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

P5 I 24.06.2011 I HUANG Yahui I Student ID 4033620 I Complex Cities

KEY WORDS

Public space network, Fragmentation,Local value,Multi-layering strategy,Flows,Landscape

REASEARCH 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 inhabitants of western fringe of Xi'an City,supplementing the governmental city model.

CONTEXT
INTRODUCTION

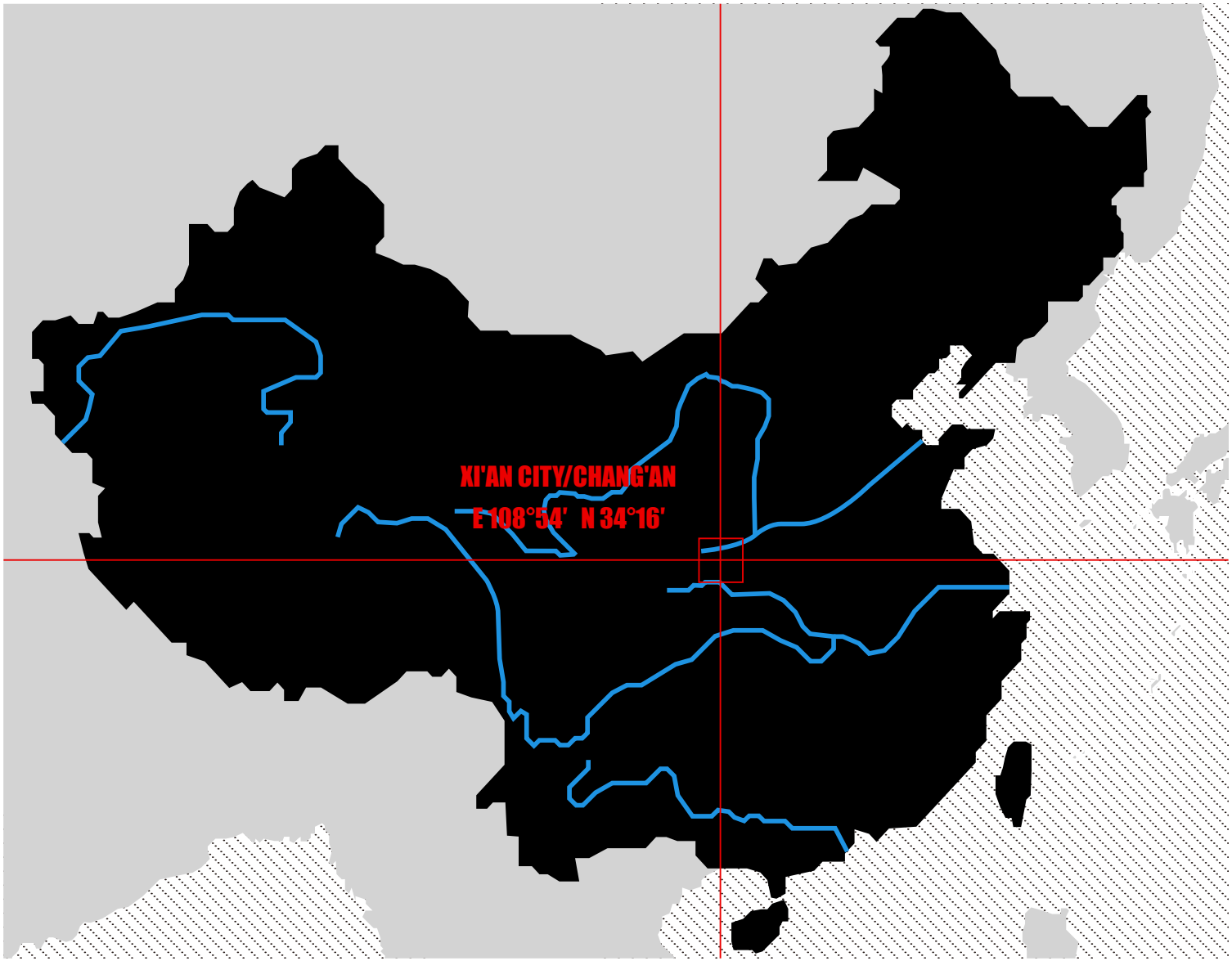
READING THE
CITY&VISION

URBAN DESIGN

EDGE STRATEGY

XI'AN CITY : Complex city

XI'AN CITY Introduction



Population

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

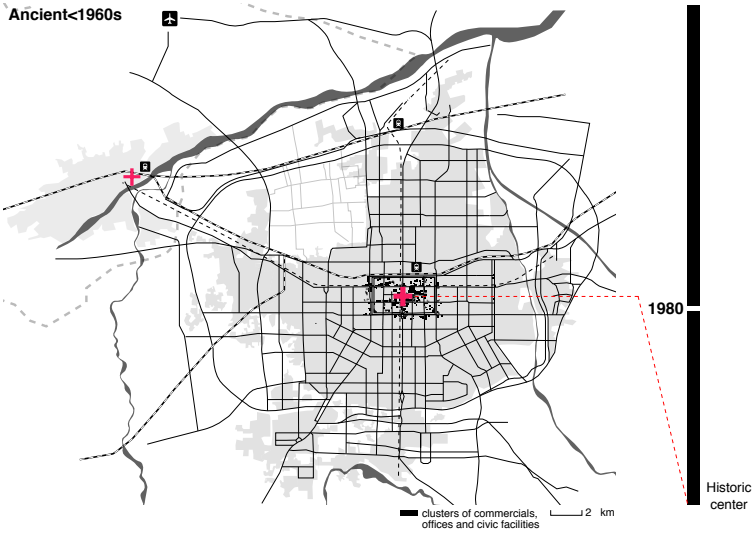
Land Area (sq km)

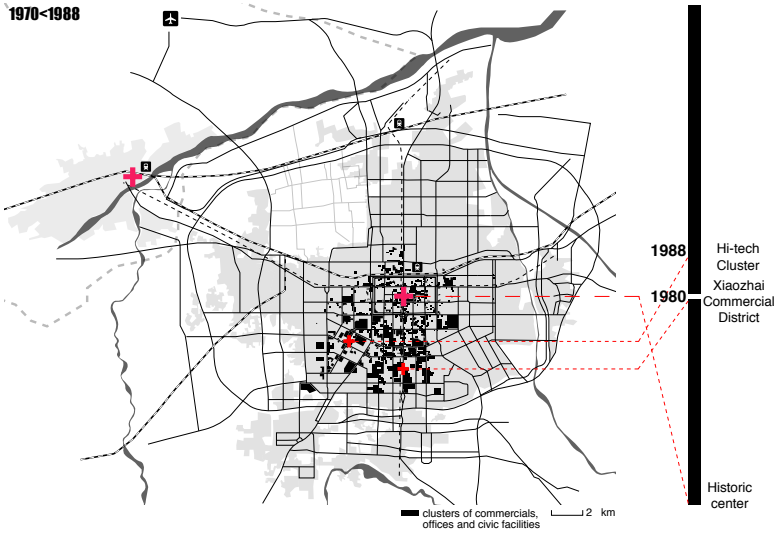
Xi'an	3,547
Rome	1,285
Amsterdam	166
Shenzhen	2,050

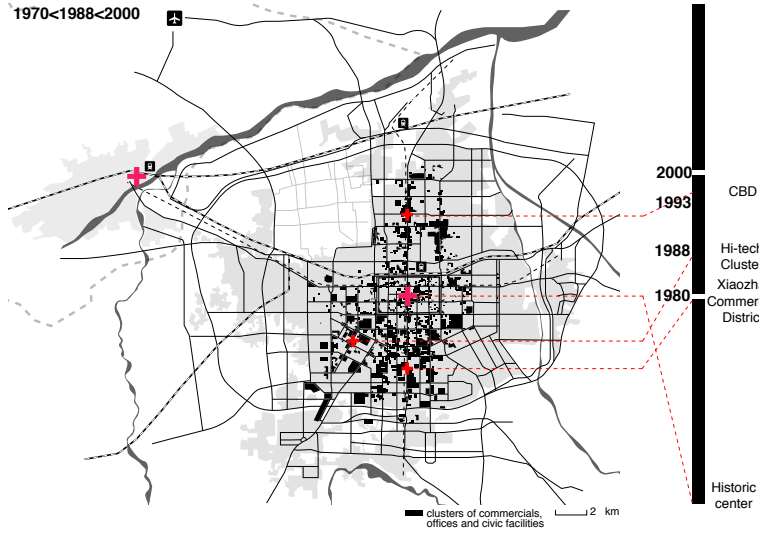
History (yr)

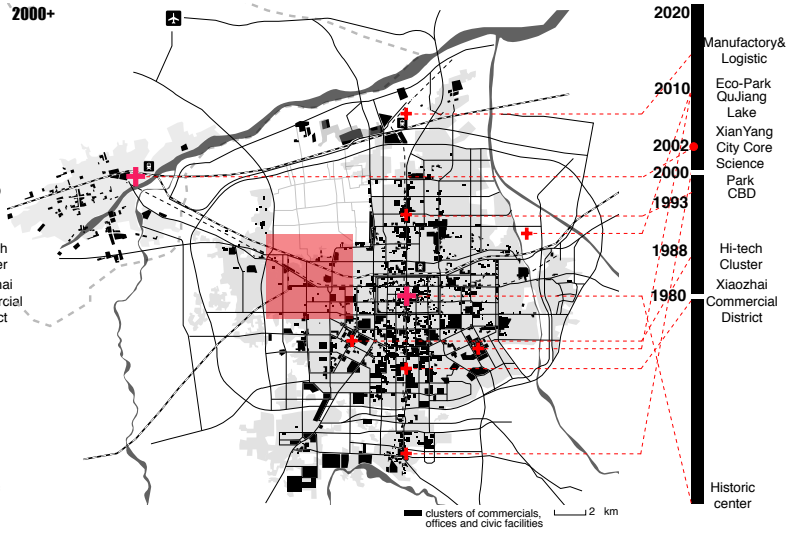
Xi'an	3,200 since 1100BC
Rome	2760 since 763BC
Amsterdam	735 since 1257
Shenzhen	32 since 1978

Context: Mega Xi'an City 2020+



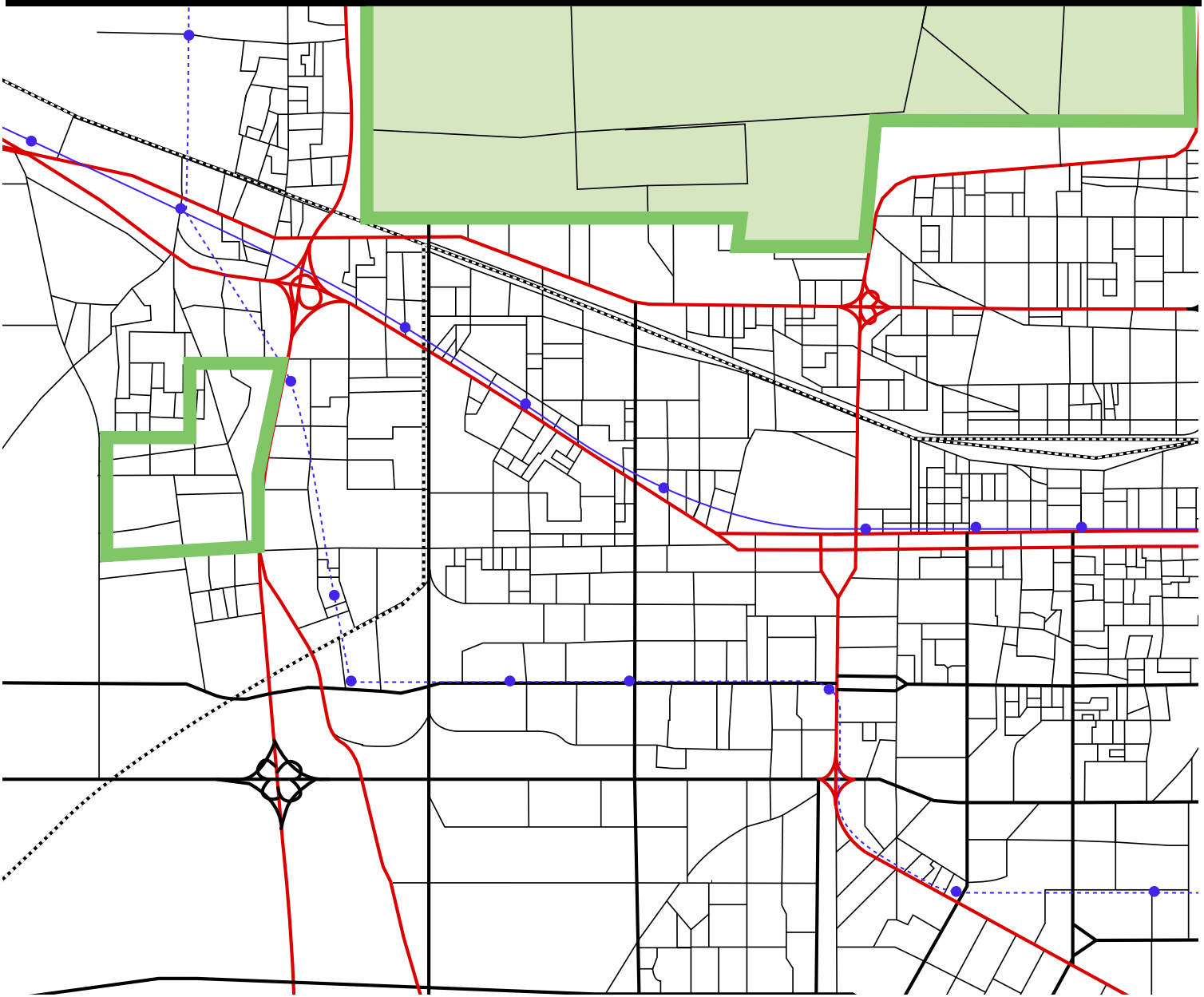




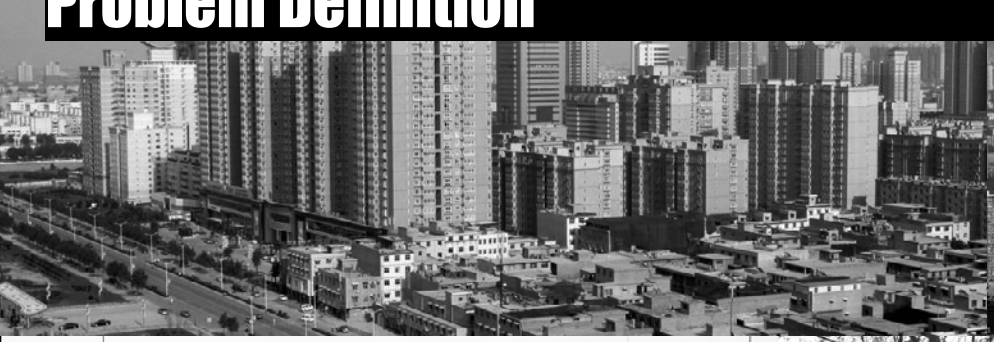


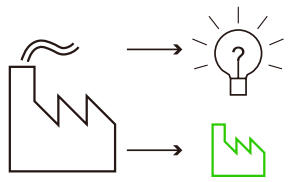
Monocentric city >Polycentric city > Proximal cities' collaboration > Twin city model > Mega Xi'an city plan 2020+

Condition of local scale



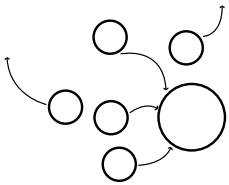
Problem Definition





transforming industry

+



floating groups

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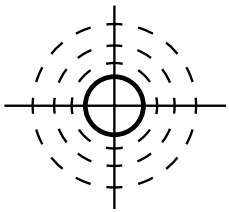

rapid urban growth

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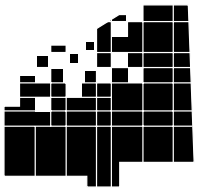
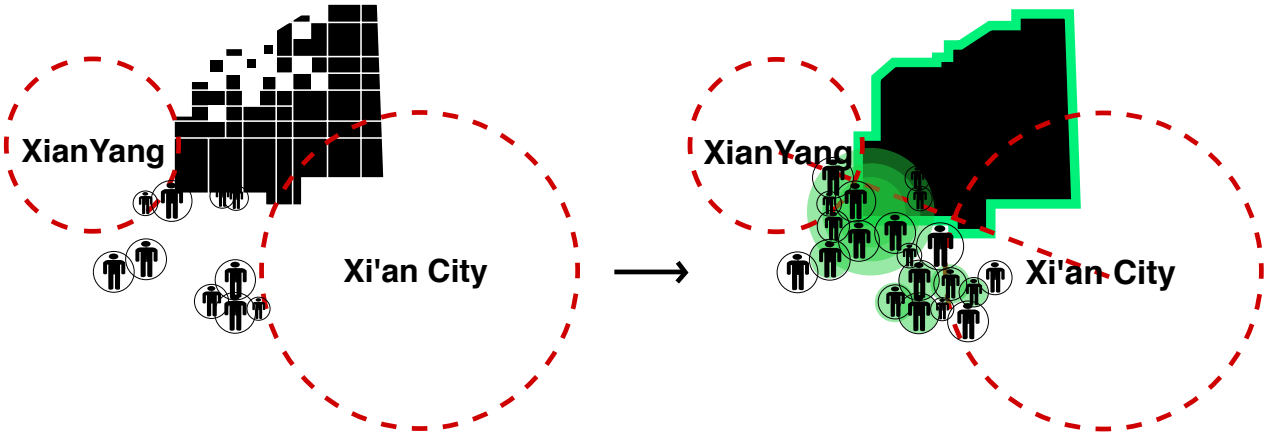


neglecting cultural assets

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

Ultimate Aim



**The availability of the cultural & historic asset area,
and the importance of new development area in between two main centralitiy cores,
can be 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 benefit the localities.**

Networked Cities

Urban Fragmentation

Public space Network

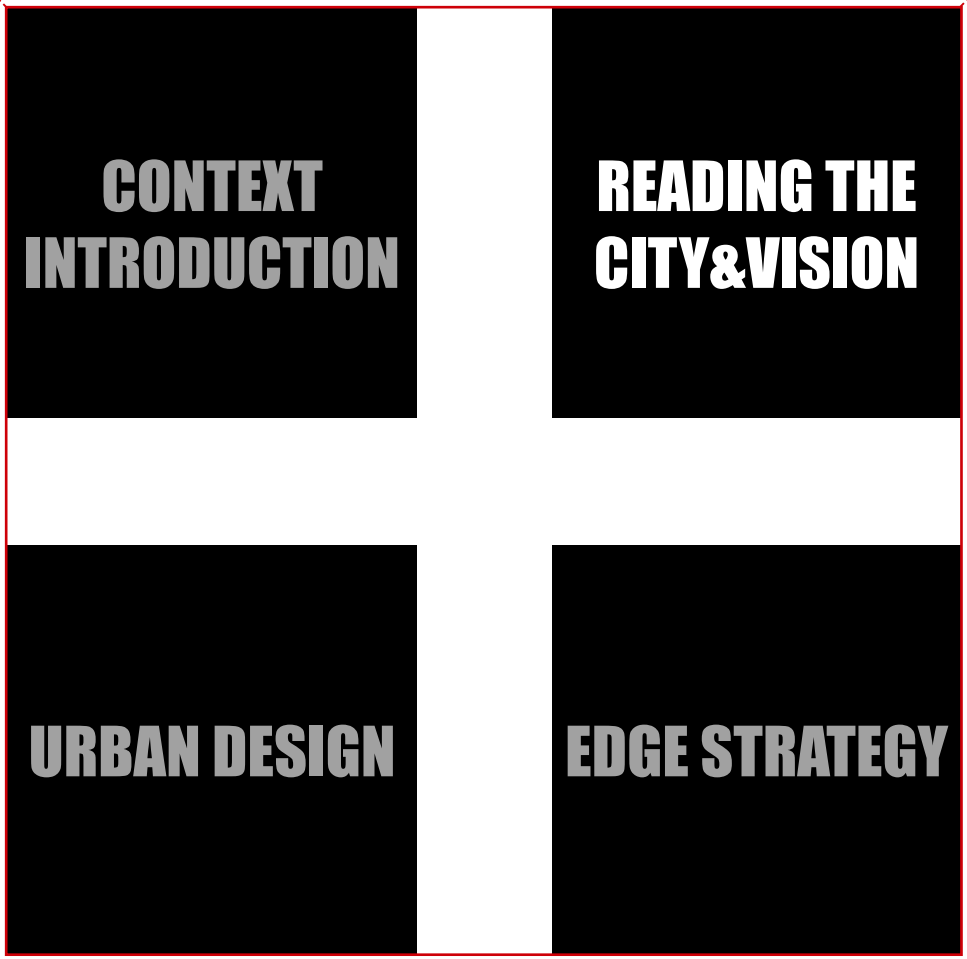
Consistent urban form

Vision

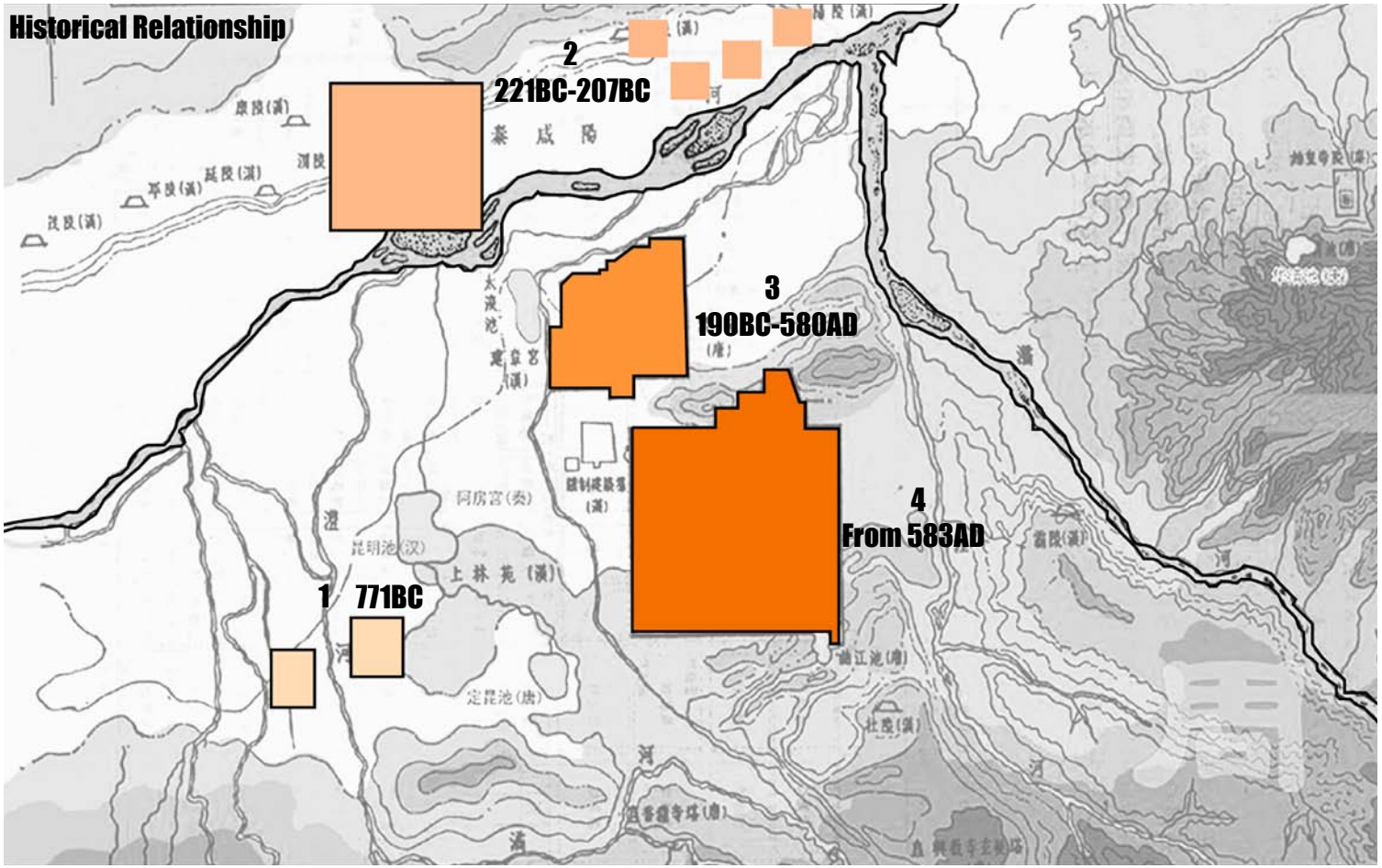
Future trends

Current development

Historical territorial relation



City Scale-historical relation



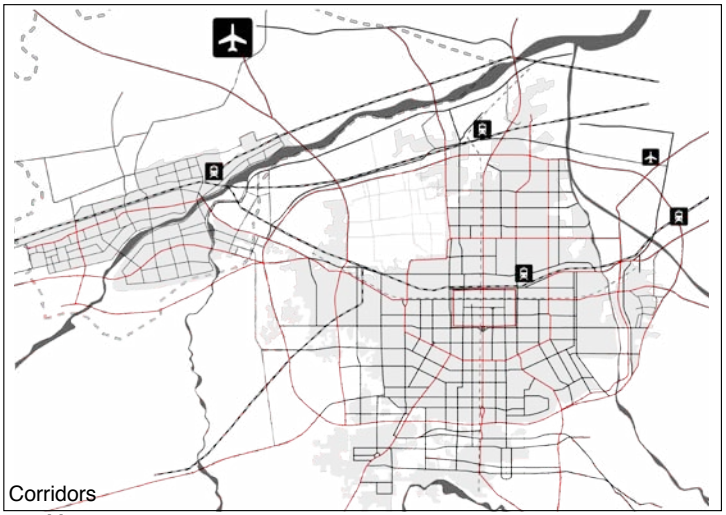
First settlement

Ancient capital city of "QIN"

Ancient capital city of "HAN"

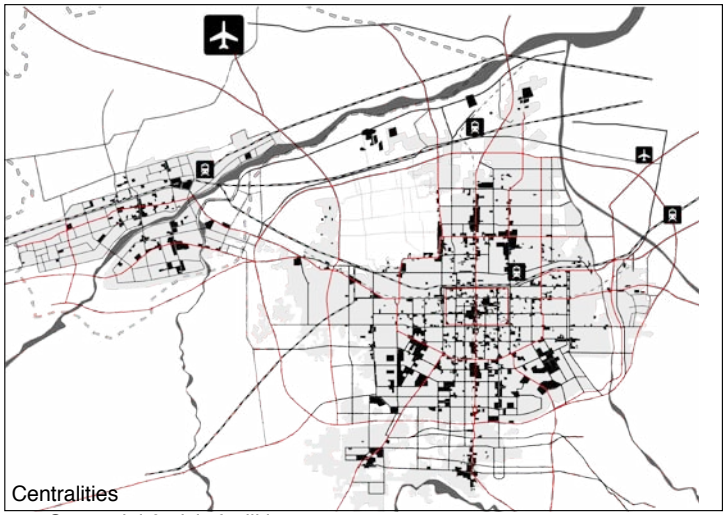
Ancient capital city of "TANG"

City Scale-current development



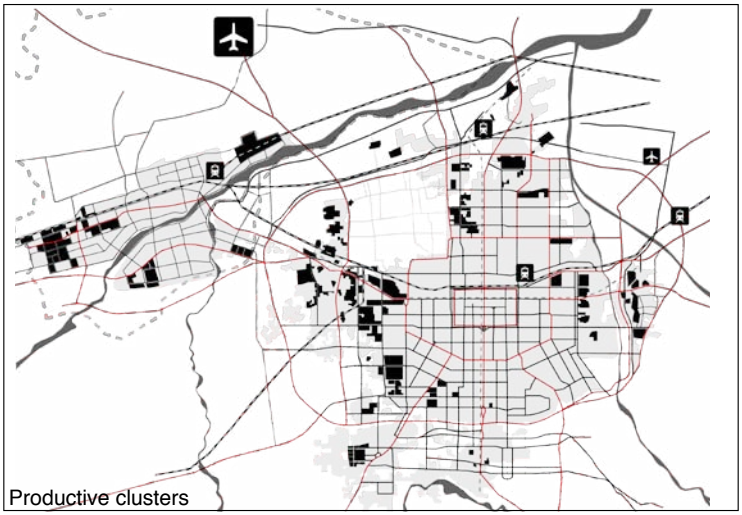
Metro
Railway
Corridors
Main streets
Build-up area

4 km



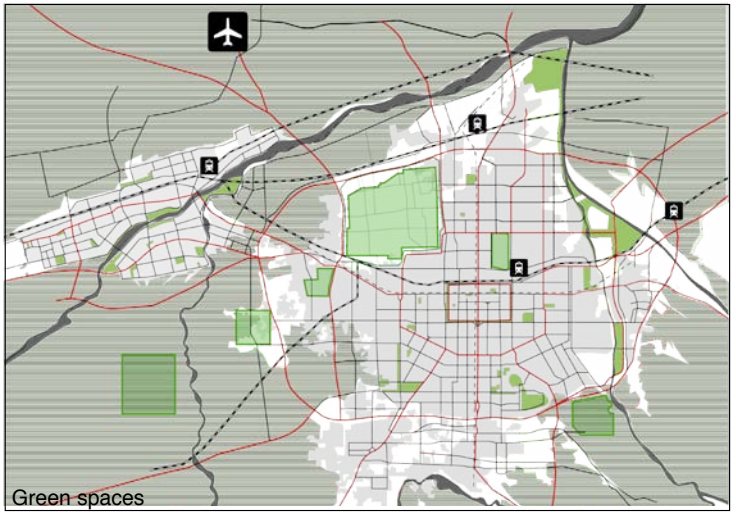
Comercial & civic facilities
Metro
Railway
Corridors
Main streets
Build-up area

4 km



Industries & Logistics
Metro
Railway
Corridors
Main streets
Build-up area

4 km

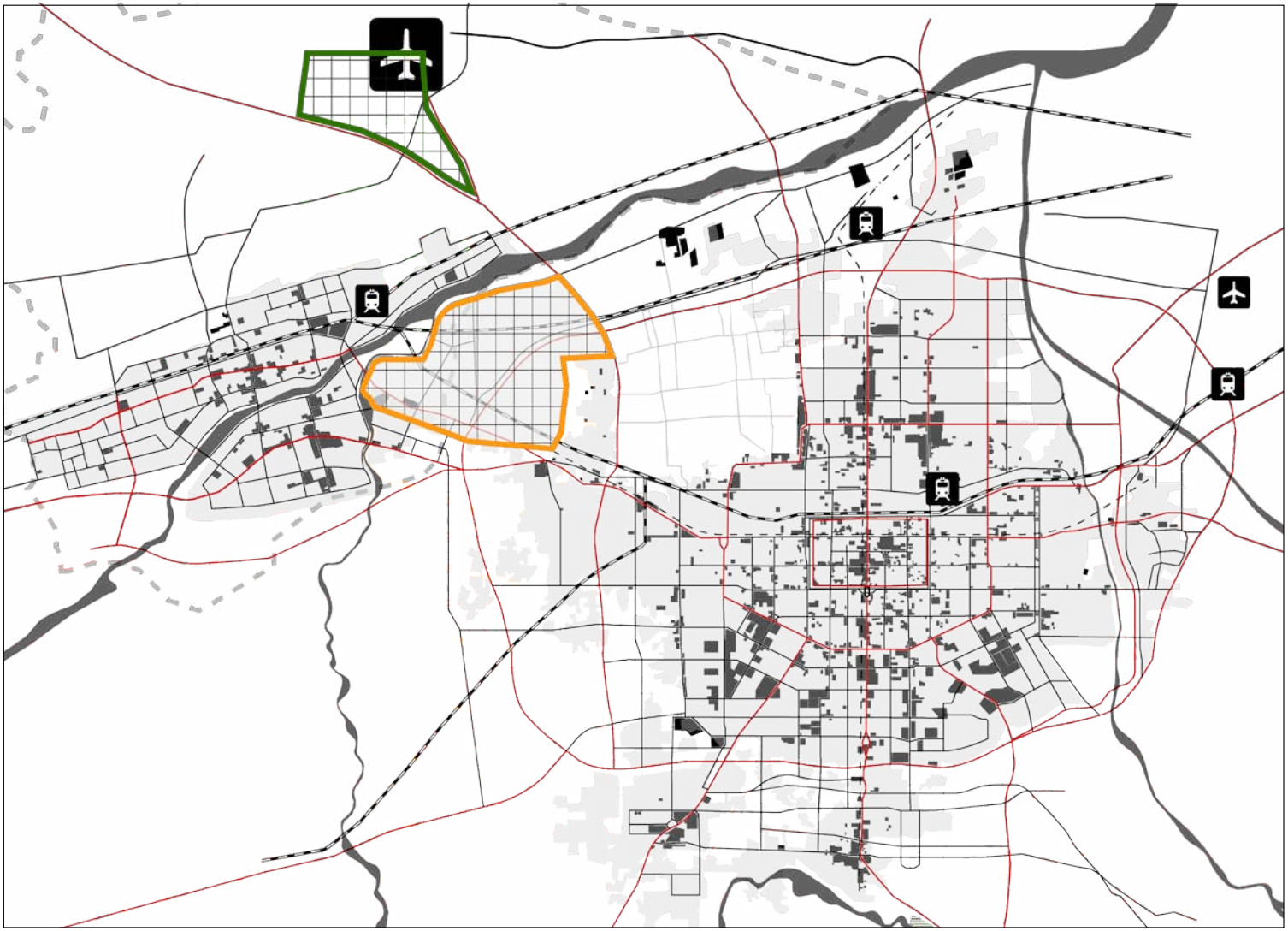


Urban green space
Preserved heritage area
Rural green area
Build-up area
Railway
Corridors
Streets

4 km

City Scale-future trends

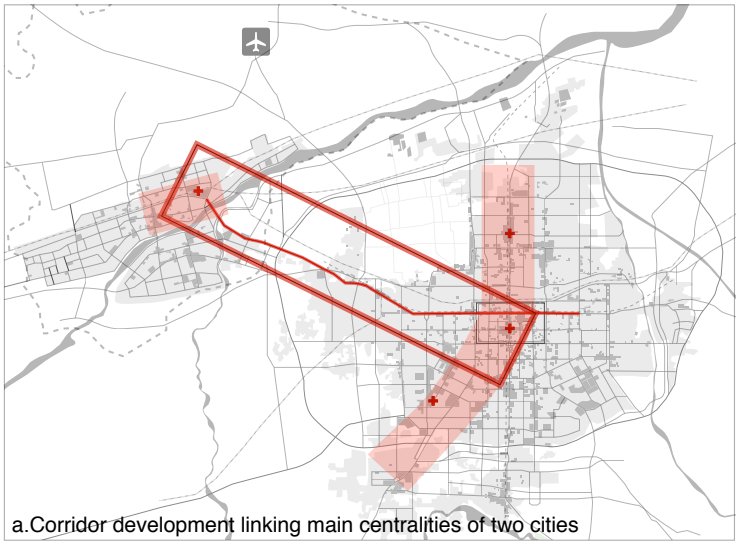
The Future--Governmental Actions

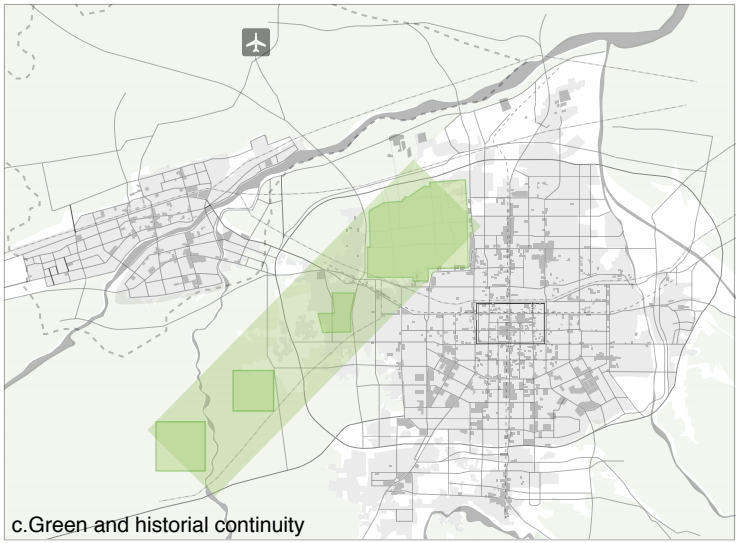


Mixed-used developing zone
Airport development
Build-up area
Railway
Corridors
Streets

2 km

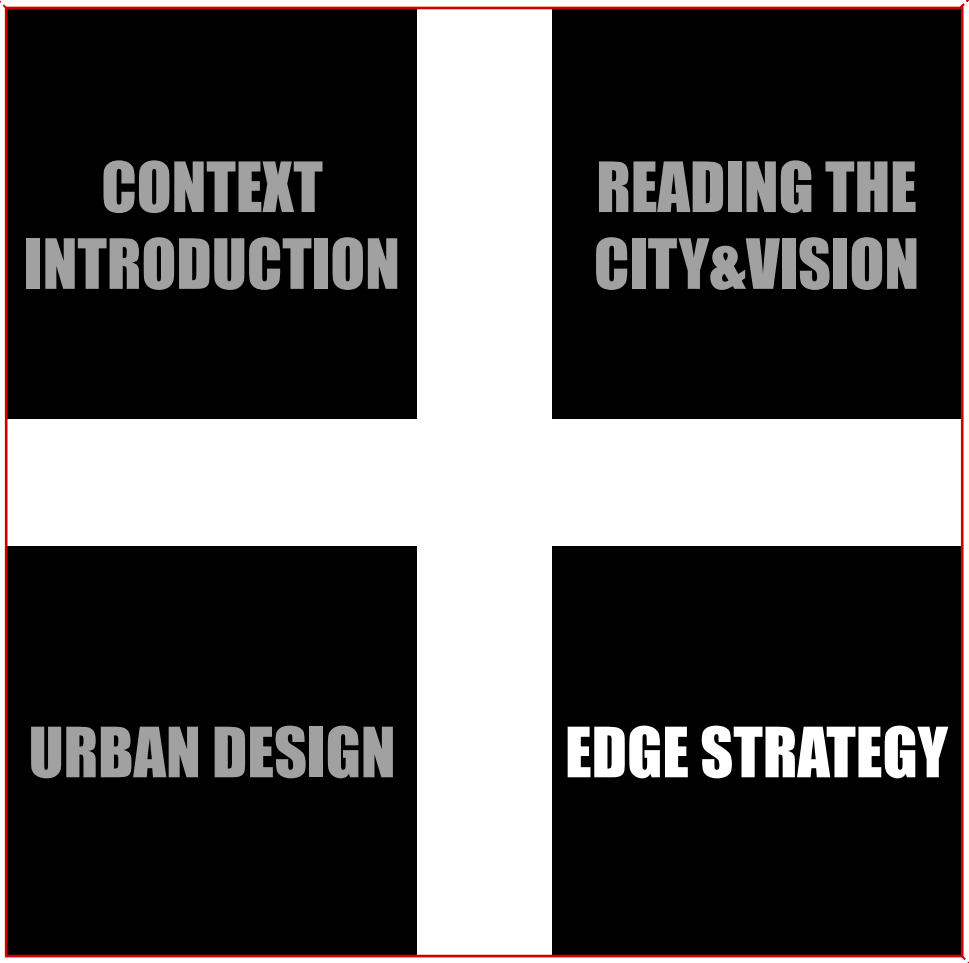
Vision: Integration of "HARD" &"SOFT" spines





4 km

Spatial transitional point integrated with the "Hard Spine" and "Soft Spine"



Diagnosis

Spatial material

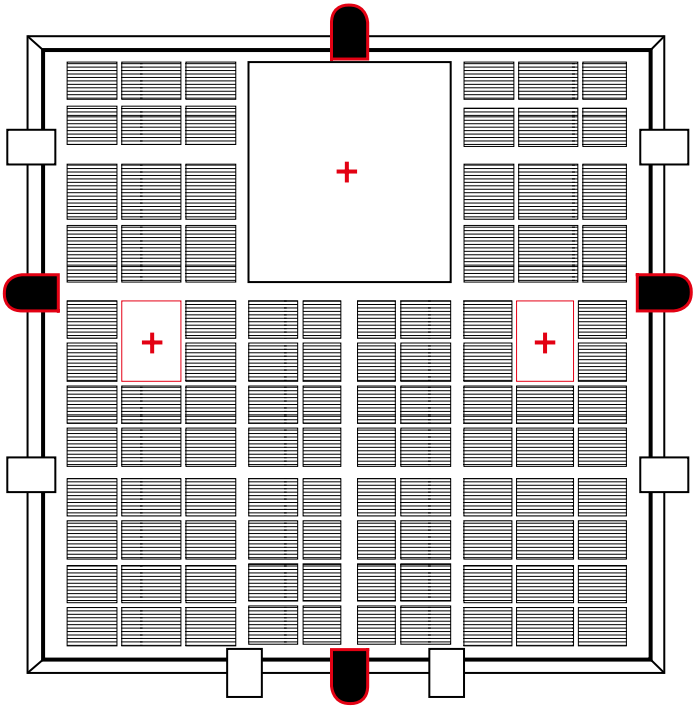
Concept

Edge strategy

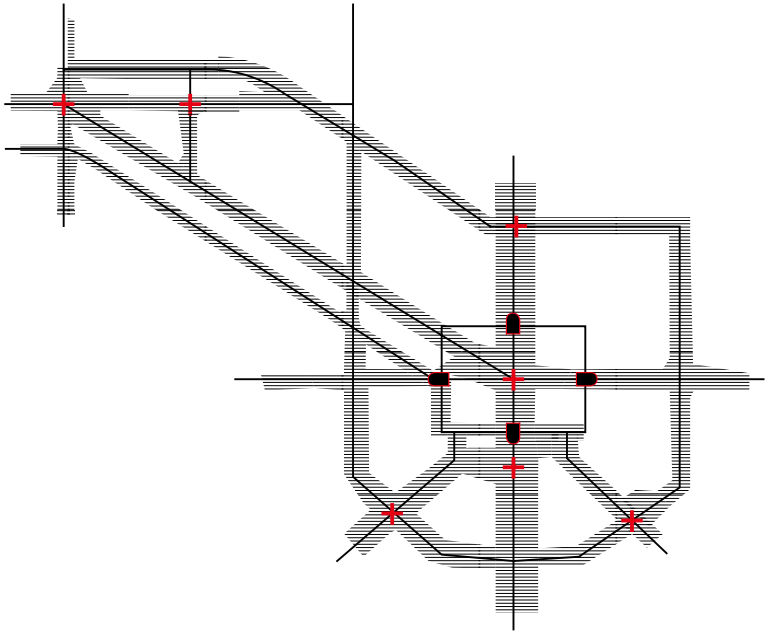
Built area

200m

Changing urban scale and pattern

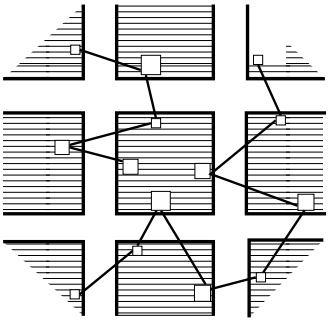


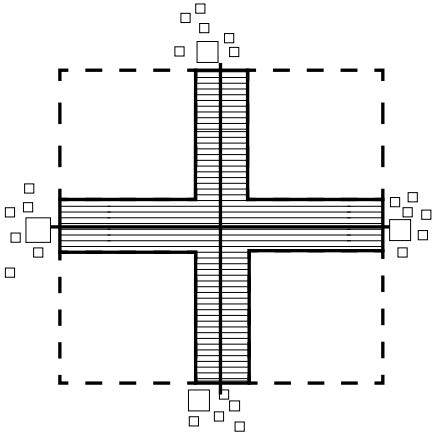
Ancient urban pattern of Xi'an City



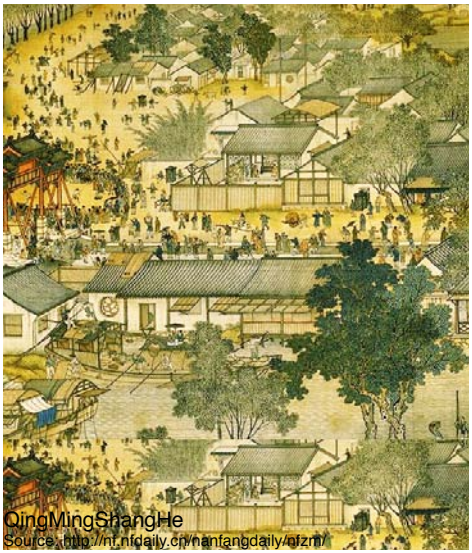
Contemporary mobility and economy oriented urban pattern

Spatial Metarial





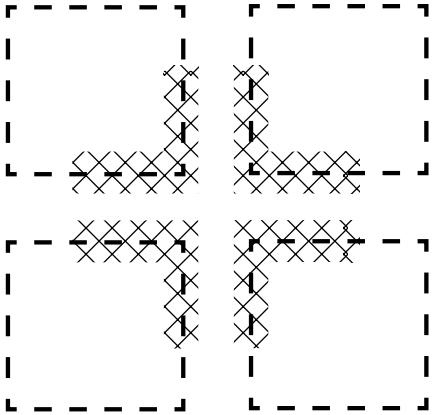
Missing dialouge between mobility and surrounding territory



QingMingShangHe

Source: http://nr.nfdaily.cn/nanfangdaily/nfzm/

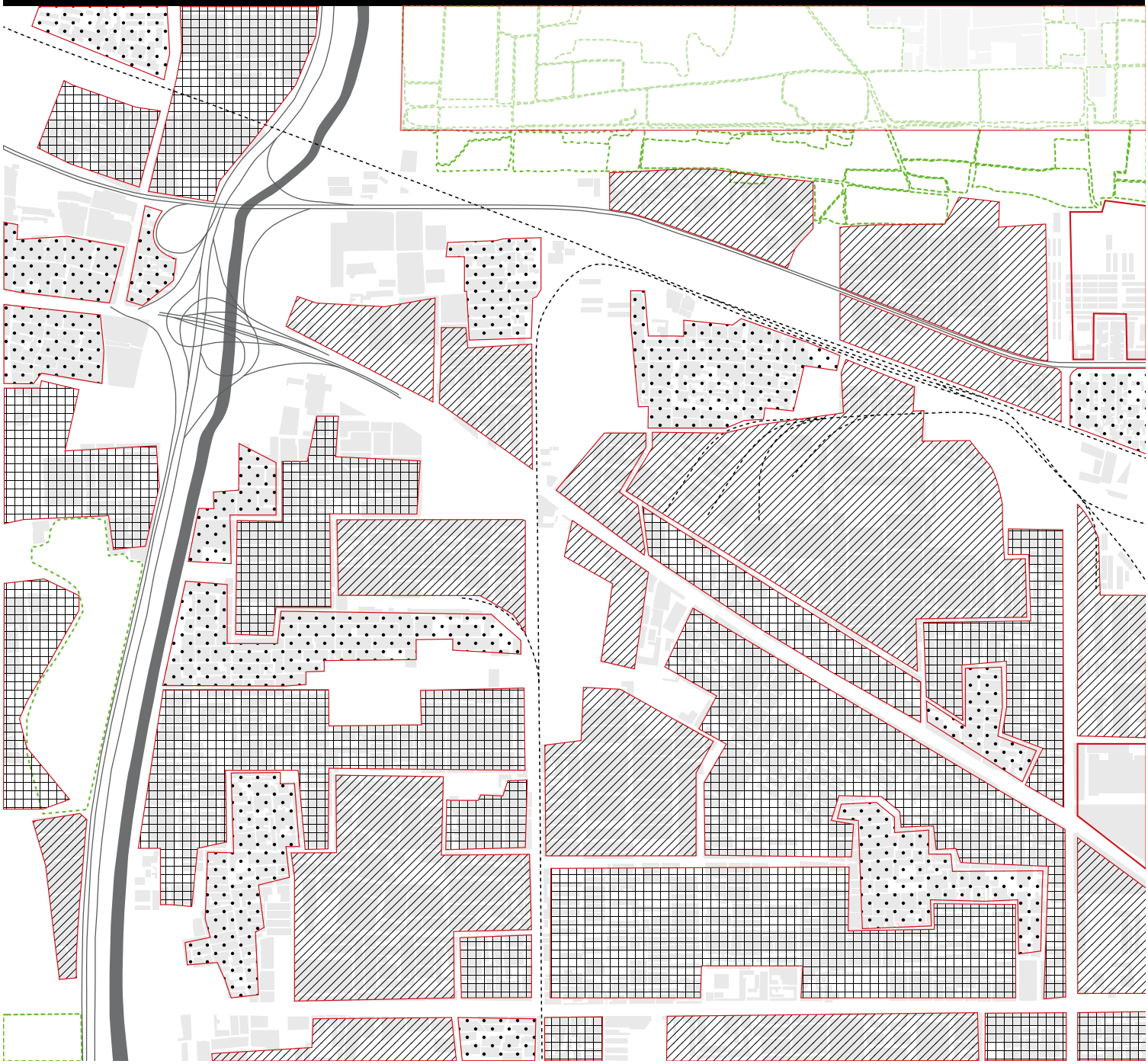
Source: photo by author



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

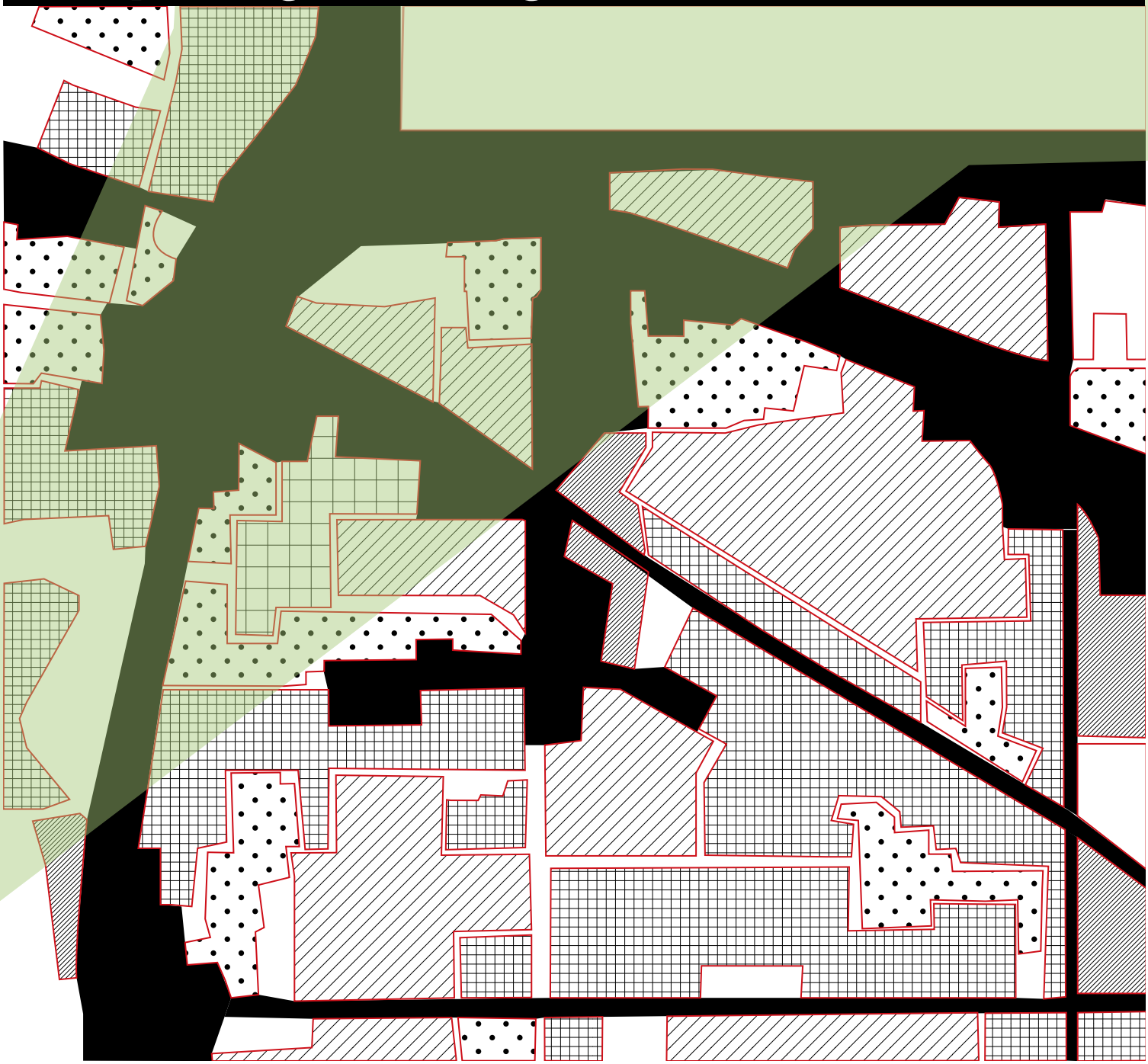
The "edges" become the interactive spatial element.

Isolated mono-functional islands



200m

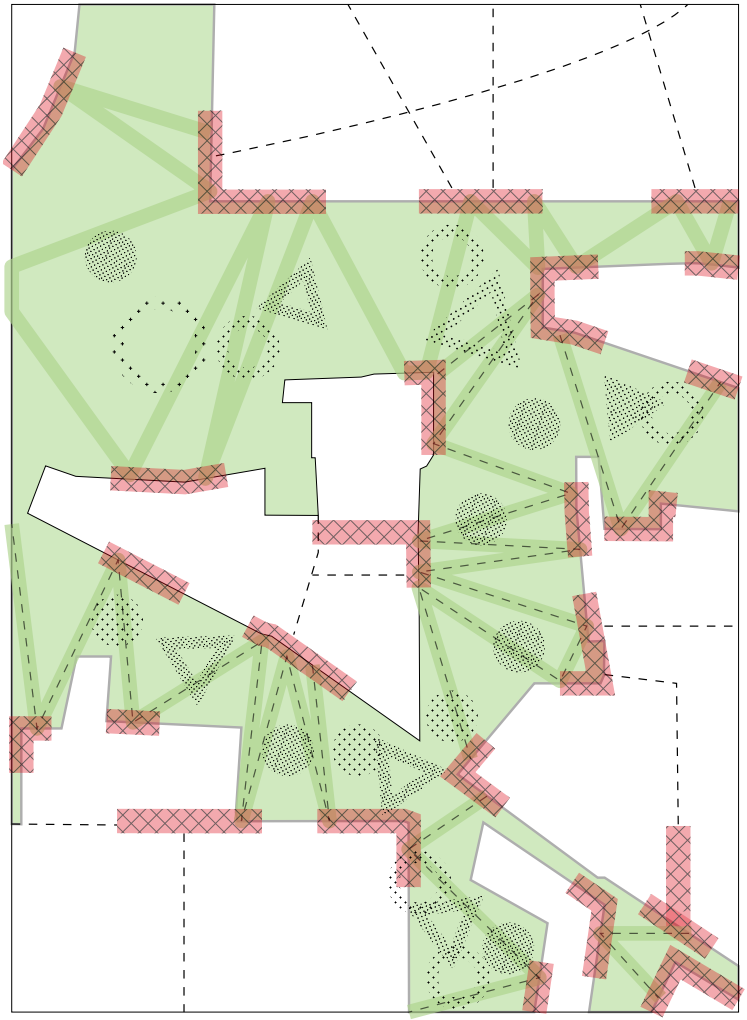
Concept: Design on the edges



200m

Strategy: Activation of edges

Activate the edge by means of



Landscaping

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

Densifying

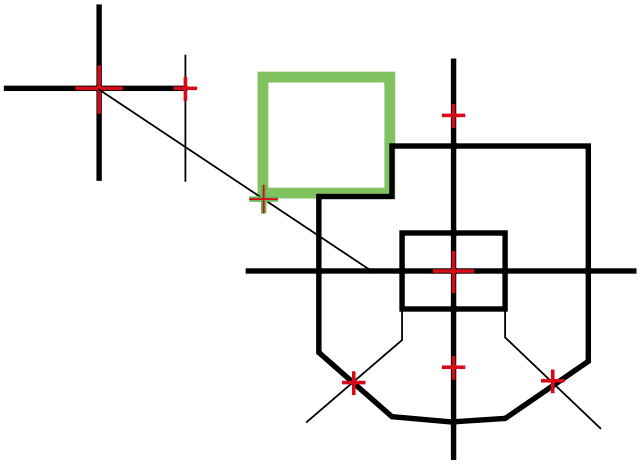
Building densification on the edges in different functions which enable new typologies of public spaces and more capacity for urban diversity.

Programming

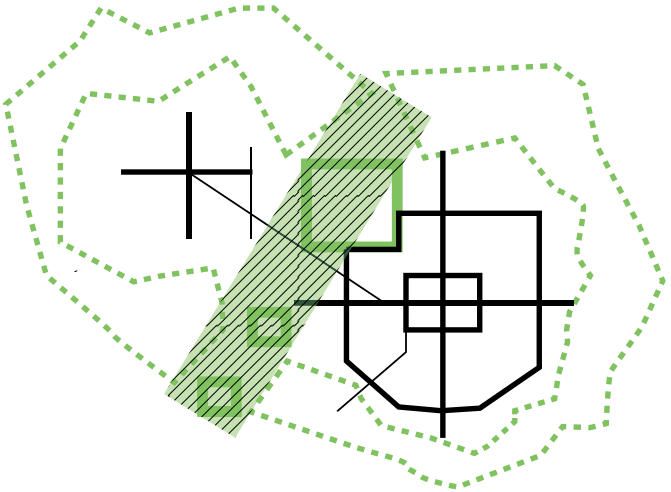
Proposals of diverse and consistent public activities in order to vitalize the public space network on the edges.

Expected Spatial Relational Effect

City Scale Effect

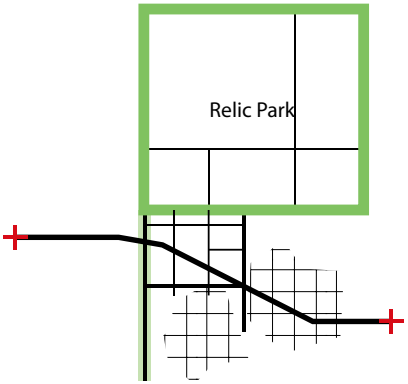


Form new identical sub-centrality to reinforce the twin city model.

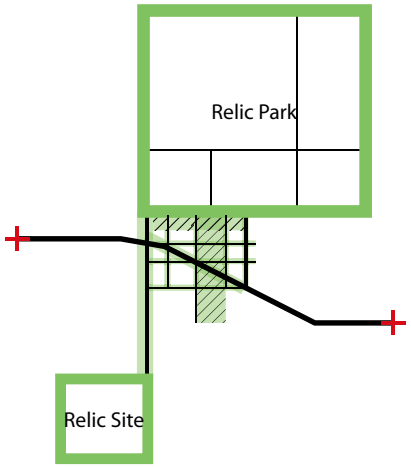


Keep the green structure coherent and create opportunity to interface the city with green and cultural related space.

Local Scale Effect

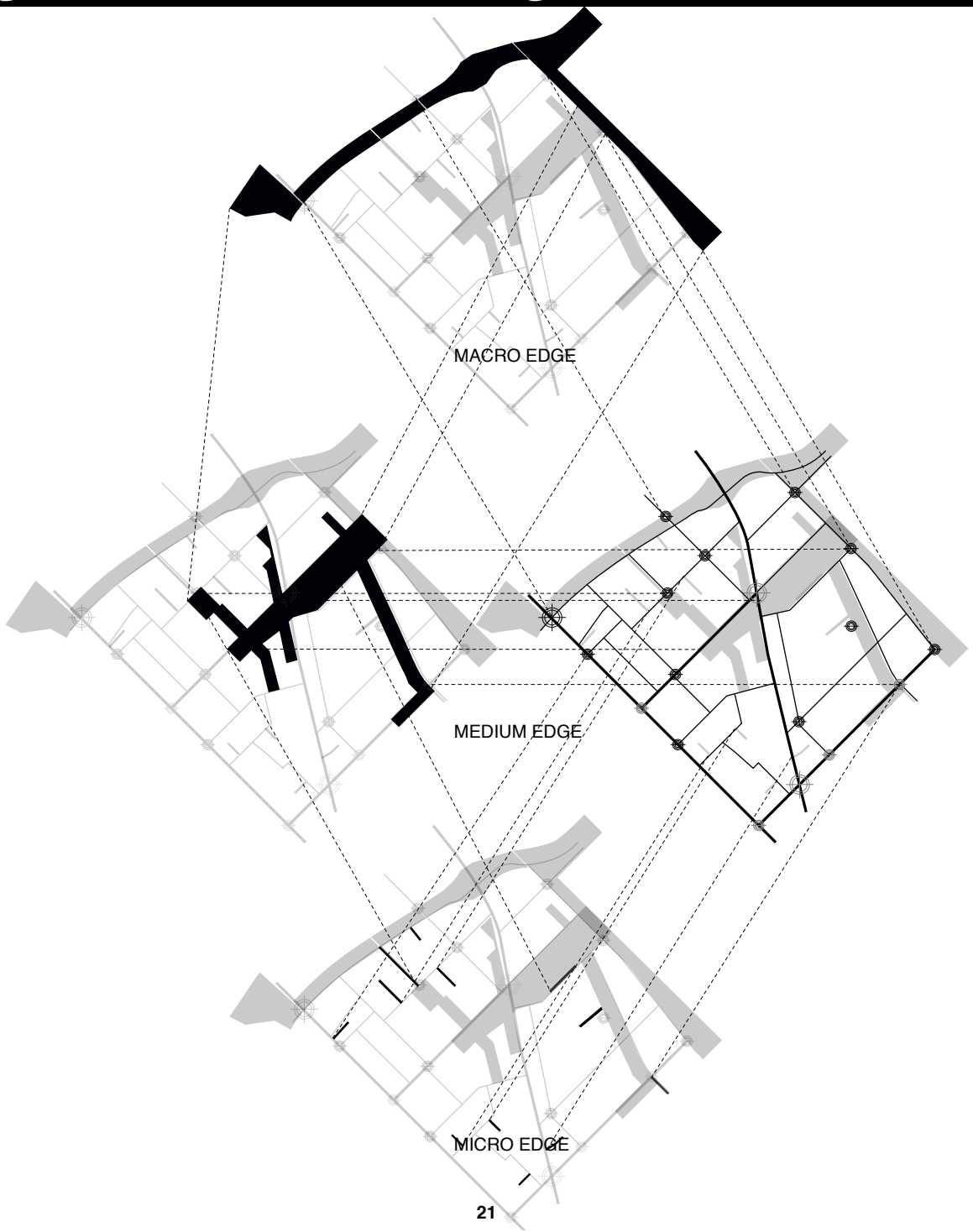


Restructured urban network in the future integrates the local area as the urban tissue with the city structure as a whole.

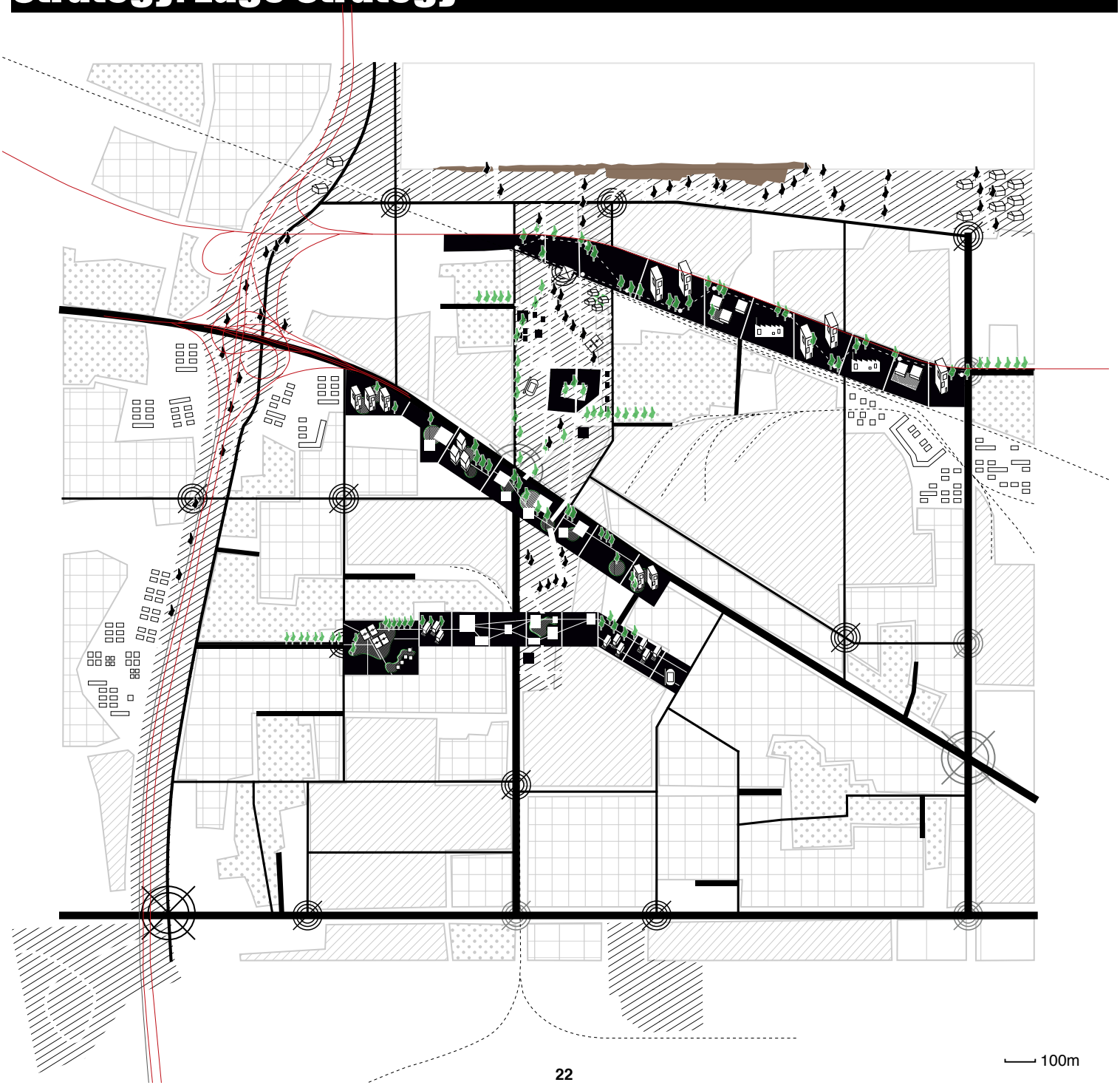


Provoke the value of the regional heritage park to the public meanwhile permeate the green quailty via the proposed network.

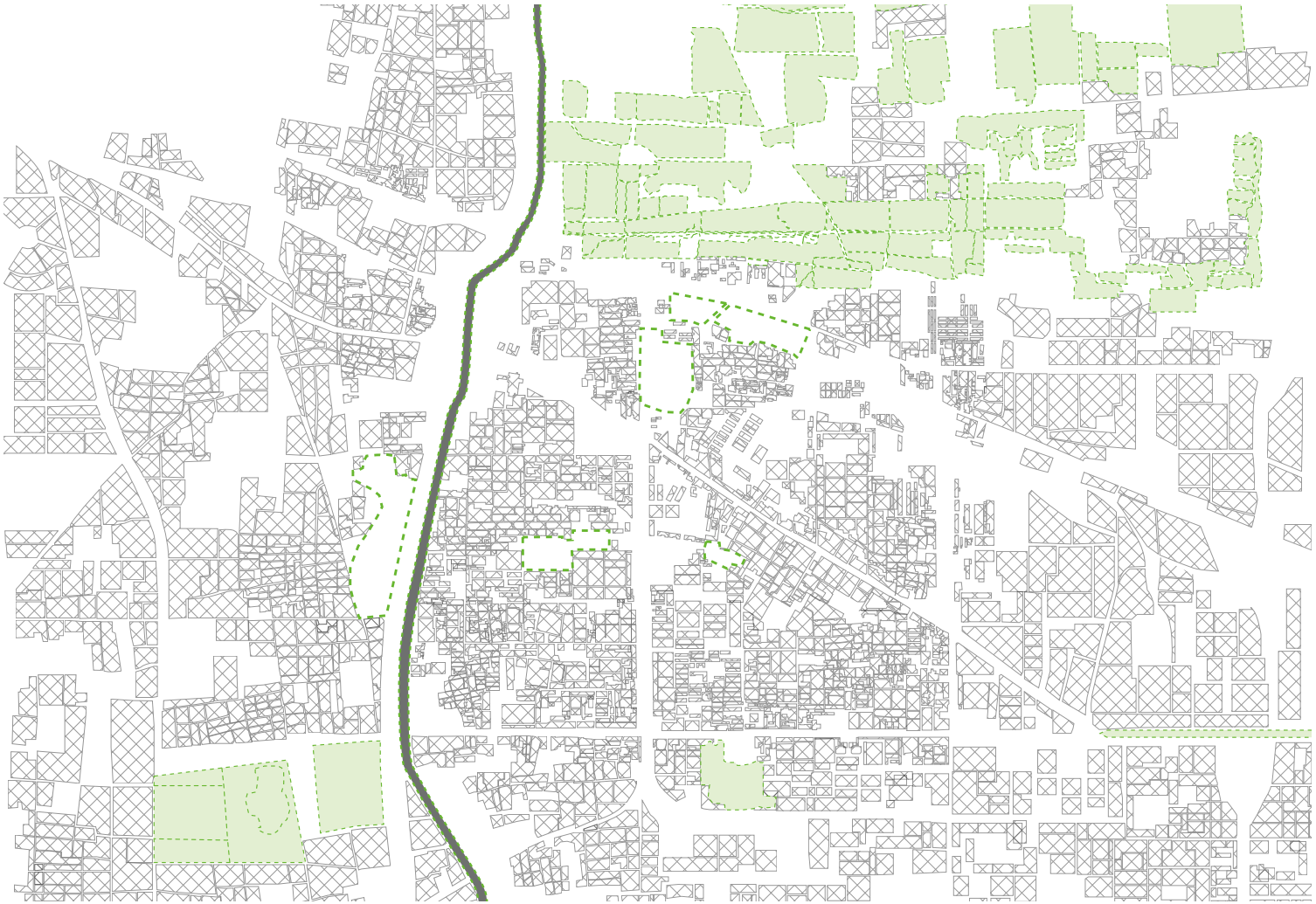
Strategy: Multi-layered working system



Strategy: Edge Strategy



Existing green space

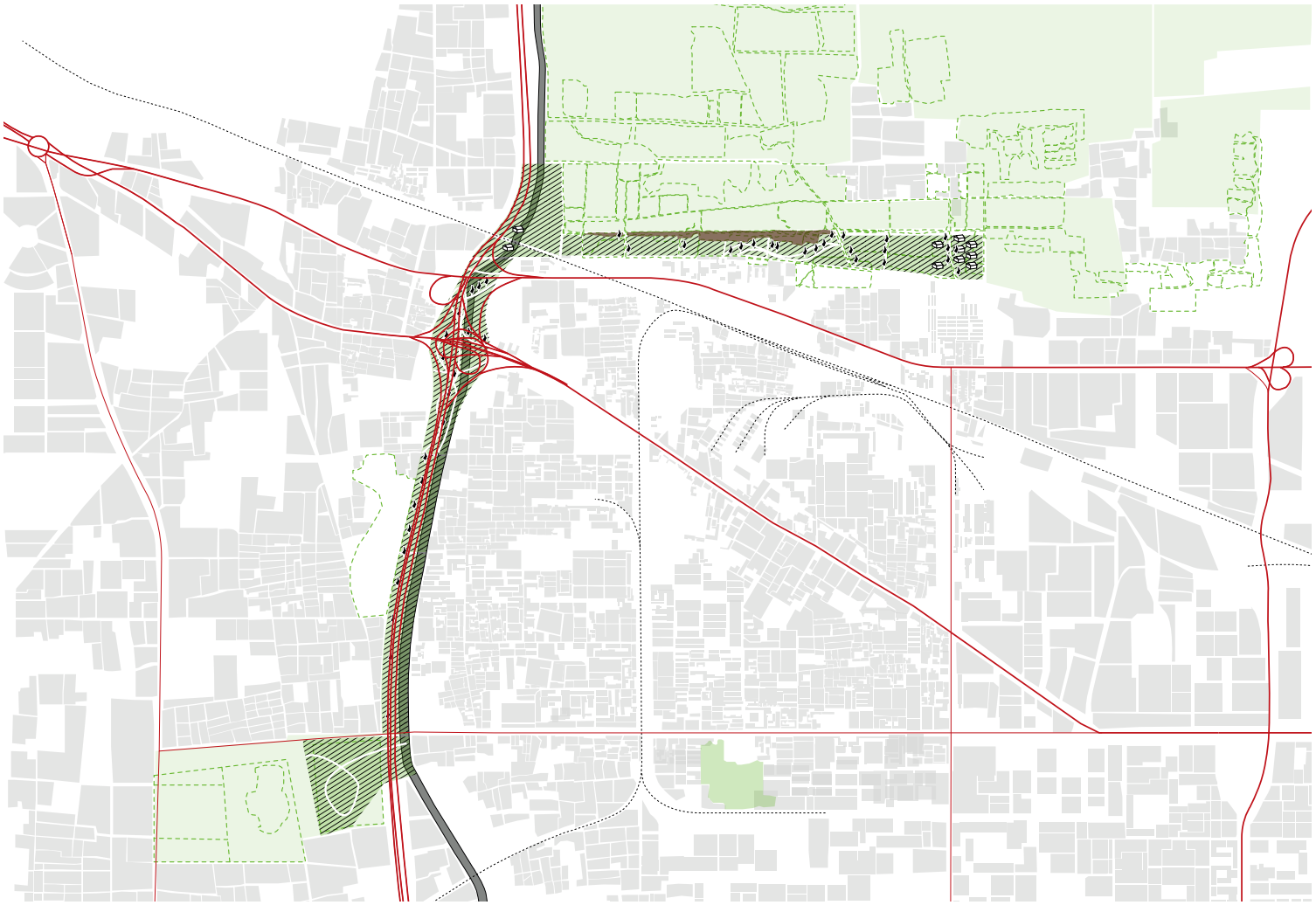


Existing urban green
Undefined green open space
Riverbank green space

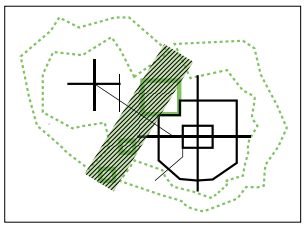
200m

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

Macro edge: Form the "soft spine"



- 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

Macro edge: Form the "soft spine"

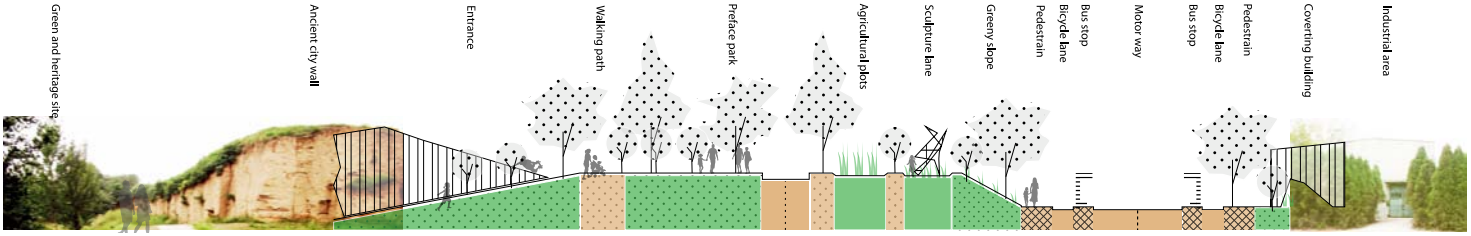
Source:Buffalo Bayou Promenade, Houston, TX

HAN city heritage park

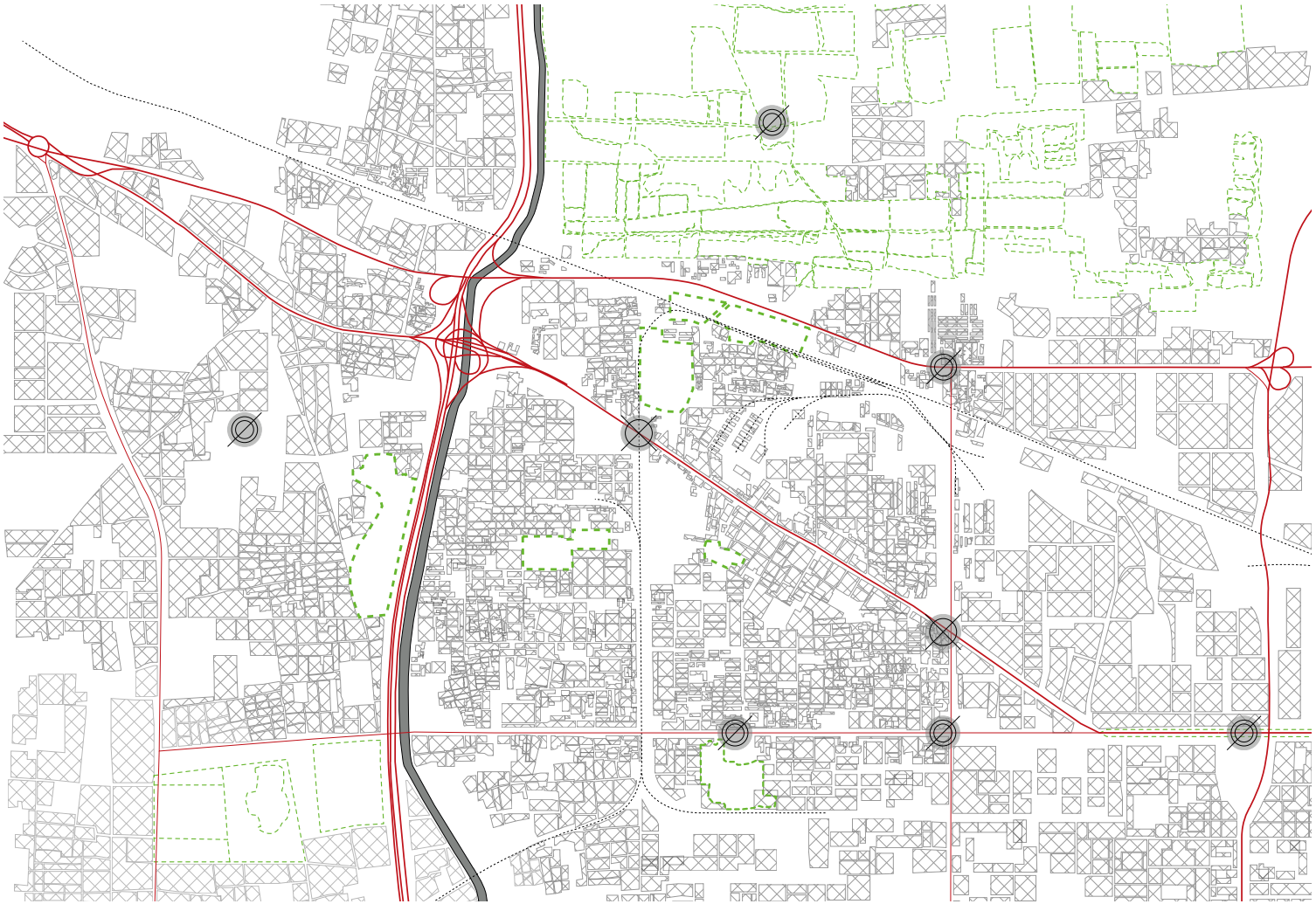
Preface park

Green belt

Palace heritage park

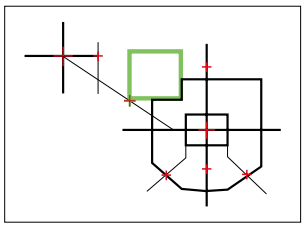


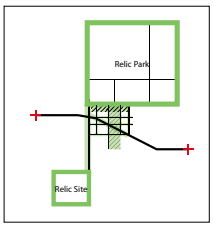
Existing systems



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

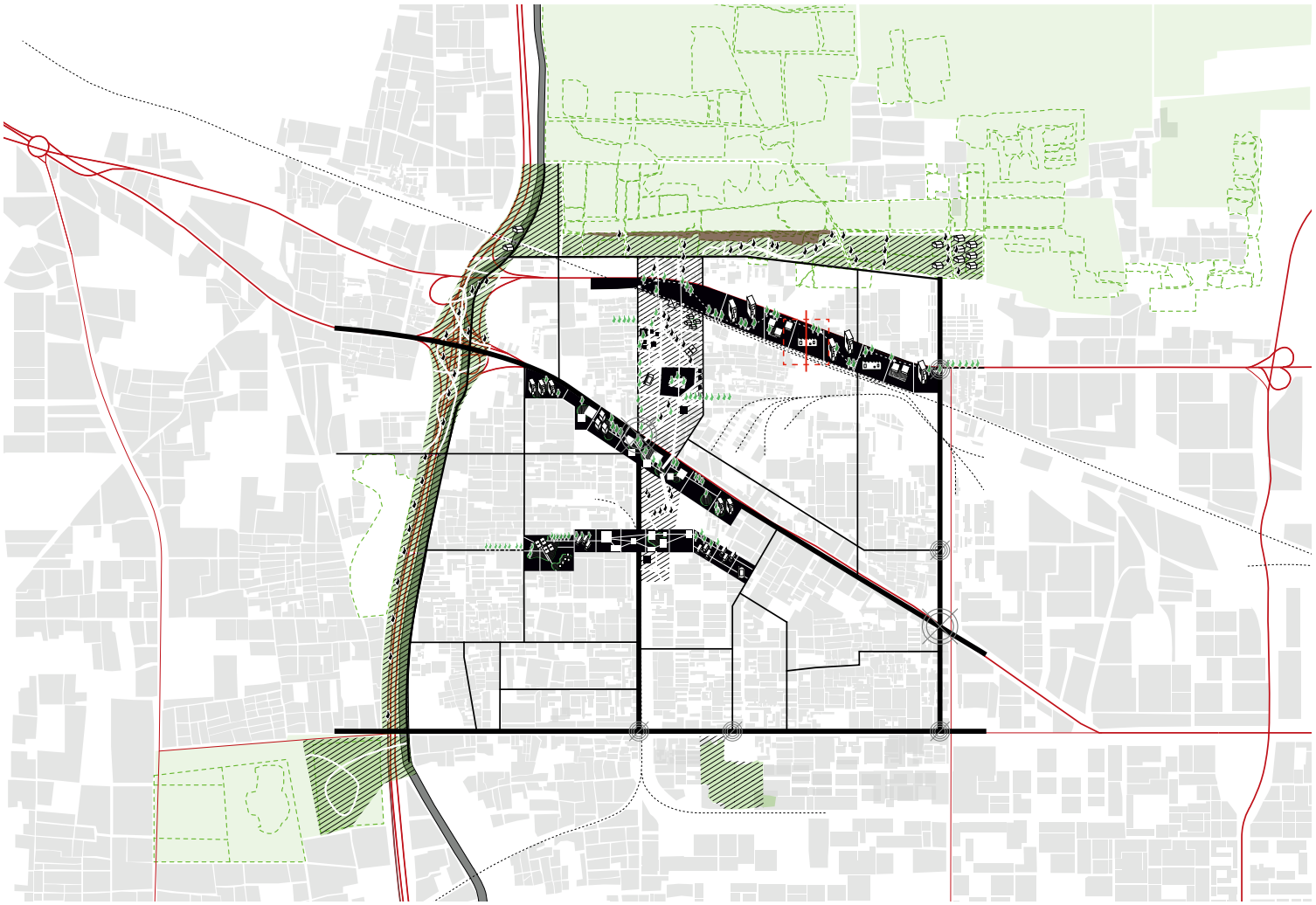
- Railway
- Corridors
- New green open space
- Proposal area
- Existing urban green
- Rellic of ancient city wall
- Build-up area
- Existing activators
- Proposed activators
- Key transportation nodes



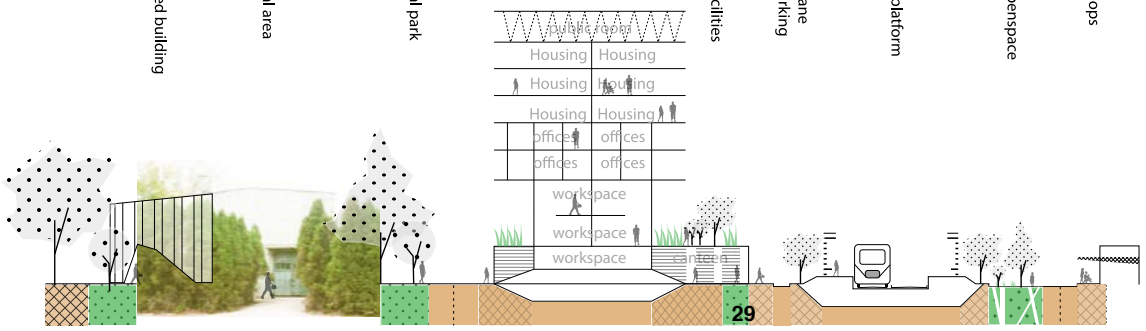


100m

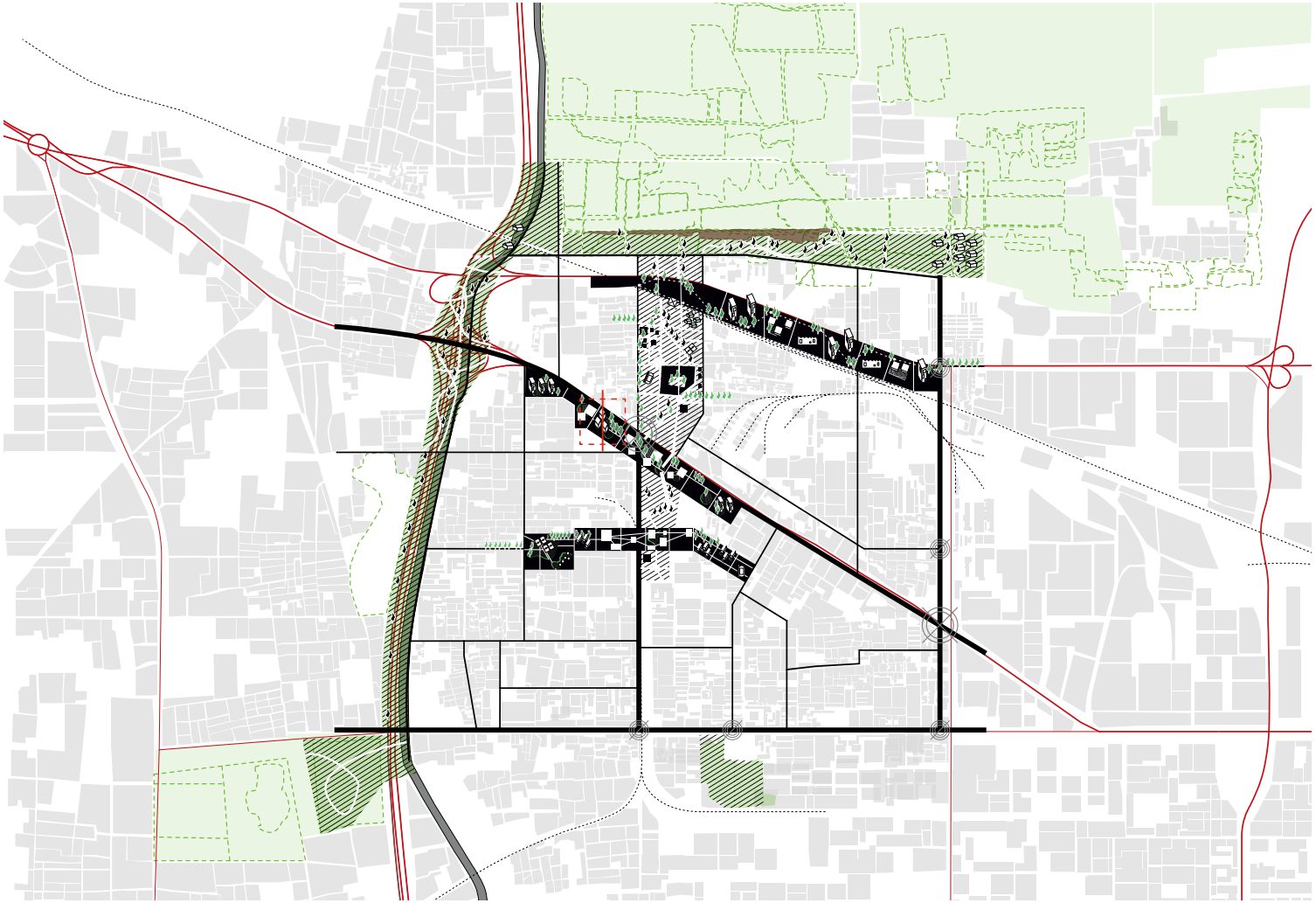
Medium edge: Permeable public space

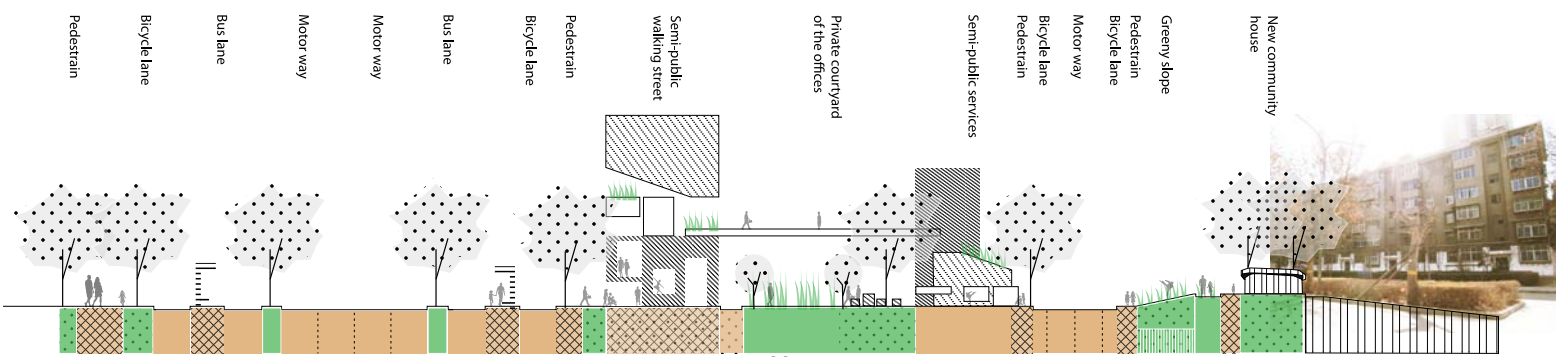


Converted building
Industrial area
Industrial park
Workers' building
Public facilities
Cycling lane &bike parking
Railway platform
Green openspace
Street shops
Incity villages

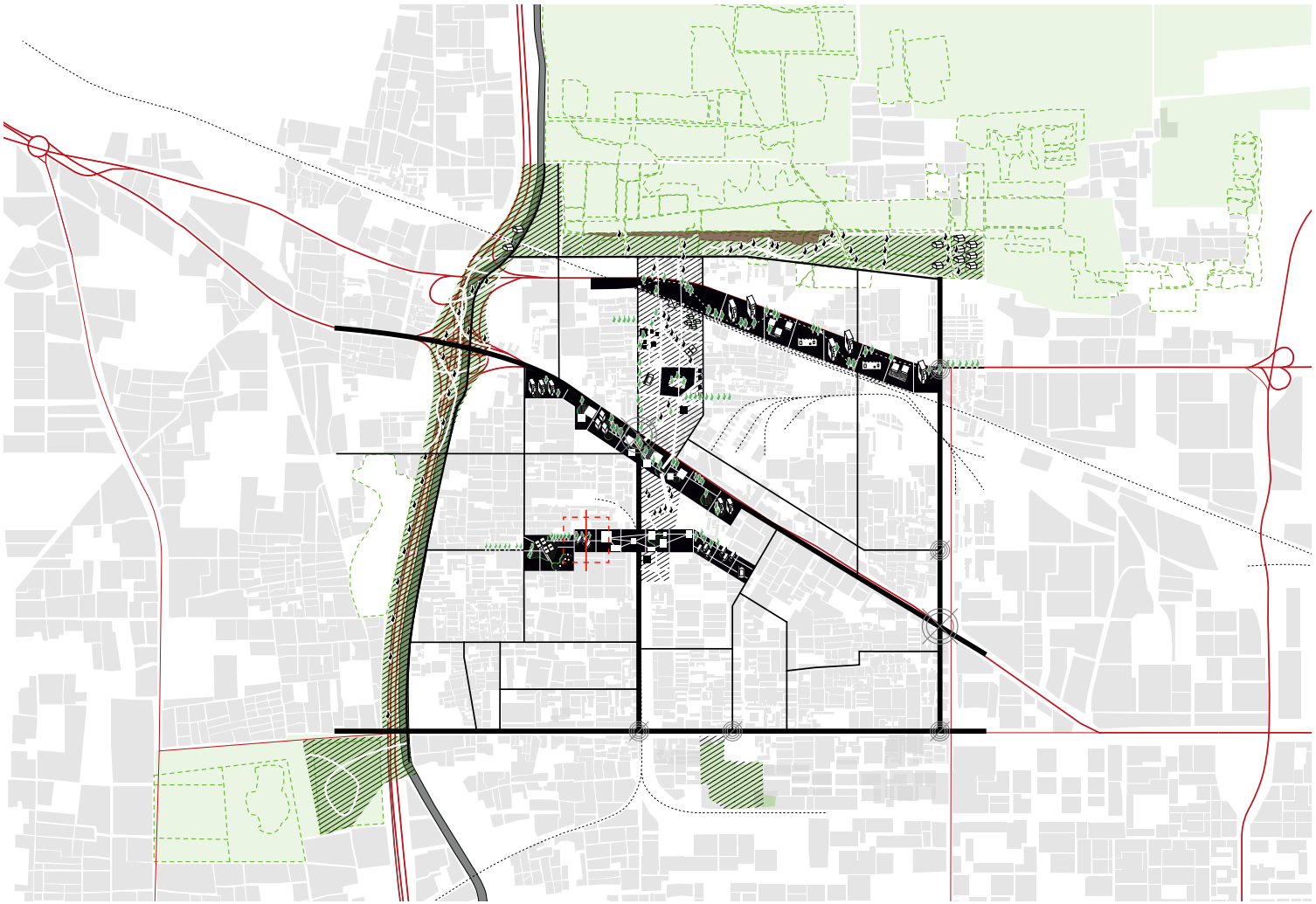


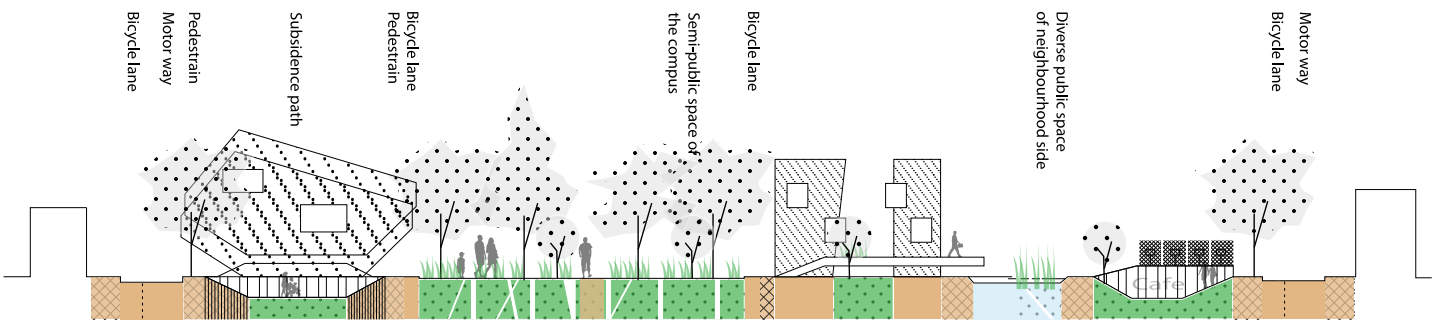
Medium edge: Permeable public space



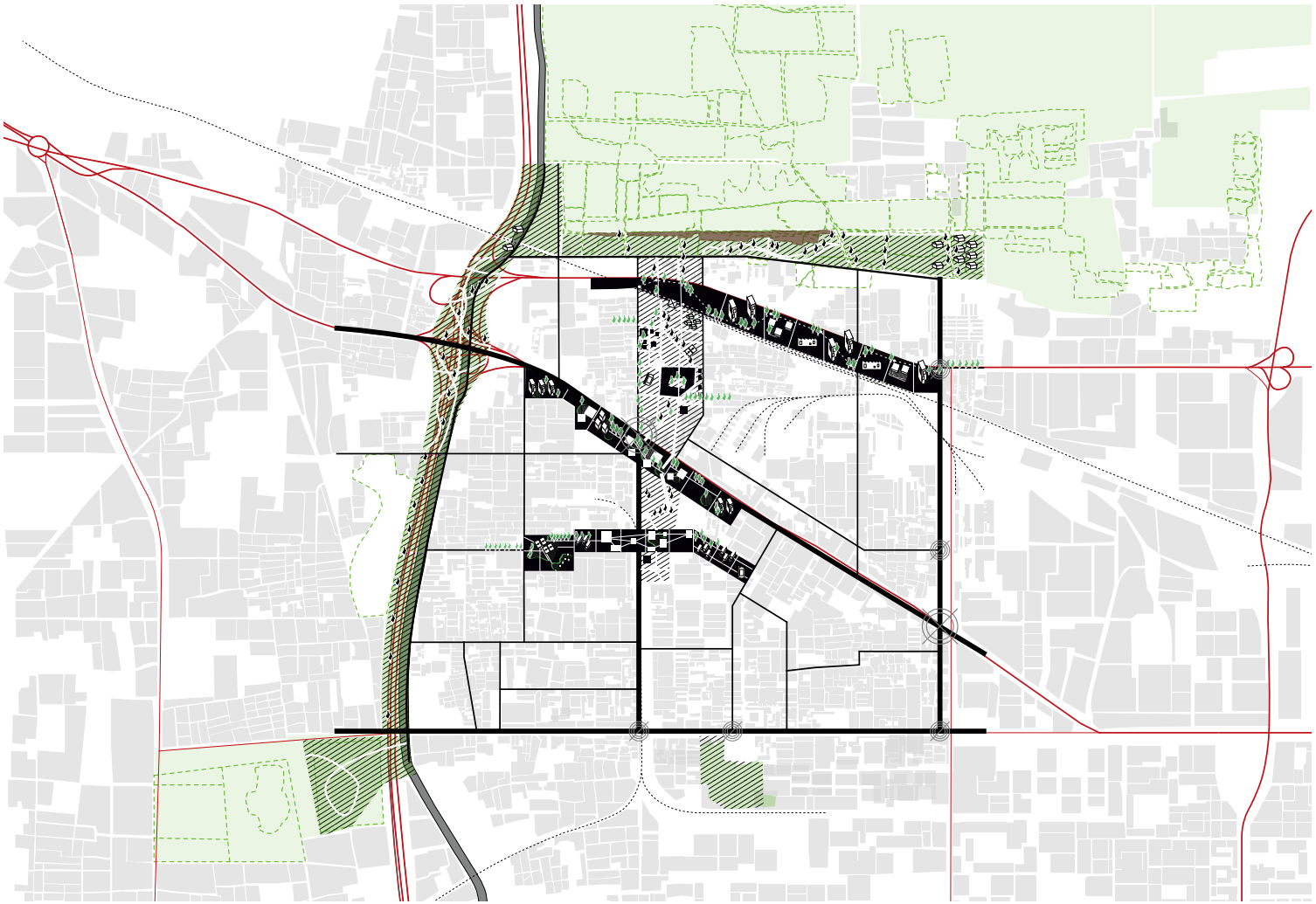


Medium edge: Permeable public space

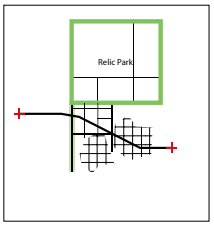


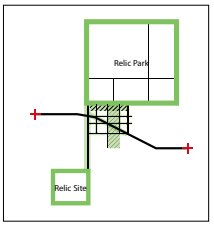


Medium edge:Spin off to local area



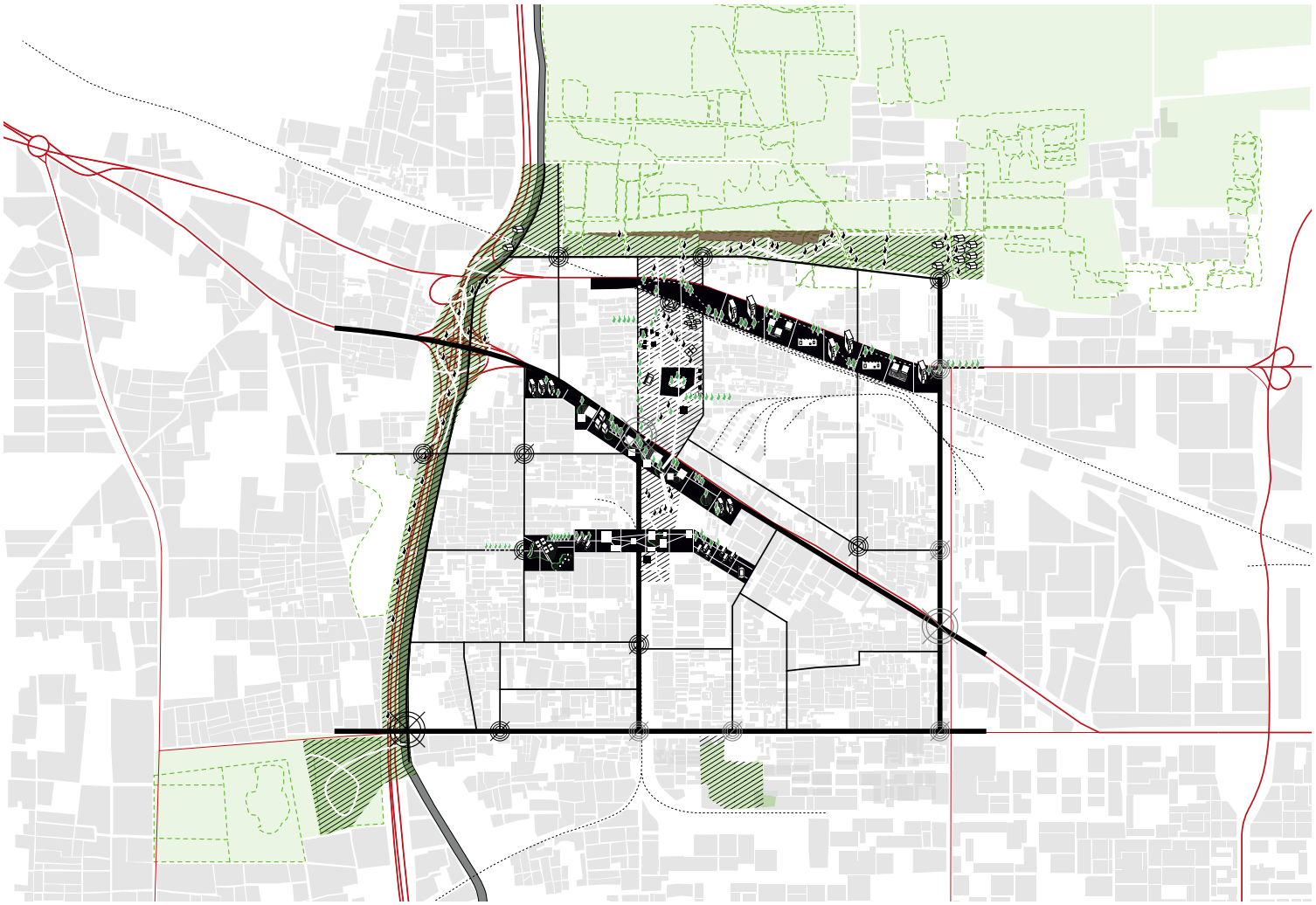
Railway
Corridors
New green open space
Proposal area
Existing urban green
Rellic of ancient city wall
Build-up area
Existing activators
Proposed activators
Key transportation nodes





100m

Medium edge: New activators



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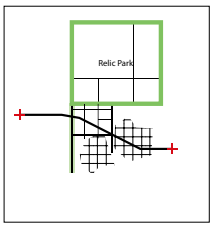
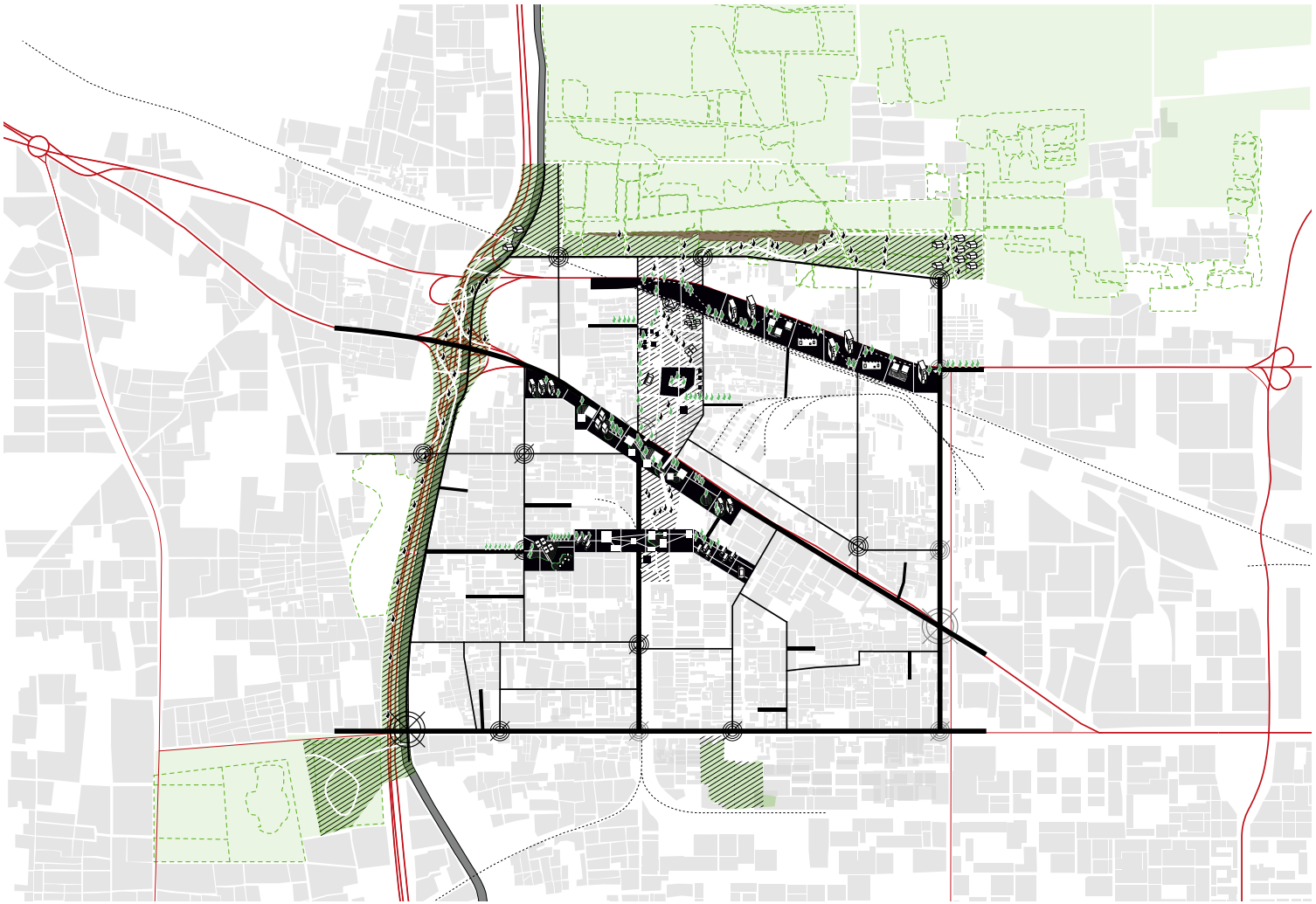


100m

Micro edge:Spin off to the neighbourhood



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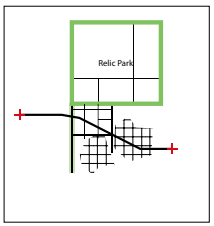


100m

Micro edge: Design tools providing permeability

Criteria are dependings of what is surrounded.

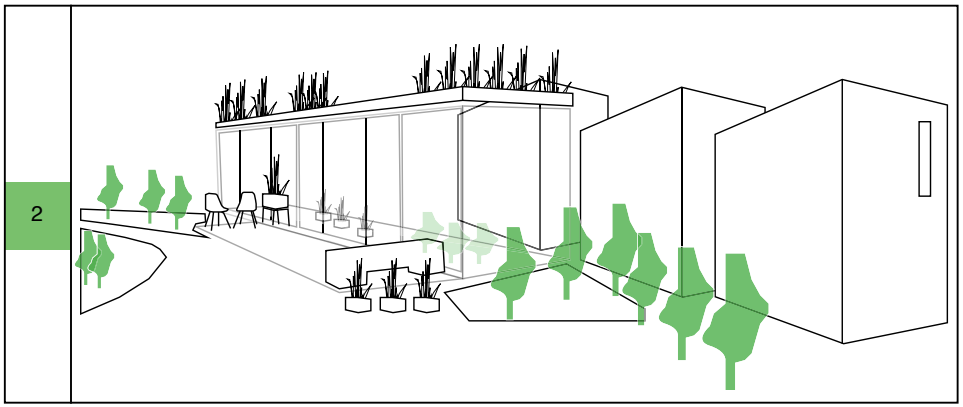
+ Large infrastrucutre

+New housing development projects

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

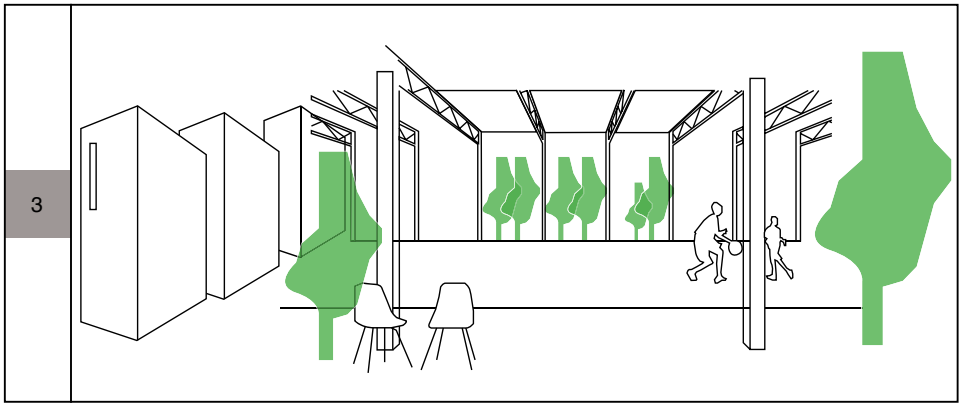
+ Green and original agricultural land

+ Local neighbourhood



Urban agriculture(glass houses, community room)

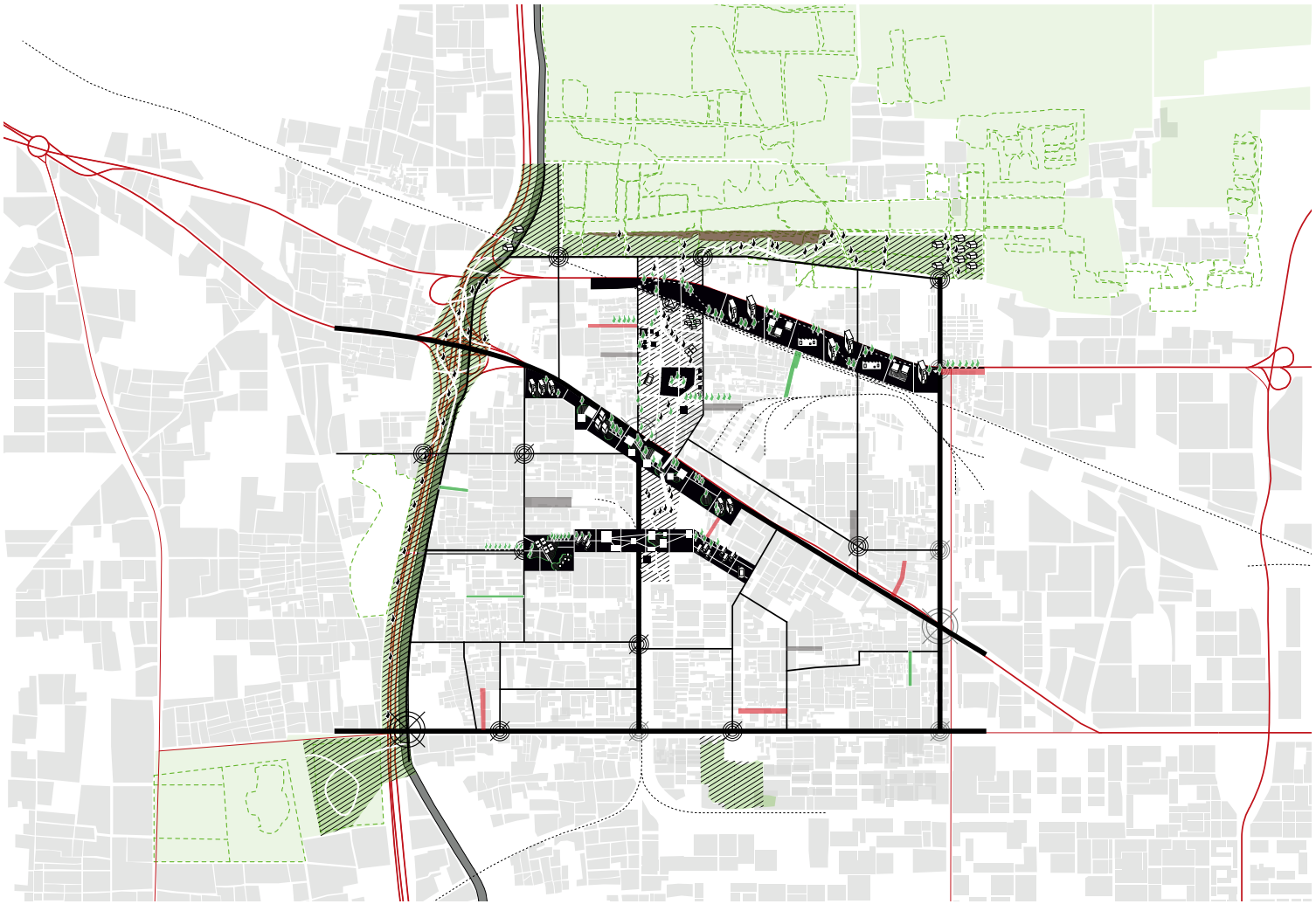
+ Industrial area



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

Providing visual accessibility
Place of gethering
Diversity and vitality
Qualified edges
Permeable public spaces
Sense of belonging

Micro edge: Design tools providing permeability



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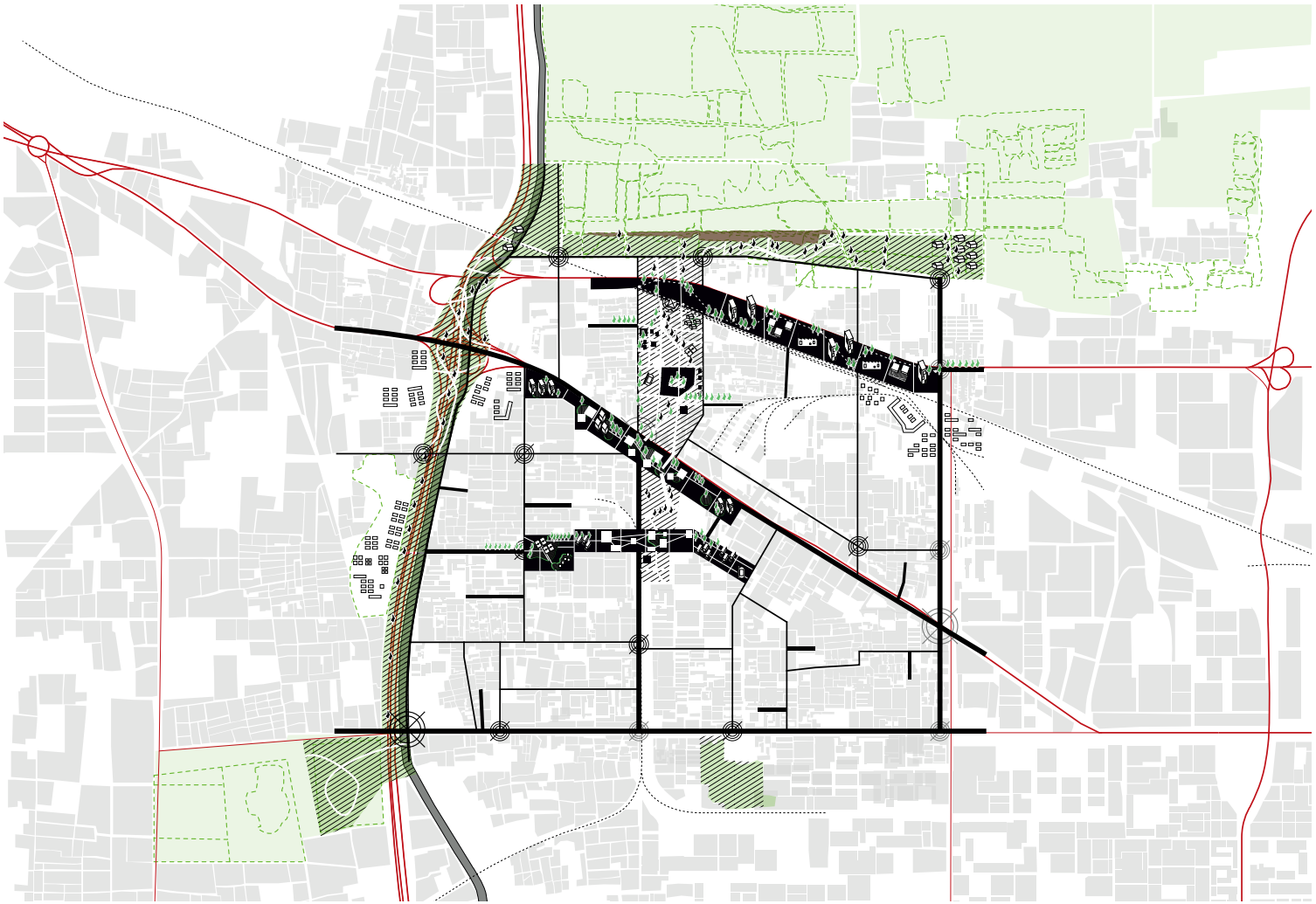
Densification
Urban argriculture
Convertion

100m

Mixed typology housing development



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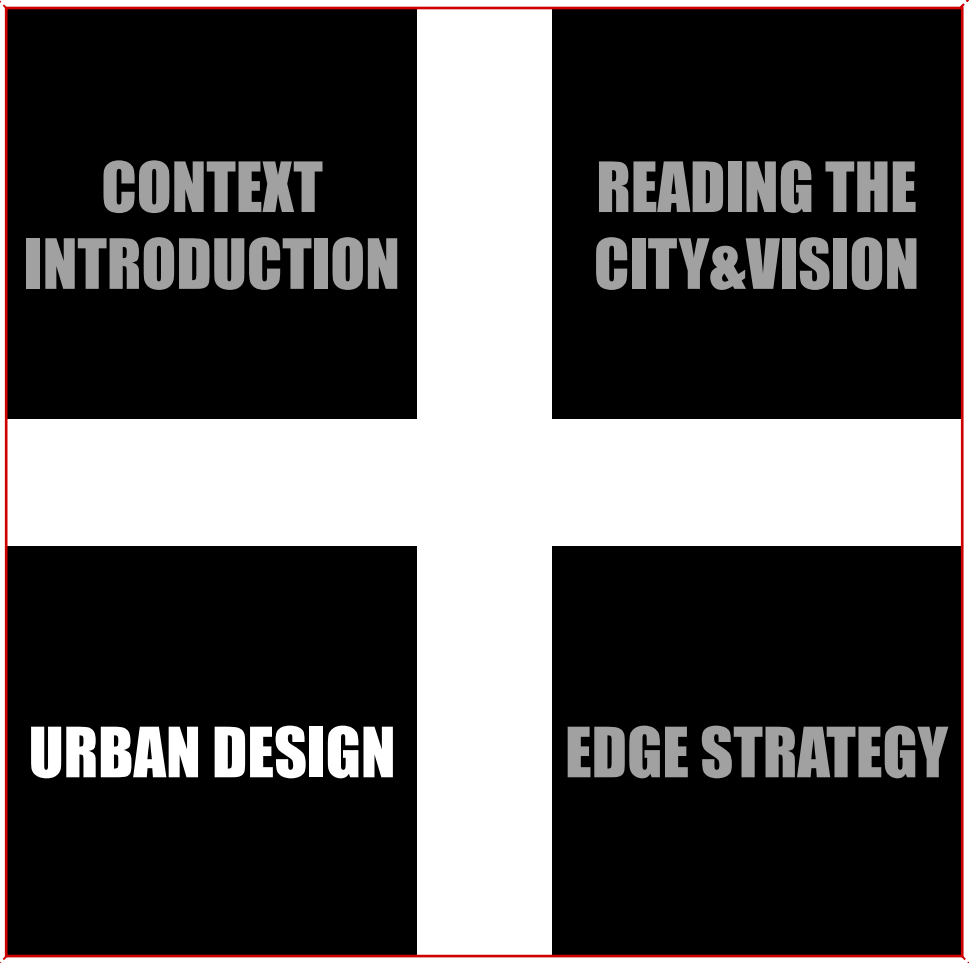
100m



Site observation

Masterplan

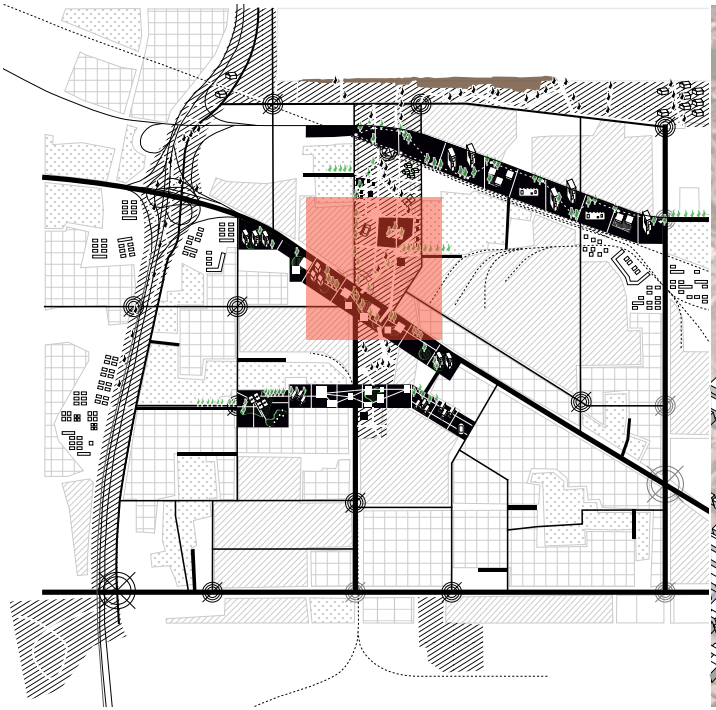
Strategic element

Flexibility

Conclusion

Design: Starting Point

Central Yard Area
size: app.247,500 sqm

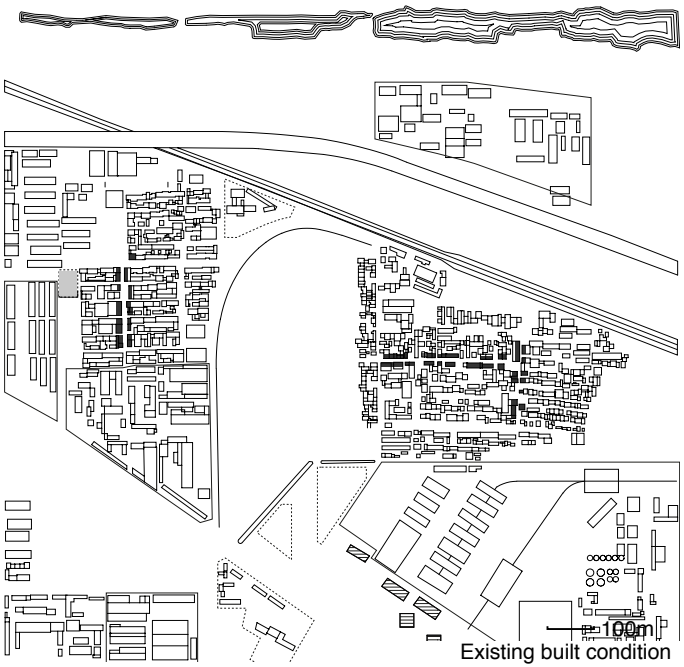


Spatial design challenge
How to organize the different level of public space as a network, by means of shaping landscape, meanwhile permeate the qualities to surrounding neighbourhood, in order to integrate the local structure in the new city structure?

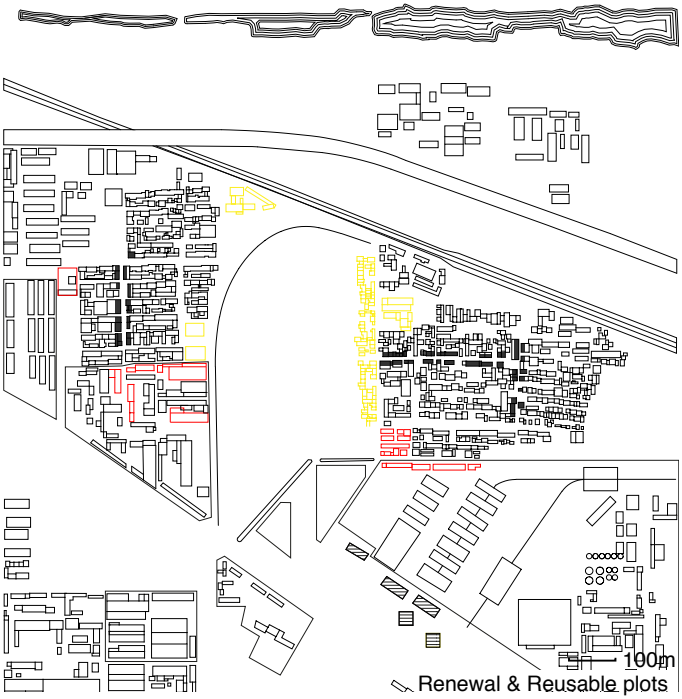
Transtional Strip

Site: The existing & potential

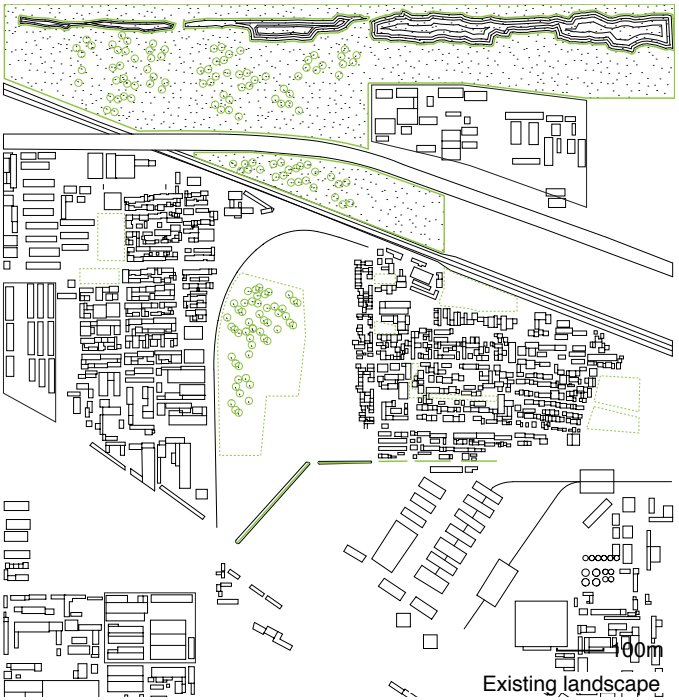
Existing mobility network



Existing built condition



Renewal & Reusable plots



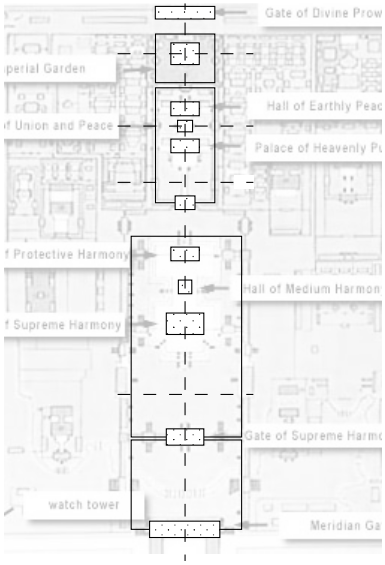
Existing landscape

Site: The existing & potential

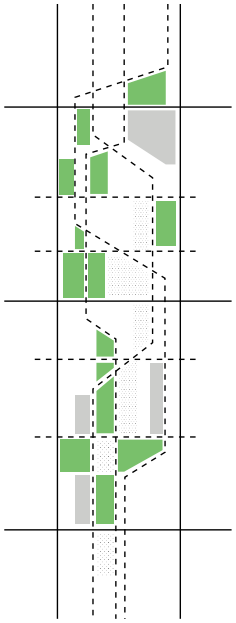
100m
Potential flows

100m
Proposed central green flow

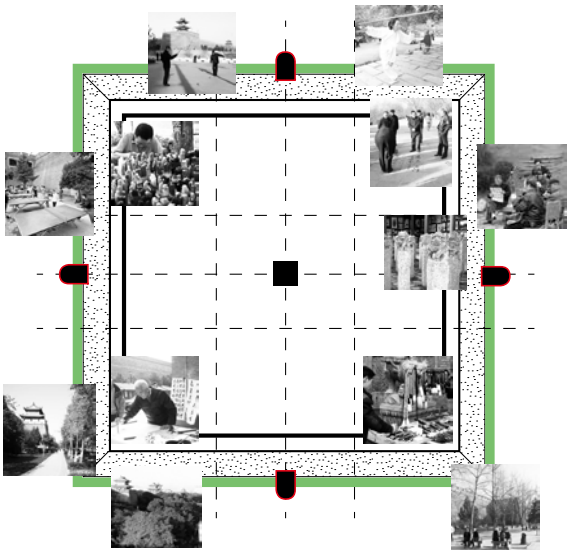
Reshape the traditional pattern



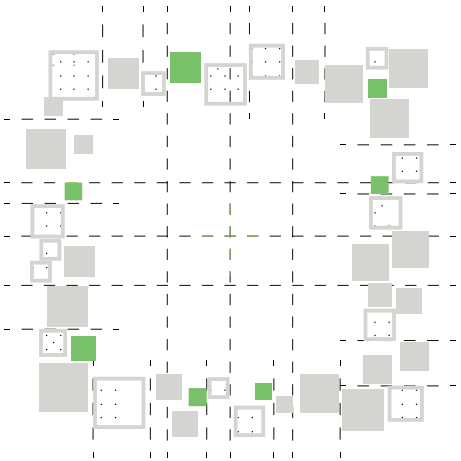
Iconic axial regularity of the Chinese traditional architecture



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



Iconic public space system of Xi'an city



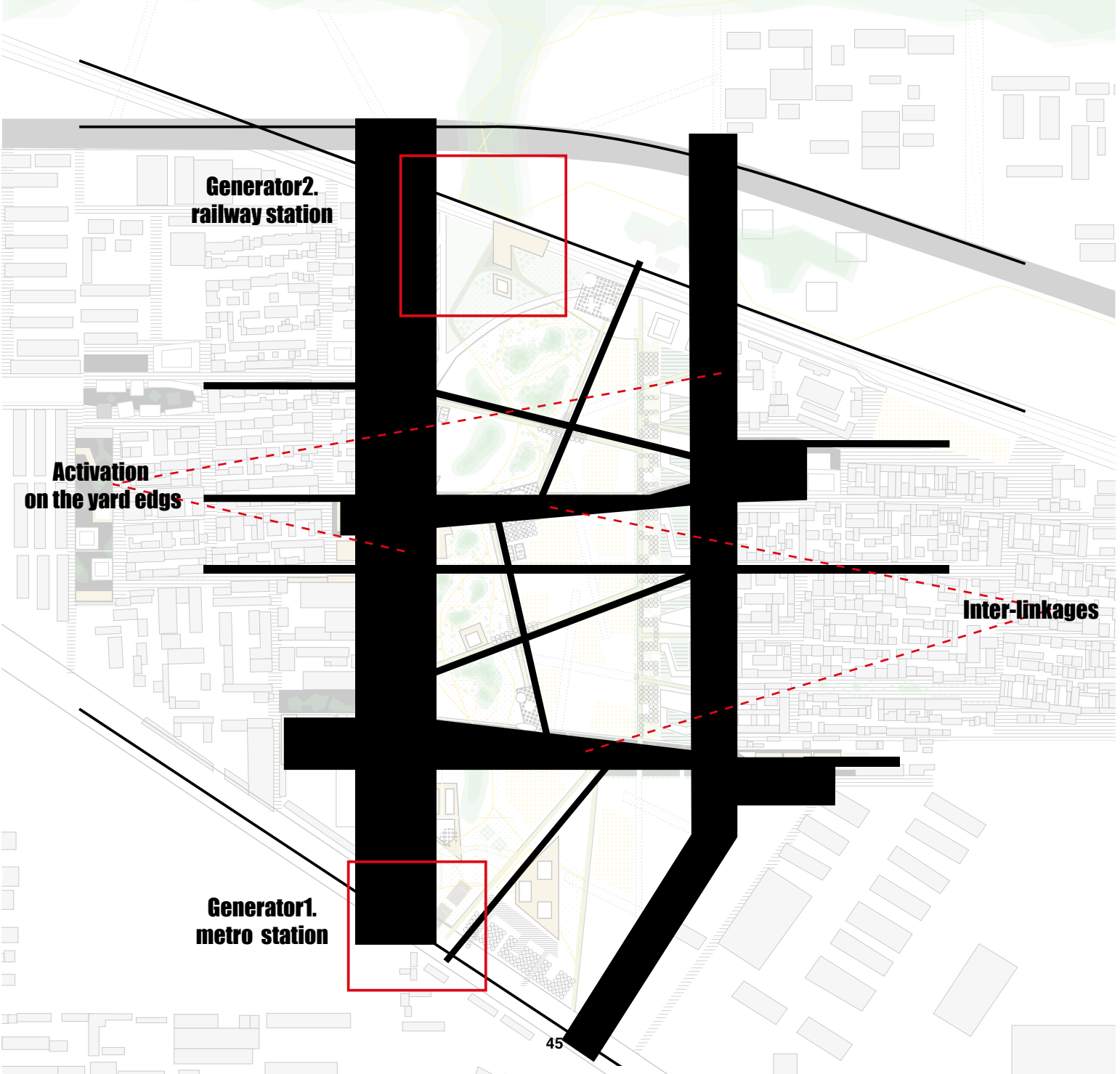
Propose different transparency of the public space by programing and site structure in order to create dialogue between in and out on the permeable edges.

Proposed spatial structure

Internal Flows + External Feeders

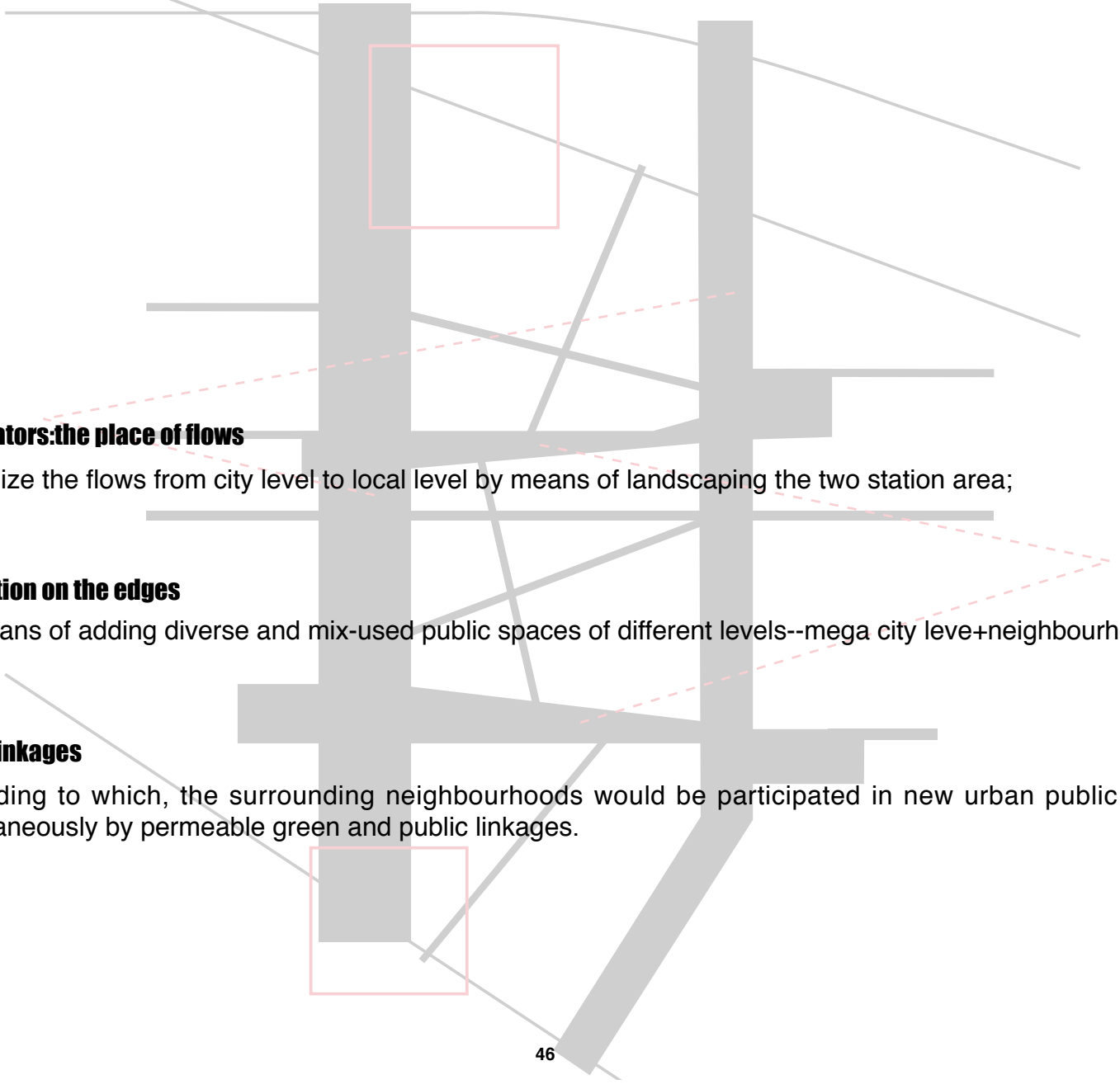
Design Masterplan

Strategic elements



Design Strategy

Strategy



Generators:the place of flows

Organize the flows from city level to local level by means of landscaping the two station area;

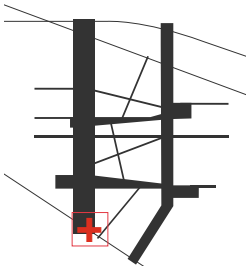
Activation on the edges

by means of adding diverse and mix-used public spaces of different levels--mega city leve+neighbourhood level;

Inter-linkages

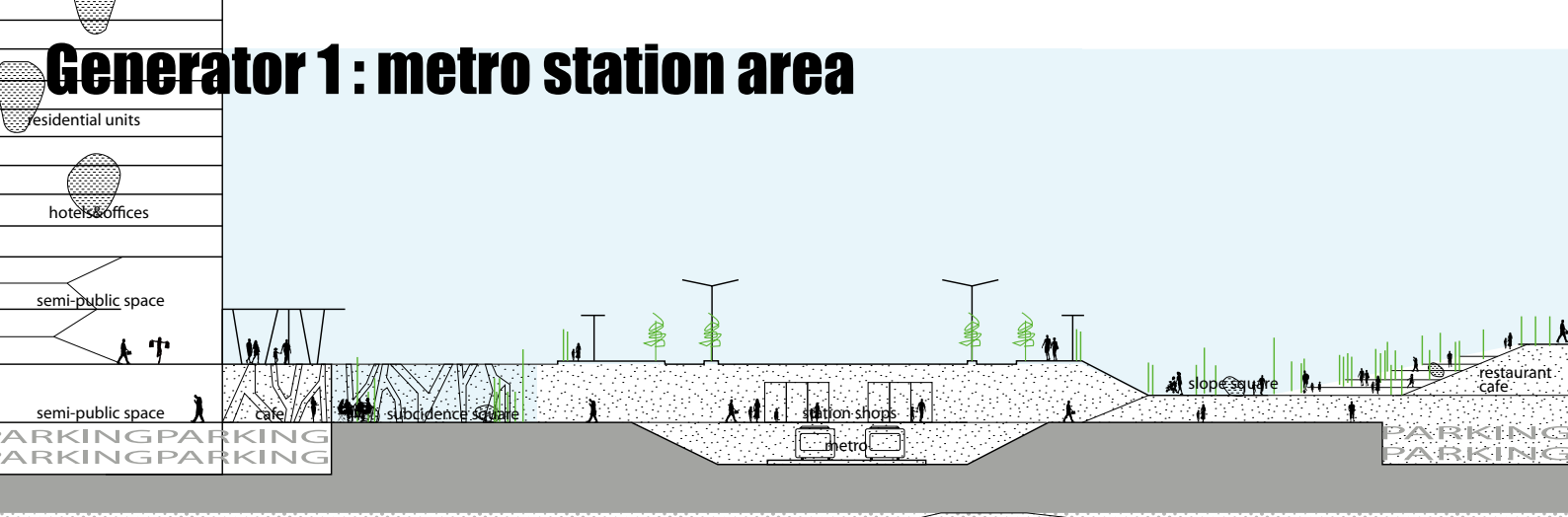
according to which, the surrounding neighbourhoods would be participated in new urban public life spontaneously by permeable green and public linkages.

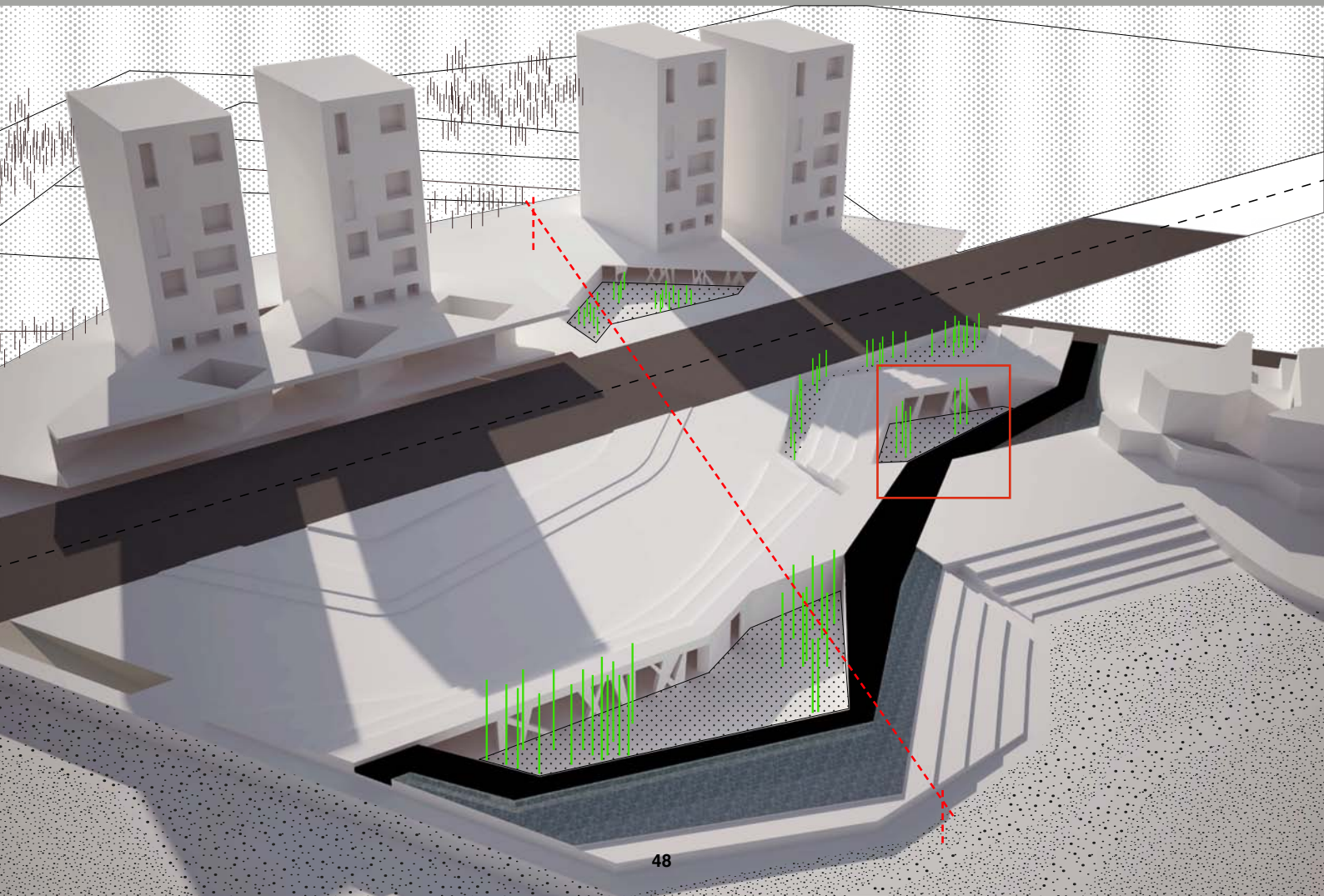
Generator 1 : metro station area



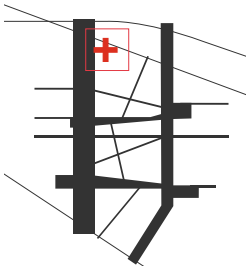
Landscaping the territory

Generator 1 : metro station area



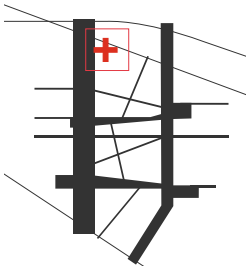


Generator 2: railway station area



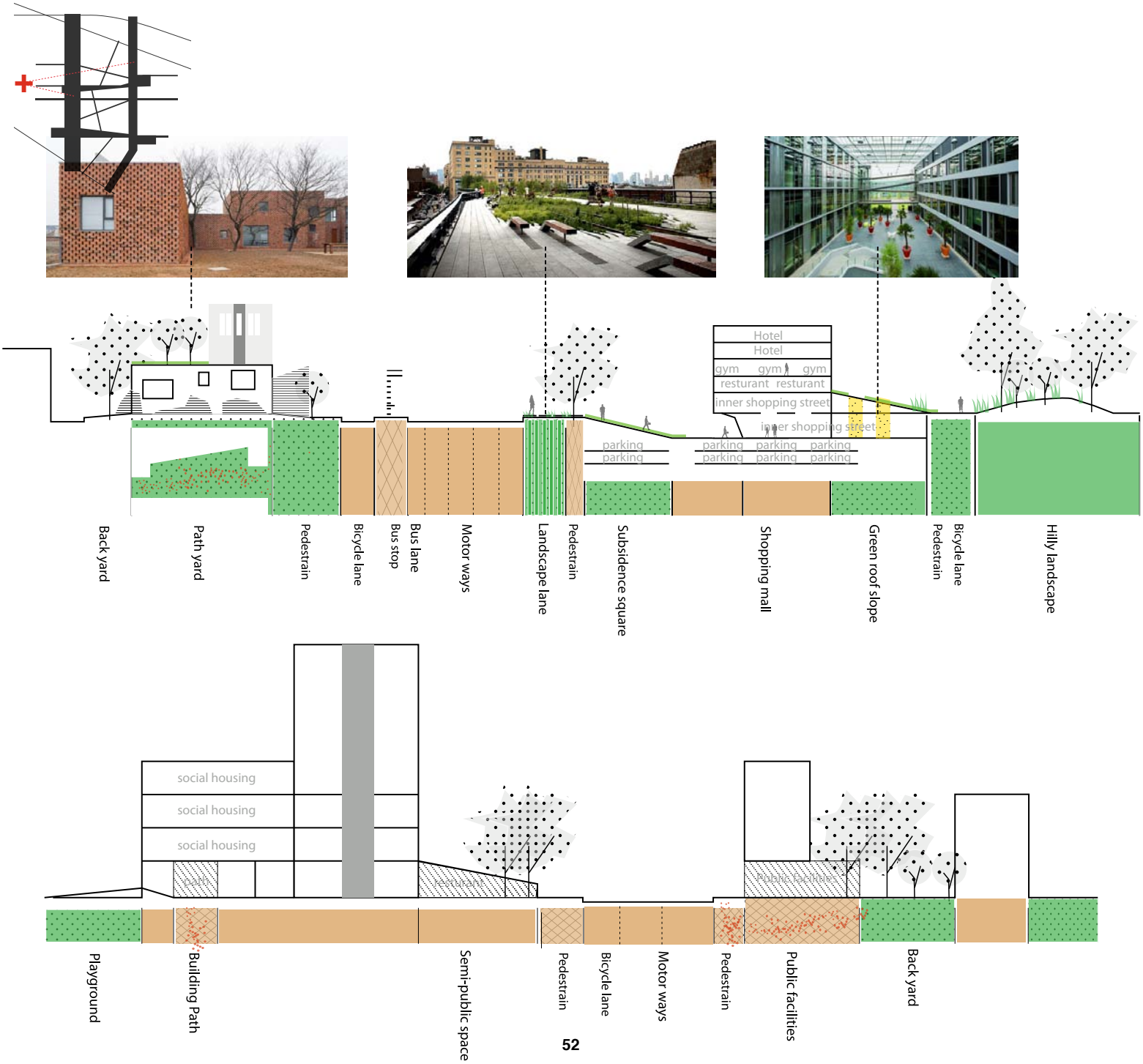
Landscaping the territory

Generator 2: railway station area

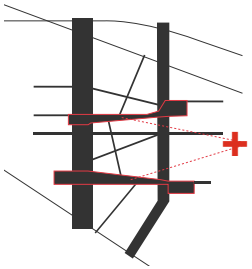


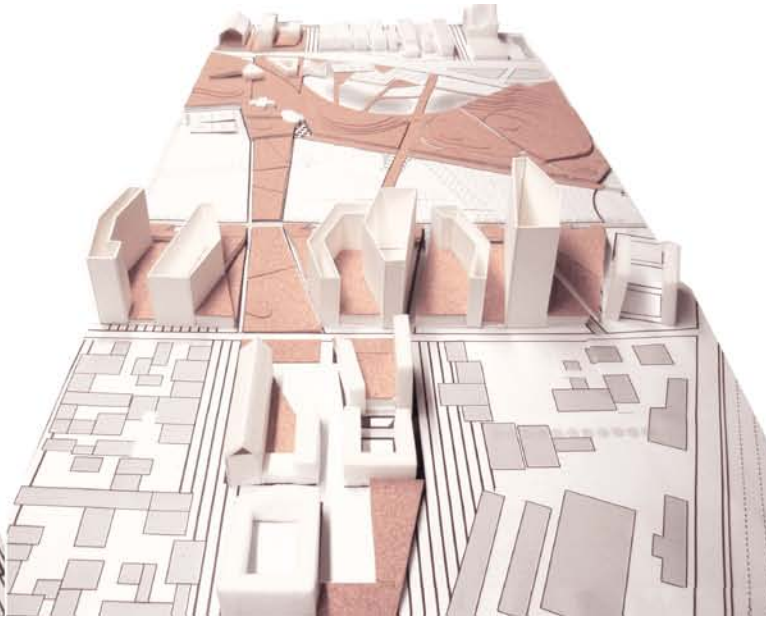
Landscaping the territory

Activation on the edges



Inter-linkages





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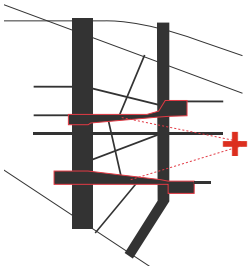

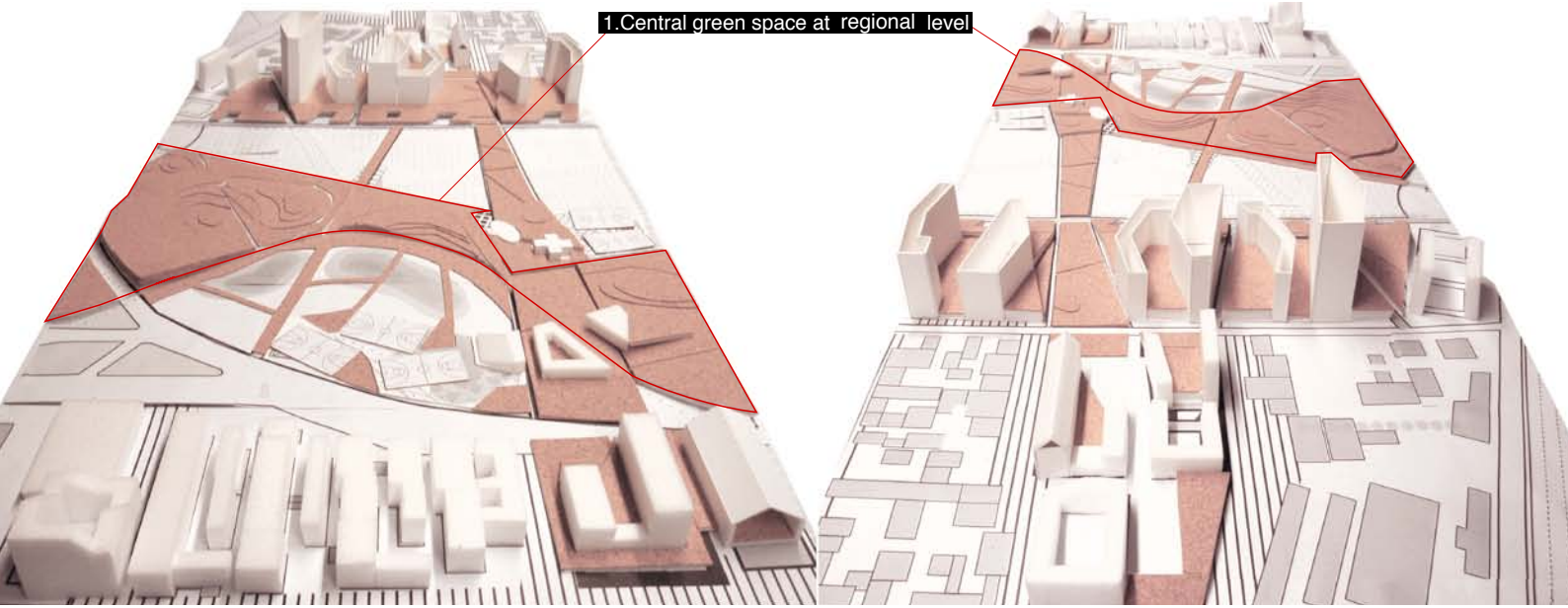

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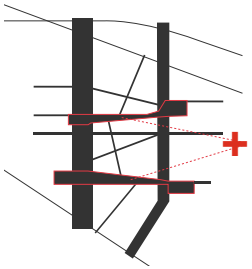
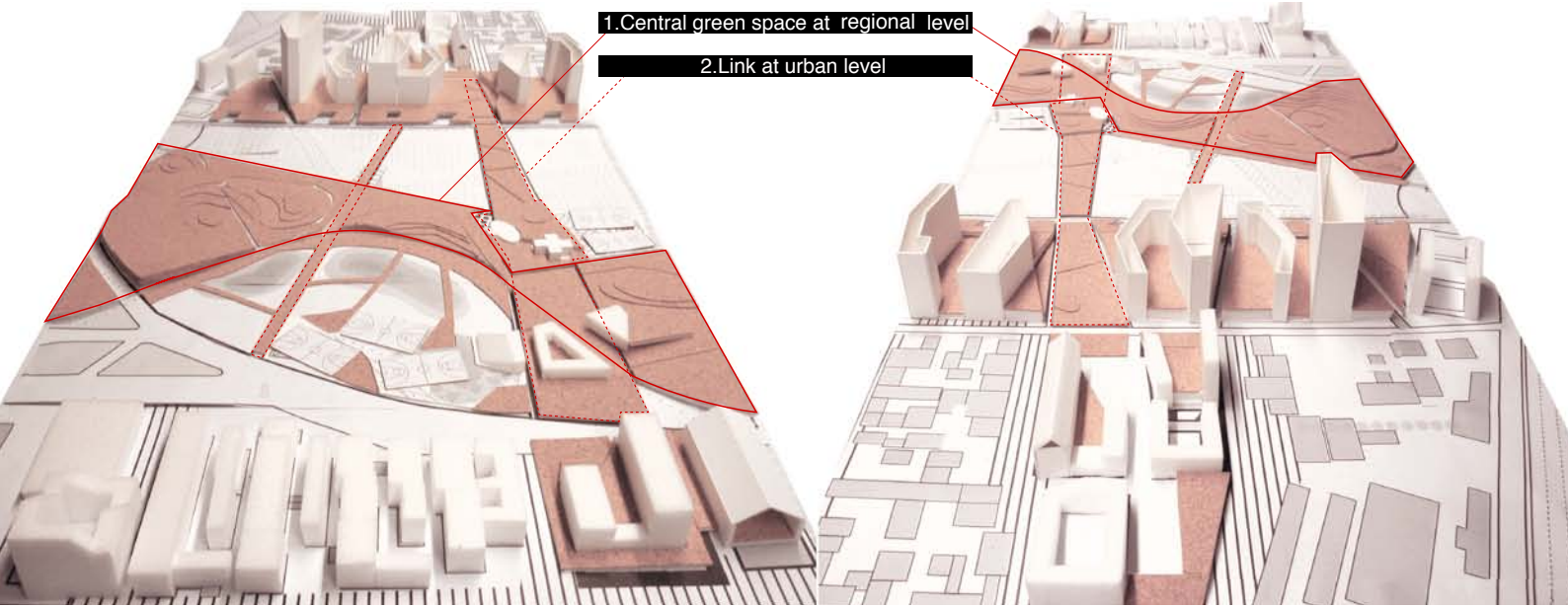
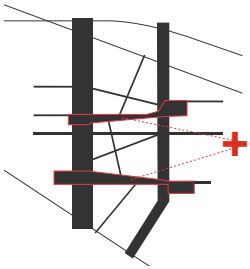
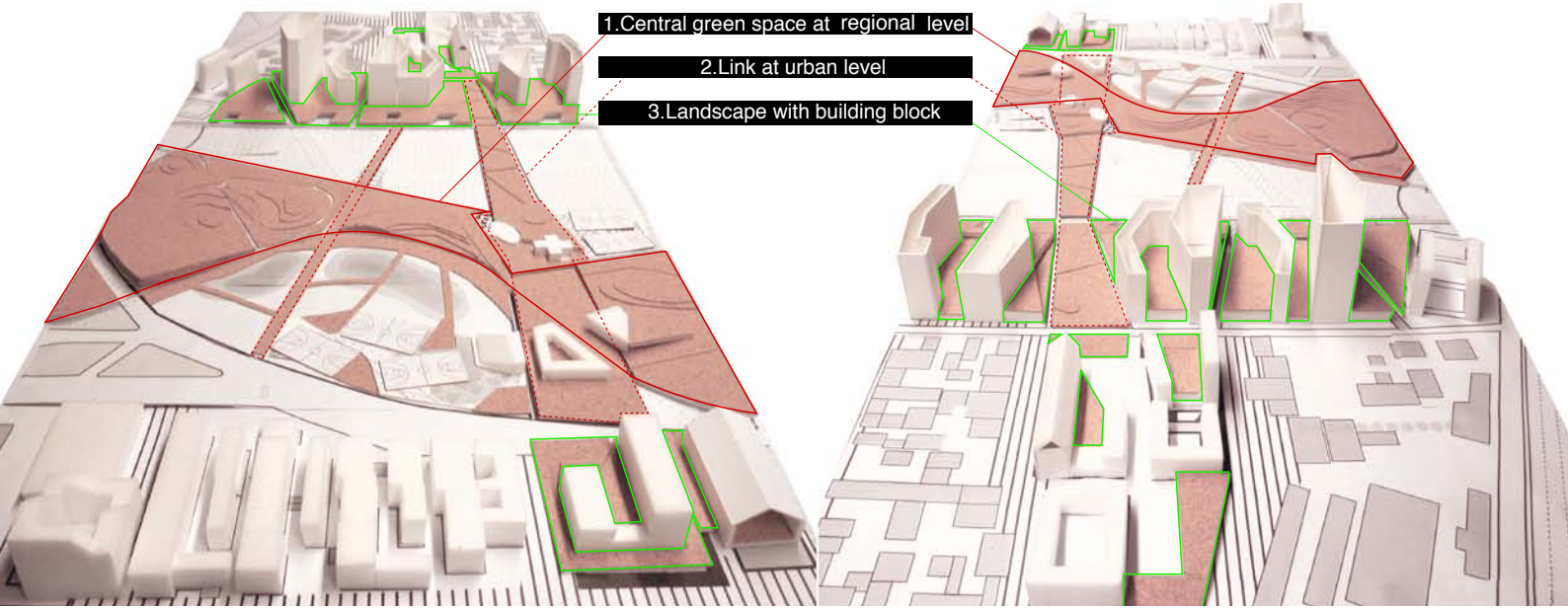




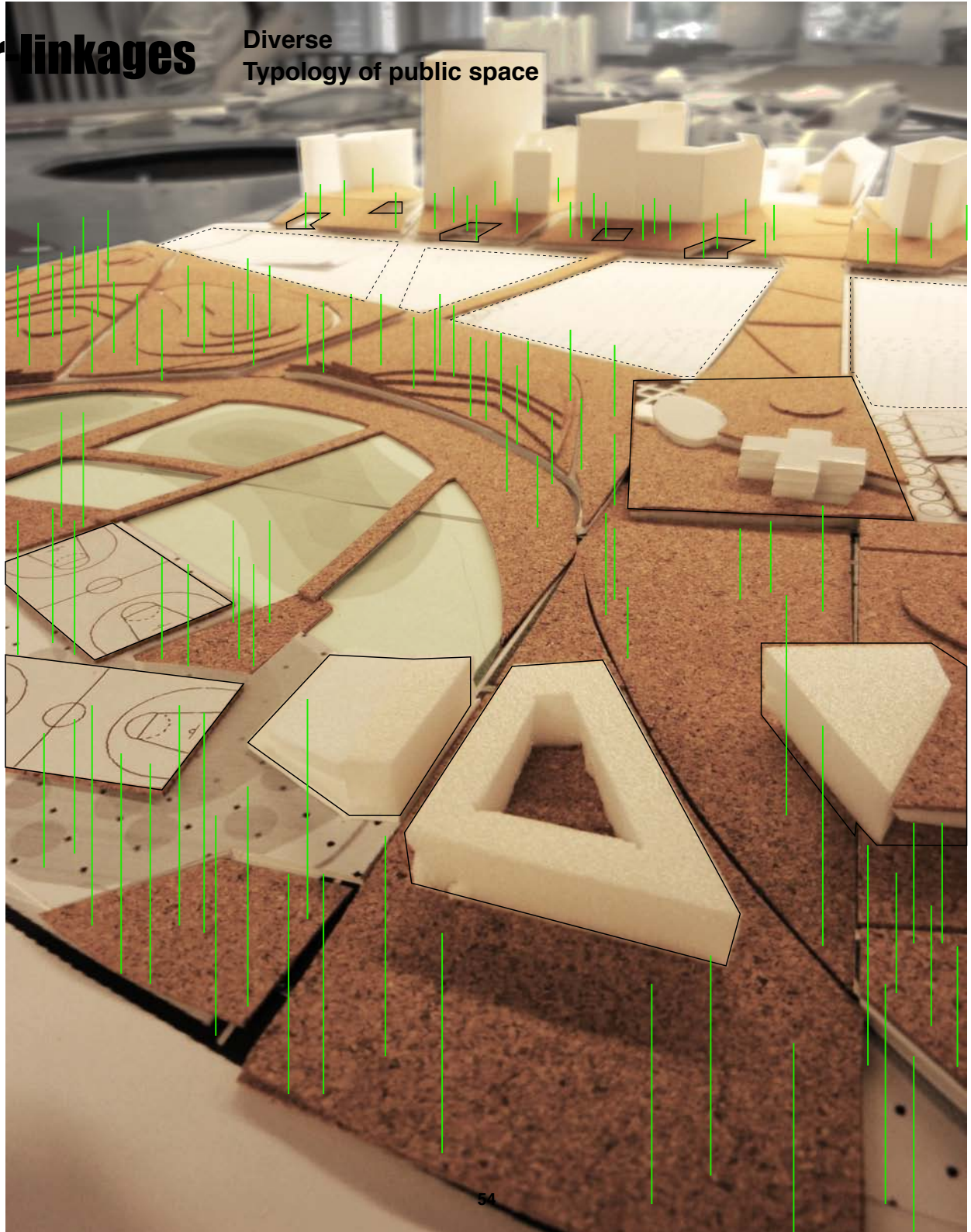
Inter-linkages





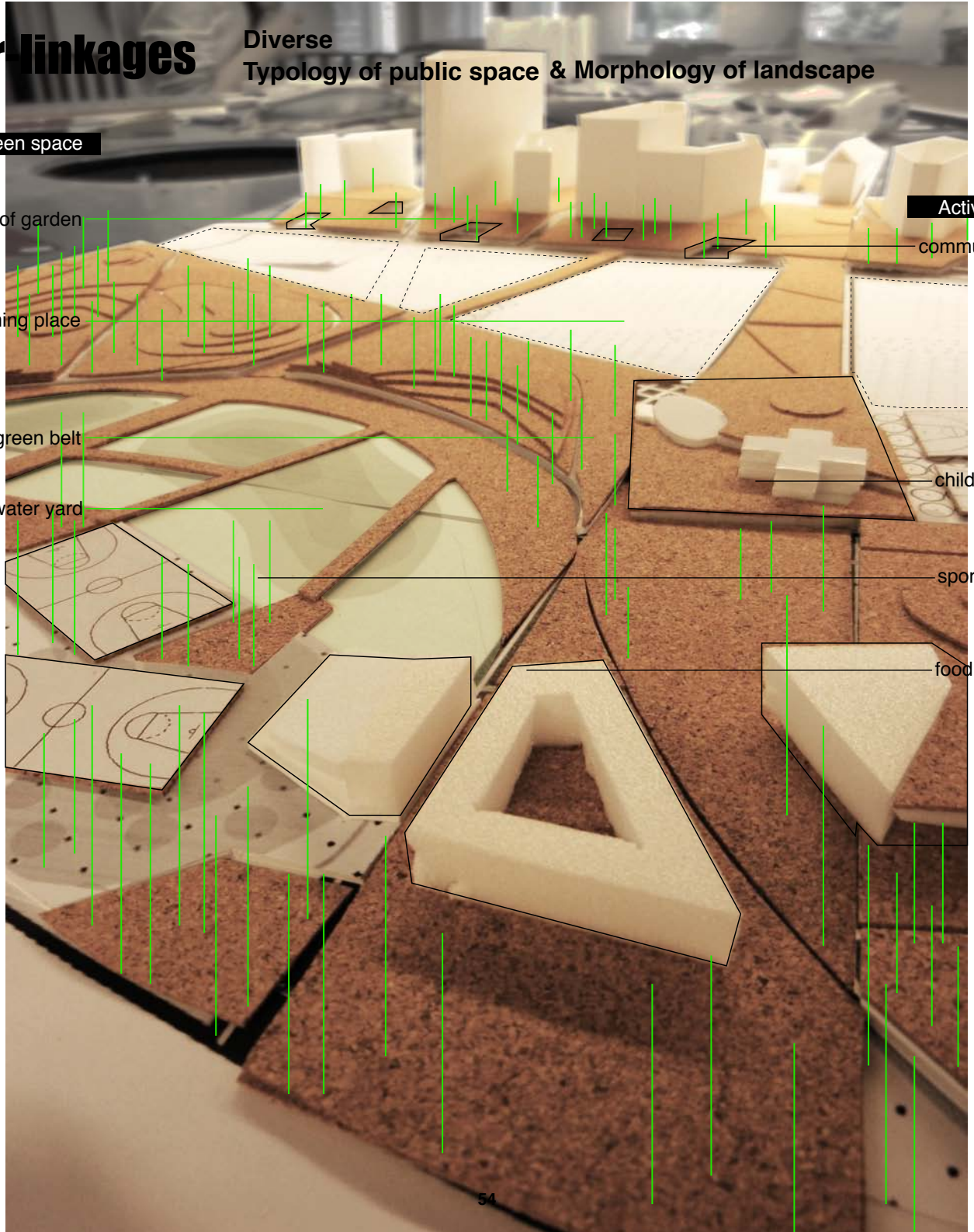
Inter-linkages

Diverse
Typology of public space



Inter-linkages

Diverse
Typology of public space & Morphology of landscape



Inter-linkages

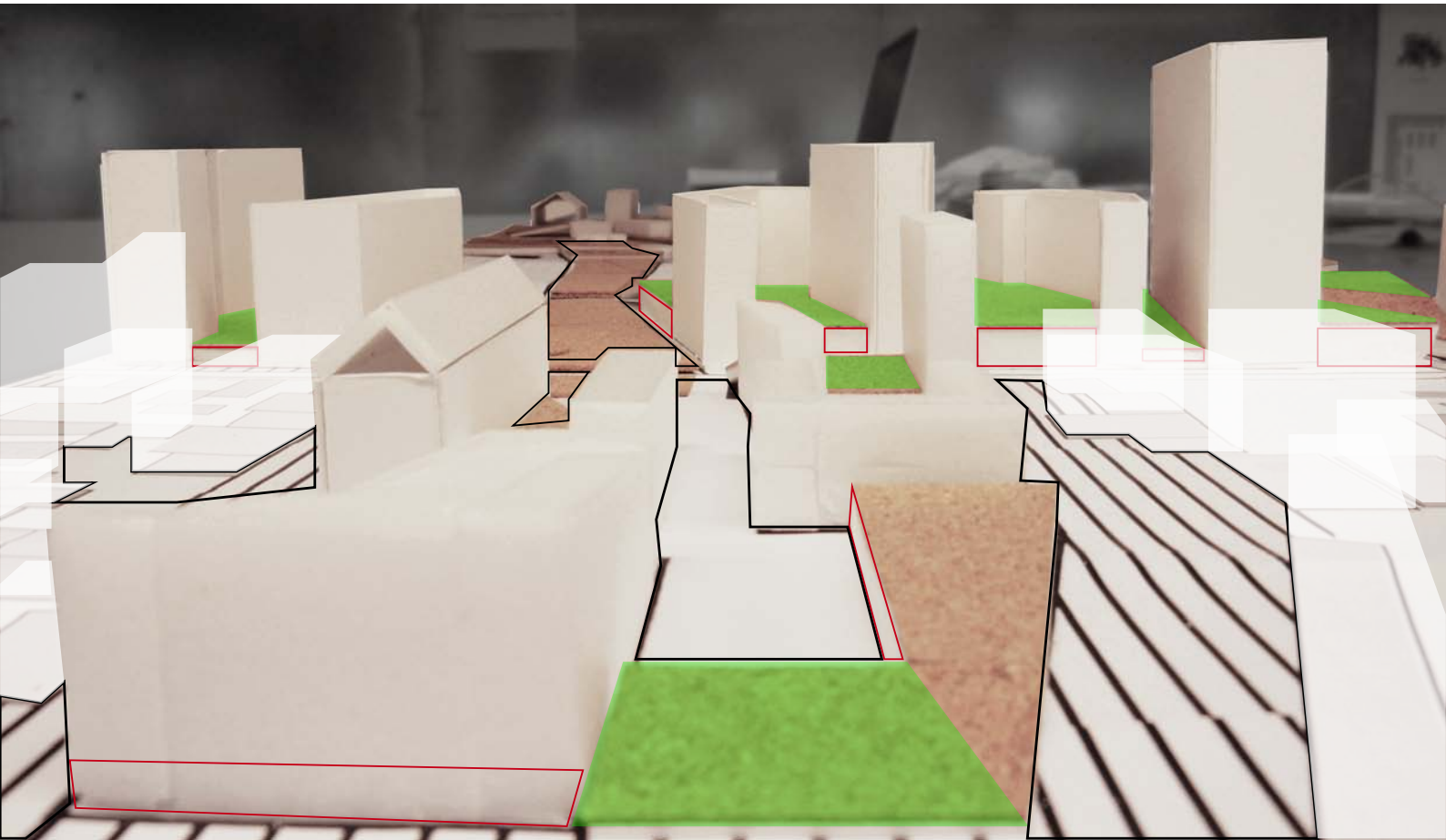
Regenerated "city village" neighbourhood

accessibility space

semi-public space

landscape

Memory of local yard & street morphology



Inter-linkages

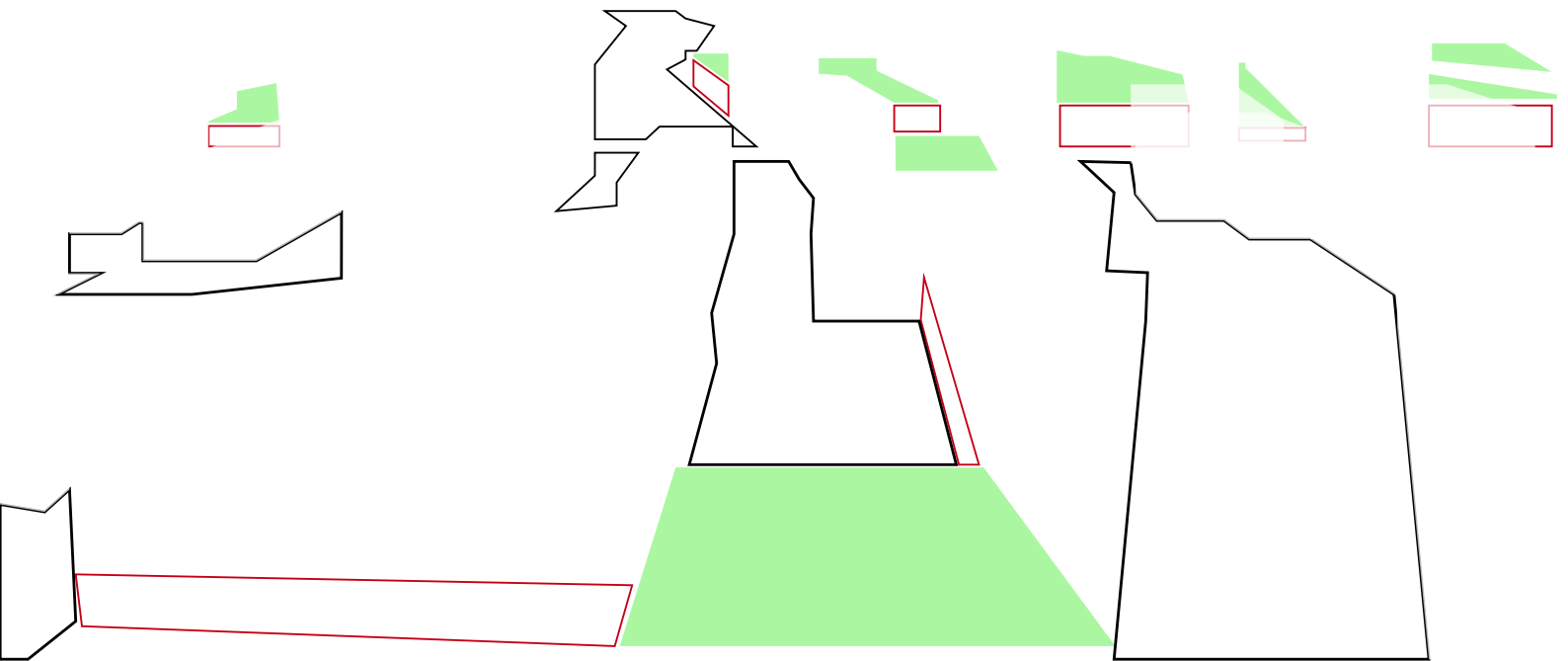
Regenerated "city village" neighbourhood

accessibility space

semi-public space

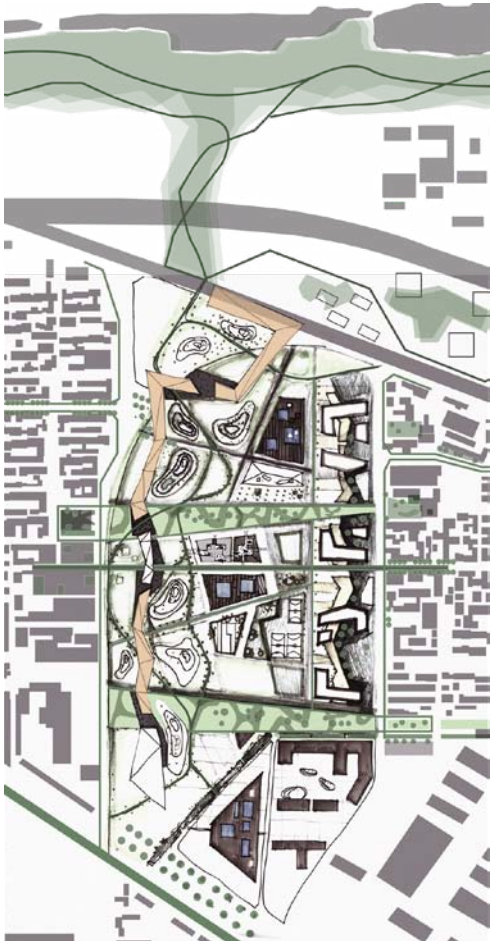
landscape

Various layers of permeable landscape

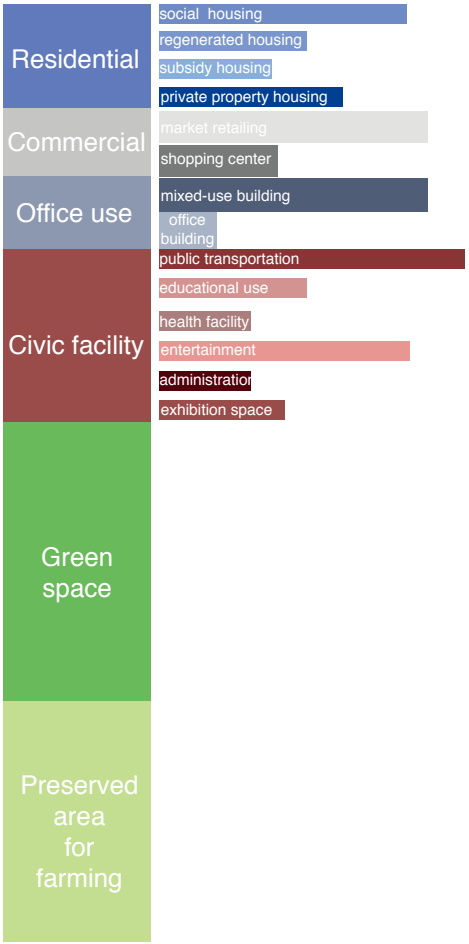


Design Possible programming illustration 2020+

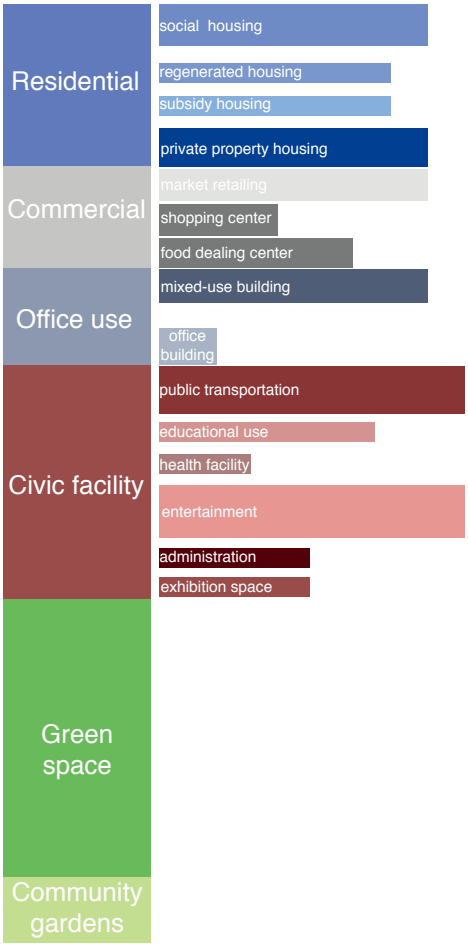
Cluster of public spaces



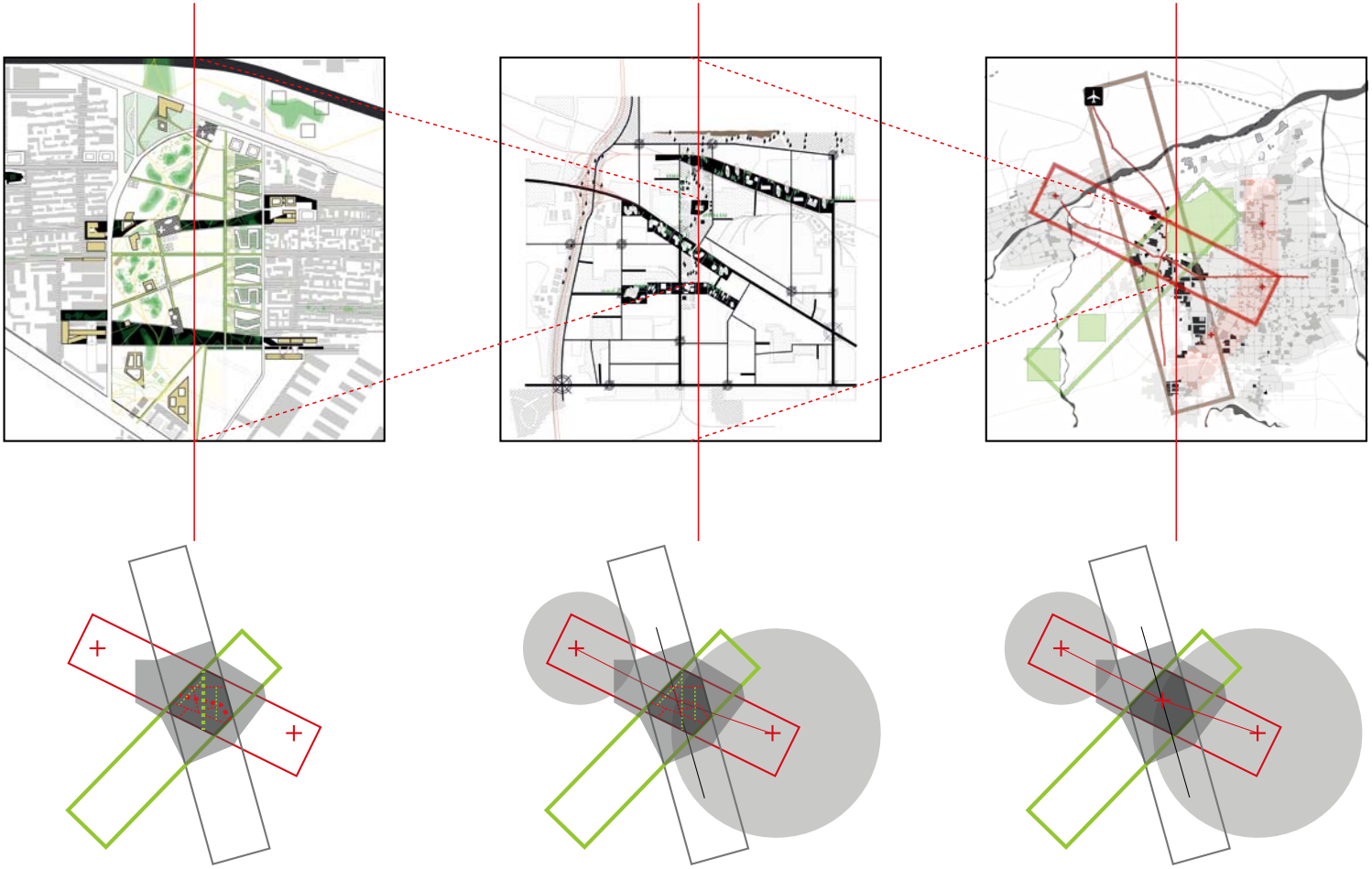
Landuse of starting program



Landuse 2020+



Conclusion



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.

Thank you.
Questions?