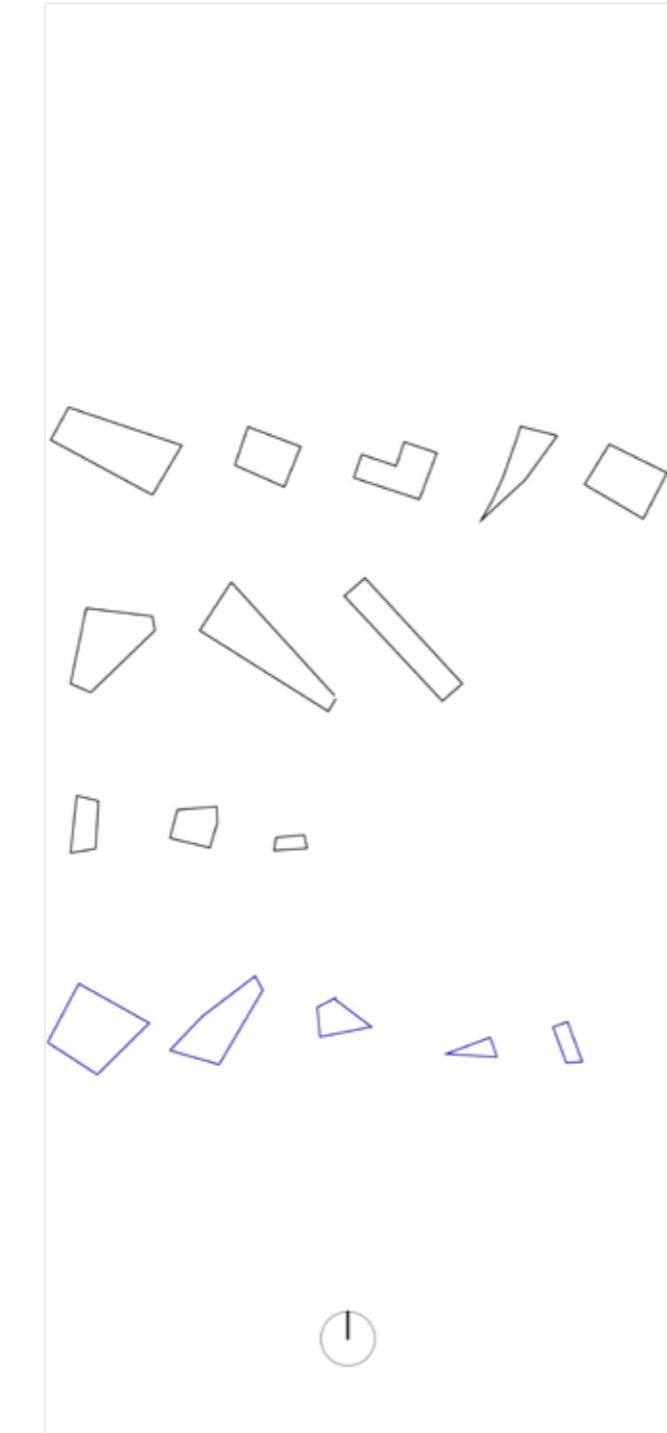


A 15 minute Walk Neighborhood

Walkable Neighborhoods

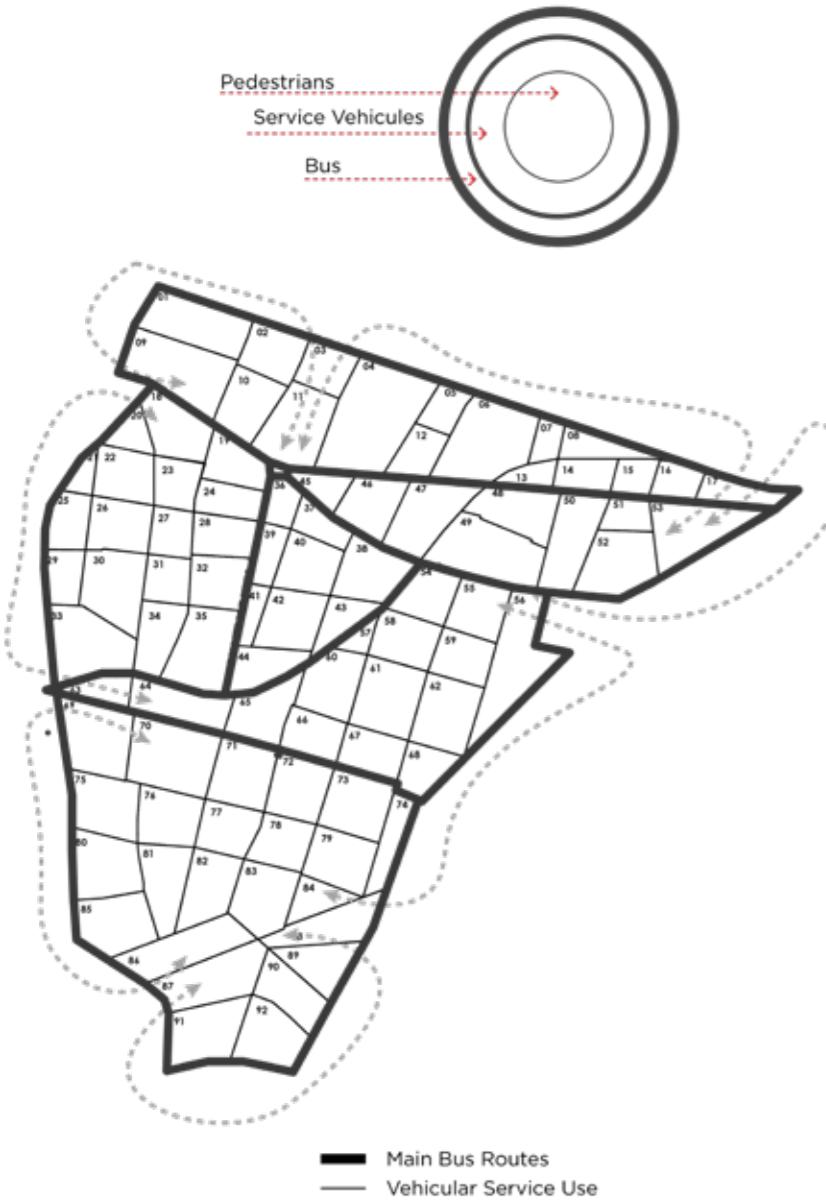
The general distribution of open spaces around Bourj Hammoud is utilized for the reduction of car use. This is done by establishing entry points near the clusters to filter out cars while taking advantage of Bourj Hammoud's dense fabric where services, commerce, and leisure can all be 15 minutes away from the edge of the region.



Accessible Neighborhood

Inner and Outer Dynamics

The superblock system is proposed to carry vehicular flows at the outer edges of the superblock, and to dedicate the inner fabric of the block to pedestrian use. To reduce car use within the region, several filtration points are prosed around the peripherals of Bourj Hammoud.



General Arrangement

The main Highways that divide the different patches are proposed to sustain heavy vehicular use with bus stations distributed at the outer edges of Bourj Hammoud near potential edge parking spaces. And to connect the region vertically, alternative transportation systems are proposed to extend from the lower region of Nabaa area and up to Dawra highway.



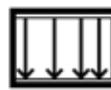
Overlap between Human and Vehicular Use

Centers of Commerce

Commerce is considered a vital component to Bourj Hammoud's historical growth, the built fabric and the distribution of the shops along the streets of Bourj Hammoud convey dynamic centers of commerce that overlap with the intense vehicular activities occurring within the grid system. These centers of commerce relate to one another through the distribution of the shops along the secondary streets of the grid system forming different cores and interlinked by a central diagonal core.

General Flows

Short Vertical Arteries
Most of the commercial activity emerges from a central spine creating a linear journey from point a to point b.



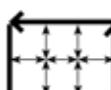
Central Spine
Most of the commercial activity emerges from a central spine creating a linear journey from point a to point b.



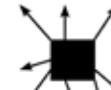
Diagonal Core
Commercial activity is spread out through two diagonal axis



Clusters
Commercial activities are spread out in clusters based on a defined grid system.



Radial Dispersion
Commercial activities hold a central location within the region and extend radial towards the edges.



Distribution of Shops

The shops are distributed mostly along secondary streets at a width of 8 meters, these streets maintain car parking on both sides of the street and are mainly one-way streets, where shops expand to sidewalks and pedestrians resort to using the streets for walking,

Spill-over of Shops Marach Street



Souk Al Akel Father Arees Street



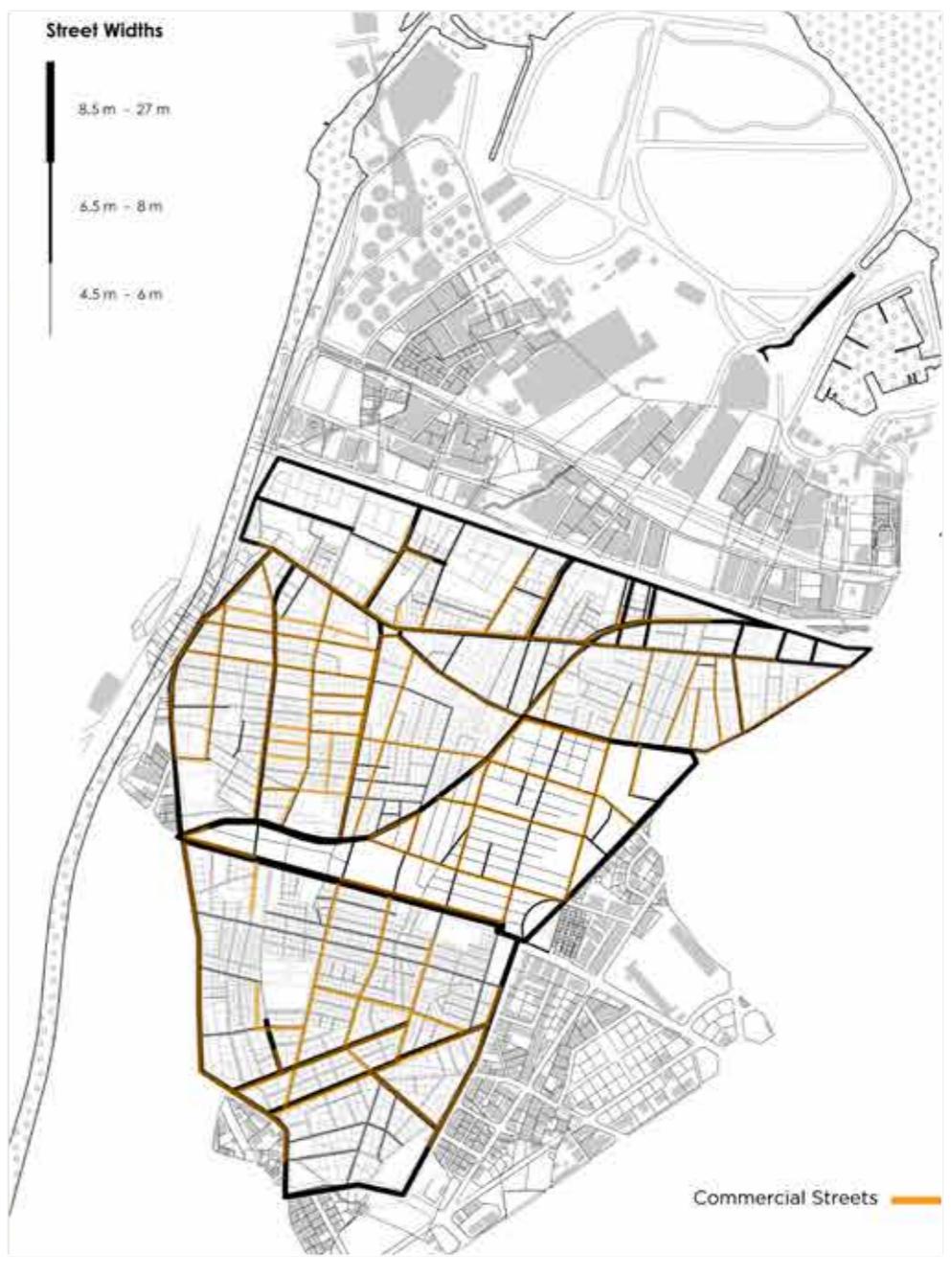
Pedestrian Use of Streets Nabaa



Easter Seasonal Use Arax Street



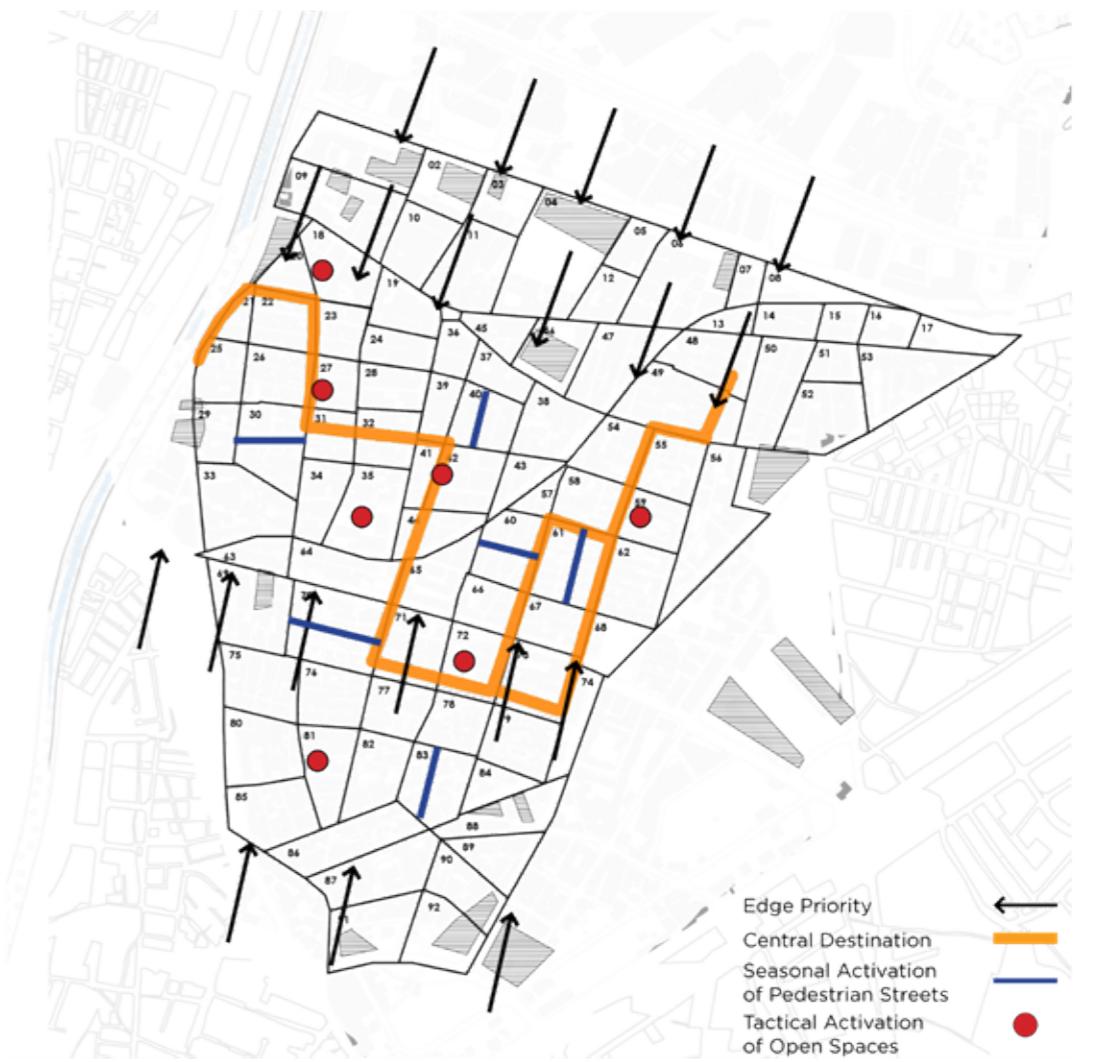
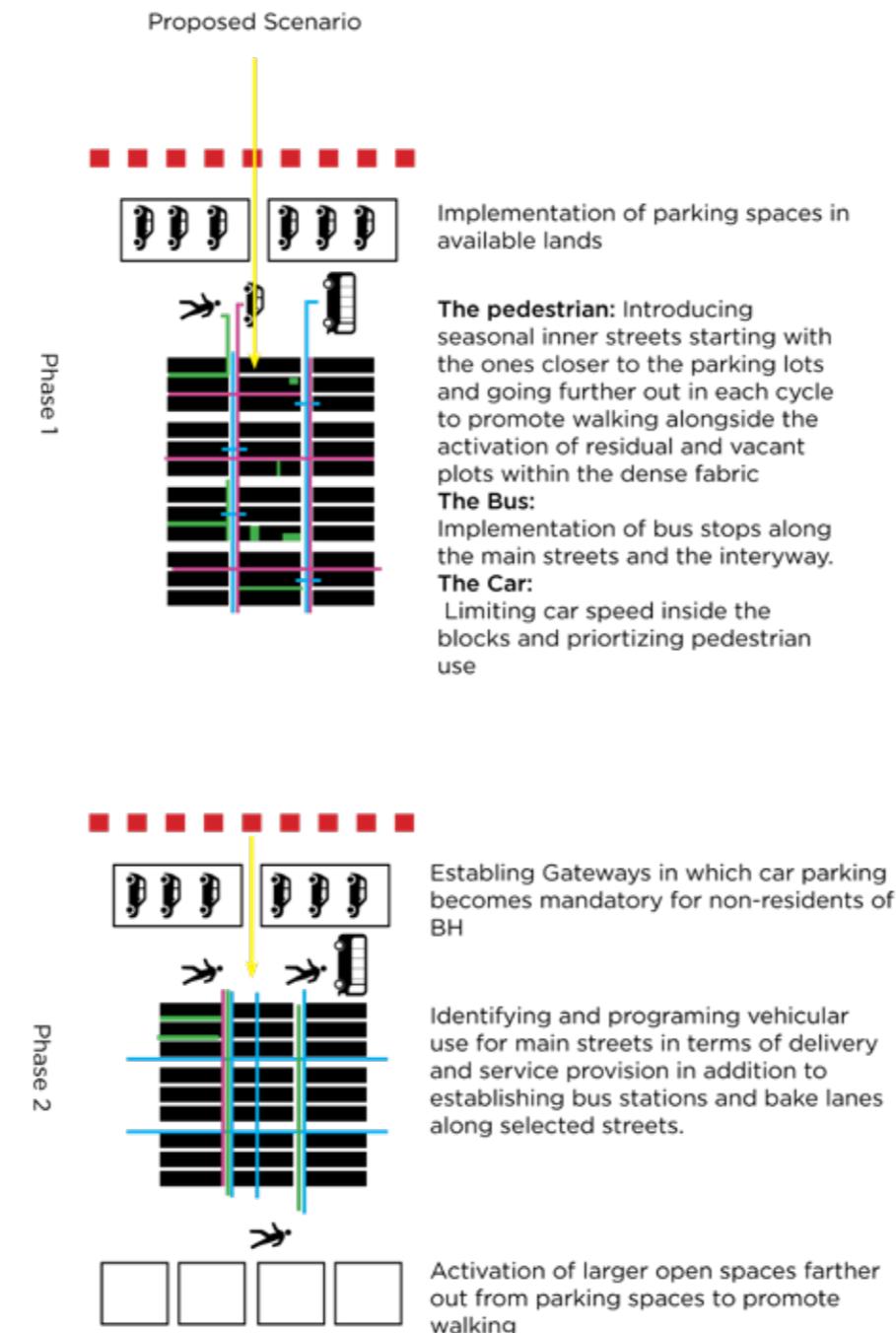
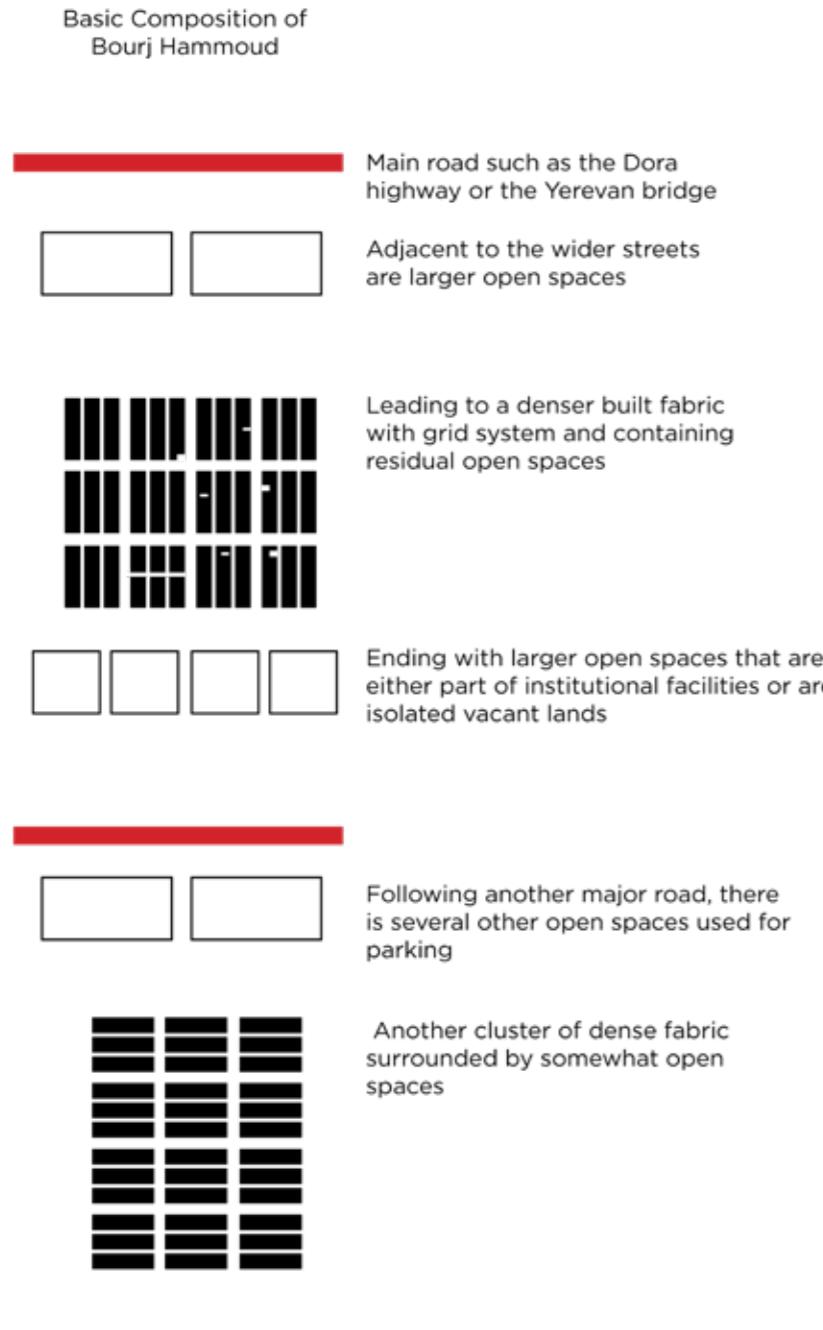
Sidewalk Seating Nabaa



Establishing a Destination

Progressive Intervention

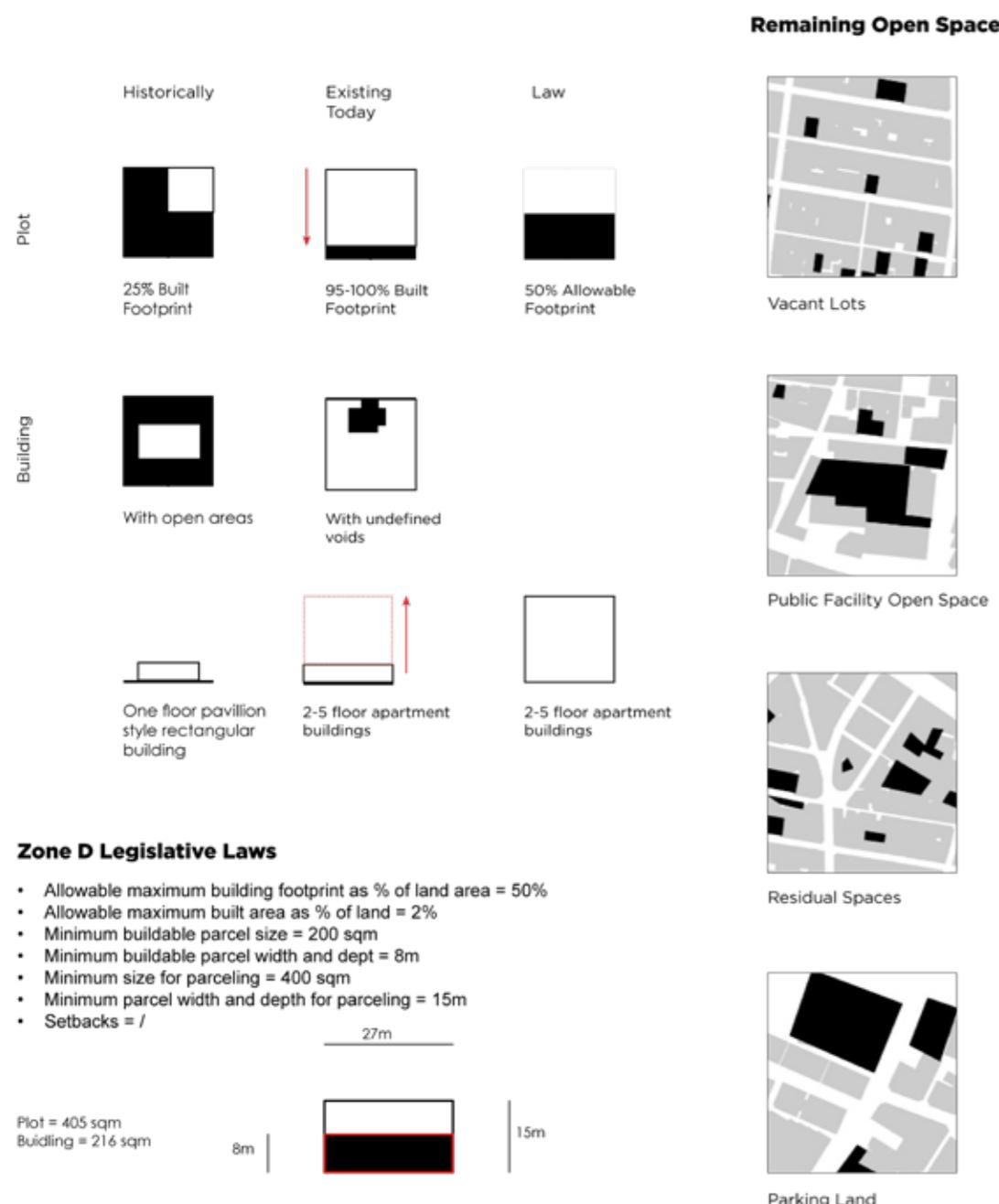
Bourj Hammoud maintains a specific dynamic in terms of spatial arrangement which allows for a progressive way intervening from Dawra highway and downward.



Over-densification of Urban Fabric

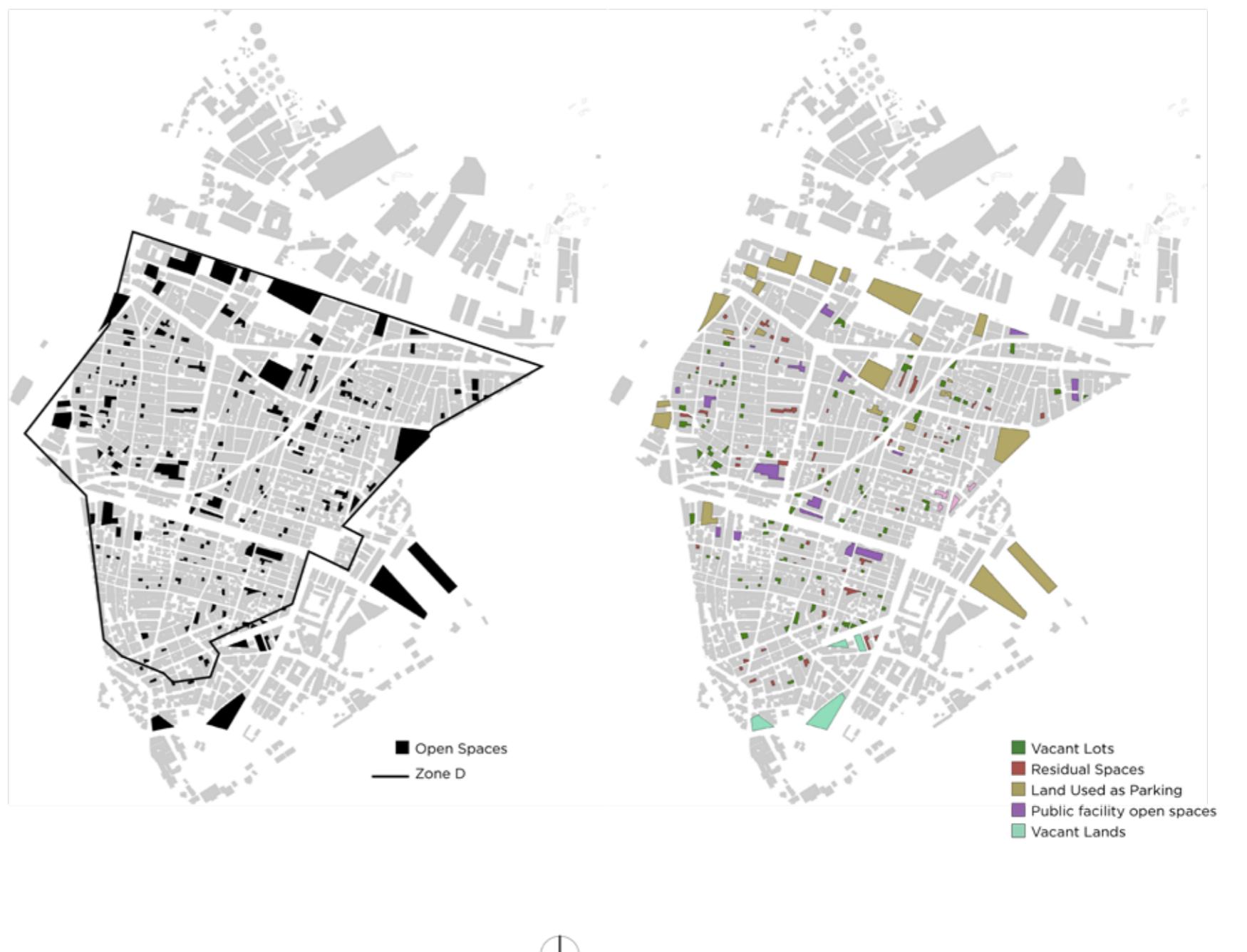
Forms of Open Space Consumption

Originally the buildings on the plots, usually only occupied a quarter of the parcel and consisted only of a small one story pavilion. The building law allocates a maximum of 50% footprint allowable built area in zone D. The built up footprint was way below the maximum percentage because of lack of funds and lesser population. The buildings on the plots were upgraded or re-placed by newer, bigger houses with several stories and a bigger footprints occupying a major part of the plot



Open Space

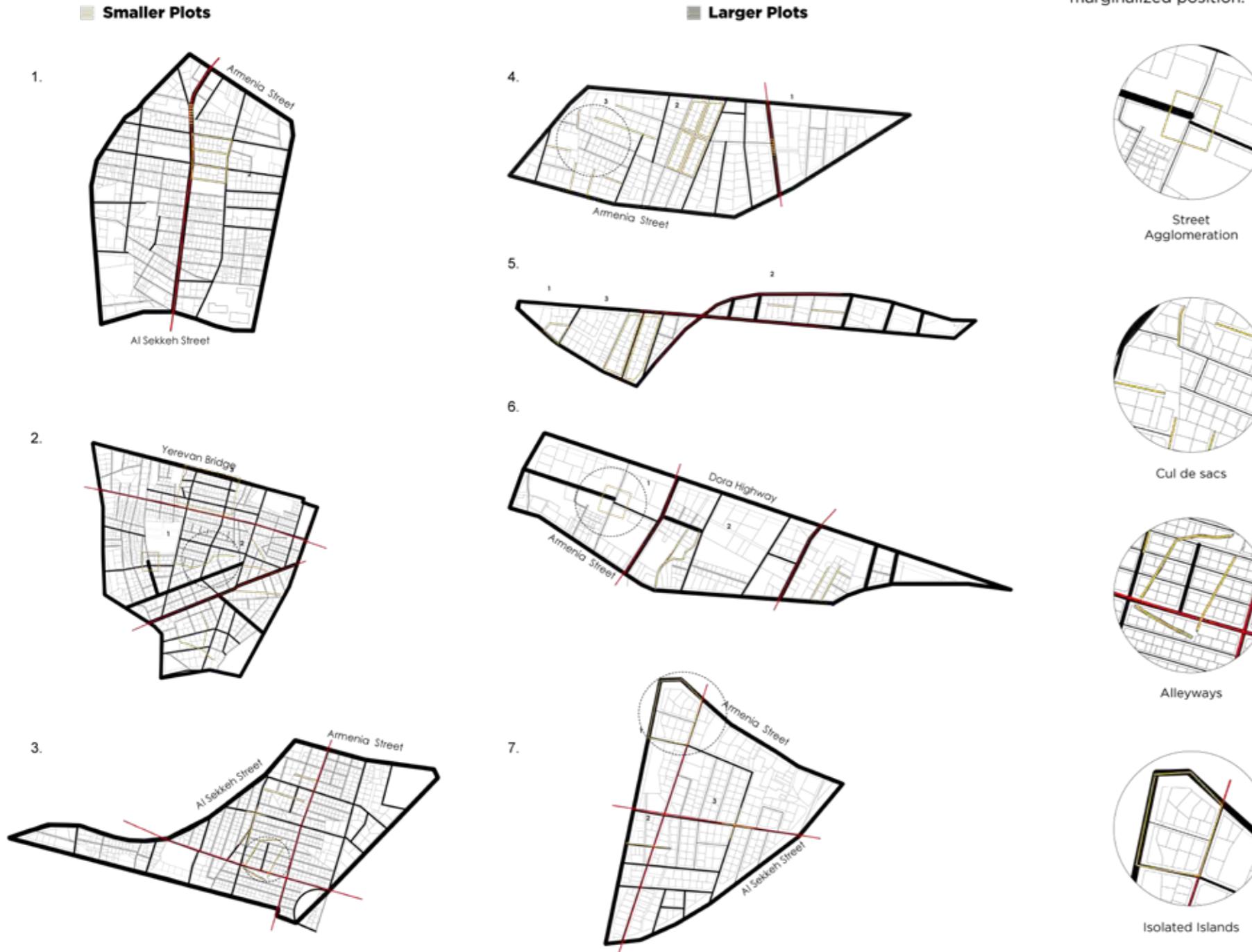
The larger patches of open spaces are concentrated on the Dora highway edge, and similar but smaller patches surround the edges of Bourj Hammoud, whereas the inner fabric is mostly built, and scattered with smaller pockets of open spaces, the single pocket occupying an average area of 150sqms.



Detached Grid system

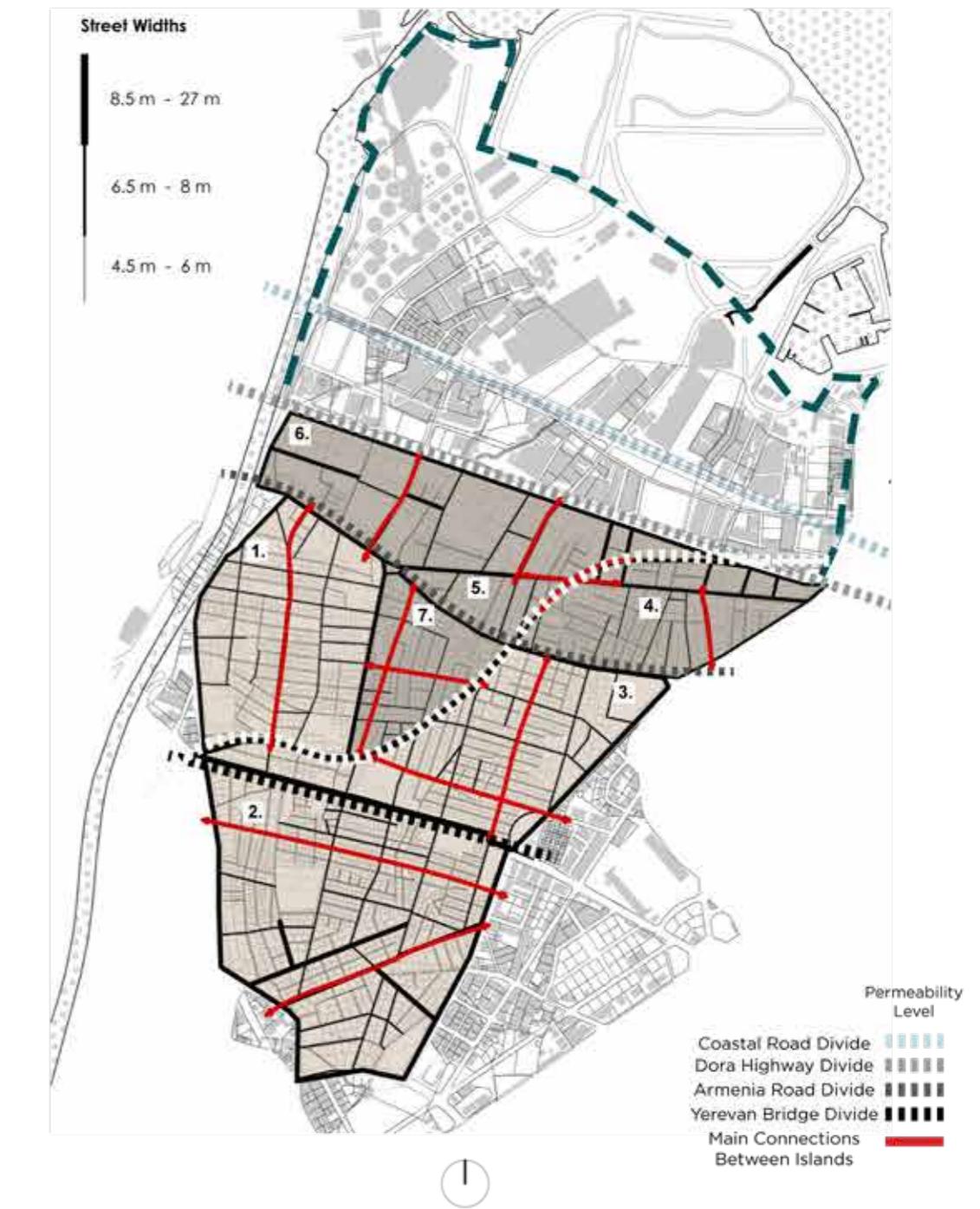
Division of Islands

The grid systems within the islands are **detached from one another** due to the extension of the **wider roads surrounding them**, their width reaches up to 54 meters. The patches at the coastal edge with the larger plots provide the highest percentage of parking space, particularly along Dora Highway and within the looser built fabric within patch 6.



Main Connections and Permeability

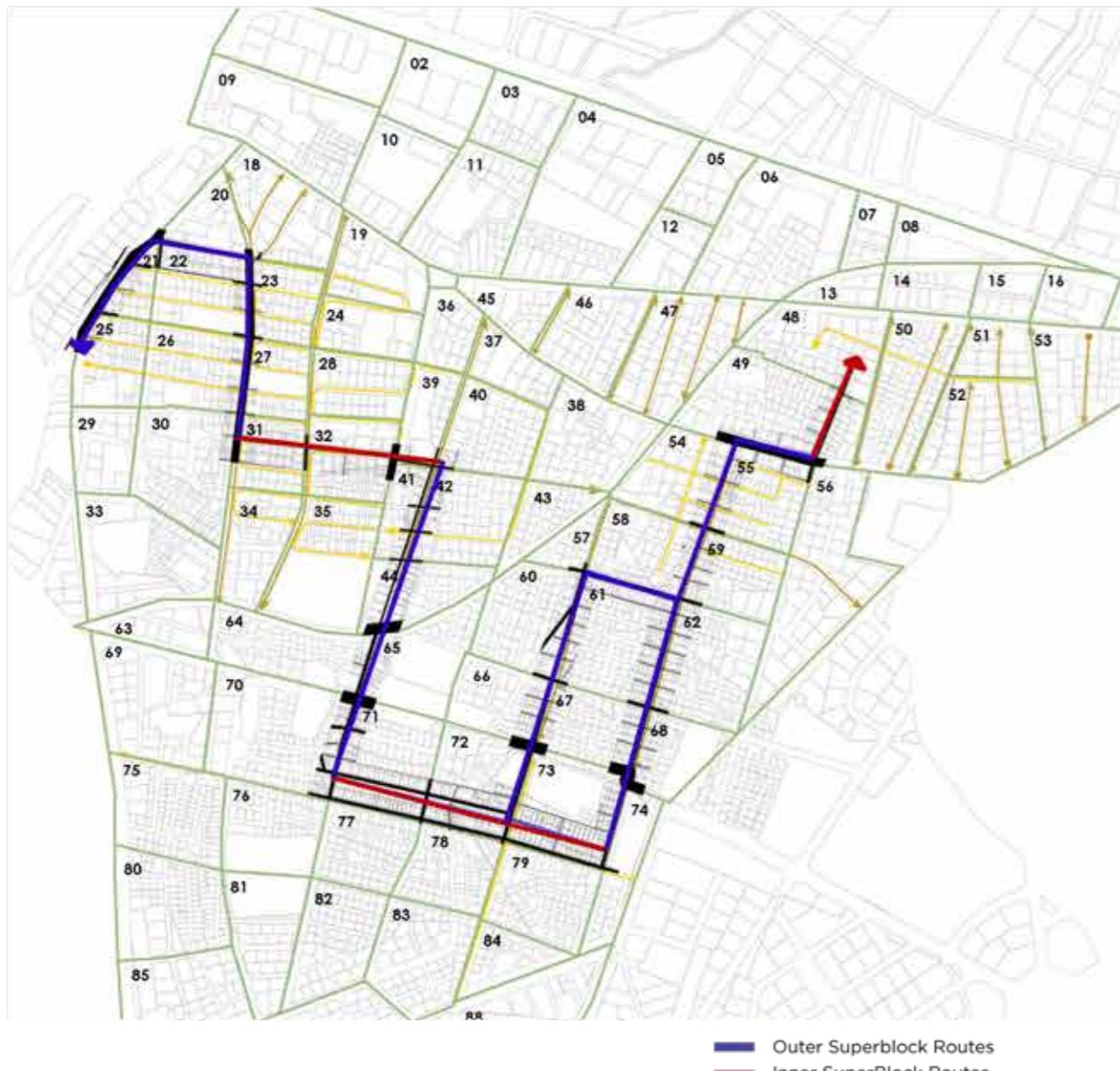
The continuity of the inner road network is disrupted by the surrounding major roads, however each patch maintains a main road connection to the adjacent patch through double perpendicular connections or through a single main artery such as arax street, Aside from Nabaa region where at the northern edge, the permeability markedly decrease leaving the area in a marginalized position.



Reviving Heritage

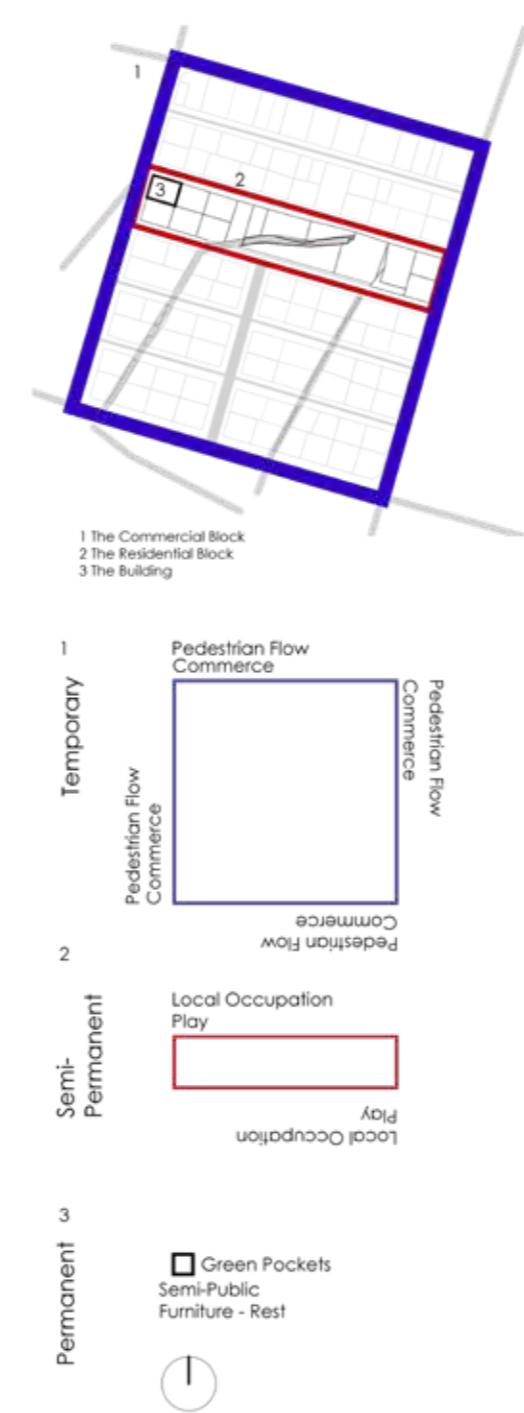
Historical Fabric

To create a pathway of experience through Bourj Hammoud's historical fabric by rehabilitating the streets and facades, activating the shops and the nearby open spaces, this would enliven the monotonous nature of the grid system in Bourj Hammoud, and is a way to introduce dynamism by injecting a form of interplay between the scalable dimensions of the different blocks through temporary and permanent interventions.



Performative Hierarchies

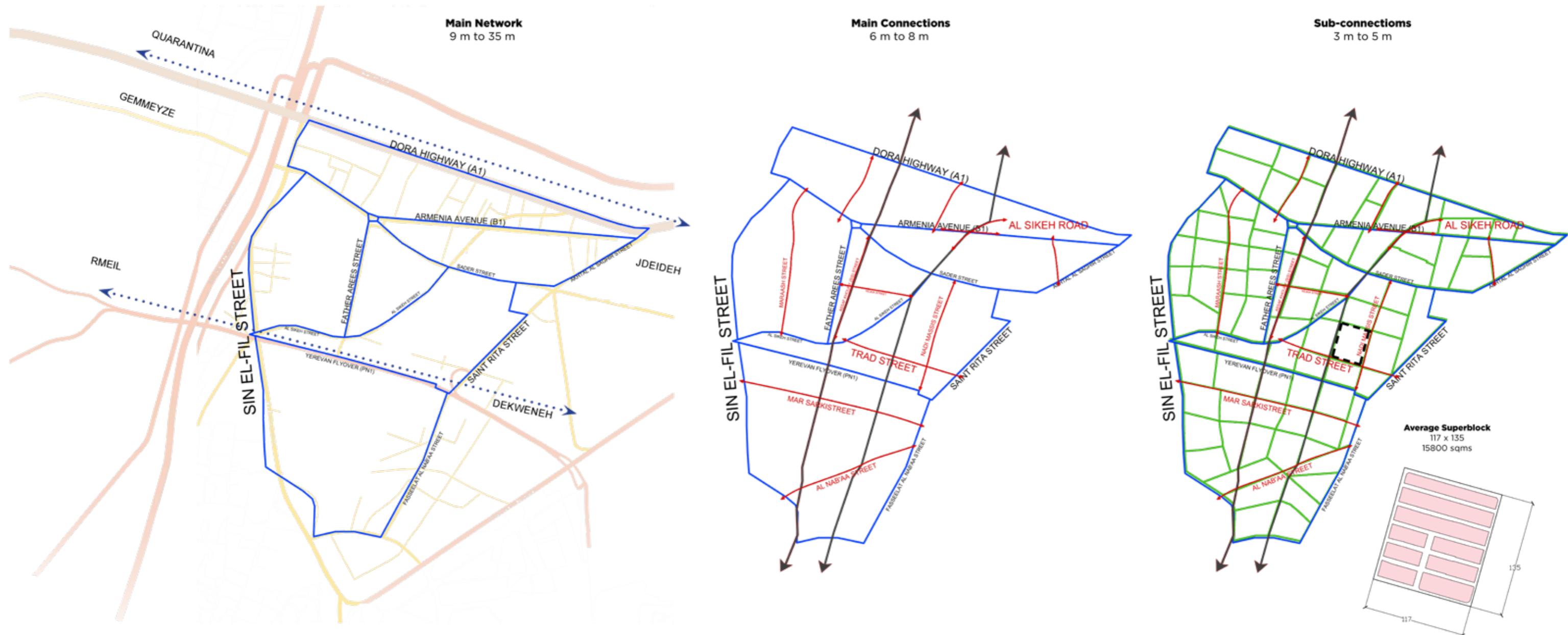
Reconvey the relation between main and secondary streets to create a flow dynamic that relies less on the perceived importance of main streets and encourage the use of marginal and residual spaces that could potentially encourage the opening of closed shops.



A Connected Hierarchical System

Superblock Devisions

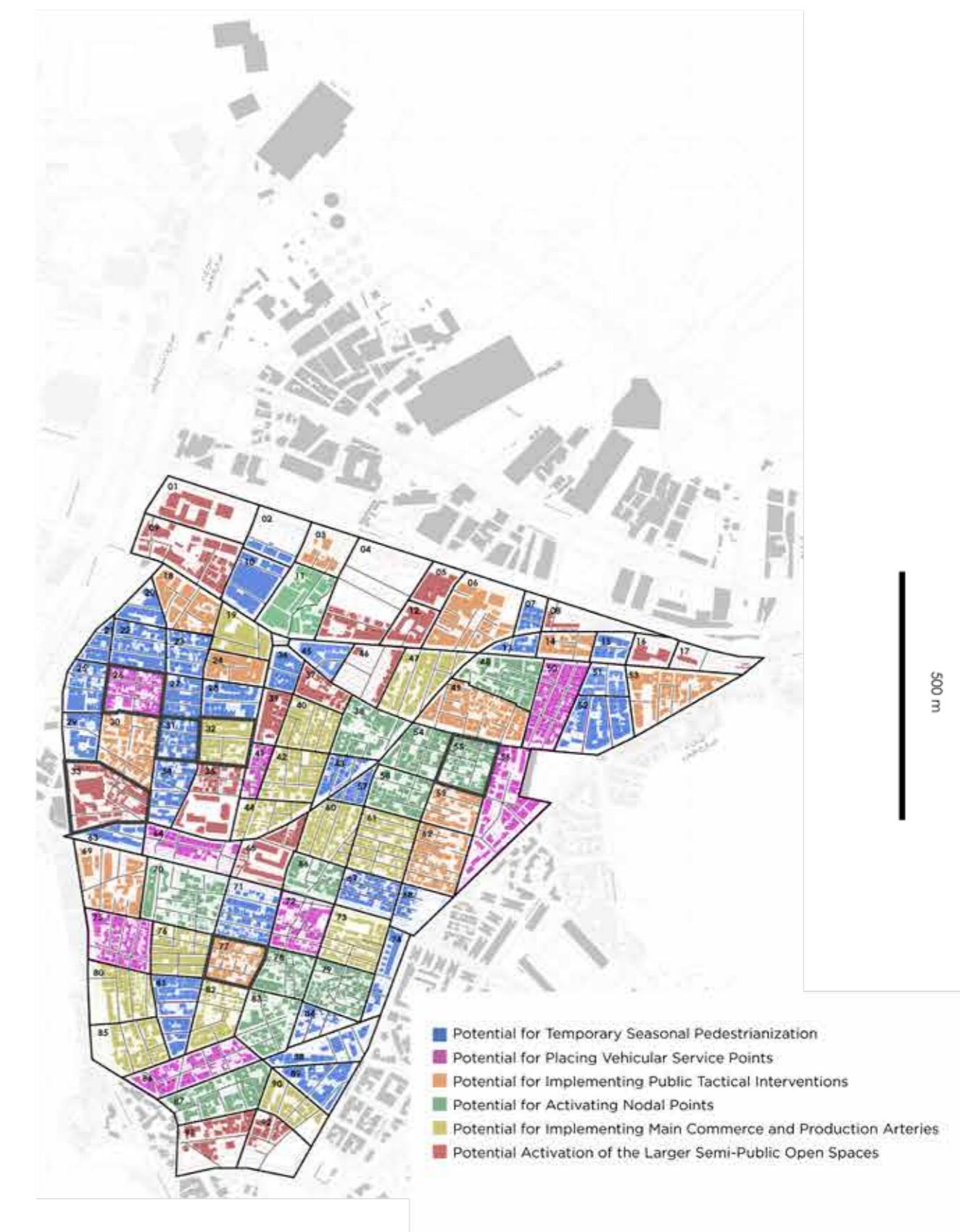
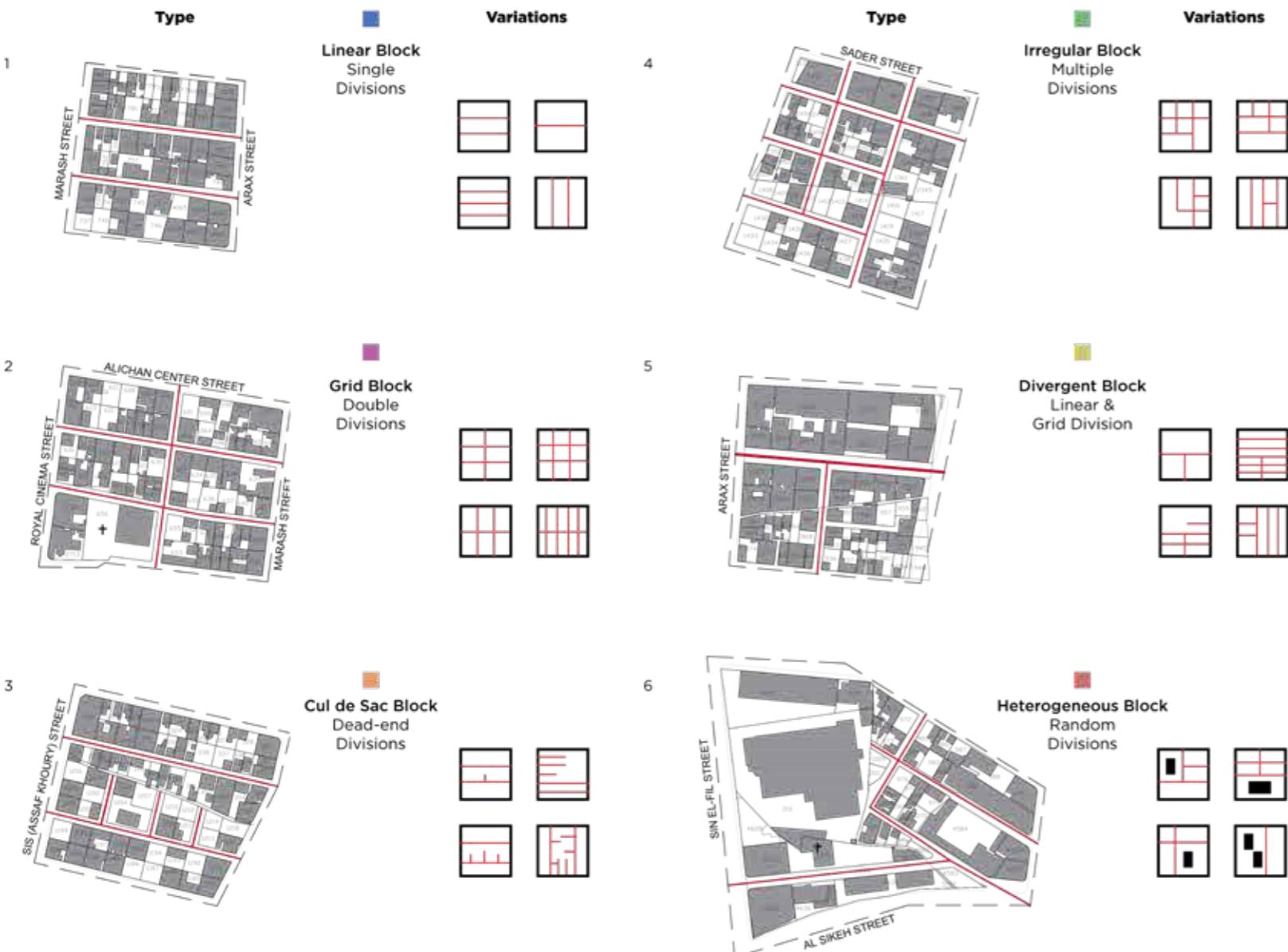
Based on the existing patches of Bourj Hammoud, and the main connection between each patch, a superblock grid system is proposed to be overlayed onto the existing street system to introduce a hierarchy of functions, reinforce pedestrian flows in the region and establish the overall continuity of the Bourj Hammoud region.



Employing Superblock Formations

Temporary Interventions

The classifications for each superblock allows for identifying temporary projects and their location within the greater context of Bourj Hammoud, each class maintains a specific arrangement that aligns best to the several tactical interventions identified for this project such as the seasonal streets, open space activation, Nodal point pedestrianization.

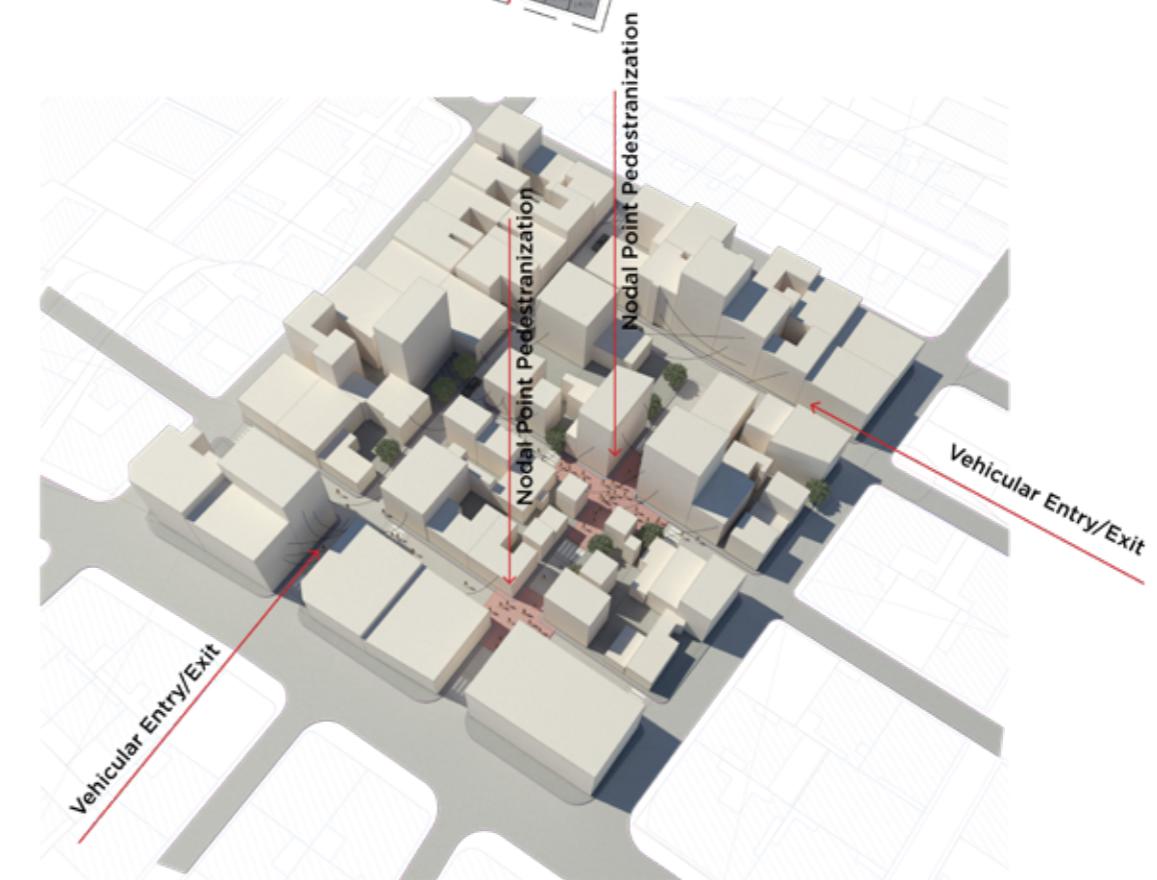


Employing Superblock Formations

Single division blocks are ideal for the adoption of temporary pedestrian streets because of the limited intersections within the superblock. Whereas the irregular superblock provides an opportunity to take advantage of the central nodal points that could serve as temporary public spaces whereas the outer streets could provide entry and exit for vehicular flow, additionally the irregular grid contains several residual spaces for potential activation.



Irregular Block
Multiple Divisions

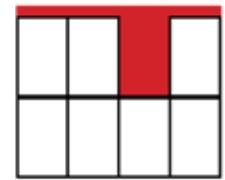


Tactical Activation of Public Space

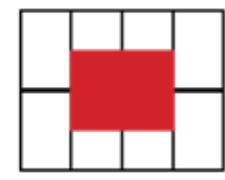
Mirror Bourj Hammoud's Dynamism

Bourj Hammoud's lively streets, usually serve as platforms for a variety of activities, but also cause street congestions, a way to free up the streets for more scheduled interventions, is to spread out those activities along the several open space pockets scattered across the region's fabric.

Urban Block



Extroverted Spaces
usually outside of the block and overlooking the street.

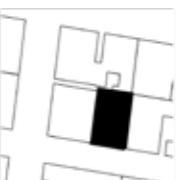


Introverted Spaces
usually inside the urban block and defined by several buildings, is usually semi-public.



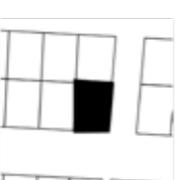
Mixed Spaces
usually extends from the street towards the inner part of the block forming a linear or a dead-end type of space.

Single-side Plot



For local production and display of local crafts.

Corner Plot



For open air markets and selling local goods.

Linear Street Space



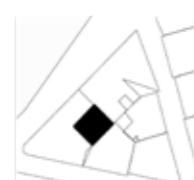
Small pedestrian platform and seating by the street

Island Open Space



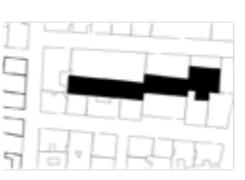
For larger events such as exhibitions and performances.

Courtyard Space



for enclosed gardens, Urban greening and inner plazas

Interconnected inner spaces



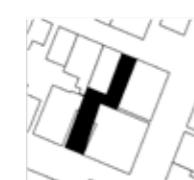
For conducting larger community events

Merged street



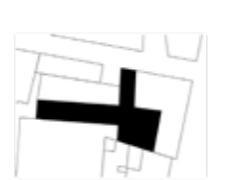
For providing safer children playgrounds,

Extended Space



For implementing bike lanes within the enclosed space

Combination Space

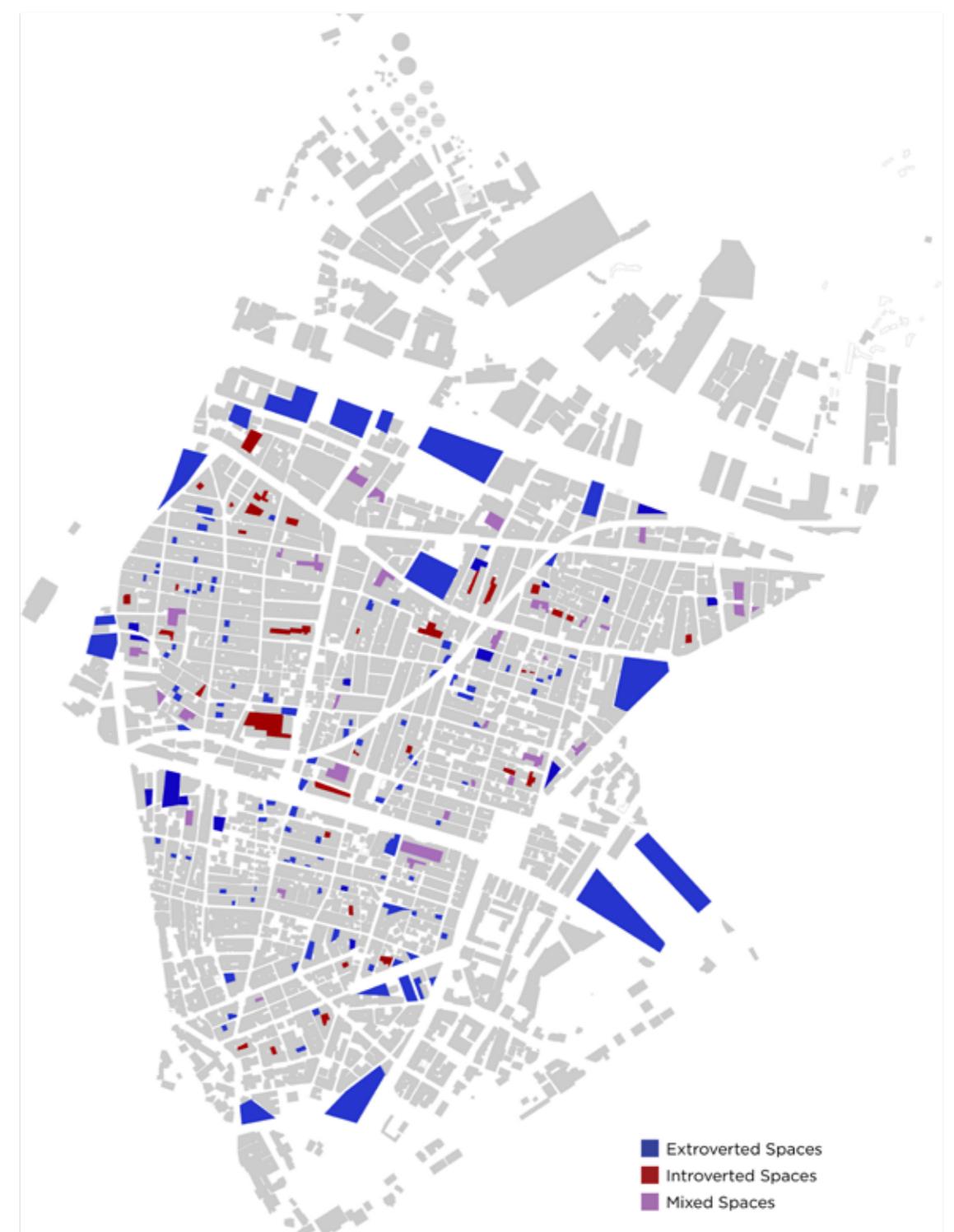


For creating a variety of activities along the extension of the space that feeds off the main

Semi-Public Space



For larger semi-private events, that require a level of enclosure

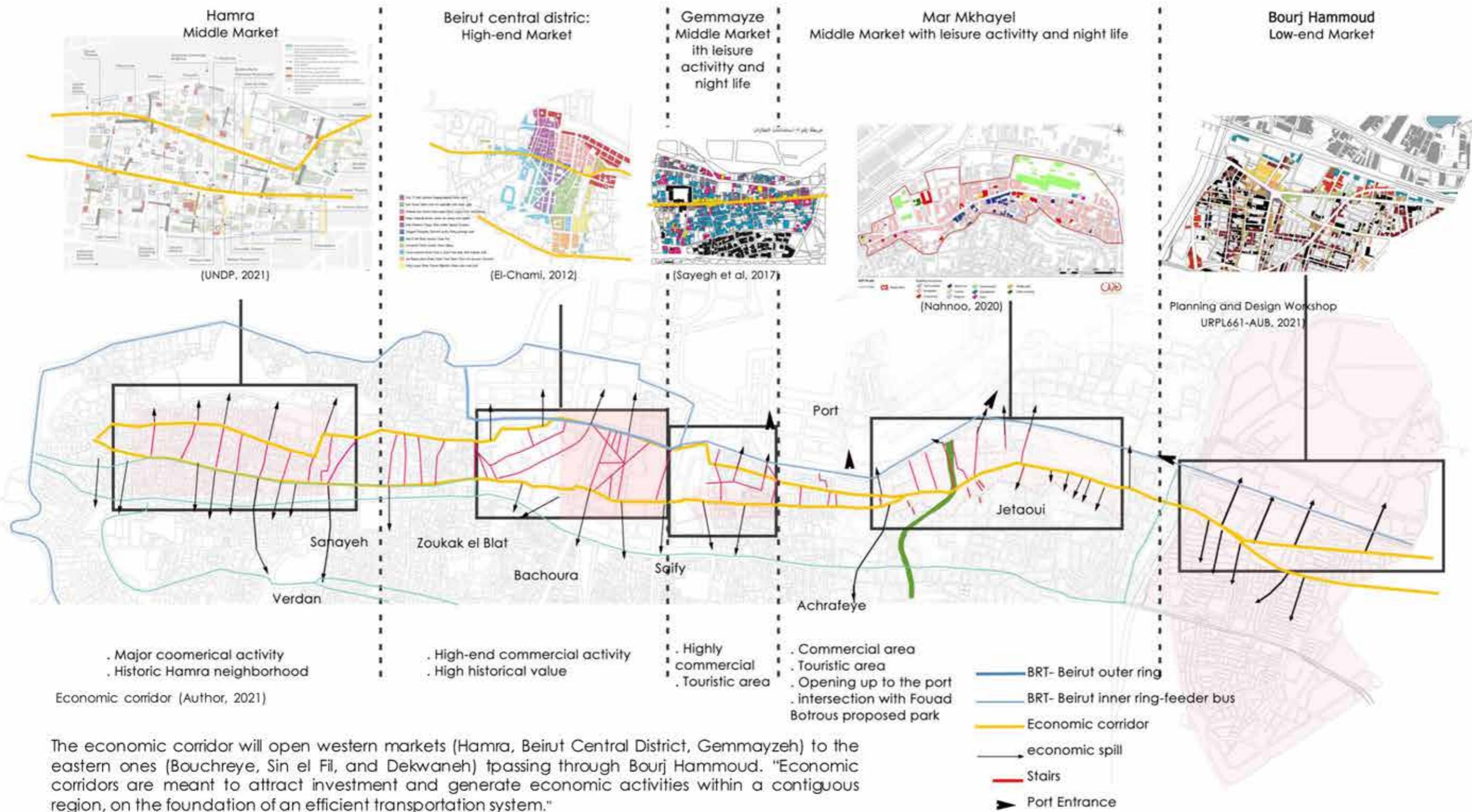


Metropolitan Scale: Reposition market at a metropolitan scale

Connecting markets horizontally at a metropolitan scale (Hamra, Beirut Central District, Gemmayze, Mar Mkhayel)

Economic corridors

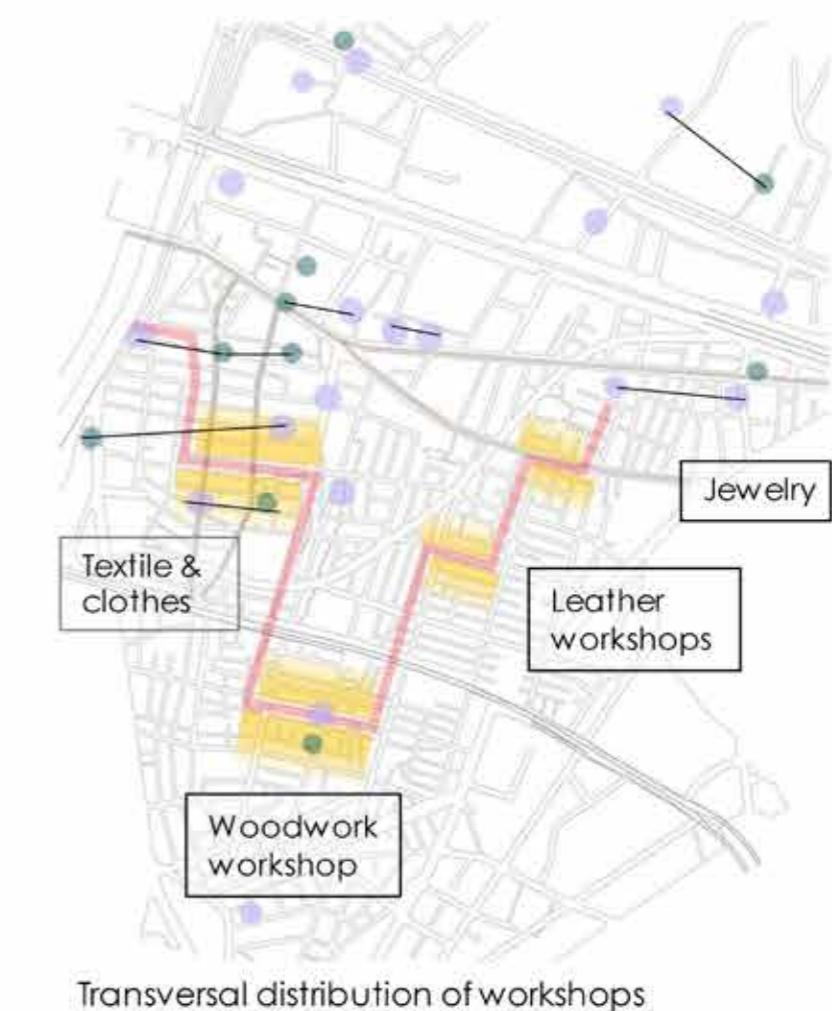
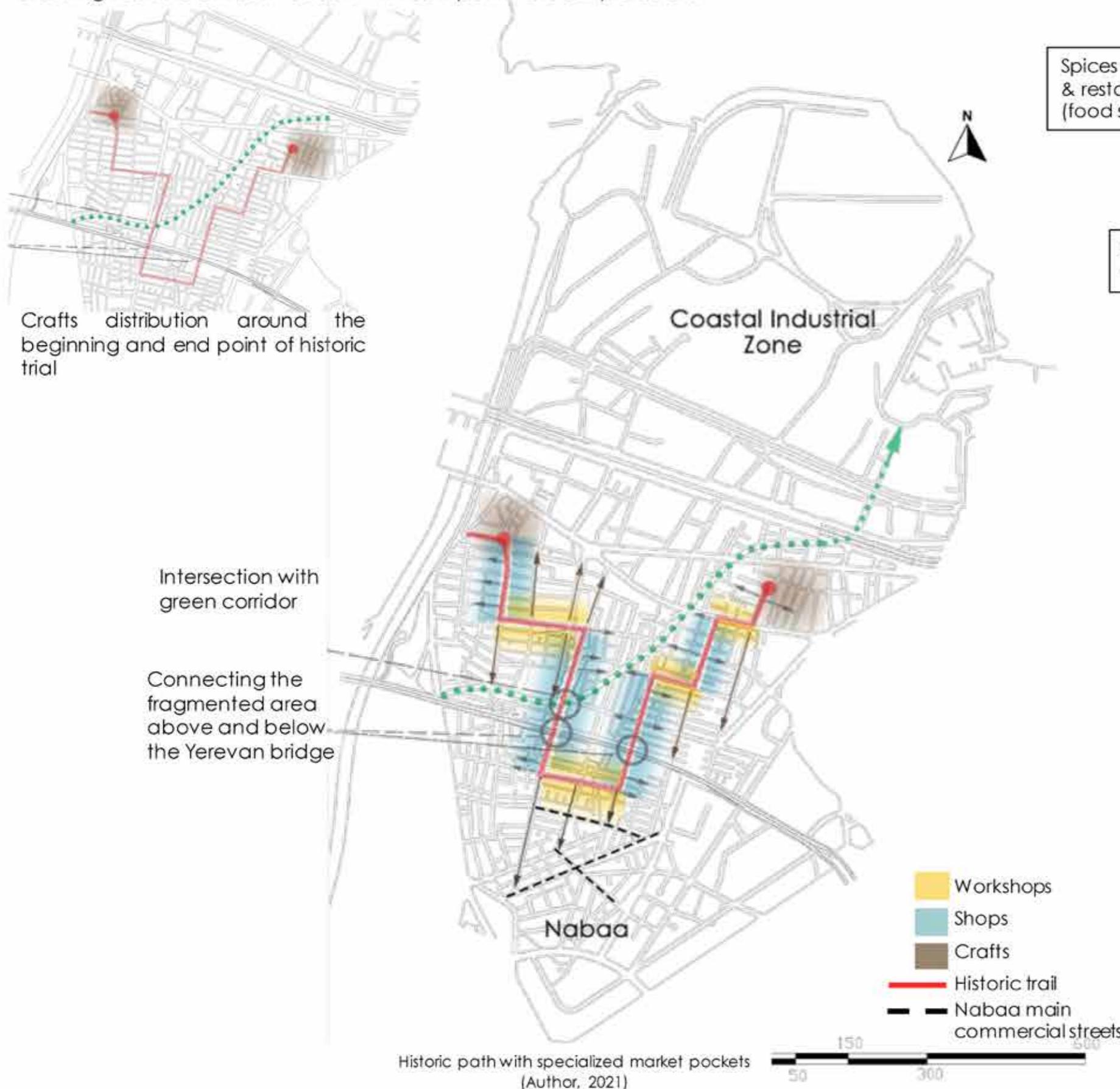
"connect economic agents along a defined geography. They provide connection between economic nodes or hubs, usually centered on urban landscapes, in which large amount of economic resources and actors are concentrated." (Brunner, 2013)



Historic Core : Reinforcing the Identity of Economic Clusters of Specialized Markets

Pockets of specialized markets were proposed based on the agglomeration of shop types. These clusters were located along the historic path which will serve as a connecting spine between market pockets. Thus, creating touristic attractive souk with competitive local products.

The historic trial connects the fragmented spatial districts of BH(Nabaa and the middle geographical area)



Internal blocks: Circular Economy

It maximizes the life of a product in order to extract the maximum value before turning them into new materials or products.

It is based on 3 principles:

1. Design out waste and pollution
2. Keep products in use
3. Regenerate natural systems

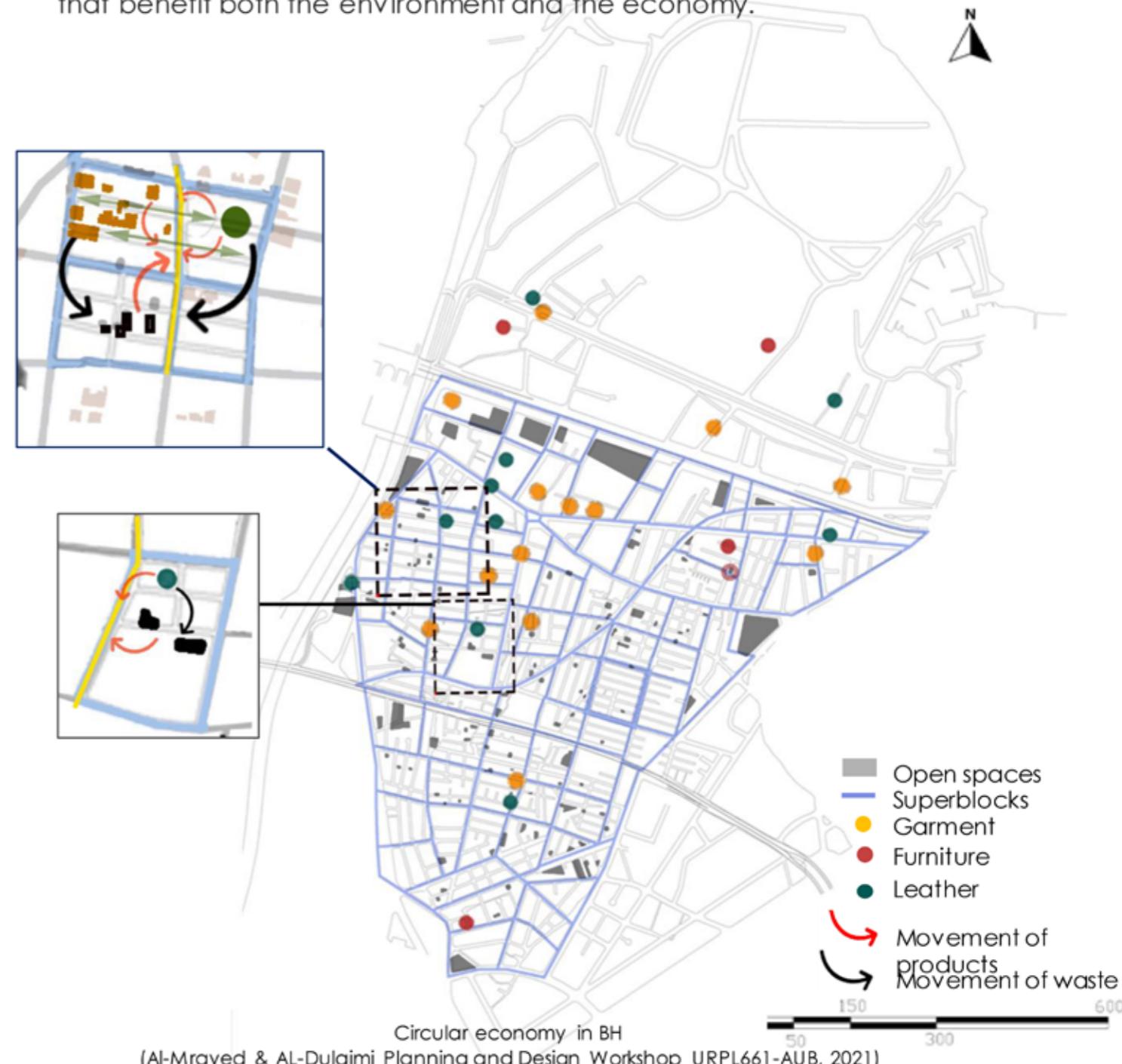
Current Issues in Bourj Hammoud	Circular Economy
Limited resources	Saves resources
Unemployment crisis	Creates local jobs
Tremendous decline in purchasing power	Lowers the purchasing value of the produced goods
Waste crisis	Minimizes waste
Deteriorated environment	Reduces the stress on the environment

AL-Dulaimi Planning and Design Workshop URPL661-AUB, 2021

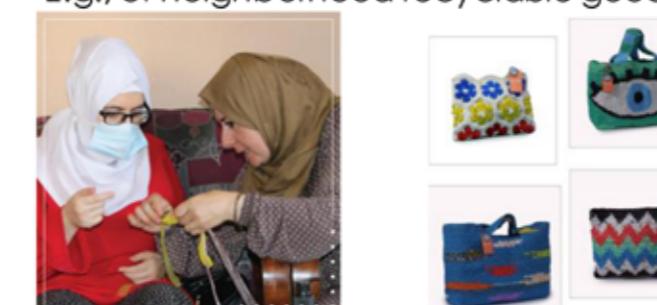
Industry Type	Problem	Target through circular economy
Garments	Billions of clothing thrown away after being used for few times."	Reduce products value, cut down waste and harmful environmental impacts.
Food	A third of the world's food gets thrown away creating methane gas in landfills	Minimize food waste, provide food security,
Furniture	Generate pollution during the manufacturing phase	Reduce waste and lower the cost of products.
Industrial facilities	A tenth of industrial electricity consumption is used for compressed air	Shared services to minimize
Jewelry	No issues regarding this industry since most of the components that go into making it are entirely recyclable	Expand the jewelry market of Bourj Hammoud to attract jewelry designers and open up the market

AL-Dulaimi Planning and Design Workshop URPL661-AUB, 2021

In Bourj Hammoud the open spaces will serve as production spaces for recyclable goods. This intervention will activate business on the secondary and tertiary roads as it will feed the market with another type of products that benefit both the environment and the economy.



E.g., of neighborhood recyclable goods: Jellyfish



Jellyfish Facebook page:

<https://www.facebook.com/jellyfish.ecoo/photos/1219372308460048>

Tactical Interventions: Enhancing Social Life

These interventions put together projects to enhance social life through promoting public space

Public art

Public art as a Temporary urbanism strategy aims to:

1. Highlights the value of outdoor spaces for social life
2. Enhances community cohesion
3. Improves local tourism.
4. Boosts street attractiveness and improves its image.

(The importance of art in public spaces: The European Forum for Urban Security, N.D.)



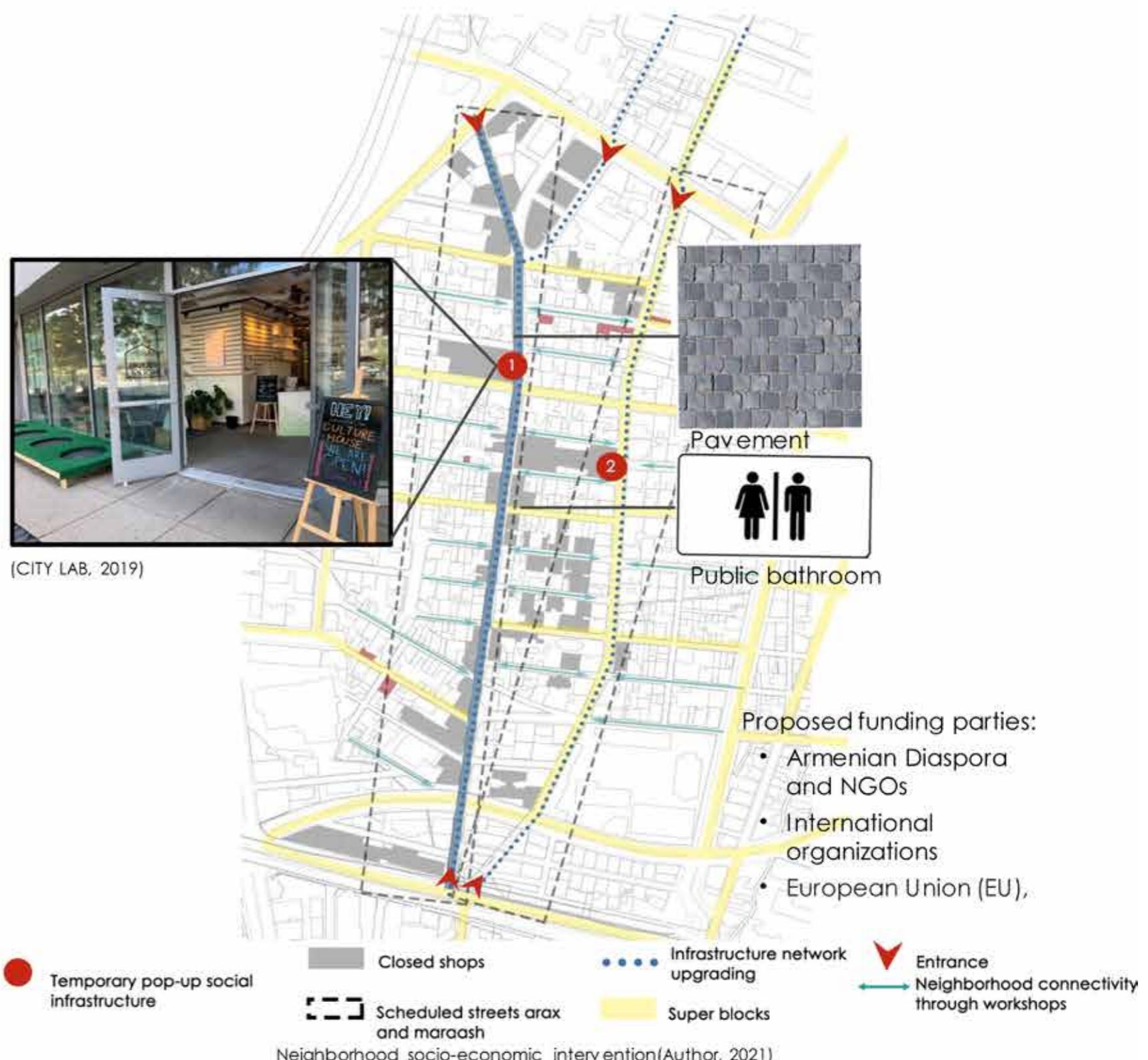
(CITY LAB, 2019)

Pop-up social infrastructure (city Lab, 2019)

Tactical urbanist approach physically occupies vacant stores and turn them into pop-up public places.

Advantage:

It gives people a reason to stay, and that, in turn, supports the businesses that are still open, consequently preventing vacancy

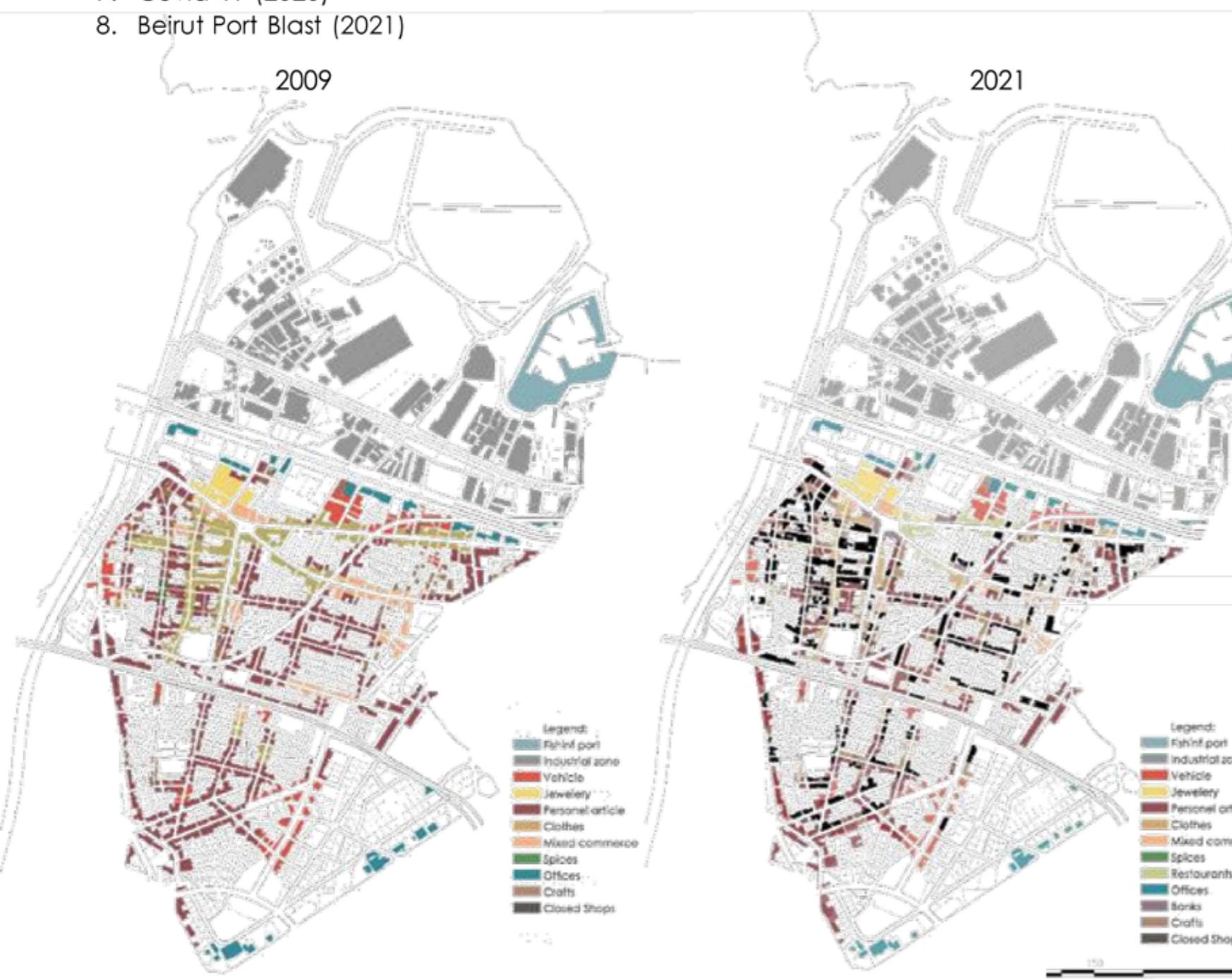


Market Closure

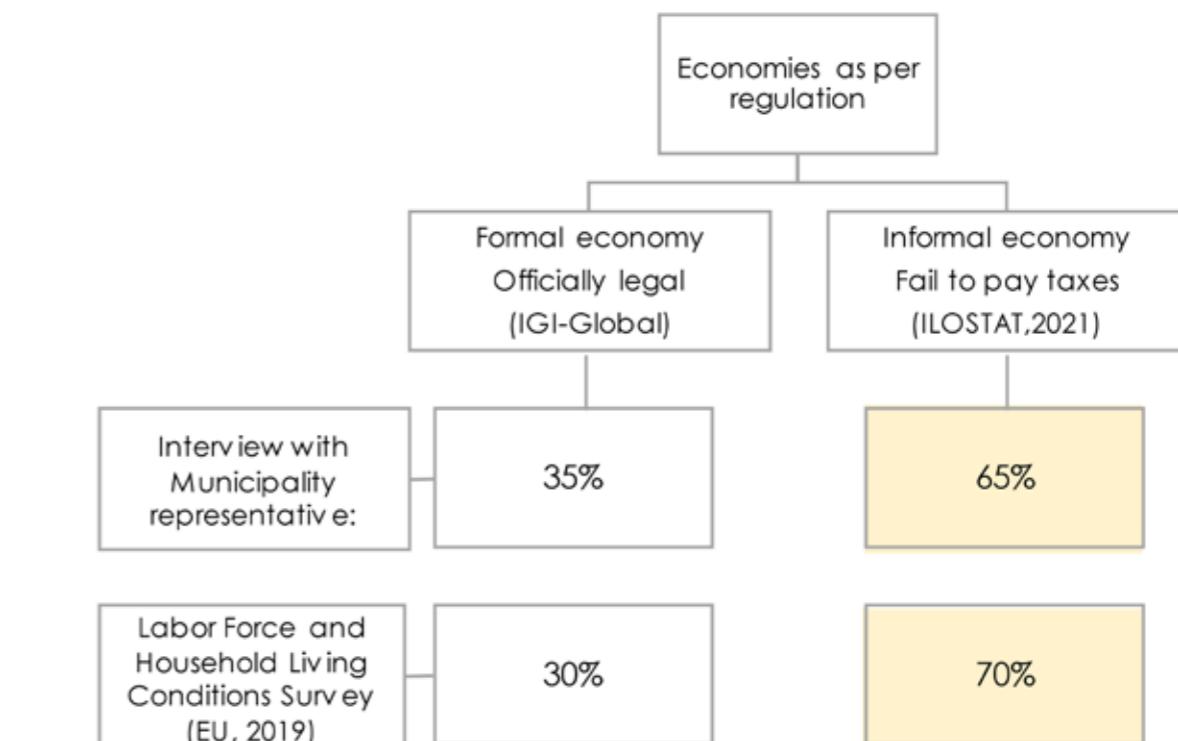
Causes: (Lebanese craftsmen insights for policy making, 2019)

1. Globalization and mechanization (local products replaced by Chinese and Turkish products)
2. Decay of infrastructural facilities (high traffic along commercial streets with no parking)
3. Migration of craftsmen
4. Loss of attractiveness over the metropolitan scale
5. Syrian Refugee crisis (2011)
6. Economic crisis (2019)
7. Covid-19 (2020)
8. Beirut Port Blast (2021)

The percentage of closure in BH reached up to 15% on major roads and 30% on secondary ones, leaving many businesses operating within the informal economy and not paying municipal taxes. (Nahnoo, 2019)



Economic function in BH (Al-Banna Planning and Design Workshop URPL661-AUB, 2021)



Closed shops on primary roads (Author, 2021)

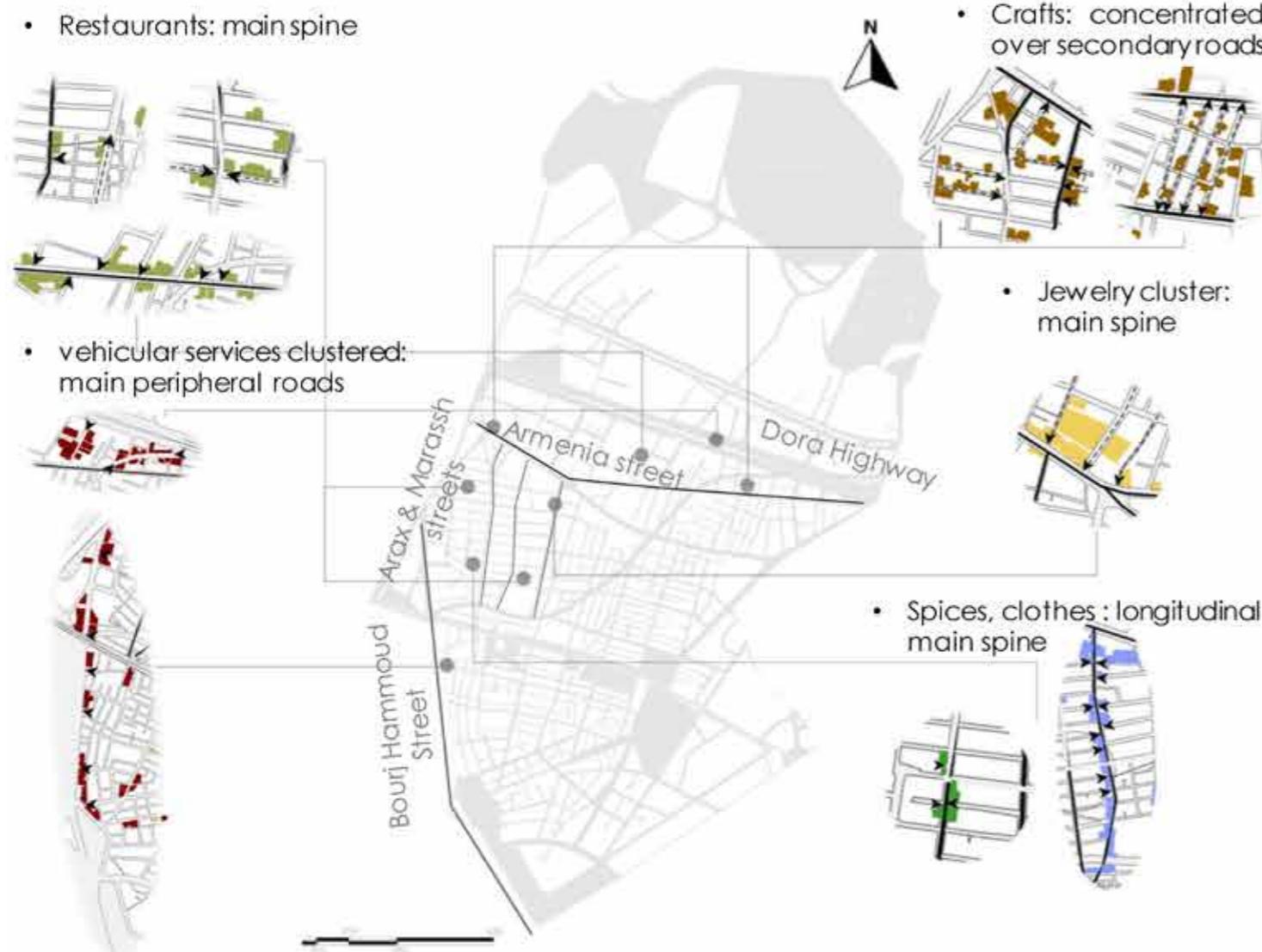


Closed shops on secondary roads (Author, 2021)

Fragmented Market

Overlapping street analysis with commercial clusters

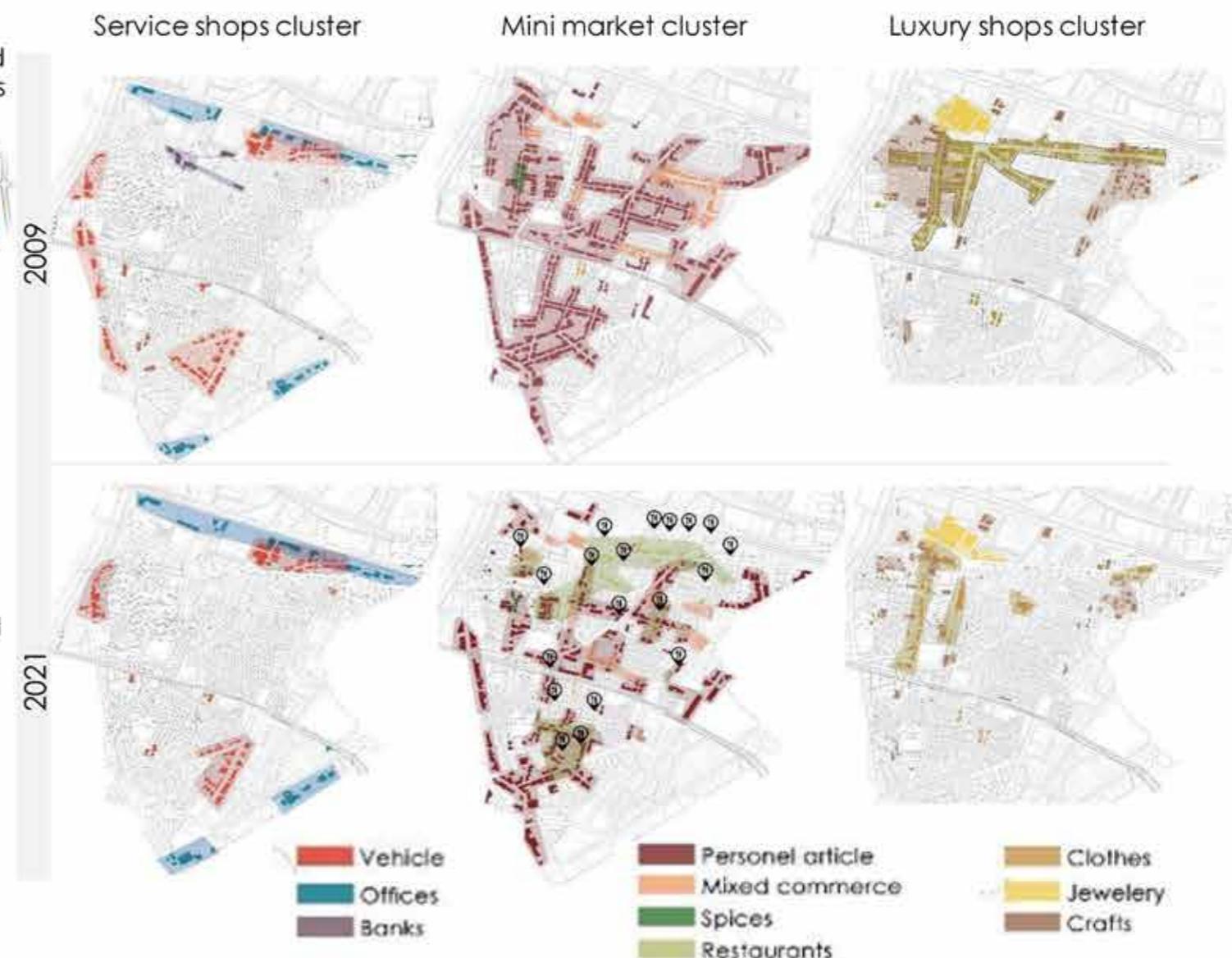
Each specialized cluster of shop is located over a certain type of street. Their geographical location is intertwined with type of commercial activity or service, type of customers and age business.



Overlapping the commercial activity with the spatial structure of streets (El Mrayed, Planning and Design Workshop URPL661-AUB, 2021)

From Agglomeration to Fragmentation

The changes in the past 12 years indicates transformation from a cluster agglomeration of businesses into a fragmented one. The loss in character identity and continuity impacted the attractiveness and competition.



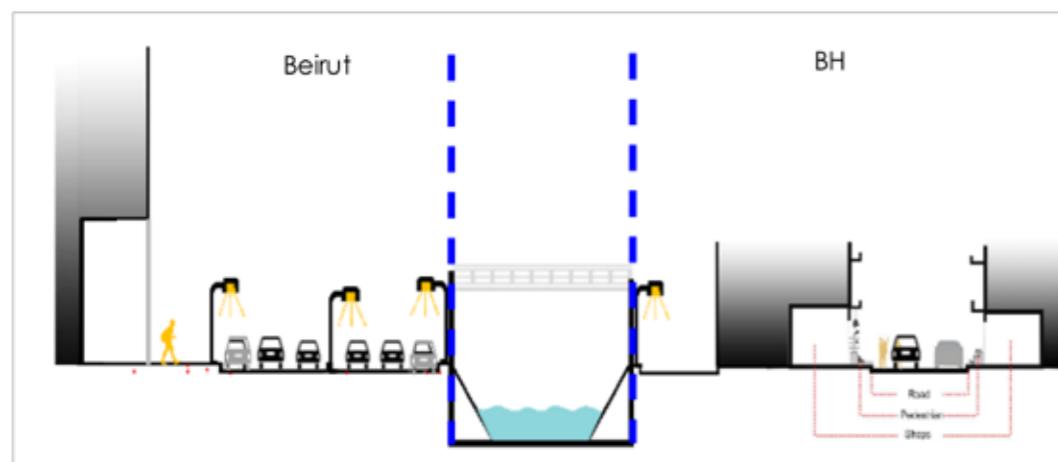
Comparison between commercial clusters in 2009 and 2021 (Author, 2021)

Spatial Separation: Natural and Infrastructural Leading to Economic Obstruction

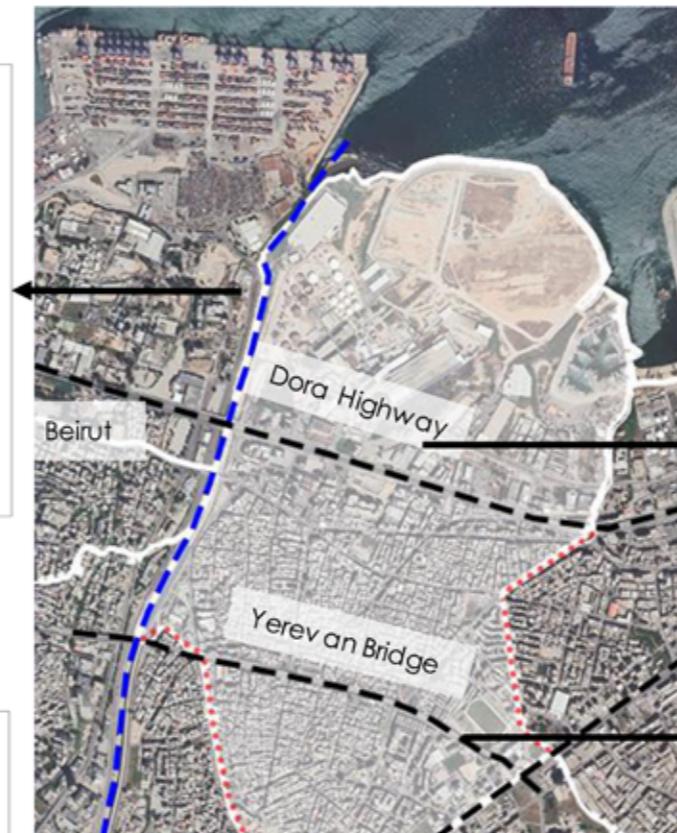
Edges Accessibility

In his study about boundaries and edges, Lynch (1960) proposed that the former should be accessible to prevent them from forming a barriers or fragmenting elements. Consequently, spatial accessibility over edges creates a spill over which is identified through improved economic activity (Martínez, 2021)

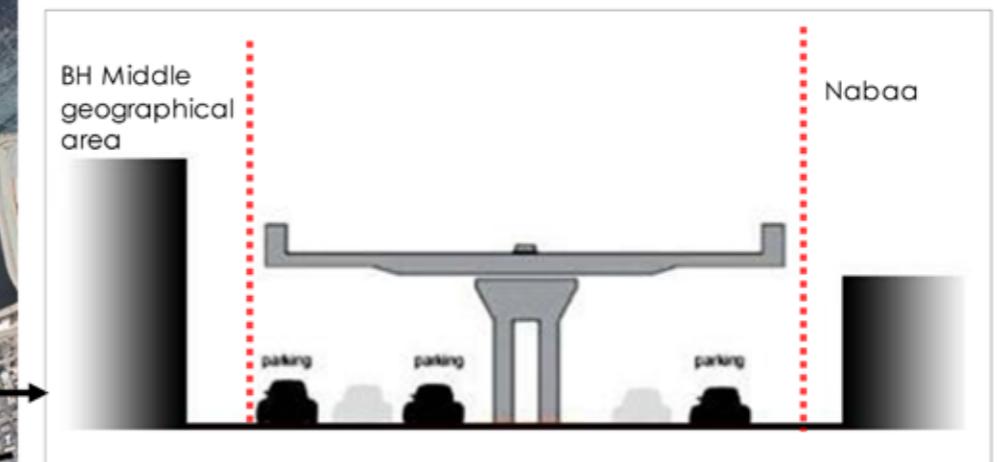
Edge Natural and Infrastructural separation



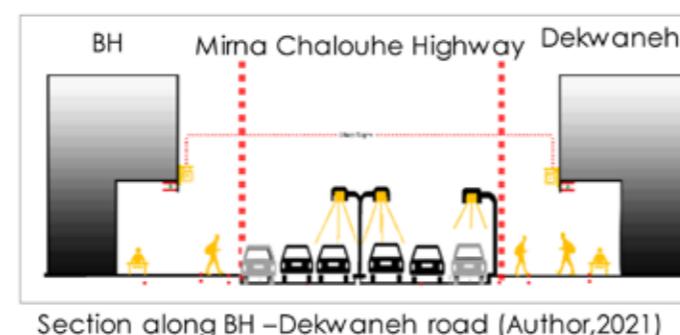
Section along Beirut river (Author,2021)



Internal Infrastructural separation



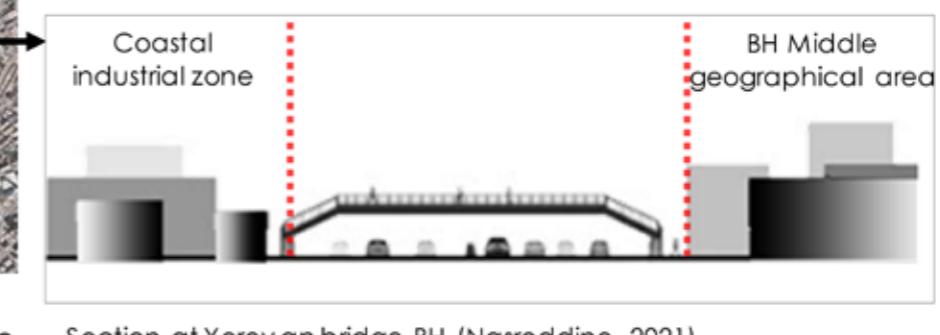
Section at Dora highway- BH
(<https://spaceofflowsstudio.blogspot.com/2013/11/>)



Section along BH -Dekwaneh road (Author,2021)



Ariel Map showing roads and network in BH (Bourj Hammoud-Brief city profile-Harmandayan, 2009)



Section at Yerevan bridge-BH (Nasreddine, 2021)

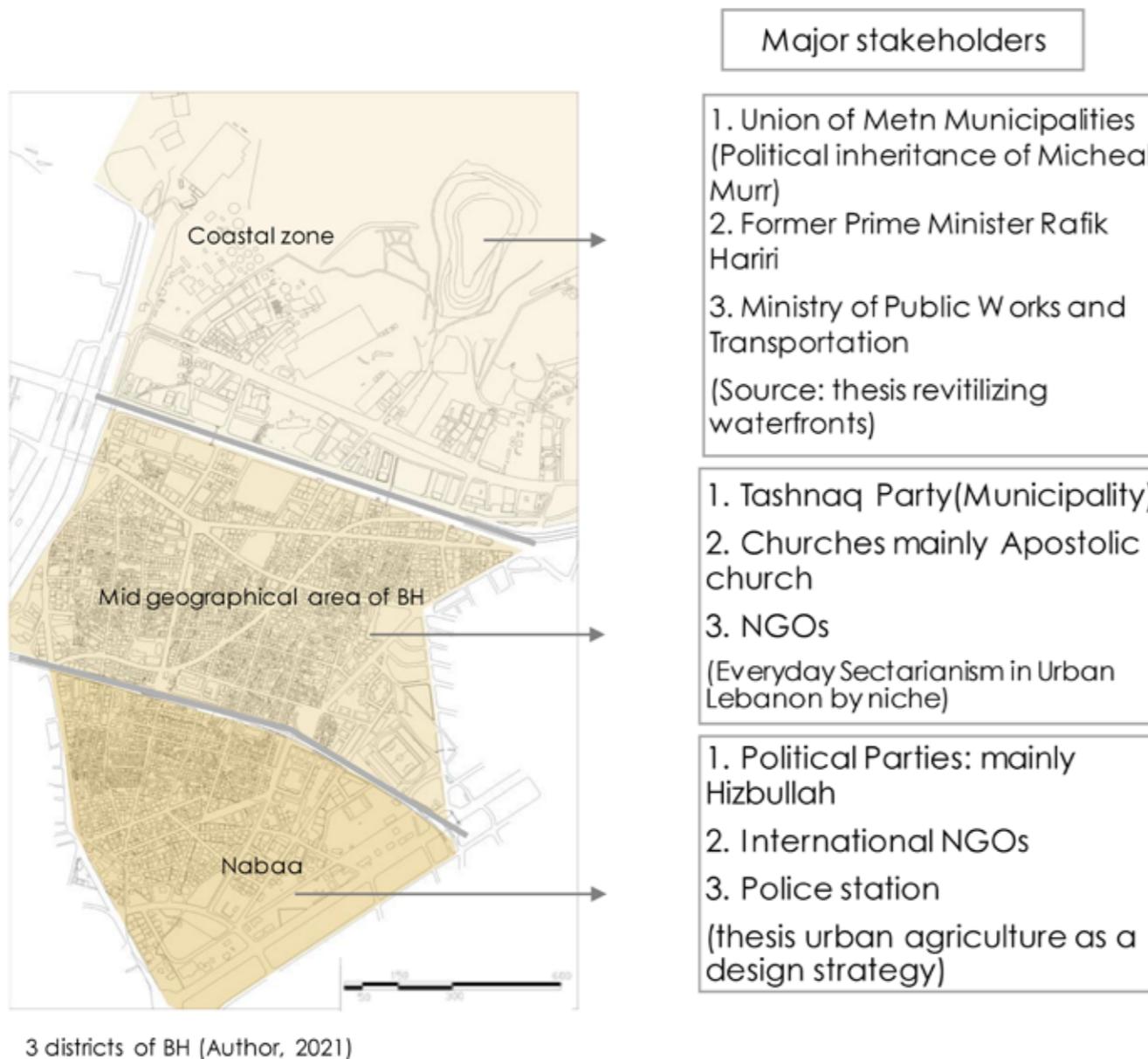
Bourj Hammoud is spatially separated from its surrounding mainly Beirut and . Thus, relying on Martínez (2021) this hindered the economic spill over from the neighboring suburbs, resulting in economic deterioration.

Social Fragmentation

Major Stakeholders

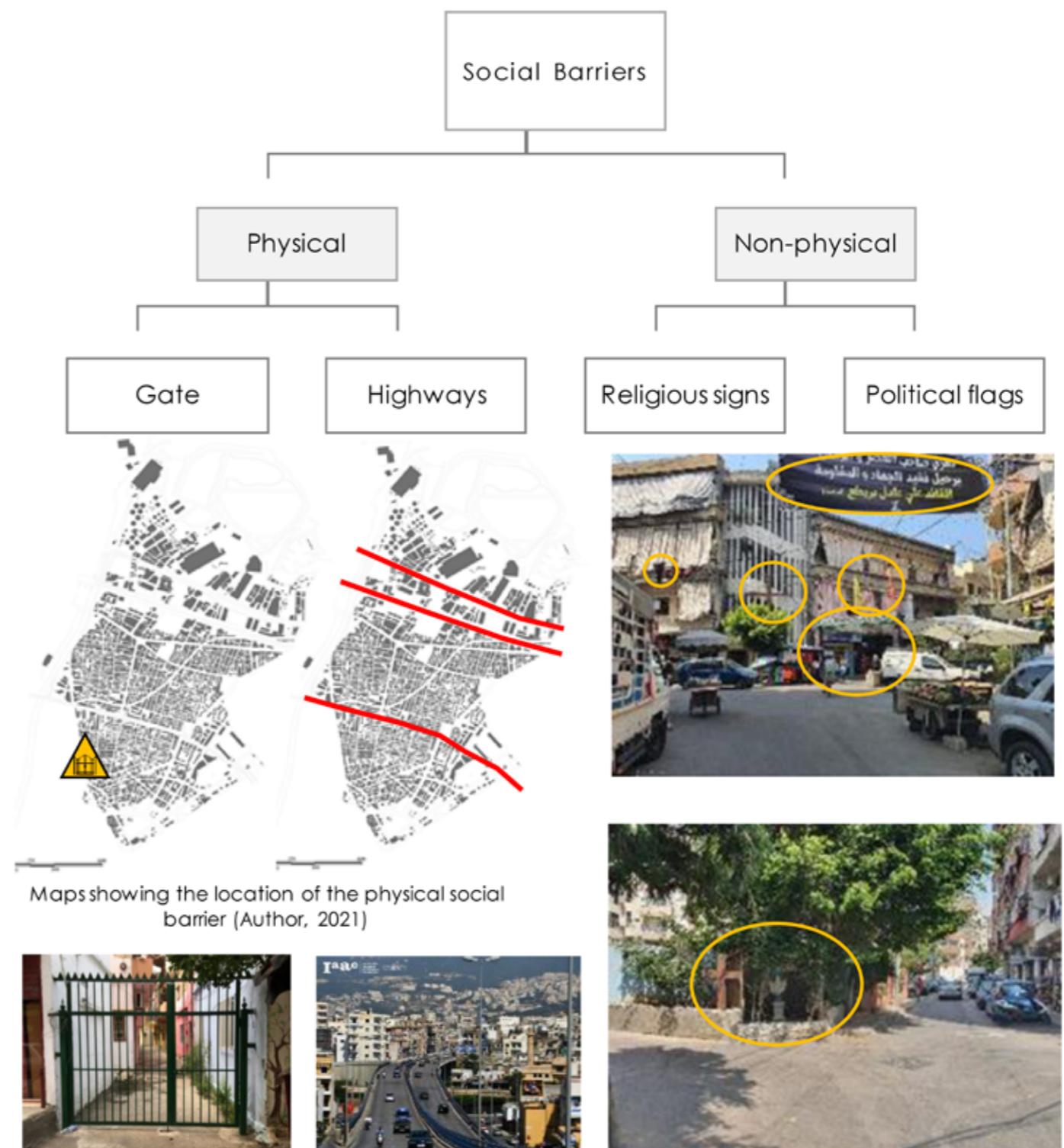
The density of population in BH is 112,500 persons/km² it consists of more than 7 nationalities, 2 religious groups, and 4 main political parties (Bourj Hammoud-Brief city profile -Harmandayan, 2009).

This diversity was reflected in the stakeholders, who varied between different geographical area.



Social Barriers

The diverse social fabric caused social fragmentation which was translated through various physical and non-physical barriers.



Bourj Hammoud is a large fragmented area controlled by political parties, with little to no participation of local community groups