"Eroding on the edges"

Integration Strategy for Western Fringe of Xi'An City as a supportive urban tissue in Mega City Plan 2020+

COLOPHON

TUDelft Delft University of Technology

CONTENT

AMBITION

CITY PROFILE

Xi'an city is a dense congloerate of different urban patterns.There is the historical center, new development zones, some villages that have been eaten up by the expension of Xi'an city, and a ring of more ore less independent fragments taht form the border of the city towards the XianYang city next to it. These peripheral city fragments are in general always zones where many transformations are taking places(Muilty layered strategy) : they are former industrial areas, spontaneous housing constructions, argricultural or disorder structures,etc., isolated from each other by the cutting through of infrastructure.

1 Fast urbanization process taken place after 2000, in such a short period, the city is expanding towards its fringe with constructuons of infrastructure, new settlement like the scientific parks and handrands of housing projects, which linked to the current infrastructure development. This kind of fast growth bring about the contradiction between the local existing situations and the new extension, the building up of the high speed infrasturcutre without considering the local habitant and existing situation has caused the splinterred urban form(Graham and Marvin, 2000) at the fringe area.

2 Sencondly, the transformation of the original in dustries.The re-location and re-integration of the factories make the shrinking identity for the area as the industrial area before.Gradually losing the urban identity of the area made a disorder of urban structure in both of spatial and social aspects.

3 Futhur more, because of the specific location of the area, it attracts the lagest proportion of floating groups of the whole city. The low cost of the living expense and convinient location for commuting out-and-in city, more and more floating groups are gethering to this area

4 The last but the most specific problem of this area is the diminished value of the historical and cultural assets. Although this preserved area is 36 sq kms and has been standing there for 2210 years long, archaeological excavation work started since 1960s last century, the extremely high value of the relics has been neglected and out of public's attention.

In conclusion, the larger scale transformation cause the fragmentation socially and spatially because of neglecting the local existing conditions.

Population

Xi'an   7,547,600
Rome   2,726,927
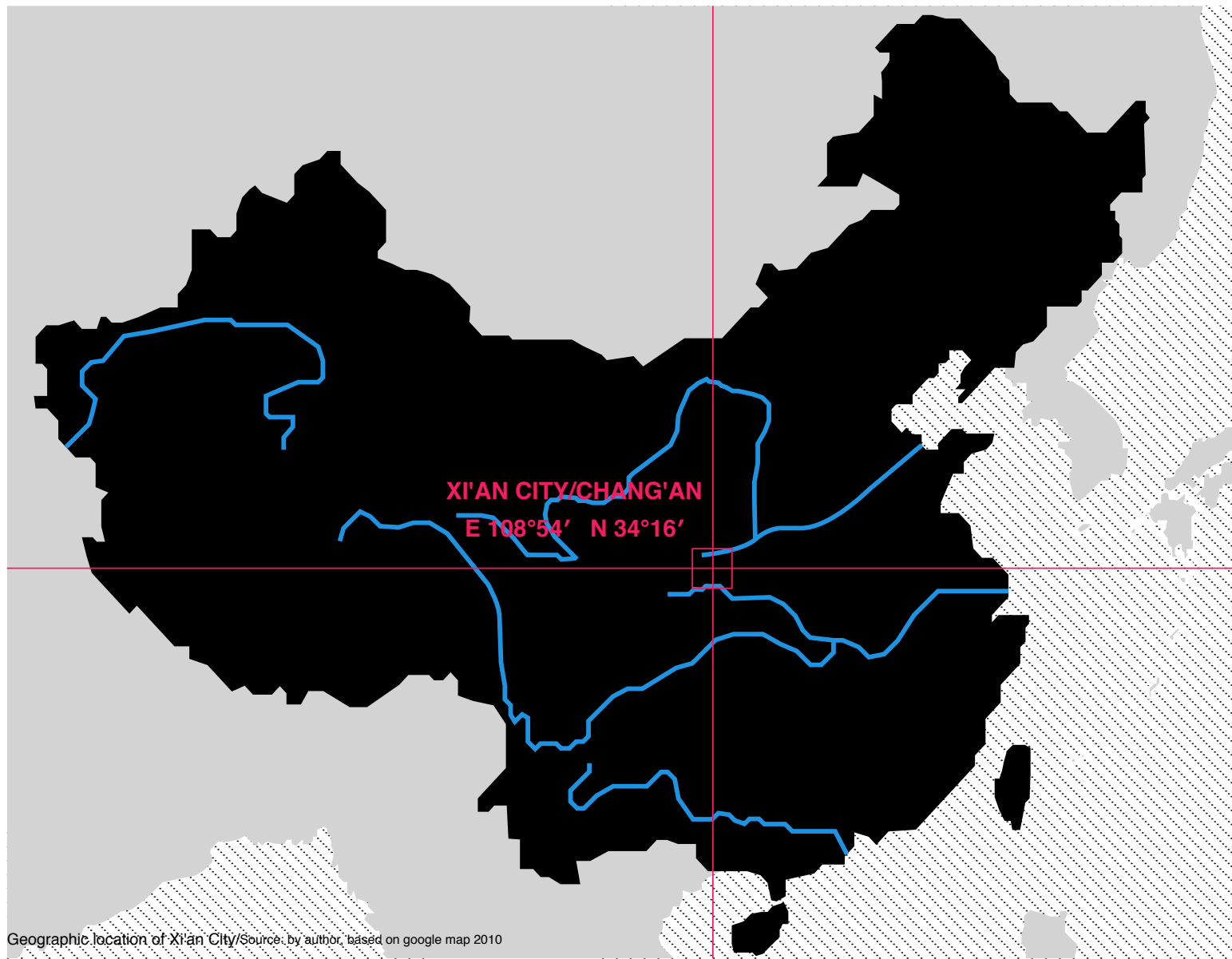Amsterdam   762,317
Shenzhen   12,693,000

Land Area(sq km)

Xi'an   3,547
Rome   1,285
Amsterdam   166
Shenzhen   2,050

History(yr)

Xi'an   3,200 since 1100BC
Rome   2760 since 763BC
Amsterdam   735 since 1257
Shenzhen   32 since 1978

XI'AN CITY/CHANG'AN
E 108°54′   N 34°16′

Geographic location of Xi'an City/Source: by author, based on google map 2010

Contemporary Development

Although with such a splendid history, the city which is located in the hinter land part of China, doesn't keep pace with development of the coastal China after the political reform. The remarkable gap in terms of urbanization and economy has been taken place. Although, the total area of western China is much larger than the eastern, the GDP of eastern part is more than 3 times larger as much as that of west part.(Fig. 2) In order to reduce the gap and make balance development, the "GO WEST" strategy issued by the central government of China was starting in the year of 2000. And a crucial element of this strategy is strengthening the central cities and clusters as the priority of development.

As the important role of centricity of Xi'an City in the hinterland China, and the transition node from east to west, Xi'an City has been starting to enlarge the construction and development since the implementation of the "GO WEST" strategy in the year of 2000.

From that time, there is a booming development taken place for this ancient city, in terms of population and urbanization.(Chart.2) As mentioned in the last chapter, the municipality established a polycentric city model in order to response the increasing population and more comprehensive development in the future. This model distributes the city functions and the technical flows as a network with new centralities and subcenters. In that model, the Xianyang City ,which is in the lower position of the city hierarchy, is going to develop as the twin city structure with Xi'an City.(Fig. 7) Xianyang City will afford as the manufacture and logistic base combined with the development of the airport. the New infrastructures are being built to make these centers accessible with each other. More investment are attracted towards these centers.

Conclusively, the city is going to be integrated in a big structure of urbanity with ambitious plannings and policies. Nevertheless, this kind of distribution of flows and collaboration is creating a urban condition that "cities are fragmented and splintered." (Graham and Marvin, 2001)(Fig.8)

XI'AN CITY

Beijing

Shanghai

Shenzhen & HongKong

Western China
6,850,000 sqkm
GDP: 17%

Eastern China
2,750,000 sq km
GDP: 83%

Gap Between West and East/ Source:by author based on report of National Bureau of Statistics of China http://www.stats.gov.cn/tjsj/ndsj/

WORKING FRAME

WORKING FRAME

Motivation of the study

As mentioned in previous part, the west fringe area is going to be highly invovled in the coming urban transformation process.There will be a new regional urban synergy model at the "large scale" which will cover a certain area spatially at the "local scale". This would influence the future of this area based on and overlaped the exsisting spatial condition. Does this change coming from the large scale re-structure of the region bring a benifit and opportunity to the neglecting area to improve? Could this transformation get to roll more sufficient if the local area contributes as well?

From that way of thinking the subject of the research could be concluded in words: A back wash effect in-between the large scale and the local scale via integrating the local spatial networks with the larger ones.

Benefit

Support

Large scale structure   **Local scale structure**

Origin of the ambition

Main spatial approach

The main goal of the approach could be INTEGRATION. Integration of the local existing conditions and the larger scale structure; integration of the opportunity with the local habitant; integration of the local resources with regional resources, etc.,should be considered as the the specific aspects of the main one.

The integration would be achieved by developing a network of public space in terms of green public space, public space with any civic functions like the infrastructure nodes, cultural landscapes,etc,. Because of the huge capacity of public space for cohering people and the activities in terms of whatever the necessary, optional or the social ones(Jan Gehl, 2009). Public space is considered to applying attractiveness of human flows and the activites.As a result of that, a network of public space will be introduced for the destination of integration.

Meanwhile, the characteristics of public space of this specific area is unique because of the existence of the historic and cultural elements here. The significant relics area locate in this area could be seen as a leading element for the public space, integration of this preserved green and cultural area with the research area as a whole, is another task for the approach.
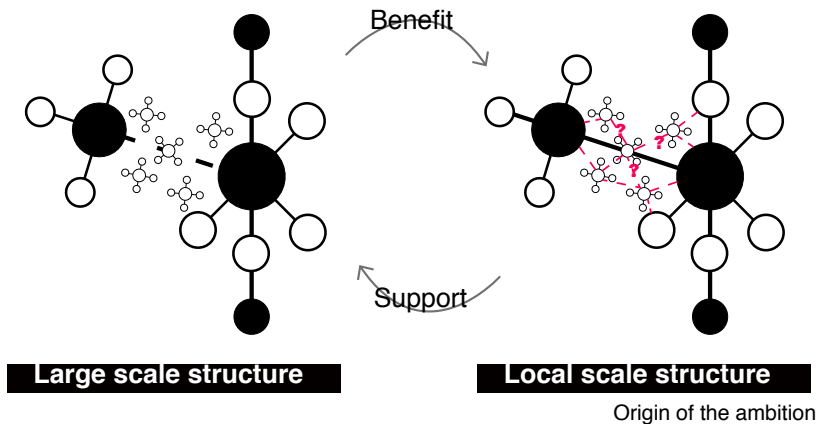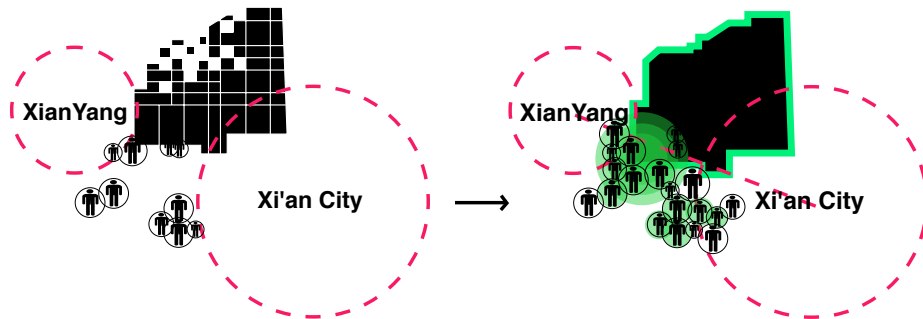
Ultimate aims

The current corridor development supporting the regional leve urban synergy, is bringing the integration on larger scale but creating fragmentation at the local scale. Additionally, the fast development of the city has neglected much local urban values such as the history and local inhabitants. According to these corridors and what they connects, large amount of investment and effort is devoted to establish the super strong urban cores. At the same time, the in-between area and the inhabitants there can not seek any benefit from the opportunity, but neglected to be more and more deprived part of the city as a whole.

The government aims at building up a urban synergy model as the Mega city development in order to consturct collaboration instead of the competition for long term. To achieve and support the governmental plan meanwhile supplyment the policy and strategy spatially, establishing a supportive goal should be considered inmmediately.

In addition, by surveying on the reality and problems of the local area, the current corridor development caused fragmentation on urban form at the local scale. The infrastructures of high speed roads and railways cut the urban form into pieces and block the connection in-between local plots with each other.Even more, the local cultural and historical valure asset is diminishing because of the rapid urban growth at infrastructure and building-up scope. As a result of that, I will focus on establishing strategy to counteract that fragmented situation meanwhile re-activate the local cultural and historical values.

By combining the governmental plan at larger scale and the urgent demand of improvement at local scale, the availability of the cultural asset area, and the importance of new development area in between two main centralitiy cores, can be re-combined as the activator in order to integrate the whole in-between area become the supportive tissue of the Xi'an Mega City model, meanwhile reinforce the historic identity and benefit the locality and improve the living quality of this area.

Specific aims

To achieve the ultimate goal, it could be divided into more detailed layers of spatial aims:
Integrating the current corridor development with the activation of the cultural assets in order to benefit the local area with spatial qualities and new identities.
1.Integration of local area with users\urban functions\urban forms;
2.Integration of corridor development with lower down connectivities(secondary/ third road networks) which can expend the benefit to the local area as a whole;
3.Integration of cultural and historic asset with public space /(green public space) network which organise and connect different activators of the area.

Social relevance

The vision from government point of view, concerns on huge collaboration in terms of the regional level infrastructures and large newly developing zones.It seems to bring the equality to every different parts of the region, but create the inequality indeed. That consequence happens at the very local area which appears strikingly different.

To dilivery the a series of spatial interventions which are going to support the implementation of the governmental plan firstly, could be the supplement for neglecting part of the plan as well.

Futher more, for the local neighborhood, the strategy is also focusing on addressing the local problems, meanwhile to potentiate the locality by completing the low-down infrastructure network, activating the local attractors, and improving the living quality of the area.

By implementing that, more and more powerful social sectors like the investors and local government of the relevant district could be involved in the transformation together and format the whole process. The expected result of that, is achieving to really activate the debate and participation process, which attracts more attention to local value than before.

Another essential issue is that the availibility of the cultural and historical assets area could be activated and reinforced. The cultural and heritage assets are significantly important to not only the area where it locates, but also to the city and region as a whole.Since the strikingly strong identity, it can help local inhabitants recall the strong identity for area where they are living and form the sense of belonging to the new settlement at the same time. Besides, this large area can be seen as the generator for the promotion process.
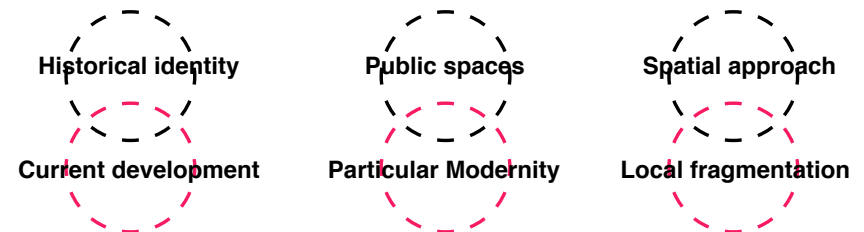
Scientific relevance

Firstly, the main spatial aim of the research and desgin is doing an experiment to combine the historical preserved area with current corridor development.In my point of view, it could be explained to combine the historical identity with the new development. I will develop the process including research and design to explore the combination of these two elements to provide more potentiality and quality for the city.

Futher more, according to the theory of public sphere, it is a space of democracy that all citizens have the right to inhabit and where all public discourse takes place. The public space became more concerned because of the relationship between the physical environment and the society.In the physical aspect,public space is a platform for urban life and communication, in another word, it plays an important role in the seciety.Public space could bring different people from various social groups together to debate.In terms of the social aspect, the public space has the largest capacity to provide platform for oepn communication.(Holston,1995)
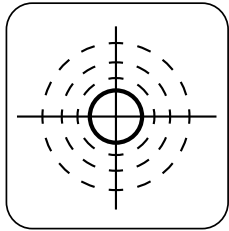   In Chinese context, the public space is a relatively modern concept which is deprived from the European context. To explore the modernity of Chinese own way of public spaces is signicantly essential issue.Additionaly, searching for particular characteristics of Chinese public spaces which hinge the peoples' habit and way of living.

The last one is trying to take advantage of public space to counteract the fragmentations which are frequently taken place of contemporary cities, especially in developping countries.

Historical identity   Public spaces   Spatial approach

Current development   Particular Modernity   Local fragmentation
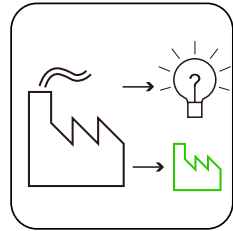
Problem definition

The current fast growth of Xi'an City (after the implementation of "Go west" strategy), is transforming the urban context and urban form,meanwhile several active urban corridors are developed to connect the cores of the Mega Xi'an City model. However, this model create spatial fragmentation at the local level because of neglecting the local inhabitants and existing conditions,the history and cultural assets and in-city villages for instance.
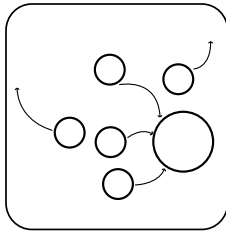
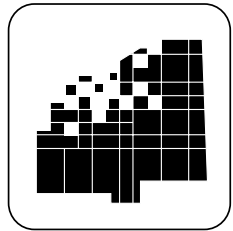rapid urban growth   transforming industry
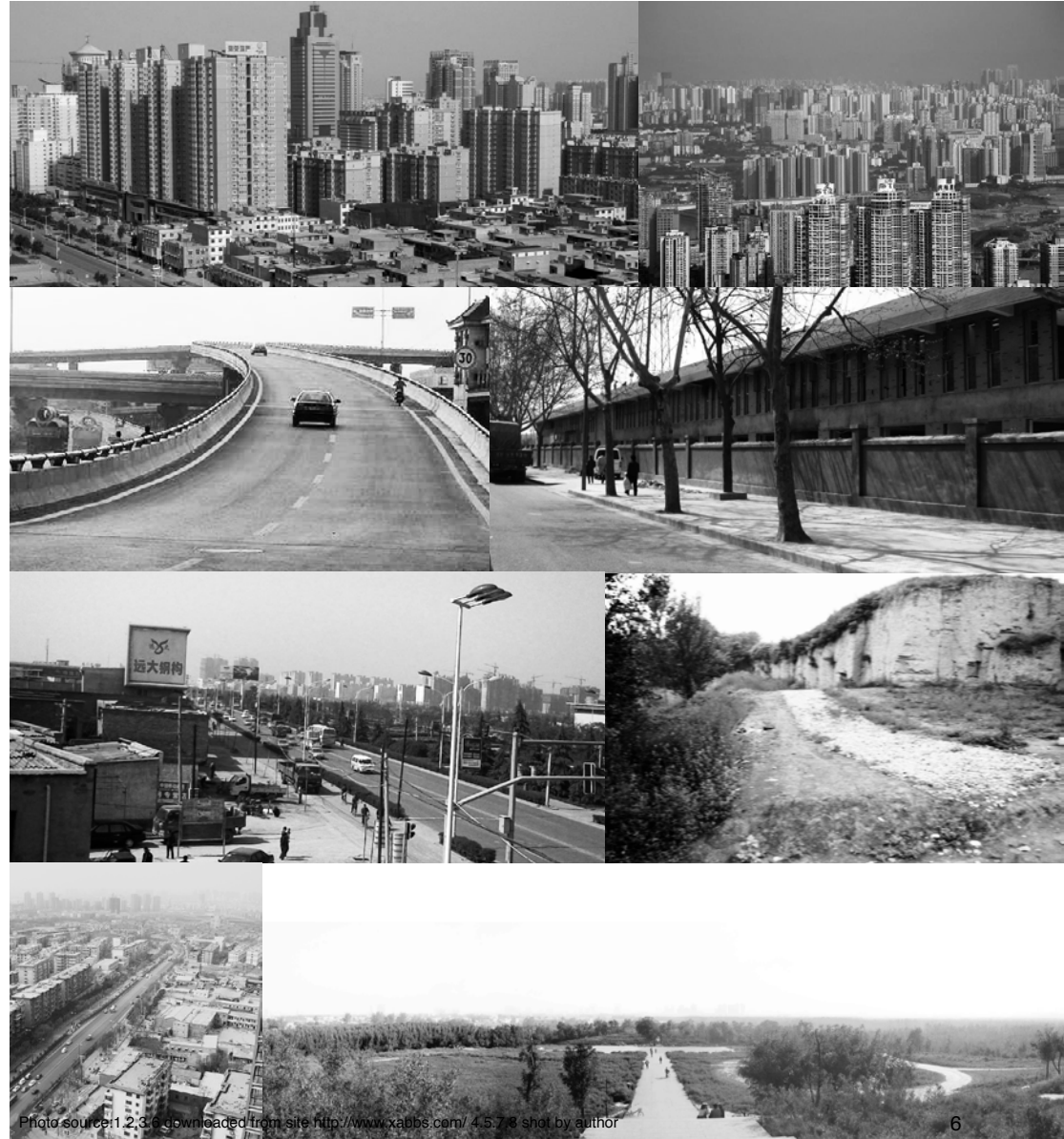
Fig.7 Transformation forces

floating groups   neglecting cultural assets

Spatial fragmentation and deprived urban quality at the local level because of neglecting the existing conditions and local values.

Manufacturing
Cluster

XianYang
City

CBD

Ecological
Park

Xi'an
Historic Center

High-tech
Development
Cluster

Qujiang Lake

Scientific
Park

City Level Centrality

Sub-centers and clusters

New clusters being built
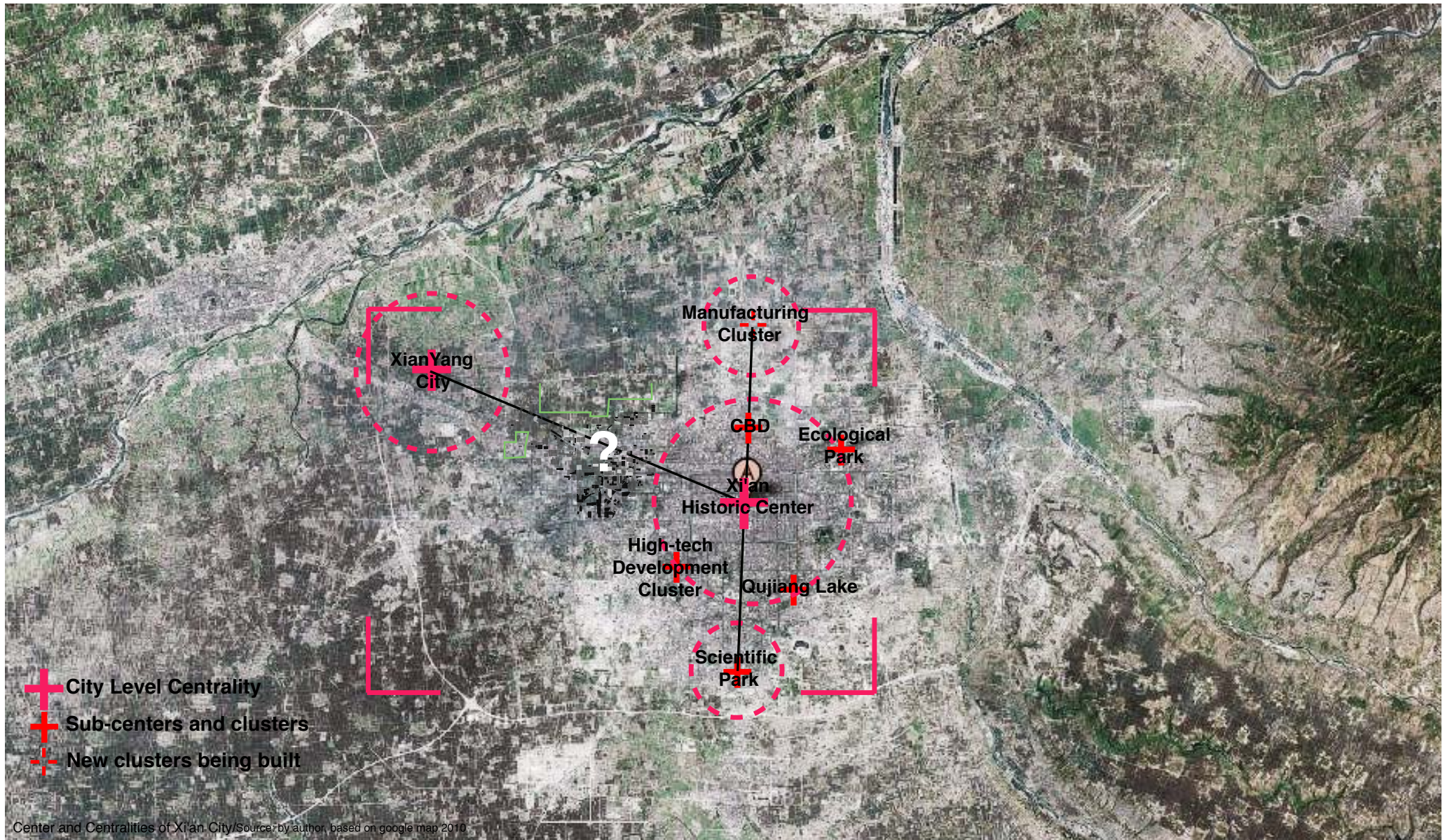
Center and Centralities of Xi'an City/Source: by author, based on google map 2010

Multi-scalar, Public space network,Fragmentation, Urban vitality,Local value

RESEARCH QUESTION

How to combine the current corridor development and the cultural & historic assets by means of the public space network, in order to counteract the fragmentation at the local level and meanwhile benefit the local inhabitant of western fringe of Xi'an City, supplementing the governmental city model.

Sub-research questions

Since the area is neglected by all the plans from higher integration and plans, and transformed by various forces, the significant elements I will develop, to improve and enhance the locality, are defined as following:

-Urban identity
Lynch (1981) defines identity as "the extent to which a person can recognize or recall a place as being distinct from other places". Like individuals, cities should have character and distinctions; like individuals, this flavour is made up of numerous characteristics, or identifiable elements.

The urban identity of not only the one specific area but also the whole city presents one of the most important role for dwellings.It could form the sense of belonging for man who lives for a long term and new settlement. Additionally, it could form the outstanding city image immediately if the city or area presents with ditinguishable identity.

Since the transformation process of the research area, it is going to diminish its own identity. From the farming fringe area to the peripherical industrial area, nowadays the area is closely involved in new round of urban integration at regional level. Therefore, I should consider about the following questions for identity part:

What should be the new identity of the project area in context of contemporary urban development?
How to realize the identity by spatial approaches, especially by public spaces?

-Fragmentation
As Graham and Marvin defined, the fragmentation happens as the combined process with increased integration at the larger scale and splintered urban form at the local scale.(Graham and Marvin, 1998) The area locats at the transformed perihery of the main city. By establishing the twin city urban synergy model, fragmentation has taken place at the local scale level.Therefore, I will take consideration about the following questions for fragementation part:

What is the main driven force of the fragmentaion of the research area?
How to search for the fragmentation of the area by morphological study?
How to counteract the fragmentation by establishing spatial strategies of networked public spaces?

Representation of different urban identities/Source: shot by author

Fragmented plots of the area/Source: by author,based on Xi'an governmental district plan

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-Networked City

Current urban development demands the high accessibility for city and regional scale in order to achieve econoic and social growth.That is the birth of the contradiction. High speed infrastructure are cutting the urban form into indenpendent and isolated

pieces but can not bring the positive flows extending to the locality. However, today, the street is generally lost and reduced to a means of traffic, lacking three dimensional qualities, as a consequence of the current scattering of the buildings and the increasing motorized traffic.(Oktay,2002)

How to transit the strength from the larger scale infrastructure to the local area in order to benefit the local inhabitants?
How to combine the future networked city model from governmental point of view as an opportunity with the other identities of the area?

-Public space network

Public space is regarded as "the common ground where people carry out the functional and ritual activities that bind a community, whether in the normal routines of daily life or in periodic festivities" (Carr et al, 1992). Basically, the urban experience is, and has always been, the collective experience of places and spaces.

The public space is the experience of places and spaces conceived to link people and to create a vital social life(Bentley et al, 1985). Therefore, from my point of view, the network of public space is considered as the most efficient way to create cohesion in both social and spatial terms in my research.

How to develop a multi-scalar public space network by which the fragmented and isolated parts could be re-connected and transit the strength to lower down locality?
How to develop the identity of the public space by which the area can establish the significant new urban identity?

-Culture as the urban wealth

The local context here firstly represents the local values that can be activated combined with larger scaled development.Survey on the local context in terms of developing history, traditional urban form, and current opportunities is another important research part.

What is more, as Friedmann stated in "The Wealth of Cities", culture is the spirit of people, and neglected or carelessly destroyed, as happens so often, the spirit atrophies and eventually succumbs.The heritage districts are of special significance in the vast expanse of the contemporaray city.

How to activate the preserved historic assets area as the generator of the whole strategy in order to accelerate the development to the area, meanwhile reinforce the historical identity as a whole?
How to create a new dimension of memory container by spatial strategy and interventions in order to respect the local context according to different periods?

Memory container of different periods
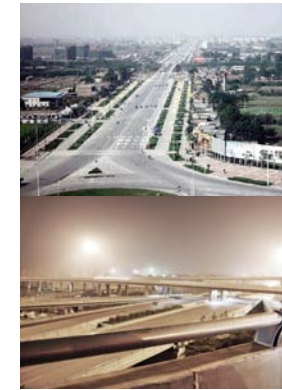
Current corridor development for supporting Mega Xi'an city model

From regional public space to local scale

Methods

For theorietical study part, the planning is to review the field relating urbanism including networked cities, networked infrastructure, splingtering urbanism, wealth of the cities, urban fragmentation ,cultural landscape and public realm&public spaces,etc,.

Firstly the literature review paper is focusing on the problem defining and problem solving part. As a result, a paper is going to explore the interrelationship between contemporary networked physical world and the cities which are not only about physics but also societies.
Nowadays, more and more emphasis are put on the debate and rethink of that, how the technical infrastructure works with "sociotechnical world" (Aibar and Bijker,1997). Apart from the visible connections between different physical world, the hidden effect that negatively influence of the society is happening as well. Roads have traditionally been taken for granted due to their economic and social significance as transportation and utility corridors. Meanwhile, the implementation of the road system creates spatial fragmentation and barriers which cause deeper gap of societal and cultural cohesion. In contemporary China, rapid development demand in terms of economy and urbanization process provide fertile field and resource for infrastructure constructions. During the current transformation process, the existing social and cultural networks are neglected. The same issue and problems are happening everywhere in the global scope. This paper will explore whether the technical infrastructures are pursuing for equality or creating inequality with losing the societal and cultural value from the empirical theory and reality.
In the paper, the spatial integration approach is also reviewed at the end part.

Secondly, the literature studies oncentrate on public realm and public spaces since it is the integrated tool spatially. According to a lot literatures, the public spaces is not only a beautifu visual space with city image and place, but also a platform for urban life and communication, in another word, it plays an important role as the spatial base that allows for socio-cultural interactions in the society (Gehl, 1987; Jacobs, 1961; Habermas, 1989). The interventions of public space is one of the most important postulates of contemporary urban planning and one of the priority actions to execute in order to promote urban social integration (Lungo, 2001).Public spaces can represent the way of communication of people, the traditions and the habit of citizens. As a result of that, reviews is focused on the combination between public space and exploring the local context and that of cities as well.

Theory

In support with project, urban theories of different perspectives have been reviewed. There are most important four themes of the theory study to verify and clearify the concept of Problem Definition, Vision, Hypothesis, and the Urban Design part.

Urban Fragmentation

The book of "Splintering Urbanism" as the main guide for understanding and recognising the problems.
"Fragmentation is a combined process of increased integration at the large scale and splintered urban form at the local scale. (Marvin, 2008)."

Networked City

There are a lot of readings related to the contemporary networked city.The paper of Place and Space in the Networked City:Conceptualizing the Integrated Metropolis, emphasized on the continuities of the urban spaces to reinforce the key features of the network.
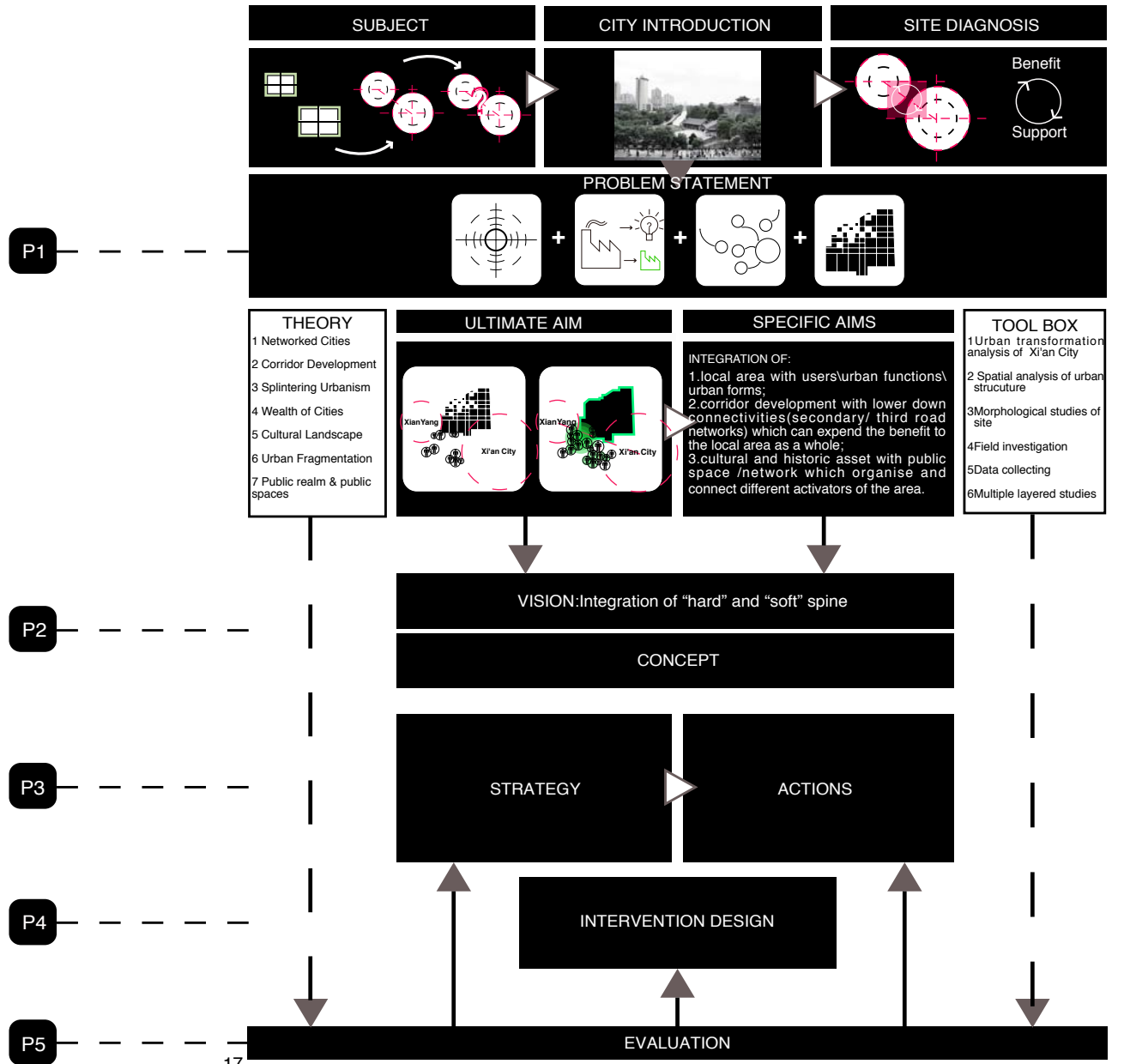"Important continuities of routes and spaces could be maintained, whilst other parts of the urban fabric could be subject to quite drastic transformations.(Marion,1999)"

Public Space Network

The reason to take position of public space network as the main tool is from Bojar. He pointed out in2003,the public space plays a key role in the urban structure and city life, becoming a privileged element in order to promote territorial cohesion. It thus becomes possible to think of "public space as an element able to promote continuity and order the territory, but also with a natural ability to create and maintain strong local centrality, environmental quality, economic competitiveness and sense of citizenship."

Urban Landscape

Shape the urban landscape in specific social context with different morphology.
Permeable urban landscape.continuity of the urban landscape.

SUBJECT

CITY INTRODUCTION

SITE DIAGNOSIS

Benefit

Support

PROBLEM STATEMENT

P1

THEORY

1 Networked Cities

2 Corridor Development

3 Splintering Urbanism

4 Wealth of Cities

5 Cultural Landscape

6 Urban Fragmentation

7 Public realm & public spaces

ULTIMATE AIM

XianYang

Xi'an City

XianYang

Xi'an City

SPECIFIC AIMS

INTEGRATION OF:
1.local area with users\urban functions\ urban forms;
2.corridor development with lower down connectivities(secondary/ third road networks) which can expend the benefit to the local area as a whole;
3.cultural and historic asset with public space /network which organise and connect different activators of the area.

TOOL BOX

1 Urban transformation analysis of Xi'an City

2 Spatial analysis of urban strucuture

3 Morphological studies of site

4 Field investigation

5 Data collecting

6 Multiple layered studies

VISION:Integration of "hard" and "soft" spine

P2

CONCEPT

STRATEGY

ACTIONS

P3

INTERVENTION DESIGN

P4

P5

EVALUATION

17

From research question to methodology to answer the question step by step.

How to combine the current corridor development and the cultural & historic assets by means of the public space network, in order to counteract the fragmentation at the local level and meanwhile benefit the local inhabitant of western fringe of Xi'an City, supplementing the governmental city model.	Concerning on	Tool Box

Decomposing the main research question

Theme 1: Urban fragmentation

What is the main driven force of the fragmentaion of the research area? How to search for the fragmentation of the area by morphological study? How to counteract the fragmentation by establishing spatial strategies of networked public spaces?	Deprived spatial quality Disintegrated urban structure Negtive effect on urban development	-Literature study on splintering urbanism theory. -History study of urban transformation. -Potos for observation on deprived living quality. -Comparison on fragmented fringe area and integrated centralized area.

Theme 2: Networked cities

How to transit the strength from the larger scale infrastructure to the local area in order to benefit the local inhabitants? How to combine the future networked city model from governmental point of view as an opportunity with the other identities of the area?	Centre and centralities Structure of the road infrastructure Future plans	-Mappings of the existing centralities. -Study on governmental structure plan. -S.W.O.T. analysis on governmental city plan. -Mappings of road infrastructure network.

Theme 3: Urban identity

What should be the new identity of the project area in context of contemporary urban development? How to realize the identity by spatial approaches, especially by public spaces?	Properable urban identity of the area Identical element of the area Space shaped by certain identity	-Literature study on searching urban identity. -Photos for discovering local identical space or living pattern. -Field trips and investigation.

Theme 4: Network of public space

How to develop a multi-scalar public space network by which the fragmented and isolated parts could be re-connected and transit the strength to lower down locality? How to develop the identity of the public space by which the area can establish the significant new urban identity?	Existing public space and potential field Existing public mobility network Typical way of public activities.	-Mappings of existing public space. -Case study on successful public space of using. -Evaluation on public space by accessibility. -Typology study of the public space. -Photos on observing spatial quality of the public spaces.

Theme 5: Culture as urban wealth

How to activate the preserved historic assets area as the generator of the whole strategy in order to accelerate the development to the area, meanwhile reinforce the historical identity as a whole? How to create a new dimension of memory container by spatial strategy and interventions in order to respect the local context according to different periods?	Culture and green related area Culture potential as the new productive sector	-Literature study on urban cultural wealth. -S.W.O.T. analysis on developing the rellic area as a regional park. -Mappings of accessiblity and spatial integration of the area.

Main Case studies

Lisbon city. Analysis of the public spaces network : Planning public spaces networks towards urban cohesion/46th ISOCARP Congress 2010

Pinto Ana Júlia
Remesar Antoni
Brandão Pedro
Nunes da Silva Fernando.

Fig16.Memory container of different periods

"The integrated planning of the public spaces network involves countless added values,associated, not only to restructuring existing spaces, but also to the construction of new public spaces, making it possible to integrate them in the existing network, so as to promote urban cohesion."

I also get some important principles pointed out in this paper that can guide the integrated planning of the city's network of public spaces, having, as primary goal, the construction of a cohesive and coherent territory:

"Promote the formal continuity of the flows circulation (road network, pedestrian network, railroad network, cycling, etc.);
Promote the continuity of important natural structures and ecologic corridors (waterlines, large green areas, etc.);
Create relations of functional complementarity through the existing land uses / activities;
Generate social dynamics that minimize phenomena of social exclusion and marginalization;
Generate socio economical dynamics capable of regenerate a degraded area of the city."

From this paper and Lisbon city study, it concluds the essential element for the idea of planning public spaces networks towards urban cohesion. I also follow the significant principles to search and develop the mapping of my own city, for instance, the continuity of important natural and cultural structures is one of the most essential element through out the whole story of my research and design.

Barcelona case: Transformation of @22 District

| @ activities | Green spaces | Avanced infrastructures | Industrial heritage |
| 7@ facilities | Subsidized housing | New mobility model | Revitalization public |
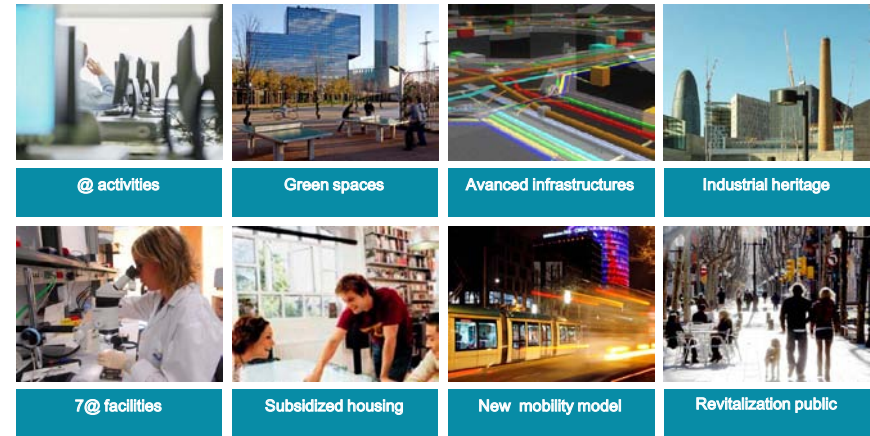
Barcelona--use public spaces to achieve structural improvements in disadvantage district

The improvement of the urban environment at the peripheries as well as the emphasis put on the connection between urban neighbourhoods previously isolated from the city centre were clear priorities of local urban planning at that time.
This is an urban renovation strategy which is going to deliver a new model of making city. They combine the spatial approach with the policy and principle making approach.

The whole transformation proposal invovles different phasings of each there is a clear stakeholders and urban goals in terms of economy promotion and urban quality improvement as well.

From this case, it shows the whole image how to manage the transformation process step by step and meanwhile, the relationship between implementation at urban territory and their marketing goals.

Ville Nouvelle Melun-Sénart / OMA / Rem Koolhaas/
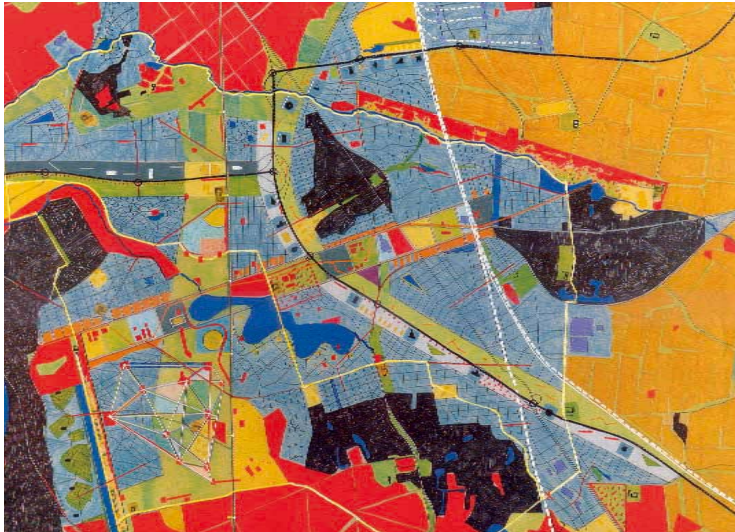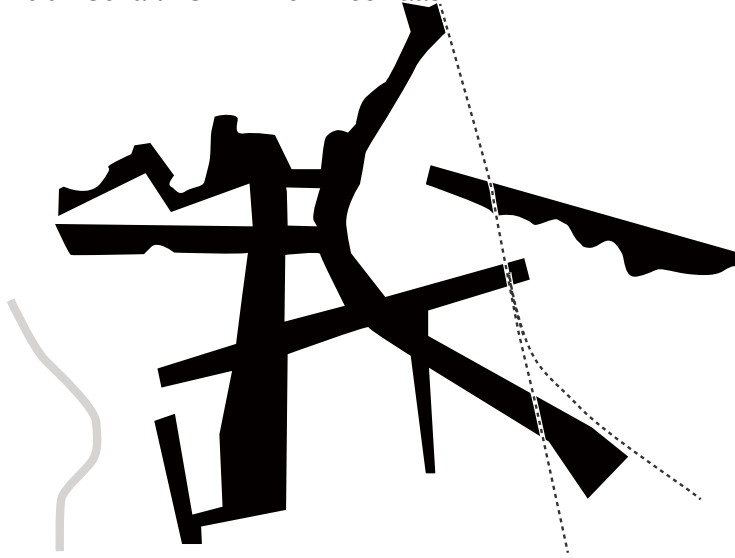
Phase 0: Inventory
The Seine, two forests, existing villages, motorway, TGV line.

Phase 1
Minimum public investment for maximum preservation of existing qualities.

Phase 2: First programmatic reservations
East/west: campus strip; north/south: nature/leisure; beginning of business band along motorway.

Studies for development choices

East/west band absorbs motorway, village.

Parallel north/south strips create random relationships with existing elements.

Existing villages as multiple cores of future development.

Conical strip between two forests isolates most important landscape elements.

Campus relates existing cores; each village colors a section.

Voids along the forests and the Seine leave attractions accessible.

Size: 5.000 ha.

Program:
Ville Nouvelle, French New Town
Residential neighbourhoods, industrial parks, infrastructure for educational, recreational and cultural development. Preservation of existing farmland and roads.

Type:
Thematic realistic strategy
Studying from the architect's point of view for planning and designing the territory is helping me to set about translating the strategy into morphological experiment.It is a process about really put things in space, in the urban area precisely.

20

REASEARCH CONTEXT

Urban transformation

Ancient<1960s

clusters of commercials, offices and civic facilities — 2 km

1980
Historic center

1970<1988

clusters of commercials, offices and civic facilities — 2 km

1988 — Hi-tech Cluster
1980 — Xiaozhai Commercial District
Historic center

1970<1988<2000

clusters of commercials, offices and civic facilities — 2 km

2000 — CBD
1993 —
1988 — Hi-tech Cluster
1980 — Xiaozhai Commercial District
Historic center

2000+

clusters of commercials, offices and civic facilities — 2 km

2020 — Manufactory& Logistic
2010 — Eco-Park QuJiang Lake
2002 — XianYang City Core Science Park
2000 — CBD
1993 —
1988 — Hi-tech Cluster
1980 — Xiaozhai Commercial District
Historic center

2000+

2020

Manufactory&
Logistic

2010

Eco-Park
QuJiang
Lake

2002

XianYang
City Core
Science

2000

Park
CBD

1993

1988

Hi-tech
Cluster

1980

Xiaozhai
Commercial
District

2 km

Historic
center

23

Urban Transformation

To understand the city transformation from the angle of large scale restructuring, the city centrality was mainly concentrated in the ancient city wall with slow development untill 1980.In which year, the Chinese open policy was implemented.The city started establish new centers and subcenters with the economic and development identity outside. After 2000, since the implementation of the "Go West" strategy, the Xi'an city as the most important city of hinterland China. It was growing boomingly towards the fringe area and is going to face and integrate with another surrounding city. Now in this city, we have different centers to go for activities.

Historic center

Qujiang River district

High-tech district

Chang An

Xianyang city

CBD

Most iconic center of the citizen of Xi'an city which is full of all kinds of comercial activities and urban attractors.It is the hotest point for tourism as well.The morphology of the district followes the traditional straight grid urban pattern. It is the core area of the city.

This area is famous for the TANG culture identity. Some important historic buildings and heritage are located here. The area has been developed as the high level quality urban area which is going the way of realestate development oriented without considering the existing local demands and residents.

The main high technology productive district of the whole city even plays significant role in the regional level. The area has been built from the monofunctional productive zone towards the mixed use area with all kinds of urban vitalities and facilities.

The district named following the historical city of Xi'an. The district is supported up by the clusters of universities. Due to Xi'an city is also a significant city for high education in China, the area has formed the atmosphere of new extension of the universities which used to lacate in the inner area.

Xianyang is a lower level city of heavy industries which is associated with the Xi'an city.But due to the extremely short distance from Xi'an, the city is going to develop in the urban synergy with the main city in order to create collaboration instead of competing with each other.

The area is going on the similar way of the High-tech district as the good urban example. The area is also the highlight part of the whole city from the governmental plan.

Impact on the west fringe area

Typical industrial communities in the western fringe area
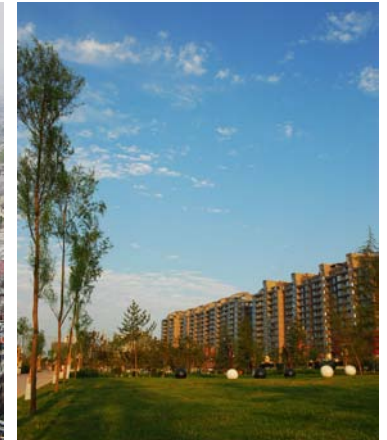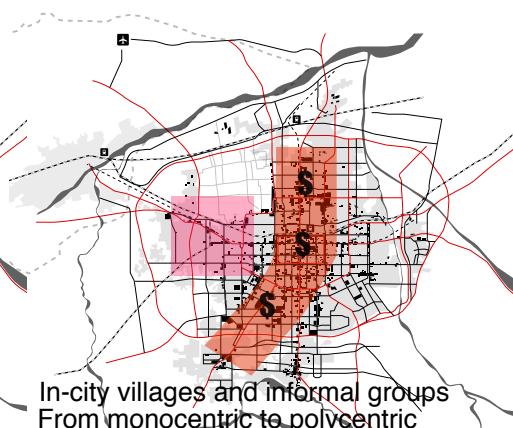

New housing area in the south part of the city

1 Overleft industrial area (1960s+)
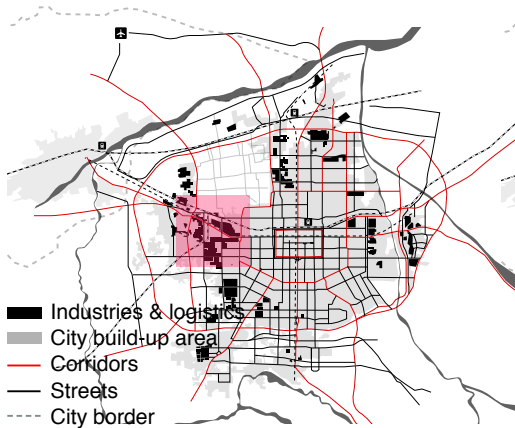
Industries & logistics
City build-up area
Corridors
Streets
City border

2 Floating and informal groups(1980s+)

In-city villages and informal groups
From monocentric to polycentric
since 1980s

The first step for fomation of this area is the period after establishment of the PR CHINA the national industrialization happend, the central government distributed the city as the industrial base of the hinterland. Factories settled down on the periphery area. But nowadays, the shrinking and relocation of the industries make the area gradually losing its strong identity as an industrial area as before. The living quality and the land value is the most deprived compared to the rest of the city. The second essential period that affected the area is after 1980s, the urban structure changed from mono-centricity

to poly-centricity. The main city spine was formed and started working and these belt became the most job opportunity locations. Since the area is close to these centers and the lower living cost, it is attracting more and more floating groups.

The second essential period that affected the area is after 1980s, the urban structure changed from mono-centricity to poly-centricity. The main city spine was formed and started working and these belt became the most job opportunity locations. Since the area is close to these centers and the lower living cost, it is attracting more and more floating groups.

3 Development polarization (2000+)

Source: by author,based on Xi'an governmental city plan 2010

1990	6,179,552	117	844.76	40
2000	6,744,900	198	988.37	96
2009	8,344,600	398	2,134.9	320
	Population	**Building Area (sq km)**	**Road Length (km)**	**Bus Lines**

High density
Middle density
Low density
Lowest density
Industry occupied
Preserved heritage park
Photo shoot point on next page

Commercials and offices
Metro
Railway
Corridors
Streets
Local streets
Preserved heritage park
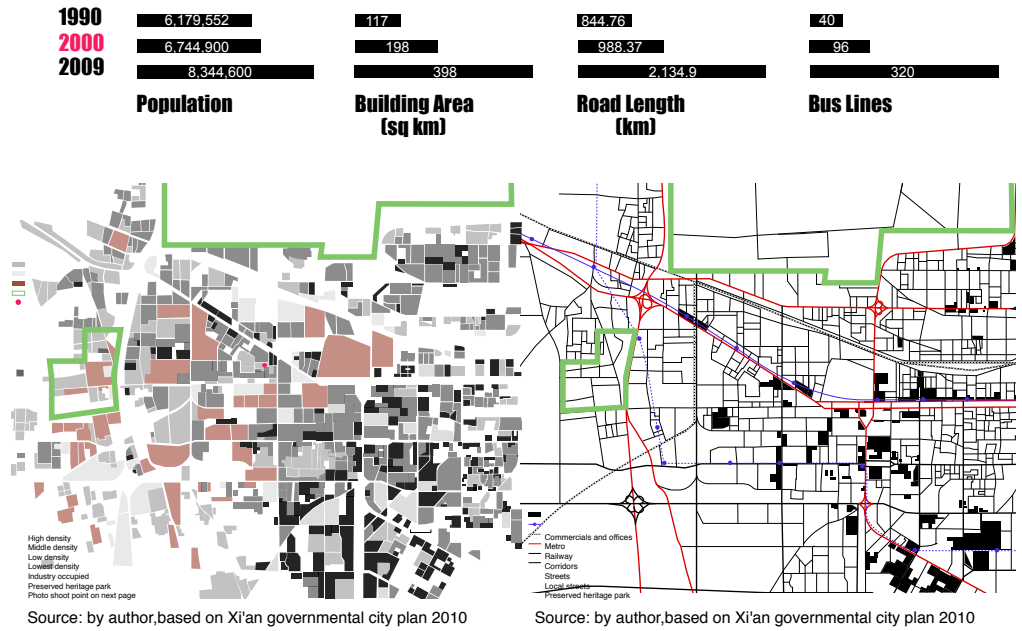
Source: by author,based on Xi'an governmental city plan 2010   Source: by author,based on Xi'an governmental city plan 2010

The city expanded to surrounding with dramatic constructions since the year 2000, in which the "Go west" implemented.To achieve the urban synergy with another city for collaboration instead of competing with each other, more and more infrastructures were built to connect the main centralities of the two cities.These fast speed infrastructure cut the area into fragmented pieces and the new development like the offices and services are along the new infrastructures but not expanding to the local area. Splintered urban form with quite different densities, and the comparision between the new highrise building and the in-city village.

4 Diminished value of the historical heritage

The last but the most specific one is the diminished value of the historic heritage. The big infrastructure is cutting off the linking between the large green and culture relic area with the cities. Although this heritage area is a huge well preserved area, existing for 2000 years and the archaeological work starting since 1960s, it is still out of people's mind or to say out of the public.

Metro
Railway
Corridors
Streets
Local streets
Preserved heritage park

400 m
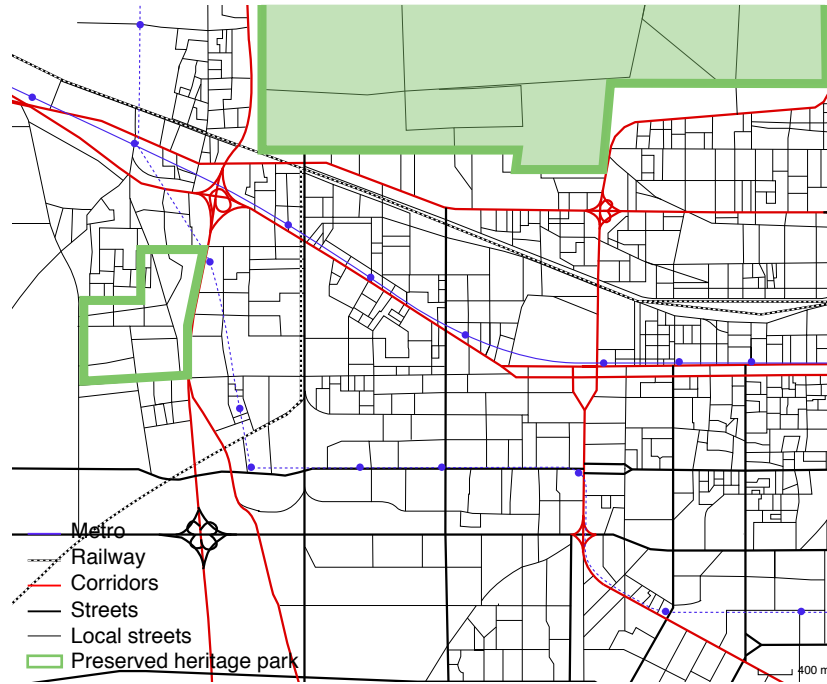
Source: by author,based on Xi'an governmental city plan 2010

Source: all photos shot and edited by author

Natural value & Cultural value

The heritage area still keeps the ancient city wall two thousands years ago. Although large part of the palaces has been damaged through the years, there are still huge amount heritage value underground.

What is more, since the area is strict preserved for decades, it is now a high valued green open spaces.

36 sqkm
2210 years
archaeological excavation since 1960s
relics through 3 historical periods

Source: all photos shoot and edited by author

Regional scale

Beijing

Xi'an

Shanghai
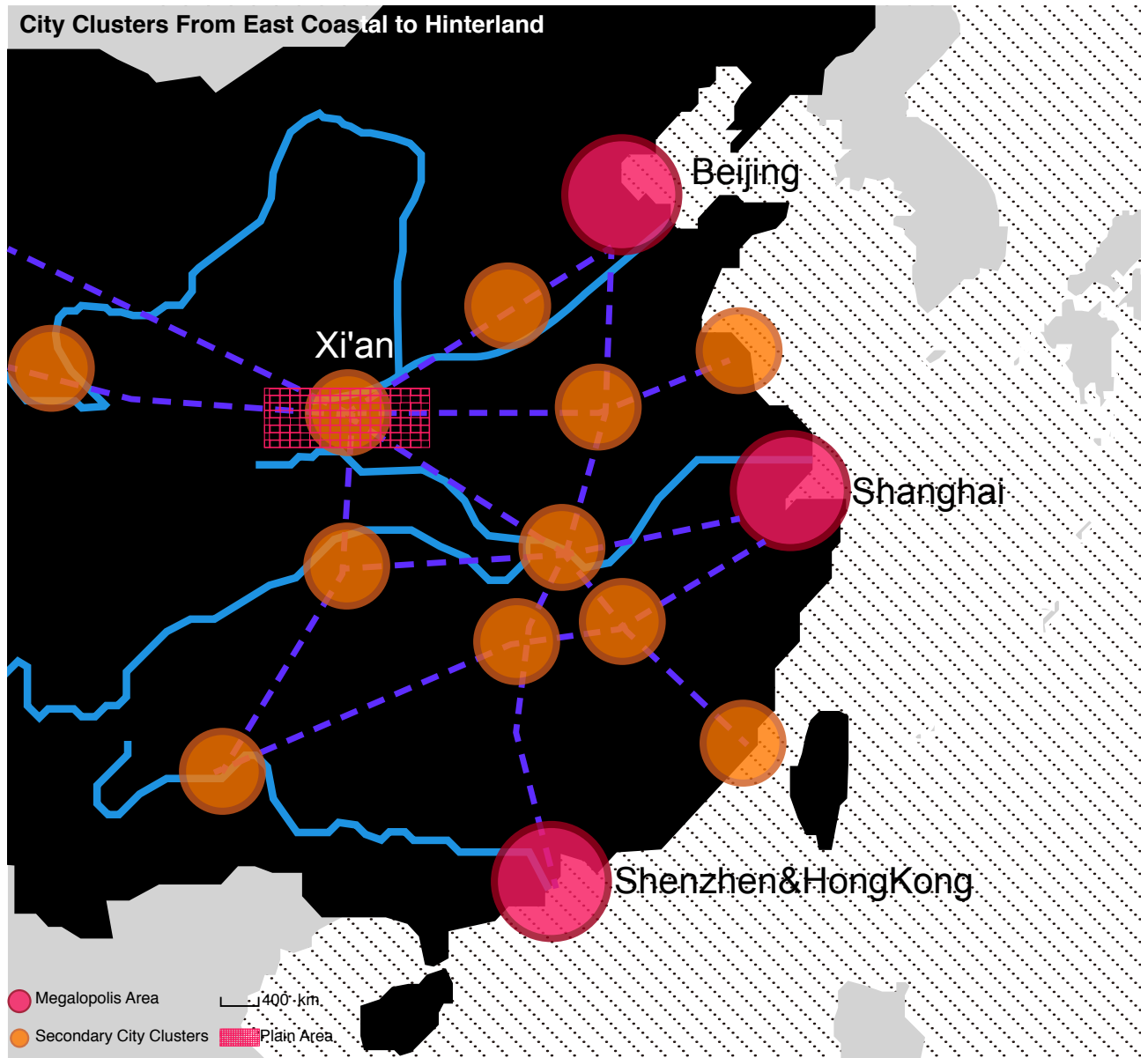
Shenzhen&HongKong

From illustration of the main city and city clusters region in whole China scale, the main developed city clusters are located at the east coastal area.The Beijing region, Shanghai-Changjiang river delta city region, and the Shenzhen-Hongkong-pearl delta city region are playing the role of main economic benefit producer.

But recent years, the hinter land part is going to open up for the market and trying to form the regional urban synergy to develop.

Megalopolis Area

Secondary City Clusters

400 km.

Plain Area

Regional urban synergy plan

At very regional level, Xi'an city as considered as the transitional node to absorb the developing strength from the east coastal to west. To achieve that transit, the cities collaborate with each other at the GuanChong Plain region to form the developing belt. The urban synergy between Xi'an and XiangYang City is seen as the central node of this regional developing plan.

City Clusters From East Coastal to Hinterland

Beijing

Shanghai

Shenzhen

● Megalopolis Area   ⊢——⊣ 400 km

● Secondary City Clusters   ▦ Plain Area

—— Rivers

River Plain Area

⊢——⊣ 20km

Connections

⊢——⊣ 20km
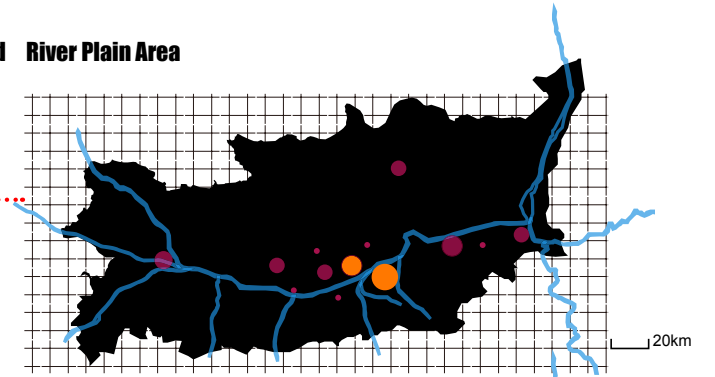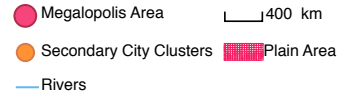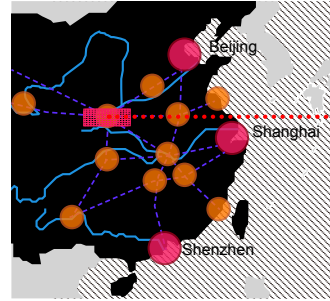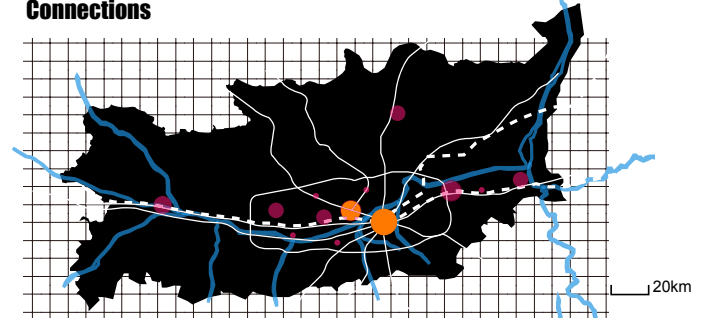
City Clusters and Developing Belt

⊢——⊣ 20km

34

2
221BC-207BC

3
190BC-580AD

4
From 583AD

1 771BC

Source: by author,based on historical map of ancient Chang'an,from planning department of Xi'an city

☐ First settlement

☐ Ancient capital city of "QIN"

☐ Ancient capital city of "HAN"

☐ Ancient capital city of "TANG"
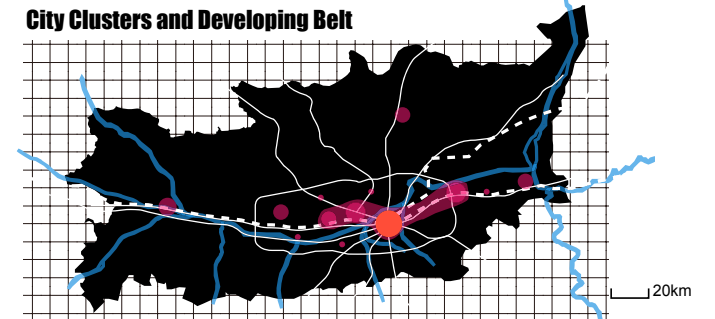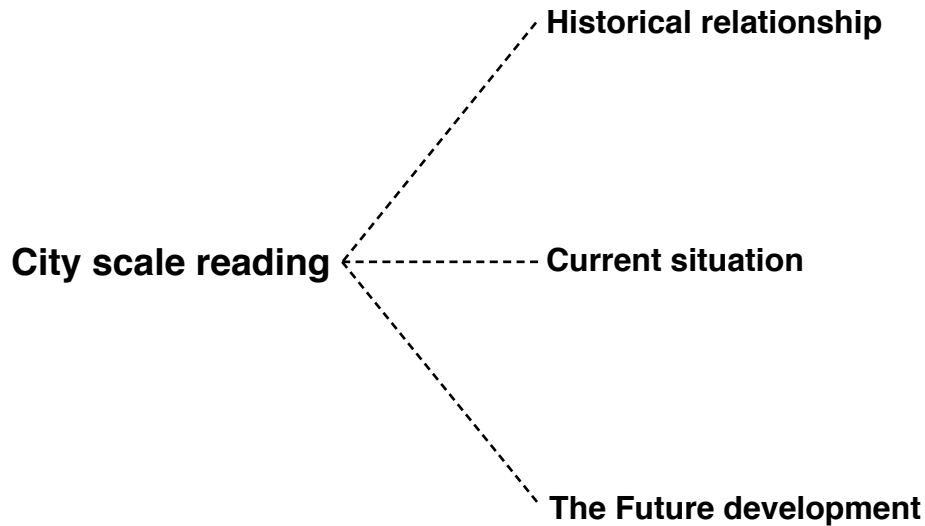
Historical relationship

City scale reading ← **Current situation**

The Future development
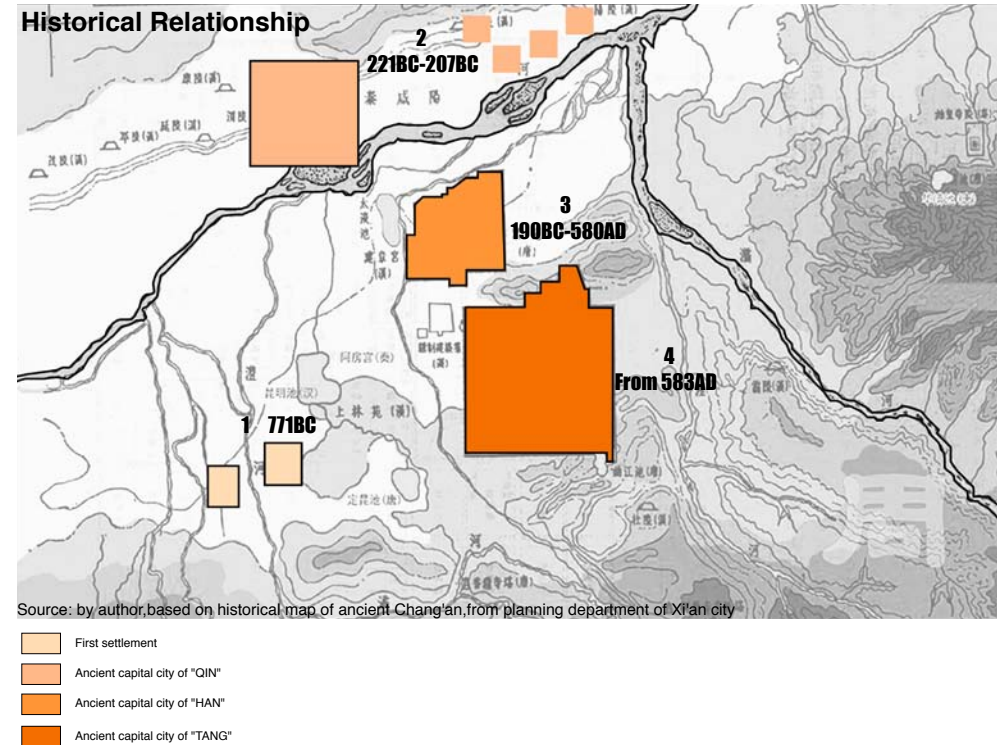
This is showing the relationship between the two cities and their in-between area. Firstly, the human settlement of chinese nation settled down at the place of 1. Then, the first capital city in Chinese history is the location of 2 in the map during the period of 221BC-207BC, where the xianyang city is located now. The dynasty changed, the capital city moved to the site of 3 in the map, which is the still preserved as the historic city heritage nowadays.Finally, the most important capital city in Chinese history of TANG dynasty was built at the site of 4 around 583 AD. The city is famous for its earliest city planning during the ancient time. It is also where the Xi'an city locating now.

Current Situation

Corridors

There are different types of corridors for linking the Xi'an and surrounding cities and regions for the expanding accessibility of the main city. Transport hubs like the railway station and the airport are also being improved for larger capacity. Ringroad and highways are connecting the cities in a large scale but meanwhile cutting the city into pieces at the local level.

Centralities

The mapping highlights the commercial, offices and civic facilities landuses to show where the clusters of the urban activities locate. The mix area of the these vital urban functions are presenting the existing centralities of the two cities. Additionally, the accumulation of activities are taking place along the main corridors because of their strategic accessible locations as the node on the polycentric networks of the space of flows.

Current Situation--Corridors

Metro
Railway
Corridors
Main streets
Build-up area   Source: by author,based on Xi'an governmental city plan-road network 2010   2 km
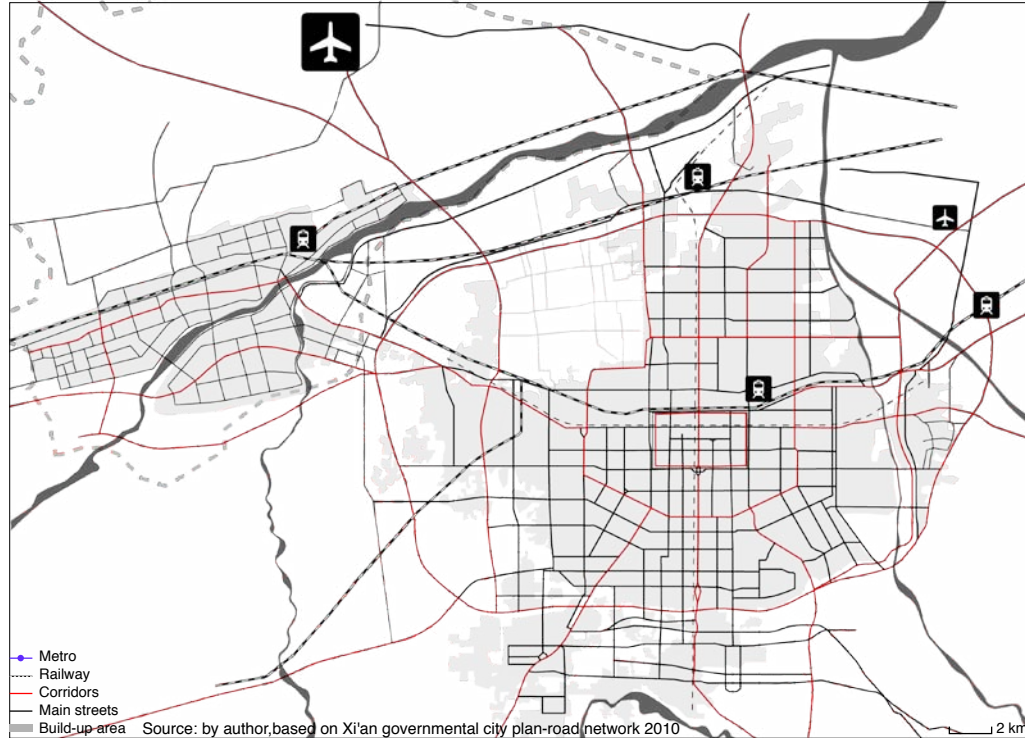
Current Situation--Centralities

Commercials,offices & civic facilities
Metro
Railway
Corridors
Main streets
Build-up area   Source: by author,based on Xi'an governmental city plan-landuse map 2010   2 km
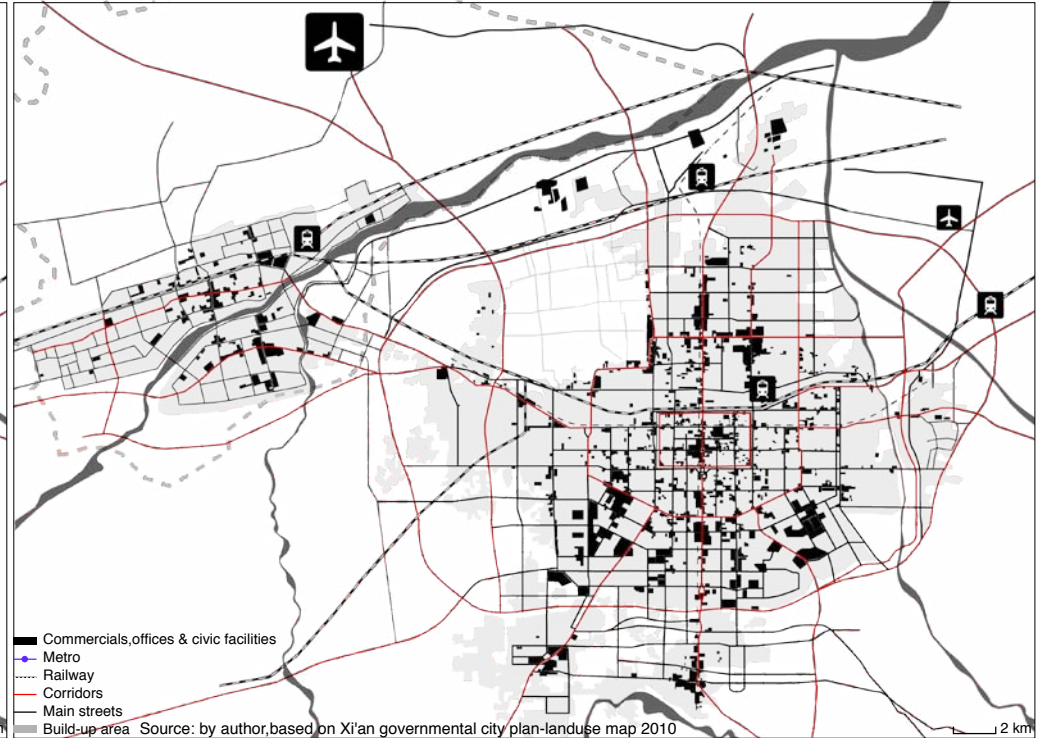
Productive area

The main productive area are located at the periphery of the cities as well as the area near the transport hubs. The problematic area is now presenting as one of the productive sectors of the city as a whole but facing the decaying of the productions due to the restructure of the city.

Landscape

When the two cities are growing towards the surrounding territory and going to form the twin city model.The urban landscape will occupy the green landscape outside the city.The greeny continuity of the natural landscpae would interupted by the urban constructions at the in between area of the two cities. The map shows the existing green scape by different identity.What could not be ignored of the Xi'an city structure is the green space also with cultural landscape.

Current Situation--Productive Area

Industries & Logistics
Metro
Railway
Corridors
Main streets
Build-up area   Source: by author,based on Xi'an governmental city plan-landuse map 2010

2 km
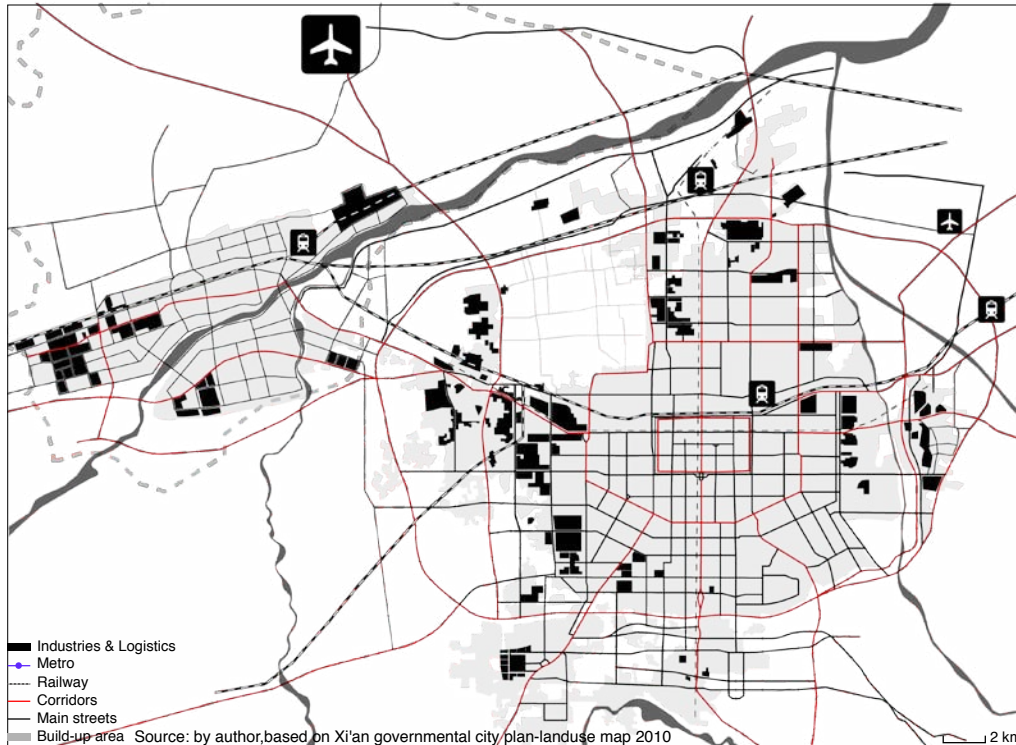
Current Situation--Green Space

Urban green space
Preserved heritage area
Rural green area
Build-up area
Railway
Corridors
Streets   Source: by author,based on Xi'an governmental city plan- landuse map 2010

Future vision from the governmental plan

As the respond to the new metropolitan structure of the two cities, the municipality of Xi'an city proposed the extension of the mix used urban area to attract more urban resource and flows to the inbetween area.

What is more, there is also an extension plan for the airport.As the most important city synergy plan of the region, the airport will be transformed from mono infrastructural zone to the mix used area combining with business and residence.

The Future--Governmental Actions

Mixed-used developing zone
Airport development
Build-up area
Railway
Corridors
Streets   Source: by author,based on Xi'an governmental city plan- Xi&Xian new district map 2005
2 km
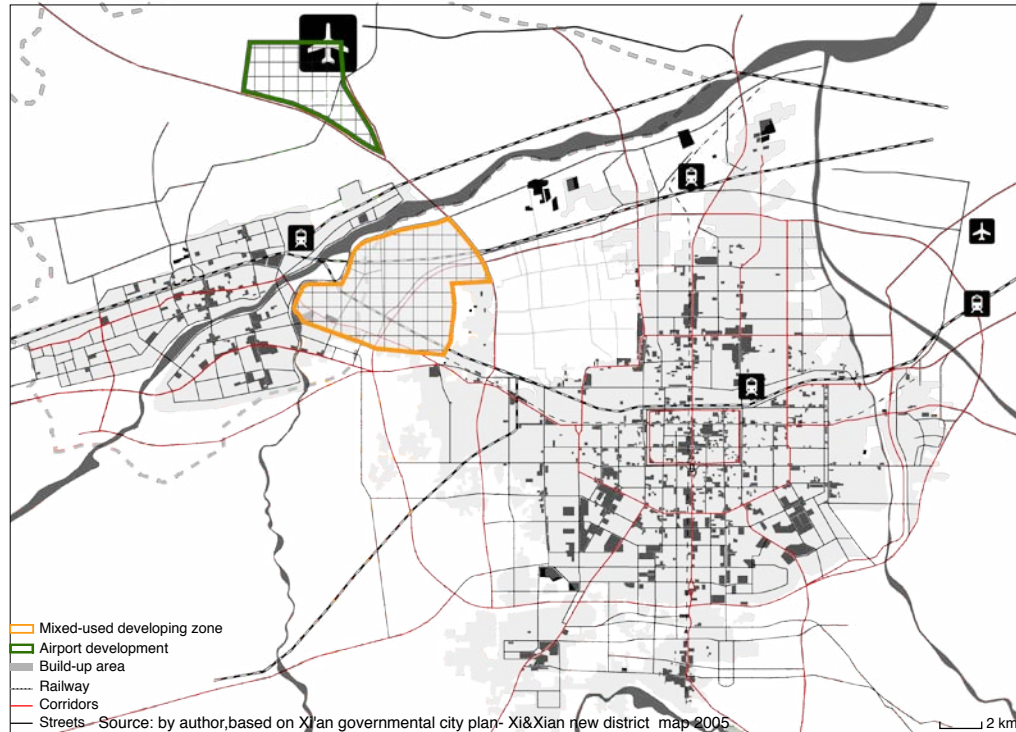
VISION

Development backbone

From the anaylsis of the concentration of the urban activities, the main city centralities could be highlighted. Meanwhile, overlapping with the reality of corridor development, there is one essential corridor at the metropolitan level linking the main centralities of the two cities.What is more, the one of the new metro line is also going along this develop artery.

Therefore, there will be formed the backbone of the new regional structure which access the main centralities.In other words, along this significant backbone, all kinds of urban activities will be attracted by the highly accessibility and strategically postion.
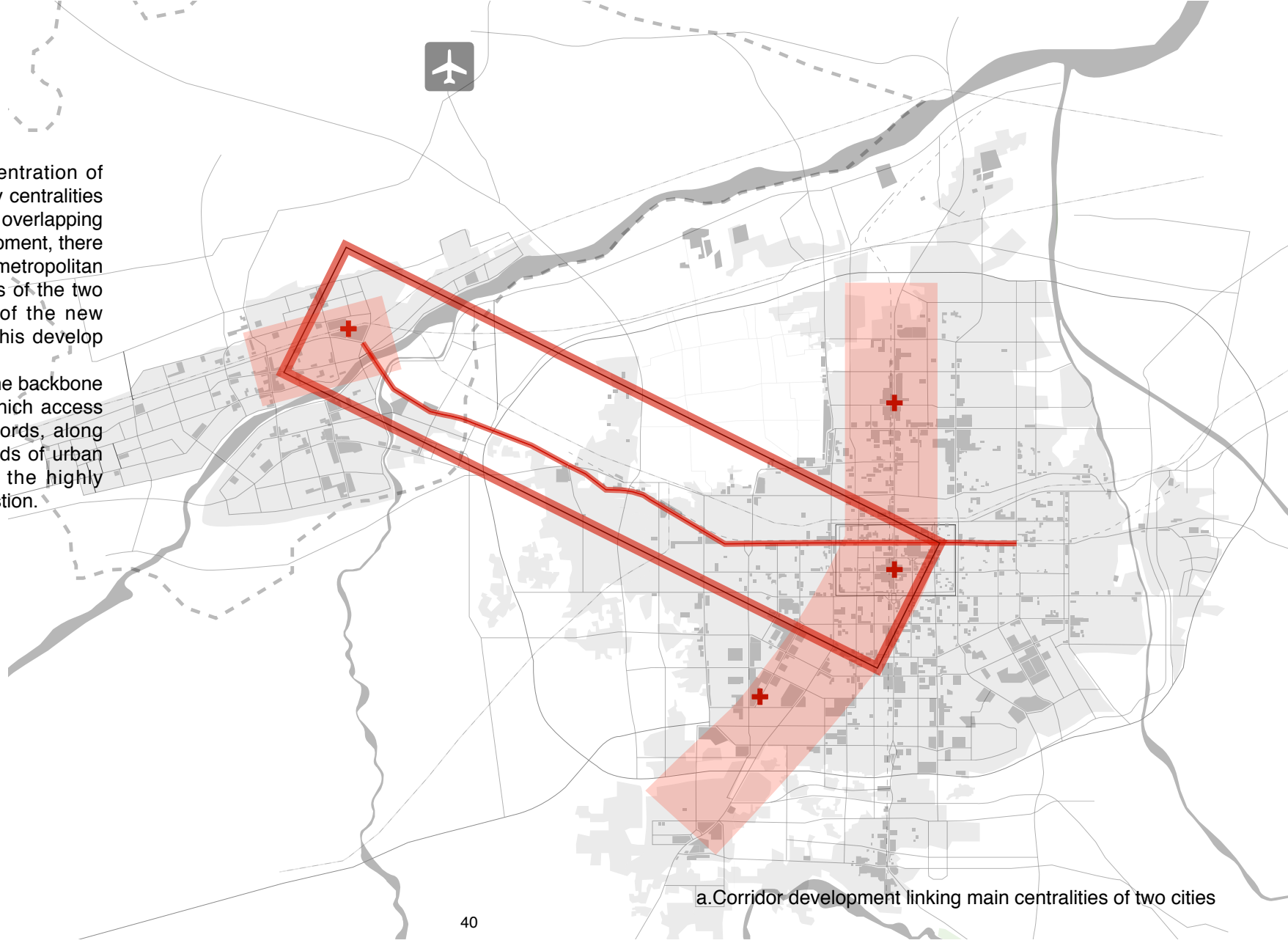
a.Corridor development linking main centralities of two cities
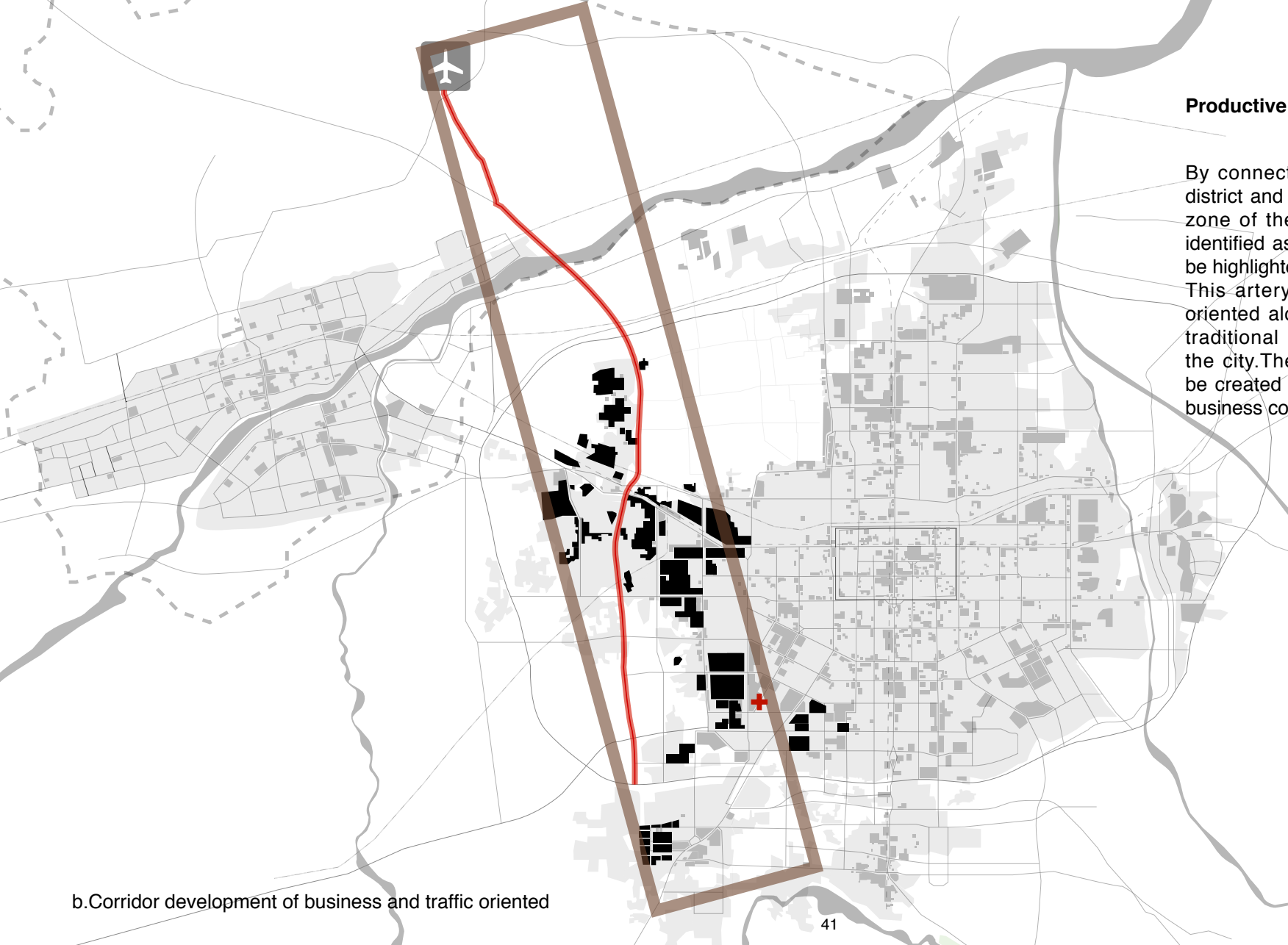
Productive backbone

By connecting with new airport business district and the highly developed productive zone of the Xi'an city, the second artery identified as the productive backbone could be highlighted.

This artery is more traffic and business oriented along which is going through the traditional industrial area of the fringe of the city.Therefore, new opportunities can be created by taking advantage of the new business corridor.

b.Corridor development of business and traffic oriented

Green and cultural corridor

The city fringe is the place where natural landscape encounter with the urban landscape.The bluring of the natrual boudaries between the cities provide more opportunity for city interfacing with the nature. Meanwhile, at the west boudary of the city, there are four historical site with natural environment create the opportunity for more diverse activitis.Moreover,the largest and most significant historical site in that belt is bounded closely with the urban territory and remain preserved as the huge green and cultural site for the future.

Therefore, the continuity of the green and culture related belt will play import role for the urban diversity of this area in the future.

c.Green and historial continuity
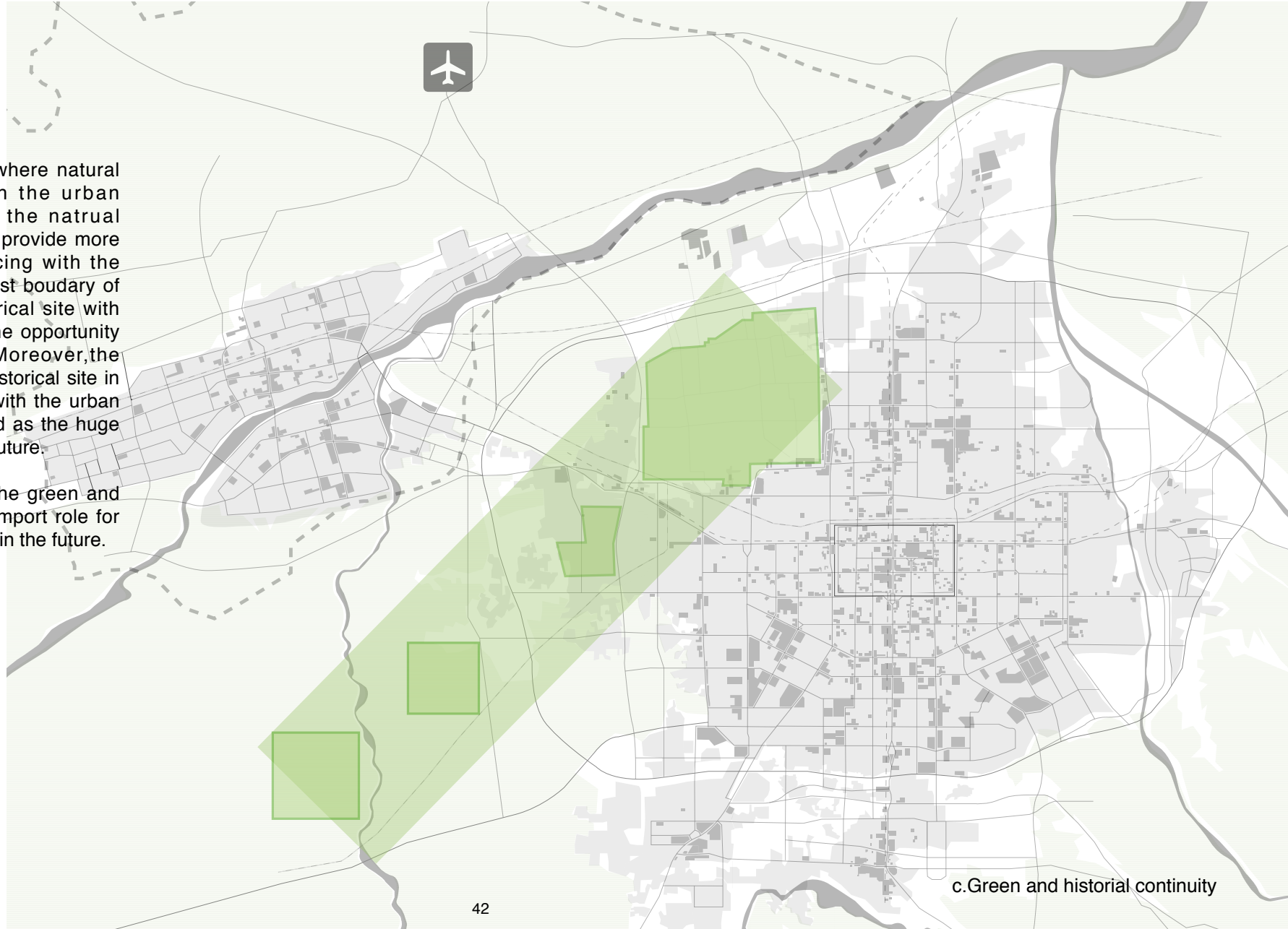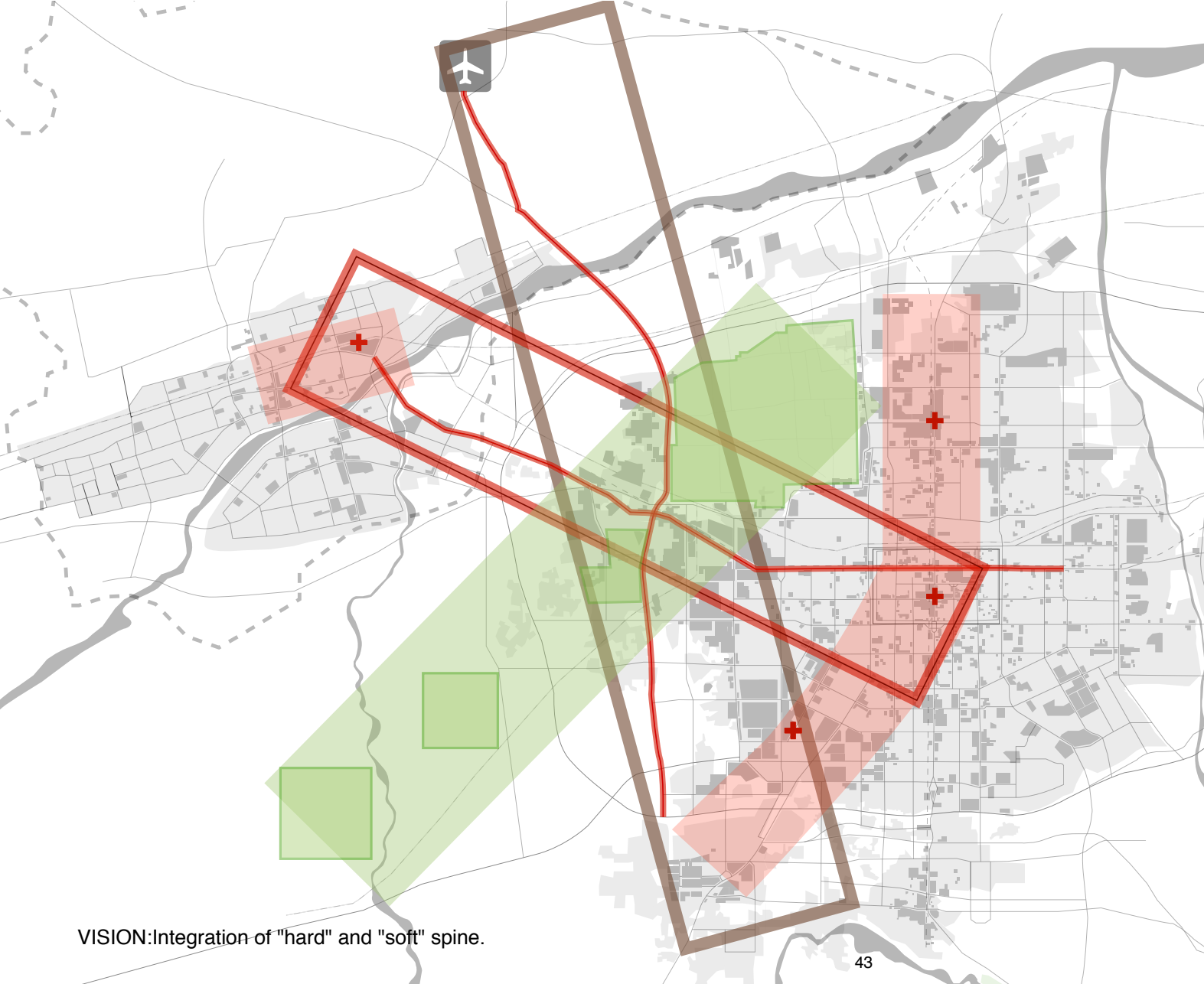
Vision:Integration

The comprehensive public backbone (linking the main centralities) and business oriented spine could be defined as the "hard" spine for the future development by which more urban vitality and flows will be attracted. Meanwhile, the area has the potentiality to develop the natural and cultural related backbone as one of the important identity for the public which could be defined as the "soft"spine.

Therefore, the vision is mainly about Integration:
The integration with the hard and soft which looks as the conflict two parties.
The integration of high level development and the local territory by means of public space network.

Challenge

Conclusively, the challenge for strategy making is how to take advantage of the culture and green related spine ,which is highly potentially viable space, to absorb the flows from two hard spines.

VISION:Integration of "hard" and "soft" spine.

WEST FRINGE AREA

Spatial fragmentation

built up area

in city village industry industrial community
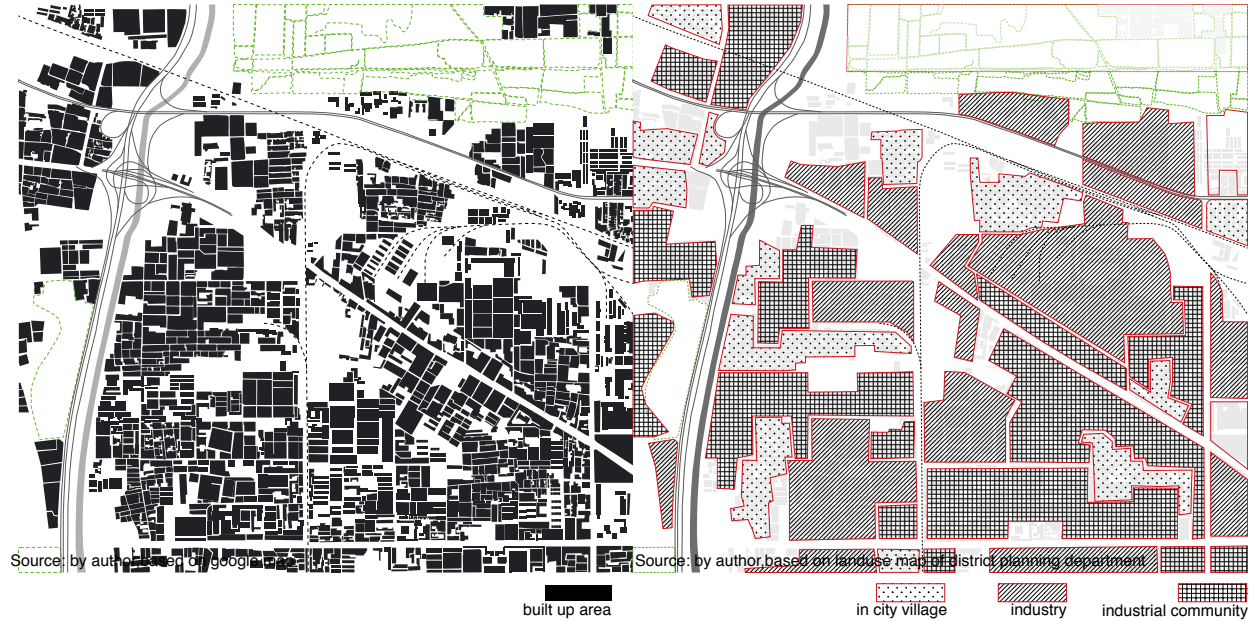
map of built-up area

monofunctional isolated islands

It is hardly to highlight the urban structure and clear configuration in relation with the build-up area and the mobility hierarchy. We can only see the new main develop corridors bring little benefit to the local area but heavy spatial fragmentation instead. Additionally, the transport oriented corridors are blocking flows from the city to the green heritage site.

Changing urban scale and pattern
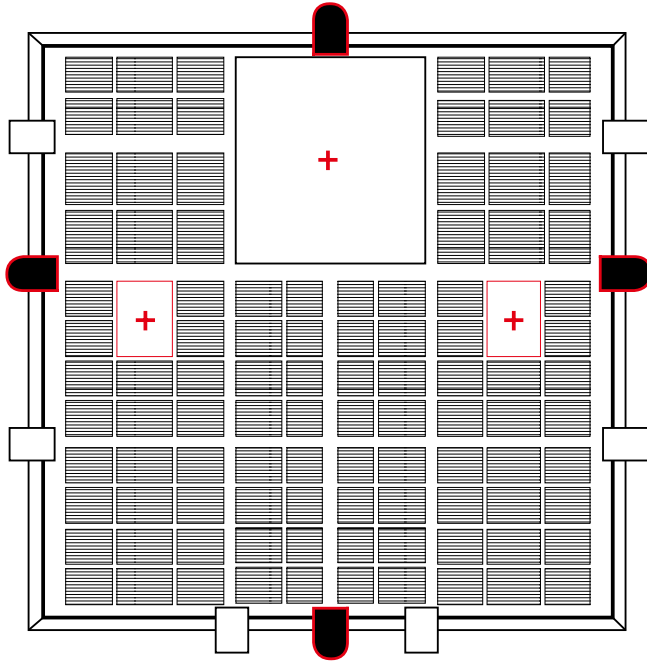
Ancient urban pattern of Xi'an City
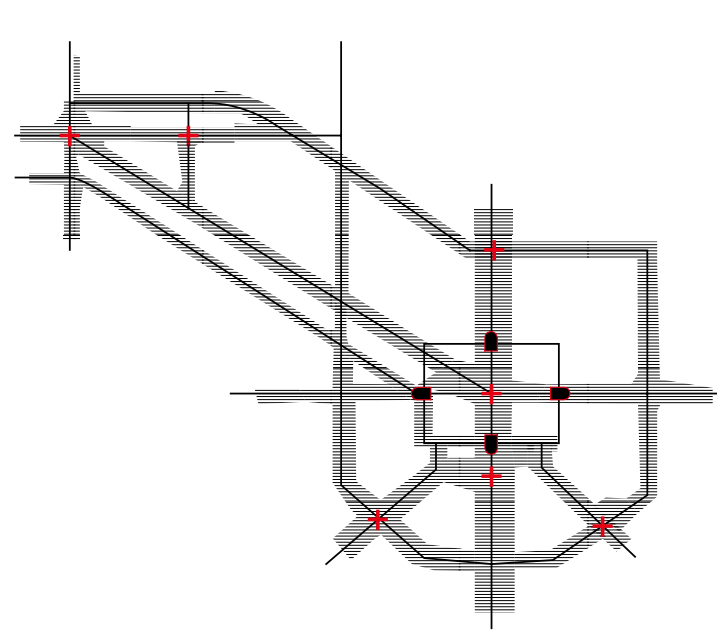
Mobility and economy oriented urban pattern

From the comparison between changing scales and urban pattern of ancient city and contemporary city, today, the city is based on the pattern of mobility and economy development.

Missing dialouge between mobility and surrounding territory

QingMingShangHe
Source: http://nf.nfdaily.cn/nanfangdaily/nfzm/
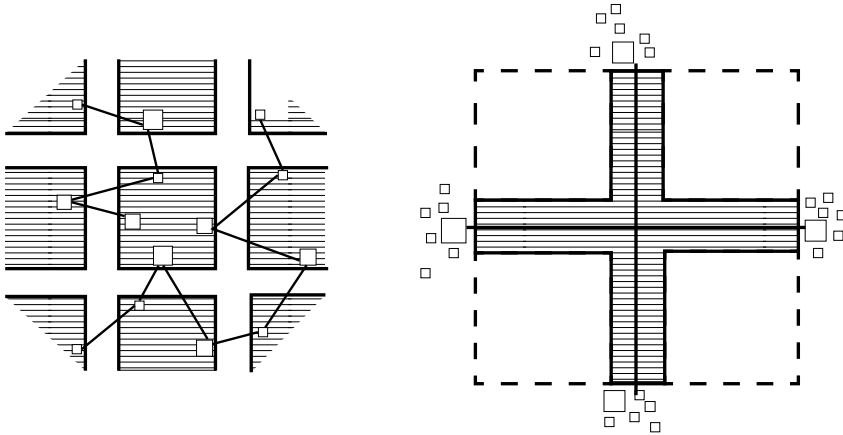
What is missing is the dialogue between mobility and surrounding territories. In ancient pattern, the small scale and low speed streets interfaced with activities of surrounding blocks. But today, urban corridors are built only for accessing from destination A to B, both of which are highly concentrated with economic productions.

The development is going on without considering the local territory and skipping spin-off to integrate the locality.

Therefore, the conclusion here as the hypothesis is : rethinking and redesign the "edges" between the urban territory and their passing by mobilities.

Rethink and redesign the "edges" to absorb flows and developing strenghth to establish the integrated urban tissue.

The "edges" become the interface spatial element.
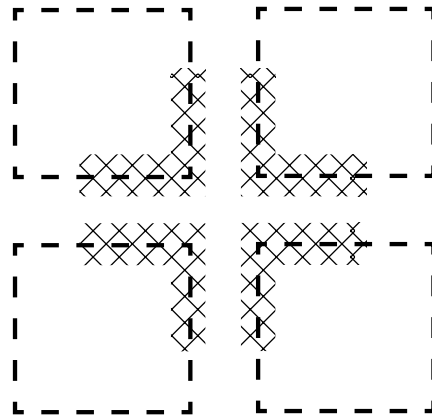
Concept & Hypothesis
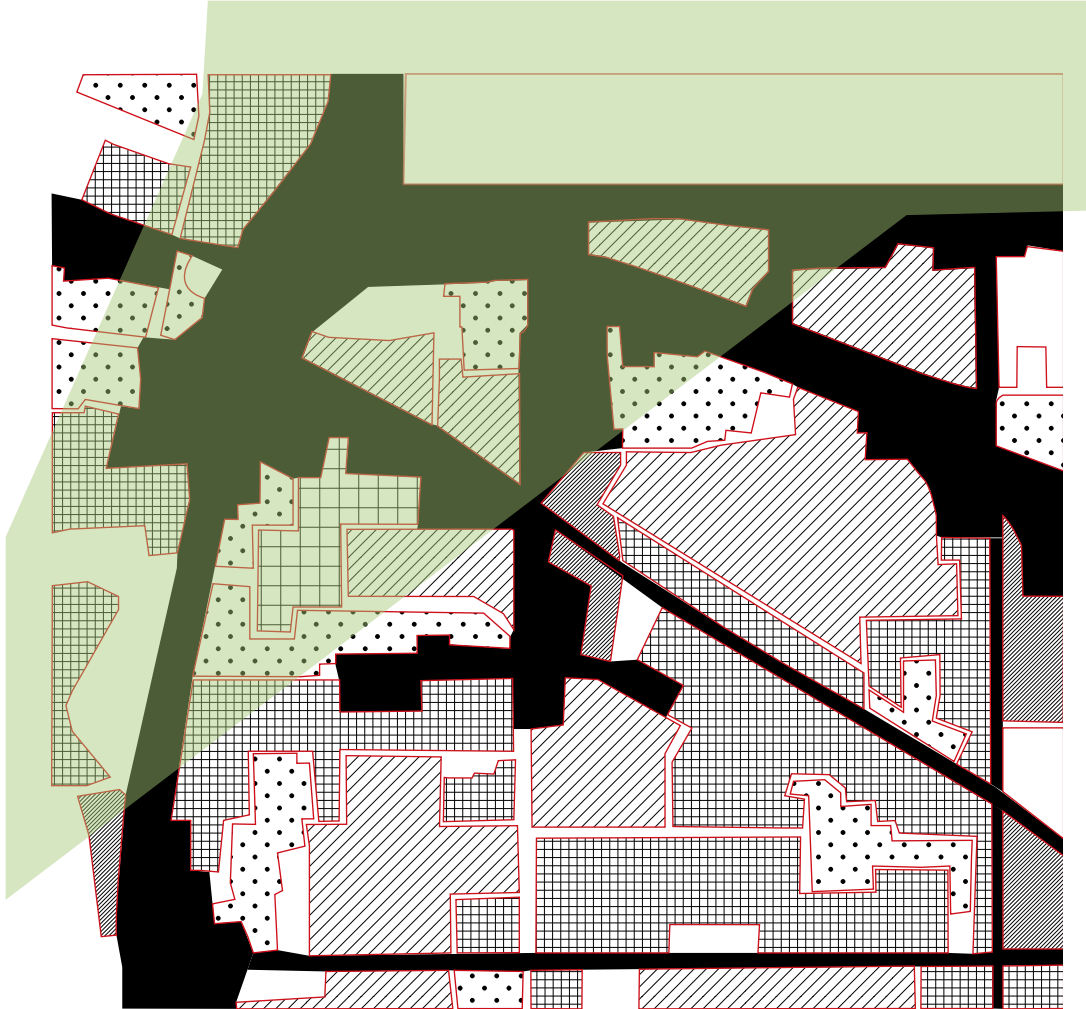
If we take that perspective to observe the reality, we can find the situation that, the "edges" is the complex spatial consequences caused by mobility space, including the vacant strips triggered by railway tracks, the no-go streets without any activities can be associated with neighbourhoods, and the no-go green buffer under the highways.

These edges cut the area into isolated islands having no collaboration with each other as the consistent urban tissue no matter spatially or functionally.

STRATEGY

Spatial Approach

Landscaping

Providing diverse landscape quality on the edges by capturing the green flow from natura heritage park to the locality.

Densifying

Densification on the edges by different functions of buildings which enable to provide mixed housing typologies.

Programming

Proposals of diverse and consistent public activities in order to vitalize the public space network on the edges.

Activate the edge by means of

Landscaping + Densifying + Programming

Expected Spatial Effect

City Scale Effect
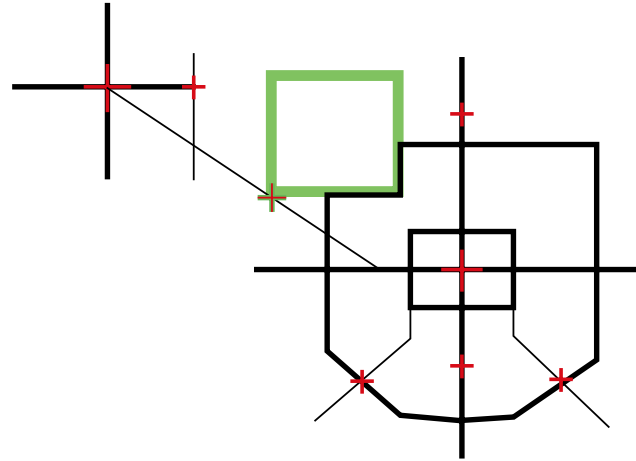
Form new identical sub-centrality to reinforce the twin city model.
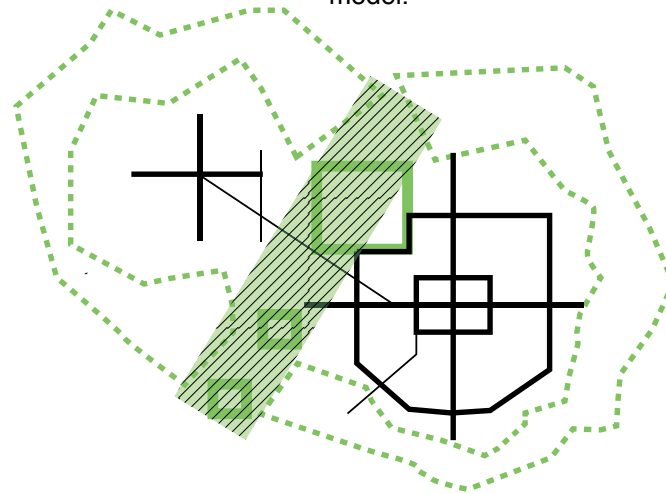
Keep the green structure coherent and create opportunity to interface the city with with green and cultural related space.

Local Scale Effect
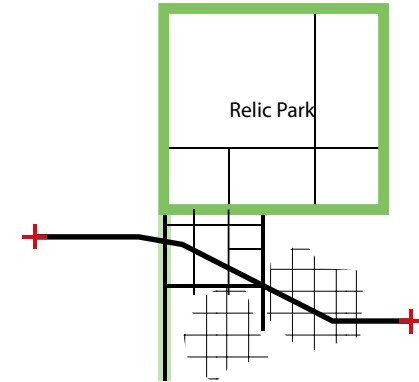
Relic Park

Restructured urban network in the future integrates the local area as the urban tissue with the city structure as a whole.

Relic Park

Relic Site
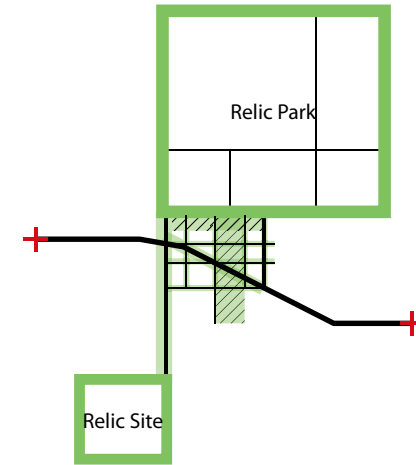
Provoke the value of the regional relic park to the public meanwhile permeate the green quailty via the proposed network.

Multi-layered Public Space Network

MACRO EDGE

MEDIUM EDGE

MICRO EDGE
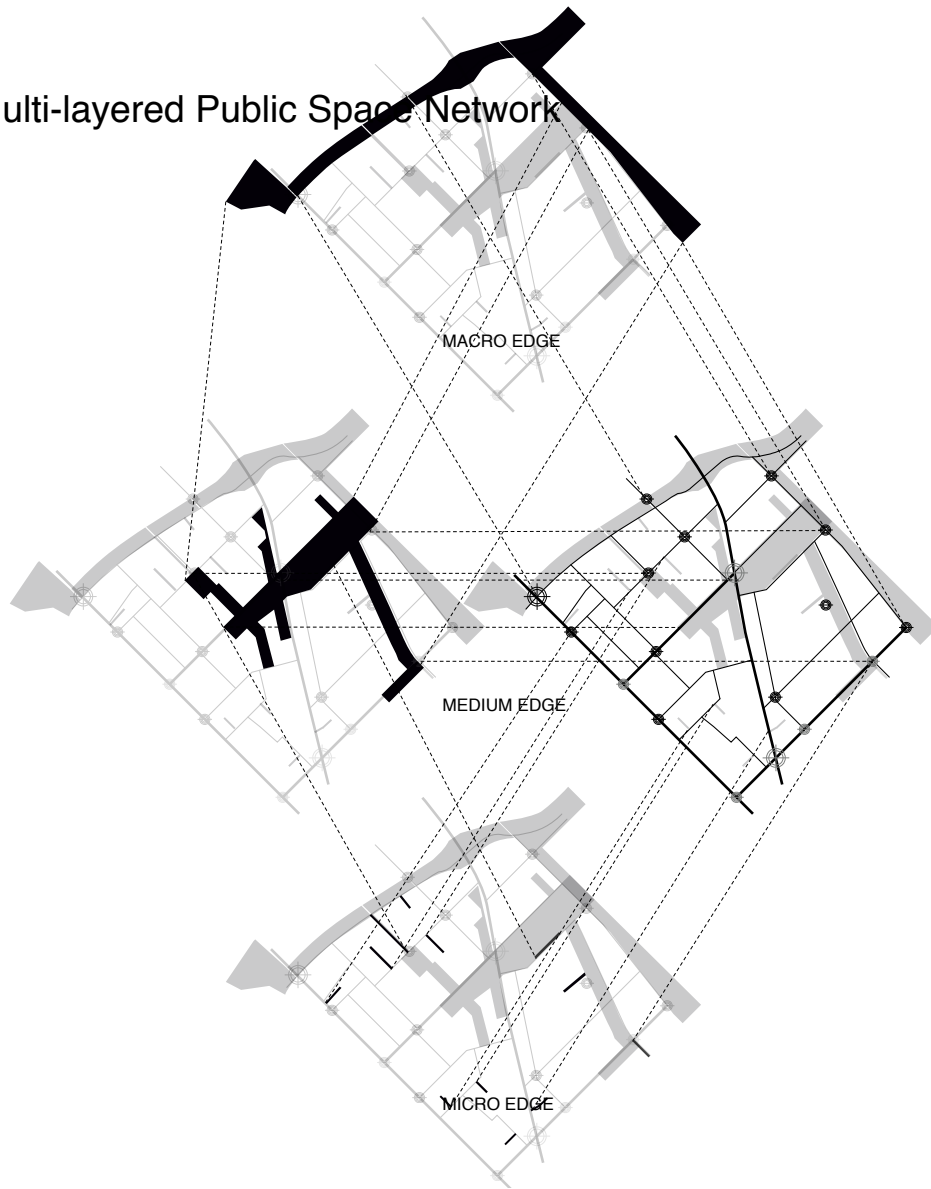
To cope with demands from different level, I decompose the edges strategy into 3 layers as a multi dimensional network.The 3 layers of public space suppose to work together and gradually permeate the regional pottentiality of development to the very local level.

Edge Strategy

The plan contains different dimensions of the network, like the proposals, the connections in between and the activators.

100m

Existing green system

Here presenting that the green space of the area are divided into existing proposed urban parks, undefined green belt along the river and below the highway and undefined vacant green space.

The heritage park has no dialogue with the city meanwhile the enormous value of leisure and green space is being ignored because of no permeability allows the city get touch into the natural heritage site.

The local existing parks are downgrading and losing its value as well, with less and less vistors and downgrading qualities because of the disorder development and fragmentation happening here.

But these green spaces have huge potentials to develop as a network that enable to provide green flows to the locality.
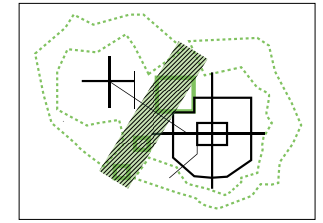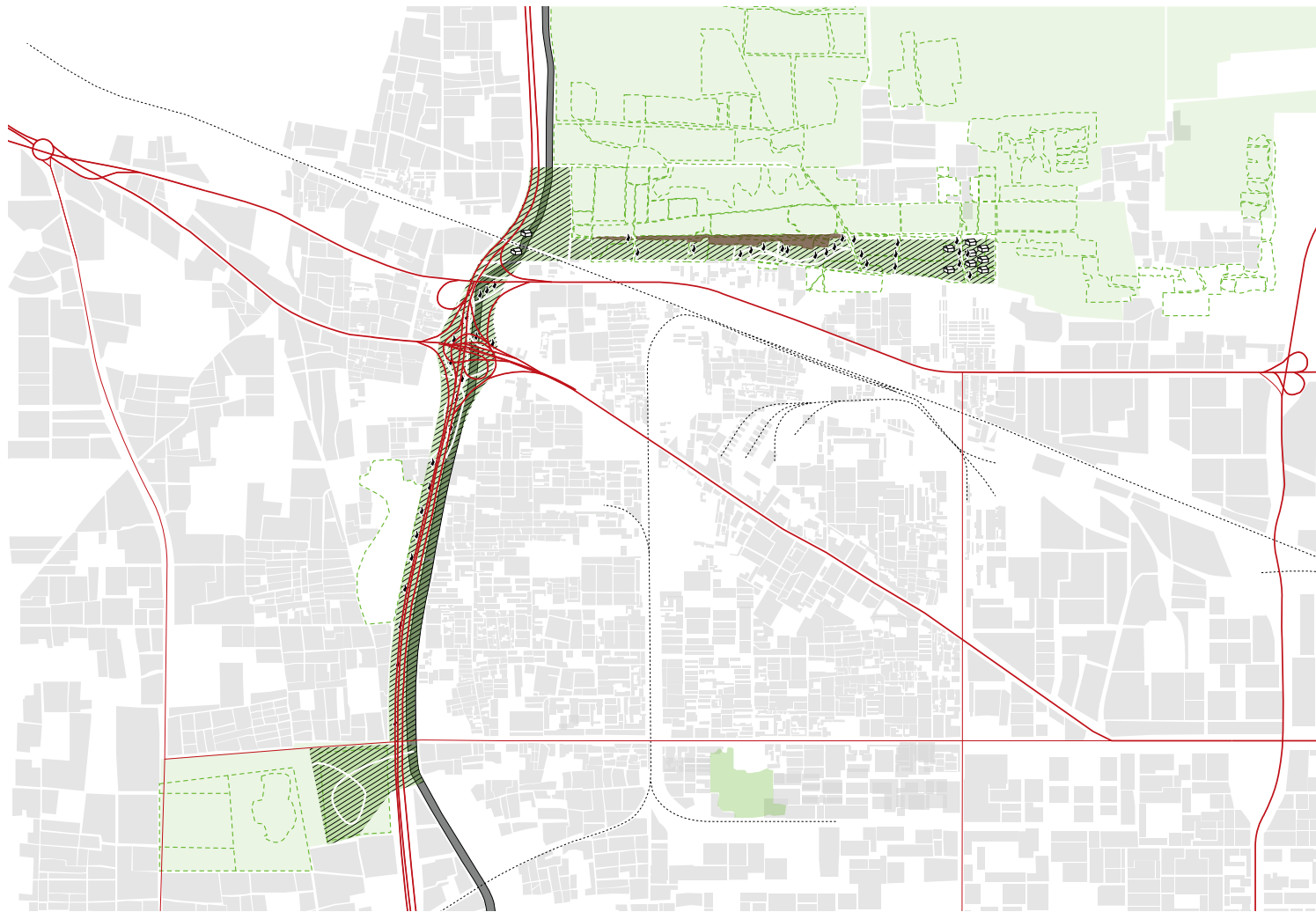
⌐ 100m

Macro edge: Formalize the "SOFT" spine

Establishing a large scaled green space system integrating the 2 regional nature and cultural heritage parks with the green buffer. At this level: a regional green spine established with sequence starting with HAN city heritage park (huge preserved green area), a preface park at the border of the heritage site, green belt and another palace historic park.
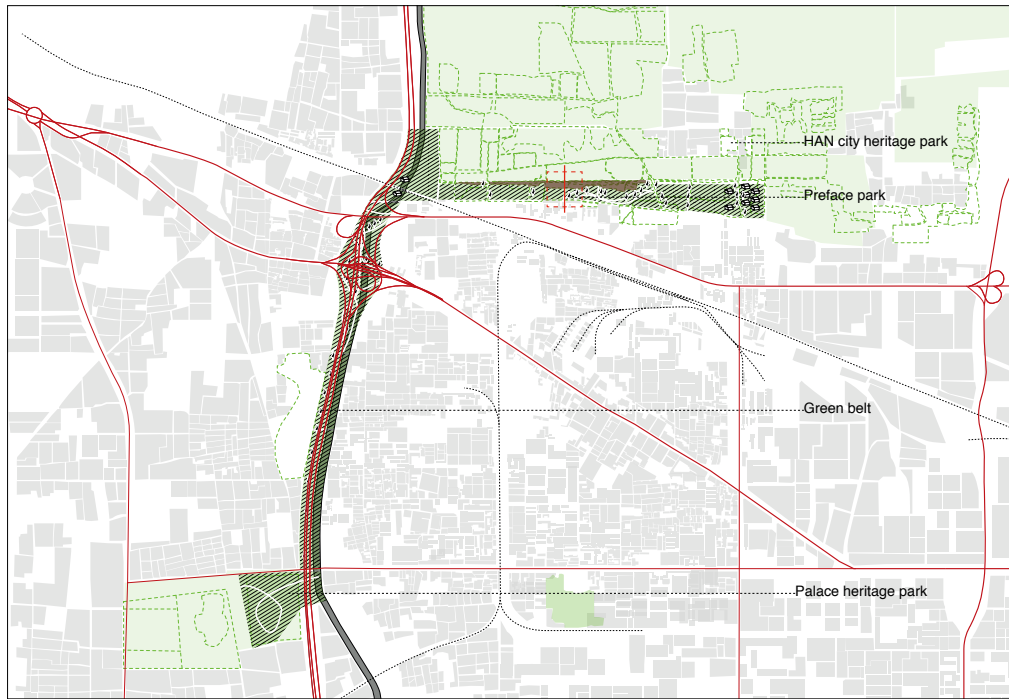
Preface park area

The section is presenting the spatial atmosphere from the heritage site to outside.I propose the preface park which is providing completely open green spaces with cycling lanes, walking path, small forests with different kinds of plantings and the sculpture lane as the space for activities happening and for people staying and hanging out.

The street profile here is designed for low speed and public transport friendly.On the other side of the street, the industrial buildings will be converted to other functions with opening facade towards the street and park side. Therefore, the vitality and activities could be consistent and permeable introduced from the city to the preserved park site.
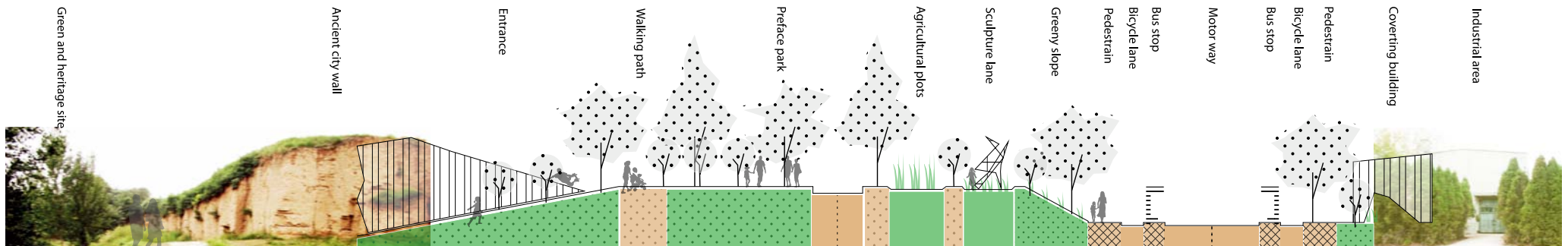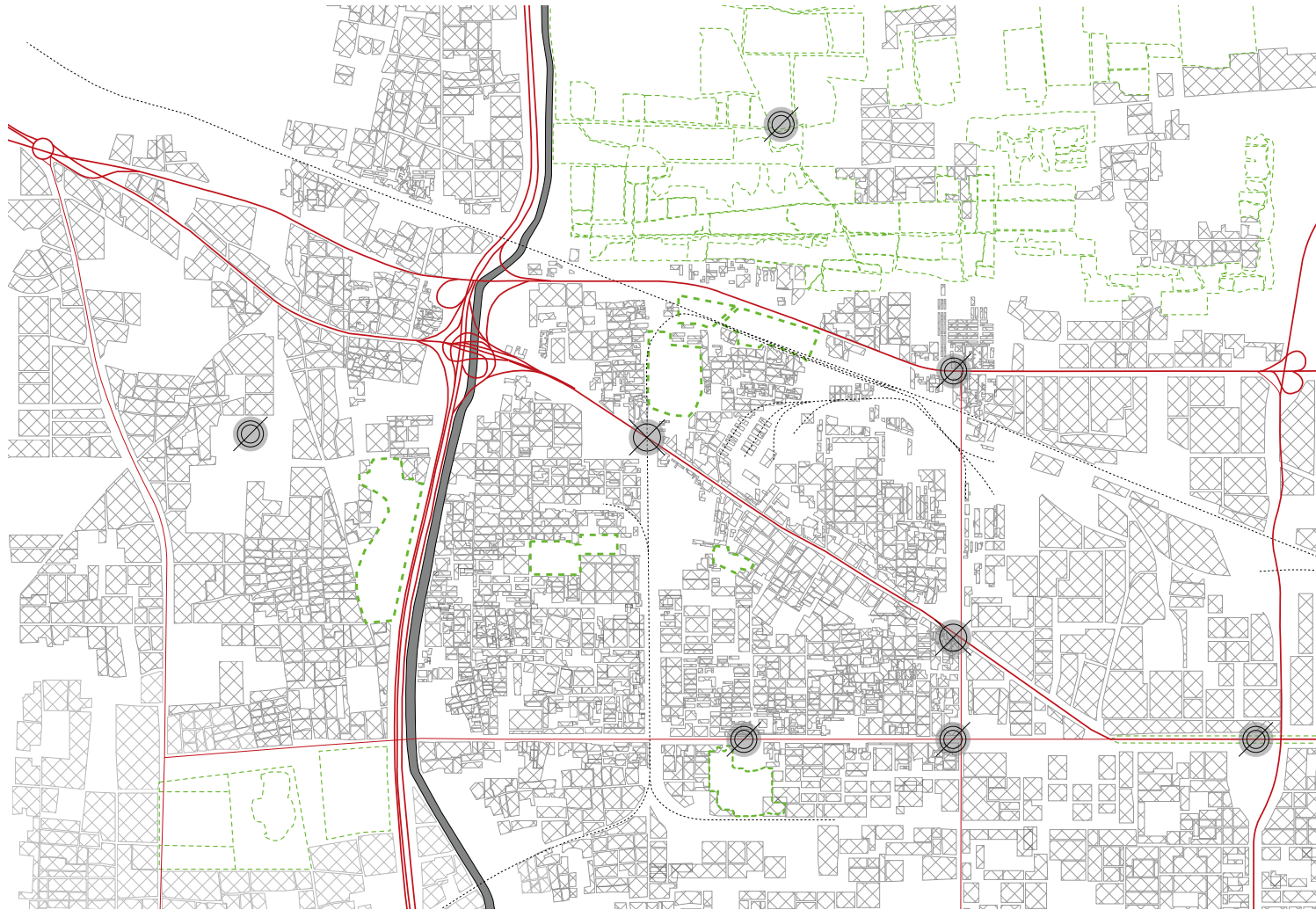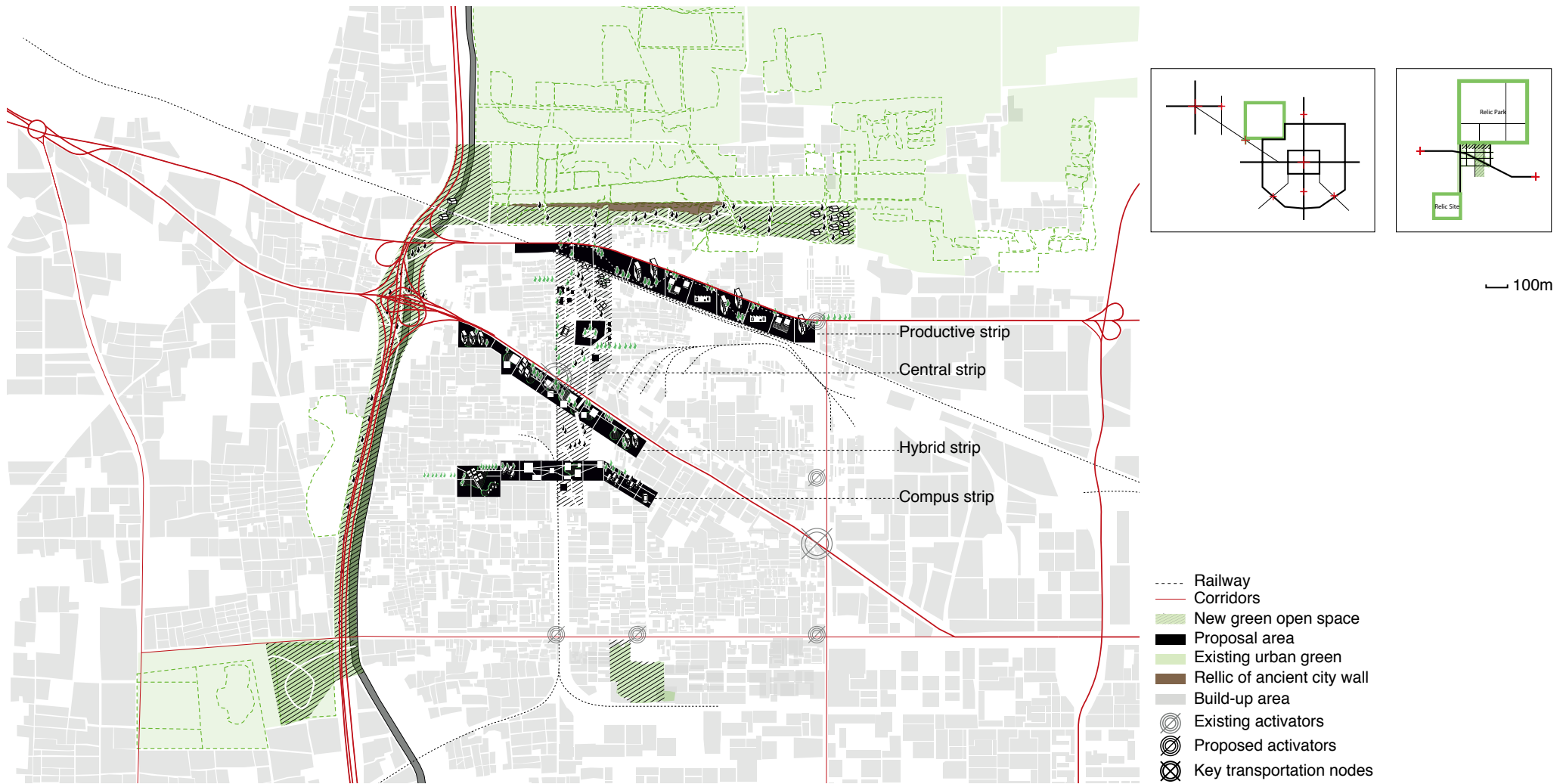
Existing system

There are already some local attractors like the vital food trade central market(which selling traditional food materials and products but doesn't affect a lot with the local area; the new metro stations and bus transitional station etc.,

But there is still limitation of accessing some certain area. What is more, the single metro line brings a lot opportunities along it but need to be activated and integrated with the development of the area as a whole.

For existing mobility, the corridors bring about the opportunity of the area and meanwhile create fragmentation at the local level since there is no connecting system of low down mobility to absorb the flows from higher level.

Productive strip

Central strip

Hybrid strip

Compus strip

Relic Park

Rellic Site

⊢— 100m

- - - - Railway
———— Corridors
░░░░ New green open space
████ Proposal area
░░░░ Existing urban green
▓▓▓▓ Rellic of ancient city wall
░░░░ Build-up area
◎ Existing activators
◎ Proposed activators
⊗ Key transportation nodes

Medium edge:activate the edge by "hard" and "soft"

First, propose new Productive strip which is extension of the existing factory area along the railway ; the mixed used strip along the main development corridor and compus strip where the facilities could be used for the surrounding residential area as well.The central strip going north-south will be proposed like the transitional belt ,which on one hand absorb green flows from the heritage park to each of the strip and locality, on the other ,to give direct openness of the heritage site to the public.
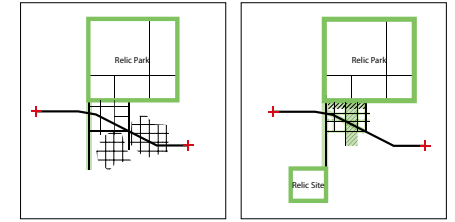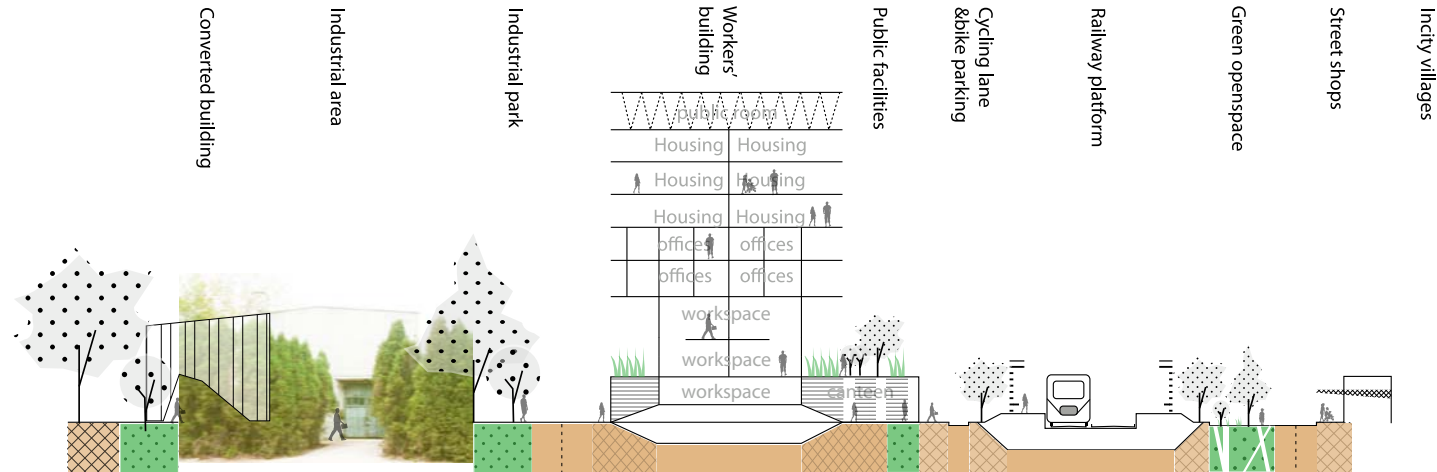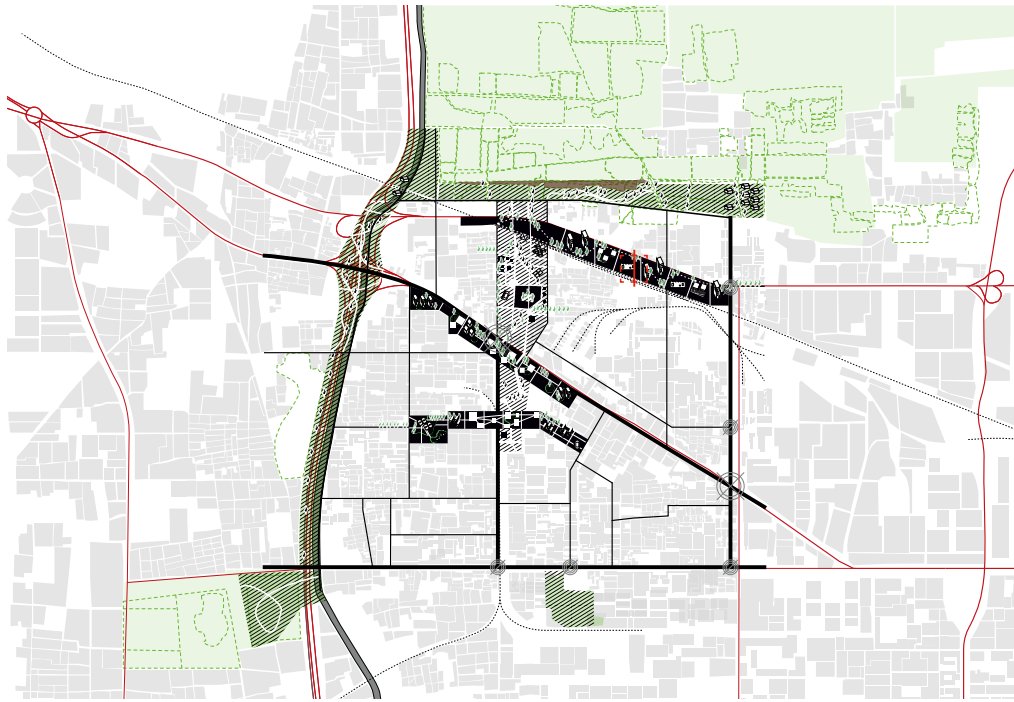
Railway

Corridors

New green open space

Proposal area

Existing urban green

Rellic of ancient city wall

Build-up area

Existing activators

Proposed activators

Key transportation nodes

Medium edge:Spin off to local area

By completing the low down speed street to link the existing attractors and new proposal area working in framework and collaborate with each other.

Converted building

Industrial area

Industrial park

Workers' building

Public facilities

Cycling lane &bike parking

Railway platform

Green openspace

Street shops

Incity villages

public room

Housing | Housing

Housing | Housing

Housing | Housing

offices | offices

offices | offices

workspace

workspace

workspace | canteen

Productive strip

The proposed productive strip is transformed based on the existing traditional ones.The new railway station will be the essential generator for starting this new type of productive belt.

The buildings on the boarder will be partly converted to more mixed use functions in order to keep vital at the street. New building blocks for factories and offices should be set up combine with subsidize housing for the workers.
Moreover, the accessiblity of the area should introduce in more public transport and cycling lanes friendly to covinient the local workers.
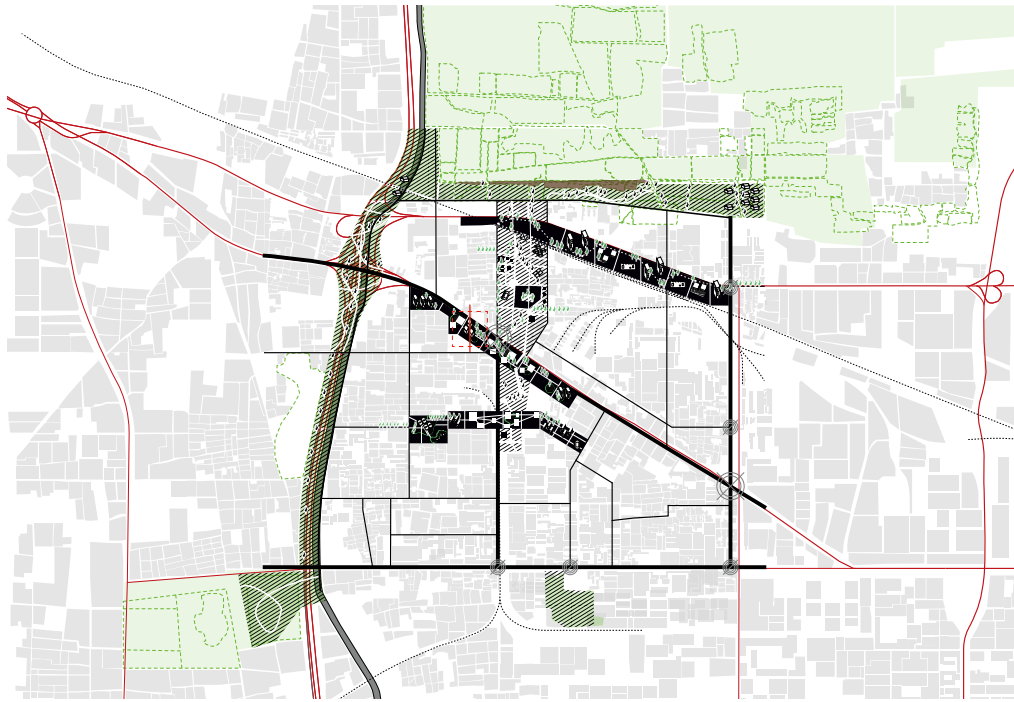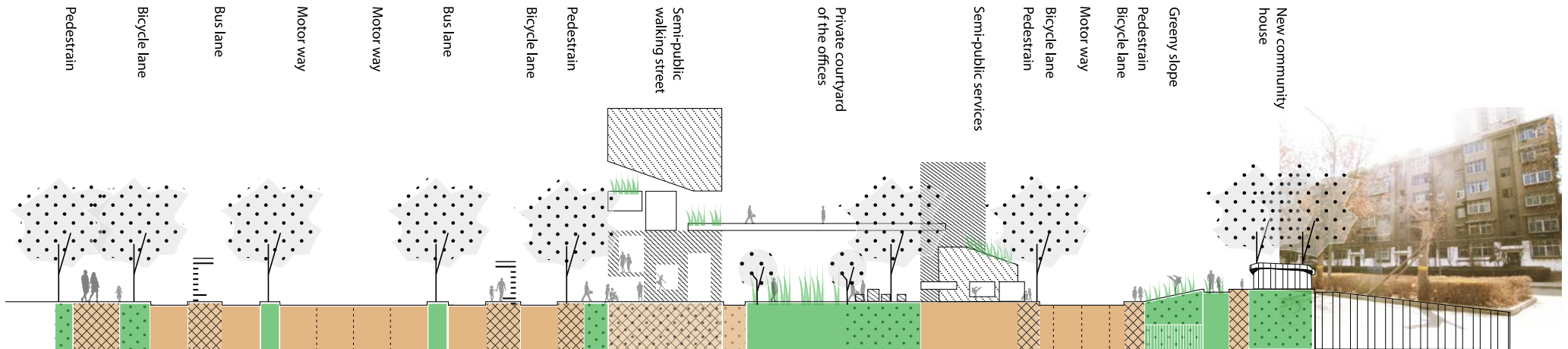
Mixed-use strip

This section presenting how the new mixed use business strip will be placed embeded with the local exisiting systems. Due to the highly potetial of the main development backbone,the reorganise of the flows and development strenghth should be redefined effeciently but meanwhile bring benefit to the local neighbourhood.

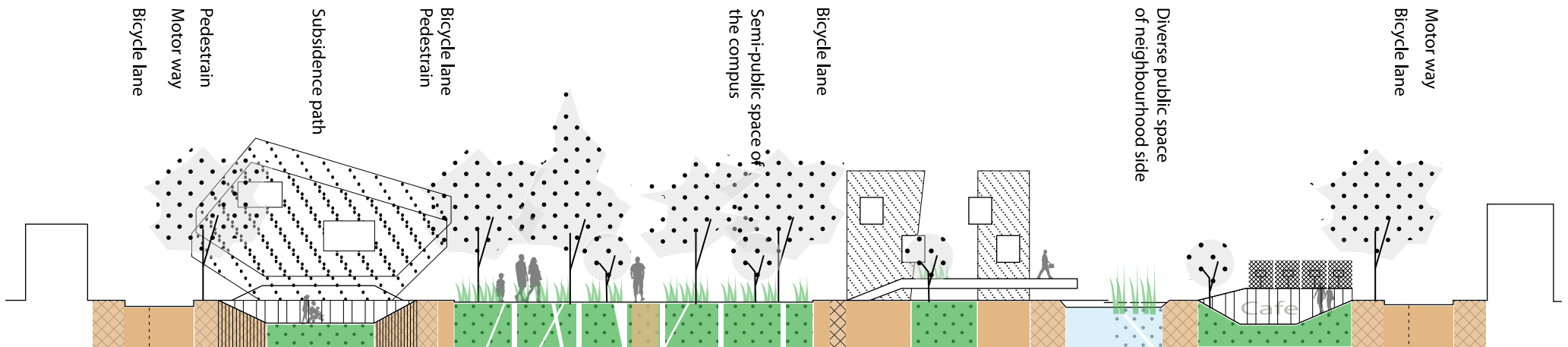The strategy is providing a spatial hierachy of the public spaces.

Fully public spaces like the bus stations and street squares keep the openness and attractions from the backbone. semi-public space at the ground level of the new office building blocks allow the flows permeate to the neighbourhood at the back side of the strip. However, the central inner yard will also provied the privacy for one unit of the office building.
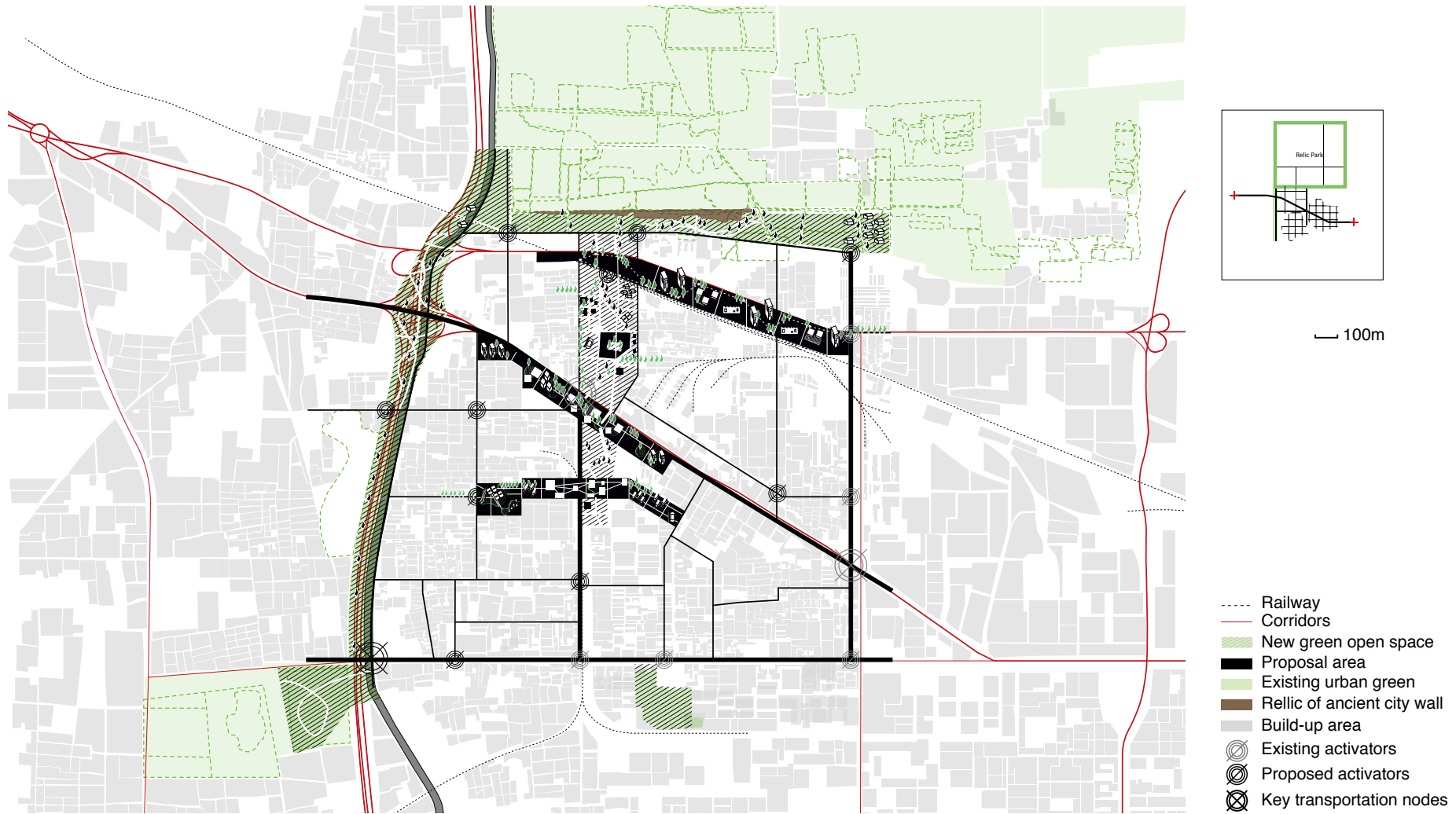
Pedestrain
Bicycle lane
Bus lane
Motor way
Motor way
Bus lane
Bicycle lane
Pedestrain
Semi-public walking street
Private courtyard of the offices
Semi-public services
Bicycle lane
Pedestrain
Motor way
Pedestrain
Bicycle lane
Greeny slope
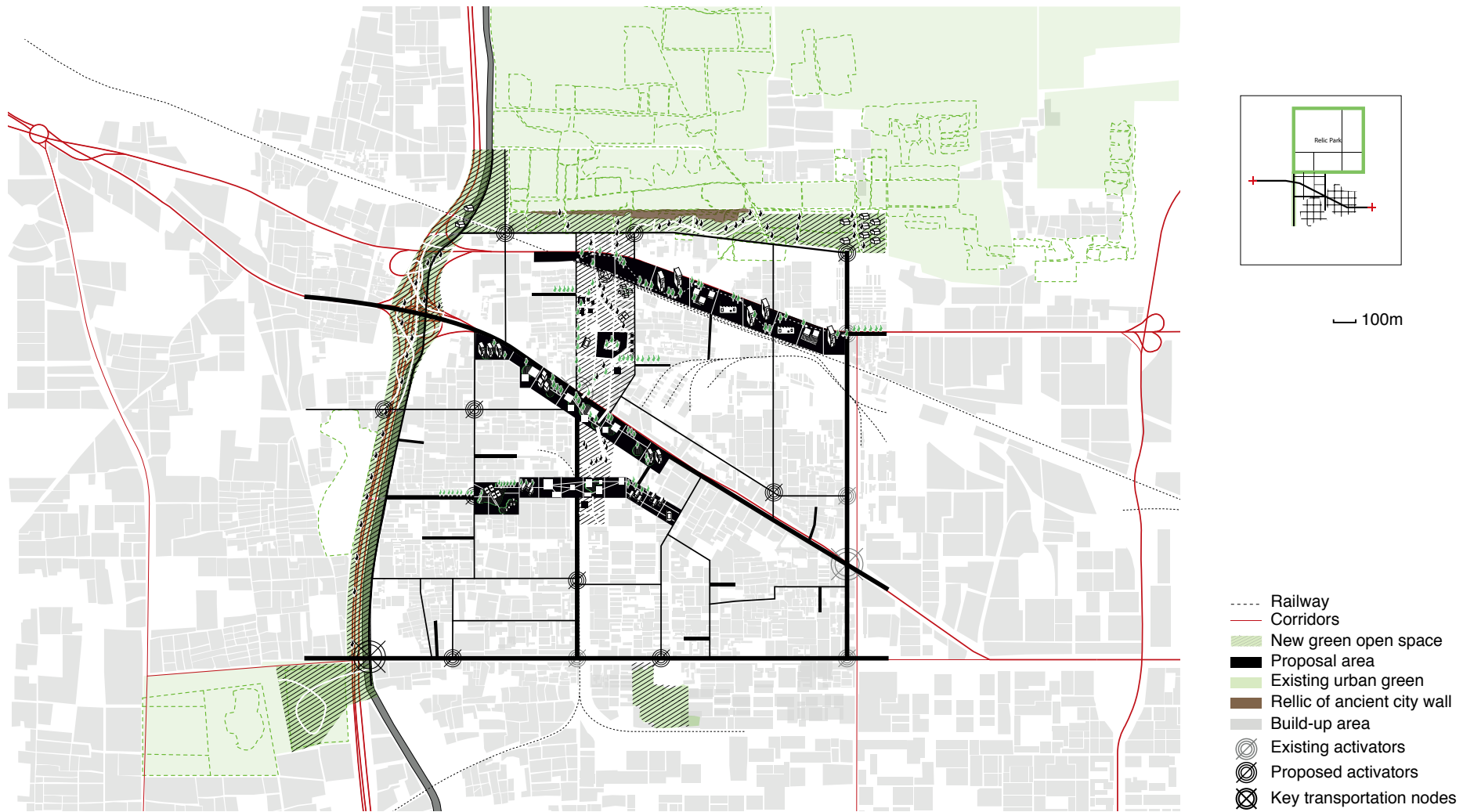New community house

Campus strip

This section presenting the relationship of the compus strip and their surrounding neighbourhood. They put the public facilities like the library, the sports center and cafes at the border of the compus in order that the residents can also benefit from these facilities. Meanwhile, The compus is open by the walking throughway that people can share their green quality as well.

Bicycle lane
Motor way
Pedestrain

Subsidence path

Bicycle lane
Pedestrain

Semi-public space of the compus

Bicycle lane

Diverse public space of neighbourhood side

Motor way
Bicycle lane

Relic Park

⊢——⊣ 100m

Medium edge:New activators

Series of activators of the strategy including the new bus transitional node, bike parking node,entrance to the park and so on will be introduced at the strategic location of the network.

Legend:

- ---- Railway
- —— Corridors
- New green open space
- Proposal area
- Existing urban green
- Rellic of ancient city wall
- Build-up area
- Existing activators
- Proposed activators
- Key transportation nodes

⊢—⊣ 100m

Relic Park

Micro edge: Spin off to the neighbourhood

At this level, the main focus is on providing quality to the edges between the city villages and new development projects, industry area and the other common neighbourhood.

These edges will be reconsidered by these design tools.

Criteriors are deponding on what surround situation is

+ Large infrastrucutre

+New housing development projects

Densification on the micro edges(public space, shops at the bottom floor, parking)

+ Green and original agricultural land

+ Local neighbourhood
Urban agriculture(glass houses, community room)
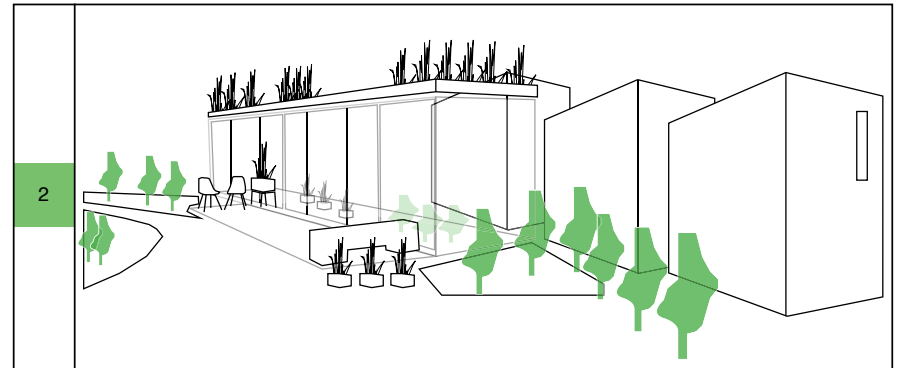
+ Industrial area

Convertion of industrial buildings into service functions
(sports, education, resturant,bicycle parking...)

Providing visual accessibility
Place of gethering
Diversity and vatality
Qualified edges
Permeable public spaces
Sense of belonging
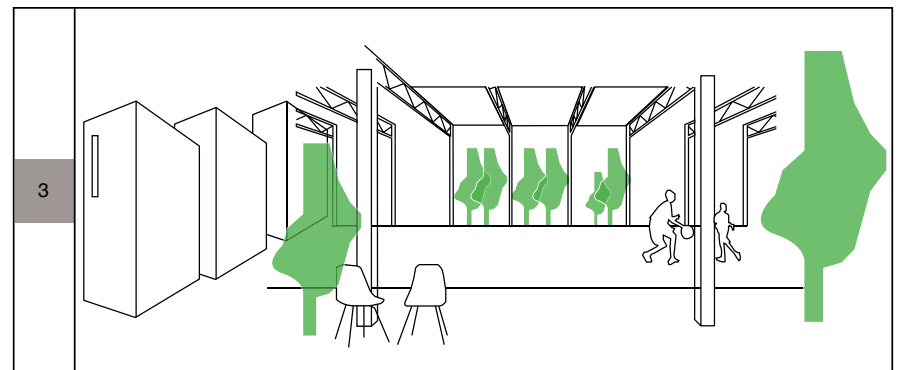
The micro edge strategy provide precise solution to the specific location.Flexible choices are differetiated based on the specific surrounding conditions.

⊢⊣ 100m

- - - - Railway
───── Corridors
New green open space
Proposal area
Existing urban green
Rellic of ancient city wall
Build-up area
Existing activators
Proposed activators
Key transportation nodes

Densification
Urban argriculture
Convertion
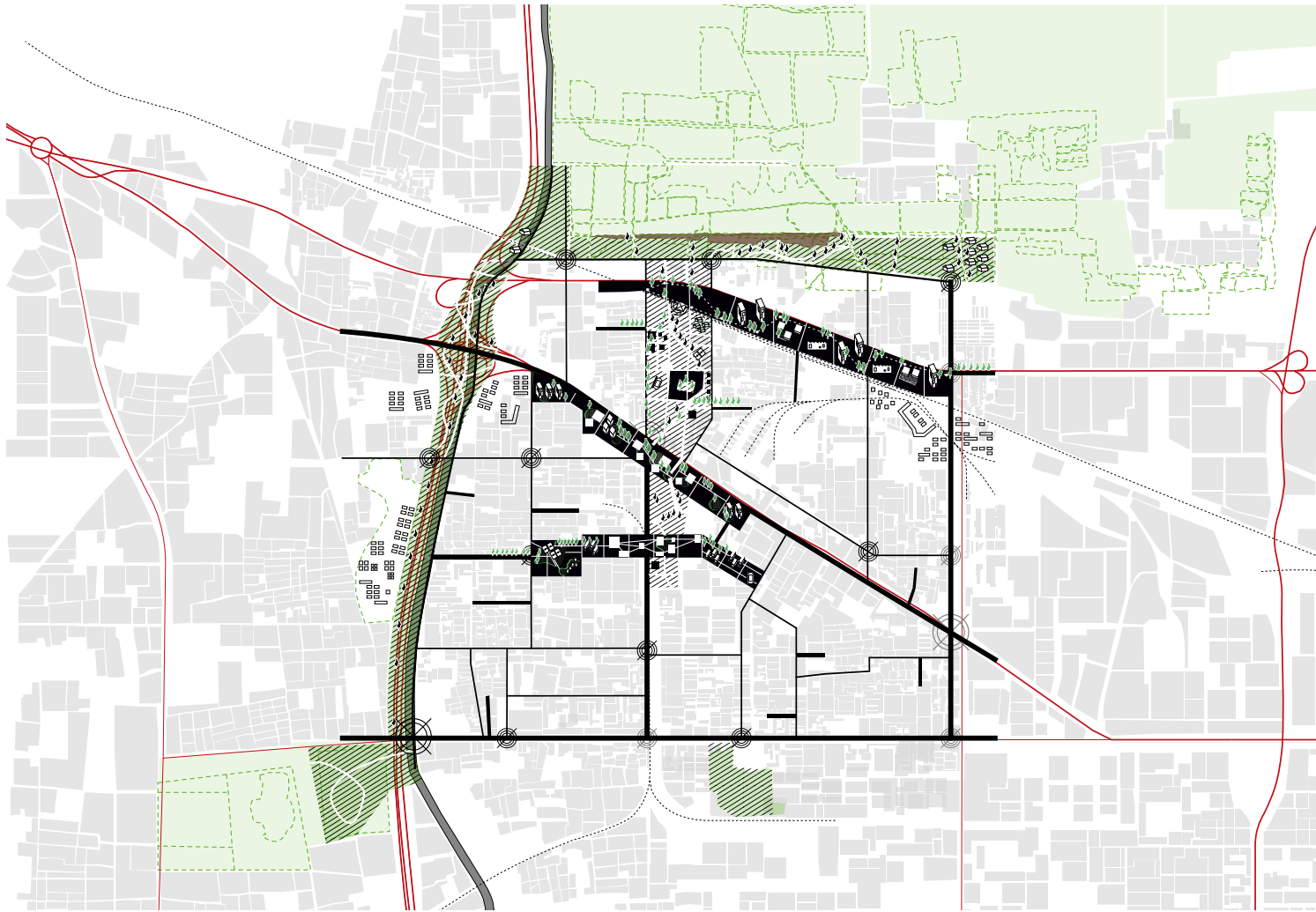
The idea for developing the new housing project starts to realise the economic feasibility.The transformation of the area will invovle lots of stakehoulders to implement and trying to achieve the win-win sitation. Because of that, the management system could run the self sufficient plan in terms of the finace. Taking advantage of the benefit from selling private housing sectors to the developer, meanwhile put the money in improving the downgraded area.

⌐⌐ 100m

- - - - Railway
——— Corridors
New green open space
Proposal area
Existing urban green
Rellic of ancient city wall
Build-up area
Existing activators
Proposed activators
Key transportation nodes

New housing development

URBAN DESIGN
CENTRAL STRIP

Cental yard as thestarting Point

How to organize the different level of public space as a network, by means of shaping landscape, meanwhile permeate the qualities to surrounding neighbourhood, in order to integrate the local structure in the new city structure?

size: app.247,500 sqm
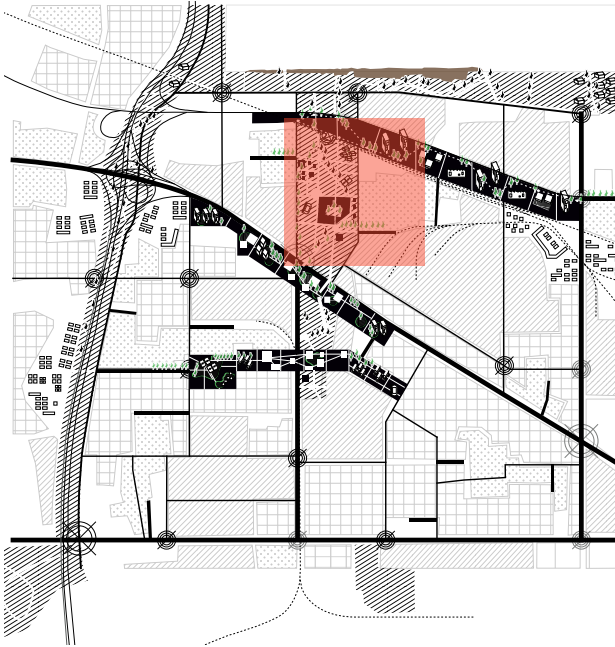
+City level function

+Mega city user

+City growth

+Local level function

+Local user

+Local cultural&natural value

Scale observation
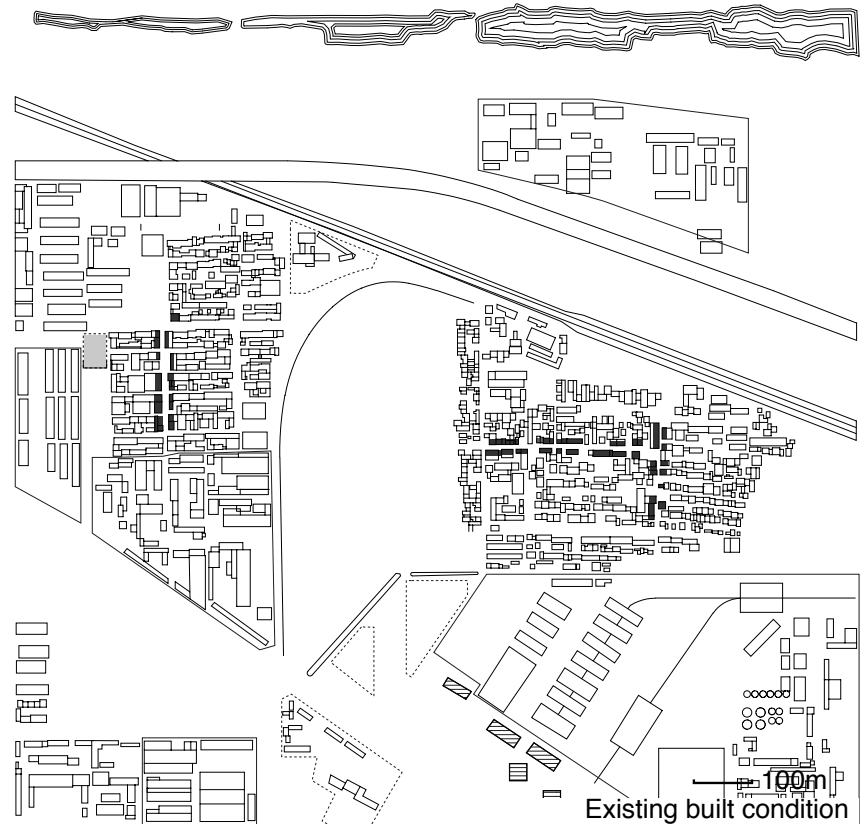

Smith Sonia Museum area

2,280m

480 m

Rotterdam Museum Park

Scale and Typology Compare
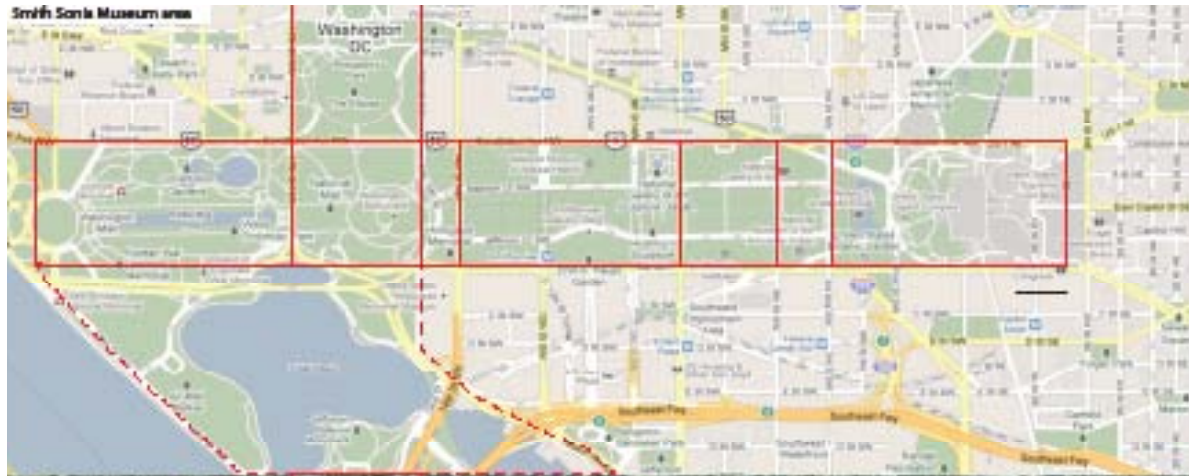
Washington Mall Area
+
TU Compus
+
Musuem park,Rotterdam

100m
Existing mobility network

100m
Existing built condition

Evaluation of existing

Existing mobility network

The existing mobility network contains the first hierachy of the accessibility, in other words, the high speed transport ways, railway, highways for instance.But there is no complete network of low down streets at the second level to transit the flow from higher level to the local level. Moreover, the two village neighbourhood disconnect with each other because of the existence of the empty space inbetween which was caused by original railway lines.

What is more, the railway track and the highway running in the north part cut off the connect between urban area and the historical site area.What is more, the wide road is also seen as the barrier.

Existing built conditions

The surrounding territory contains the landuse of residence which are poorly connect with each other and the neighbourhood in the south side of the back bone.The large amount of industrial land locate at the south part diconnecting with any other functions of the surrounding.

In the in-city village neighbourhood, some of the streets are playing the role of main public life collections with the street shops, local food markets,restuarants with high vitality.However, the small local activities still require more potential and to be re-activated with new highly development.

100m
Renewal & Reusable plots

100m
Existing landscape
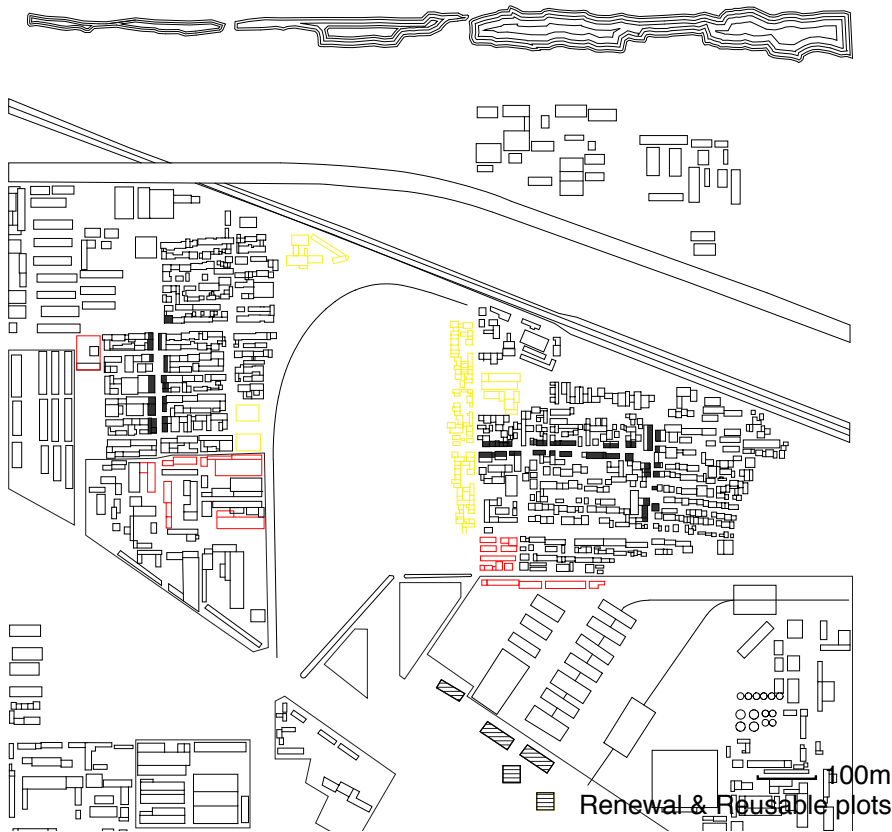
Renewal and reusable plots

The area are mono-functional area with only residential and industrial blocks.
The territory was used mainly for industrial pruposes for a long time because of railway infrastructures.Some of the industrial buildings were built with high quality of constructions which are used for local factories and storage.

The building condition of the residential area are mainly the in city village neighbourhood which have urgent need to be regenerated for better quality. However, the living typology is not only quite unique but also keep the small streets vital with local activities, the open air markets for instance.
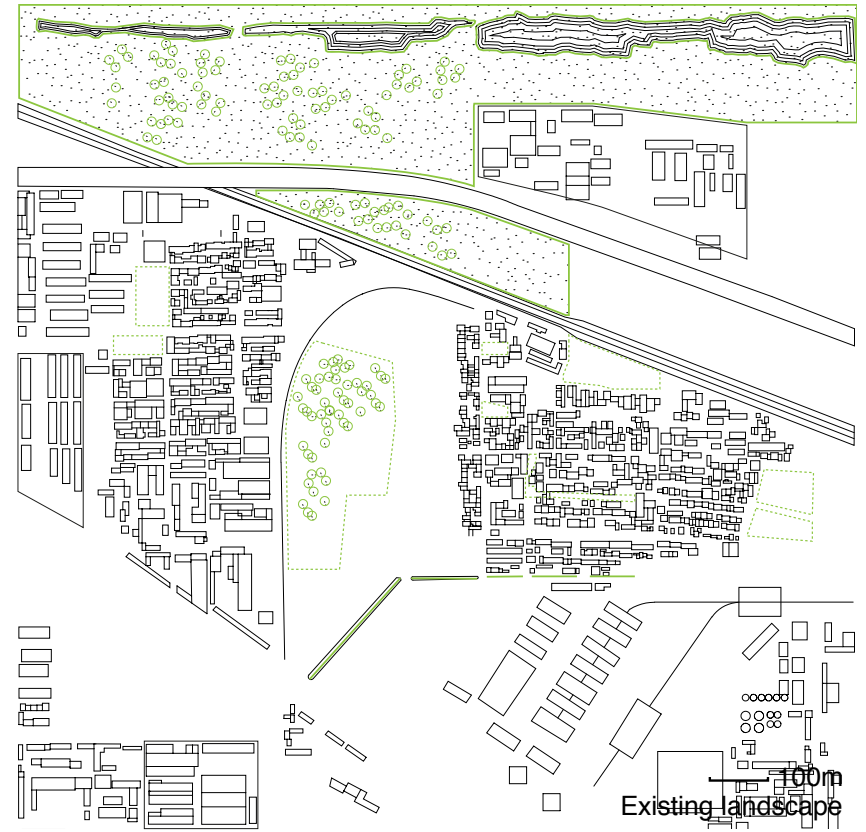
Existing landscape

The structure of the existing landscape is that the green area continue from the historical site in the north and expanding to the open empty space, but without any qualifying and defining. Small plots of open spaces locate seperately among the building scapes.

100m
Potential flows

100m
Proposed central green flow
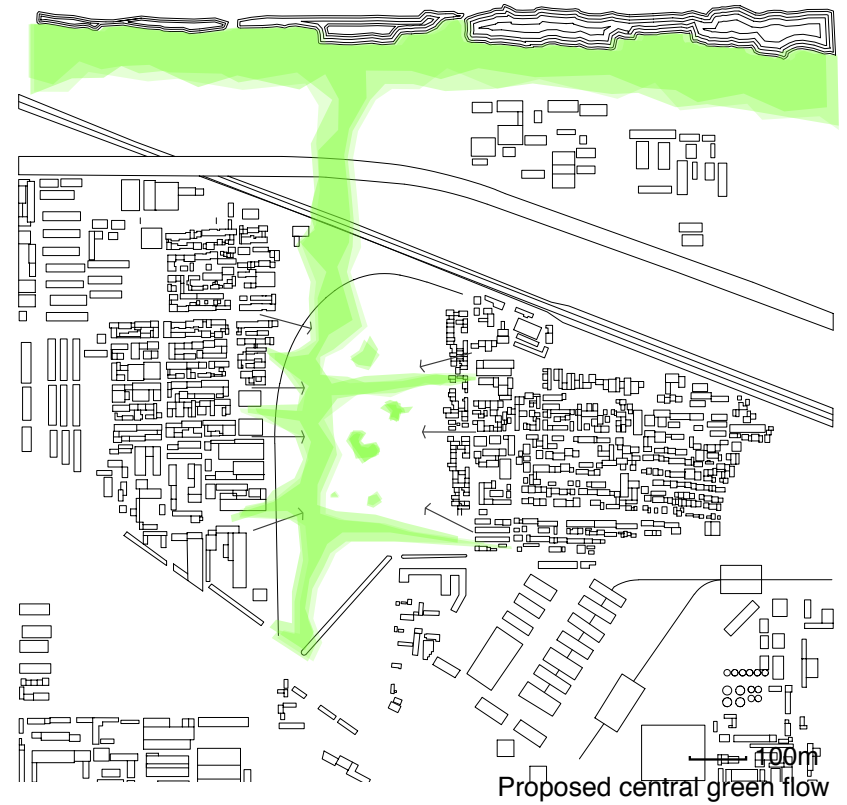
Analysis of the future potentiality

Main generators of the future flows

The territory will be open up and connections will be activated by the establishment of the railway station at the north boudary and metro station at the south. Therefore, the central strip has enormous potential of accessibility and activity if these two transport hub connects with each other.

Moreover, because of the different importance setting of the accessibility of the stations, there will be different hierachy of the future movement which can also affect the program and functions along these two path.

Future concept of the green flow

The green potential of the territory is coming from firstly the vision of the development of the whole area.By expanding the green space quality as the viable spatial material for developing the public space, the central green axies will be formalized as the backbone to spin off the quality to the surrounding area.
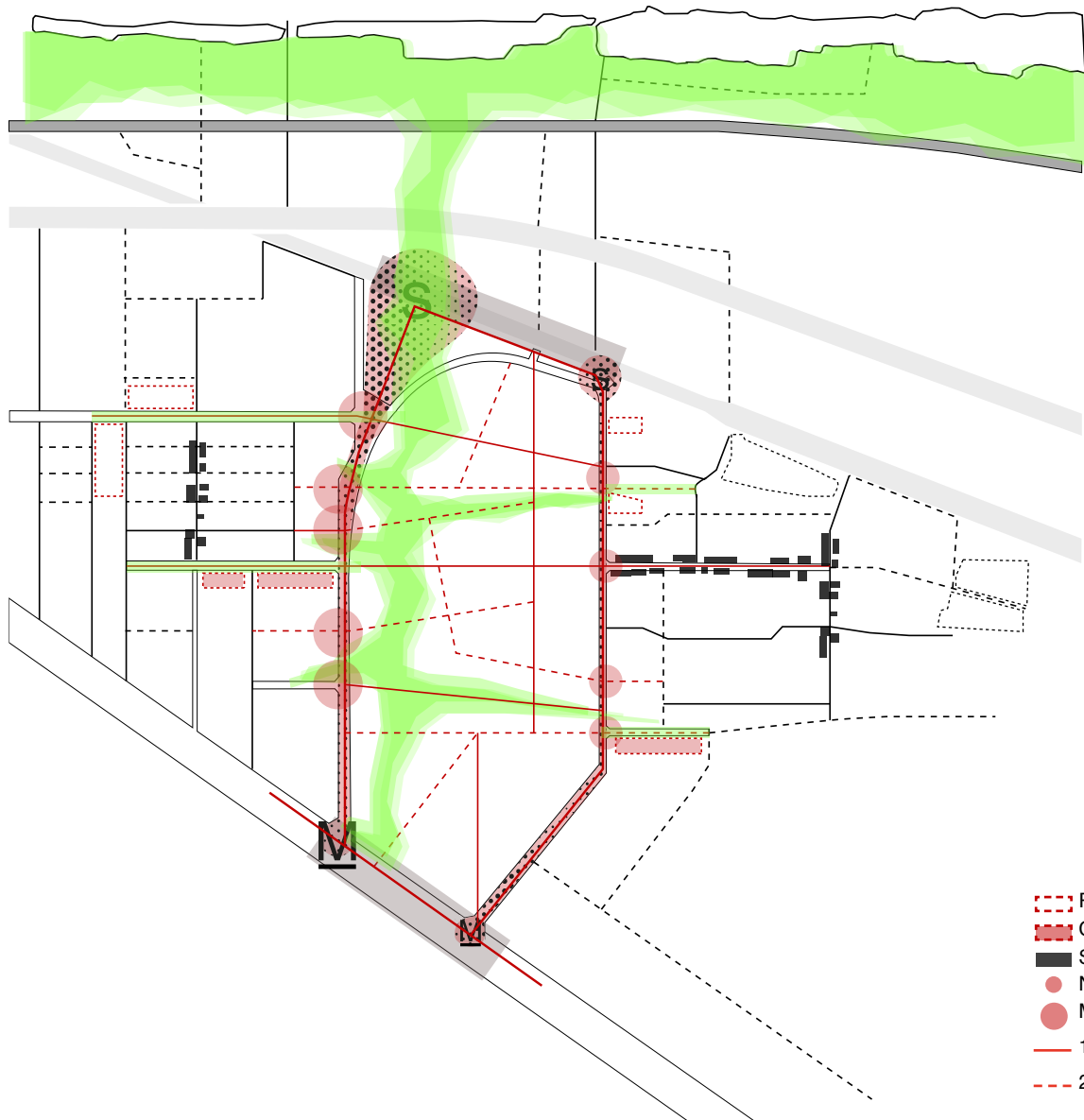
Spatial abstraction from ancient pattern
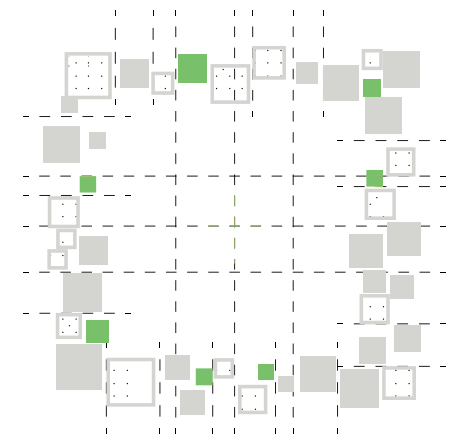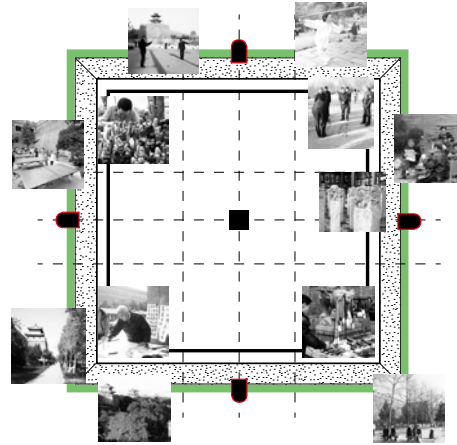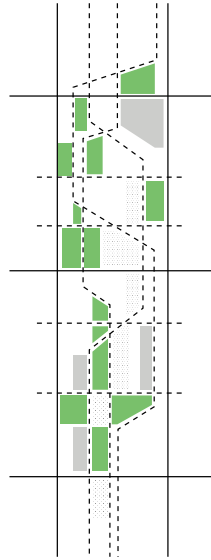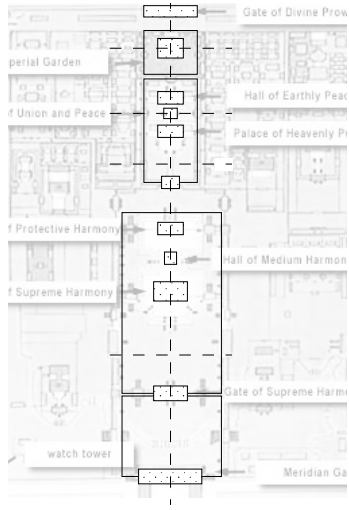
Iconic axial regularity of the Chinese traditional architecture

Enrich the spatial condition of the axes for dynamic demands and program,meanwhile improve the permeablity.

Iconic public space system of Xi'an city

Propose different transparency of the public space by programing and site structure in order to create dialogue between in and out on the permeable edges.
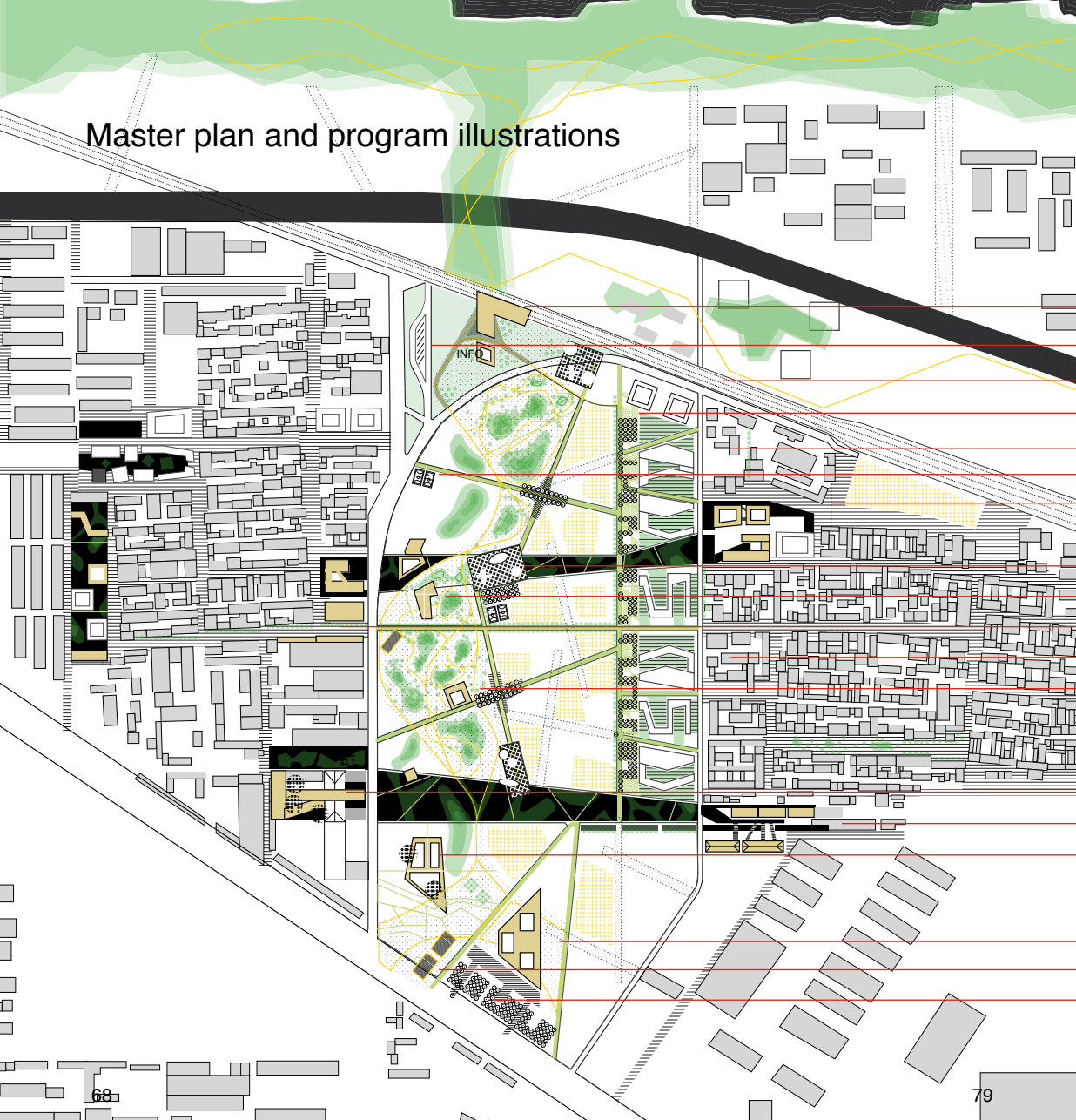
Structure

Internal Flows + External Feeders

As the result of integrating all the analysis in different terms, the main structure of shaping the territory and implementing a complete network, is created as the combination of the Internal Flows + External Feeders.

The internal flows will be developed in relation with the metropolitan public functions and urban activators combining the symbolism green belt which connects the historical site in terms of space and memory. External feeders are the urban level and local leve street networks with public spaces which allow people access to the proposals and integrate the fragmented territory.

Conlusively, the "internal flows " strip takes responsibility of capturing the higher level flows and presents as the weekly used public spaces.Meanwhile, the external feeders linkages are related to the daily flows of public networks. As a result, they should be embeded and interfaced with eachother to work as a public space network.

Legend:
- ▫ Reactivated attractors
- ▪ Converted industrial buildings
- ■ Street shops
- ● Neighbourhood related functions
- ● Mega city levle functions
- — 1st level linkage
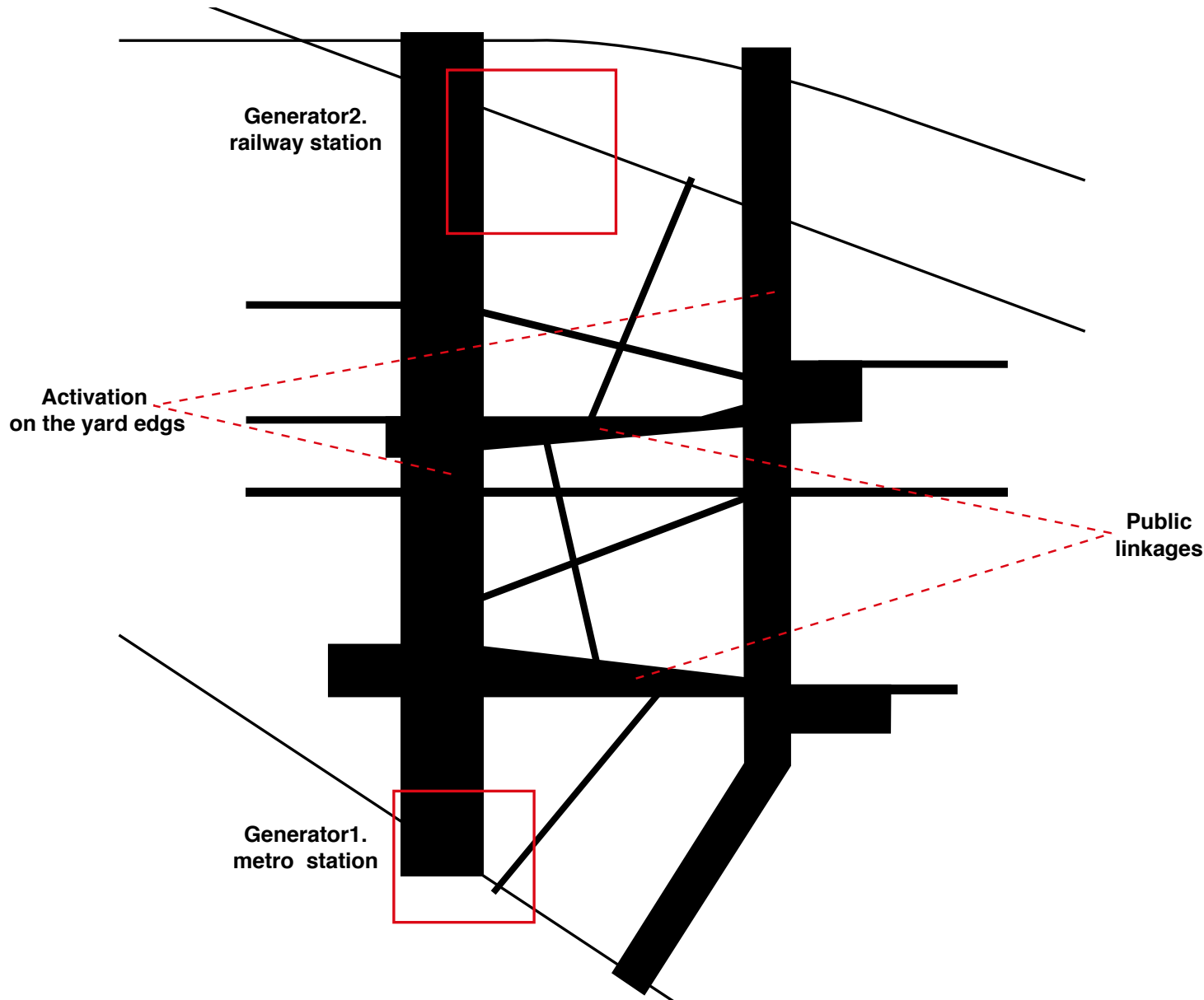- --- 2nd level linkage

Master plan and program illustrations

INFO

Train station

Bus terminal

New office building

Reserved space

Yard house

Sports square

Health center

Child center

Local food market

Community center

Socail housing

Event space

Planning institutional hall

Resturaunt&cafe

Shopping center

Traditional opera theatre

Bike renting

INFO

Generator2.
railway station

Activation
on the yard edgs

Public
linkages

Generator1.
metro station

Strategic element of the structure

The fragmented territory will be integrated in the larger urban structure by transforming the original edges of fragments into new meaningful public spaces.
New railway station and metro stop will be established as the metropolitan level gateway to this area.Enornous potentiality will be created at the same time.

Transformation is going to take place starting on the edges of the territory because of they will be the main artery to link the two transport hubs.

Thirdly, the public linkages of local level will provide opportunity to extend the flows into the surrouding of the territory and create connection and communication for the fragmented neighbourhood.

The detailed spatial interpretation will be created to show how these strategic element will be put into work spatially and functionally.

Key word of the spatial design:

Landscaping, Organization of flows, Semi-public spaces,Multi-layers of functions,morphology,locality
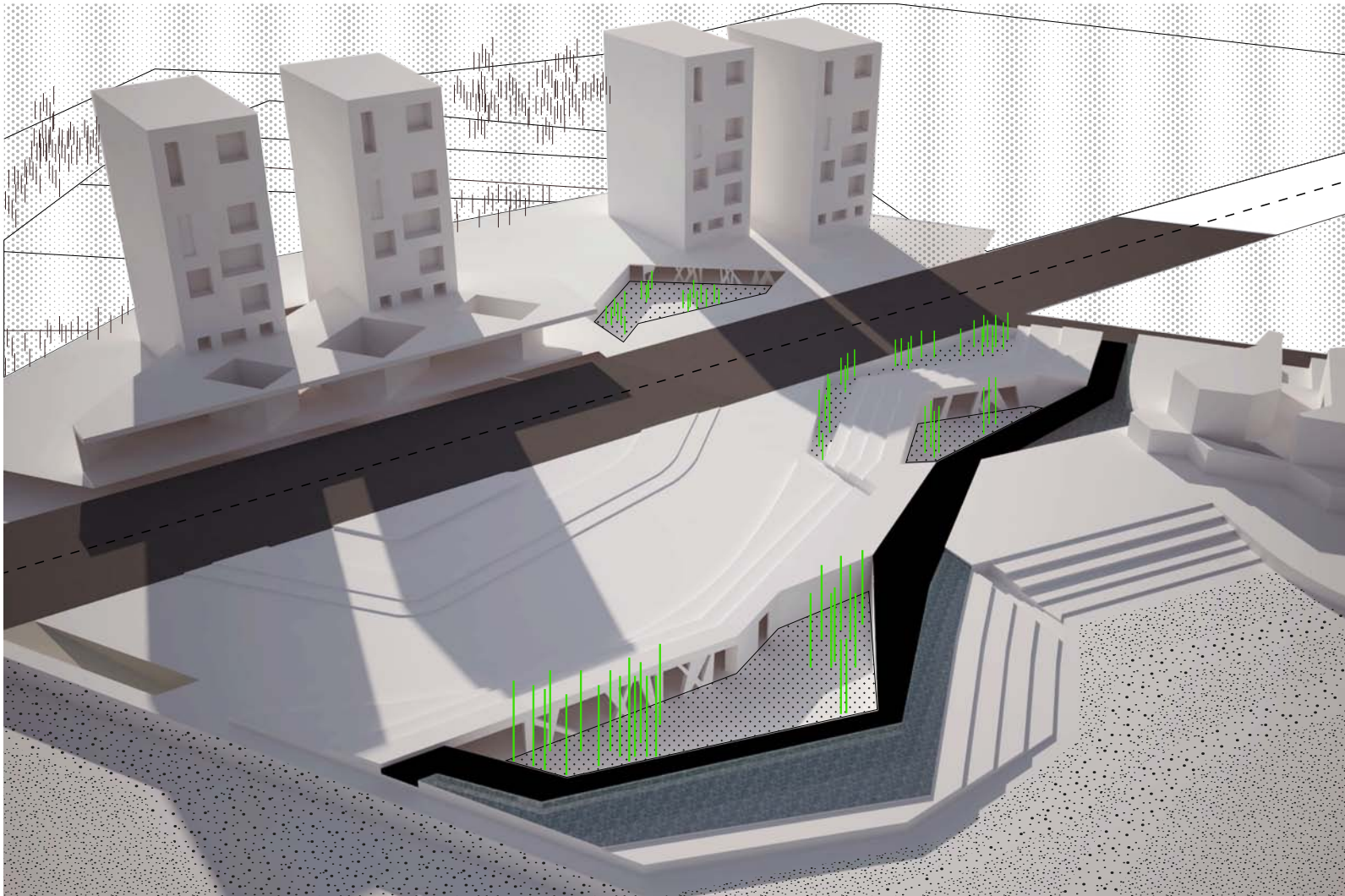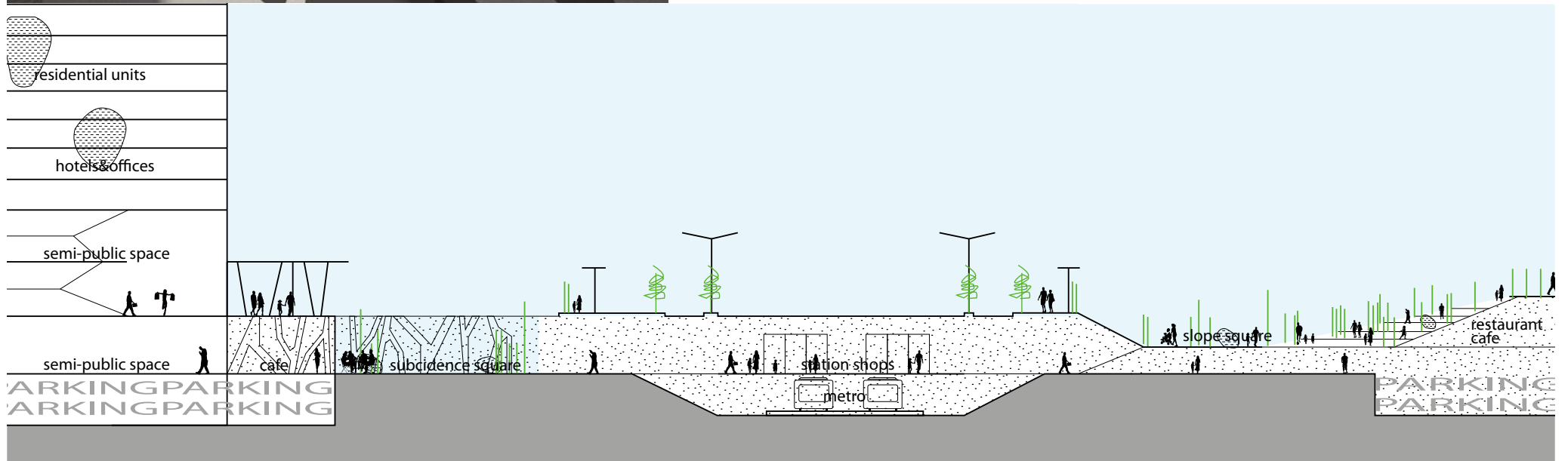
Generator1. metro station

The metro station area as the most important generator will created the multi-layered landscape integrating with exits of the station,underground parking,bus station and pedestrain area, all of which are related to infrastructure space in order to organise the different levels of flows, the public transport and the private ones.

At the same time, the local cultural square will be embedded in the multi-layered landscape that create the communication between different users.

residential units

hotels&offices

semi-public space

semi-public space

PARKINGPARKING
PARKINGPARKING

cafe subcidence square station shops slope square restaurant cafe

metro

PARKING
PARKING

Generator2. railway station

The railway station square will introduce the car free path to get over the railway track.The pedestrains and cyclers can go through the track directly long the entire slope square.What is more, the area will play the role of public transportation hub where bus terminal and bicycle renting house combined.
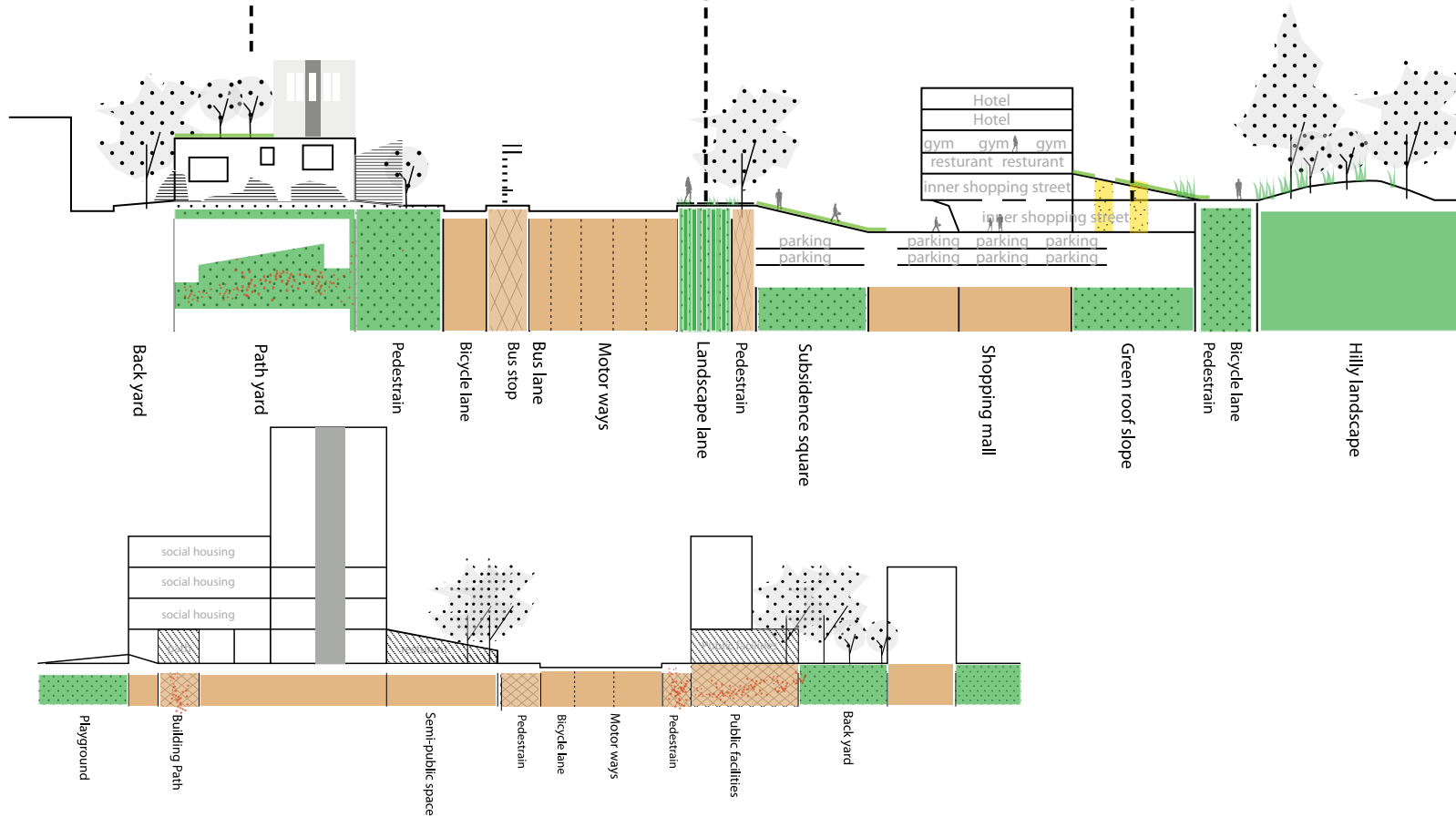This area will be the starting point of connecting the large green historical site by public transport, touring buses and self renting bike systems are organised within this square.
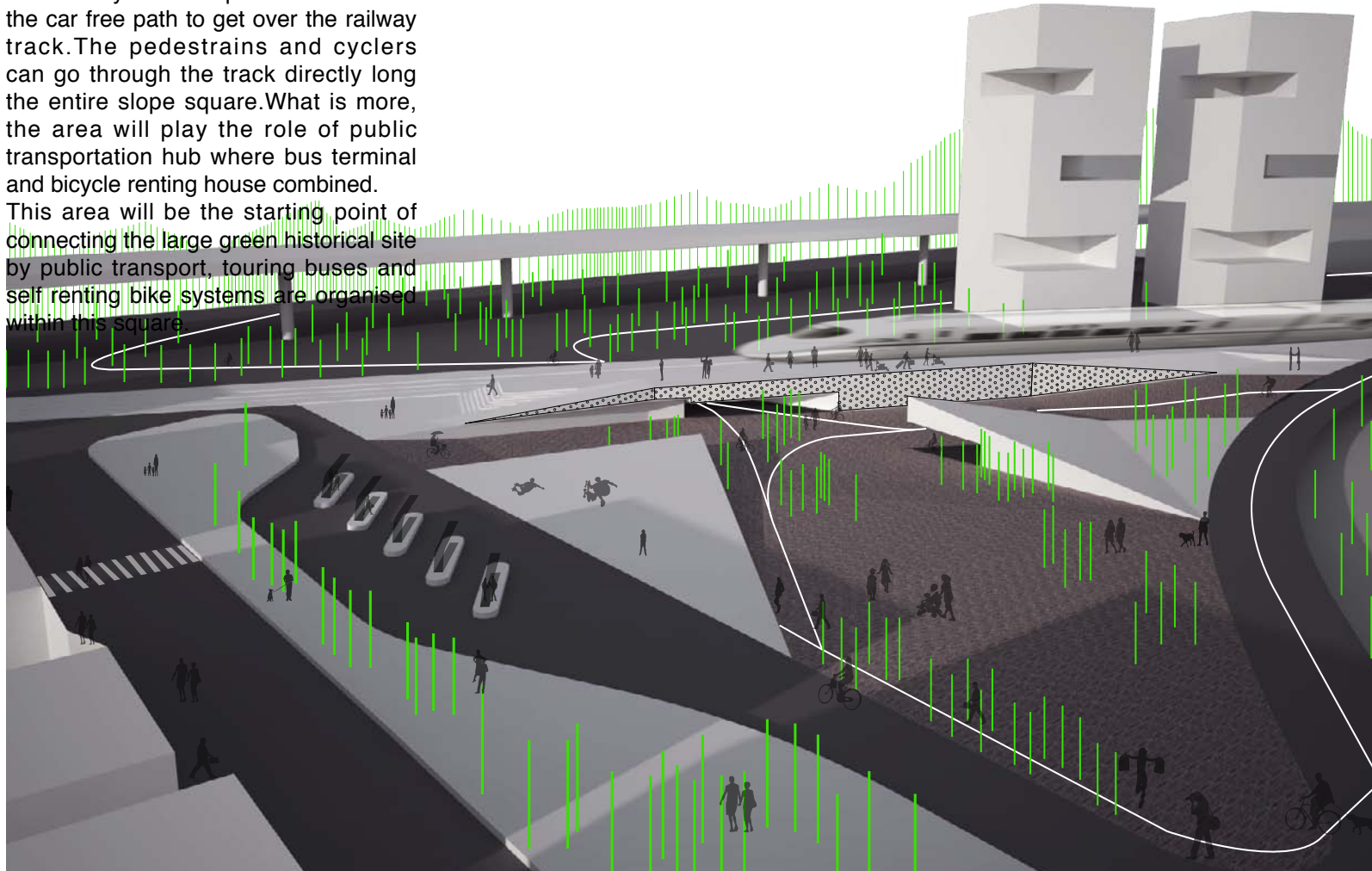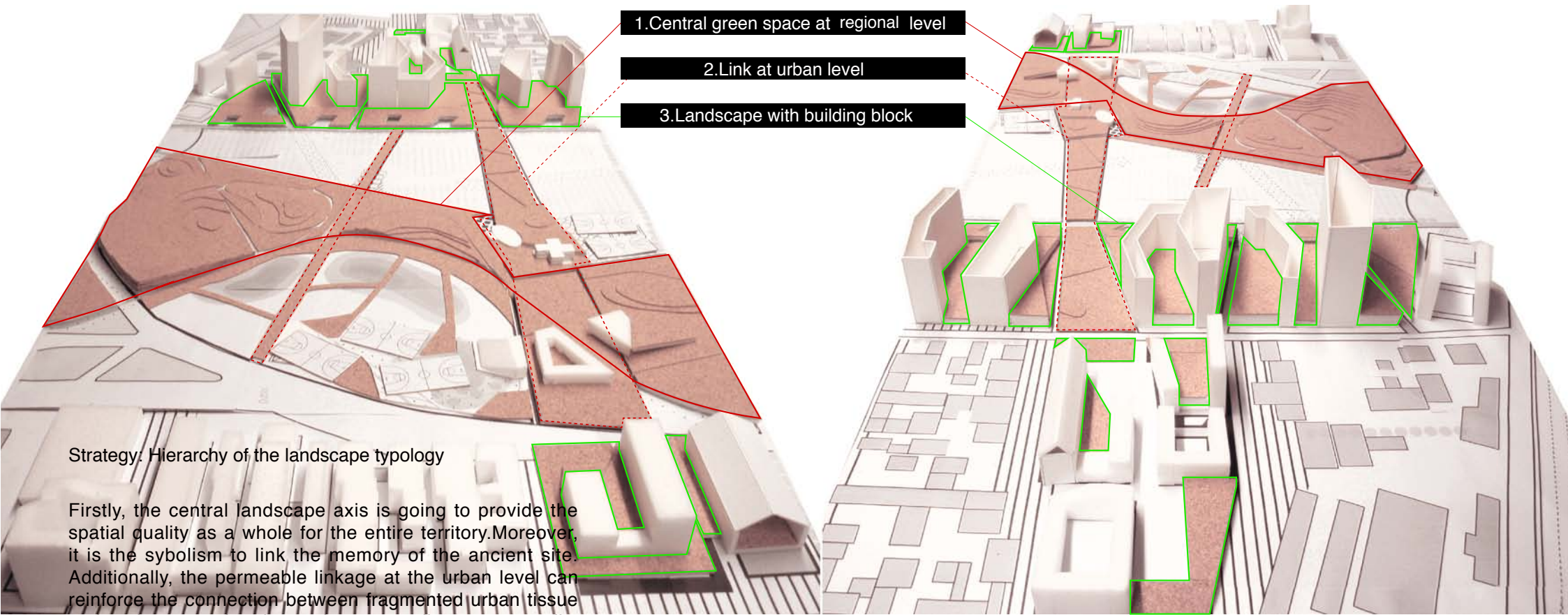
Activation on the edges

Two different hierachy of flows stimulate different requirement of functions by the edges.

Hotel
Hotel
gym   gym   gym
resturant   resturant
inner shopping street
inner shopping street
parking   parking   parking   parking
parking   parking   parking   parking

Back yard
Path yard
Pedestrain
Bicycle lane
Bus stop
Bus lane
Motor ways
Landscape lane
Pedestrain
Subsidence square
Shopping mall
Green roof slope
Pedestrain
Bicycle lane
Hilly landscape

social housing
social housing
social housing

Playground
Building Path
Semi-public space
Pedestrain
Bicycle lane
Motor ways
Pedestrain
Public facilities
Back yard

Public linkages

1.Central green space at regional level

2.Link at urban level

3.Landscape with building block

Strategy: Hierarchy of the landscape typology

Firstly, the central landscape axis is going to provide the spatial quality as a whole for the entire territory.Moreover, it is the sybolism to link the memory of the ancient site. Additionally, the permeable linkage at the urban level can reinforce the connection between fragmented urban tissue and at the same time keep tthe metropolitan green quality consistently to the locality.

The local building block on the edges will create the semi-public space to keep vital of the street level.What is more, the permeable regeneration projects will expend into the existing neighbourhood to bring new quality as well.

Strategy:
Diverse morphology of the landscape for different demands
from metropolitan level to local level.v

Public linkages

There are different layers of green space consisting central
hilly green belt, water yard,roof gardens of the social housing,
and urban farming territory
To combine with the layers of landscape in order to activate
the green space, different types of activators are proposed
combined.The local food market, community yard, children
center and sports square are for both the daily use and
weekly functions.

accessibility space
semi-public space
landscape
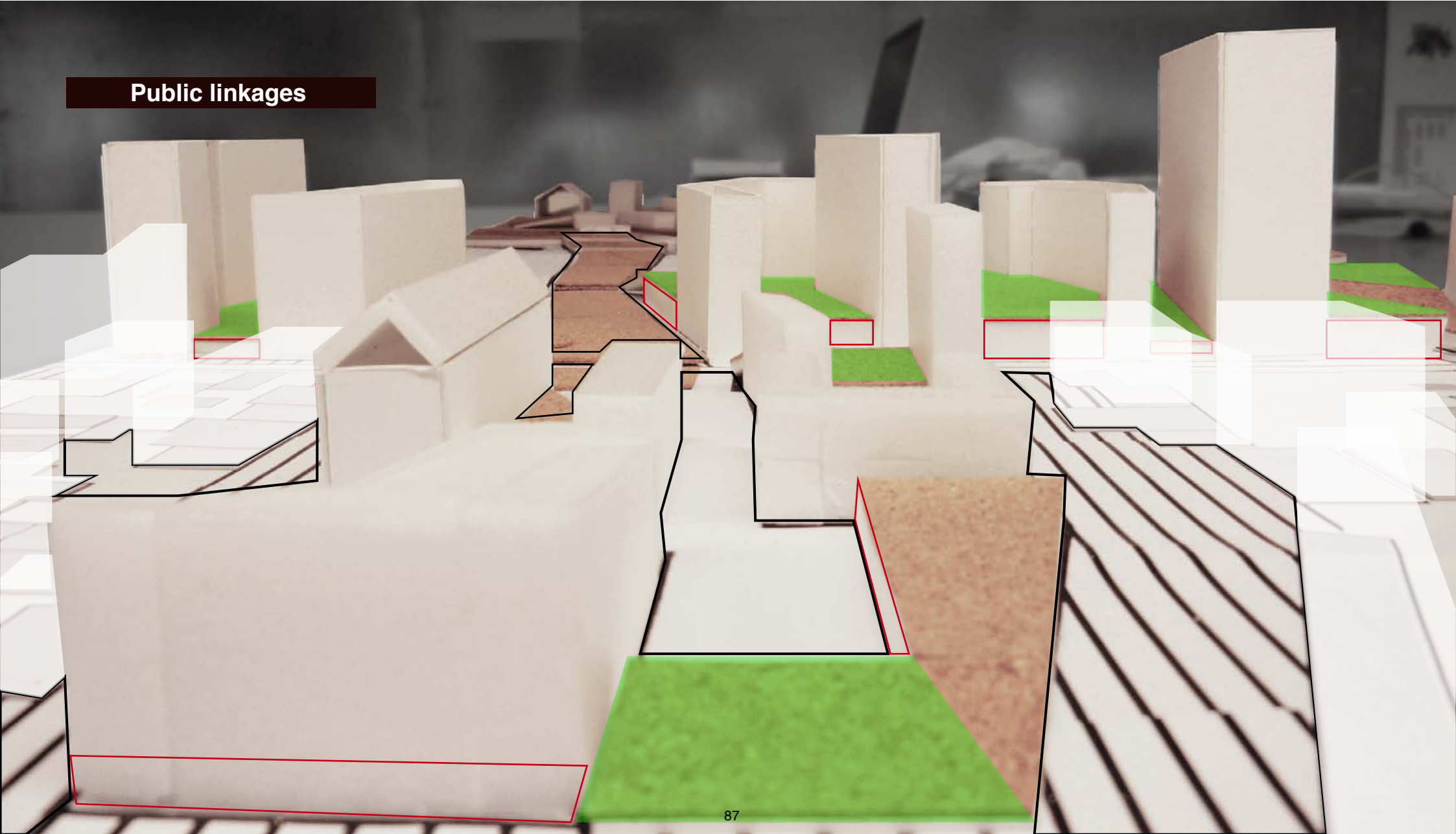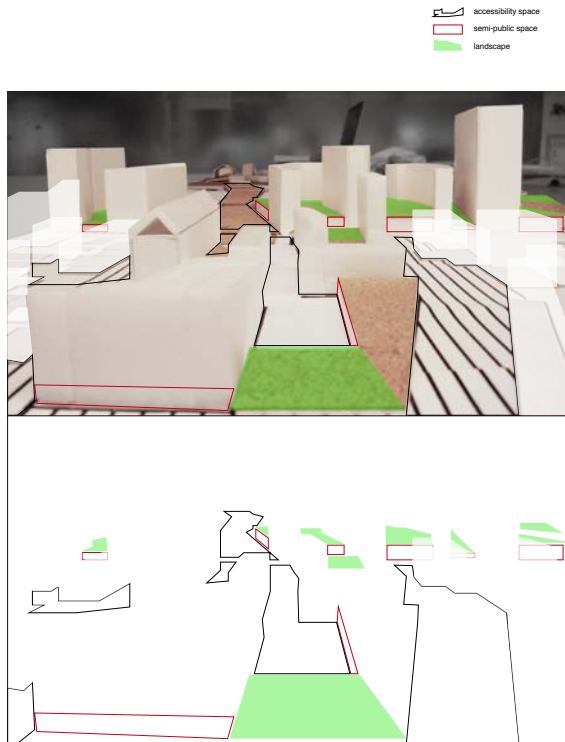
Strategy: regeneration of the neighbourhood

The residential area in the territory was built up by the local people who kept the traditional way of doing that.Although the physical quality of the neighbourhood is not quite affluent, the spatial experience is at human scale with positive relationship between space and human.
Actions:
The regeneration part will keep the memory of the local yard typology and street morphology which has various spatial layers and fullly spatial experience.
The regenerated unit of the yard housing will be partly with public facilities like health center of the neighbourhood, and partly for residential use.It keeps the original spatial layers for going through. Moreover, the street shops and other functions will be proposed as the semi-public space with the new social building blocks that allows vitality permeable. Meanwhile, the space is shaped with the diverse landscape layers that enable green and activities permeate to the neighbourhood.
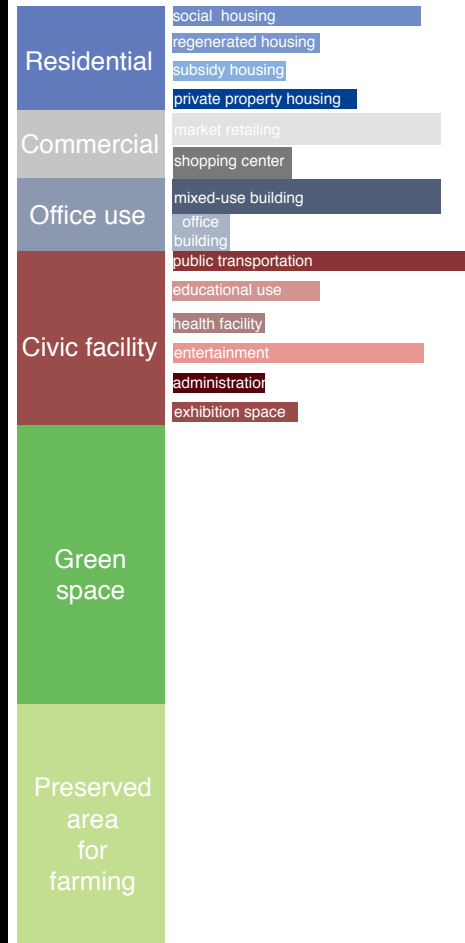
Flexibility and future scenario

Since the heavy fragmention and deprivation of the area, it will cost a certain period to improve the quality socially and spatially. Therefore, the program and landuse of the central yard is supposed to be a flexible plan to fit the long term development. Moreover,the design strategy has considered the flexibility in which amount of preserved area is provided to face the phasing and changing.
At the starting point, the main actions is to improve the spatial quality of the area on one hand, and promote the working of infrastructure for public transport on the other hand. Commercial facilities and civic facilities are more at neighbourhood level.
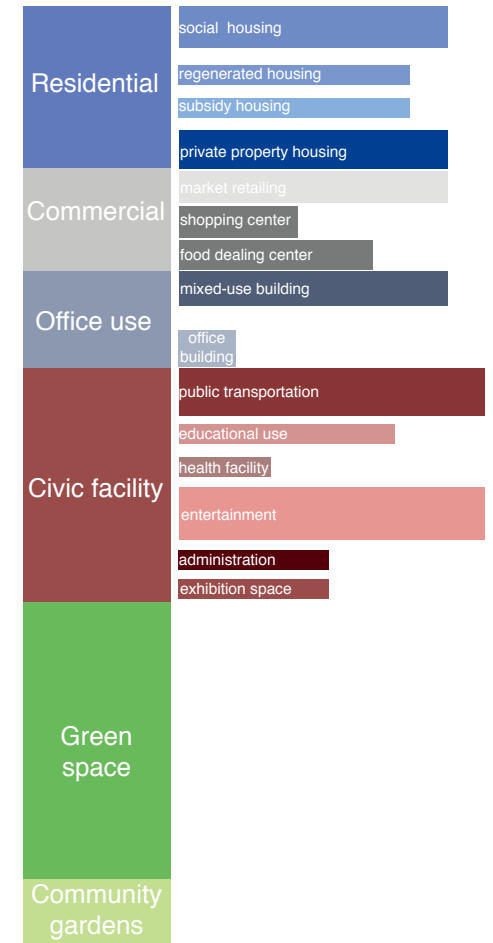
Here one of the possible programing scenario is provided for the vision of the year 2020. Till that moment, the central yard will be the center of the area, the subcenter of the metropolitan region. As a result, it should be the capacity to clusterize the public spaces with different scale and levels.
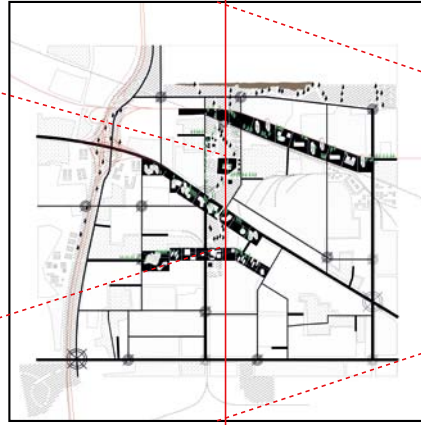

Possible scenario of programing illustration

Landuse of starting program

Residential
- social housing
- regenerated housing
- subsidy housing
- private property housing

Commercial
- market retailing
- shopping center

Office use
- mixed-use building
- office building

Civic facility
- public transportation
- educational use
- health facility
- entertainment
- administration
- exhibition space

Green space

Preserved area for farming

Landuse 2020+

Residential
- social housing
- regenerated housing
- subsidy housing
- private property housing

Commercial
- market retailing
- shopping center
- food dealing center
- mixed-use building

Office use
- office building

Civic facility
- public transportation
- educational use
- health facility
- entertainment
- administration
- exhibition space

Green space

Community gardens

Design

Strategy

Vision

From the paper of Planning public spaces networks towards urban cohesion, the curcial principles were pointed out that,

1 promotion of the continuity of the flows circulation;

2 promotion of the continuity for important natural structures and ecologic corridors;

3 relations of functional complementarity through the existing activities;

4 generation of the social and economic dynamics;

By using the abov principles as the criteria for the whole proces from design to vision,the project focuses on

1.transform the "dead urban edges" to active linkages between the new development at regional level and existing local value spatially and functionally.

2. propose different layers of public space network,considering landscaping, flow circulation, and semi-public space to achieve the urban dynamics.
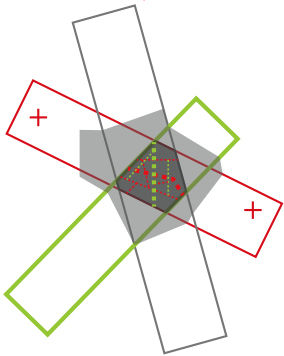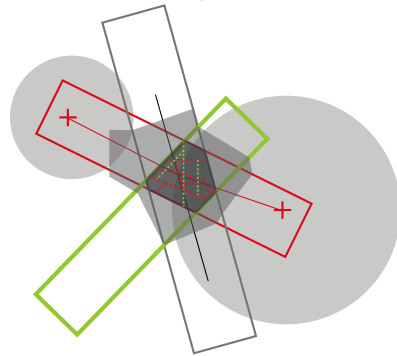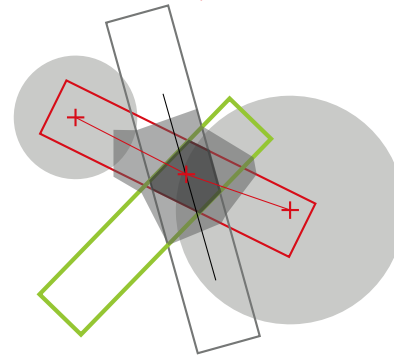
BIBILIOGRAPHY

Herman R., Ausubel,J. (1988). Cities and their Vital Systems: Infrastructure Past,Present and Future, Wshington DC: National Academy Press.

Friedmann, J. (2007). The Wealth of Cities: Towards an Assets-based Development of Newly Urbanizing Regions. Development and Change. International Institute of Social Studies, The Hague.

Stephen, G., Simon, M. (2001). Splintering Urbanism:Networked Infrastructures, Technological Mobilities and the Urban Condition, London and New York: Routledge.

Gehl, J., (1987). Life Between Buildings: Using Public Space. Van Nostrand Reinhold, New York

Ahern, J. (1995). Greenways as a planning strategy. Landscape and Urban Planning

China's National Bureau of Statistics.Statistical Yearbook of China. Available at: http://www.stats.gov.cn/tjsj/ndsj

Dupuy, G. (1995). The automobile system: a territorial adapter.

Dunham-Jones,E .(1999). Networking the Postindustrial Landscape, Mimeo.

Graham, S. and Marvin, S. (2001). Splintering Urbanism:Networked Infrastructures,Technological Mobilities and the Urban Condition, London and New York: Routledge.
Lynch, K. (1982). A Theory of Good City F o r m , M a s s a c h u s e t t s : T h e Massachusettes Institute of Technology Press.

Nye, D. (1994). Ameican Technological Sublime, Cambridge MA:MIT Press.

Wall, A. (1994). The dispersed city.In Woodroffe,D. Papa and I,MacBurnie (eds.).London: Wiley/Architectural Design.

Southworth, M. and Josph, E. (1997). Streets and the Shaping of Towns and Cites, New York: McGraw-Hill.

Isabelle Doucet [Centrality] and/or Cent][rality A Matter of Placing the Boundaries, G. Maciocco (ed.), Urban Landscape Perspectives, 93–121. 93

Roberts, Marion , Lloyd-Jones, Tony , Erickson, Bill and Nice, Stephen(1999) 'Place and space in the networked city: Conceptualizing the integrated metropolis', Journal of Urban Design, 4: 1, 51 — 66

Pinto Ana Júlia,Remesar Antoni,Brandão Pedro,Nunes da Silva Fernando. (2010) Planning public spaces networks towards urban cohesion, Planning Public Spaces Networks Towards Urban Cohesion 46th ISOCARP Congress 2010