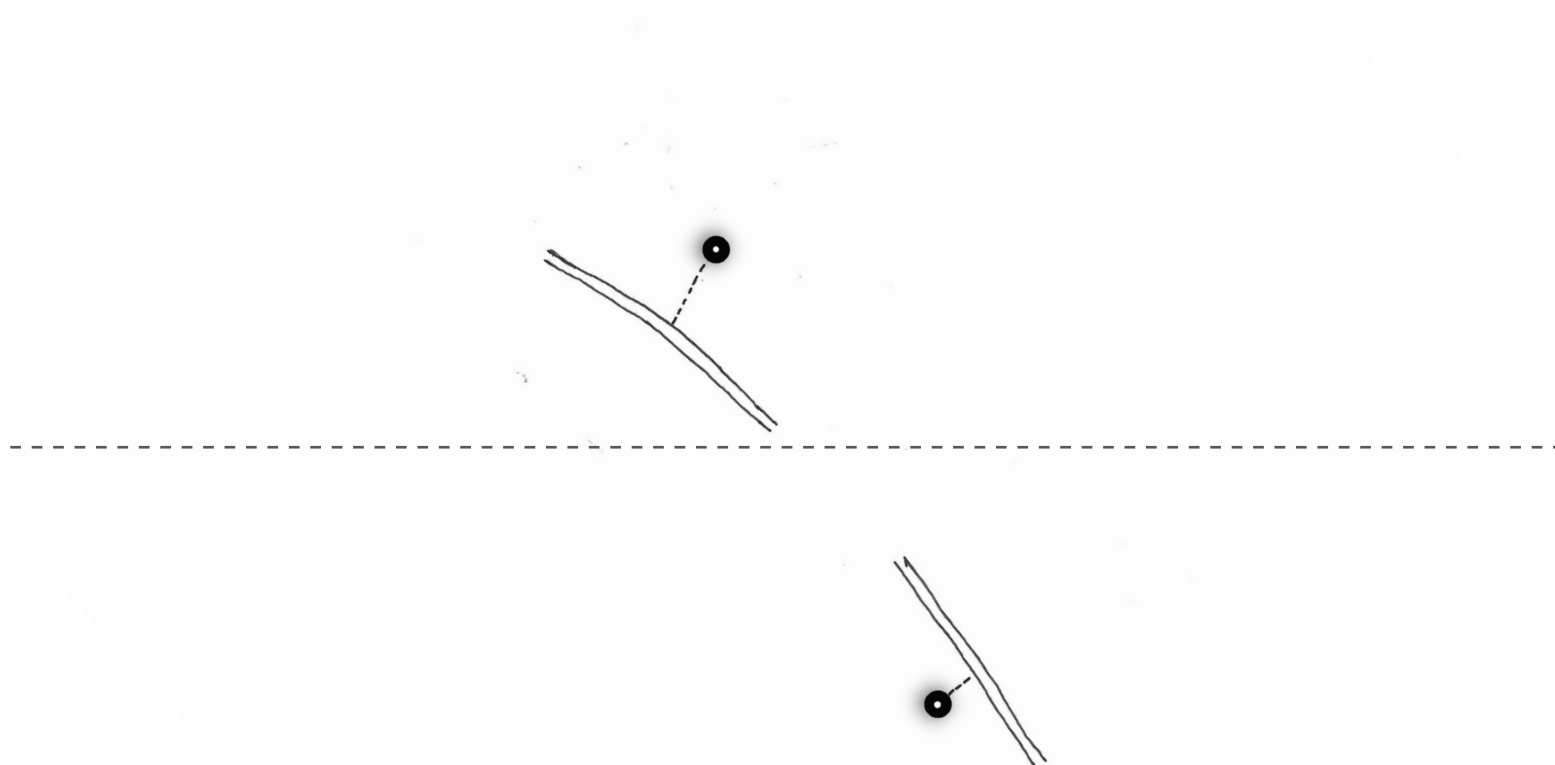


Transit oriented Development model (TOD)



## LOCATION OF METRO RULE #1

- Away from the line; In the Local Tissue



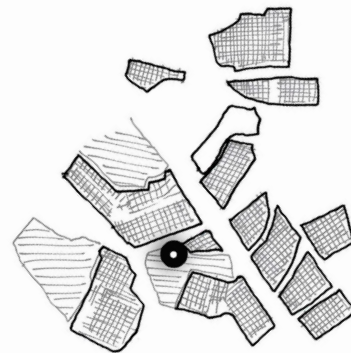
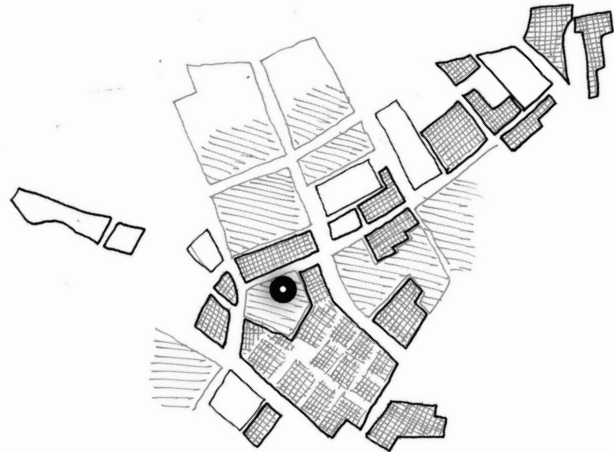
## LOCATION OF METRO RULE #1

- Placing them within communities to lend them a natural sense of place to each station and trigger local benefits.
- Avoiding unnecessary collision of INTRA-URBAN & INTER-URBAN flows



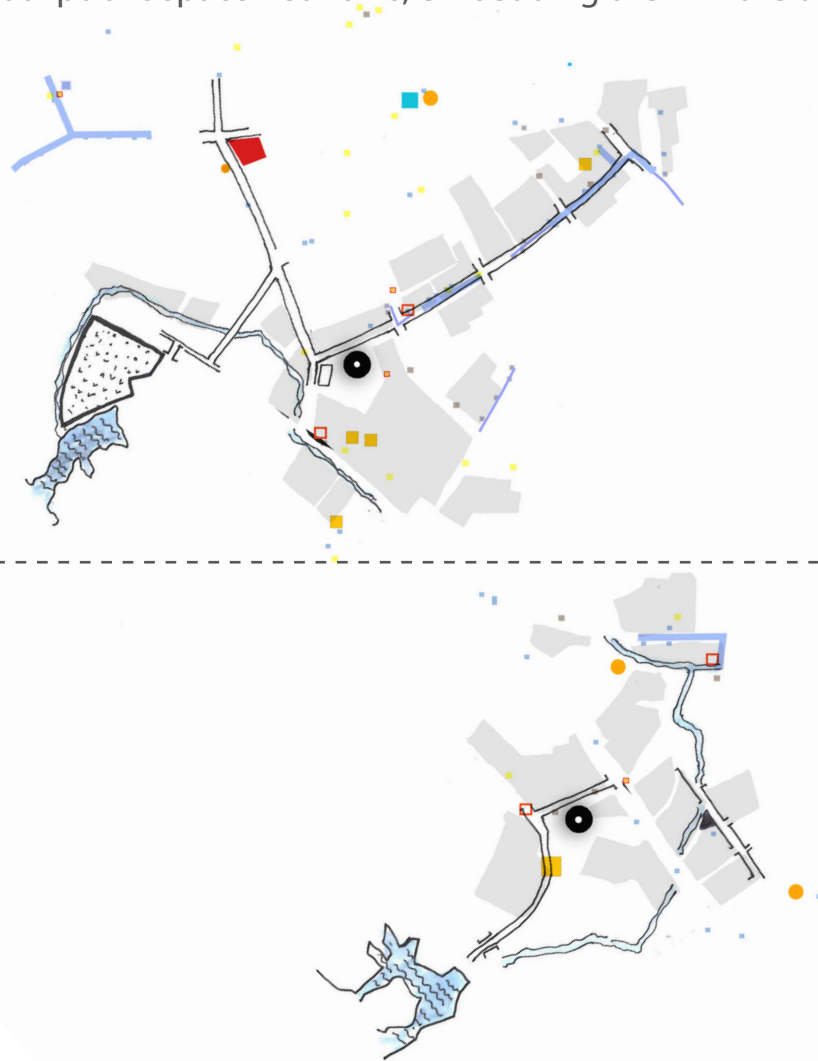
## LOCATION OF METRO RULE #2

- Stations are placed with respect to critical residential mass of Urban villages to maximise benefit to otherwise marginalized community.



## LOCATION OF METRO RULE #3

- Align with existing/potential public space networks, embedding them in the urban daily system.

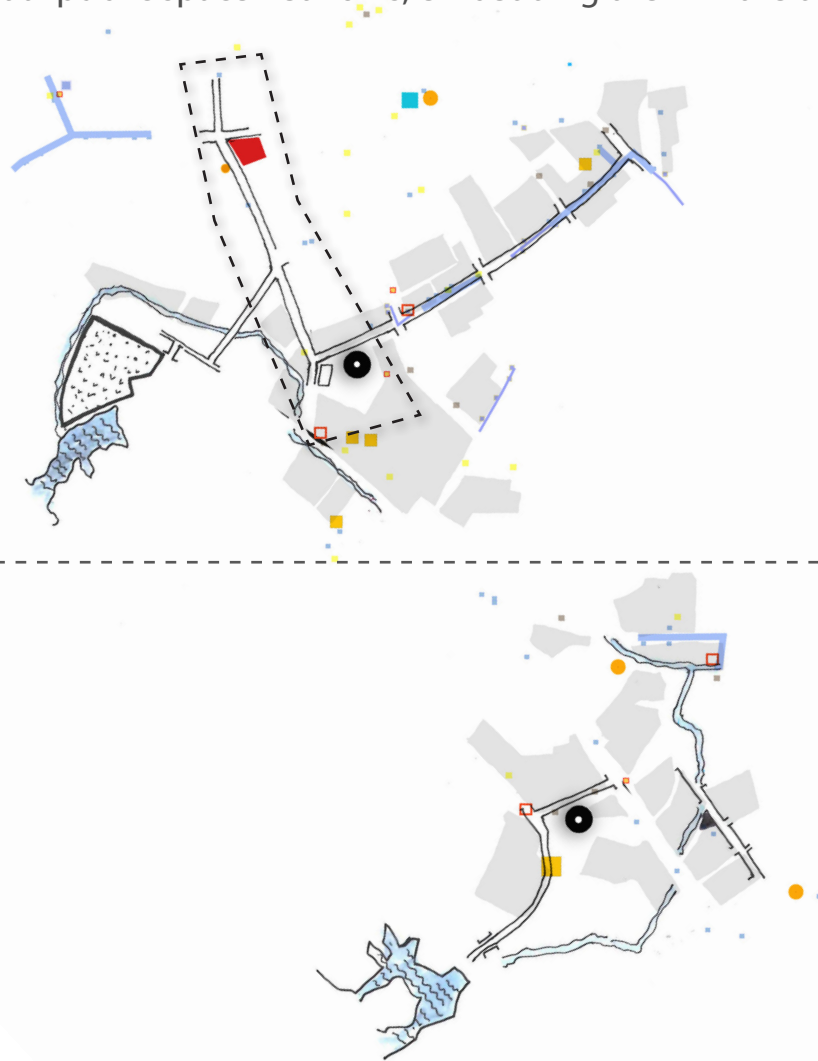




## LOCATION OF METRO RULE #3

- Align with existing/potential public space networks, embedding them in the daily urban system.

Main Square

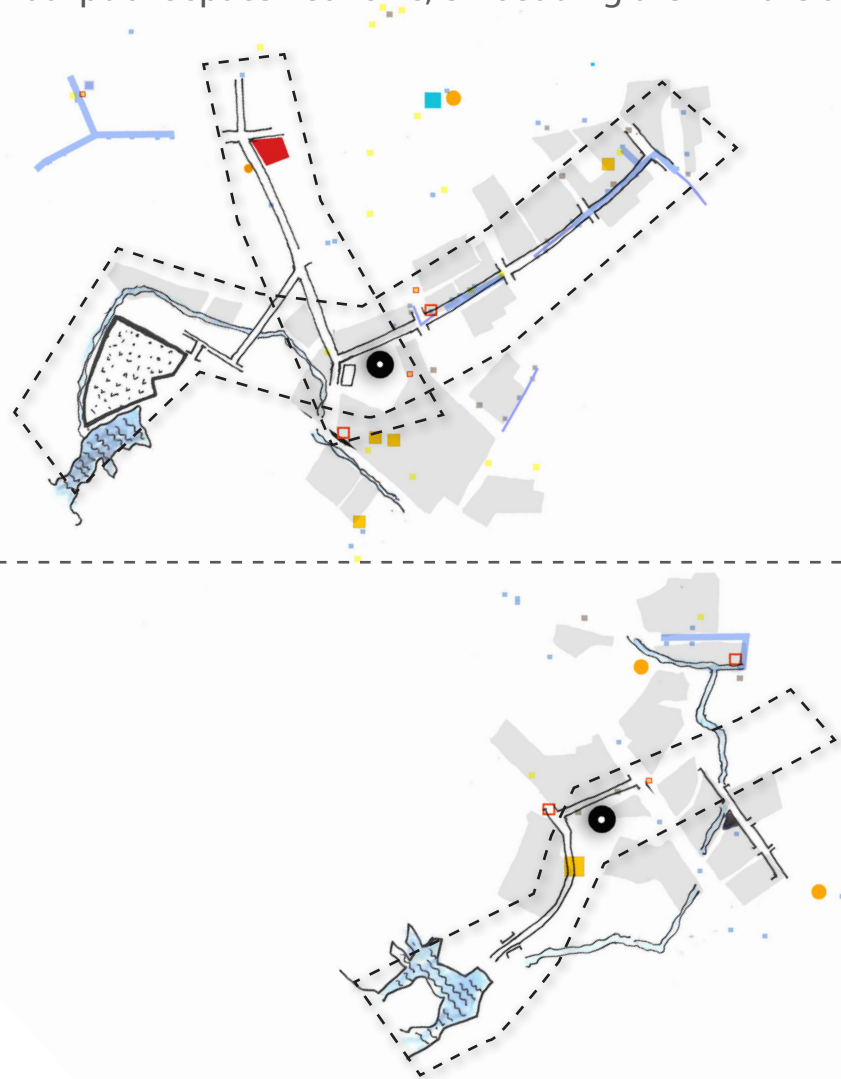


## LOCATION OF METRO RULE #3

- Align with existing/potential public space networks, embedding them in the daily urban system.

Main Square

Green spaces



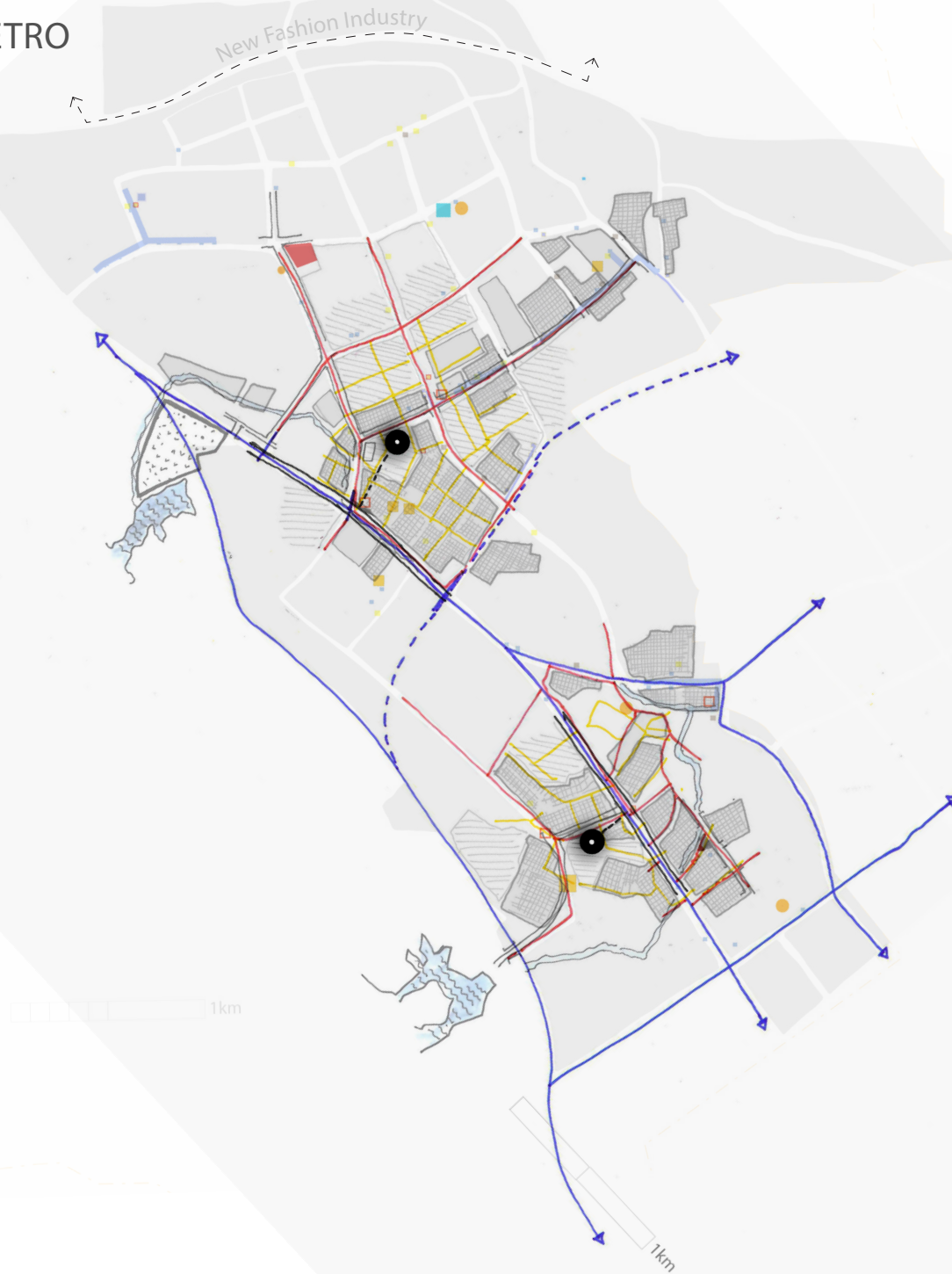
• Location of the metro

• Regional Node in Local Tissue

• Path of Metro Line

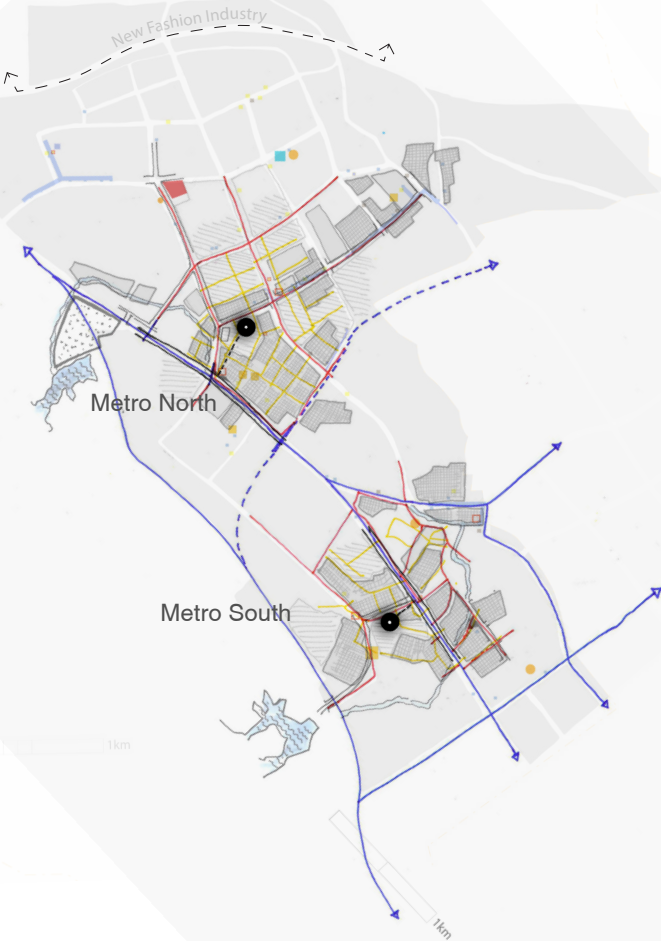
• Making of a Spatial Framework

## LOCATION OF METRO

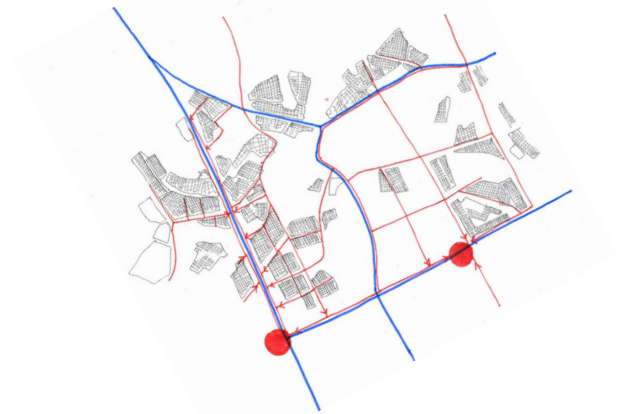


# LOCATION OF METRO

Proposed Location of Metro Nodes



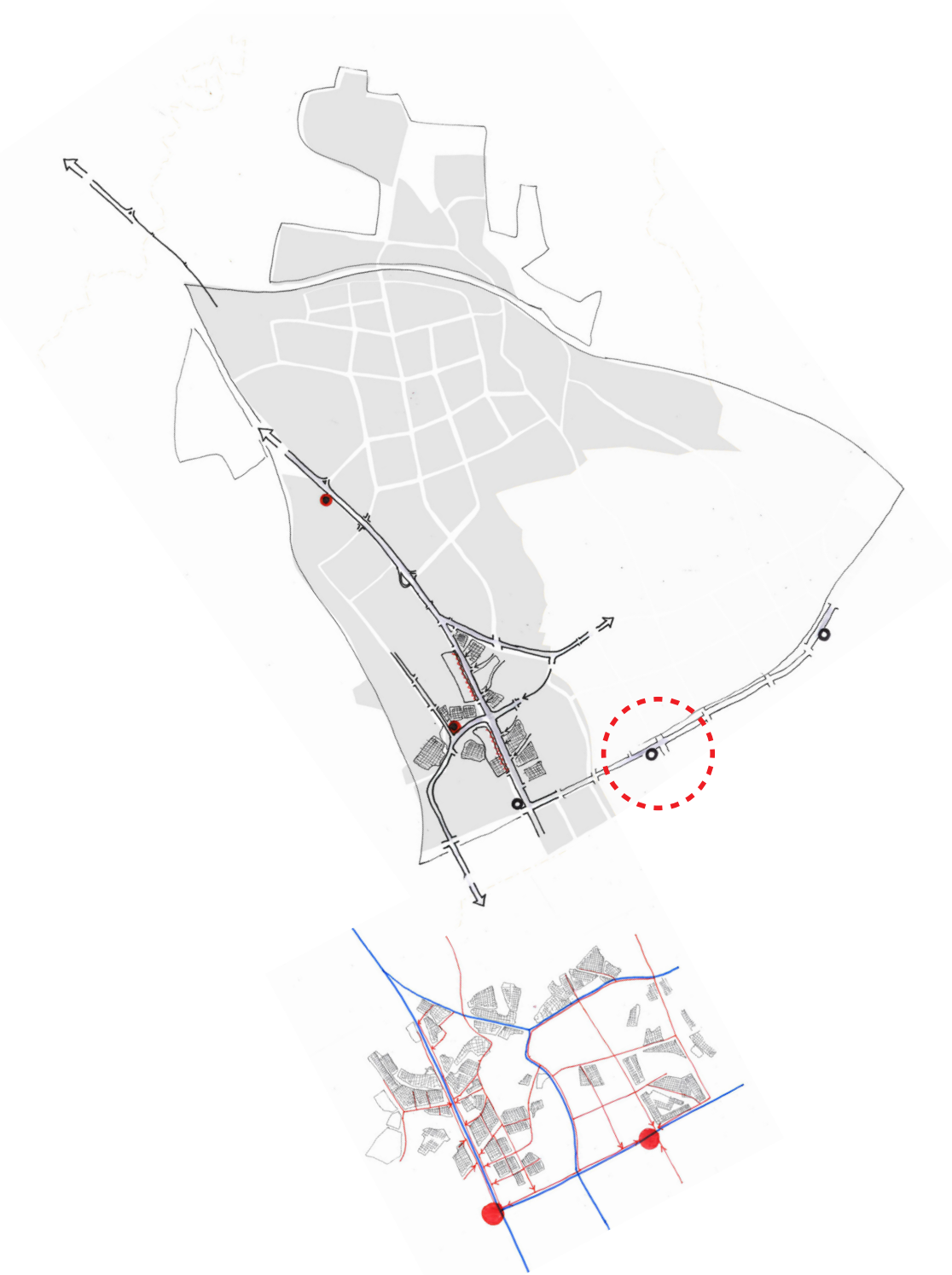
Metro nodes as per current proposal by government



- Regional Flow
- Local vehicular Flow
- Pedestrian and neighbourhood level

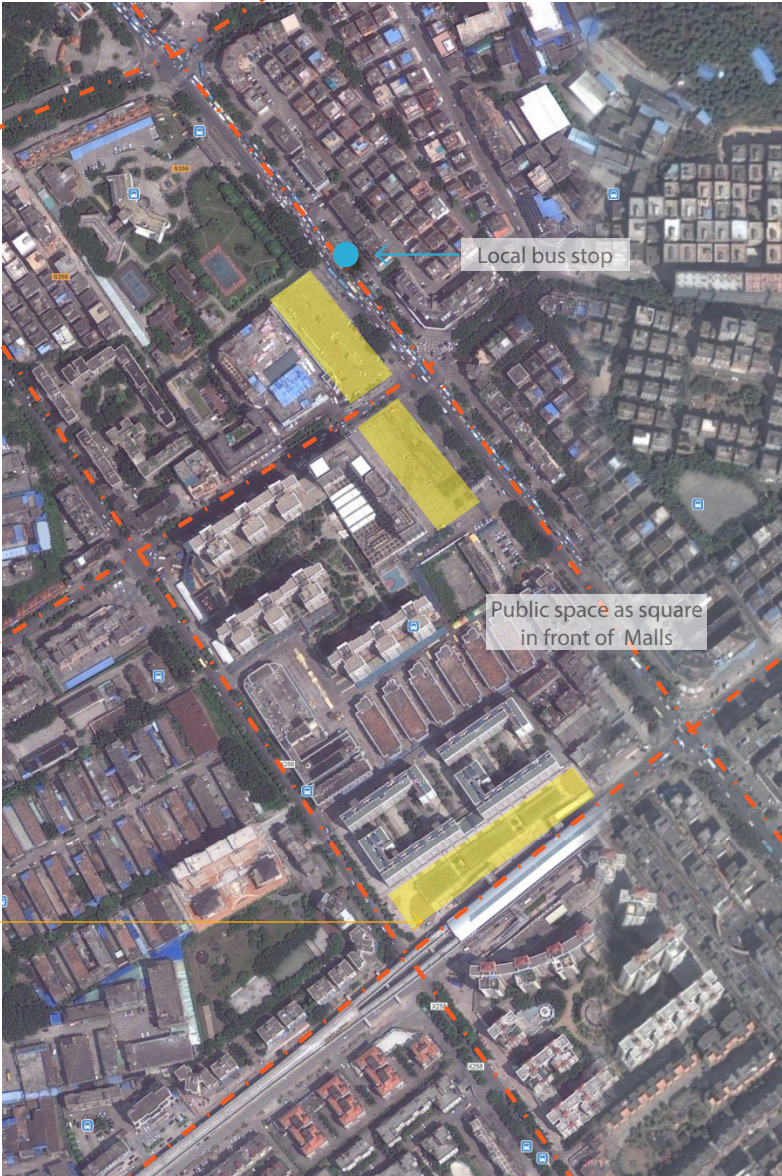
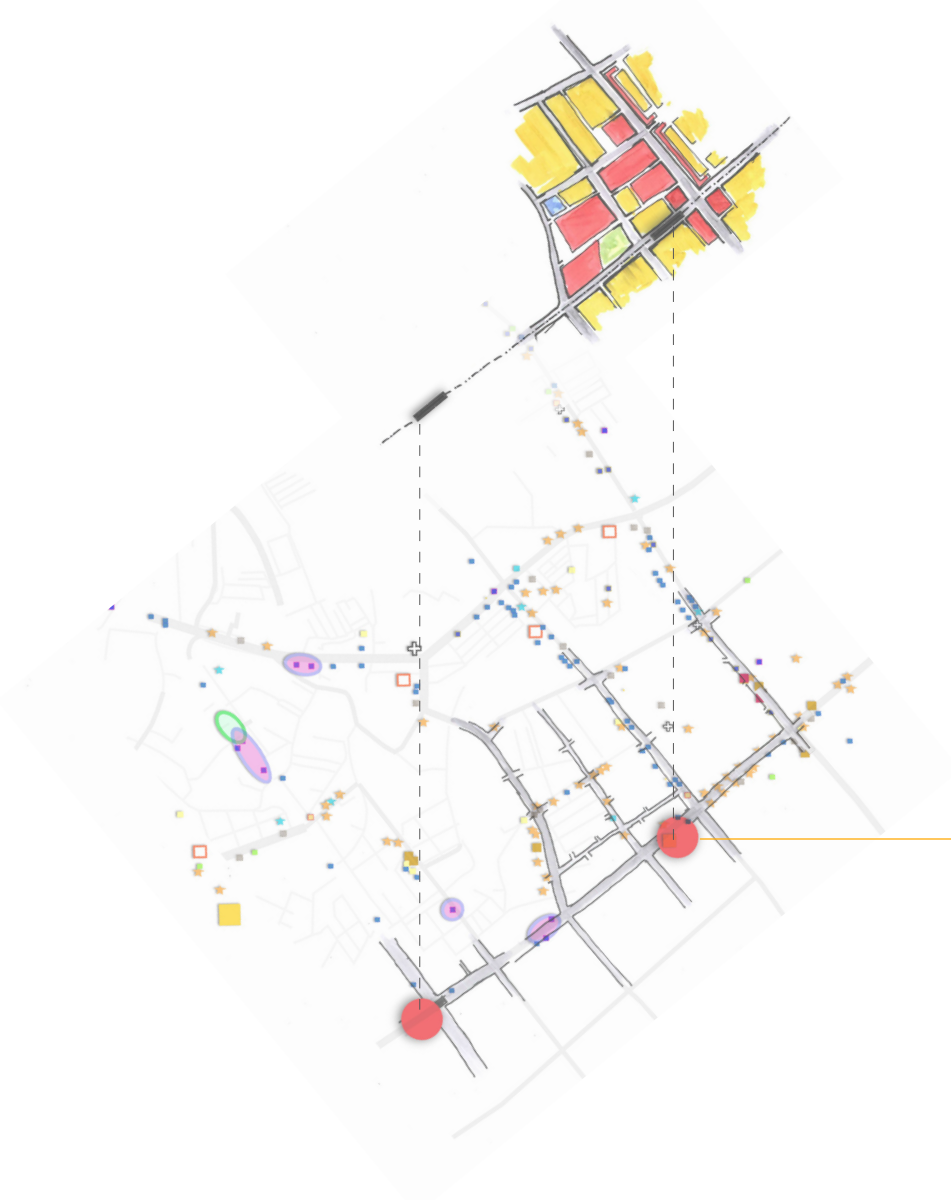


Metro nodes as per current proposal by government



### Metro nodes as per current proposal by government

Station not a node. Functions and public space not concentrated as a node but scattered along the lines of flow.





• Location of the metro

• Regional Node in Local Tissue

• Path of Metro Line

• Making of a Spatial Framework

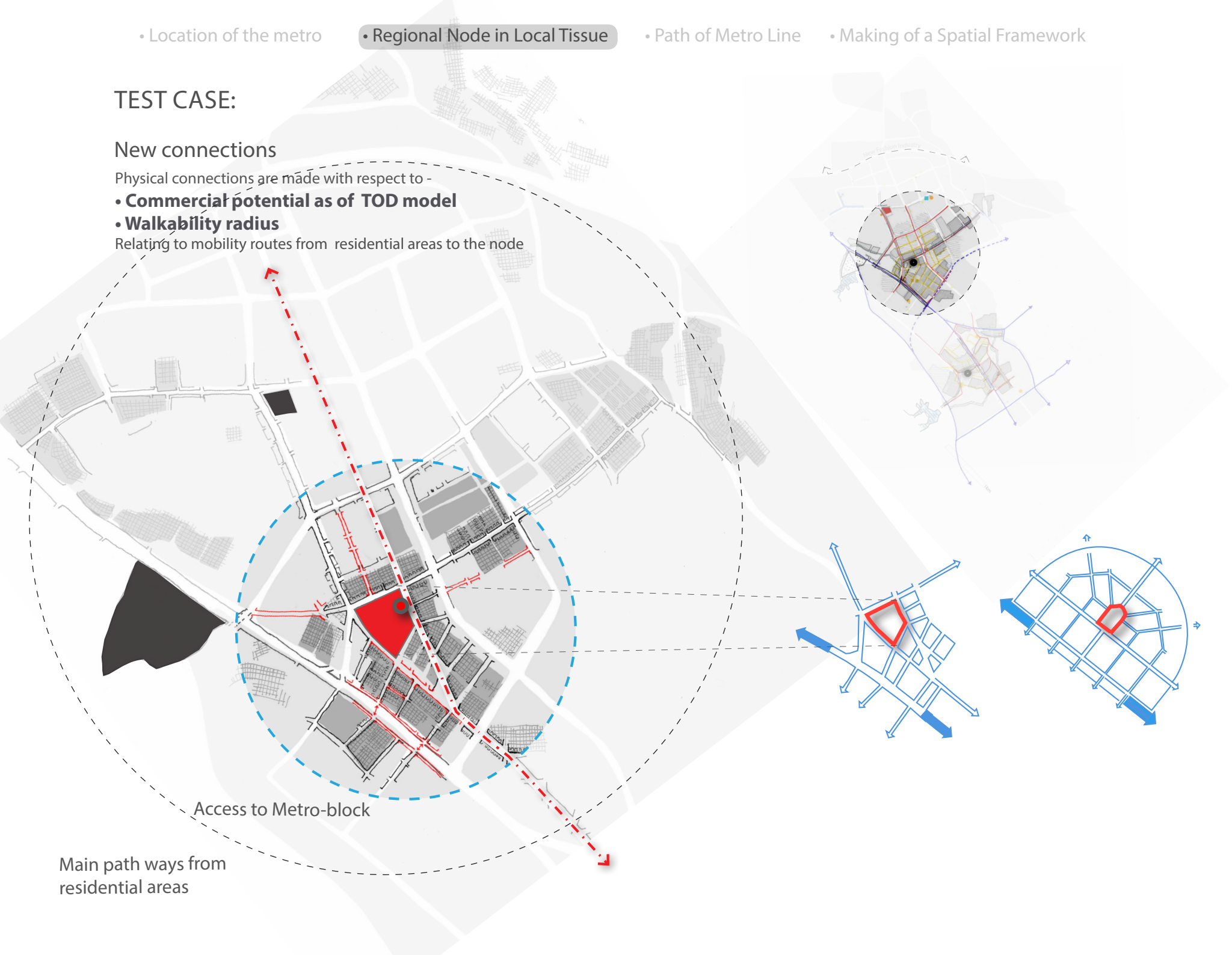
## TEST CASE:

### New connections

Physical connections are made with respect to -

- **Commercial potential as of TOD model**
- **Walkability radius**

Relating to mobility routes from residential areas to the node



Main path ways from residential areas

• Location of the metro

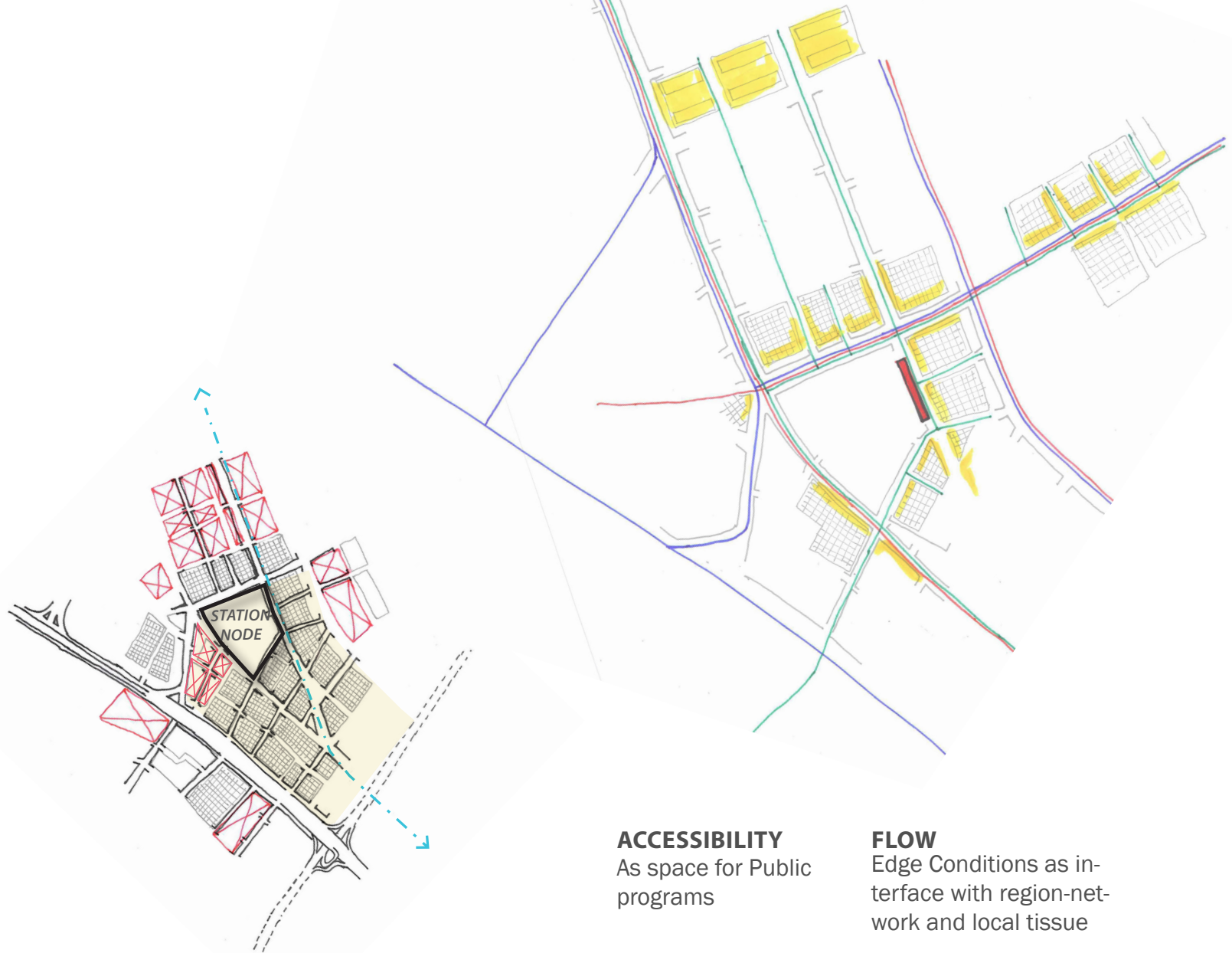
• Regional Node in Local Tissue

• Path of Metro Line

• Making of a Spatial Framework

## TEST CASE: METRO NORTH

Node as a civic space

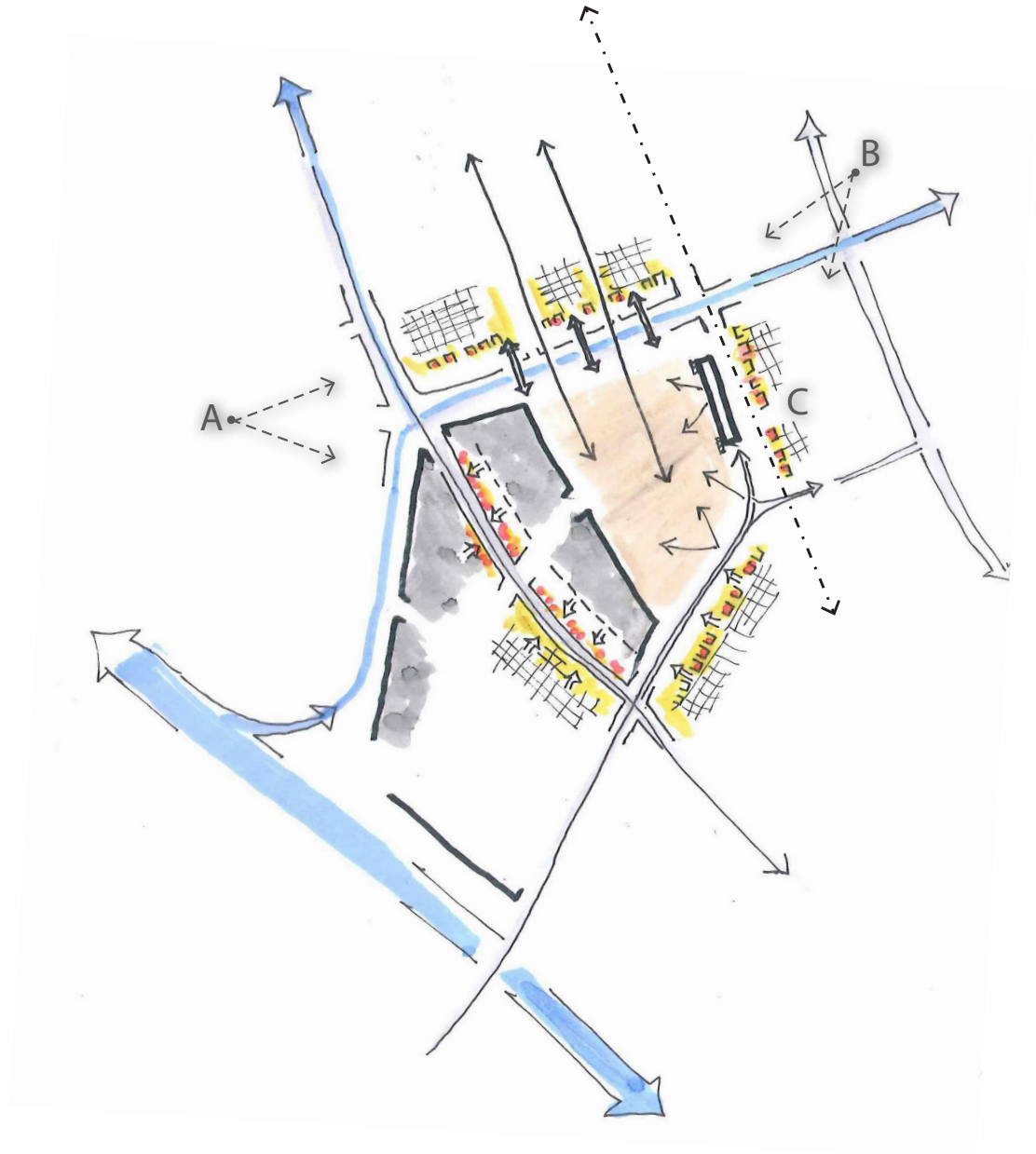
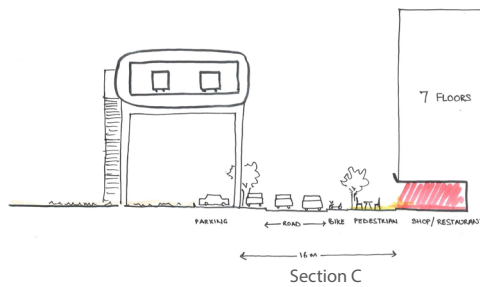
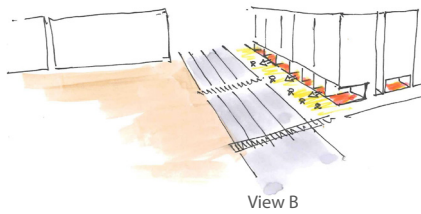
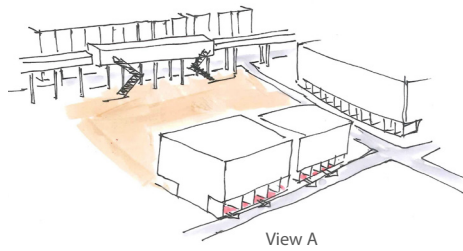


## TEST CASE: METRO NORTH

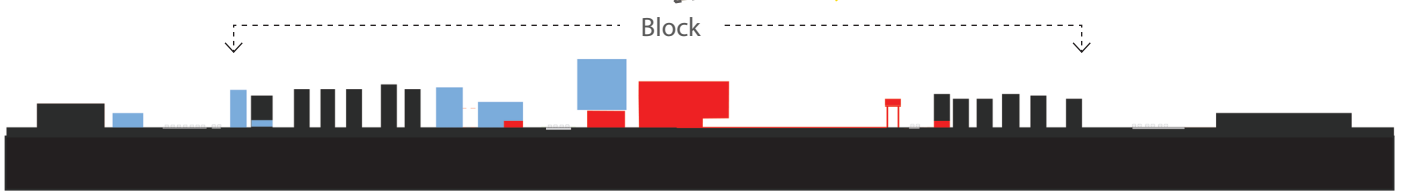
### Node as a civic space

#### Two design criteria:

- Edges as interface







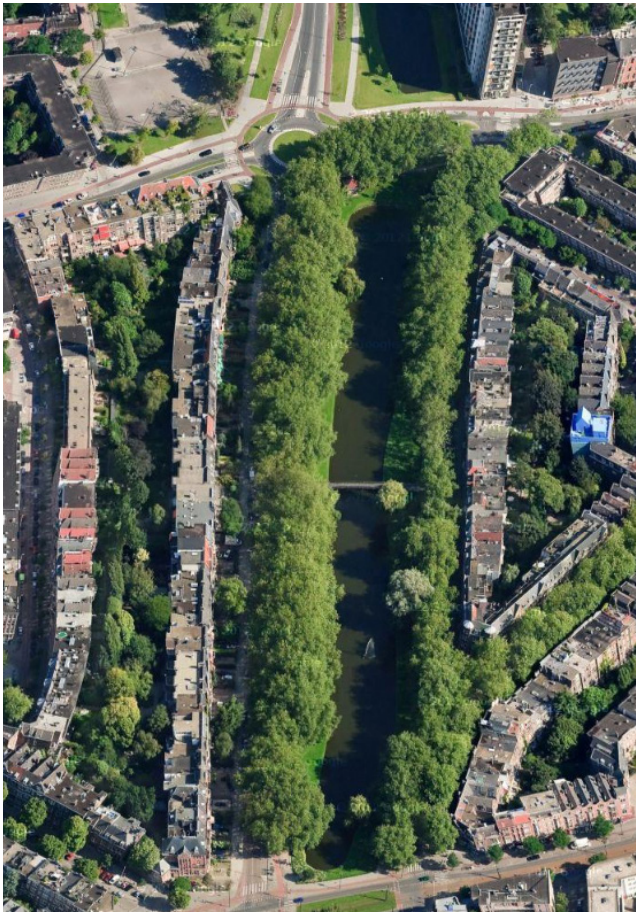


## TEST CASE: METRO NORTH

### Node as a civic space

#### Two design criteria:

- Edges as interface
- Space for programme



HEEMRAADSSINGEL

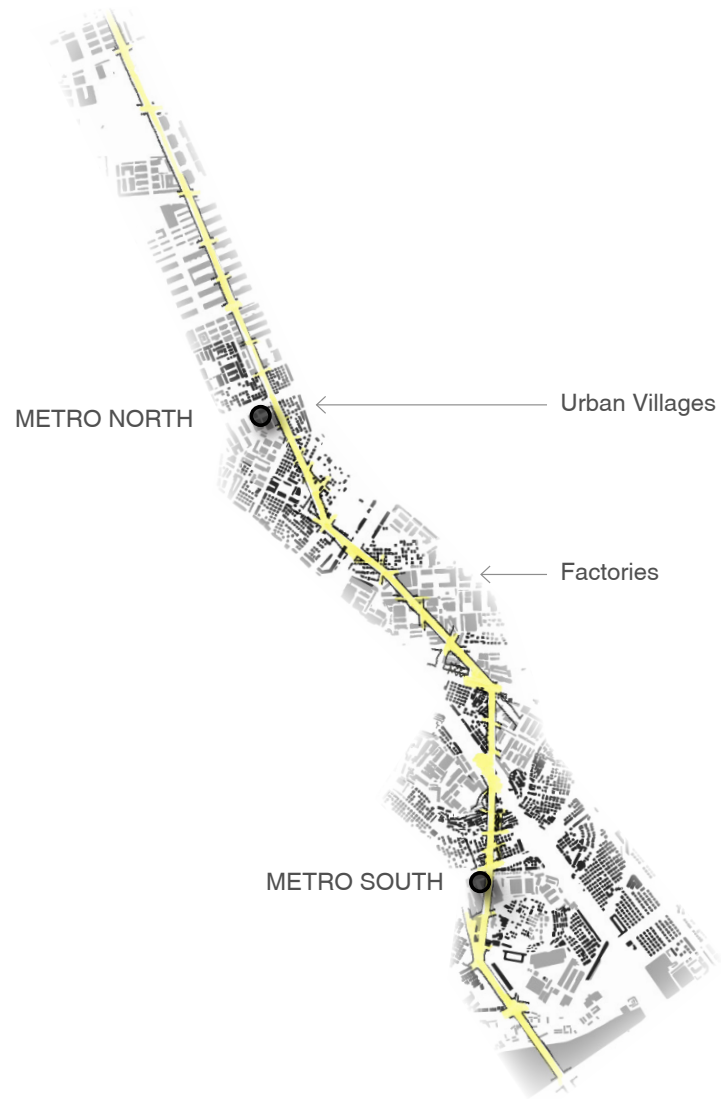


# OVERHEAD METRO RAIL LINE AS SPACE



## OVERHEAD METRO RAIL LINE AS SPACE

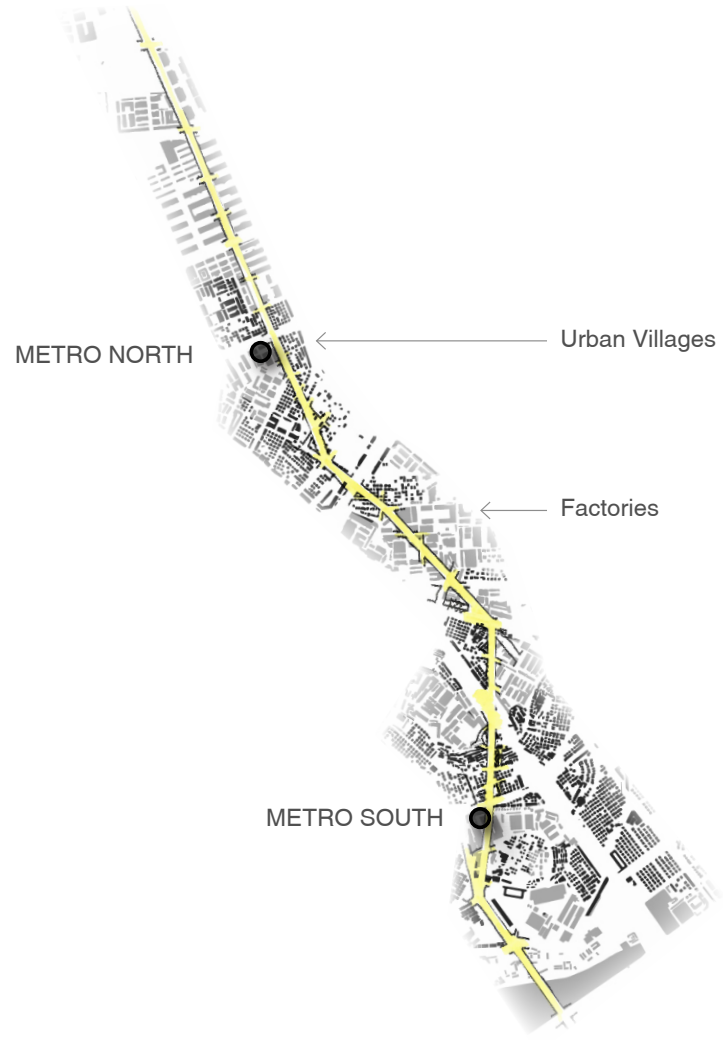
- New architectural typologies and spatial conditions





## OVERHEAD METRO RAIL LINE AS SPACE

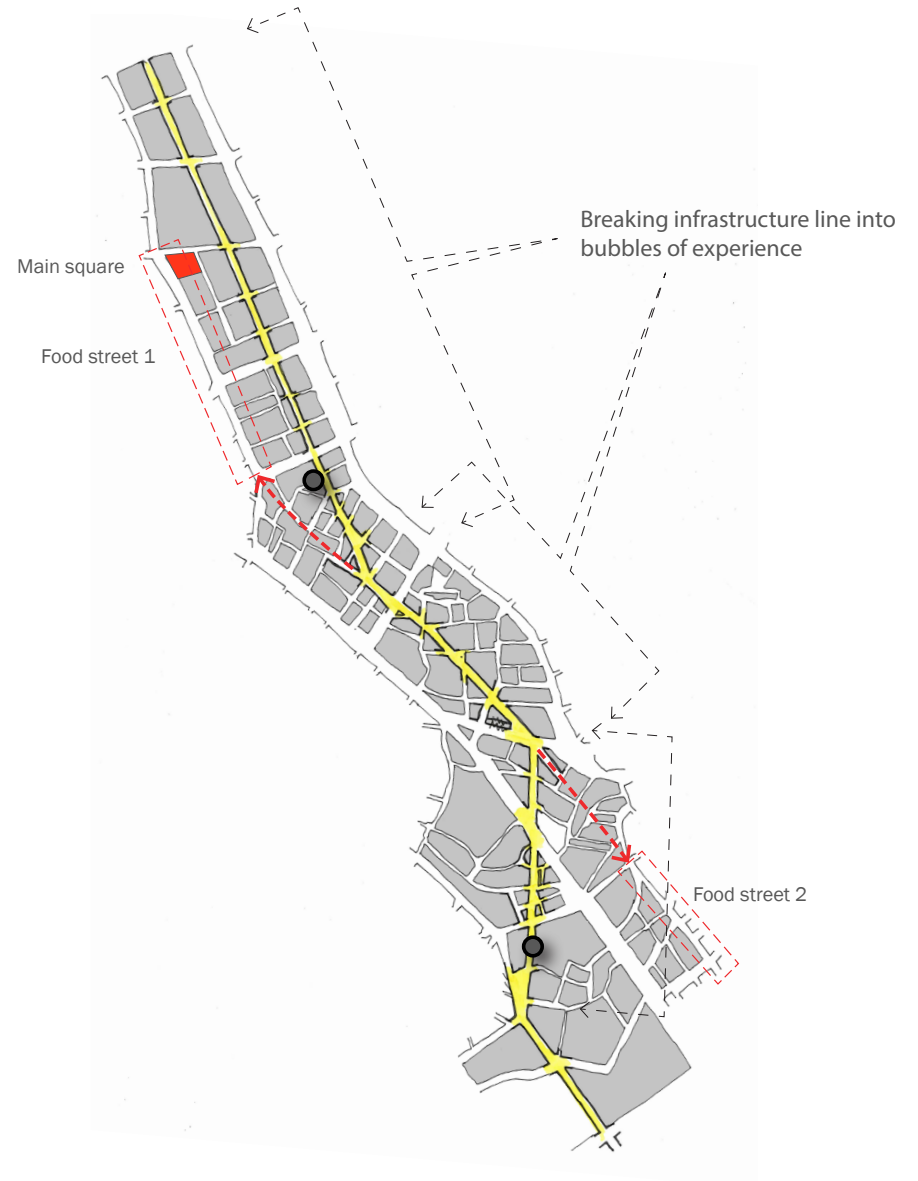
- New architectural typologies and spatial conditions.
- Sub-dividing the industrial block
- Breaking the monotonous section into bubbles of experience



## OVERHEAD METRO RAIL LINE AS SPACE

- New architectural typologies and spatial conditions.
- Sub-dividing the industrial block
- Breaking the monotonous section into bubbles of experience
- As an instrument to make new connections
- As a new line of orientation/ Axis

Facilitating cohesiveness and visual & geometric coherence

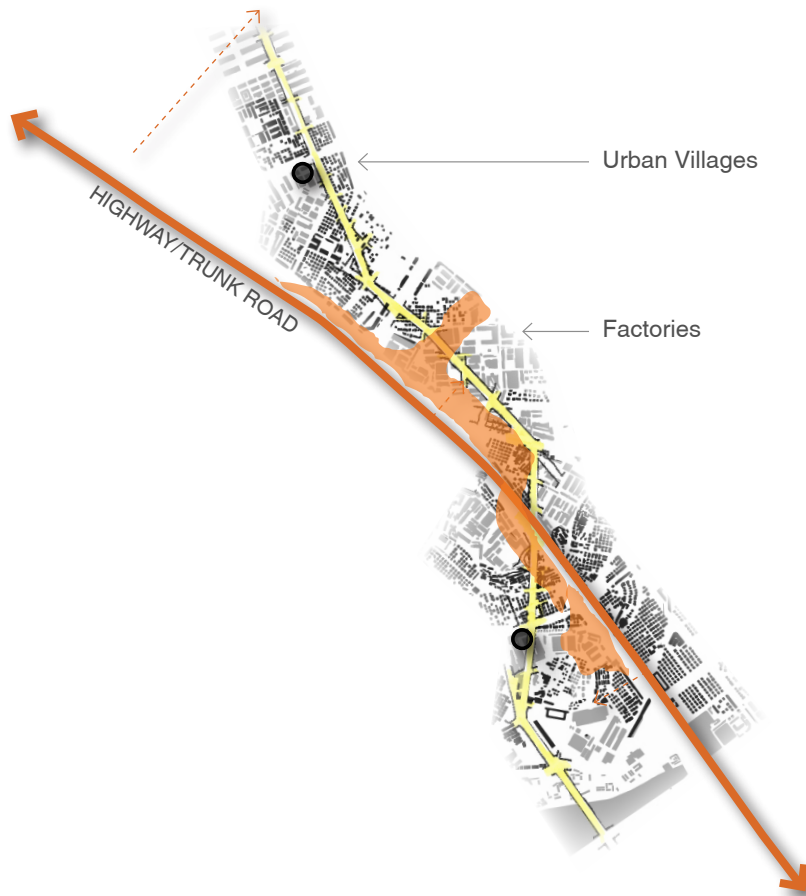


## OVERHEAD METRO RAIL LINE AS SPACE

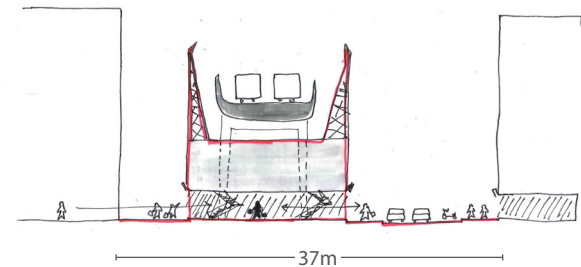
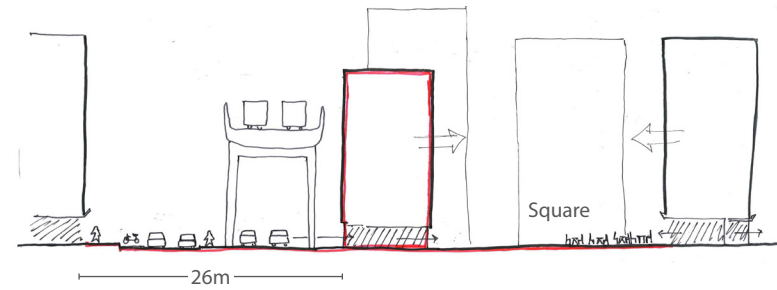
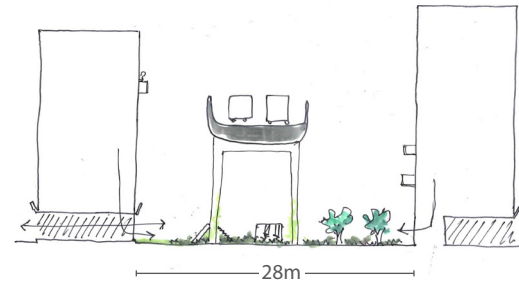
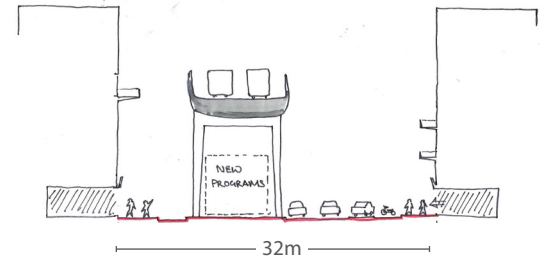
- New architectural typologies and spatial conditions.
- Sub-dividing the industrial block
- Breaking the monotonous section into bubbles of experience
- As an instrument to make new connections
- As a new line of orientation/ Axis

Facilitating cohesiveness and visual & geometric coherence

- A new geometry

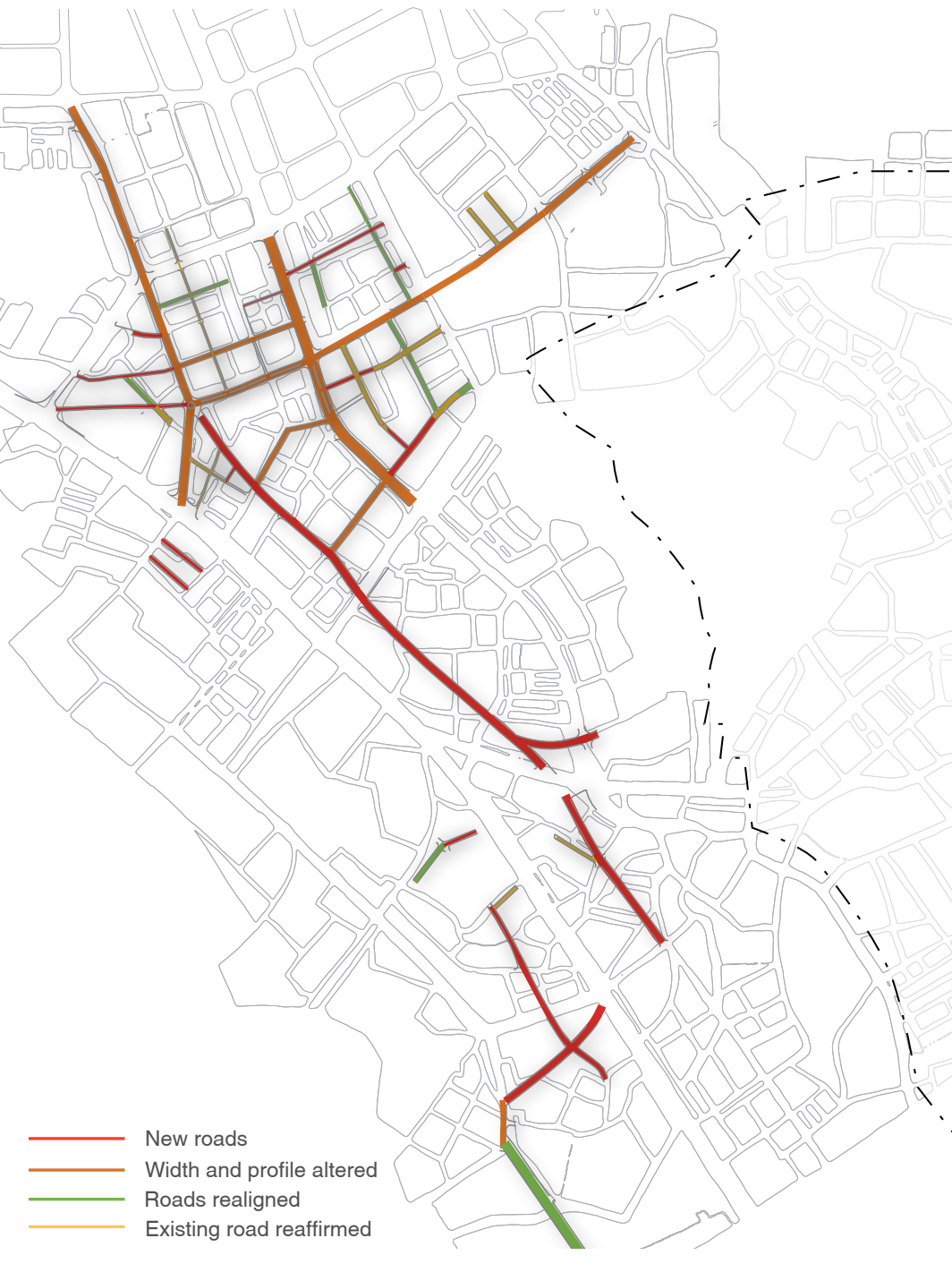


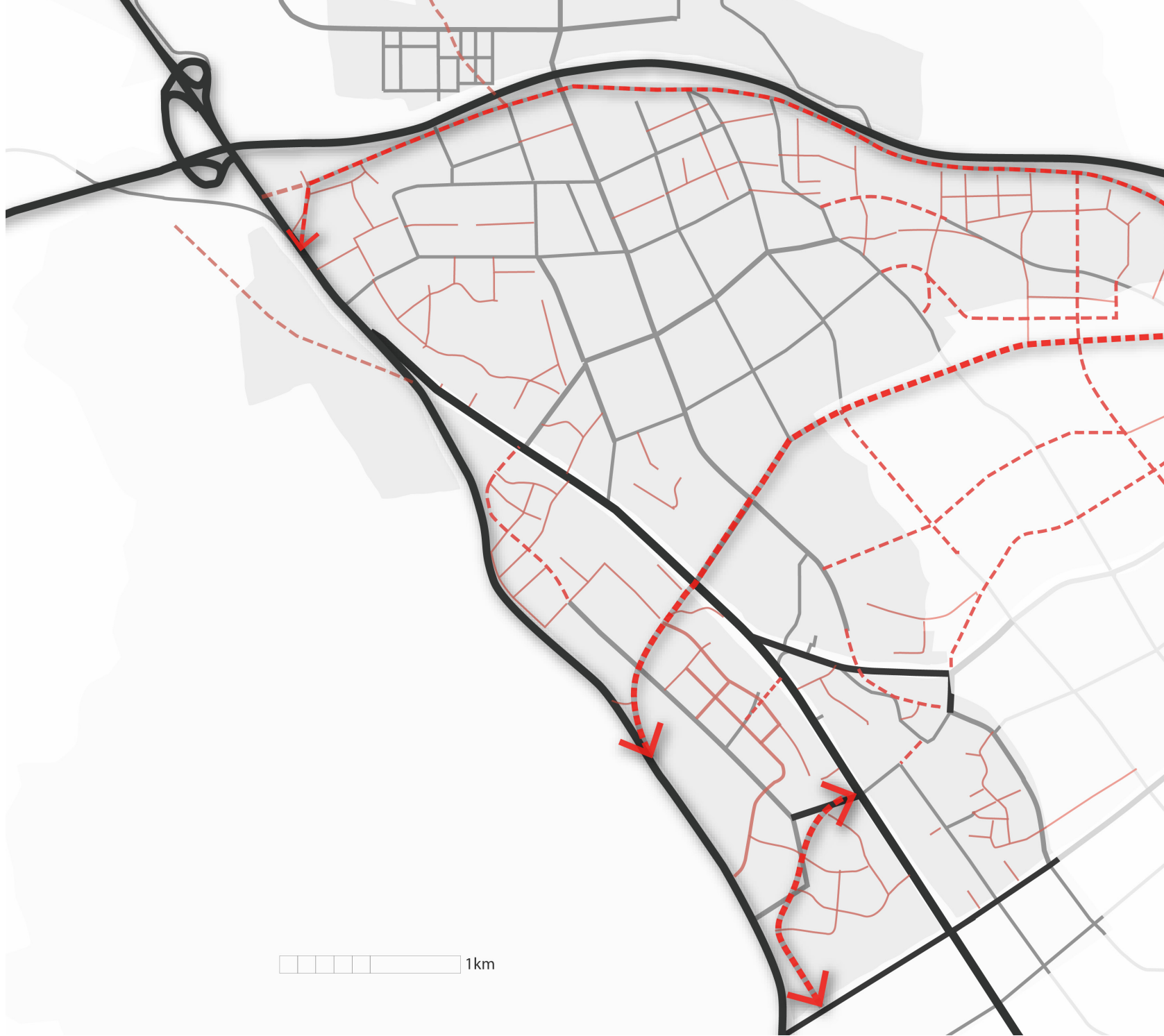
# OVERHEAD METRO RAIL LINE AS SPACE





# CHANGES IN THE FABRIC

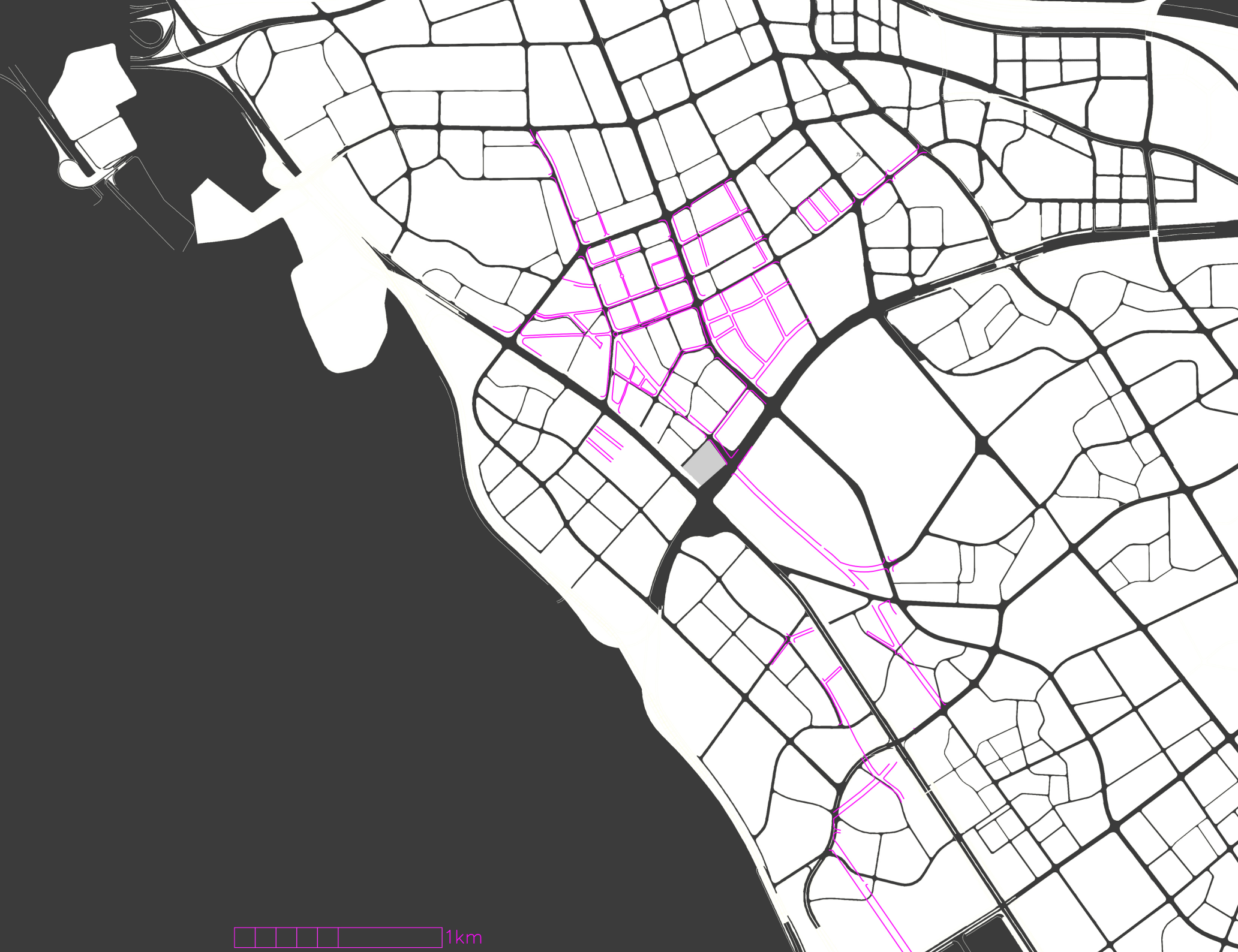




1km







1km



# NEW CITY PLAN

- Existing Square
- Proposed Square
- New blocks as potential public spaces and Services
- Proposed Area for New services
- Land use: Housing
- Land use: Industrial and Commercial
- Hills
- Existing parks
- New parks proposed
- Schools
- Existing theatre, auditoriums
- New Project possibilities

1km

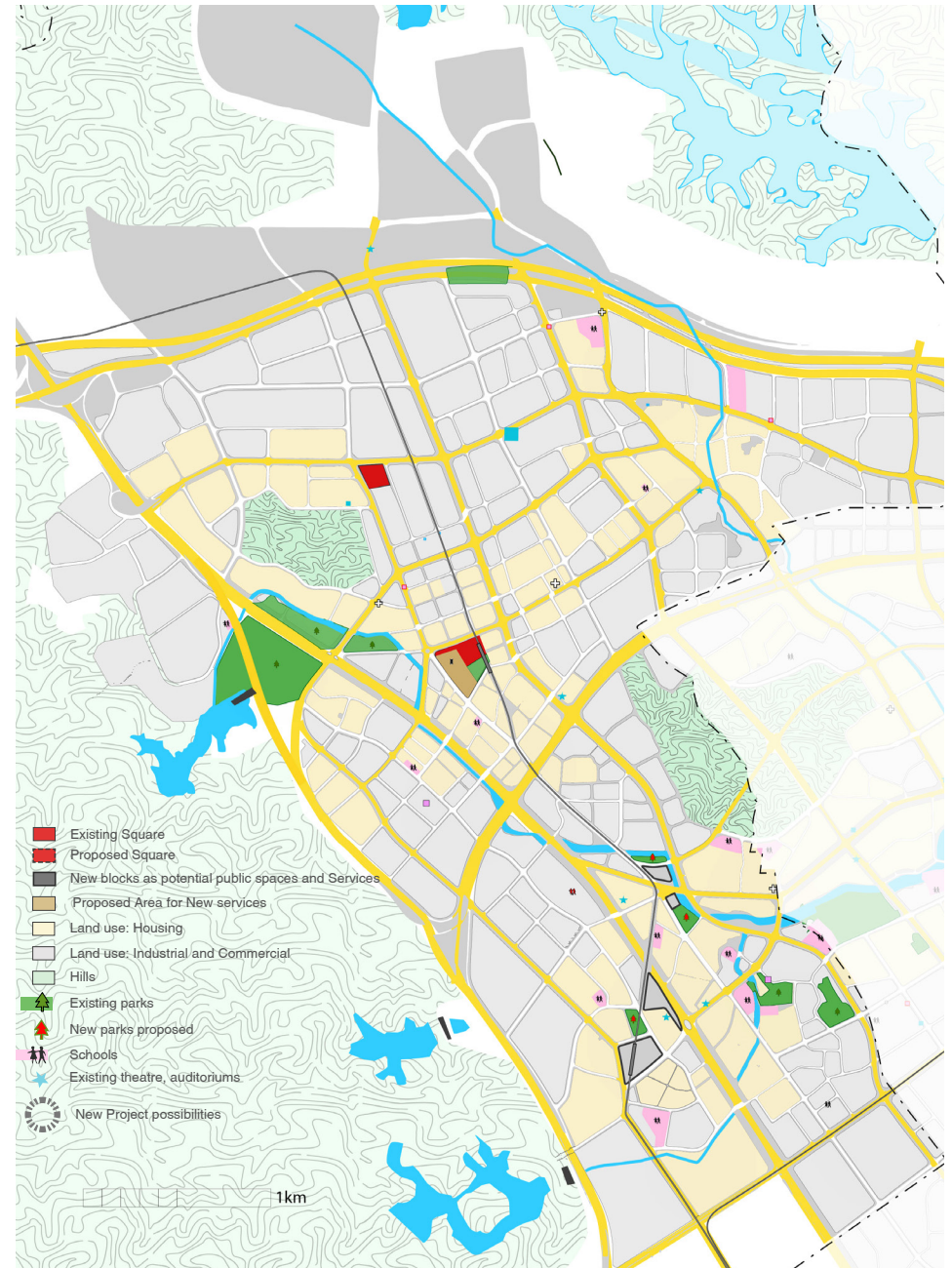




Existing city plan. Source :Google Maps



NEW CITY PLAN

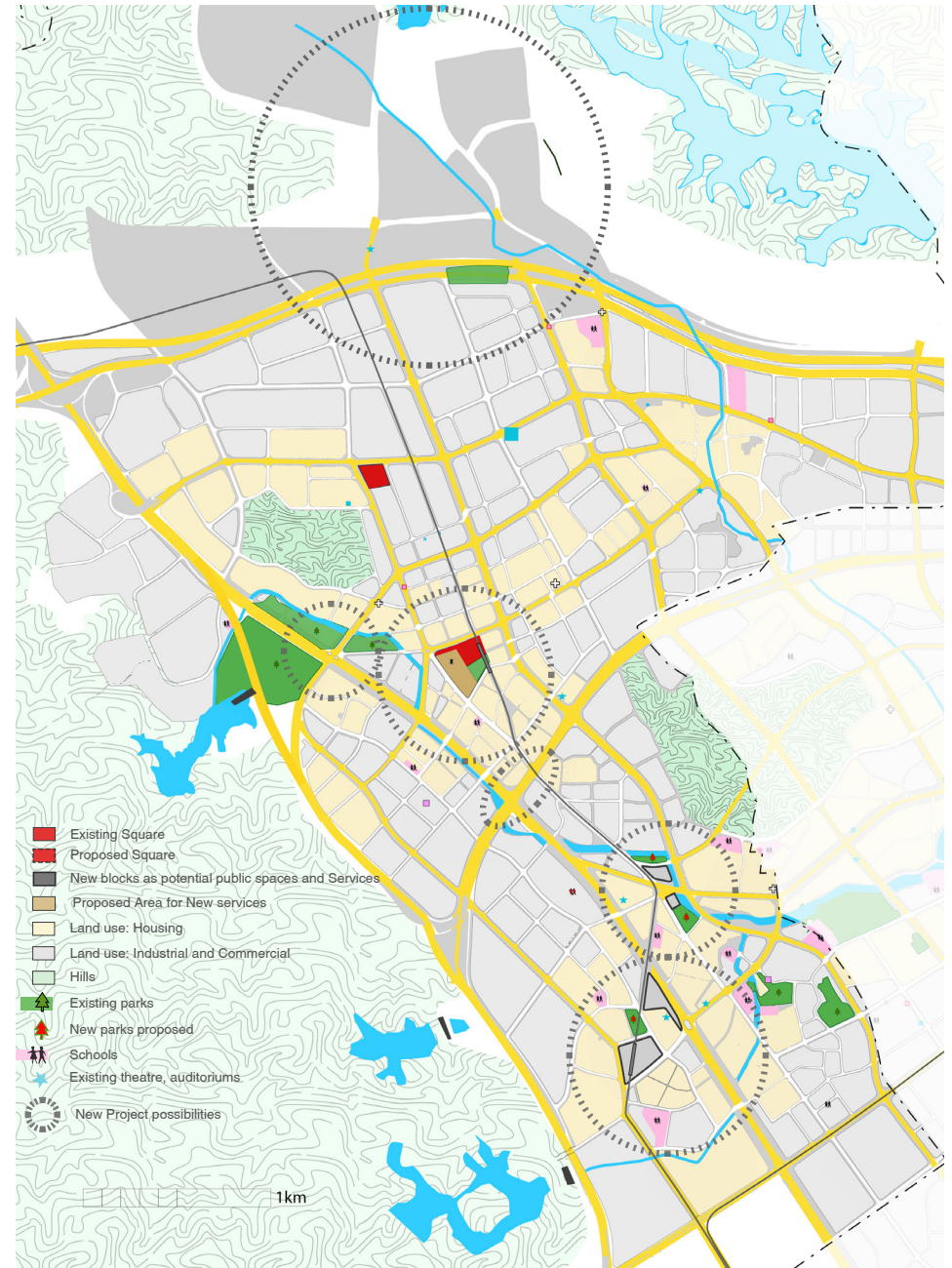




Existing city plan. Source :Google Maps



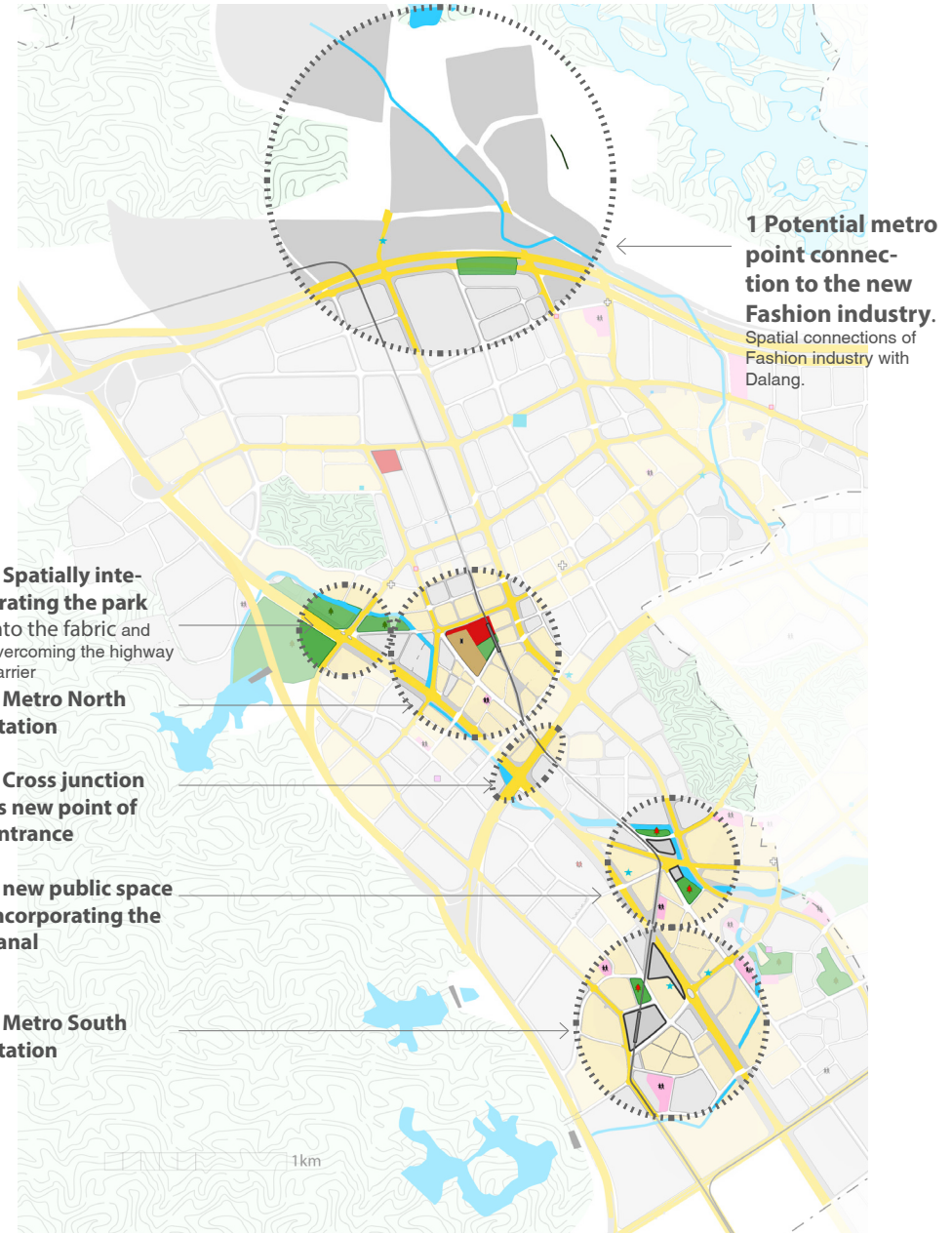
NEW CITY PLAN





# (NEW) CITY PLAN AS PLANNING FRAMEWORK

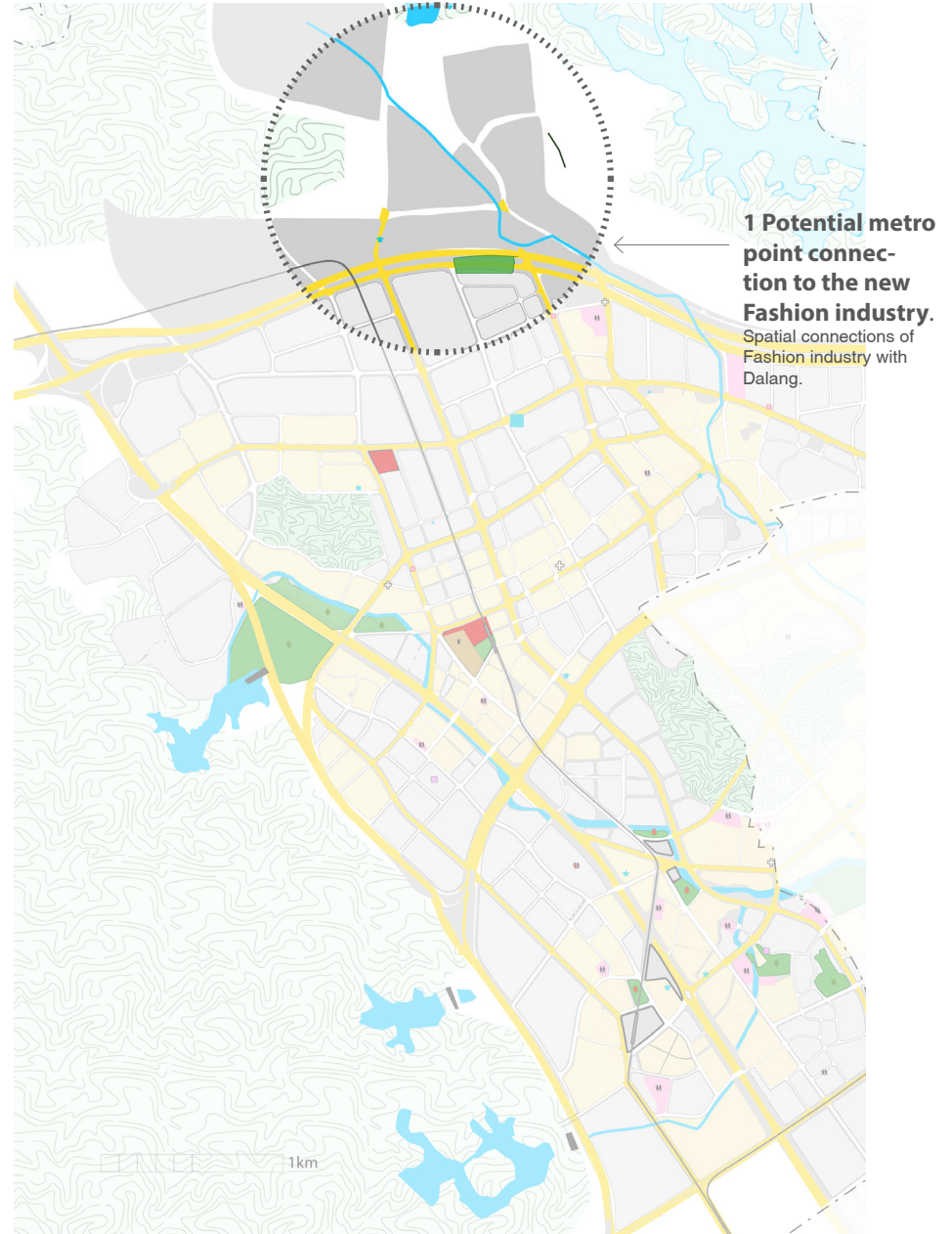
## 6 Key projects





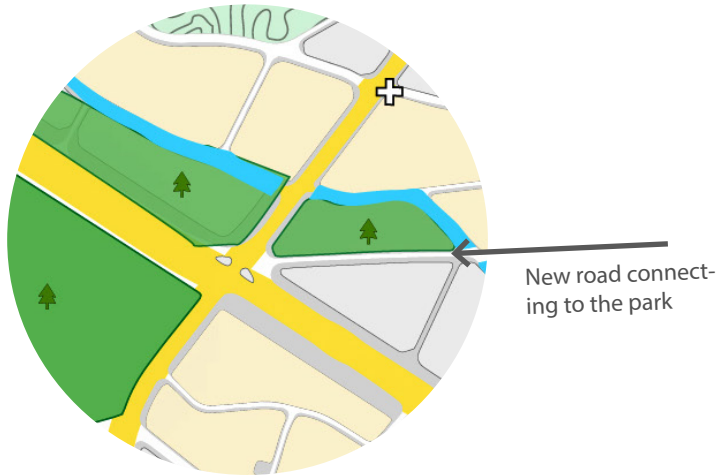
# (NEW) CITY PLAN AS PLANNING FRAMEWORK

## 6 Key projects

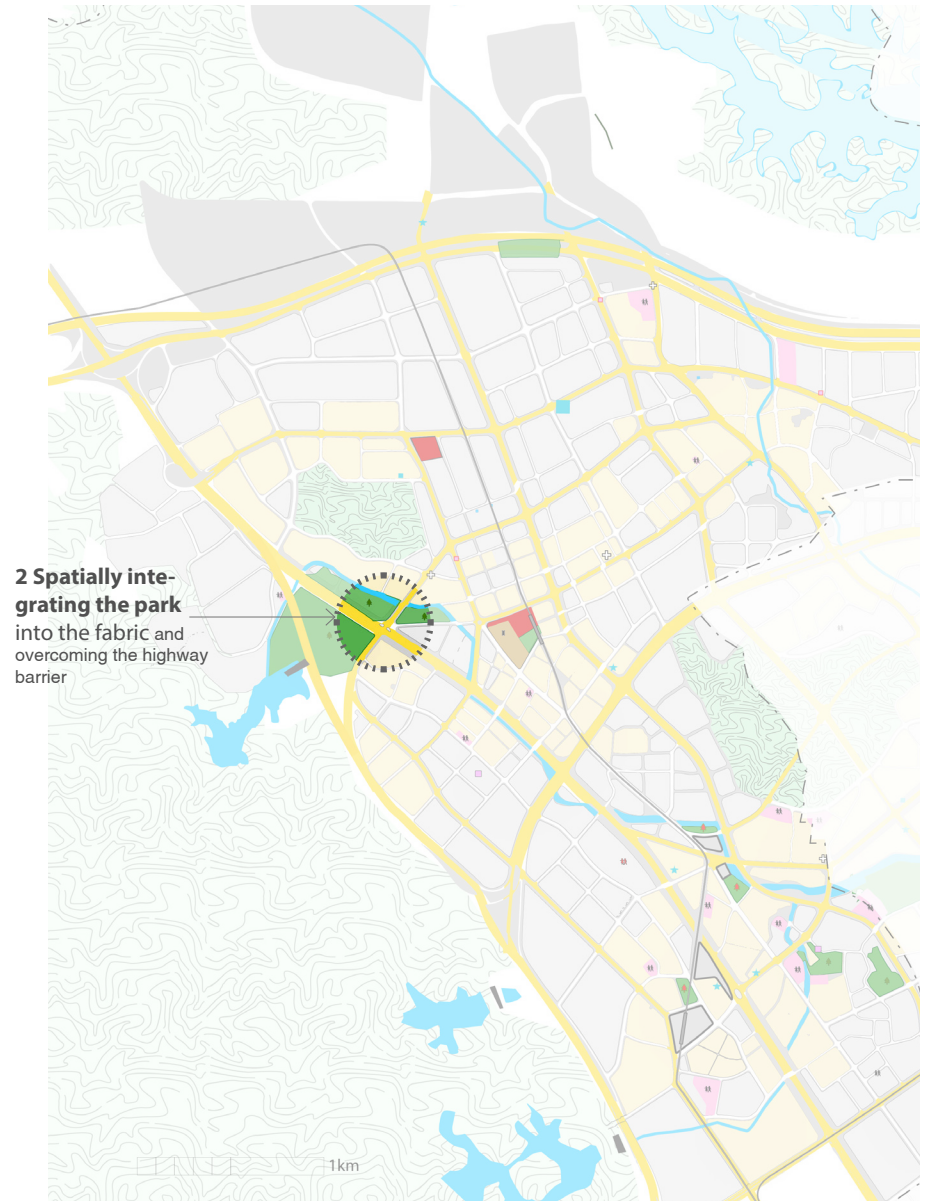


# (NEW) CITY PLAN AS PLANNING FRAMEWORK

## 6 Key projects



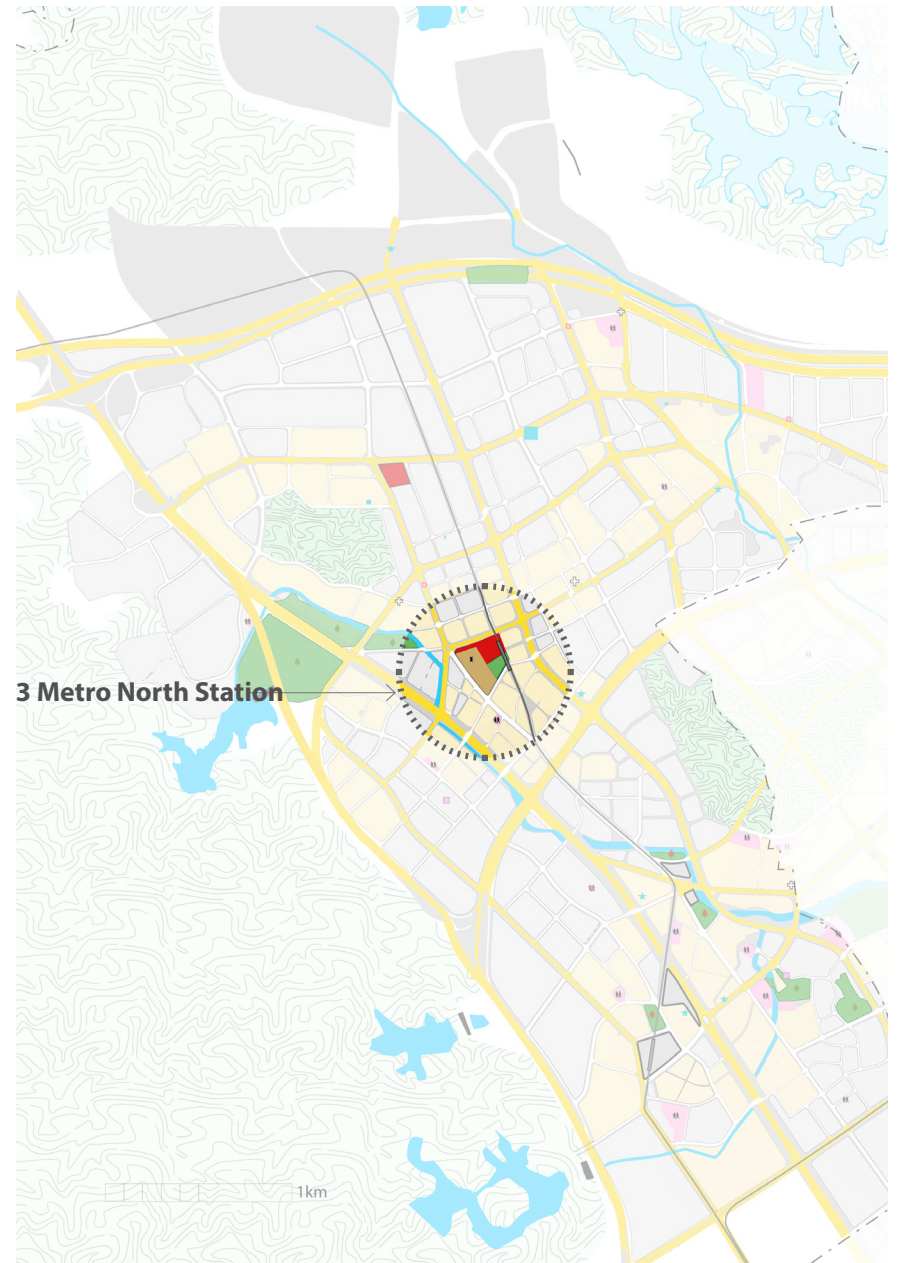
New road connecting to the park



2 Spatially integrating the park into the fabric and overcoming the highway barrier



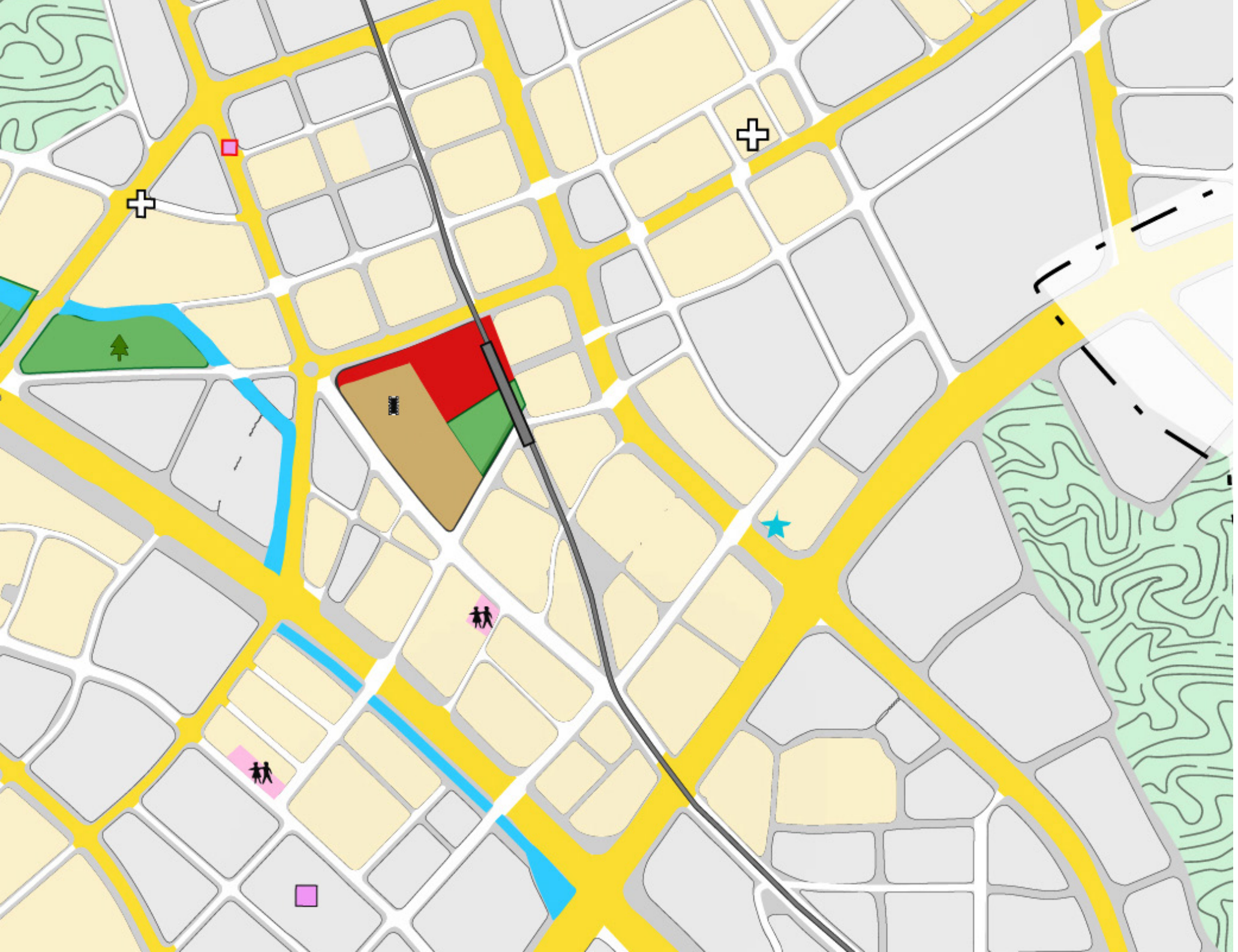
(NEW) CITY PLAN AS PLANNING FRAMEWORK  
6 Key projects





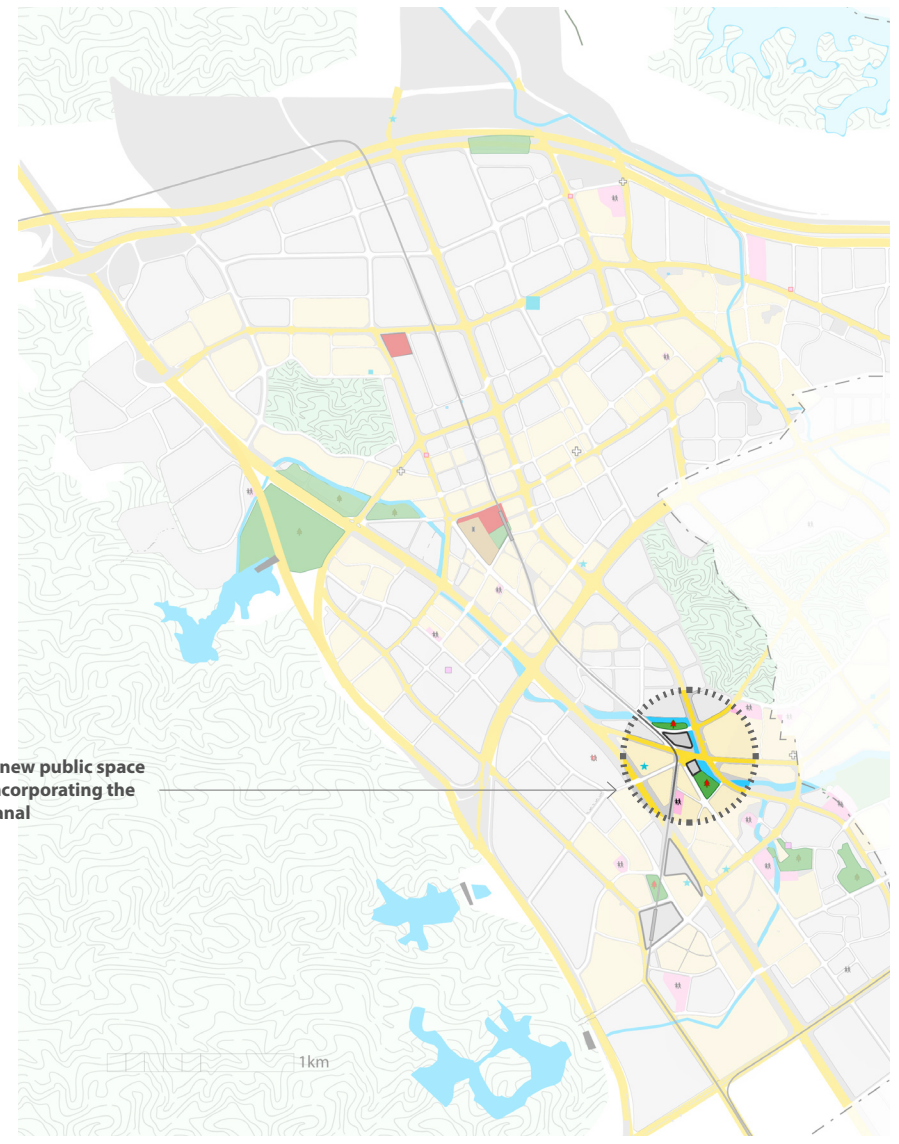






# (NEW) CITY PLAN AS PLANNING FRAMEWORK

## 6 Key projects

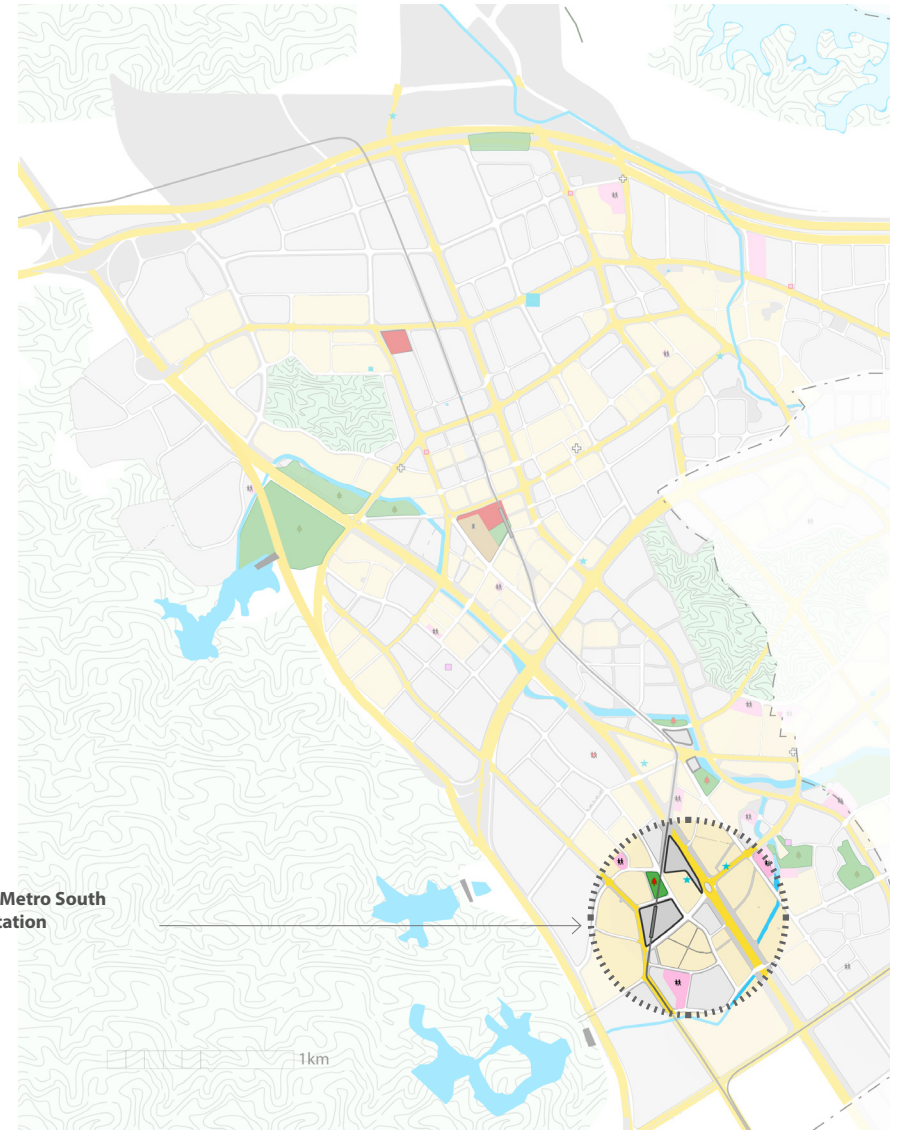
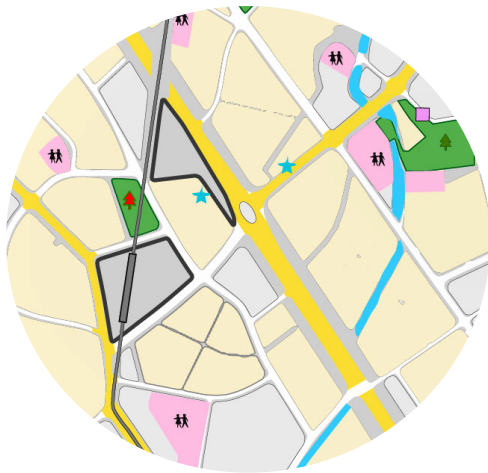


5 new public space  
incorporating the  
canal



# (NEW) CITY PLAN AS PLANNING FRAMEWORK

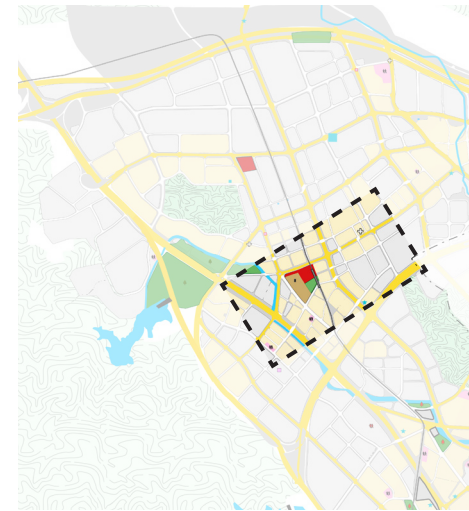
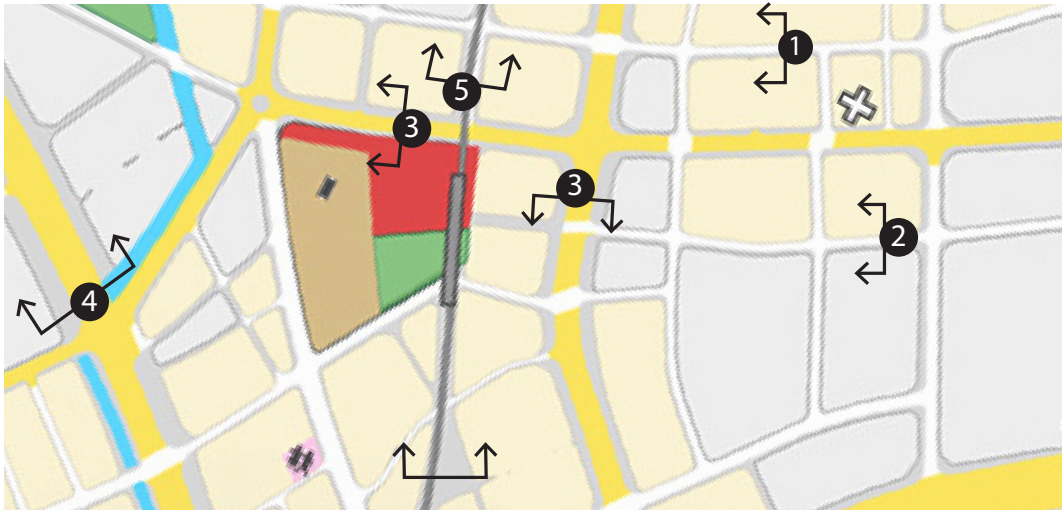
## 6 Key projects





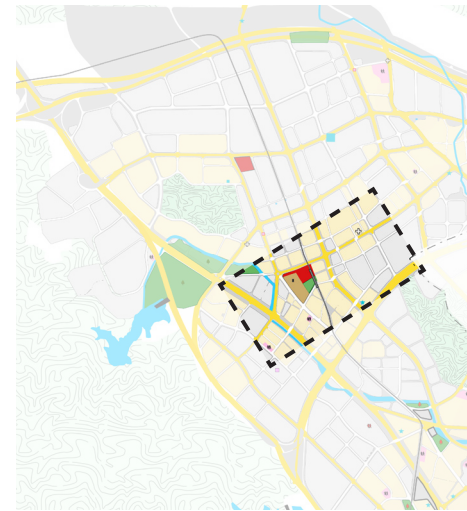
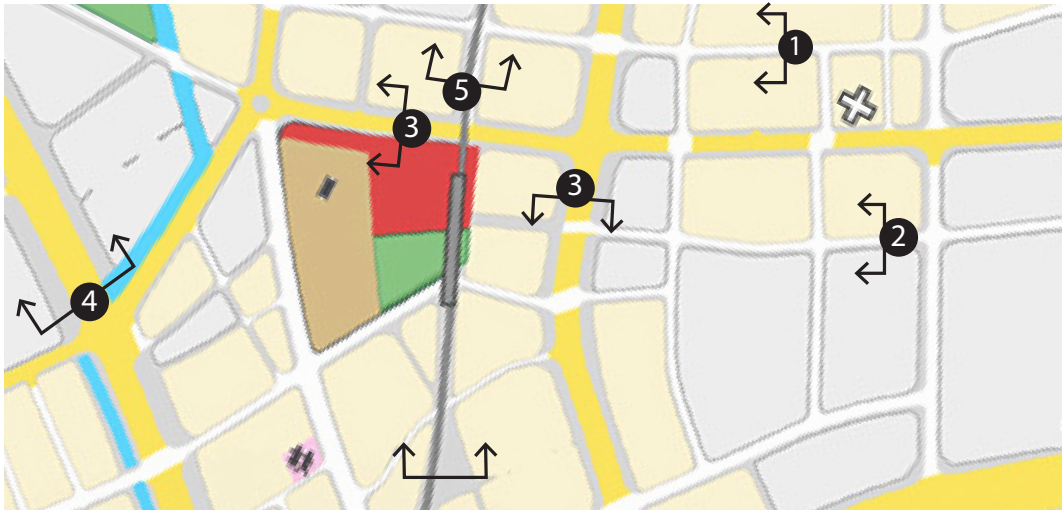
## (NEW) CITY PLAN AS PLANNING FRAMEWORK

### Spatial typologies



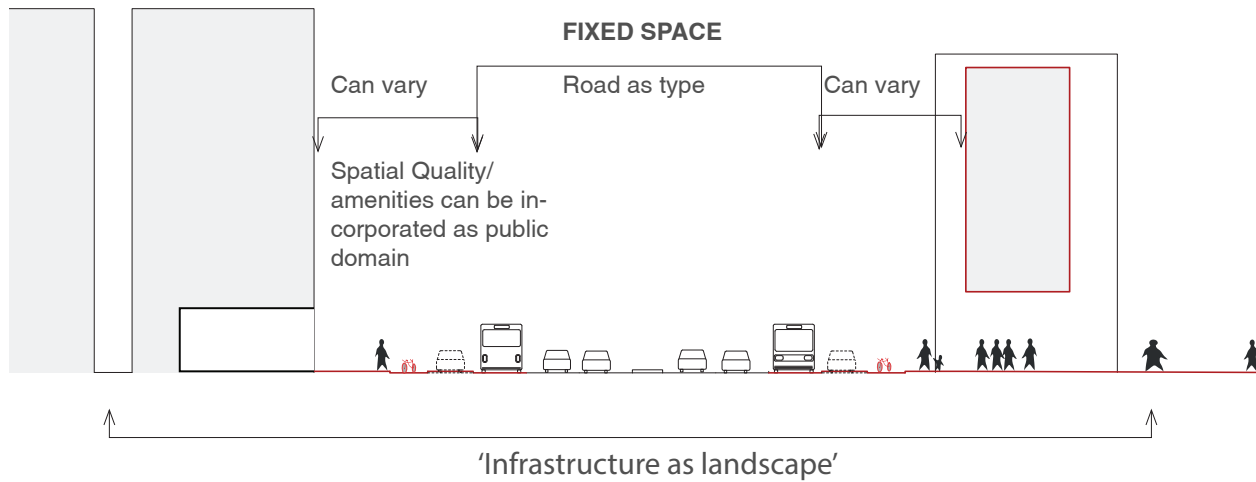
# (NEW) CITY PLAN AS PLANNING FRAMEWORK

## Spatial typologies



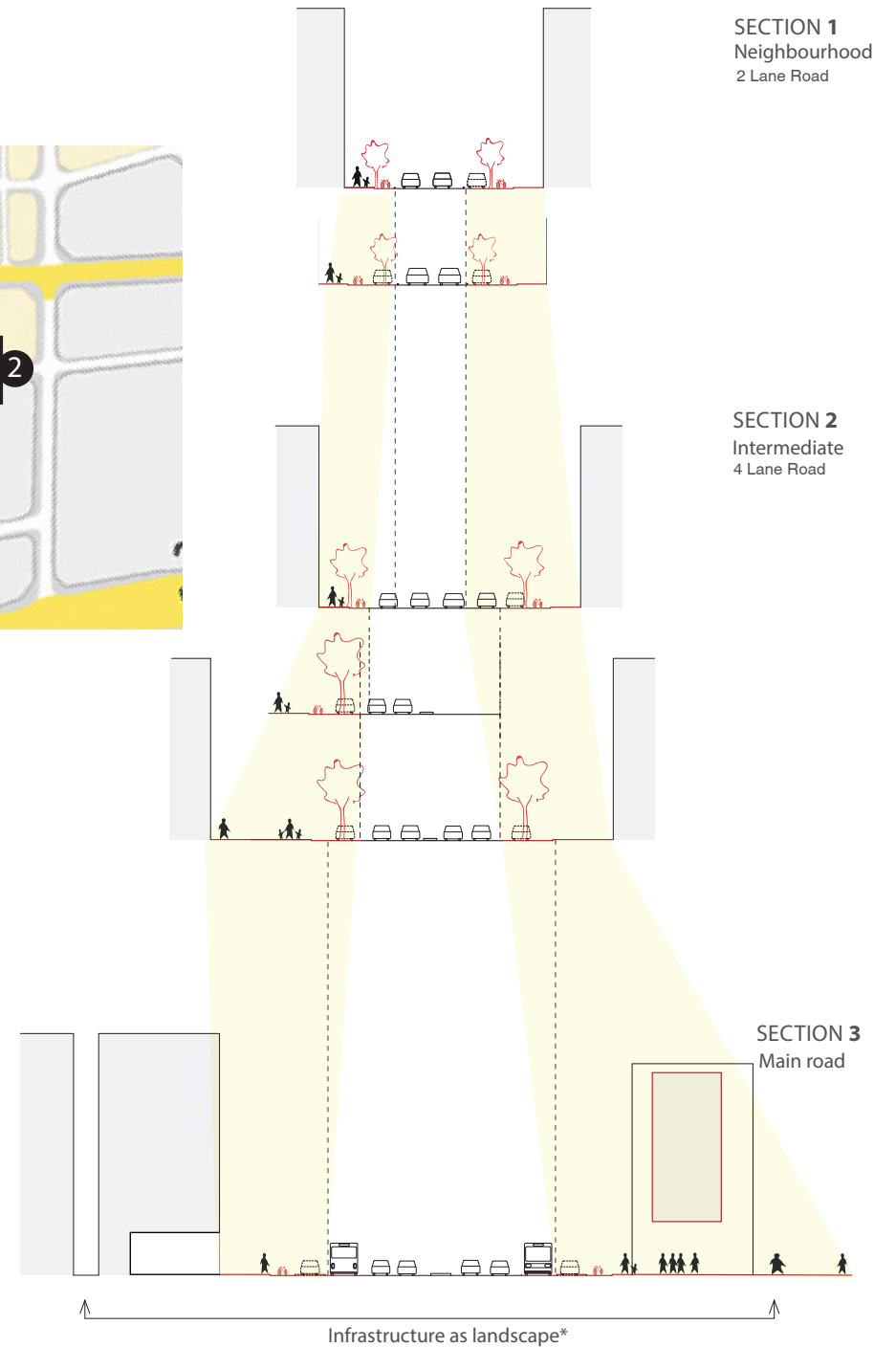
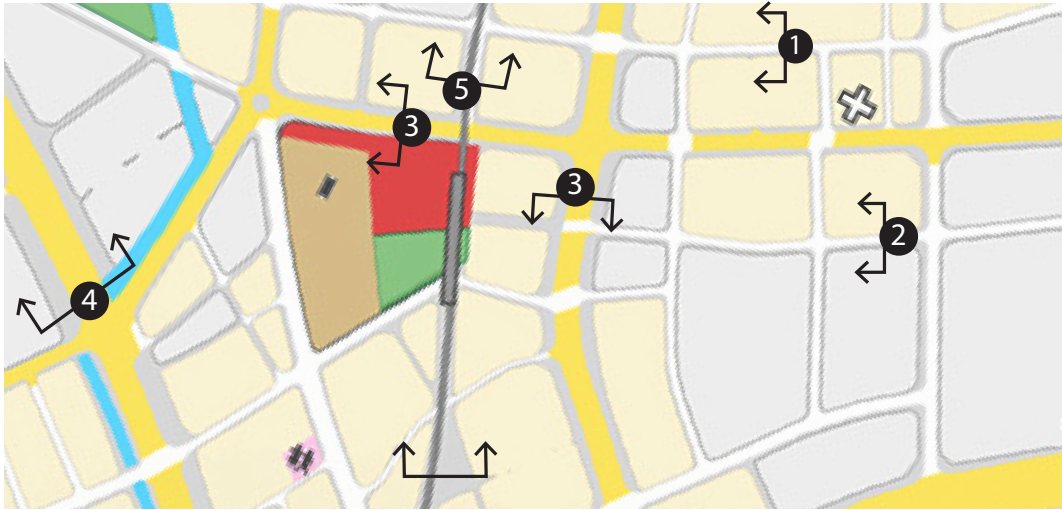
### SECTION 3

#### Main road



# (NEW) CITY PLAN AS PLANNING FRAMEWORK

## Spatial typologies







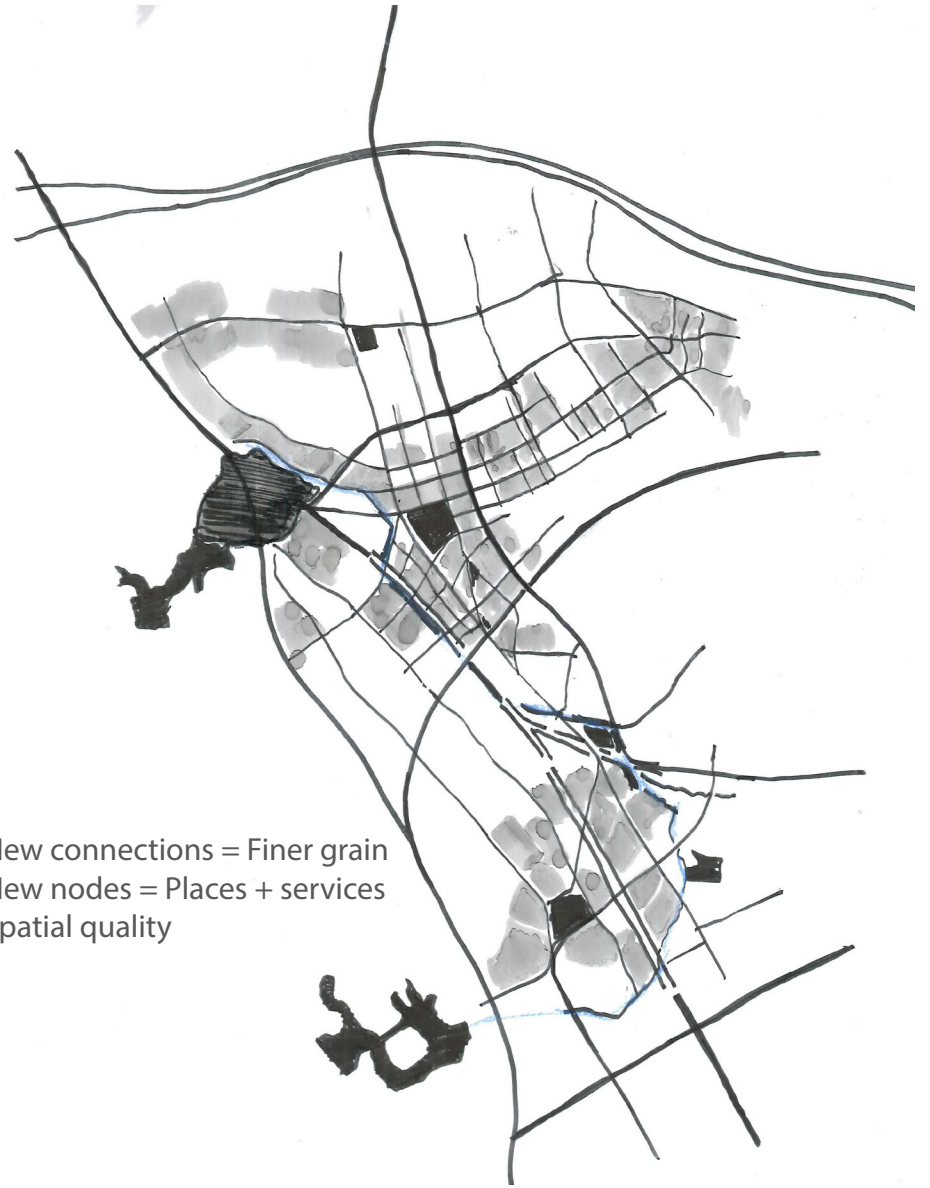




Reducing flexibility; Increasing Identity = Reducing Uncertainty  
Investing In fixed realm



New connections = Finer grain  
New nodes = Places + services  
Spatial quality





# INFUSING SOCIAL MEANING IN SPACE OF FLOWS



People  
Buildings  
(Urban Villages or Factories)  
Industrial Use Lease  
Commercial Use Lease

Residential Use Lease  
Infrastructure  
Landscape



## RESEARCH QUESTION

In the 'Restless Landscape' (Lin & Wei, 2002) where people, functions, social structure are in flux. What are the planning tools required to build an inclusive, yet flexible framework for future development of Dalang in context of uncertainty that allows for an evolutionary rather than revolutionary model to future planning?



## 5 CRITERIA FOR EMPOWERMENT

### PEOPLE

- 1) AFFORDABILITY
- 2) ACCESSIBILITY
- 3) CONNECTIVITY
- 4) IDENTITY
- 5) ABILITY TO MODIFY  
ONE'S ENVIRONMENT  
(Harvey, 2008)

### METRO INFRASTRUCTURE

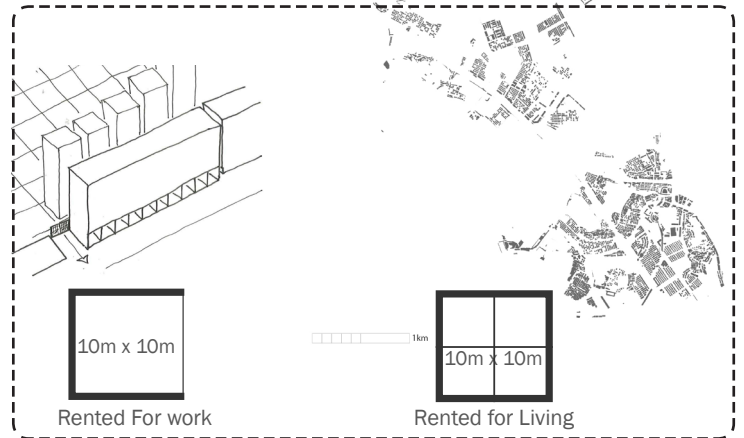
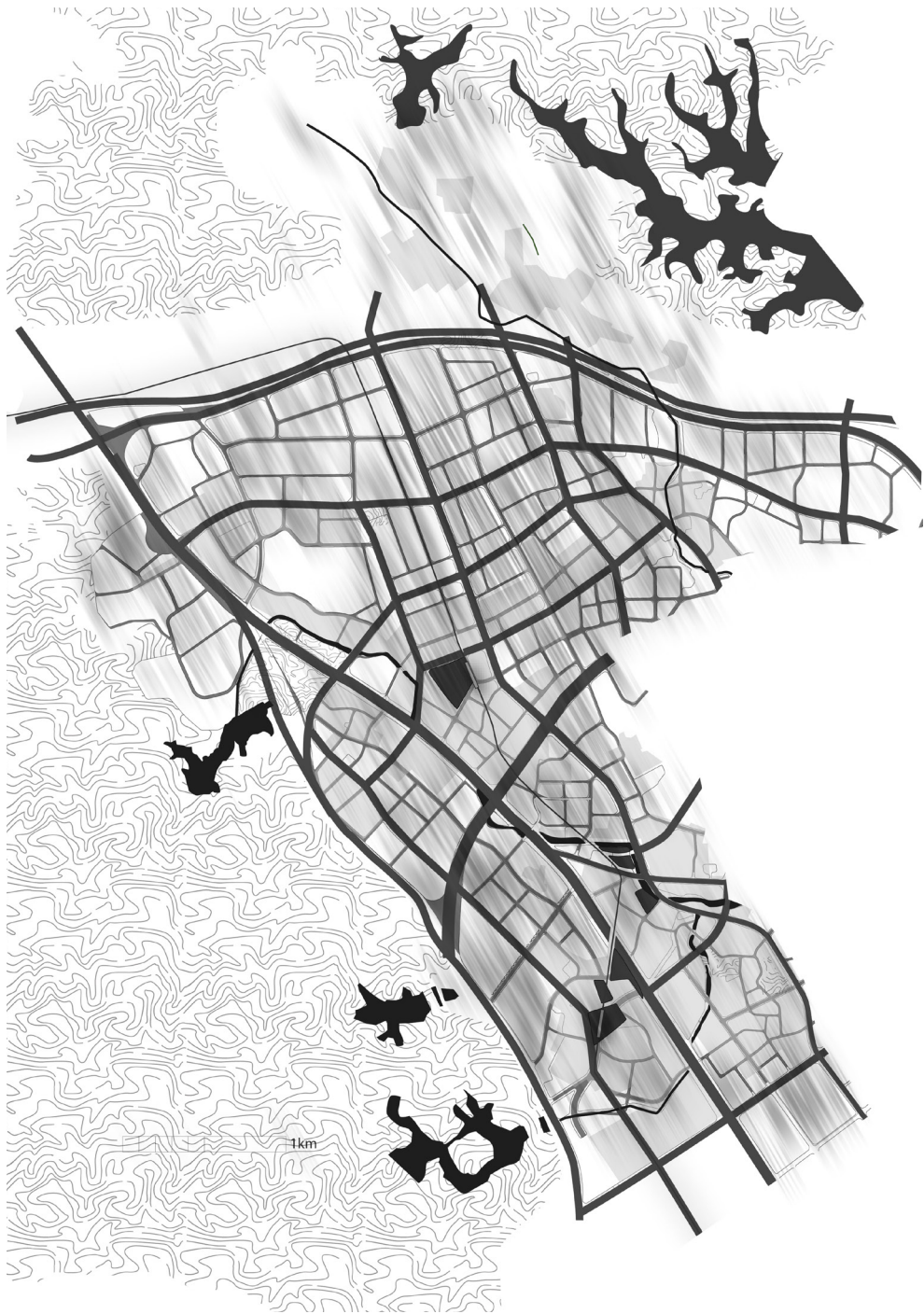
- Radius of Walkability
- Adding new Services and civic space
- Access to regional network
- Commerce footfall
- Facilitating Diversity
- Amenities and spatial quality

### PLACE

- IDENTITY
- SPATIAL QUALITY
- PROXIMITY TO NETWORK

*The right to the city is far more than the individual liberty to access urban resources: it is a right to change ourselves by changing the city.”*  
(Harvey, 2008)





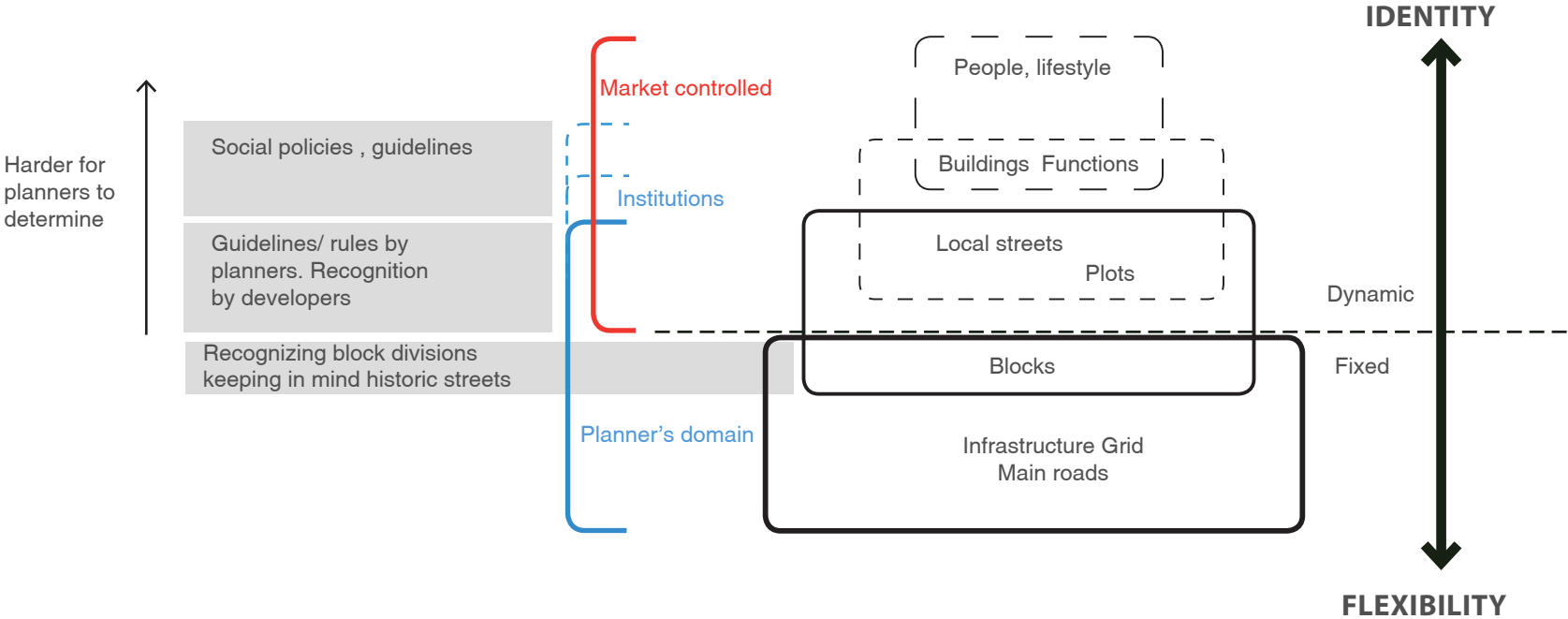
10m x 10m

Rented For work

10m x 10m

Rented for Living

# CITY AS LANDSCAPE OF CONTAINERS



- Blocks ——— Industrial blocks currently 350 - 700m
- Local streets ——— As cultural landscape in urban villages
- Plots ——— Unit of affordable space. The residential buildings in the urban village. 10x10m flat space divided as 4 rentable rooms





**INFRASTRUCTURE**

Places

Connectivity

1km



**POLICIES**

**GRID**

Elongation of time of change time

To develop heterogeneous mix. Availability of small unit of space key to affordability

TIME SPAN OF REDEVELOPMENT

