

# (Re)Levant

Former railway networks in the Levant as a backbone  
for regional cooperation and social inclusion



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Former railway networks in the Levant as a backbone for regional cooperation and social inclusion.

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# Preface

Being a crossroads between Asia, Europe and Africa, with access to the Mediterranean Sea and places with religious importance, the Levant region has become a contested region as tensions are long-lasting for almost a century.

Today, the region is divided and is characterized by impermeable borders and lack of cooperation and communication between nations. Nevertheless, while the divisions and conflicts are still ongoing, I found a special interest in a shared heritage, history, infrastructure, and architectural typology, which can still be found around the region. I am referring to the former railway system, a network that was built during the Ottoman empire and after WWI, which is the focus of this work. The thesis analyzes the historical importance and the current condition of the former railway network, and it explores its potentials to reimagine an alternative future for the Levant region.

# Motivation

Growing up in the conflicted country of Israel, I was not able to ignore the powerful relationship between governance, political narratives, and the built environment. During my bachelor studies, I was overwhelmed by the profound relationship between the built shape of my country and historical and political events.

In Israel, the political reality has resulted in the building of and the maintaining of segregated societies. This state did not hurt only one population, but it created a complex situation in which various groups of people are living in an unjust reality (that this short motivation letter is too short to further elaborate on).

While this might come off as somewhat naive perspective, especially in light of the current political climate, I believe that urban planning and the design of the built environment, have to play a role in shaping alternative narratives. In my thesis project, I was hoping to engage in the idea of shifting the current planning systems in my region, from spaces of separation, fences, and walls, to spaces of coexistence, livelihood, and inclusiveness. Even if only by illustrating other possibilities. While such a shift in the built environment and planning process might take more than a few decades, I believe that discussing burning issues of urban segregation and divisions should start already today in order to achieve a more just environment.

# Abstract

This thesis focuses on the former railway network in the Levant region and aims to use it to promote cross-border cooperation, social interaction, and overall sustainability. The thesis relates the regional division and the historic railway network, based on the understanding that the demolition of railroads, during the mid 20th century, was a tactic means to ensure and maintain separation between nation-states.

The first part includes an introduction to the Levant region and the former railway lines. Due to limitations and the scope of this master thesis, only a brief review of the region's conflict is introduced. In the second part, the methodological framework will be explained. The theoretical framework and the methodology were used to (a) relate the topics of former railway infrastructure and heritage values with sustainable development and cross-border cooperation, and to (b) develop planning and design approach to achieve the research aim. The next chapter includes the analysis of the spatial, social, and governance aspects of the division in the region. Yet, the analysis focus will be on the former railway line: its historic importance, its current condition, and the review of relevant future regional plans. Finally, the spatial planning vision, strategy, and design interventions illustrate how the research aim can be achieved. This part includes a regional plan and three intervention sites. The sites will demonstrate the regional implications on the local scale. The field trip and two case studies were important to the development of the suggested planning and design approach will also be reviewed. The project will conclude that the reuse of the former network in the Levant can help to establish cross-border relations yet, with some limitations.

It is important to mention that the overall approach of this thesis work is to use urban planning as a tool to suggest alternative future planning perspective for the region, considering the existing political structures to a limited extent.

# Keywords

Contested regions, Levant region, former railway networks, cross-border cooperation, sustainable development.





## PART 1 Introduction

This chapter provides a brief introduction to the Levant region and to the focus topic of the research - the former railway network.

FIG 1 The Levant region and the relevant research areas, satellite images with national borders marks (black lines).  
1. Lebanon  
2. Jordan  
3. Israel  
4. West-bank  
5. Gaza Strip



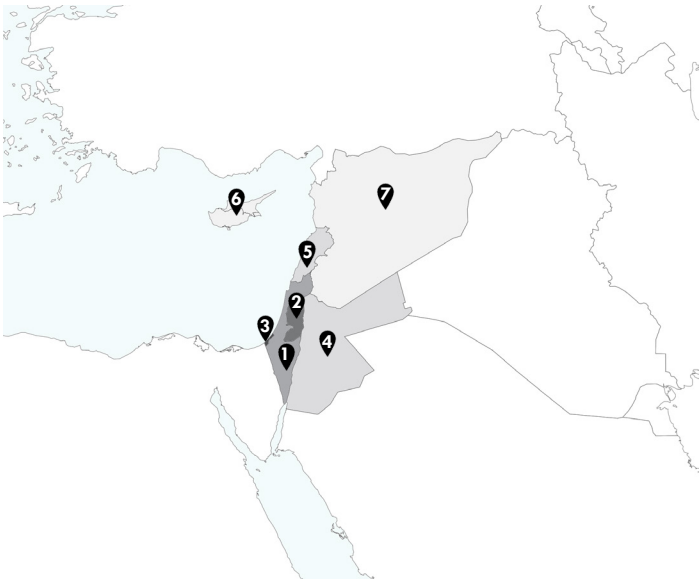
FIG 1.1 The Levant region as a cross-roads between Europe, Asia and Africa

- Countries located at the region
- Countries sometimes included in the region
- Entire territories historically included in the region



FIG 1.2 The Levant region and its nation countries, 1-5 will be included in the scope of the research

- |             |           |
|-------------|-----------|
| 1 Israel    | 6 Lebanon |
| 2 West bank | 7 Cyprus  |
| 3 Gaza      | 7 Syria   |
| 4 Jordan    |           |
- Will not be included within the scope of this work



# 01 Context

## 1.1 The Levant region - a divided region

The Levant region is located in the Eastern part of the Mediterranean. This geographical area is recognized with the name "Levant" since the late 15 century, deriving from the French language which means "rising", "shining" or "east" (where the sun shines). In the 20's century, this area is mainly referred to as the states of Syria, Lebanon, Palestine, Israel, Jordan, and Cyprus (Mansel, 2012).

Being located in a strategic location as a crossroads between three continents of Asia, Africa and Europe, with access to the Mediterranean Sea, and with relation to places with religious importance, this area has been a strategic position for ruling armies looking to establish themselves and gain control in the area (Hiltermann, 2018). The Levant region has become a region of constant conflict. Some disputes are battles within nations, as a younger generations challenge autocratic regimes in search for future opportunities and political reform. Others, fight nation against nation, over issues ranging from territorial disputes to religious tensions and battles over resource (ibid).



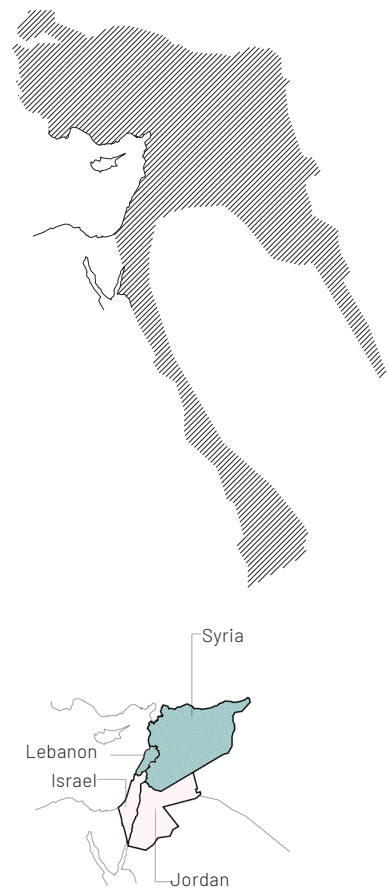


FIG 1.1.1 a diagram showing the territorial changes in the region. On the top, the Levant region before the formation of national borders, within the territory of the Ottoman Empire. On the bottom - the territory after it was divided into new states defined by clear boundaries after WWI.

FIG 1.1.2 The Levant region before the formation of nation-states, approximately around 1900. It is possible to see that the area which today consists of Syria, Lebanon, Israel, the west bank, and Jordan is one territory with no borders.

### 1.1.2 From a territorial sequence to a fragmented territory

At the beginning of the 20th century, the entire region was under the control of the Ottoman Empire. Ottoman Levant cities had existed between the 17th and 20th centuries, with diverse populations of Arabs, Christian Greeks and Armenians, French and Italian families, Jews, and Muslim Turks (Mansel, 2012). The Ottoman Empire encourages foreign merchants to move to certain cities for trade purposes. Merchants, travelers, missionaries and Catholic priests contributed to the diversity established in cities like Istanbul, Izmir (Turkey), Alexandria (Egypt), and Beirut (Lebanon) (ibid). Community relationships (economic and cultural) existed throughout this region between areas which are now recognized as the states of Lebanon, Israel, Syria and Egypt. Conflict and tension between different groups existed during the Ottoman times. Yet, generally, these tensions and their resolution, took place among local communities, it was rarely related to the topic of the ruling of the Empire and did not hold a national character until the 19th century (ibid). Nevertheless, "centuries of coexistence and multiculturalism came under threat soon after the collapse of the Ottoman Empire, and their decline started as the map of the Middle East was redrawn" (Alemdar, 2017).

At the beginning of the 20's century and at the end of WWI, Allied Powers dismantled the Ottoman Empire and named two of the winning allies, Britain and France, to gained control over the area (Hiltermann, 2018). New Boundaries divided the territory (fig 4) and borders were drawn to suit European interests, often neglecting local history and traditions (ibid). This act intensified borders and frontiers and the existing relationships between communities were disconnected at once. Later on, with the rise of nationalism during the 19th century and due to a line of political developments in the region, the borders of the 20's century became impermeable. Currently, Spatial fragmentation takes a physical form with the development of "conflict infrastructure" which constitutes of borders, walls, buffer zones and checkpoints (Calami & Charlsworth, 2012). Regional cooperation and social integration are far from reach.

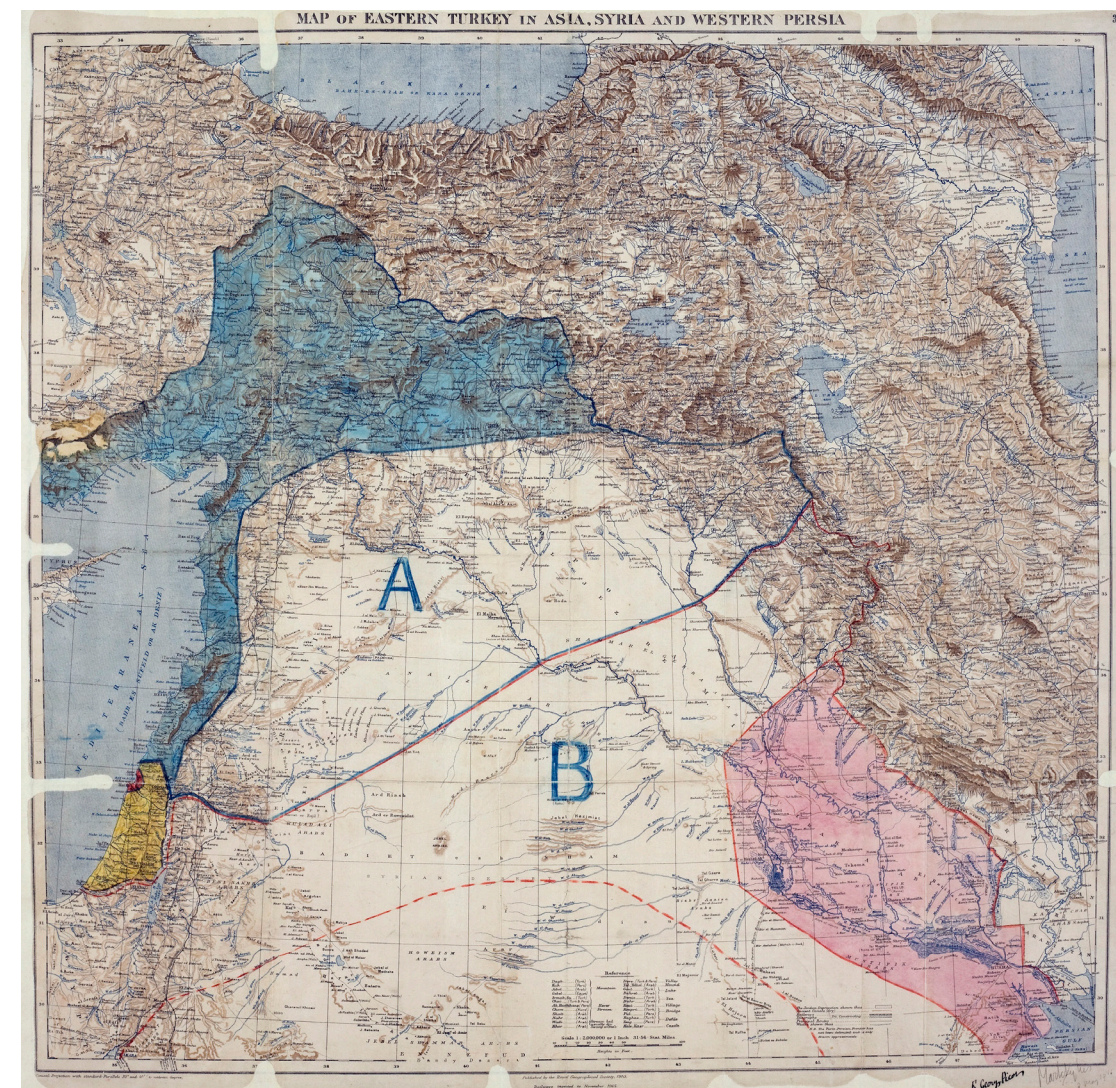


FIG 1.1.3 The Levant region initial division map, according to the Sykes-Picot Agreement, 1916. The Ottoman Empire territories were divided into a British zone of influence (B) and a French zone of influence (A). The area in yellow, known as Palestine-Israel today, was intended to be under international rule.



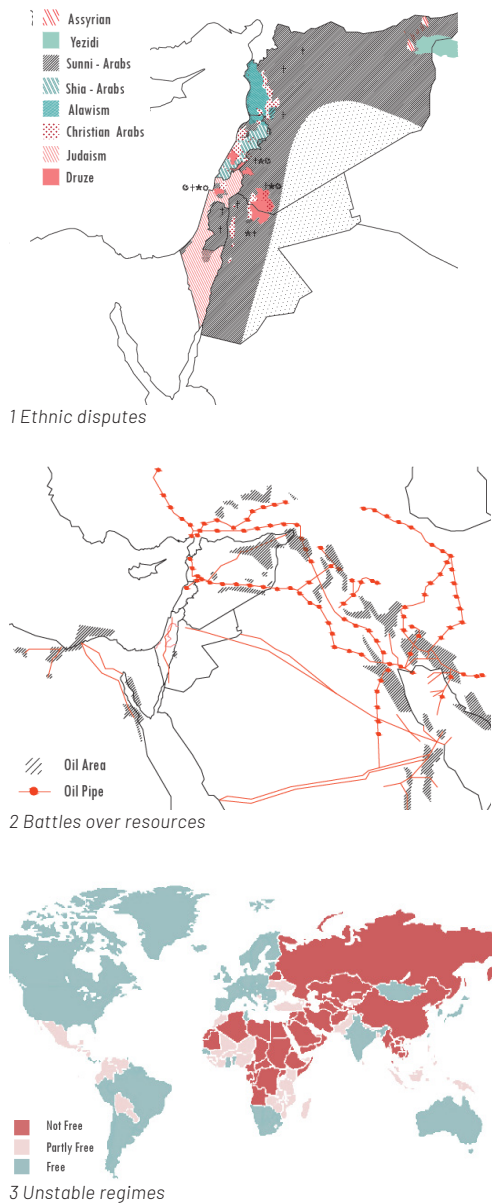


FIG 1.1.4 TOP: the multiple Ethnic-religious groups in the region have contributed to tensions in the region over the years. Middle: A map with Gas sources and pipes from the Gulf area to the Levant region. The competition over access and control over oil is still evident Bottom: a map indicating the freedom of political rights and civil liberties, 2019. modified from: [freedomhouse.org](https://freedomhouse.org)

### 1.1.3 A contested region

The first process of separation of the region was defined during the time of the British and French mandate at the beginning of the 20th century, yet this process increased over the years. Currently, the region is a contested region. Many of the regions' problems today cannot be related purely to the division made during the early 20's century, as internal struggles over ideology, politic and resource allocation shaped the region to its current state (Hiltermann, 2018).

The conflict reality in this region is complexed, and it is defined by many factors and actors, changing from country to country. In the scope of this work, I will briefly mention some of the main reasons for the disputes:

#### 1. Post-colonial region:

As mentioned before, in the act of dividing the region, boundaries were drawn to suit European interests, often neglecting local history and traditions (Hiltermann, 2018). France and Britain aimed to keep control over this area due to several reasons such as: defending the route to India, the acquisition of oil and military bases, keeping out rivals and protect Christian holy places (ibid). Almost immediately after the borders where drawn, Arab resistance movements arise to challenge European dominance (ibid). To gain control over the communities, a part of the mandate strategy was to favor minority groups (especially religious minorities) as a tool to 'divide-and-rule', and as a means to prevent majorities from gaining power and independence (ibid). This increased tensions between groups over control and political power. With the formation of new borders, new and independent states developed. Syria, Lebanon, Jordan and later on Israel, emerged as new nation-states as the population struggles to gain independence from the British and French mandate. Throughout the years, the states have battled over resources, territory, religious and cultural believes and political control (ibid).

#### 2. Ethnic and religious tensions:

The Levant region have multiple ethnic-religious groups that share the same territory under one sovereign state (see fig 1.1.4-1). From the colonial times and until this day, this is a reason for many tensions, especially when one group tries to impose its believes and culture on different minorities, and vice versa, when a minority controls a majority and imposes its authority on it (as described above). The majority population of the Levant region is Muslim. Most of them Sunni sect, and the smaller part Shiite sect. Other smaller religious groups in the region are, Jews, Druze, Alawite, Christian Arabs, Coptic and Maronite (there are other minorities in the region, but these are the main groups) (Middle East, Crossroads of Faith and Conflict, 2002).

#### 3. Battles over resources:

65 percent of the world's known petroleum reserves is located in the Middle East, where supplies could be exhausted in about 85 years if no new reserves are found. (Middle East, Crossroads of Faith and Conflict, 2002). While the states of the Levant are not rich with oil, pipelines pass through their territories as part of the export process, therefore the oil is one of the important industries in these countries. Accordingly, as western countries are trying to increase their oil access, they try to gain influence over the countries of the Levant supplying it (Hiltermann, 2018). Oil-related tensions are still evident as countries in the region are competing on access, export, and control.



FIG 1.1.5 + 1.1.6 Protest in Lebanon against corruption, an out-of-touch political class, a growing economic crisis and failure of basic services. October, 2019

FIG 1.1.7 a map describing the Arab spring during the summer of 2012

Moreover, the scarcity of another precious fluid - water, limits the development with growing population rates (Middle East, Crossroads of Faith and Conflict, 2002). Water is one of the most critical resources in the region, and it was at the heart of conflict and wars in the past. A key issue dividing Israel and Arab neighbors, for example, was the control of the tributaries of the Jordan River and West Bank aquifers. Water shortage is an increasing problem due to the desert climate, limited rainfall, and drought.

With a growing population and higher water consumption, the Levant countries will have to face future climate change challenges. Across the region, recycling of wastewater and drip irrigation, along with dam reservoirs and desalination, are used to some extent, to relieve shortages (ibid). With few regional water agreements and the growing threat of pollution, water might become once again a conflict issue.

#### 4. In-state conflicts: oppressive regimes and unstable economies:

The new states' paths to independence varied in length, but their dependence on Western countries for military protection was long-lasting. In return, the new states of the Levant offered Western states access to resources (mainly oil), loyalty, allegiance and even material support in wars (Hiltermann, 2018). Consequently, military coups often became a means to gain power, especially in the late 1940s, 1950s, and 1960s (ibid). Autocratic rulers used military institutions to control societies. This has resulted in unstable political life and disabled mechanisms ensuring the peaceful and regular rotation of power. As regimes changed by force, civil institutions such as national parliaments courts and judicial authorities became degraded (ibid). In 2011 Arab uprisings exposed the governance faults and failures. In most cases, these protests were either crushed or dissolved in civil war as states escalated repression (ibid). These constant instabilities have resulted in a mechanism of government corruption, an out-of-touch political class, a growing economic crisis, and a failure in providing basic services (ibid). While these are in-state problems, they have regional implications as well. The lack of cooperation among the regions' countries created almost isolated economies, which only increase the economic pressure and recovery process each time a crisis broke out.



# 1.2 Former railway network - from past to a possible future

Imagine a train that connects countries, cities, and citizens across North Africa through the Middle East and the Arabian Gulf and further north to Europe. Not so long ago, until the mid 20th century, such a journey was possible on the railway tracks of the Levant region. Today as the region is a contested region, crossing between states' borders is mostly forbidden. Nevertheless, traces of these tracks are present in the landscape and constitute a potential future connection.

During the Ottoman empire, thousands of miles of good quality railway lines were built from the mid-1800s, making trade routes and allowing the development of previously remote areas (Ozyuksel,2014). This railway system became a strategic web of supply behind the Turkish forces. The railway line used to connect the Levant region with Europe and Africa, passing by places with economic and religious importance (ibid). In the Levant region, the most famous part of the Ottoman tracks is the Hejaz railway line, that ran from Damascus to Medina, through the Hejaz region of Saudi Arabia, including a branch to Haifa port on the Mediterranean Sea (fig 1.2). After the fall of the Ottoman Empire, during the time of the British and French mandate in the area, the network was further developed, mainly along the coastline. Later on, as the new nation-states tried to gain their independence different attacks on the tracks caused the deterioration of this network.

Today, in light of the political climate, such travel is far from possible. The railway line and its stations were left to deteriorate or abandoned. This great infrastructure is almost forgotten, and instead, dividing infrastructure slowly became a permanent reality. However, in 2017 the Israeli Foreign Affairs Ministry announced the *Tracks for regional peace* initiative, which includes the reconstruction of a short segment from the Ottoman railway, connecting Israel with Jordan. In addition, in 2016 a national transport master plan was developed by the Palestinian authorities indicating the need for rebuilding railway transportation. These plans provide a positive opportunity to rethink the former railway network as a desirable future potential for the Levant region.



FIG 1.2 A map of the Ottoman railway system lines (marked in black and red), approximately around 1908-1912. The railway line going north connected the Levant area (Syrie) to Turkey (Anatolie) and Europe (through Bulgaria). The south direction continued to Medina (today in Saudi Arabia). The boundaries in bright Pink mark the Ottoman Empire territory.





## PART 2 Methodology



This chapter constructs the methodological framework of this thesis including the problem field and problems statement, research question(s), research aim and intended outcomes, the conceptual framework and the research methods.

FIG 2: A photo collage combining borders and conflict infrastructure around the region. All photos are taken from the Israeli side of the borders.



## 2.1 Problem field

“Walls between nations are the most eloquent material expression of the human inability to coexist and negotiate...the greater the number and denseness of these walls, the greater our fears and our differences can become” (Real, 2017:23).

Today, it is possible to notice a dual worldwide phenomenon in which along with globalization processes and the formation of extensive relationships between nations, national borders are becoming higher and impermeable, resulting in social segregation and social injustice (Kolossova&Scott,2013).

After the fall of the Iron Curtain in 1989 and the end of the Cold War, practices of wall-building between nation-states were presumed to have come to an end (Donnan&Wilson,2001). Yet, in reality, a line of political events brought to a rise in the number, type, and intensity of border disputes and contested environments. These are related to conflicts between states over their supposed sovereign territory, like in the case of Iraq and Kuwait, Israel and Lebanon, Serbia and Bosnia and Croatia; or cross-border ethnic conflicts such as Ireland and the United Kingdom, Palestine and Israel, Serbia and Albania; or national efforts to support or constrain the cross-border movement of refugees, immigrants or illegal workers, for instance along the US–Mexico border and at the many external borders of the EU (ibid). Therefore, as contested environments characterized by walls of separation are not an uncommon phenomenon, questions relating to social justice and borders are still relevant in today’s world.

Construction of the borders in case of intensified conflicts is often characterized by spatial fragmentation and territorial division. These take a physical form with the development of “conflict infrastructure”, which constitutes walls, razors and fences, buffer zones, and checkpoints, and even large roads and motorways (CinC,2012). The physical division aims not only to maintain separation but also to implement difference by limiting the exchange and distribution of resources (Cf.Vallet,2006). Consequently, conflict infrastructures affect socio-economic connections or the lack of it. Physical division can promote the interests of certain groups while create or sustain inequalities (CinC,2012). Moreover, While conflict infrastructure is usually a part of the temporary measures, in case of conflict, it tends to become permanent (Calami & Charlsworth, 2012). In these cases, conflict infrastructures often have a severe societal impact and it can become more than just physical obstacles. Populations that are separated physically for long periods, tend to reject differences and acceptance of “the other” (CinC,2012).



FIG 2.1 A photo collage combining borders and conflict infrastructure from different places around the world (Israel, Lebanon, Syria, West bank, US, Mexico, Austria).





FIG 2.1.1 A world map showing current ongoing conflict status between states and within states.

Moreover, in several cases, border-walls and other means of separation can be considered as an imposed act of violence, ignoring local dynamics that were established over time through mutual influences (Rael, 2017). This is often evident in areas where colonization processes have determined new borders, regardless of the existing relationship, dividing communities and landscapes, discouraging interaction, and crossing (ibid). Accordingly, spatial fragmentation and physical segregation have severe consequences for society. In the course of history, these often resulted in the violation of human and civil rights with the displacement of people, separation between family members, loss of accessibility to resources and economic decline and even loss of lives (Donnan&Wilson,2001).

In light of the serious social injustice challenge that derives from border issues, conflict infrastructure, and physical separations, planning should be used as a tool in addressing these. Promoting spatial integration and inclusion, along with cross-border developments and strategies, are needed to overcome social segregation and division.



FIG 2.1.2 Top: Abandoned Ottoman railway station in TolKarem (West bank).

FIG 2.1.3: Abandoned Ottoman railway station in TolKarem and the separation wall (West bank).

FIG 2.1.4 Abandoned Ottoman railway tracks in Saida, Lebanon, 2007.

## 2.2 Problem statement

The Levant region is currently a contested region, defined by impermeable borders, spatial and social segregation, and lack of cooperation among nations. Nevertheless, at the beginning of the 20th century, a complete railway network connected the Middle East to the West and Africa to an extent that is unthinkable today.

During the first half of the 20th century, several new national borders were defined by the British and French mandates. This intensified borders and frontiers, and existing connections in the area were disconnected. Later on, due to a line of political events, multiple states were disconnected completely or partly from the railway line. As the new nations battled to gain power and sovereignty over their borders, the railway infrastructure became a strategic target to ensure security and maintain separation.

As the railway network dissolved, these states, which were once a part of an economic and political network, lost their inner and international connections. Economic relationships, accessibility, and freedom of movement were therefore limited. The region that used to act as one territorial sequence, turned into a fragmented and segregated territory.

The dual process of border-walls building and railway disconnection have more impact than just physical divisions. Mobility, or lack of it, is often used as a tool of conflict. In the case of the Levant, the disconnection was meant to maintain separation and implement difference by limiting the exchange (Cf.Vallet,2006). Several localities that were disconnected from the railway, suffer today from socioeconomic inequality, lack of accessibility, and limitation of movements, such as the case of the West Bank or Gaza. Moreover, as physical division became a preferment reality in the region, societies were unable to communicate and tension where left unease. The railway line that crossed landscapes and connected different places and cultures was replaced with vertical concrete walls and the train stations, were replaced with checkpoints and watchtowers.

With ongoing conflicts between the borders, the historic railway network and its heritage is forgotten. In light of the current political climate, there are no policies or strategies for cross-border cooperation to promote common interests of prosperity and sustainability around this region. However, although it was mostly dismantled, traces of this former network are still present in the landscape today and constitute a potential future connection.

## 2.3 Research question

Considering the relationship between border-wall construction and the destruction and disconnection of the railway line as means to ensure regional separation, this thesis asks to explore the possibility of reversing this trend. Hence, the main research question of this thesis is:

How can redevelopment of former railway networks [in the Levant] contribute to regional cooperation and social interaction in a contested region?

This main research question is followed by several sub-questions:

1. Why is the Levant a contested region? [b]
2. What is the historical importance of the former railway network in the Levant? [b]
3. What are the spatial and social dimensions of segregation in the region? [a]
4. What is the current condition of the historic networks today? [a]
5. How can railway infrastructure contribute to sustainable development? [t+d]
6. How can heritage values promote inclusiveness among communities and sustainable development? [t+d]
7. How can spatial planning in contested area promote conflict resolution? [t+d]

Orientation of the sub-questions:

b = background

a = analysis

d = design

t = theory

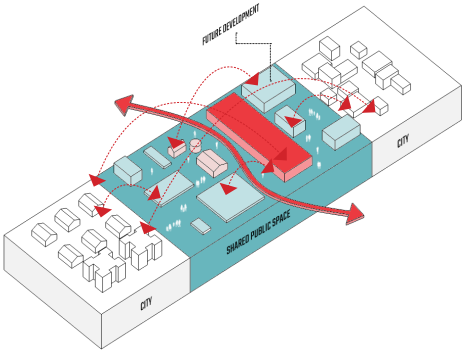
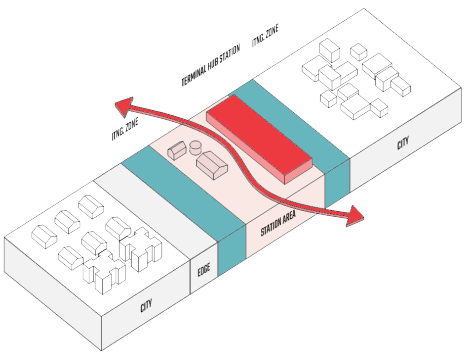
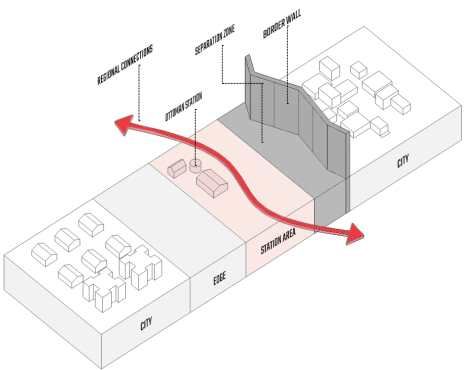


FIG 2.4 Three schemes describing the intended outcomes. Top: focus on the regional connection, middle: focus on the railway stations, bottom: focus on the influence and the relations between the railway station and local communities.

## 2.4 Research aim and expected outcomes

### 2.4.1 Research aim:

The aim of this thesis is to provide an alternative vision for the future of the region, by using the former railway network and its stations as a backbone to promote cross-border cooperation and social interaction.

The regional vision for the Levant, using the redevelopment of the historic railway network, offers to shift (1) from impermeable borders and rigid divisions towards regional collaboration, and (2) from segregated societies to social encounter and communication.

Furthermore, the research explores the possibilities and opportunities along the former railway line and its stations. On the regional scale the research aims to use the the line to develop spatial planning concepts, vision and a strategy to promote cross-border cooperation based on shared goals. On the local scale the research aims to use this infrastructure to provide shared spaces to promote social inclusiveness and interaction, improving mobility and rehabilitated station environments.

### 2.4.2 Expected outcomes:

The research outcomes addresses the to the railway network as lines and nodes:

#### Lines:

The lines are referring to the railway infrastructure and the regional connection. The regional scale includes a regional vision to illustrate the benefits of regional connectivity and a strategy to explain the redevelopment of cross-border processes in a contested region.

#### Nodes:

The nodes are referring to the historic railway stations, located along the former line. The nodes demonstrate the implementation of the regional scale on the local scale. The nodes illustrates how the former railway stations can contribute to local prosperity and social interaction.

This thesis approach is of alternative planning. Considering the current spatial, social, and political climate, this project offers planning solutions, that would only be possible with different political schemes. However, planning and design are important tools for re-imagining realities, stimulate discussion, and debate existing narratives.

## 2.5 Methodology

An overview of the research methods that were used to answer the research questions and aims, and to develop a planning and design approach are listed below.

### Literature Review:

A literature review provided the knowledge for the historical background of the former railway network and the conflicts in the Levant region. The literature review also included theoretical papers that were used to form a theoretical framework. These combine the topics of railway infrastructure and heritage as a means to promote sustainability, and spatial planning theories addressing contested environments.

### Mapping:

Mappings were made to understand the former routes and the current state of the former railway line in the region. The mapping was based on a combination of historical maps with, satellite images and other available online maps. Mapping was also used to illustrate the current situation and types of regional divisions.

### Fieldwork:

The field work included visiting sites along the historic railway network, in Israel, in order to learn what is the current condition of the infrastructure and stations, and how they are being used. Additional two historical railway station sites were visited in Jerusalem and Jaffa-Tel-Aviv as two case studies of renewing historic stations areas. In the field trip two main methods were used:

- Photography: for the documentation of the infrastructure, stations and station areas.
- Conversations: Two conversation were conducted with railway history experts. These talks have provided historical information and also an overview of current challenges in redeveloping the historic stations.

### Documents review and analysis:

Two main categories of documents were reviewed, historic maps and drawings of the former railway line and review of future regional plans, addressing this former network. The first was crucial for the spatial analysis, and the second was necessary for the analysis of future potential related to the railway line.

### Photography:

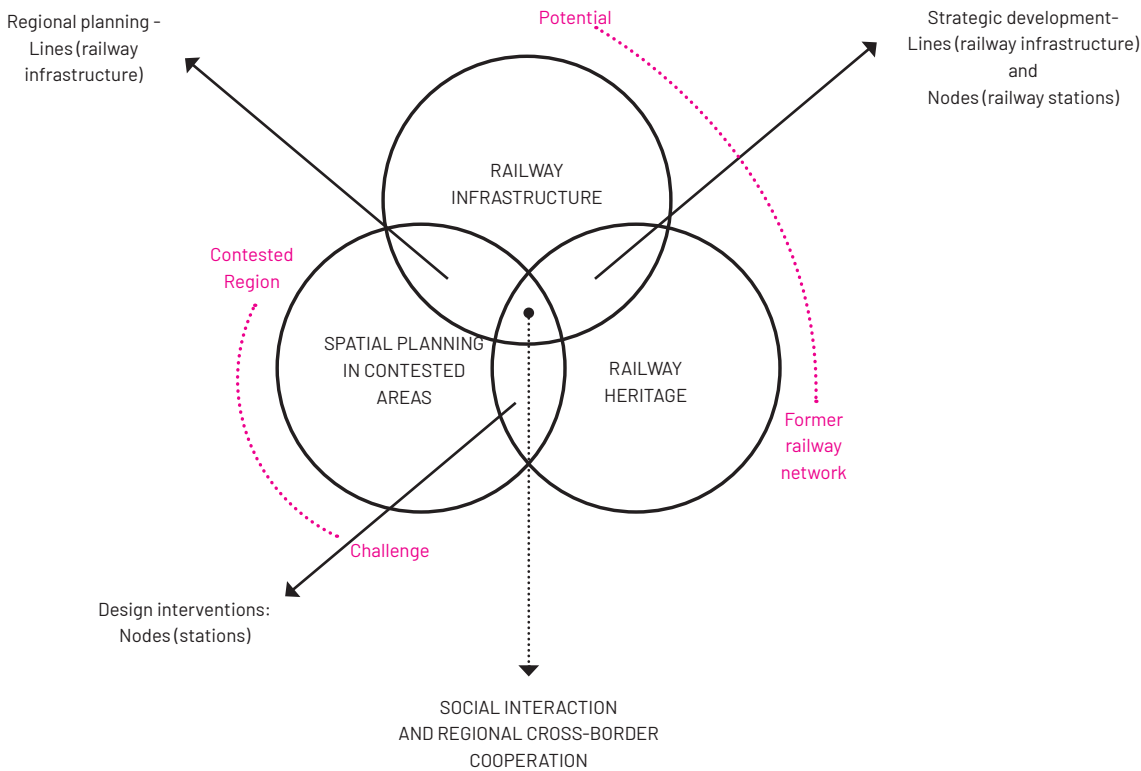
Available photography was used to illustrate the spatial segregation around the region today in order to emphasize the problem issue, and also to show the railway infrastructure and stations condition today and in previous years.

### Case studies analysis:

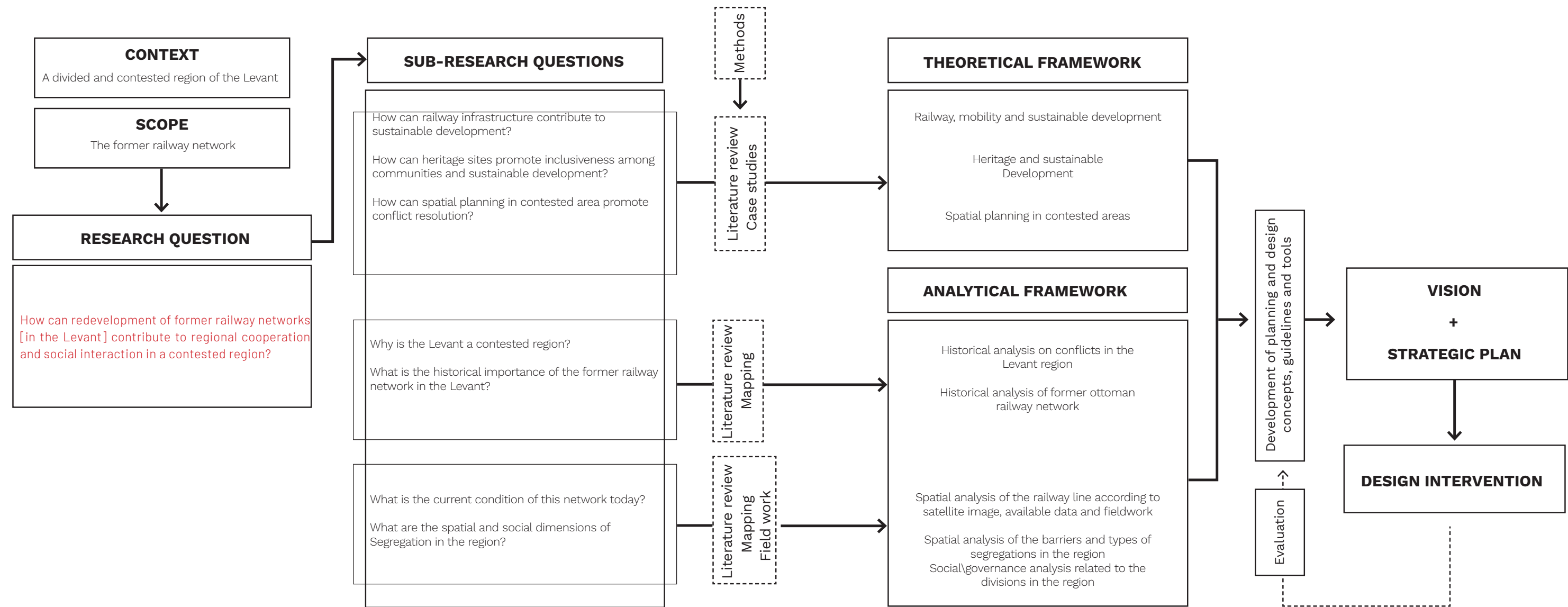
Two case studies from the US-Mexico border were reviewed and used as part of the design and strategy development. These cases present ideas for cross-border cooperation and social inclusion at the border area, which is also relevant for the Levant region.

## 2.6 Conceptual framework

The conceptual framework correlates between the context, the theoretical framework, the reacher outcomes and the research aim. The thesis research a unique case of the former railway network in the Levant as a means to promote cross-border cooperation and social interaction. The research identifies two potentials and one main challenge which derive from the context of this work. The two potentials are related to the former railway network. First, its existing shared infrastructure that runs through the region, and second, the heritage values that are embedded in it. Therefore, the theoretical framework asks to leverage on these potentials by investigating how railway infrastructure and heritage sites can promote overall sustainability and social inclusion. The main challenge which derives from the context is the nature of the contested environment and the lack of regional relations. The combination and overlaps of the three fields were developed further and translated to regional planning, strategy and design interventions.



2.6 Methodological framework







PART 3 Theoretical framework

This chapter covers the main theories which were used through the research. The first part addresses the context of the contested region in a broader sense. The second part links railway infrastructure and sustainable development, the third part links heritage with sustainability and conflict resolution. The final part reviews spatial planning approaches in conflict areas and theories for cross-border cooperation.

FIG 3 an abandoned railway station from the Hejaz railway line in Saudi Arabia. In 2015 the site, including the rail tracks and several station, was recognized as a world heritage site.

3.1 - Contested regions

The thesis focuses on the Levant region, which is currently a contested region. This chapter discusses the characteristic of contested environments in a more broad context.

Contested and divided regions are not a unique case of the Levant. All over the world, contested environments can be found. The tension around conflicted areas can vary. These can be related to conflicts between states over their supposed sovereign territory, like in the case of Iraq and Kuwait, Israel and Lebanon, Serbia and Bosnia and Croatia; or cross-border ethnic conflicts such as Ireland and the United Kingdom, Palestine and Israel, Serbia and Albania; or national efforts to constrain the cross-border movement of refugees, immigrants, illegal workers, and terrorists, for instance along the US-Mexico border and at the many external borders of the EU (Donnan&Wilson,2001). As the reason for the disputes may change, contested regions are still a concerning phenomenon in today’s world.

According to Gaffikin and Morrisey, contested environments are mainly routed in two concepts from which dispute derives: *Pluralism* and *sovereignty* (2011). The first concept of *Pluralism* refers to a state in which the co-existence of different groups under a shared territory turns into antagonism and rivalries among the groups related to an imbalance of power, welfare, and resources(ibid). In the case of the Levant region, one example of this state can be found between the Jewish society and Arab communities in the West Bank. In this case, power implemented on Palestinians by Israeli authorizes is resulting in imbalance power relations and unfair distribution of resources and opportunities (Weizman,2012). For instance, the Palestinians freedom of movement in space is dependent on approval from the Israeli authorities while the Jewish population living in the west-bank can travel freely in the Israeli territories(ibid).

The second cause for disputes derives from the concept of sovereignty. In this case, similar pluralist disputes over resources and power take place, but these are related to a larger ethnic-national conflict about the legitimacy of the sovereign (Gaffikin&Morrisey,2011). This can be seen in the conflicts and disputes between Israel and the Palestinians in the West Bank and Gaza areas, as the Palestinian society strive to gain their own state and control over a defined territory (Donnan&Wilson,2001). In the past, such conflicts occurred between Israel-Lebanon,Isreal-Syria, Israel-Jordan, Israel-Egypt, and Syria-Lebanon, as states battled

to define their sovereignty over their borders. These disputes and tension still exist to a different extent and degree between the different nation-states of the Levant.

As Gaffikin and Morrisey further explain, these two concepts of pluralism and sovereignty can result in different types of conflicts (2011). They have identified three main types of conflicts in contested environments: political, cultural and economic, which can derive from the concept of pluralism or sovereignty or from both. These types of conflicts are categories by the authors to *intrastate* or *interstate* conflicts. Intrastate conflict refers to an issue within the state itself (or issues within cities), while *interstate* conflicts refers to disputes which crosses political and territorial boundaries (ibid):

**Political conflict:** This type of conflict revolves around political disagreement. This includes the tension between two or multiple states, in relation to the territorial boundaries. Political conflict can include separatist movements between states, or disagreements between countries. *Furthermore, the governmental ideology can impose division between different groups in the society, forcibly creating social or spatial segregation between its inhabitants.* This type of conflict can, therefore, be a part of inter and intra-state conflict (ibid). In the Levant case, both interstate and intrastate political conflicts can be identified. The intrastate disagreements can be found between Lebanon-Israel and Syria-Israel. These state are officially in a state of war and the governments do not have official relation. The interstate conflict occurs between Israel and the Palestinian population of the west-bank(see more on inter and intra-state conflicts on chapter 4.1).

**Cultural conflict:** Cultural conflict: cultural conflict is related to the differences in ethnicity and religion between communities. These are often not directly related to politics but are eventually reflected in it. Gaffikin and Morrisey (2011) claim that cultural conflict is usually occurring on the smaller scale levels, such as the city scale, and can be defined as intra-community conflicts. This conflict has higher chances of violent outbreaks and the inhabitants are personally confronted with it in their daily life. Furthermore, political conflicts, border shifting and changes, and migrating populations emphasis the differences among groups. In some cases, the different languages, customs, practices used by the different populations will take a physical form in space, through symbolism, architecture,

and other means, marking and classifying the space with belonging to a certain group (ibid). These characteristics are present in the current division between the Jewish and Arab communities in the West Bank area. Here, for instance, the separation wall along with other physical fragmentations marks the difference between one group and the other. As mentioned, the authors categorized cultural conflict as an intra-community conflict. Nevertheless, in the case of the Levant, the ethnic-religious tensions can be also identified as interstate and intrastate conflicts as well. The difference in religion and ethnic groups was (and still is) a source of dispute throughout the history of the region. The difference in religious and cultural ideologies has turned into a serious obstacle in forming any types of relation between Israel and its neighbouring countries.

**Economic conflict:** The last type of conflict is related to economic processes. This refers to the polarization of rich and poor in contemporary societies (Gaffikin & Morrisey, 2011). The authors mention several examples from the global south and from other developing countries, in which gated communities, slums, and global economic processes continue to sustain and increase this type of division. Economic conflicts are mainly categorized as intrastate conflict (ibid). This type of conflict is relevant in the West Bank area, where Palestinians employment opportunity are heavily depended on the Israeli labour market. The access of the Palestinian to these employment resources is controlled by the Israeli authorizes (Weizman,2012). Also in the case of Gaza, economic opportunists and access to resources are limited due to the state of war and dependency on the Israeli government (see more information on chapter 4.1).

3.1.1 Contested region physical and social implications:

As mentioned in the problem field, when conflicts are intensified, spatial fragmentation and territorial division take a physical form with the development of “conflict infrastructure”, which constitutes walls, razors and fences, buffer zones, and checkpoints and even large roads and motorways (CinC,2012). Conflict infrastructure in disputed areas, is more than a physical barrier, as it has long-lasting and serious implications on the society affected by it. While conflict infrastructure is usually constructed as a part of a temporary means of protection, it tends to become permanent and even further extended (ibid). Groups that have been separated for a significant period, tend to

accept the state of the conflict. Moreover, separated populations tend to reject differences and acceptance of “the other ”, resulting in difficulties in resolving the conflict (ibid).

Furthermore, as mentioned in the problem field, conflict infrastructure and its separative character have resulted in social injustice in several ways. In his book,*Borderwall as Architecture*, Ronald Rael claims that the construction of border-walls is usually an imposed act of violent, that ignores local dynamics which were established over time through mutual influences (2017). It is dividing communities and landscapes, and discourages interaction and crossing (Real, 2017). Therefore, the construction of conflict infrastructure is often accompanied by the violation of human, civil and political rights, such as in the cases of separation between family members, displacement of people (and loss of property), limitation on movement, and loss of community and economic ties (ibid).

Finally, contested regions which are characterized by solid walls and spatial and social divisions, have resulted in severe societal injustice issues. This thesis seeks to use planning and design perspectives as a tool for promoting spatial integration and social inclusion, along with strategies for cross-border collaboration which are needed to overcome the wall obstacles, to move towards a more just and inclusive environments.



3.2 - Railway and sustainable development

As mentioned in the research aims, the thesis asks to use the former railway in the Levant as a backbone for regional sustainable development. This chapter reviews how railway infrastructure can contribute to sustainable development.

3.2.1 Sustainable development:

Sustainable development is a complex concept, and it is subject to numerous interpretations as it involves several disciplines and possible interpretations (Rodrigue, 2019). Nevertheless, to make the flow of argumentation clearer, I will address the term sustainable development in a more general way. In that sense, sustainable development will favour conditions that benefit the environment, the economy and the society. Accordingly, sustainable development will be supporting three main pillars: Social equity, Economic efficiency and Environmental responsibility(Rodrigue,2019). Also, as a guideline for promoting sustainable development in this research, I will be referring to the sustainable development goals, defined by the UN as a part of the 2030 Agenda for Sustainable Development (United Nations,2015).

Railway development and social aspects:

*"Transportation is not an end to itself but rather a means allowing people to access what they need: jobs, markets and goods, social interaction, education and full range of other services contributing to healthy and fulfilled lives"*  
-United Nations, 2014: 4

Accessibility and mobility are two crucial concepts to consider when addressing social justice issues. Simply put, Social Justice can be understood as the "fair distribution of rights, opportunities and resources" (Carmme & Diamond, 2009:3). Accessibility and mobility are necessary means to achieving this ideal, as they can contribute or restrain the individual ability to reach opportunities and resources. In the framework of this work, mobility refers to the movement of people and goods (Graham & Marvin,2001), and accessibility refers to the ability to reach desired goods, services, activities and opportunities (Litman, 2012). Railway infrastructure can contribute to social equality as "the ultimate goal of most transportation is "access" - people's ability to reach desired goods, services and activities" (Litman, 2012). However, railway transportation can be developed selectively and create local disconnection, functional island and users bias (Graham and Marvin 2001). Thus, in the pursuit of social

justice, equitable railway development should be promoted to provide mobility and access for all.

Furthermore, improvements in the availability of railway infrastructure can lead to profound changes in the standard of living of the population by facilitating access to health, education, other social services and the labour market (Alonso and Sánchez, 2012). Railway infrastructure also plays an important role in including rural areas in regional and international networks and in establishing urban-rural links (UNDP/Government of Chile, 2014).

Railway development and economic contribution:

Railway infrastructure can contribute to economic development. As mention above, by linking urban and rural areas, and establishing domestic and international long-distance networks, railway connections can generate economic activity(Rodrigue 2019). As a simple example, one can think of liking a rural village to urban markets. Railway transport also provide a cost-effective, efficient and relabel means for the mobility of freight and passengers, which is importance to the coherence of economic activities and social interactions (ibid). Another economic aspect to be considered is the labour related to the construction and maintenance, and operation of the railway line (ibid).

Railway and environmental aspects:

It is possible to claim that the arguments mentioned above can be also relevant for other transportation means. While this might be true to some extent, in term of environmental aspect, railway provide far more cost-effective and energetically efficient ways of transporting passengers and freight in comparison to motor vehicles and airplanes (Rodrigue 2019). Therefore, railways can contribute to the global efforts of reducing the emission of greenhouse gases and help promoting the goals set by the Convention on Climate Change, and the Paris Agreement to reduce the forecast rise in global temperatures (Borda-de-Água et.al, 2017). According to Craven and Philippe (2017), the rail system offers 3 environmental benefits: Energy efficiency, low carbon emissions (when coupled with modern clean energy sources) and immediate compatibility with modern renewable and clean energy means.

To summaries, according to the three presented arguments railway infrastructure can be considered as sustainable transportation means that can support sustainable development, following the definition of the UN for sustainable transport:

*"Sustainable transport is the provision of services and infrastructure for the mobility of people and goods— advancing economic and social development to benefit today's and future generations—in a manner that is safe, affordable, accessible, efficient, and resilient, while minimizing carbon and other emissions and environmental impacts". United Nations, 2014: 10*

3.2.2 Railway infrastructure and SDGs:

Recently, infrastructure has been incorporated into the Sustainable Development Goals of the 2030 Agenda of the United Nations as a crucial tool to improve the population's living conditions and promote greater social stability (United Nations, 2017). Within the framework for the Sustainable Development Goals, transport is recognized as a key tool in reducing emissions, improving equity, and reducing poverty. Seven Sustainable Development Goals include targets that address transportation. These targets recognize the importance of access to achieving advances in education, healthcare, and other critical needs. The goals suggest promoting good public transportation, encourage strong transit-oriented development (TOD), and support social equity around transportation (The Role of Transport in the Sustainable Development Goals,2015).

The most relevant targets for railway transportation and to this thesis are the following:

Goal 9.1 - Develop quality, reliable, sustainable and resilient infrastructure, including regional and transborder infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all.

Goal 11.2 - By 2030, provide access to safe, affordable, accessible and sustainable transport systems for all, improving and expanding public transport.

Finally, railway infrastructure as a sustainable means of transportation, can promote mobility and accessibility to resources and opportunities which are currently lacking Levant region.

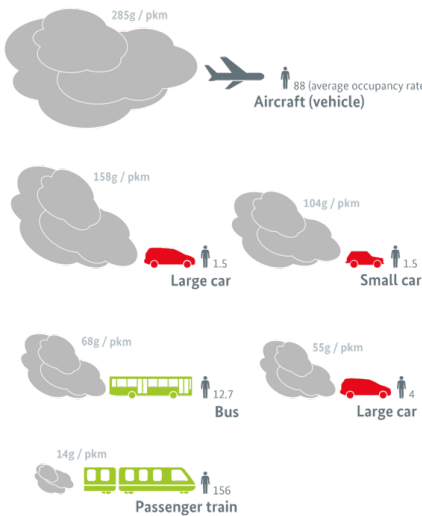
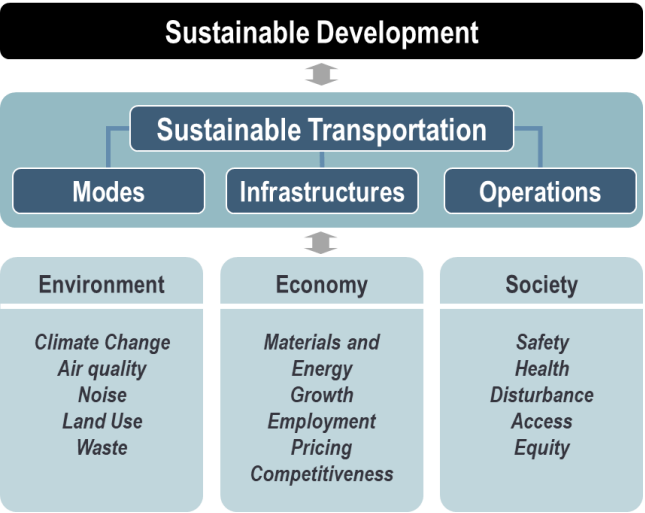
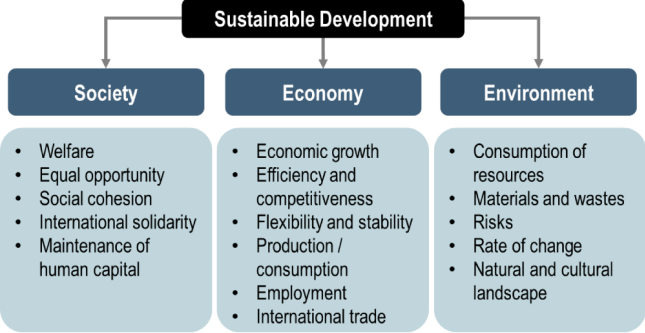


Diagram 3.2: Top: Main sustainable development principles and the three main pillars of sustainability. Bottom: description of main sustainable transportation development principles. Source: Rodrigue,2019

FIG 3.2.1: An illustration showing carbon emission per passenger. The train has the lowest carbon emission per passenger in compression to the other means of transformation.

3.3 - Heritage and sustainable development

The former railway network in the Levant has a rich history and heritage values. The thesis aims to leverage the shared heritage values as a means to foster sustainability in the region. The chapter reviews the possible contribution of heritage sites to sustainability based on the UNESCO World Heritage policy for the integration of a sustainable development perspective into the processes of the World Heritage Convention (2015).

The UN 2030 agenda for sustainable development goals, integrates the role of cultural heritage as an enabler of sustainable development. According to UNESCO, the World Heritage Convention can provide a platform to develop new approaches using heritage for sustainable development. UNESCO emphasis the crucial importance of heritage to societies and its potential to contribute to social, economic and environmental goals(UNESCO,2015).

In 2015, UNESCO developed a policy for the integration of sustainable perspectives into the processes of the World Heritage Convention. The main goal of the policy is to provide guidelines for states parties, professionals, institutions and communities, to leverage the potential of World Heritage properties and heritage in general, to contribute to sustainable development. The policy aims to improve the effectiveness and relevance of the conservation process while protecting outstanding universal values of heritage sites(ibid). While the policy mainly addresses world heritage sites, the thesis claims that the given guidelines and conclusion can be relevant for other heritage sites and specifically for the former railway network and its stations in the Levant.

3.3.1 Heritage and sustainable development:

The UNESCO policy explains the relation between heritage sites and sustainable development, addressing social, economic and environmental aspects. It is claimed that World Heritage and heritage in general, can be used as an instrument promoting sustainable development across its various dimensions. The sustainable potentials as mentioned in the policy were summarized and listed below (UNESCO,2015):

Heritage and social aspects:

In terms of social sustainability, the policy states that a well-protected world heritage site may contribute to poverty

and inequality improvement by providing basic goods and services, such as security and health, shelter, access to clean air, water, food and other key resources(UNESCO,2015).

Moreover, World Heritage, is also essential to the spiritual well-being of people. Heritage sites carry an important symbolic role. The conservation of the diversity of cultural and natural heritage, fair access to it and equitable sharing of its benefits can contribute to individuals and societies. It can enhance the ‘feeling of place’ and sense of belonging, it can promote mutual respect for others and ability to maintain a common good. Overall, The ability to access, enjoy and care for one’s heritage is essential right for both communities and individuals and it can foster social cohesion (ibid).

Finally, and importantly for this work, the report points out the ability of heritage to foster sustainability in conflicted areas. As stated:

In conflict and post-conflict situations, the acknowledgment and conservation of heritage, based on shared values and interests, may foster mutual recognition, tolerance and respect among different communities, which is a precondition for a society’s peaceful development(ibid).

Environmental aspects:

Clearly, preserving natural resources, including outstanding sites containing rich biodiversity, is essential to environmental sustainability. The UNESCO World Heritage agenda promotes environmental sustainability, by valuing and conserving places of outstanding natural heritage value, containing rich biodiversity, geodiversity or other exceptional natural features, which are essential for human well-being. The policy mentions that most heritage sites have developed over time through mutual relation between humans and the environment. This reflects on the interaction between biological and cultural diversities and on the complex co-evolutionary process(UNESCO,2015).

Economic aspects:

World Heritage is also an asset for economic development. Heritage sites can attract investments that can ensure, in return green space or services, locally-based, stable and decent jobs. Generally, activities associated to cultural and natural heritage sites embody a naturally more sustainable

land use, and consumption and production patterns which have developed over centuries of slow adaptation between the communities and their environment (UNESCO,2015). This is true for natural protected areas with rich biodiversity, but also for cultural landscapes and historic cities. Moreover, World Heritage sites, carry great potential to improve poverty and enhance sustainable livelihoods of local communities, including those of marginalized populations (ibid).

All of the above reflects the positive potentials that the World Heritage conservation and management could contribute to sustainable development.

3.3.2 Heritage and conflict resolution:

In the next paragraphs, some of the main principles from the *Policy Document for the Integration of a Sustainable Development Perspective into the Processes of the World Heritage Convention* (UNESCO 2015) will be reviewed. These address the sustainable development of heritage sites with respect to conflicted areas. These were brought here as they are highly relevant for the context of the thesis work:

Fostering Peace and Security and ensuring conflict prevention:

According to the policy, sustainable development and the conservation of the world’s cultural and natural heritage can be threatened by war, conflicts and acts of violence. Being an integral part of UNESCO, the World Heritage Convention aims to foster peace and security. Accordingly, the policy requires all involved parties to promote the “achievement and maintenance of peace and security between and within States Parties”(UNESCO 2015). In a conflict area, it is crucial to acknowledge the cultural diversity within and around many World Heritage properties and promote a culturally pluralistic approach in both strategies and in management of conservation sites.

States parties have an important role in preventing conflicts between and within states, and in promoting respect for cultural diversity within and around World Heritage properties. To achieve these the policy offers several principles which are summarized below (UNESCO,2015):

1. Support scientific studies (including those locally conducted) demonstrating the contribution of conservation and management of World Heritage sites (and their wider setting) to conflict prevention and resolution.
2. Develop an inclusive approach to identifying, conserving and managing World Heritage properties that encourage consensus, appreciation of cultural diversity. Also promote understanding and respect for heritage belonging to others, particularly between neighbouring states.
3. Consider tentative list for World Heritage site that have the potential to generate fruitful dialogue between states parties and different cultural communities.
4. Support sensitive cross-culture approaches, for the interpretation of World Heritage properties that are of significance to various local communities.
5. Identify and manage and support transboundary/transnational heritage properties, to foster dialogue between neighbouring states parties sharing a common heritage.

Promoting conflict resolution and contributing conflict recovery:

The policy emphasizes that World Heritage properties and conservation must contribute to conflict resolution and the re-establishment of peace and security. Also, Heritage can contribute to the recovery process and socio-economic reconstruction in conflict areas. Here the recommendations are as followed (UNESCO,2015):

1. Protecting of World Heritage properties ,their settings, along with cultural and natural heritage values, should maintain a UN priority (also for other regional peace-keeping and post-conflict initiatives and interventions).
2. Encourage full participation of the local communities in the reconstruction and conservation process of their heritage site.
3. Promote traditions and expressions, performing arts, social practices, rituals and festive events, knowledge and practices, and traditional craftsmanship associated with the World Heritage properties, which may have been disrupted by the conflict.

3.4 -Planning in contested areas

The relation between division and planning is mutual: “planning affects and is affected by division” (Caner& Bölen, 2016). According to Caner and Bölen, planning has the power to change the spatial, economic, social, and political dimensions of divisions(2016). Therefore, planning approaches in contested space investigate the role of planning in improving or intensifying divisions in these societies(ibid).

Caner& Bölen claim that planning as a profession is limited when addressing the spatial consequences of armed conflicts(2016). The existing framework of land use planning must be reconsidered in order to change and adjust the existing methods to approach challenges one encounters in divided cities (ibid). Several urban planners have offered theories and strategies for planning in contested area. Some of these are reviewed in this chapter.

Bollens four planning models (2007):

In order to deal with contested context, Bollens (2007) proposed four different planning and policy models, terming them as Neutral, partisan, equity and resolver. The neutral approach, as implied by its name, is intentionally ‘colour-blind’ and consists of a technocratic depoliticized planning intervention as a means to promote an impartial urban context. The partisan model promotes the privileges of the dominant group through state-directed efforts that control demography and spatial production. On the contrary, the equity model focuses on creating a more equal balance between both sides, whereas the resolver approach promotes a more radical agenda and sees planning as an opportunity to address wider societal issues. However, applying these theories proves to be quite difficult (Gaffikin &Morrissey,2006). With land being the centre of the conflict it is quite impossible to think of a neutral land use approach. Conversely, the partisan model enhancing the conflict by harnessing it to the planning process. Also, the ability to agree on definition of equality is enabled only after a continuous reconciliation, thus hindering the application of the equity model. At the same time, the somewhat utopic ambitions of the resolver, which call for radical changes, might promote an “all or nothing approach” which obstructs the possibility to achieve a realistic resolution (ibid).

Gaffikin and Morrissey ‘collaborative planning approach (2006):

According to Gaffikin and Morrissey (2006), planning in contested spaces requires a collective mindset. This means that the process of decision-making should be based on an inclusive discourse in which all stakeholders can take part of.

Furthermore, Gaffikin and Morrissey (2006) claim that the numerous opposing groups that usually exist in divided spaces challenge the concept of *collaborative planning*. Accordingly, they propose the creation of **shared spaces** that would promote **a collaborative public discourse**, hoping that this would eventually lead to **contact and engagement and emphasize the need for a shared future**. They offer places like public parks, recreational areas and even universities campuses (ibid). **The shared future** mentioned by Gaffikin and Morrissey (2011) **should be founded on an integrated setting that bridges over divisions and that is based on a diverse, inclusive and considerate everyday life**. However, as the authors claim, this could only be achieved once we start focusing on transforming divisions, rather than trying to manage them (ibid).

Lederach conflict resolution transformative process (1995):

Another approach is developed by Lederach and is explained Gaffikin and Morrissey (2006). From the different perspective of conflict-resolution theory, Lederach’s (1995) work emphasizes the need for a *transformative* process in peace building that prioritizes relational concerns and reconciliation(Gaffikin & Morrissey 2006). Lederach propose three levels of conflict resolution and suggests appropriate activities be targeted at each level. The first level address the top leadership (political/military/religious leaders). The actors on this level should focus on negotiation/ceasefire. The second level is the middle range leaders (social partners/opinion formers) and the activities here focus on problem solving workshops/conflict resolution. The final level is Grassroots leaders (community/NGOs), and it includes actions for local conflict resolution (see table 3.4.1). Moreover, the triangular emphasis the interdependence of the levels: no level can achieve reconciliation on its own. It also reflects on top-bottom and Bottom-up interventions, from the community to the highest level of leadership.

Finally, both Gaffikin and Morrissey and Lederach claims that planning in contested space must embrace a wider perspective of peace building. They both acknowledge the governance importance as well as of bottom-up initiatives in peace building process in the contested areas.

Urban Planning Model	Strategies
<b>Neutral Strategy</b> <i>Tactic:</i> Address urban symptoms of ethnic conflict at individual level	<ul style="list-style-type: none"><li>• Employs technical criteria in allocating urban resources and services</li><li>• Distances itself from issues of ethnic identity, power inequalities and political exclusion</li></ul>
<b>Partisan Strategy</b> <i>Tactic:</i> Maintain/Increase disparities	<ul style="list-style-type: none"><li>• Furthers an empowered ethnic group’s values/authority and rejects the claims of disenfranchised group</li><li>• Strategies seek to entrench and expand territorial claims or enforce exclusionary control of access</li></ul>
<b>Equity Strategy</b> <i>Tactic:</i> Address urban symptoms of ethnic conflict at ethnic group level	<ul style="list-style-type: none"><li>• Gives primacy to ethnic affiliation in order to decrease inter-group inequalities</li><li>• Allocation of urban services and spending is based on group identity</li></ul>
<b>Resolver Strategy</b> <i>Tactic:</i> Address root causes/sovereignty issues	<ul style="list-style-type: none"><li>• To connect urban issues to root causes of urban polarization</li><li>• Impacts and authority of government policy is challenged</li></ul>

TABLE 3.4 Models of urban policy straregies (Bollens,2007)

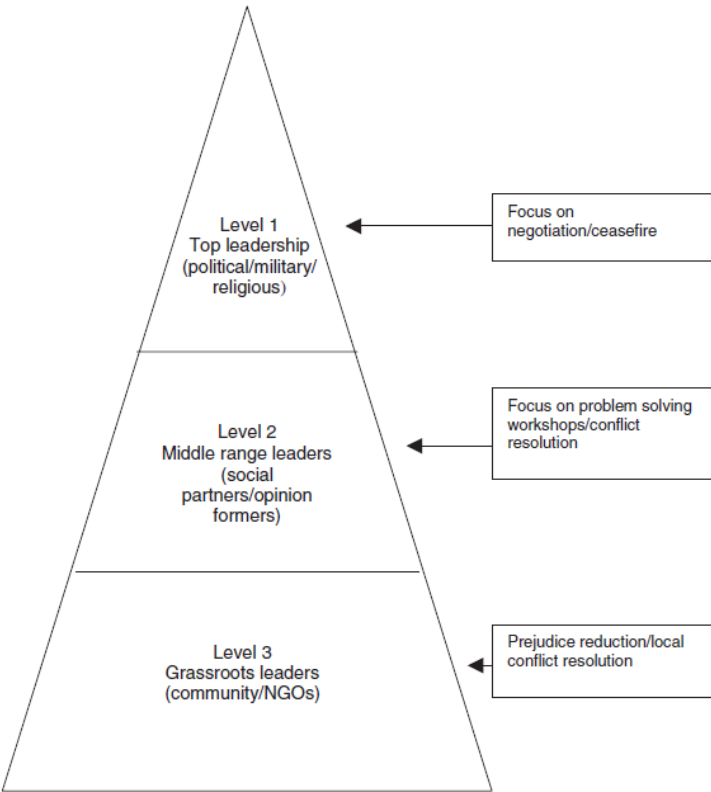


TABLE 3.4.1 Lederach’s model of conflict transformation (Lederach, 1995)



3.4.1 Towards cross-border cooperation:

As mentioned in the problem field, the process of building and rebuilding of border-walls is very much evident in today's world. Borders and their accompanied divisions can result in a line of social injustices (see chapter 3.1). Therefore, the question which arises is how can planning practices help to overcome these border-related issues?

This research aims to promote cross-border cooperation in a contested region. While a large body of knowledge address borders and social issues, and cross-border collaboration in the EU, theories addressing the promotion of cross-border cooperation in contested areas were lacking. However, in an attempt to address this topic, the work of Andreas Faludi which address border issues on a broader scale is discussed in this chapter.

While in his book, *The Poverty of Territorialism*, Andreas Faludi (2018) addresses cross-border questions with relation to Europe and the EU (2018), his conclusion and conceptual thinking can be relevant to other regions as well. Faludi refers to territoriality as "states securing their borders and executing jurisdiction within them" (Faludi 2018: 43). Hence, the notion of territoriality and borders are highly related to each other.

Faludi mentions that with the formation of the European Union, different European institutions started sharing overlapping borders and form cross-border relationships which go beyond territorial confines (Faludi,2018). Such an example can be seen in the case of Schengen, European Economic Area and the Euro-zone. Nevertheless, as the author claims, spatial planning systems are not reaching its full potential as they are still confined within closed territories (ibid). Accordingly, while the EU supports cross-border collaborations, it has resulted in a mosaic of fragmented strategies, rather than an overall transnational vision. This is since member states are not willing to reduce control over their territories (ibid).

Instead of nation-states fixed and rigid borders, Faludi seeks a softer borders approach and trans-border planning. Faludi's main suggestion is an alternative system to the current form of territorialism (Medeiros,2019). His approach includes the setup of zones of authority with overlapping boundaries that resemble a medieval type of governance - functioning more via interactions and rules rather than via fixed boundaries. The result will be territories with fixed boundaries complemented by numerous overlapping relational spaces (ibid). In his view, The EU should become a meta-governor which provides rules and room for negotiations for its active agents within various networks (Zaucha,2019).

Faludi further explains the advantages of a neomedieval approach such as the ability to facilitate functional relations, which do not necessarily have a territorial sequence or territorial elements, such as in the case of cyber-space or transnational institutes. Moreover, reorganizing networks based on shared interest and relations will allow planners to rethink and act outside the boxes of defined borders. Instead, they will be able to explore states' interaction with surrounding areas (Faludi, 2018). This perspective could contribute to solving global challenges such as pollution, biodiversity, global warming, desertification, ocean acidification, etc. (Medeiros,2019).

Faludi's approach does not suggest a "borderless" world. Yet, he offers to re-imagine the essence of the concept. His works open one's mind to rethink and study territories not only within boundaries dictated by authorities. In that sense, urban planners can be encouraged to explore relations and connections of natural systems and communities that goes beyond a defined line on a map.

Finally, since the author addresses the EU and Europe, his ideas are clearly more difficult to implement in contested areas. Yet, rethinking planning in terms of relationships based on shared goals, that are not contradicting to the existing borders can be an efficient approach in overcoming difficulties in areas of disputes. In fact, to some extent, such cases can already be found in the Levant region. For instance, in the case of the *seas canal*, where a long-term collaboration between Jordan and Israel take place in order to cope with the ecological crisis of the Dead Sea.

To summarize, promoting cross-border collaboration by mean of spatial planning is an extremely difficult task, as an extensive number of actors and factors needs to be considered. The challenge is even bigger in contested regions, where cross-border collaboration is not normative. Clearly, since borders are related to a wider political and cultural context, a much larger societal change will be needed to form new types of permeable boundaries in areas of disputes. Considering the argumentation of Gaffikin and Morrissey and Lederach, as mentioned above, planners alone are not able to cope with such a complex task. At the same time, the planning approaches reviewed in this chapter, provide tools and ideas for planning and promoting cross-border collaborations in contested environments. An interdisciplinary and cross-section actions are needed to break the walls of division and replace these with cross-border cooperation to foster prosperity and inclusive societies.



FIG 3.4.2 A Palestinian boy waches the constructions of the sparation wall in Shuafat.





## 4.1 The Levant region

This part reviews the main characteristic of divisions and separation in the Levant region, addressing spatial, social and governance aspects.

4.1 Spatial and social segregation in the region, manifested by conflict infrastructure. Photo Near Qalandia checkpoint (Jerusalem area).





1 Israel-Lebanon border



2 Israel - Jordan Border



3 West bank separation wall



4 Gaza border wall

FIG 4.1.1 Conflict infrastructure in the border areas of the region. Here, the conflict infrastructure includes walls, razors and fences, watching towers, sensors to track down movement near the fence, military roads and buffer-zones along the fences.

#### 4.1 In what ways is the Levant a divided region?

This chapter reviews some of the main characteristic of the Levant region as a divided region. The reasons behind this division are rooted in a line of political and historical events that can not be elaborated under the scope of this work. Also, since the region contains several states and autonomies, diplomatic and social relationships are complex and change between country to country. Therefore, in the perspective of this work, the chapter reviews the most predominant aspects of the division. Consequently, most parts of this chapter address the relations between Israel and its neighbouring states and areas, as these include the most extreme cases of segregation.



FIG 4.1.2 The top image presents conflict infrastructure in the border area between nation-states. This is one type of division in the region, in which countries aims to prevent exchange and border-crossing as much as possible, and maintain separation. The bottom image presents conflict infrastructure between Israel and the West bank. Here, the crossing of the barriers occurs every day under sever control implemented by the state of Israel over Palestinian citizens living in the west bank. The exchange mainly occurs for employment and occasionally for accessing services such as hospitals.

##### 4.1.1 Physical division:

The most evident elements to indicate the divided nature of the Levant region, is its borders. The borders of the Levant are characterized by solid impermeable walls and conflict infrastructure, which reflects the relation among the states. It is possible to claim that the type of walls can indicate the degree of the tension. The greater the wall – the dipper the conflict.

##### Physical borders between states not in a state of war:

The fence between Jordan-Israel is 309 km long and the border between Egypt-Israel is 208km long. These borders are characterized by a 5-7 meters high steel tiered fence. The barrier also includes a military access road along the fence, observation technologies and control towers (Ziton,2012).

##### Physical borders between states in a state of war:

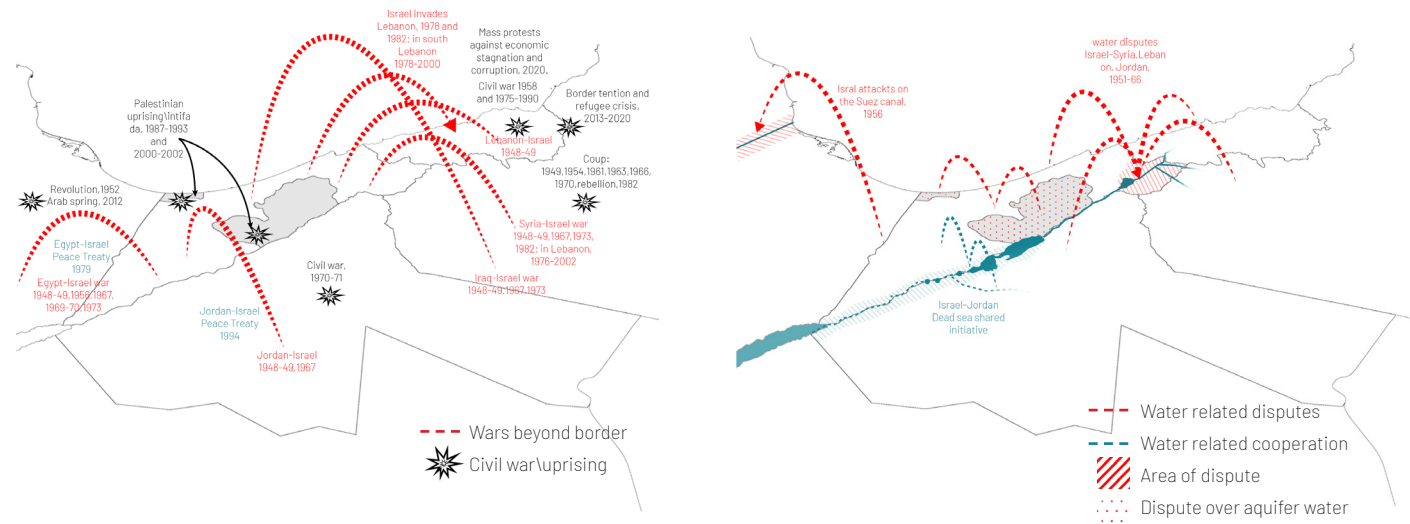
the Syrian border with Israel is 92 km and the Lebanese border is 79 km long. The northern borders of Israel are composed of 6 meters high concrete walls, and in some parts, on top of these 3 meters, hight steel fence is situated. The border area also includes engineering obstacles such as artificial hills and trenches along with military roads, observation towers and cameras (Ziton,2018).

##### Physical borders in dispute areas:

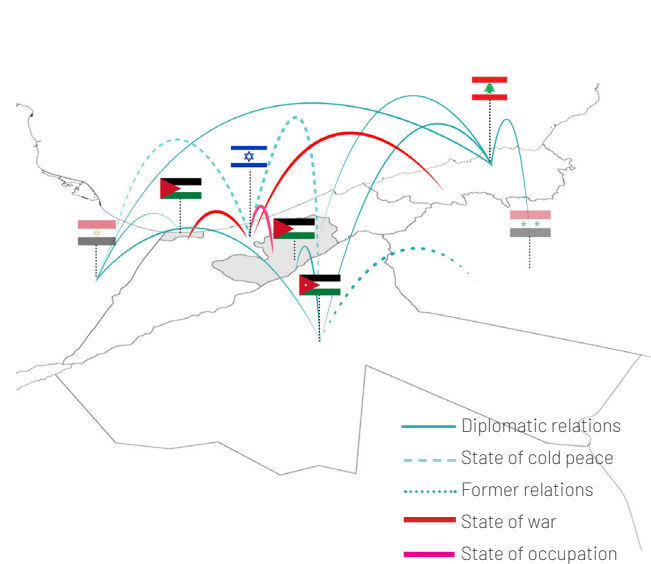
the border between Israel and Gaza is 59 km long. Some parts of

the border consists of steel wired fence with sensitive sensors. In most areas bordering with Israel and Egypt, the separation is done with 6-meter-high concrete walls, buffer zones and watchtowers. There is also an underground and maritime barrier. In some parts, a concrete wall is going underground, including sensing devices detect penetration via tunnels. In the maritime border area, a sea barrier includes a breakwater on top of which a barrier wall is constructed (Ziton, 2018). Israel and the West Bank: a separation wall was built by the Israeli government in order to prevent unauthorized movement of Palestinians from the West Bank to the Israeli central territories (Btselem,2017). Most places are divided by a steel fence, equipped with an electronic sensing and remote observation. In other parts, there is a 6 meter- high concrete wall. The separation consists of several components: an obstacle to prevent car crossing, a dug canal, additional metal fence, and a military road from both sides of the fence. The average width of the barrier is 50-70 meters (ibid). There are other types of conflict infrastructures in the West-bank that act as means for separation such as: roads for the use of Jewish settlers where travel is prevented from Palestinians, blocking of roads, and military checkpoints within the West-bank area in addition to the border checkpoints (ibid).





1 Border disputes and in-land conflicts



3 Bilateral relations

FIG 4.1.3 the schemes above describe different types of divisions in the region. The top two schemes describe historical reasons for disputes near the border area. These battles have resulted in impermeable border and limitation of exchange as part of the state's will to secure sovereignty over its borders. The bottom two schemes describe the current relationships in the region. Schemes 3 describe the types of diplomatic relations between the different states and areas in the region. Scheme 4 shows the current crossing in the region. These mainly include some tourist travel via airplane, exchange of goods between Jordan and Israel and workers crossing the west bank border to Israel.

#### 4.1.2 Governance aspects:

##### Borders and governance in the Levant:

The Levant region includes the national borders between the State of Israel, Lebanon, Jordan, Syria and Egypt and unofficial borders between Israel and Gaza, Israel-West-bank, and Israel-Syria in the Golan Heights area.

Like other post-colonial territories, the current borders in the Levant were heavily influenced by arrangements between the colonizing powers of the British and French that govern the region after WWI (see introduction). The armistice, peace and international mediation agreements that took place after the independence of the region's nation-states have generally reaffirmed the route laid down during the British and French mandate in the area.

The border formation processes date back to the Sykes-Pico agreement of 1916 and continued to shape as the states battled to claim their independence from the British and French mandate, and as countries fought nation against nation in an attempt to gain sovereignty over territory and resources. During the 1967 war, Israel occupied vast territories from its neighbouring countries – Syria, Jordan (the West Bank area) and Egypt. After which, with territorial exchange and new arrangements, the peace between Israel and Egypt in 1979, resulted in an agreement on the Israeli-Egypt border. The peace agreement between Israel and Jordan in 1994 resulted in the stabilization of the Israeli-Jordan border, which was finally defined along the Jordan River.

Yet, some of the borders in the region are considered temporary boundaries: "armistice lines", "lines of separation" or "ceasefire lines" (AKA Purple lines). Israel's control of the Golan Heights is still in the heart of the Israeli-Syrian dispute. There is an agreement on the border between Israel and Lebanon, except for a small area of Sheba farms. In both the Israeli-Syrian and the Israeli-Lebanese border areas, third-party supervision is made by UNDOF and the Red Cross are (Syrian border) and UNIFIL (Lebanese border).

Furthermore, Since the 1990s, disputes between Israel and the Palestinian Authority were intensified. The law of the State of Israel was never applied to the Gaza Strip nor to the West Bank, except form the territories of East Jerusalem(to which Israeli law was applied in June 1967). Israeli law also does not apply to Jewish Israeli settlements in the West Bank. In Gaza, until 2005, when Israeli settlements were evacuated from the Gaza strip, the area was managed by the

the IDF under a Military occupation. The West Bank territories are managed in the same manner to this day (Btselem, 2017).

##### Lack of governmental cooperation:

The official relationship between the region's states presents a challenging complex situation considering the research aim of promoting regional cooperation.

Officially, Israel and Jordan and Israel and Egypt are in a state of peace. Nevertheless, these reflect a state of cold peace. In a cold peace, the two nations enforce a peace treaty ending the state of war. At the same time, governments (of one at least one state party), are domestically and vocally not supporting the treaty. Yet, the mistrust and antagonistic between the parties, do not result in proxy wars, violent acts or similar conflicts. In the case of Egypt and Israel, the Egyptian popular support in the treaty decline in 1981 with the assassination of President Sadat and the 1982 Israeli invasion to Lebanon. The negative perception of the treaty has not recovered ever since (Asser, 2004). The relation with Jordan has a complex nature. On one hand, the two states sometimes collaborate based on shared goals, which includes economic and environmental initiatives, and Israeli truism in Jordan. At the same time, diplomatic relations are changing and unstable at times. Jordan ideologically supports the Palestinians aspiration for an independent state and condemns the Israeli occupation in the West Bank. Most of the Jordanian population opposes to any cultural ties with Israel. Over the years, Israel and the Jordan aimed to normalize the relations, yet these attempts were not accepted by the Israeli and Jordanian population.

Israel-Gaza and Israel-Lebanon are in a state of war and there are no diplomatic or governmental relations. The state between Israel and the Palestinians in the West Bank is a state of occupation. The Israeli law does not apply to the West Bank area, and the Israel Defense forces (IDF) is the sovereign under a Military occupation. Further explanation of some governance aspect in the West Bank will be discussed next.

Diplomatic and government official relations do exist between Lebanon- Gaza-West Bank; Lebanon-Jordan; Lebanon- Egypt; Jordan-West Bank -Gaza, and Jordan-Egypt (see 4.1.3)

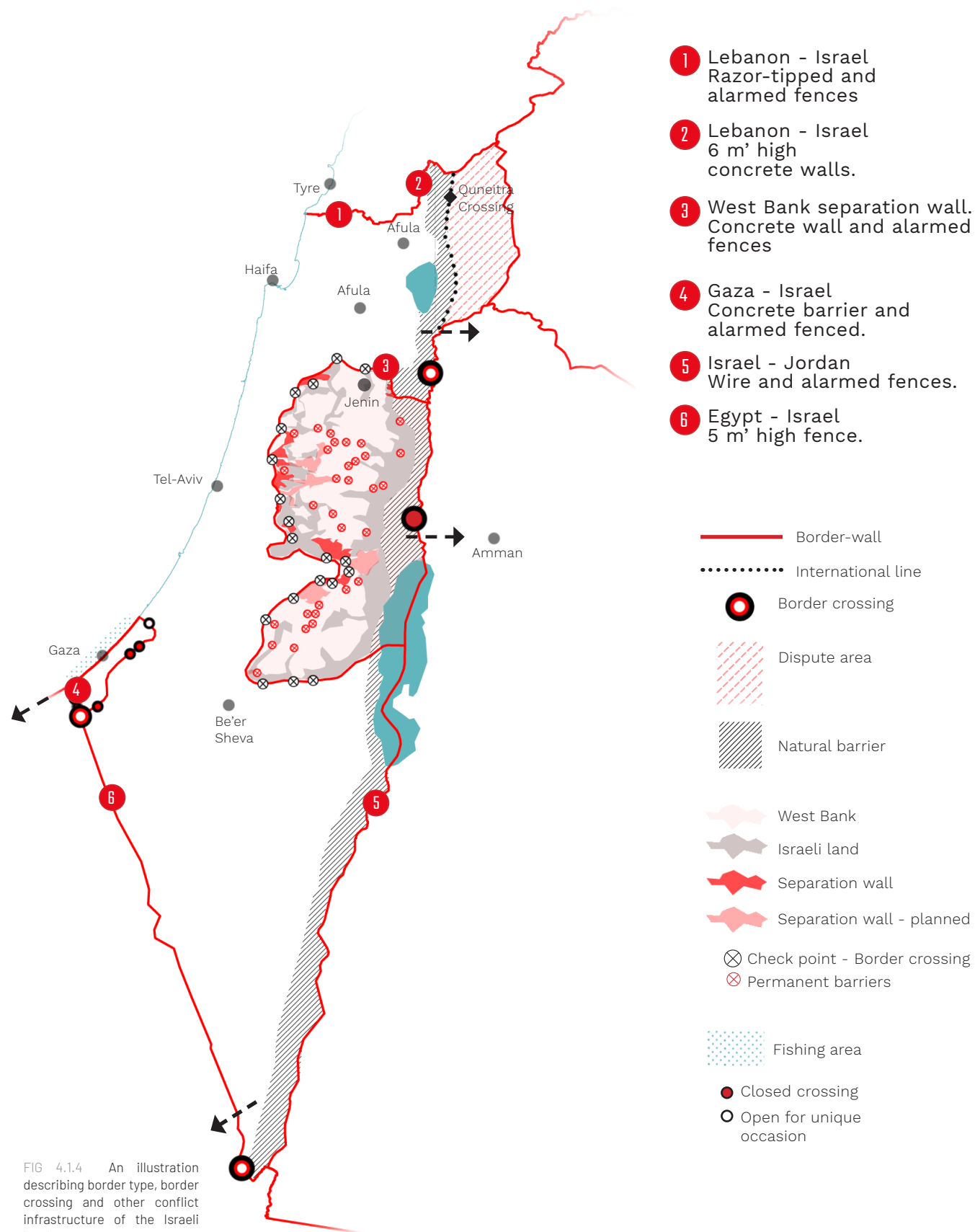


FIG 4.1.4 An illustration describing border type, border crossing and other conflict infrastructure of the Israeli borders.

#### Governance and border-crossing control:

There are two types of border-crossing in the region. One between states (Israel-Jordan; Lebanon-Jordan; Israel-Lebanon) and the other crossing is along the separation wall between the Israeli territories the West Bank and Gaza. As mentioned in the problem field (see section 2.1), border-crossing support trade and people movement promoting social and economic exchange. Therefore, border-crossing is related to governance control over resources, as - mobility, or lack of it, can be used as a tool of conflict.

Today, border-crossing in the region is very limited. There are two crossing points between Israel and Egypt and Israel and Jordan. The crossing is allowed only with a special permit (Visa) and used mainly for international and Israelis tourist travelling from Israel to Jordan and from Israel to Egypt (Sinai Peninsula)(The Ministry of Region Cooperation, n.d). There is also some freight travel going from Jordan to Israel, mainly by trucks (ibid). This border-crossing are heavily supervised by both state parties and the checkpoint are open for a limited time.

There are several checkpoints on the border between Gaza and Israel. Currently, only two checkpoints remained open between Israel and Gaza. These points are heavily guarded by the Israeli authorities. Passage of people and goods is only allowed for humanitarian causes. International organizations, diplomats, and merchants holding permits can pass. The checkpoints are sometimes used to bring in medicines and medical supplies (Btselem,2017).

In the case of the West Bank, there are multiple checkpoints to regulate the crossing of Palestinians by the Israeli territories. Border- crossing of Palestinians to the Israeli territories occurs daily, under sever control implemented by the state of Israel. The crossing mainly occurs for employment as many Palestinian works in the Israeli cities, and occasionally the crossing takes place for accessing services at the Israeli side, such as hospitals. The crossing is allowed only with a permit given by the Israeli authorities (Btselem,2017). The border-crossings from Gaza and the West Bank involves several governmental agencies: The Airports Authority, border-crossing Authority, the Ministry of Defense, the Israeli Police and the IDF (The Ministry of Region Cooperation, n.d).

#### Governance, borders control and economic implication:

Governance over border-crossing, as presented above, clearly have economic and social implications.

Governance schemes related to border- crossing determine the living conditions and opportunities for different populations and communities related to it.

**West Bank:** The lives of Palestinians in the West Bank depend on a set of security and administrative provisions imposed by the Israeli government. Movement restrictions affect most aspects of the daily life such as: getting to employment sources, trade, medical care outside the West Bank and cultivation of agricultural lands beyond the separation fence (Btselem,2017). Under these severe restrictions and limited access to resources and opportunities, the Palestinians are struggling to develop and maintain a stable economy. According to the Ministry of defence approximately 50,000 Palestinian crosses the checkpoint along the separation wall every day, on their way to work. About additional 50,000 Palestinian are crossing the fence illegally to find sources of employment (Fridson,2016). In Israel, Palestinians mainly work in the construction and agriculture sectors, where they are considered a cheap labour fore in comparison with the Israeli labour market.

**Gaza strip:** Since the occupation of the Gaza Strip by IDF forces in 1967, residents of the Gaza Strip have been relying on the Israeli government to supply water, electricity, sewage, gas, fuel, and telephone infrastructure and other services (Btselem,2017). In 1994, the Israeli government built the fence around Gaza Strip, which enabled the control of the movement of people and goods between the Gaza Strip and Israel, the West Bank - and the rest of the world (ibid). While one crossing point is under Egyptian control, passing through to the West Bank or Jordan requires Israel's approval. In the summer of 2007, after Hamas took control of the Gaza Strip, Israel imposed a siege, which led to economic collapse and created dependence of the Gaza Strip on international aid (ibid). During the siege, the entry of people and the import of goods into the Gaza Strip was highly restricted. Also, at the same time, the Israeli authorities reduced the permitted fishing area (ibid). The impermeable border surrounding the area brought to the collapse of the Gaza economy. In the second quarter of 2017, the unemployment rate reached 44%. Among women, the unemployment rate reached 71.5% and among young people (under than 29 years) to 61.9%. About 80% of residents depend on humanitarian aid and about 60% suffer from food insecurity (ibid).





## 4.2 Former railway network

This part reviews the former railway network in the Levant. This section is divided into 3 parts: past, present and future. The past focuses on the history of the former railway. The present analyses the current condition of it and the future discuss relevant regional plans.

FIG 4.2 A map showing the complete railway infrastructure constructed during the Ottoman Empire rule. The network was also named the Euroasia railway in 1914. Here the Levant region still acts as one territory.



4.2.1 - **Past:** Former railways in the Levant - historical background

Two main historic railway lines can be found in the Levant region. The first one was constructed during the rule of the Ottoman Empire in the region and its most known segment is the Hejaz railway. The second line was built along the coastline and it was constructed during the British and French mandate at the end of WWI. These tracks were operating until the late 50s, and their remains are scattered to a different extent among the regions' territories. This part reviews the history of these two main lines.

4.2.2 - **The Ottoman Empire - a brief introduction**

Between the 14th and early 20th centuries, the Ottoman Empire controlled much of Southeast Europe, Western Asia and North Africa. With Constantinople (Istanbul) as its capital and with control of lands around the Mediterranean basin, the Ottoman Empire was at the center of interactions between the Eastern and Western worlds during six centuries (Ozyuksel,2014). The empire maintained a strong economy, society and military throughout the 17th century and during much of the 18th century. However, as the Ottoman army fell behind the armies of the Habsburg and Russian empires, the empire suffered severe military defeats in the late 18th and early 19th centuries (ibid).

In the early 20th century, during WWI, the empire allied with Germany and the Central Powers, in an attempt to resolve the diplomatic isolation which resulted from continuous territorial losses. WWI resulted in the Empire's defeat and loss of Middle Eastern territories, among them the Levant region. The Levant territory was occupied by the Allied Powers and the partition of the Levant area was divided between Britain and France (ibid).



FIG 4.2.1 A map of the Ottoman Empire from 1654. The Ottoman Empire territory is bounded by a yellow line.

4.2.3 - **The Ottoman railway**



FIG 4.2.2 Meissner pasha (Heinrich August Meissner), A German engineer responsible for most of the construction of the Hejaz railway.

*"Infrastructures make empires. The economic, social and cultural systems of empires are guided by and given form and purpose of canals, bridges, tunnels, ports and perhaps most importantly, railways"* (Christensen,2017:1).

The power that infrastructure had in the early globalizing world, during the age of empires, reflected the rules desire and competition for physical presence. Railway expansion was a symbol of modernization in the late 19th century, and Britain, Germany and France built railways at a growing paste and benefited from extended economic ties. In the Middle East, railways were highly important to the Ottoman Empire (Ozyuksel,2014). During the rule of the Ottoman Empire, thousands of miles of good quality railway lines were built from the mid-1800s, making a vast trade network and the development of previously remote areas. The railway system of the Ottoman Empire became a strategic web of supply behind the Turkish forces (ibid). The railway line used to connect the Ottoman Empire with Europe and Africa, passing by places with economic and religious importance (ibid).

The Ottoman Empire was not able to construct their desired infrastructures, due to lack of technical expertise and financial resources. At the same time, the Habsburg Empire had its own infrastructure aspirations, and had the resources but did not have the explicit mandate to impose them elsewhere (Christensen,2017). This led to the transfusion of infrastructure across imperial borders (rather than within)(ibid). The Ottoman railway perhaps tells the story of globalization. A massive physical network of railway lines, stations, monuments and institutions, conceived by the Ottoman sultan and considered the pride of that empire's modernizing impulses. At the same time, it was also an infrastructure engineered by German firms, constructed with German materials such as steel and financed by German banks such as the Deutsche bank over the course of a half-century (ibid). While the construction project employed local builders and craftsmen to advanced Ottoman goals of imperial consolidation and modernization, it also accelerated German influence in the territory of the Ottoman Empire (ibid). This influence was later on reflected with the joined forces between the Ottoman Empire and the Central Powers during WWI.

The Ottoman railway network can be mainly divided into 4 main sections: European Turkey (1871-91), the Anatolian Railways (1873-99), the Baghdad railway (1899-1918), and the Hejaz Railway and its Palestinian branches (1900-1908) (ibid). The last section of the Hejaz Railway is the most relevant ones for this research and it is the most significant segment in the Levant region.



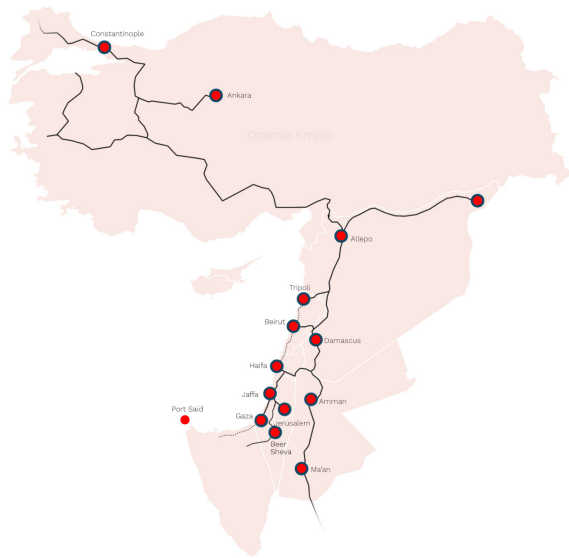
First tracks in Constantinople (Istanbul) area, 1856-1879.



Further development in Anatolie (Turkey). Also construction from Alpo (Syria) to Tripoli (Lebanon) and from Jaffa to Jerusalem (Israel), 1800-1899.



Extensive development of tracks in the Levant region with the construction of the Hejaz railway line, 1900-1920.



Further development of the network by Britain and France, mainly on the shore along the Mediterranean, 1920-1950.

The Hejaz railway was perhaps the most impressive infrastructure development of the Ottoman period. The line ran from Damascus to Medina, through the Hejaz region (Saudi Arabia), with a branch line to Haifa on the Mediterranean Sea. It was a part of the Ottoman railway network and the main purpose of the railway was to establish a connection between Constantinople, the capital of the Empire, and Mecca, the site of the holiest shrines of Islam a destination of an e annual pilgrimage (Ozyuksel,2014). Another important reason was to improve the economic and political integration of the distant Arabian provinces into the Ottoman state, to facilitate the transportation of military forces and ferrying supplies into the Arabian heartland (ibid). The line was constructed between 1900-1908, however the line was not completely constructed. The last section reached Medina, which is located about 400 km north to Mecca, the desired final station (ibid).

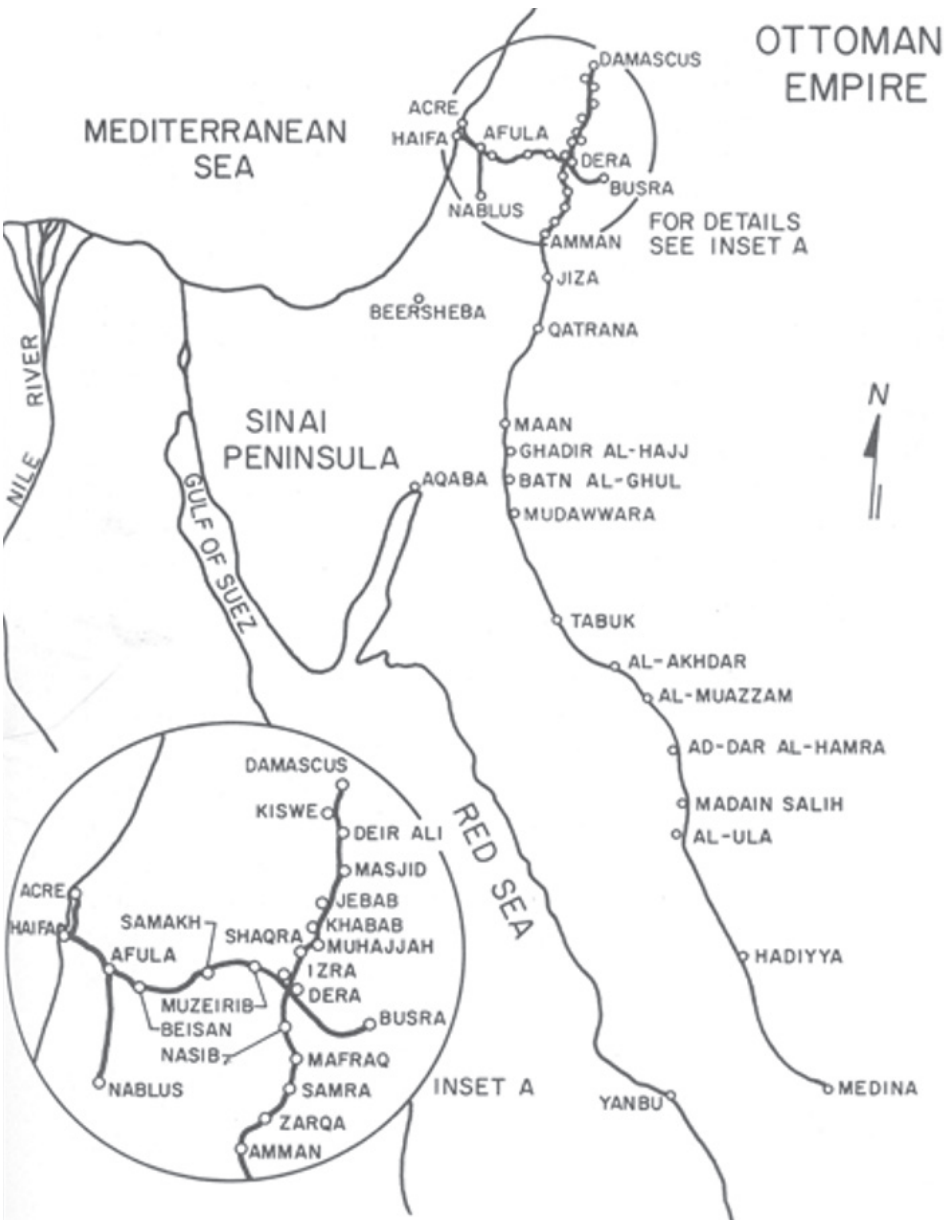


FIG 4.2.3 Left: a series of mapping describing the development of the Ottoman railway network.

FIG 4.2.4 A map of the Hejaz railway, which connected the region with Europe and Saudi Arabia. The largest and longest construction of railway line in the Levant region. The enlarged area shows the branch of the line from Jordan to Haifa and Acre in Israel (Palestine). Commissioned by Sultan Abdul Hamid II, work started in 1900 and it reached Madinah in September 1908.





FIG 4.2.5 Advertisement poster for the Taurus express railway travels, 1930, and FIG 4.2.6 visit Palestine poster, another advertisement for the Taurus express, 1936.

#### 4.2.4- From Ottoman railways to the three continent train - The Taurus Express

After WWI the Ottoman railways in Turkey and in the Middle East were left to the control of new actors. In the 1920s Turkey incorporated the Anatolian Railways, while the tracks in Syria went under French control and those in Palestine and Iraq came under British control (den Boer,2019). In 1930 the Taurus Express was introduced as an extension to the Simplon Orient Express (see figure 4.2.7). The train was named after the Taurus Mountains in southern Turkey. From Syria, connections were provided to Iraq, Palestine, and Egypt. It was a luxury train, advertised as a three-continent train (Europe, Asia, Africa), which enabled travelling from London and Paris to Cairo and Baghdad by train (ibid).

During the first decades a regular train service-connected Istanbul and Baghdad. In 1942, a missing rail link between Tripoli, Beirut and Haifa was completed (see figure 4.2.8), making Cairo directly connected to Istanbul. Finally, a continuous connection was possible between Turkey and Egypt. Yet, eventually, this railway segment was never used for passenger travel (den Boer,2019). During the British rule in the area, with the outbreak of WWII, the need for a land link between the Middle East and Europe was emerged. During WWII, after the occupation of Lebanon by the British army in 1941, it was decided to build a railroad from Haifa through Beirut to Tripoli, from which there was already a northern railroad to Turkey, to allow the passage of military forces and equipment. The British, assisted by thousands of military workers (Australians, New Zealanders, South Africans, and alongside the local population in Palestine) paved a railway line between Haifa, Beirut and Tripoli. In a tremendous effort of about 18 months, tunnels were carved, 15 bridges were laid along the route, and support walls were built to protect the sea waves. Throughout the war, rails and tunnels were used for military purposes only, and even after its end, a passenger line was never opened (ibid).

During the 1960s onwards conflicts in the Middle East caused many interruptions, which continue to this day. Also, in the early 1950s With the establishment of Israel and the subsequent conflicts, the direct connection was disrupted (ibid).

To summaries, during the French and British mandate, the greatest contribution of railway development in the Levant was the development of the railway along the coastline. This line created connections from Cairo to Haifa and Beirut and further north to Europe. Moreover, the already existing railway tracks were further developed creating new in-land connections, especially in Israel and Lebanon.

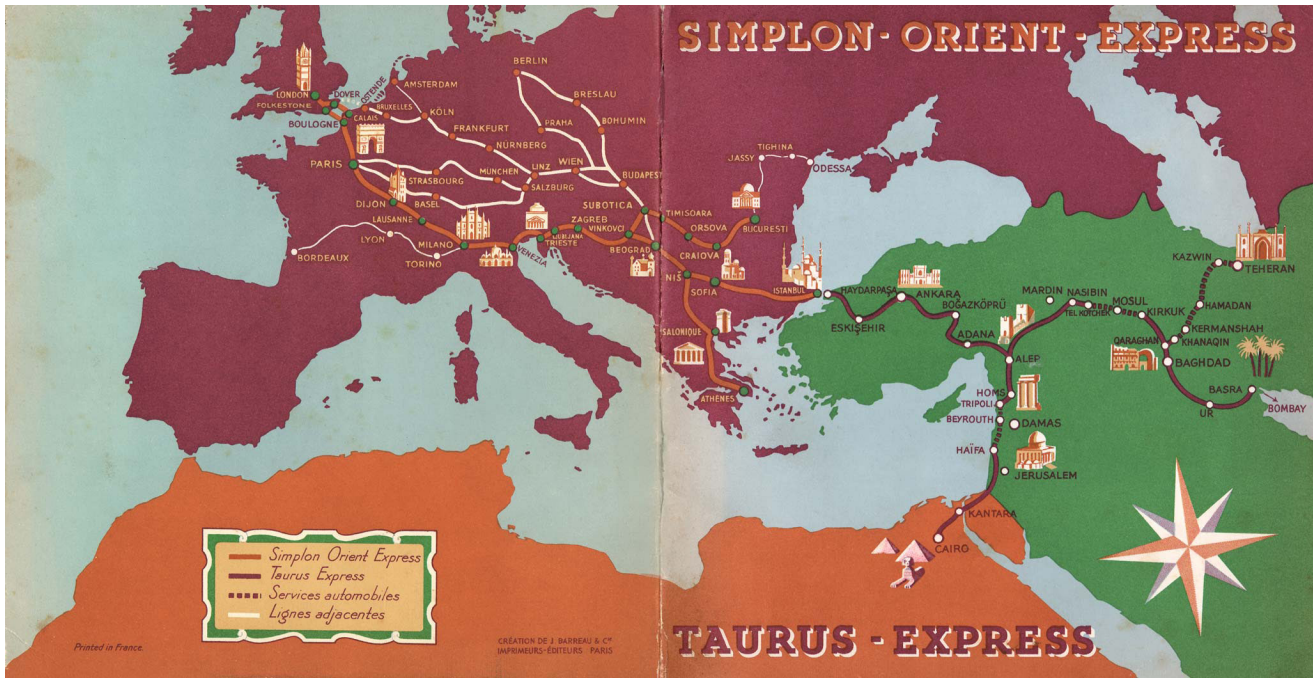


FIG 4.2.7: A brochure from 1930, showing the full travel map from London and Paris through Turkey and the Levant area, finishing in Egypt. The line marked as Automobile services was later constructed as a railway line in Lebanon, completing the rail network.

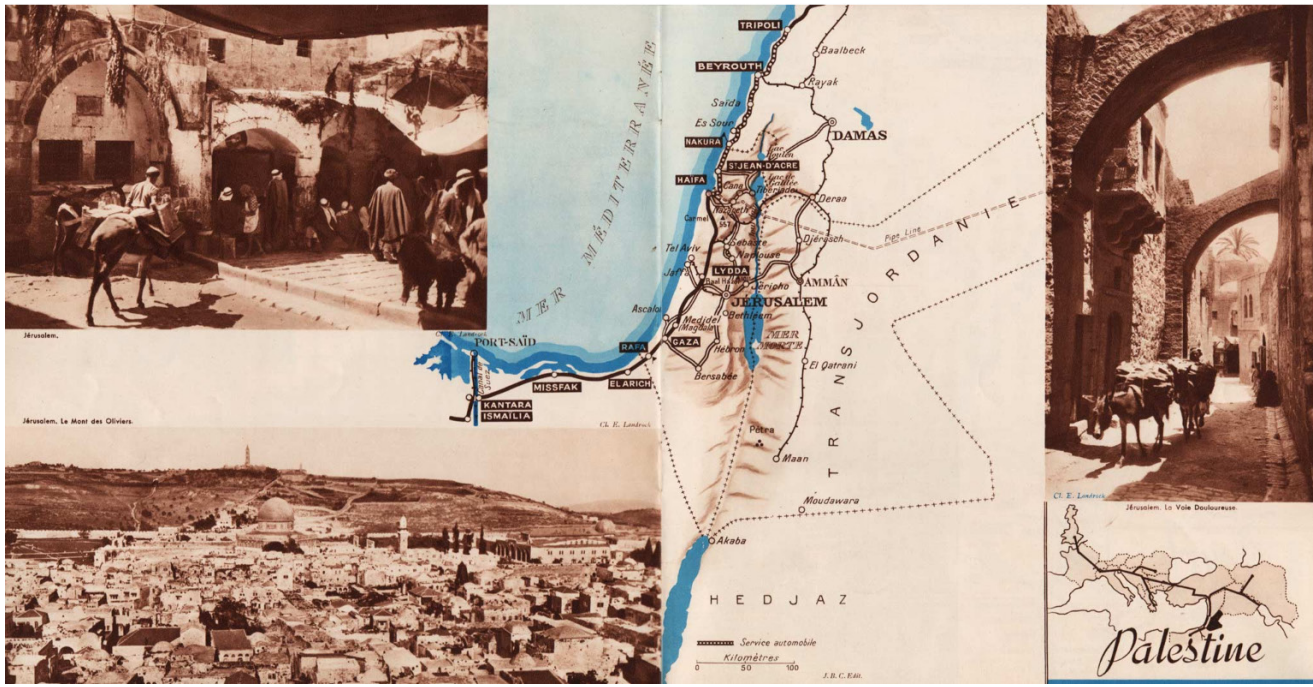


FIG 4.2.8 A brochure from 1930, showing the full travel map to Palestine. Also here, the dotted line marked as Automobile services, and was later constructed as a railway line in Lebanon, completing the rail network. The strong black line marks the main railway development after WWI.



4.3sent: Deterioration and current condition of the railway network

The railway story of decline is different in each and every country in the region. A brief summary will describe the main reasons for the deterioration of the track. Generally speaking, after WWI and until the 1970s, several attempts were made to revive the railway, but the scheme proved too difficult and too expensive (Sacksouk, et al. 2015). The railway was abandoned and the huge old steam locomotives sat and rusted. Train stations ran into dilapidation. No one travelled by train anymore except for a tourist line running from Damascus north to the Turkish-Syrian border and that too is now closed due to civil strife (ibid).

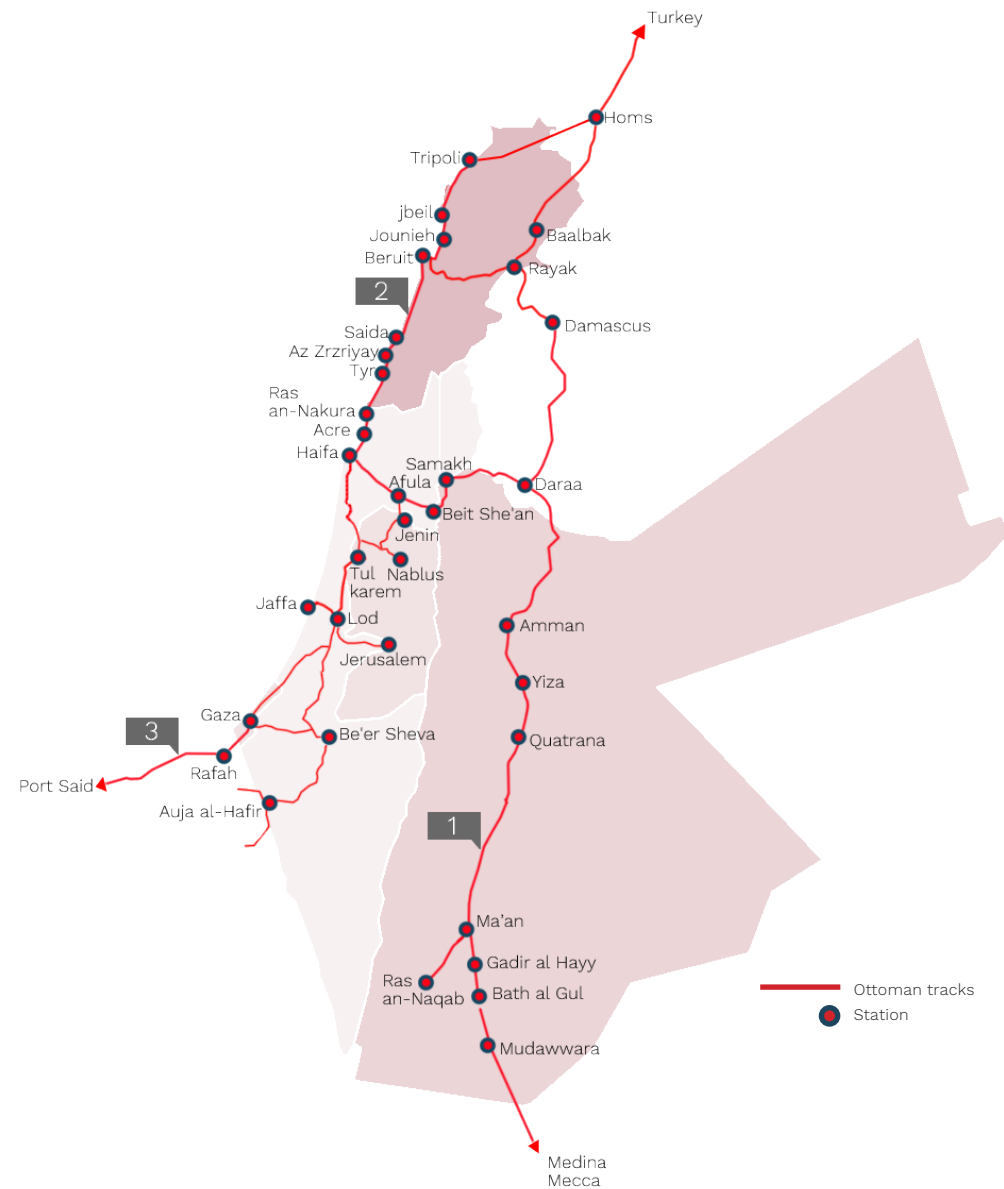


FIG 4.3 A conductor checks a Palestinian man's ticket on the first train from Gaza City to Tel Aviv, 1972. Shortly after the 1967 war, in which Israel occupied Gaza, Palestinians were allowed to travel freely into Israel, (although they were not allowed to stay the night). At the beginning of 1989, with the outbreak of the First Intifada, Israel started putting more severe restrictions on Palestinian movement. Today, it is almost impossible for most Palestinians to leave the Gaza Strip (Schaeffer, 2017).

Jordan:  
The longest part of the Hejaz railway in the Levant region went through Jordan. Since this line had a great military and supply importance, it was attacked frequently during the Arab Revolt of WWI. During the revolt against the Ottoman rule, Arabs allied with the British forces (Lead by Lawrence of Arabia) bombed parts of the rail network to stop Ottoman troops from sending reinforcements. These attacks mainly occurred in the Hejaz area in order to create a disconnection between Jordan and Saudi Arabia (Staedtler,n.d). As conflicts in the middle east increased and the Taurus Express stopped its journeys in this area, the train was left to deteriorate (ibid). Today, some sections of the railway are still in minor use today. Now, Jordan's railway network is composed of two main railway lines. The Jordan Hejaz Railway Corporation (HRC) uses a railway for touristic purposes on the north side of the country. The Aqaba Railway Corporation (ARC) uses a rail line mainly to transport phosphate to the Port of Aqaba.

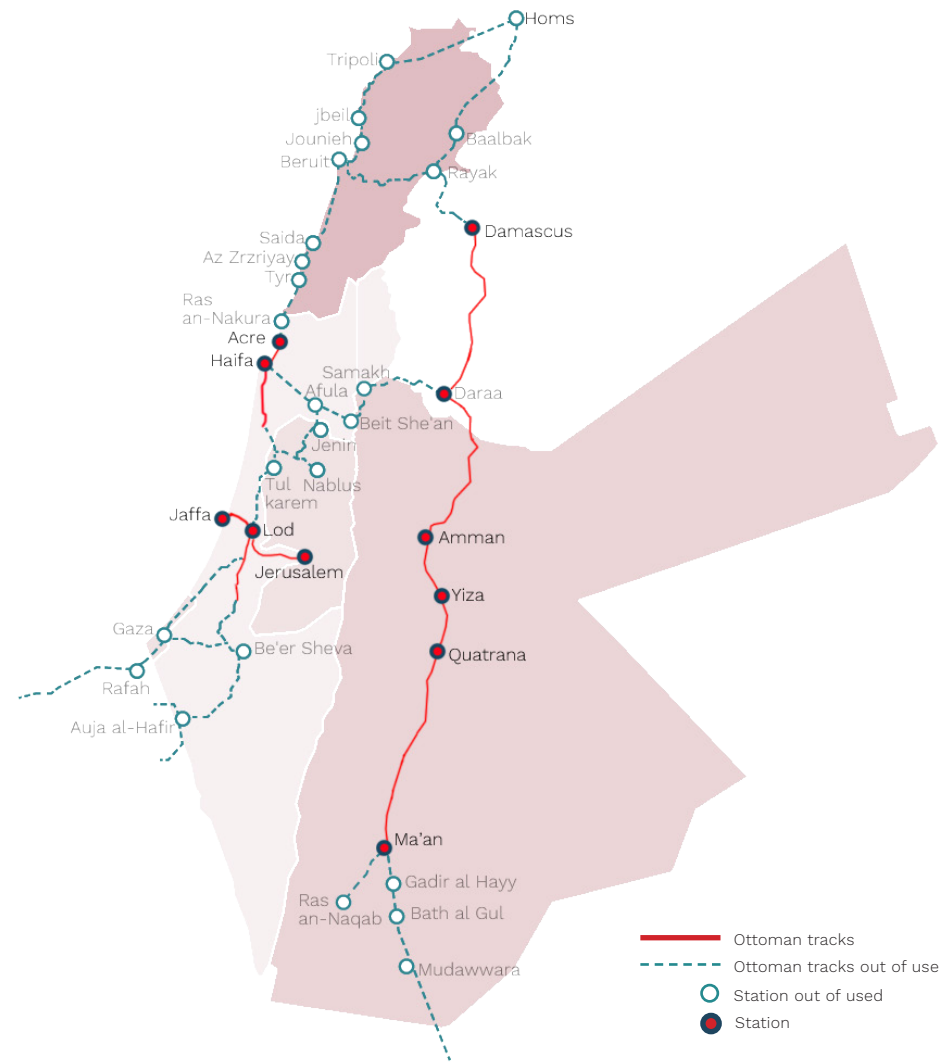
Israel:  
As the conflicts between Arabs, Jewish and British increased towards the end of the 1940s, the railway tracks were often sabotaged as part of combat action against the British mandate. Different sections of the railway line were the center of attacks at various battles. As the British mandate ended and with the establishment of the state of Israel, the tracks of the railway were in bad condition. Also, as states battled to gain their independence and sovereignty over territories, the tracks at the borders area were targeted as strategic points of attacks to prevent invasion and damage armies supplies (Cotterell,1984)(author's translation). Some of the old tracks were integrated with a newly developed railway system that connects places with economic, political and cultural importance such as: Jerusalem, Tel-Aviv, Lod and its international airport, and the Haifa port. Other parts, mainly at the periphery, were left to deteriorate. But the most evident disconnection is of the West Bank and Gaza Strip, who lost their railway network entirely until this day.

Lebanon:  
In Lebanon as well, politics have repeatedly affected the condition of the railway operation. In 1948, the establishment of the State of Israel, led to the closure of the southern line which went to the border (Acre and Haifa in Israel). The tense geopolitical situation in the region, with the current Syrian conflict, prevents the creation of economic relations between Lebanon and its neighbors (Sacksouk, et al. 2015). Tripoli station used connected this city with Homs and Aleppo, creating ties and significant economic and food revenues for the city. During the civil war (1975-1990), most stations were used by the Syrian army (which have invaded Lebanon from the 1970s until 2005). In 1976, Stations in Tripoli and Riyaq were used, as military bases and some where used as torture centers (ibid). Later, In 1985, the Lebanese state made some attempts to allow partial rail passenger transport. However, this initiative was interrupted due to lack of maintenance and continuous war (ibid). Until this day, there is no train mobility in Lebanon and the station and infrastructure are left in ruins.



**FULL NETWORK:**  
The historical network and its main stations around 1920

1. The Hejaz railway, from Damascus to Medina, with a branch to Haifa and Acre.
2. From Tripoli to Haifa, a later development in the network constructed after WWI.
3. From Konetra\Rafah (Egypt) to port Said. A later development in the network, constructed by the British mandate in Palestine. Before that connections to Egypt was made from Beer Sheva and Auja al Hafir station.

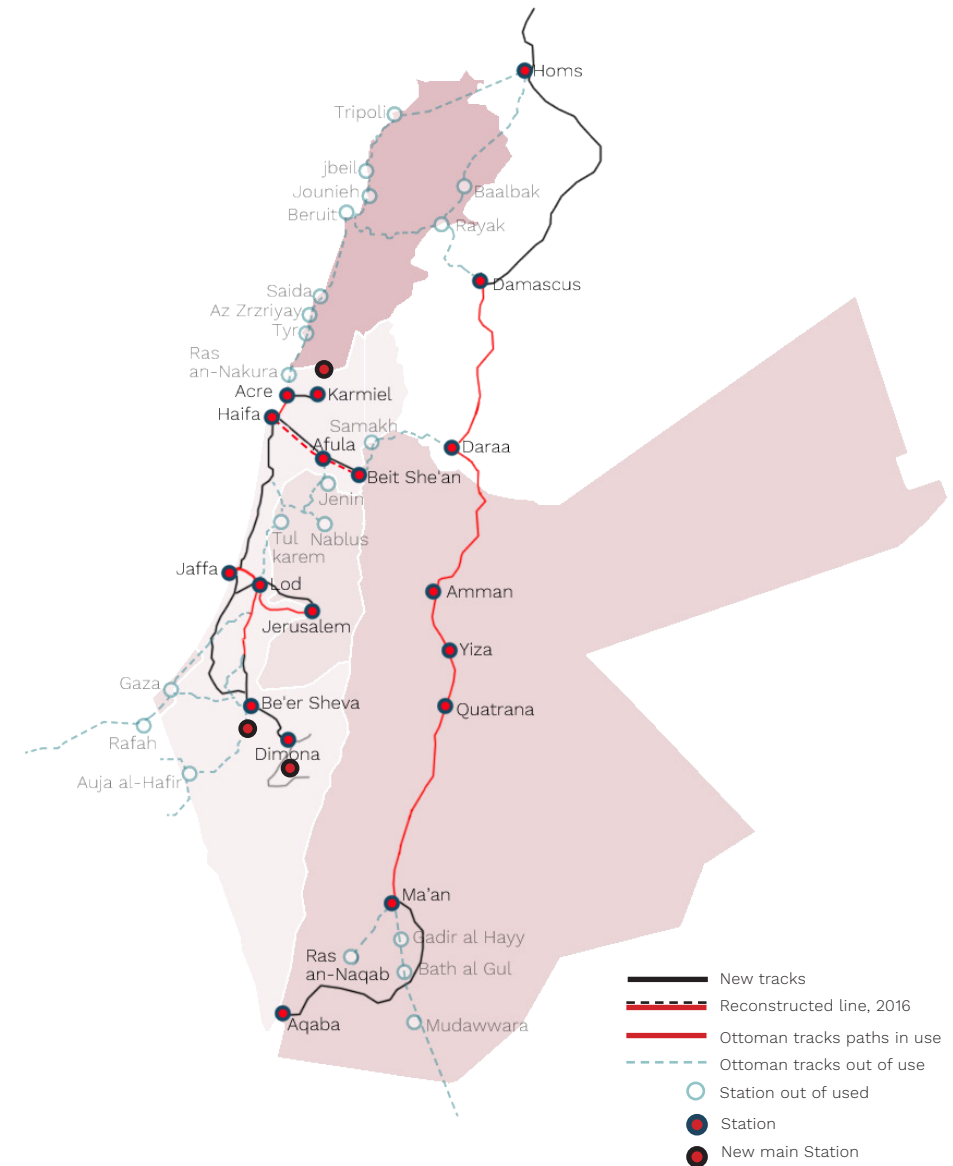


**DETERIORATION OF THE NETWORK:**  
The railway network and its dissolve between 1940-1970

In Lebanon: the railway dissolved in two phases: first, with the establishment of Israel, travels between Beirut and Haifa stopped. Later, The infrastructure was ruined by bombing during the civil war (1975-1990).

In Israel: The tracks were center of attacks in the battles between the Jewish, Arabs and British right before 1948 and after.

In Jordan: the Hejaz tracks are still there, yet the railway is being used for some short touristic trips and phosphate transportation.



**CURRENT STATE OF THE NETWORK:**  
Operating railway network in the Levant region

In Lebanon: there is no railway line services.

In Israel: The west bank and Gaza lost their railway network and restrictions of movement by the Israeli government increased as tensions intensified.

In Lebanon: there is no functioning line for passenger. Border crossing with Syria is no longer since the civil war. The connection with Saudi was lost during WWI and these tracks are out of use.



4.3.1 Regional discontinuity

The most evident railway deterioration is evident in Gaze, the West Bank and Lebanon in which traces of the line completely dissolved. As mentioned in the previous chapter, Gaza and the West bank suffer today from a heavy limitation of movement by the Israeli government and lack of connectivity to other territories. Overall, with the formation of borders in the region and their accompanied political process, the tracks were detached to prevent connectivity among the nations. In Israel, the detachment of the railway was also related to inner ethnic-religious battles between the Jewish and Arabs communities.

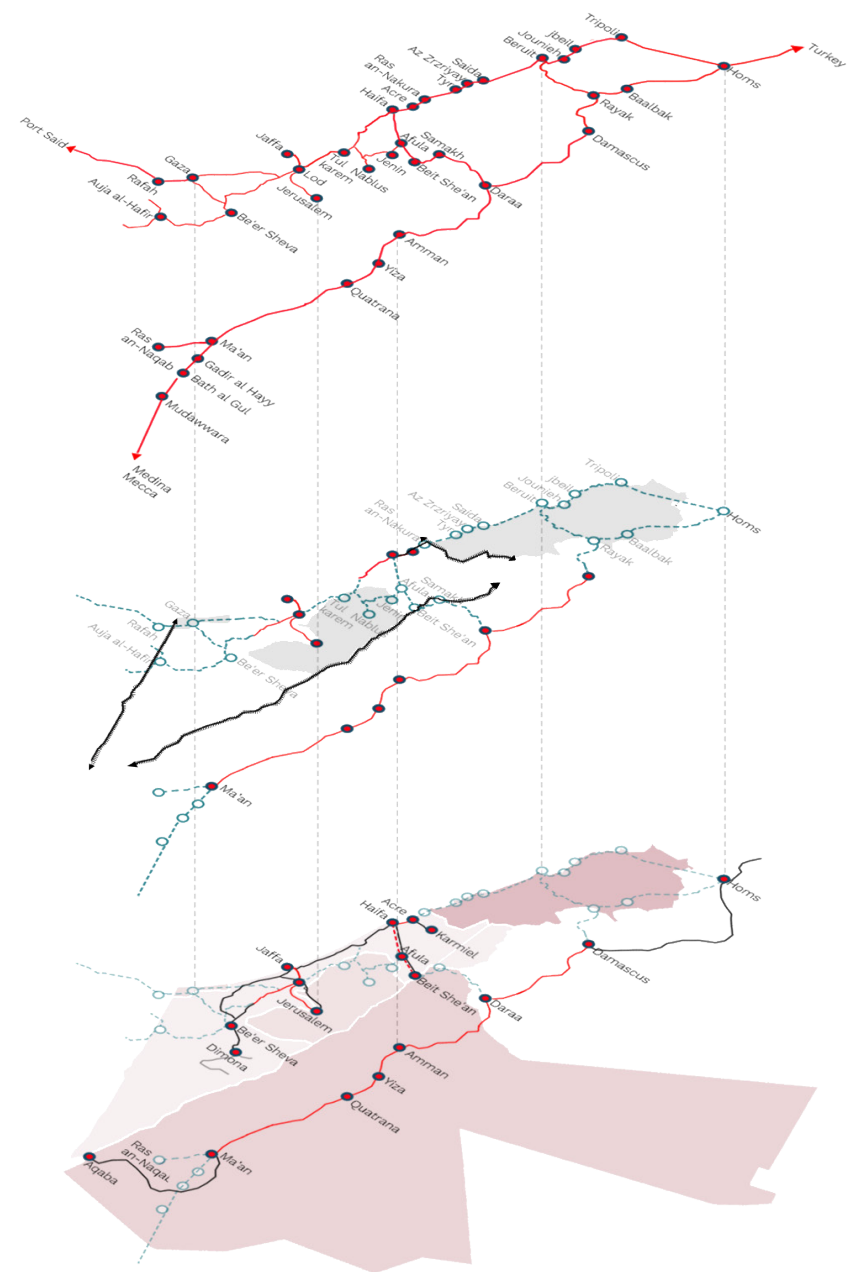
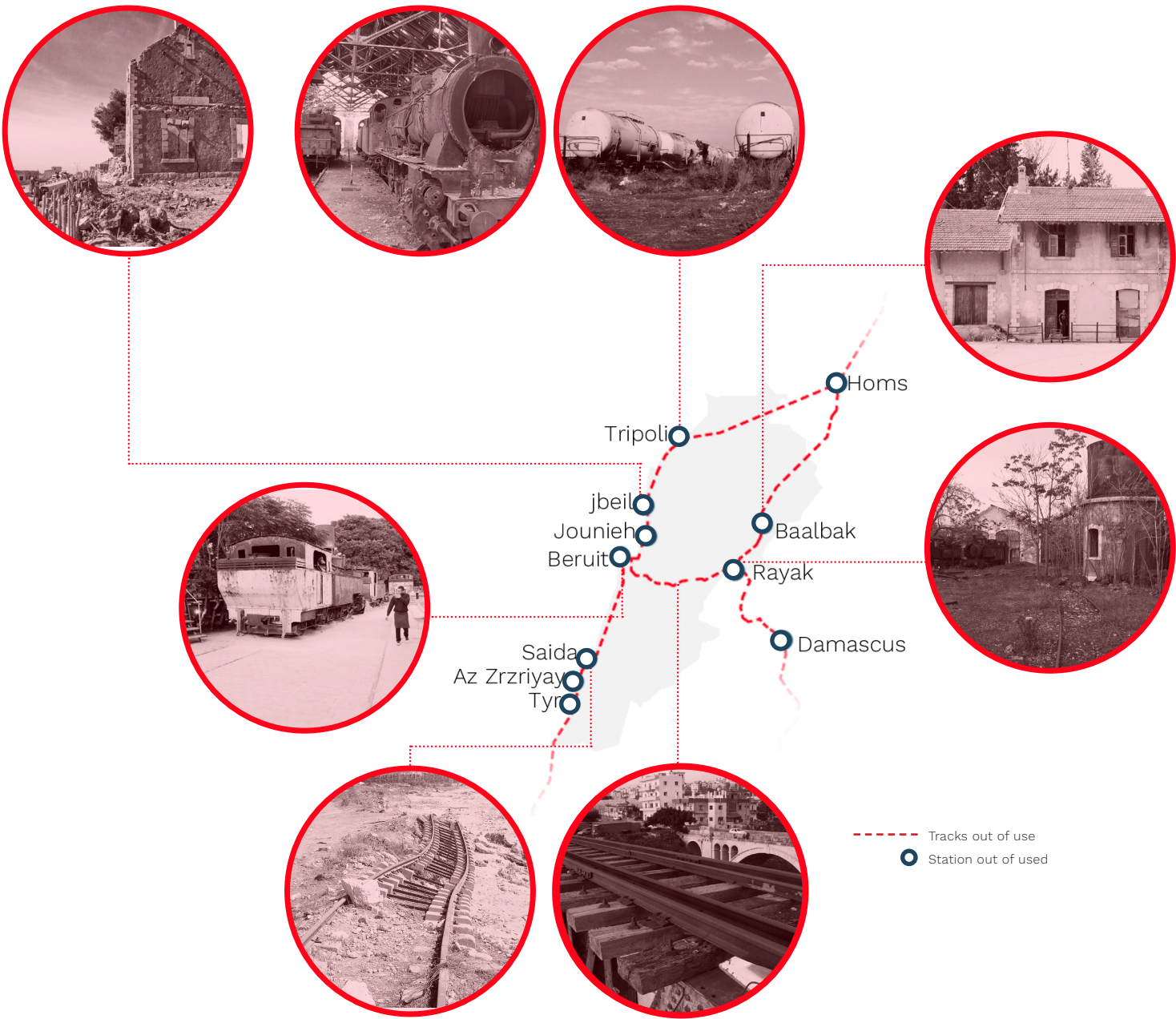


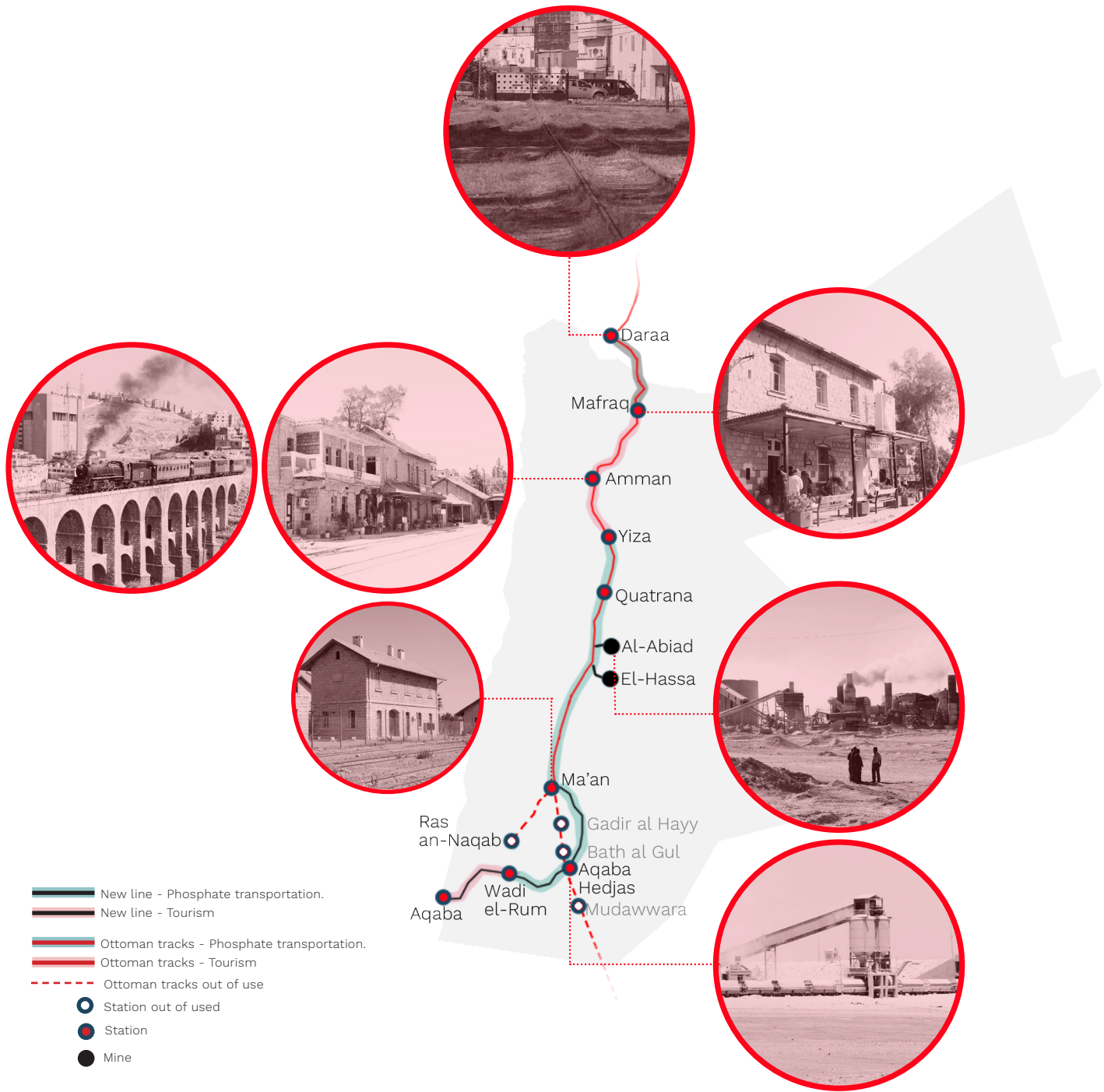
FIG 4.3.1 a compositions of the former railway network and the current one.  
Top- the former connected network.  
Middle layer - the disconnection of railway line and the isolation by borders.  
Bottom Layer- the current railway network in the region.

4.3.2 The railway network in Lebanon



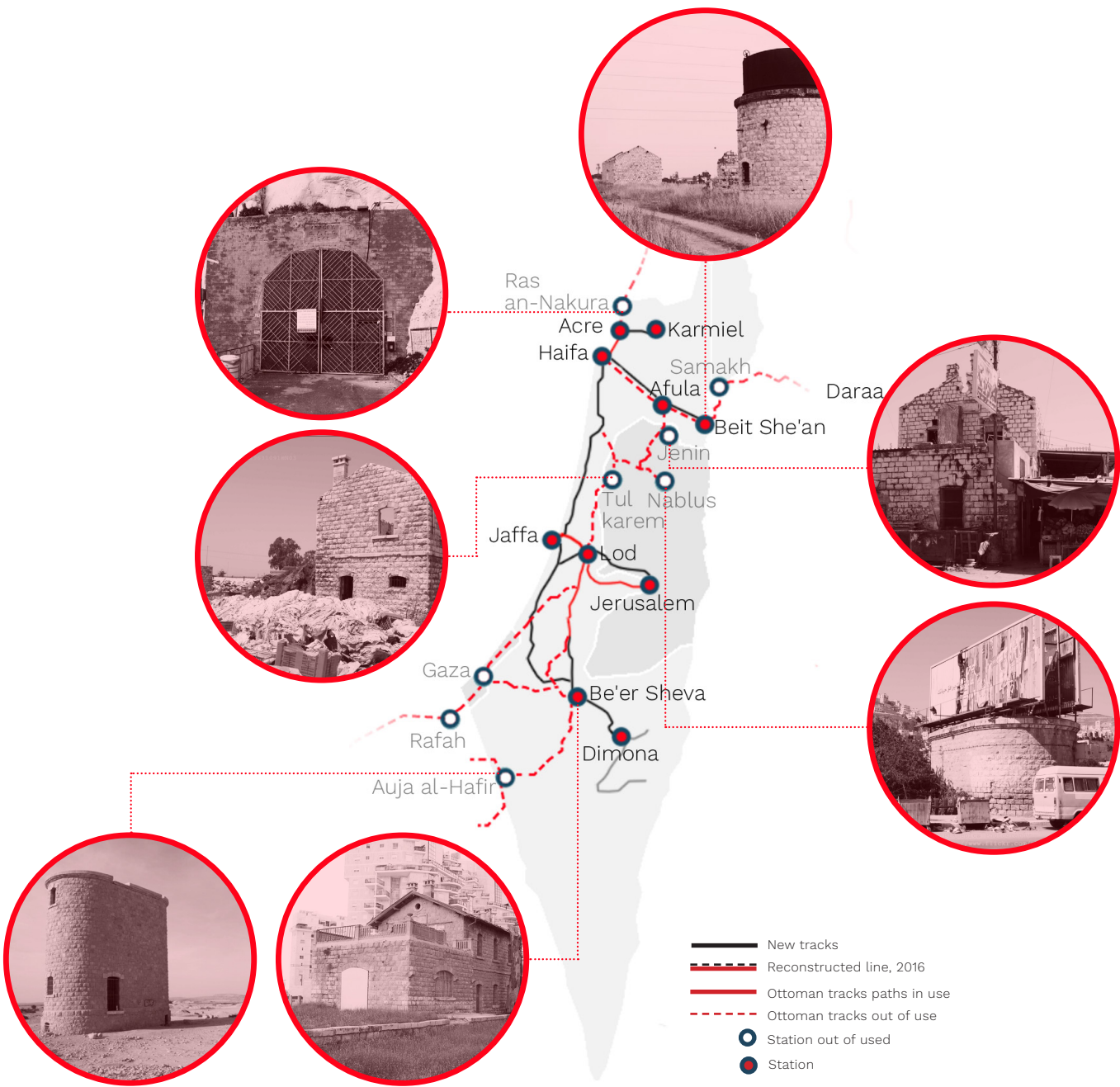
A map showing the current railway line and stations state in Lebanon.  
From north to south: Tripoli: abandoned, Jbeil: abandoned, Beirut: A new public area (bars and restaurants), Rayak: abandoned, Bhamdoun: abandoned, Saidia: abandoned tracks, 2007.

4.3.3 Railway network in Jordan



A map showing the current railway line and stations state in Jordan.  
From north to south: Darra: tourist travel and the closed Syrian border.  
Mafrq: tourist point, visitor center. Amman: tourist point, visitor center and a bridge in the suburb of Amman, used in tourist travels. Al-Abiad: phosphate mine. Maan: abandoned, a new rail station is near by. Aqaba Hedjas: phosphate loading center.

4.3.4 Railway network in Israel, West bank and Gaza



A map showing the current railway line and stations state in Israel.  
From north to south: Ras-Nakura (Rosh ha'Nikra): The station is a part of a visitor center. Beit Sheán: abandoned, new rail station was built near by. Jenin: A small shop for fruits and vegetables. Nablus: Abandoned. Tulkarem: Abandoned. Be'er Sheva: had several uses, currently abandoned with plans for conservation. Auja al- Hafir (Nitzana): Abandoned.





FIG 4.4: The suggested railway line of the initiative, going from Haifa to Saudi Arabia through Jordan.

#### 4.4 Future: Regional plans addressing future railway lines

The paragraphs discuss two existing regional plans that consider future railway development, which includes the reusing of the historic line. The first plan, *Tracks for Regional Peace* was initiated by the Israeli government in 2017. The second, *Road and Transportation Master Plan West Bank and Gaza* were developed by the Palestinian authorities in 2016. The plans were explained and analyzed for their cons and pros.

##### 4.4.1 Tracks for regional peace initiative

In April 2017, the Israeli ministry of foreign affairs (MOFA) introduced *Tracks for Peace*: a regional land-bridge and hub initiative. The main idea of the initiative is a cargo rail transport that will connect the Mediterranean to the Persian Gulf carrying goods, to improve and benefit the regional economy. According to the ministry of foreign affairs, the initiative is based on two central components: Israel as a land-bridge and Jordan as a regional transportation hub (inland Port). The land-bridge: Haifa port will provide a maritime connection with Mediterranean, and the U.S. From Haifa, railway tracks going eastwards will continue to Jordan and from there to the Gulf states. The Hub: in Jordan, a large modern inland port would be built to handle regional trade, contributing significantly to the Jordanian economy (MOFA,2019)(author's translation). The plan vision is to be build by 2030, the connection will be based on tracks the already exists in Saudi Arabia and Israel. The main new constructions will be focused in Jordan. According to the MOFA, the plan includes:

- A forecast for a new rapid economic growth and employment in the Palestinian Authority and in Jordan as well as in Israel.
- Development of new sectors in Saudi Arabia and the Emirate
- Potential trade flows via the landbridge, which is expected to reach 250\$ billion by 2030 (four times of the current value of the trade handled by Israeli ports).

##### The initiative and the historical network:

In Israel, the Valley Train line, based on the historic Hejaz railway, which connects Haifa with Beit-Shean, was rebuild in 2016. The line will be extended eastward to the Sheikh Hossain border crossing with Jordan and south to the Jalamah crossing point in the Jenin area, based on the historic Hejaz tracks.

##### Positive aspects of the plan with relation to the research:

- The initiative promotes regional cross-border cooperation and it reflects on the possibility to put forward regional strategies based on shared goals.
- The initiative emphasis that railway development around the region is relevant and desirable, and it can promote economic prosperity and contribute to development in the region.

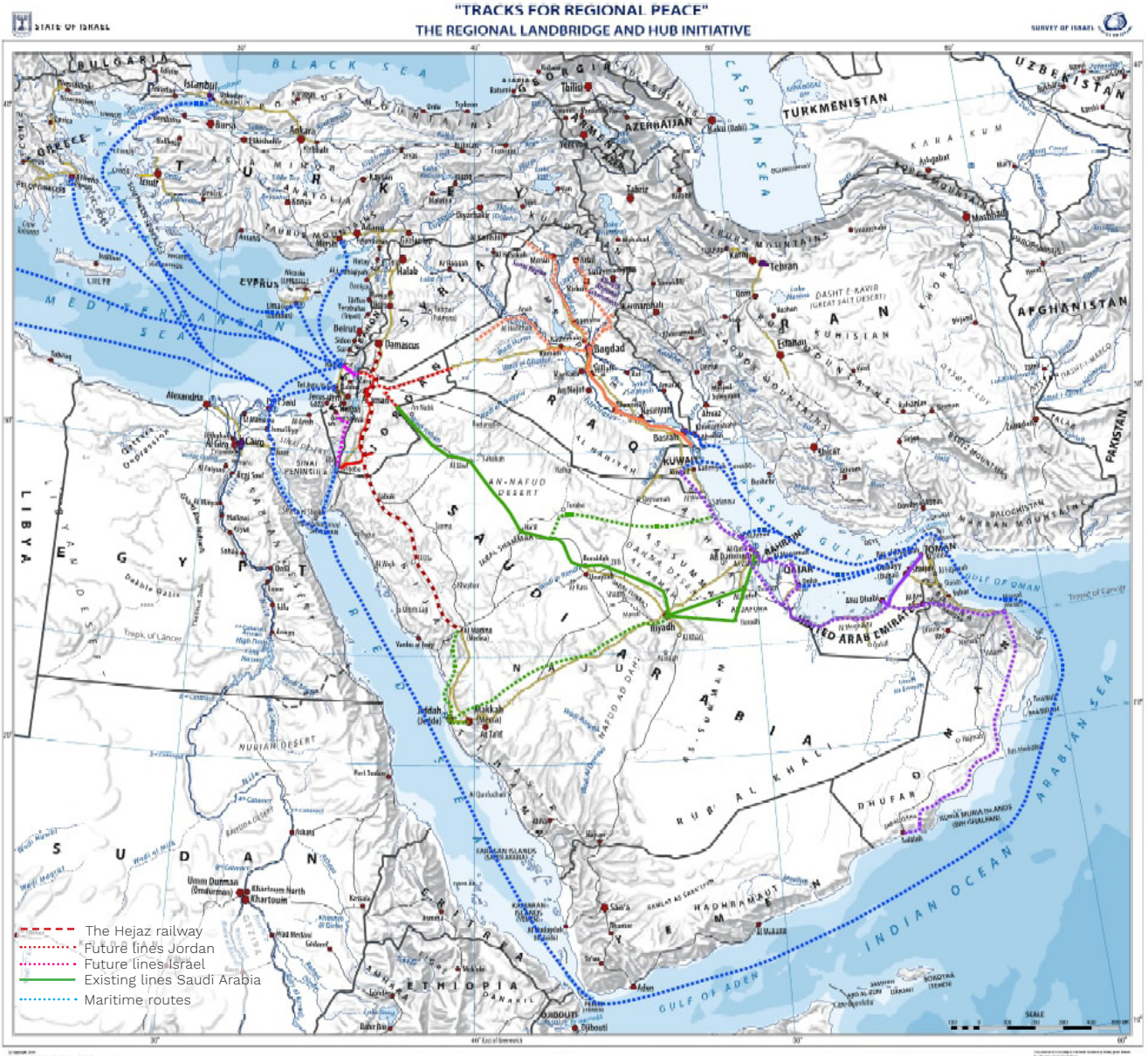


FIG 4.4.1 Tracks for peace official plan made by the Israeli Ministry of foreign affairs.

- In Israel, the Hejaz railway line will be used as the main route to Haifa port. This is a good potential to explore further development along this line and to add other values related to the route (other than cargo shipment). It also gives positive feedback for the research topic as a relevant topic of investigation.
- While it is not mentioned by the MOFA, some environmental advantages can be found. First, Railway infrastructure can replace the existing truck-based transportation system in the region. This will have a positive environmental impact, as train transport releases lower co2 emissions. Second, the train will mainly rely on the existing railway infrastructure. This can reduce ecological footprint.

**Points to consider :**

- According to the provided public information from the Israeli MOFA, the initiative is clearly driven by economic values. It is lacking social and environmental dimensions, therefore, it is not fully sustainable. From a societal point of view, the plan remains vague and does not provide information for peacebuilding process related to the initiative. While the name of the initiative is “tracks for regional peace”, it is unclear how this peace process will take place. The MOFA, mentions that the tracks will carry goods and “in the future people as well” (MOFA,2019). There is no further elaboration on this topic. It is also stated that the initiative will “strengthen economies, contribute to stability and promote peace”(MOFA,2019). Hence, the envisioned peace will be economically driven and it does not elaborate on social integration, and political consideration needed to allow people to freely travel in the region.

- The regional plan depends on strong cooperation with Jordan. Yet, the plan does not involve any representatives from Jordan. Jordanian sources reported that Jordan cannot support the plan as long as the occupation in the West Bank continues (Tobin,2017).

- The plan is lacking real solutions for connectivity and mobility in the West Bank. The train will connect to the West Bank in the existing Jalamah crossing point. This means, that the control over the station and the railway line will remain under Israeli authority. It is therefore not clear what would be the regulations allowing the Palestinians to use it. In his article “A Futuristic Israeli Peace Plan — Minus The Peace”, Andrew Tobin points out that the Palestinian authorities are opposing this suggested connection, as they wish that the train will go directly through the West Bank (2017).

- It is also noticeable that the plan does not consider any solution to the situation in Gaza leaving it isolated, with no mobility means.

- With lack of details, the environmental potentials remain unclear. It is important to consider that the main resources to be delivered from Saudi Arabia and the Gulf area to the West are oil related. The initiative does not detail what types of new sectors will be exported from Saudi Arabia and the Gulf. Clearly, more information is needed to understand the environmental impact of the plan.

-No heritage perspective is discussed regarding the reconstruction of the Hejaz railway line.

**4.4.2 Palestine’s road and transportation Master Plan**

*The Road and Transportation Master Plan for West Bank and Gaza Strip* (also known as NTMP: National Transport Master Plan for Palestine) was initiated at 2016, by the Palestinian Authority with the support of the European Commission and the European Investment Bank. The Master Plan seeks to leverage the potentials of the transport sector in contributing to the economic growth of the West Bank and Gaza strip and to respond to the increasing travel demand.

The plan proposes a national-territorial corridor between the West Bank and the Gaza Strip and involves different types of transport sectors. Rail and road transport are the two major components in the proposed network. Among the plan's objectives: to improve all transport sectors; improve external and internal connections; link West Bank to Gaza Strip and reinforce logistics and freight movements.

**NTMP and the historical network:**

Although the plan does not refer to the historic railway line, looking at the plan it is visible that some parts of the suggested railway development is based on the historic Hejaz railway line. This is true to the section that goes from Jenin to Nablus and from Jenin to Tulkarm. It is rather logical that the new line will go in the same path as the historic line, due to the topography and existing roads system which follows the landscape conditions.

**Positive aspects of the plan with relation to the research:**

- The plan emphasizes that railway development around the region is relevant and desirable, and it can promote economic prosperity and contribute to development in the region.
- The plan offers a connectivity solution to Gaza strip as a means to reduce stress and supply mobility and resources to the area.
- The plan recognizes the dependency on car transport in the West Bank and Gaza and offers to develop a good public transportation system and cargo system as more sustainable transportation modes.
- The railway line in the segments that are based on the historical line provides a good potential to explore further developments, related to heritage and cultural values.

**Points to consider:**

- The plan only refers to West Bank and Gaza, it does not mention potentials for connectivity with the existing railway systems in Israel and Jordan and Egypt.
- The plan does not refer to heritage perspective for the historic lines and stations.



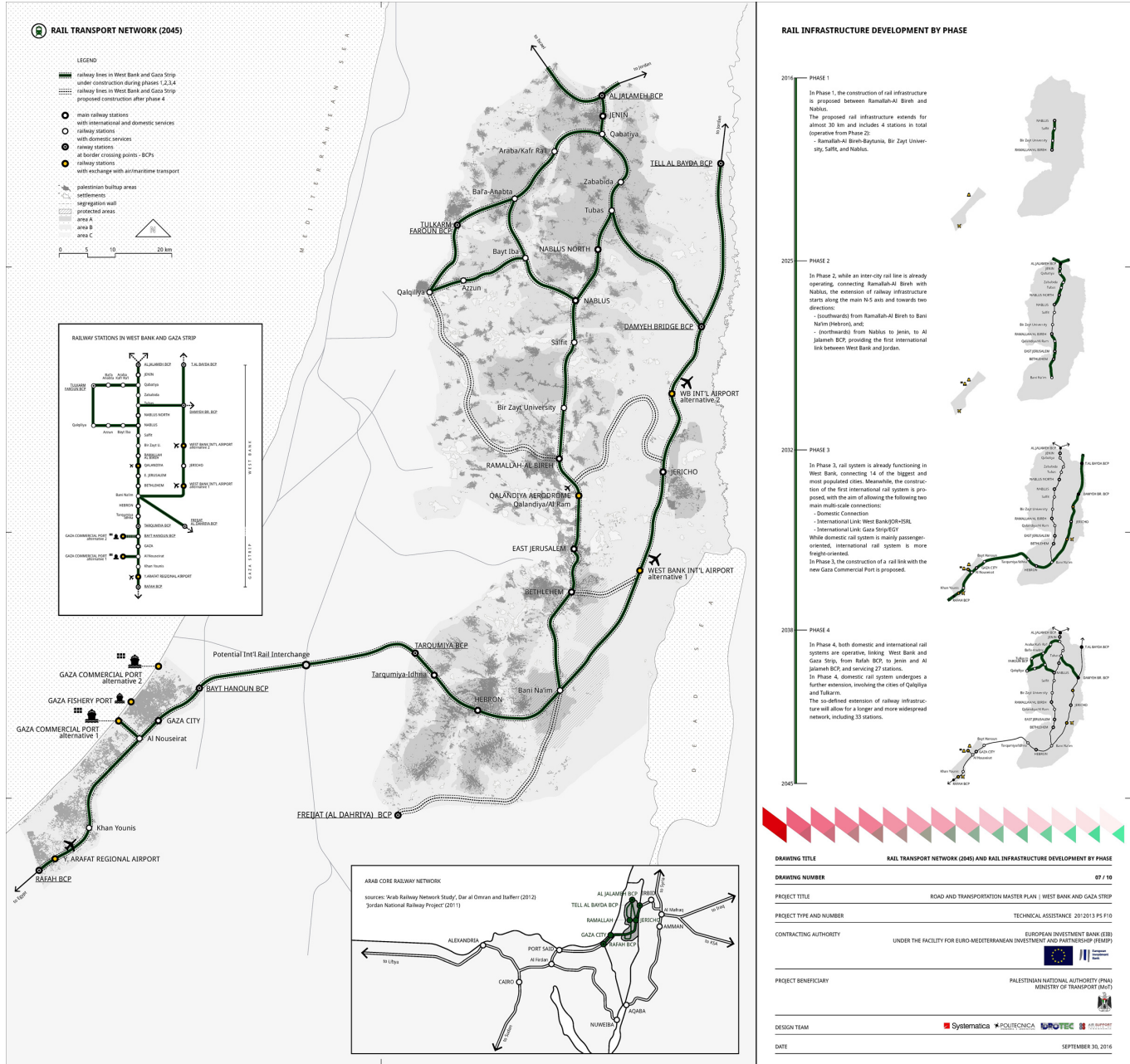


FIG 4.4.2 Tracks for peace official plan made by the Israeli Ministry of foreign affairs.

#### 4.5 Conclusions - redeveloping the former railway network

In light of the analysis above, several issues and potential have proven that railway redevelopment can benefit the region. The research motivation to investigate the topic of the former railway line in the Levant region can be summarized to four main points:

##### 1. Mobility and accessibility:

As discussed in the theoretical framework, mobility and accessibility are two conditions that are needed to achieve social justice. Since inclusive social development must be underpinned by inclusive governance of resources – mobility infrastructure, or lack of it, can be understood as a tool of conflict. Mobility and accessibility provided by transportation means can promote the interests of certain groups while create or sustain inequalities for other groups. With the establishment of borders in the region and their accompanied political process, the railway network was disconnected to maintain separation between the nations states. The demolition of the tracks created a discontinuity in the region which have intensified isolation, most evident in the case of West Bank and Gaza. Furthermore, in the past localities near the border areas used to have community, economic, cultural and family relations that were cut off with the construction of impermeable border-walls. Therefore, communities of the periphery have turned to communities of the margins, leading to a growing dependency on central locations and increased polarization processes. Finally, with the current divisions in the Levant region mobility can play an important role. As mentioned, improvements infrastructure can lead to better access to resources and opportunities such as health, education, the labour market and other social services. Also, railway infrastructure is an efficient tool for linking urban and rural areas and establishing domestic and international long-distance networks, which are crucial for the achievement of equal accessibility and mobility (see chapter 3.2).

##### 2. Existing infrastructure and heritage values:

The remains of the infrastructure and its stations carry an important historical and heritage meaning that can be shared around the region. The current state of the network is different in each country. The former line and its stations are mainly abandoned or left to dissolve. Nevertheless, the remains of both tracks and stations scattered around the region call to reexamine and rethink possible new usage.

Traces of this former lines are embedded with both the memory and possibility of connection.

##### 3. Regional future connection:

In the last section of this chapter two existing regional plans were reviewed. These plans consider railway development as a desirable future. The Israeli's plan aims to connect with Jordan based on the former Hejaz railway line, and the Palestinian's plan, which aims to connect with Gaza, includes the redevelopment some section from the Ottoman tracks. While these regional plans have their benefits and downsides, they are important to this research, as they reflect that idea that cross-border cooperation based on shared goals is possible. Also, these plans indicate that railway development is relevant and necessary for the Levant region.

##### 4. Sustainable transportation:

While this topic was not addressed in the analysis chapter, the theoretical framework consider the environmental benefit of railway infrastructure (see chapter 3.2). Railway provides a highly cost-effective and energetically efficient means of transportation of passengers and freight when compared with other transport means. Thus, this research asks to harness the potentials of the railway as sustainable transportation infrastructure, that can benefit to environmental aspects in the Levant region.

Overall, the research relates between two processes: the construction of borders and the dismantling of the railway. Both processes were aimed to maintain separation as part of a defence mechanism and sovereignty over states borders. The railway discontinuation in the Levant region reflects the idea that mobility infrastructure can severe as conflict infrastructure in the same manner of solid border-walls. It also reflects on the governance schemes that are still predominant in the region today. With a lack of cross-border relationships and the ongoing construction of segregative infrastructure, societies have adopted the reality of a divided region. Thus, the research investigates the former railway network, that used to connect the region, as a future- past potential.



PART 5 Conceptual development  
of the planning and the design  
approach



This part includes a summary of the field trip findings and a review of two case studies that have contributed to the conceptual development of the proposed regional vision and design interventions.

FIG 5 Overall impression from the field trip .



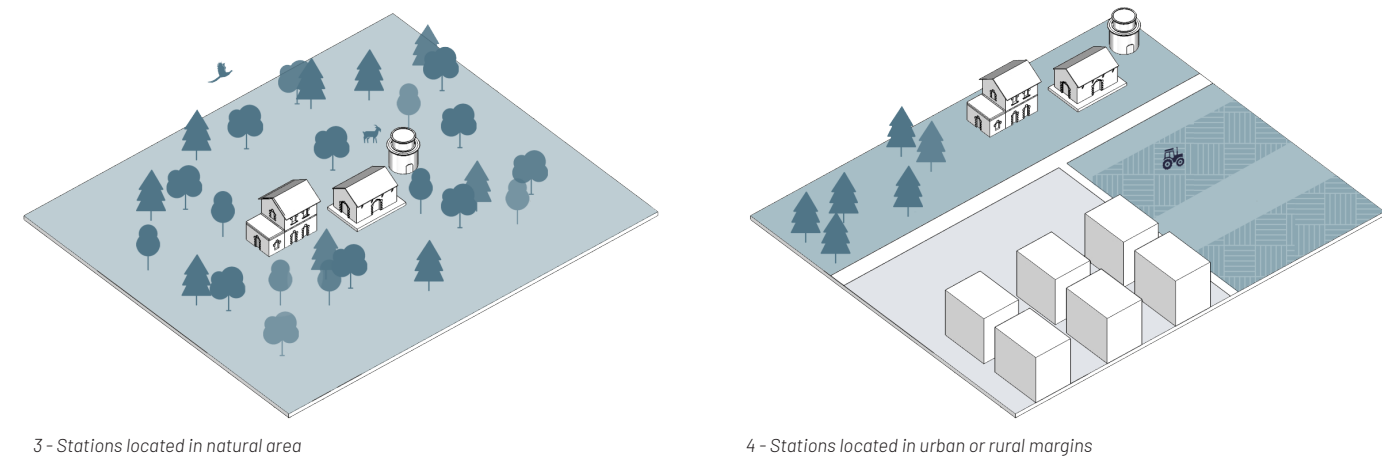
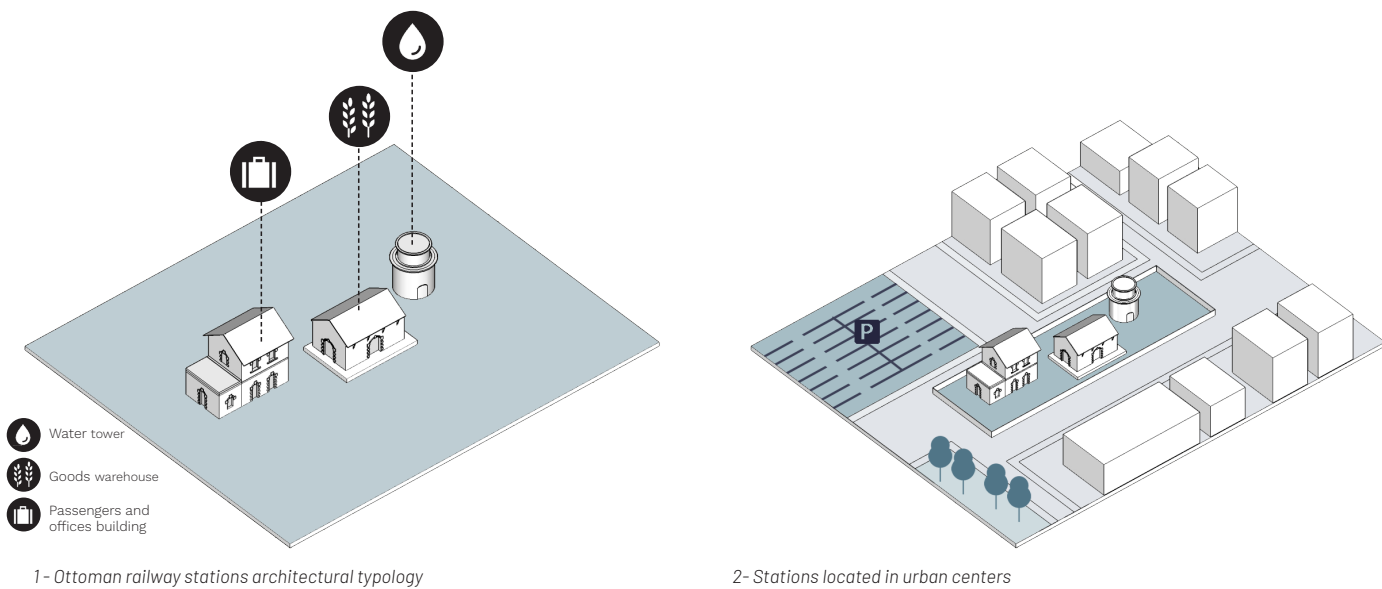


FIG 5.1 Diagrams describing the Historic railway stations locations and context typologies

## 5.1 Field trip summary

The field trip included visits to four historic railway stations along the recently reconstructed Hejaz railway line, on the segment between Haifa to Beit-Shean. The Field trip also included a visit to two historic railway stations from the Ottoman Empire times that were conserved and redeveloped as new public compounds.

After the visits and conversations with relevant experts, general typologies related to the former railway stations were made. These have some limitation, as a full regional survey needs to be made to confirm these main principles:

1. Context of historic stations: Stations are situated usually in one of these cases: in the center of urban fabric, on the margins of urban or rural settlement or in a natural area (see image 5.1).
2. Proximity to railway line: in terms of connectivity between the railway station and the railway tracks, this can vary from low connection to a direct connection to an operating or non-operating tracks. In most cases, historic stations are situated in a short distance from tracks, of up to 2 km away. It is important to mention that even though the line between Haifa to Beit Shean was rebuilt in 2017, the historic station buildings were not included as part of the new station area. Yet these are located within a range of 2 km (see image 5.1.1).

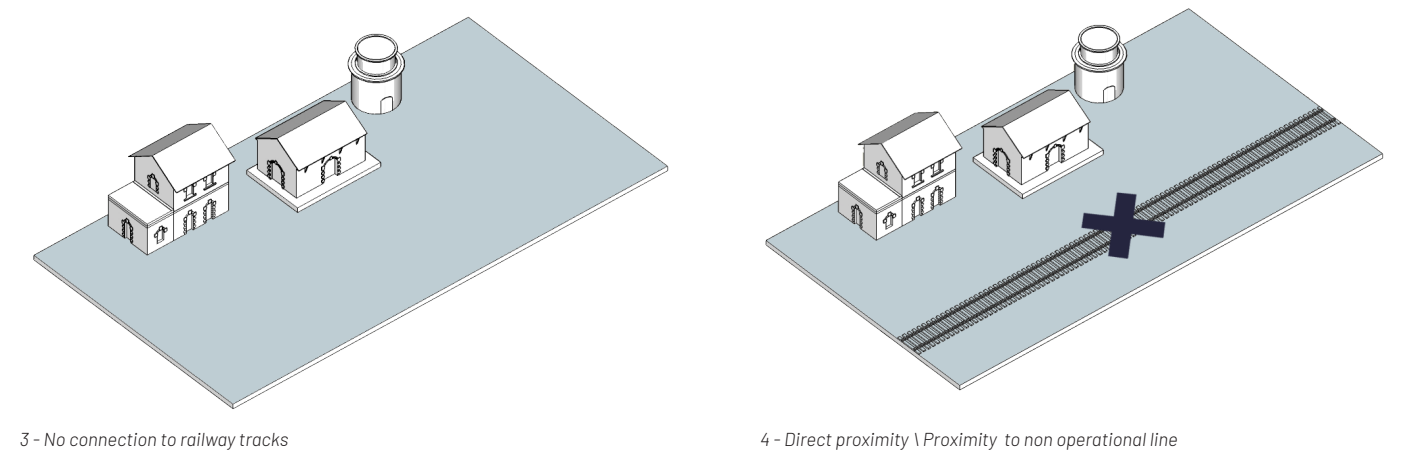
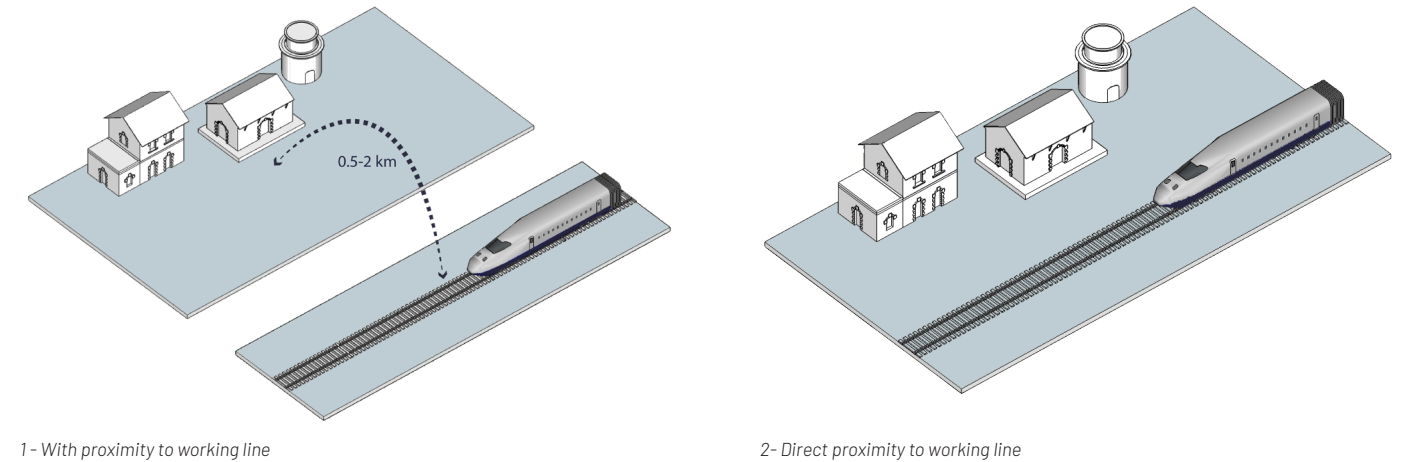


FIG 5.1.1 Diagrams describing the Historic railway stations connectivity to railway tracks

3. Functionality: the stations can be found in one of the 3 states: neglected, renovated with no use, or renovated and reuse. When reused, stations are usually a part of a gated compound, accessible mainly by car, and they are used as museum or for commercial use such as shops or restaurants. This was also the case for the two case-studies of Jerusalem and Jaffa-Tel-Aviv stations. These stations were renewed as a new compound. These are gated area, mainly accessible by car with low connectivity to the nearby urban fabric. The functions in these renewed stations area are almost completely commercial. These are considered as recreation complex or outdoor shopping malls.

4. Same, but different: the historic stations have a shared typology. Most Ottoman stations have a shared architectural typology which includes a warehouse, passenger building and a water tower. This architectural pattern is repetitive and can be found in different stations. Yet, the location and context of the stations create uniqueness in the atmosphere and characteristic of each station environments.

5. Natural elements: Often, when the historic stations are located not in urban centers, the natural elements have become a part of the historic abandoned stations' scenery.



FIG 5.1.2 a collage of first thoughts and impression after the field trip. The unique architectural feature, shared history and infrastructure creates an opportunity for an interesting place where contrast notion can meet and co-exist.

Personal experience: After the sites visits I was left the impression that since the historic stations are often found near railway tracks, and even operating railway stations, they can be integrated to a working network systems. Old stations have the potential to become a place for interaction where new and old, heritage and innovation can meet. New function can serve local community needs, while providing space to accommodate new flows of people, knowledge, cultures and goods.

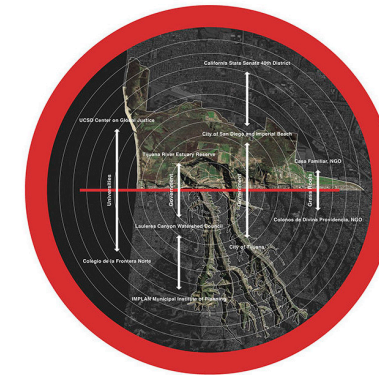
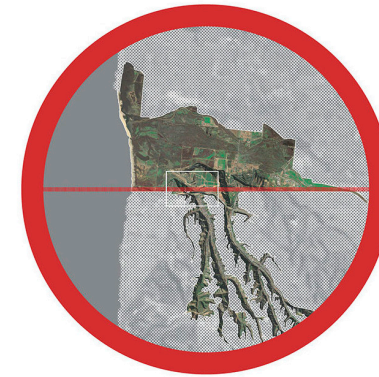


FIG 5.3 Top: a series of mapping for the MexUs project. Top: the region watershed divided by the border wall (red). Middle: suggested cross-border collaboration between, municipalities, communities, universities and governments in the area of San-Diego and Tijuana. Bottom: the watershed as a single continuous political social and ecological zone, like a green cross-border stitch.

## 5.2 - Case studies

The two case studies below present different approaches for dealing with cross-border issues along US-Mexico borders. Concepts and ideas of the proposed design were inspired by these case studies.

### 5.3 - MexUs | Teddt Cruz and Fonna Forman, 2018

Border regions, cross-border citizenship and community stations:

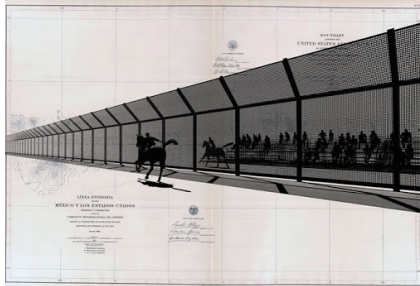
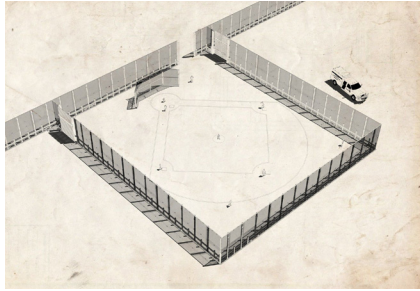
Architect Teddy Cruz and political scientist Fonna Forman are engaged in cross-border research and practices. They address the global issue of migrants and human rights, claiming that though vast populations are in jeopardy, too many cities are "closing their doors" (Broken Nature, 2019). They use the US-Mexico border as a case study to challenge the rationalist borderline imposed onto complex systems, and ask to rethink boundaries in a more ecological manner. They suggest regional interdependence in which border areas will be organized around shared interests and values among the communities related to it (ibid).

Essentially, they present the US-Mexico border as a region rather than as a line. This region is based on the shared cross-border social and environmental flows related to (and affected by) the existing systems of watersheds - such as protected lands, croplands, urban sewage crossings and indigenous tribes. Accordingly, they suggest creating a continuous area that will act as an uninterrupted political, social and ecological zone. According to Cruz and Forman, un-walling is an essential process needed to be achieved for this proposition.

Cruz and Forman propose a starting point for this process in what they call cross-border community stations. These stations will create a network of public spaces, where resources and knowledge are mobilized between states, municipal governments, communities and universities, to promote cross-border cooperation and socio-economic inclusion (ibid). These stations promote collaborations among communities from both sides of the border. They developed a framework of collaborative remote working, which does not necessarily require a physical meeting as a starting point for cooperation. The community stations link the university of California San Diego (USCD) with neighbourhoods across the border region. Each community station is a partnership with an embedded grassroots organization and these include long term development of urban projects (ibid).

One example of a community station is Erathlab- a collaboration between USCD, NGO Granville San Diego, the immigrant community of Encanto. Erath lab is an open-air climate action park for research environmental literacy and participatory climate action through community engagement. It includes energy education exhibits and hands-on experimental learning, focusing on the empowerment of youth, to be agents of climate action (ibid).



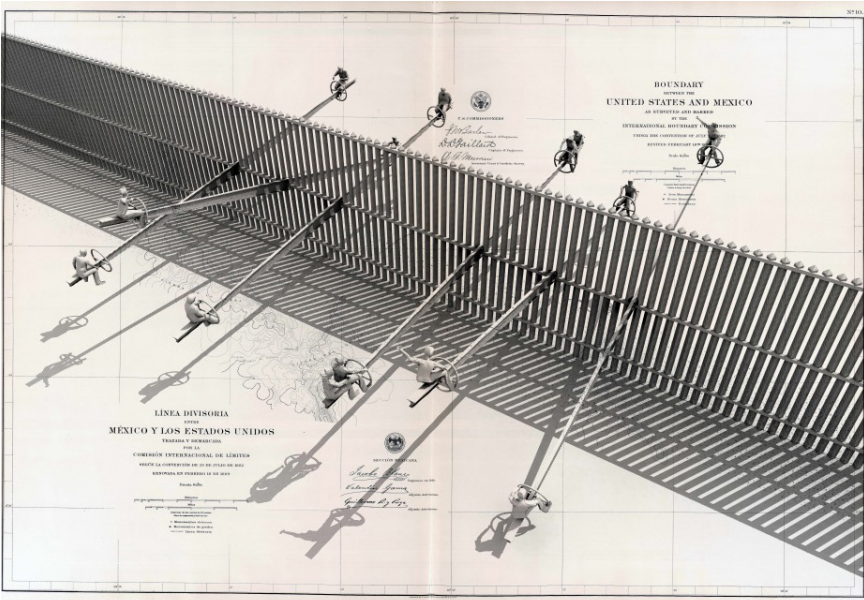


The images above describes different intervention along the US-Mexico border as suggest by Ronald Real. His main idea is to create public space for interaction along the wall, which does not necessarily involves the act of crossing.

FIG 5.4 TOP-LEFT: The border as a sports field that can be opened and closed at different times.

FIG 5.4.1 BOTTOM-LEFT: The border wall as a horse racing arena. One side is watching while the other performs.

FIG 5.4.2 RIGHT: the border wall as a playground. The swings works only when 2 sides are participating. This isolation was realized in 2019.



#### 5.4 - Border-wall as architecture, Ronald Real, 2017

##### The border as a public space

In his book, *borderwall as architecture*, Roland Real tries to extend the exclusive interpretation of physical barriers as an infrastructure of security, and provocatively interprets the wall architecture as a possible public space charged with social interaction (2017). His approach is both a protest against the reinforcement and construction of higher walls along the US-Mexico border and a projection for a possible alternative future. Beyond the provocation, Real accepts the challenge of designing and imagining different border-walls, in an attempt to correct what he describes as social and environmental violence, produced by the top-down, forced act of building barriers (Rael,2017).

In a series of imaginative interventions along the US-Mexico border, Real seeks to create a connection between the wall and human dimensions. These connections are based on dynamics that can take place around the wall, suggesting a form of cross-border contact, not necessarily linked to the act of crossing itself. Real's experiments along the border-wall are used as "laboratories to re-imagine citizenship beyond the nation-state" (Rael,2017:Xii), and his main idea is that "a cross-border public and awareness can be mobilized around share interest"(Rael,2017:Xii). These ideas are manifested through different interventions and interactions along the wall. For example, making the border as a bi-national theatre, where people can come together with performents and music (Rael,2018). An additional suggestion proposes turning the area into a playground, in which a swing would operate only when people from both sides of the border meet and play (an installation that was released in July 2019) (ibid). These are just two examples out of a series of imagery possibilities of the border as place of encounter and as public space.

#### 5.5 - conclusion

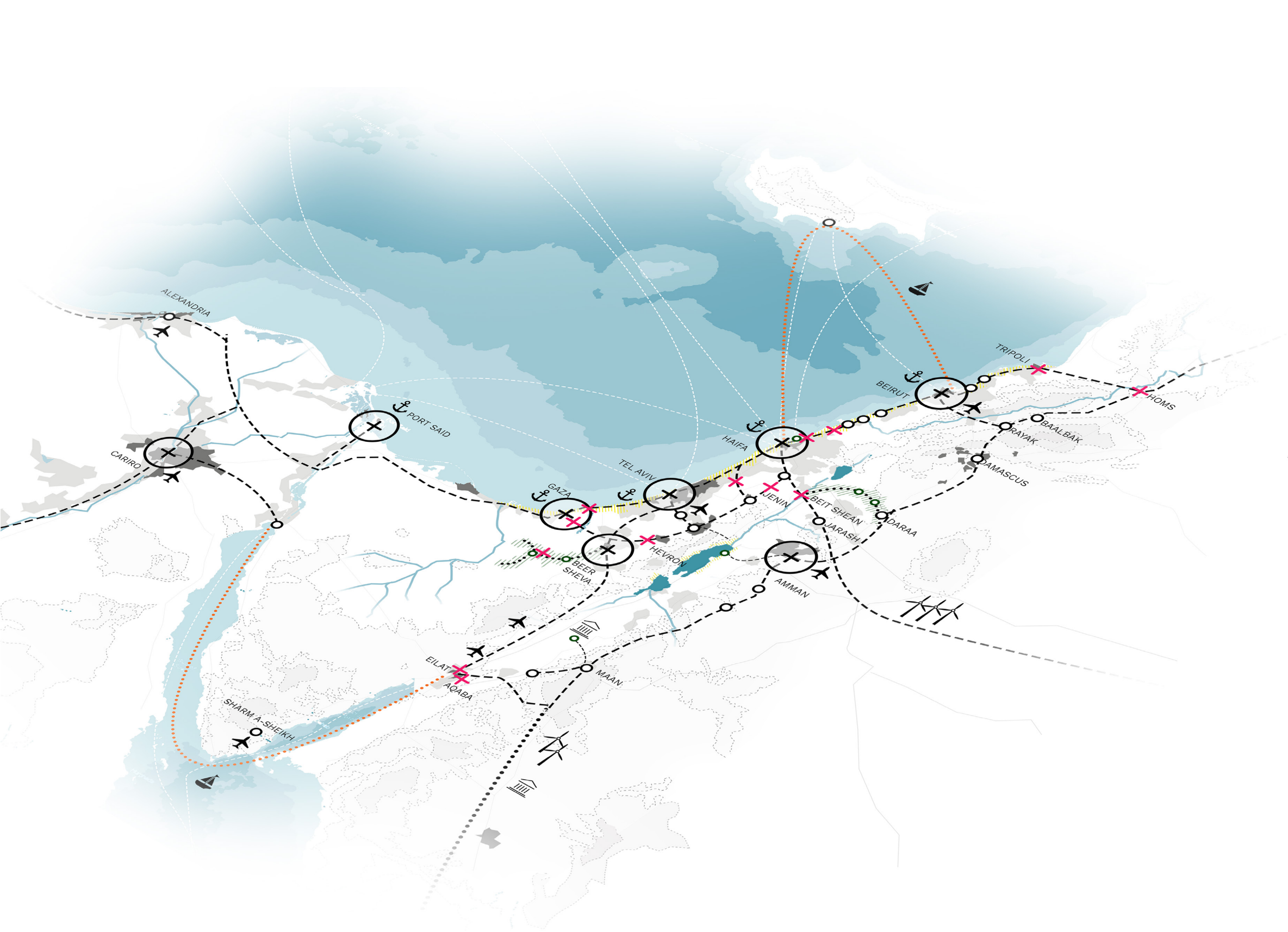
The field trip and the two case studies influenced and inspired the planning and design process. The field trip findings indicated that the different types in the station environments, require different design solutions to be included as a part of the overall strategy for the redevelopment of station environments. The field trip contributed to the development of a design tool kit which consist of design principles for different stations types (see next chapter). Some ideas and concepts from the two case studies were integrated into the design approach for the local interventions and the overall planning proposal. In the two case studies, the planners do not suggest a "borderless" world. Yet, they offer to re-imagine the essence of the concept of borders. They present changes in the perception of borders that can be done as a gradual shift - from a line to a region, and from a wall to a public space, and from strict boundaries to overlapping territories with shared interests. Also, both case studies introduce ideas for taking actions of protest or change around border areas, that can be implemented already today. In MexUs, the community stations illustrates the possibility for a distant community cross-border cooperation, which does not necessarily require the actual act of border crossing. This option can be relevant for the proposed design, as a step to establish communication, when border-crossing is not possible. The work of Real offers to think of the border as a place for meeting and exchange, rather than a place of separation. He offers public space with public activities such as sports, culture and leisure as a way to create interaction in the border area. The concept of the border as a public space was integrated (to some extent) in the proposed design. The conclusion of the analysis in this chapter have been integrated through the planning, vision, strategy and design proposal, as can be seen in the next chapter (chapters 6 and chapter 7).

##### 5.5.1 Planning proposal main concept:

As mentioned in the introduction and in chapter four, the construction of borders and railway disconnection in the Levant were simultaneous processes, meant to ensure separation as states aimed to gain and maintain sovereignty over their territories.

This was a gradual process, dating back to the Sykes-Pico agreement between the allied powers that ruled the area for over 30 years, continued with the path to independence of the new nation-states of the Levant, and carried as the nations battled each other to settled their borders. This process is reflected in the charter of the region today, as governance and planning schemes seek to maintain the division with lack of collaboration and with the expansion of physical barriers. In the past, the railway network system connected cities, cultures and landscapes across the region. Today, conflict infrastructure around the region is expended to maintain separation.

This thesis proposal is an alternative regional vision - imagining a different future for the Levant. The thesis offers to reverse the current trend of regional segregation towards collaboration and social interaction. Instead of vertical restraining concrete walls, a future railway line will be used as a shared linear infrastructure flowing resources and people around the region. Instead of checkpoint and watchtowers, the railway stations will provide a network of public spaces where crossing an encounter take place in stations as terminal hubs.



This part reviews the proposed vision and strategy for the Levant region for the future of 2050. The vision focus on the reuse of former railway network as means to promote regional collaboration and social encounter.

FIG 6 The TransLevant Express, regional vision for the Levant , based on reusing former railway networks.



## 6.1 The TransLevant Express: Regional vision

### 6.1.1 – Vision statement

#### Former railway network in the Levant - a backbone for sustainable regional future

The TransLevant express is a vision (FIG X) for the Levant region for 2050. The vision sees the Levant as a liveable, multicultural region, in which a shared railway infrastructure provides a backbone for the exchange of knowledge, culture and goods, in a process of cross-border cooperation. The built upon the historic railway network that used to connect the region and combines it with existing railway infrastructure and projected plans.

In 2050, the TransLevant express will act as a backbone for sustainable and inclusive region, transforming the Levant to a liveable multicultural region, where cross-border cooperation will based on shared goals and common interest.

The TransLevant Express will act as a network, connecting Africa and Europe, going across The Levant, and continuing east to the Arabian Gulf. The train will connect countries, cities, landscapes and citizens, promoting cultural and knowledge exchange, transporting people and goods for tourism, business and commerce, creating interaction and encounter. The train will be powered by renewable energies, replacing the barriers walls with flows from Cairo to the shores of Gaza to Tel-aviv-to Haifa, going north to Beirut-Tripoli-Istanbul and even Delft, or going east to Amman- Aqaba and-Abu Dhabi.

The historic stations will form a network of public spaces, scattered across the region. The historic stations with a shared heritage and architectural typology, will be located side by side to an innovative terminal, built in local traditional architectural style, with options for public activities and modes of transport. The railway stations will act as terminal hubs, where border crossing takes place. Each stations will receive new roles, promoting relationship between communities across the borders.

THE TRANSLEVANT EXPRESS

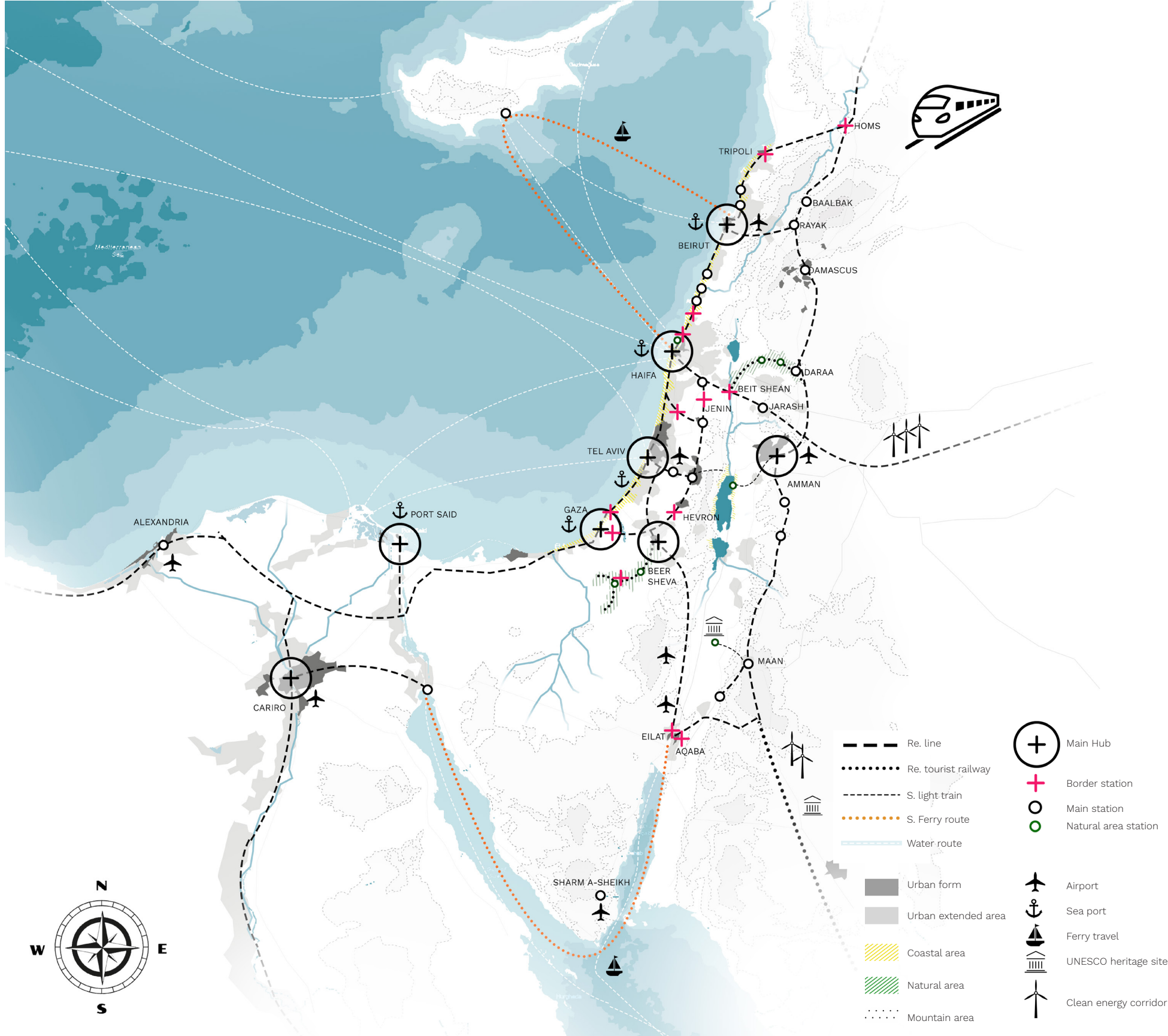


FIG 6.1 Regional vision - the TransLevant express regional vision 2050



6.1.2 THE TRANSLEVANT EXPRESS -  
TRAVEL EXPERIENCE





6.1.2 THE TRANSEVANT EXPRESS -  
TRAVEL EXPERIENCE

Please rotate the page to view this image



FIG 6.3 Regional vision - the TransLevant express regional vision 2050: The collage presents the travelling experience through the region via the train. The image illustrates the journey along the North-South line, going from Beirut through Sidon to Haifa, and further south to the Sinai peninsula and Cairo. In each station, the historic railway building is presented in a new rehabilitated environment with new uses according to local identity and the station type. At the background of each station, the main landscape characteristics are displayed to enhance the opportunity of traveling via different landscapes and cultures around the region. The enlarged figures demonstrate how people living in the region can benefit from the regional connections with new flows and exchange of culture, goods and knowledge.

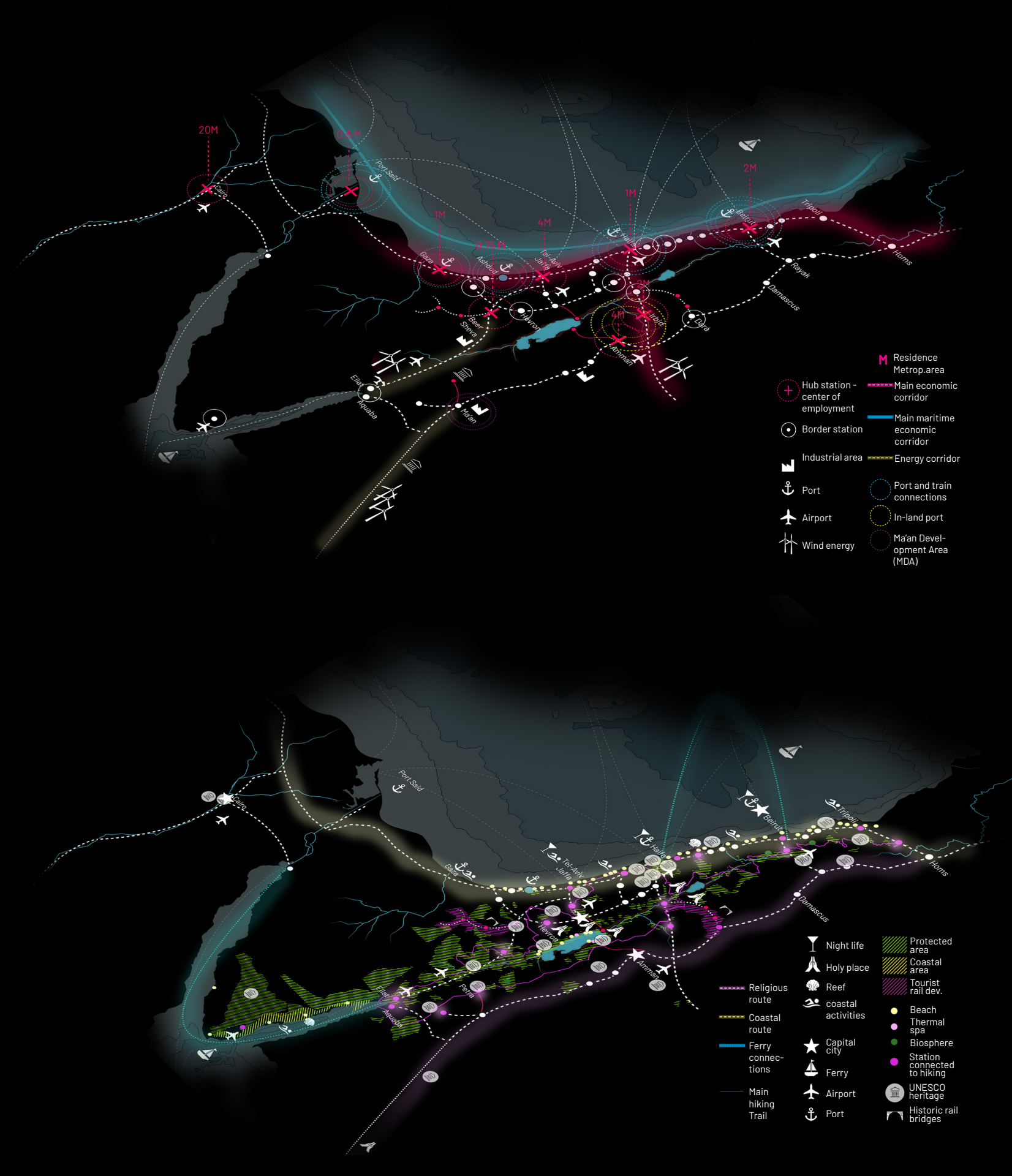


6.1.3 - Potentials analysis

The potential maps the potentials that can be achieved through the new regional links created with the TransLevant Express railway line. The mappings illustrate possible regional new flows in 3 main fields: economic, tourism and landscape and culture and knowledge. The new relations can be made via the railway travel, the border-crossing via the stations, and trough the connection between stations and their surrounding area.

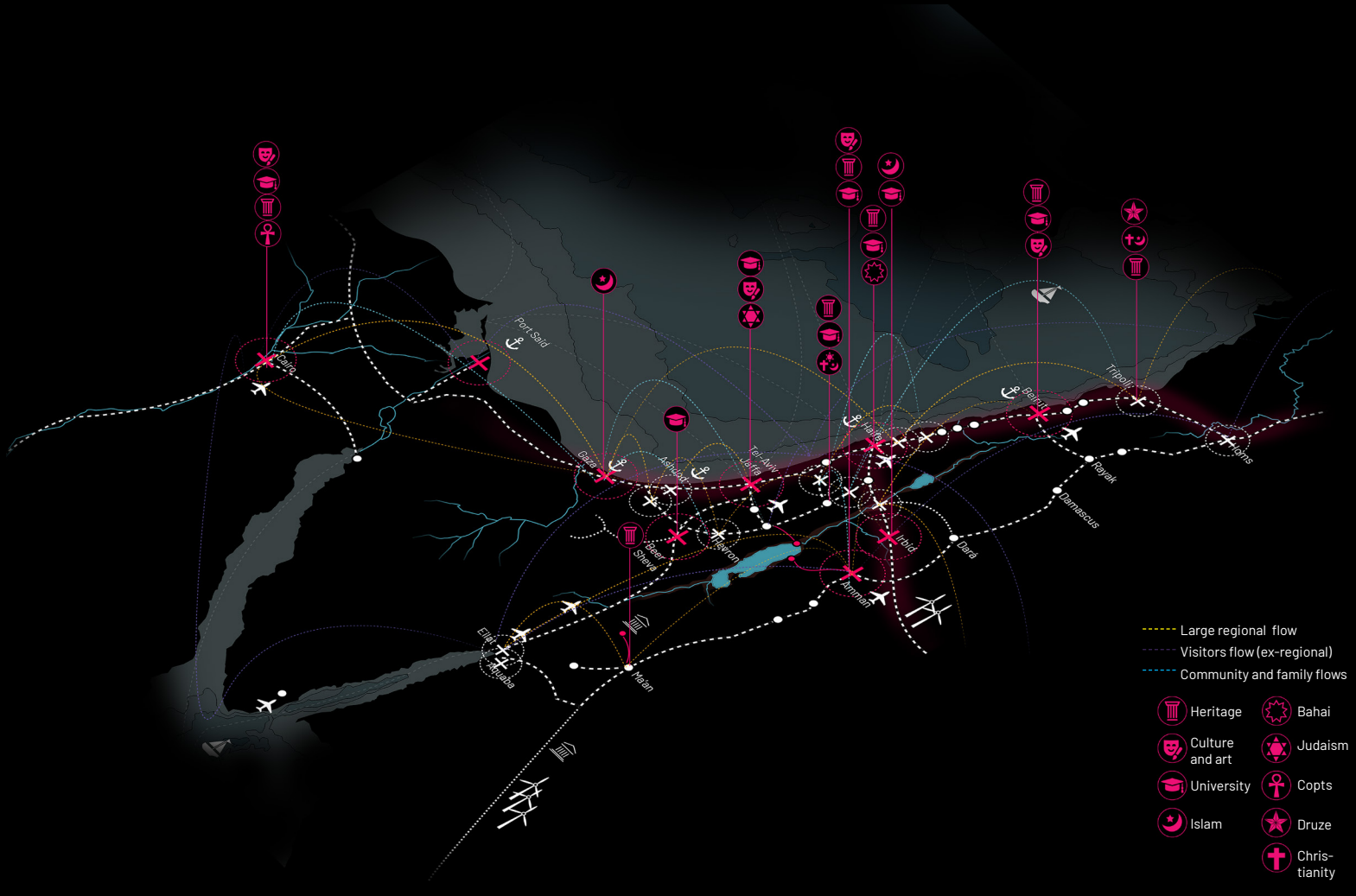
**1 - Economic potential map:** this mapping focuses on new regional flows related to goods, trade and labour. According to the report *Estimating the Economic Benefits of Levant Integration*, regional trade agreements will have positive economic impacts (Egel,et.al,2019). Overall, within 10 years and with a comprehensive trade agreement unemployment rate could decrease by over 2 percentage and increase GDP (Gross Domestic Product) by up to 7 percent (Total GDP across the Levant would increase by \$7.8 Billion)(ibid). Also, the report mentions that conflict resolution and regional free trade agreements will benefit to the increase of more than 9 percent of GDP in Israel and more than 60 percent in Palestine (West Bank and Gaza strip) (ibid). Furthermore, the Israeli initiative *Tracks for Regional Peace*, states that the potential trade flows from the railway connection from Israel trough Jordan and the Arabian Gulf, are expected to reach 250 billion by 2030 (MOFA,2019)(Author’s translation). The economic potential map shows the hub-station located in the largest cities with concentrated employment and business opportunities. The map also shows the border-station that allows people to reach new economic opportunities around the region. The mapping highlights 2 main economic corridors: one going from north to south, from Europe, via the region to Africa. The second going from east to west, from the Arabian Gulf through Jordan to Haifa port. A large in-land logistic port can be built in Jordan following the tracks for a regional peace initiative. The 3rd economic corridor is along the coast of the Mediterranean Sea. Several large international ports can be found along the coastal line. Maritime trade can continue via the railway network and vice versa. Also, the main industrial areas are also shown. Lastly, the potential offers to combine energy corridor along the tracks in strategic open locations. The renewable energy regional distribution can be supported by the railway infrastructure.

**2 - Tourist and landscape potential map:** A railway connectivity via the region will allow passengers to travel via the changing landscapes and cities of the Levant. If the region’s states could coordinate effectively in promoting tourism and tourism and travel, this sector alone could create nearly 570,000 new jobs (Rand,2019). With places of great historic and religious importance and with vast landscape ranging from the green mountainous of Lebanon to the Mediterranean shores, and the desert of Jordan, the region can attract many visitors from around the world. It will also allow the residents of the region to finally visit enjoy its nearby assets. Moreover, tourism via train is an environmentally sustainable option, when compared with airplane travel, and it can help reduce co2 emissions (see chapter 3.2). The mapping shows the main tourist attraction and locations that can be reached via the train. It also presents the main hiking trail and nature reserves and their connection to railway stations. The vision also offers to consider the redevelopment of the former railway line in natural areas for tourism. Finally, two main touristic lines are mapped: the coastal line and the Hejaz line which is related to the holy path of Islam Pilgrimage to Mecca. The tourism travel is enhanced with ferry routes to allow a complete and easy regional journey.



**3 – Culture and knowledge exchange potential:** travel via railway around the region can also contribute to cultural and knowledge exchange. This potential is also reflected in the economic and tourism and landscape potentials, as any new types of relations around the region can contribute to encounter and interaction between different groups and people. However, the following scheme illustrates the main potentials of culture and knowledge exchange. The mapping shows the diversity of religious groups around the region, that sometimes share the same territory. The mapping also indicates the main higher education institutes. Crossing via the border-stations will allow new groups to access them. This could benefit especially for the currently isolated societies in Gaza and the West bank. Also, the diversity in culture, art, and history and heritage is marked, as each country has a different rich background. The mapping includes 3 main movements around the region. These movements are also related to the economic and tourism potentials, as these contribute to exchange and expositors to other cultures around the region. The first is movement is an in-region movement, in which the resident of the area can visit other places, related to work, education, or travel. The second is an ex-territorial movement in which people outside the region can visit it for commerce, business, or tourism, fostering a larger social and cultural exchange. The third movement presents communities and families that were separated due to conflicts that will be able to reconnect via the suggest railway travel.

The three regional potentials (economic, tourism and landscape and cultural and knowledge) were further developed and elaborated in the three local intervention stations site, especially in the case of Beit Shean border station (see chapter 7).





6.2 - Goals and principles

Main goals:

The TransLevant express vision includes the following main goals, based on reconstruction a railway network:

- 1. To establish new modes of cross-border interaction
- 2. To promote Exchange of cultural values, knowledge and goods

The main goals are followed by 4 main values:

- 1. Promoting social interaction
- 2. Development based on heritage and cultural enhancement
- 3. Sustainable railway development
- 4. Contributing to economic growth

The vision has multiple objectives:

- Creating regional railway network
- Equal rail transport development
- improve external connectivity and reinforce internal connections
- Enhance mobility in rural and border areas;
- Reinforce logistics areas and freight movements

Main principles:

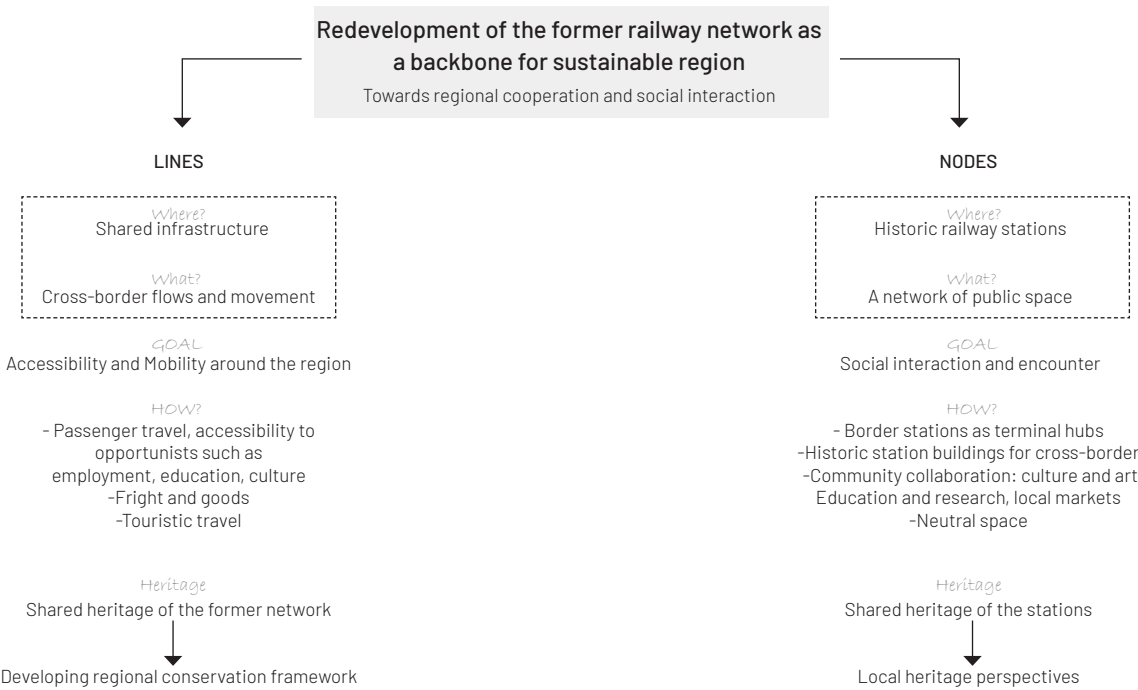
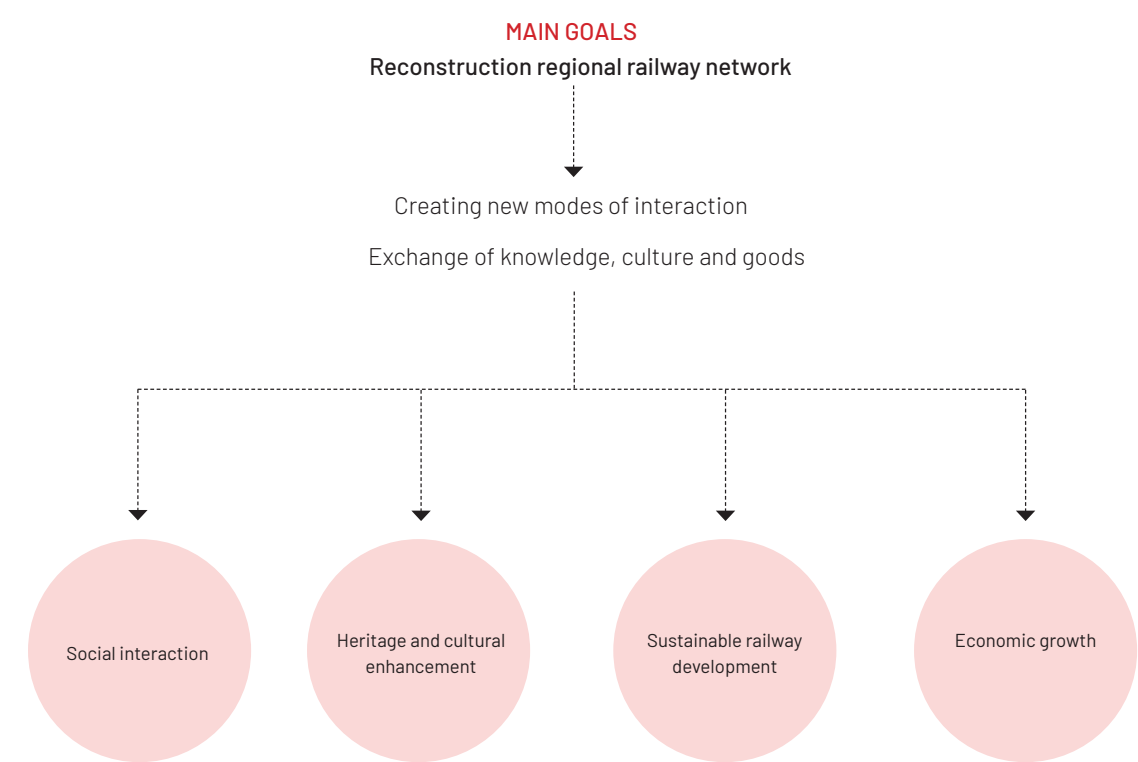
In order to achieve these goals, the plan includes a set of principles for the redevelopment of the former railway network.

- 1. **Establishing regional border-crossing:** the vision acknowledge the difficulties of border-crossing in the region. The proposal suggest a gradual shift in the movement and travel around the region, that can be establish over time (see strategy).
- 2. **Accessibility and mobility:** as cross-border connects will form, new flows and travel will go trough the regional railway network, promoting accessibility and mobility around the region. These can be related to fright and goods, tourism and for opportunities such as employment and education.
- 3. **Border-stations as crossing points:** border crossing will be shifted from check points at the border-wall to border stations. The border stations are selected former stations located near the border areas. The border stations will functions as terminal hubs in which crossing take place. The border station will be related to nearby local communities, transforming the border crossing into a civil action.

- 4. **Stations as a public space:** the border stations will act as a network of public spaces, open for public use with multiple activities to create encounter and interaction.
- 5. **Border stations as a neutral place:** the historic railway stations will be reused by local communities. The border stations will act as a natural place where communities can meet and collaborate.
- 6. **Hub-stations for future regional flows:** hub stations are located in strategic places. The hub stations will include a defined area for new logistic and fright flows and for future economic related growth.
- 7. **Heritage based railway development:** the plan revolves around redevelopment of former railway lines, promoting its heritage and environmental potentials (see design toolkit).
- 8. **Regional conservation framework:** since the former network has a shared heritage, to plan recommends to establish cross-border coalition for developing a conservation framework for the entire region.

Top chart main goals of the TransLevant express vision

Bottom chart a flow chart concluding the planning approach and main principles. The vision address to main aspects of the former railway network: The lines - the railway as a shared infrastructure, The nodes - the historic railway station scattered along the lines, as a network of public space.



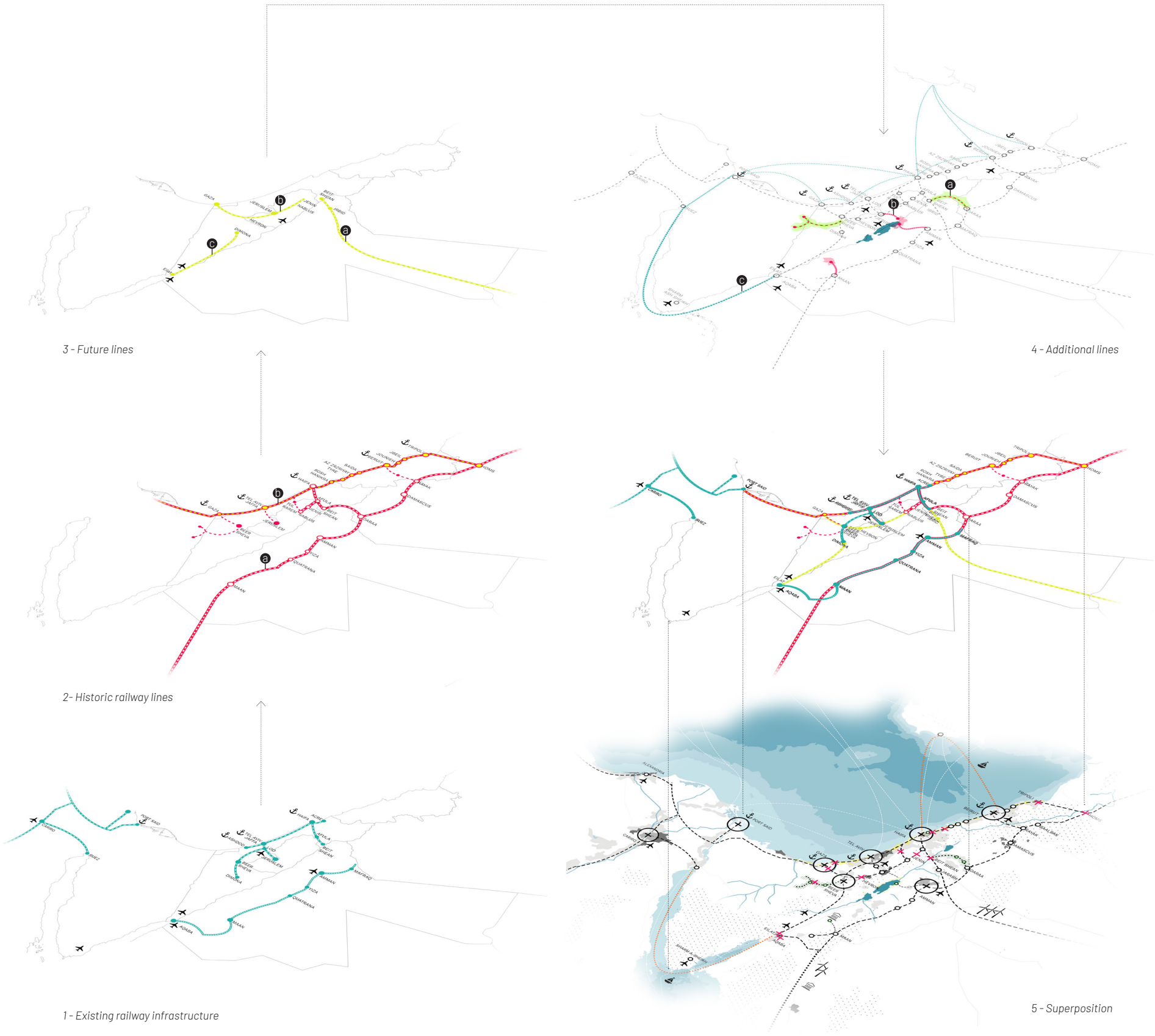
6.3 - Vision components

The TransLevant Express vision combines the historic railway network, existing railway infrastructure and future regional plans, as analysed in chapter 4. The following drawings illustrates the layer constructing the regional plan.

**1. Existing railway infrastructure:** this layers introduce the current railway transport in the region. As shown in chapter 4, the railway in Jordan is not operating for passengers travel, but for tourism and industrial related rides.

**2. Historic railway lines:** the two main historic lines are at the core of the regional plan. These include:  
a. The Hejaz railway, built in by Ottoman Empire  
b. The coastal line, built during the British mandate (the Taurus express) (see chapter 4).

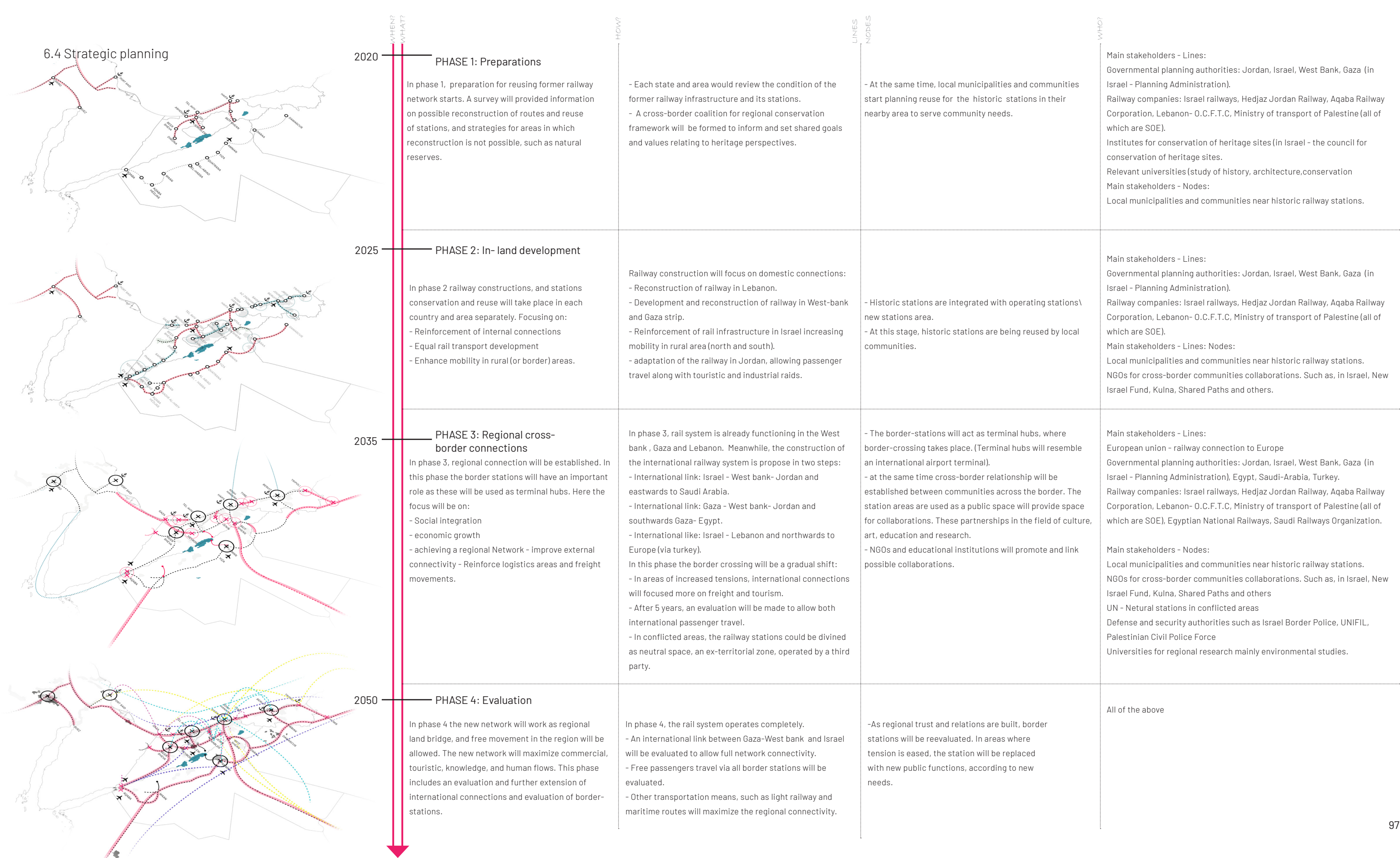
**3. Future lines:** there are several regional plans for future railway lines in the region (see chapter 4). These include:  
a. A line from Haifa to Jordan to Saudi Arabia based on Tracks for Regional Peace initiative.  
b. A railway line in the West Bank and Gaza, following the The Road and Transportation Master Plan for West Bank and Gaza Strip.  
c. A railway line from Beer-Sheva to Eilat. This is an Israeli plan to construct a railway line to serve the localities of the southern periphery of the Negev desert, connecting to the touristic city of Eilat.



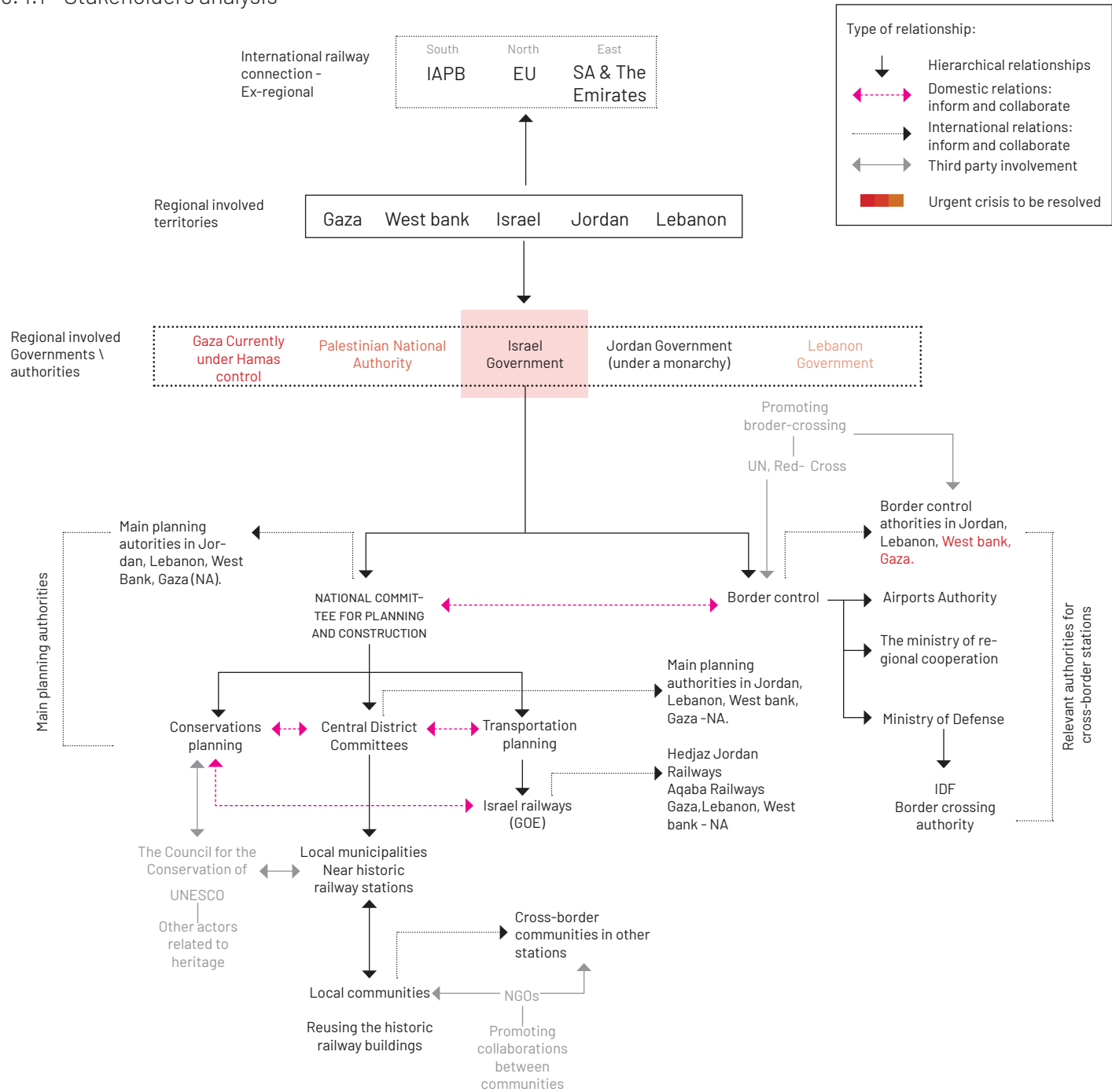
**4. Additional lines:** these are suggested additional lines meant to reinforce the railway network. These include:  
a. Touristic development of former line in natural reserves areas. These lines do not fit for passenger rides, as there are almost non existing settlements in these areas. Yet, the location and condition of these lines and stations can have a touristic potential.  
b. Light railways\direct public transport, to connect places of great cultural and touristic importance to the railway network. These are based on existing roads.  
c. Maritime connections: to reinforce the railway network a new maritime route is suggested. This route will connect Eilat (Israel) and aqaba (Jordan) to Cairo. It is possible to connect further north to Port-Said via the Suez canal. Yet, the plan offers to develop this line as a tourist route, due to the high natural sea values of this area.

**5. Superposition:** The superposition combines the different layers into a single complete railway network. It is possible to note the overlaps of the existing railway infrastructure with the historic lines. The layers is project to the regional vision The TranLevant Express.



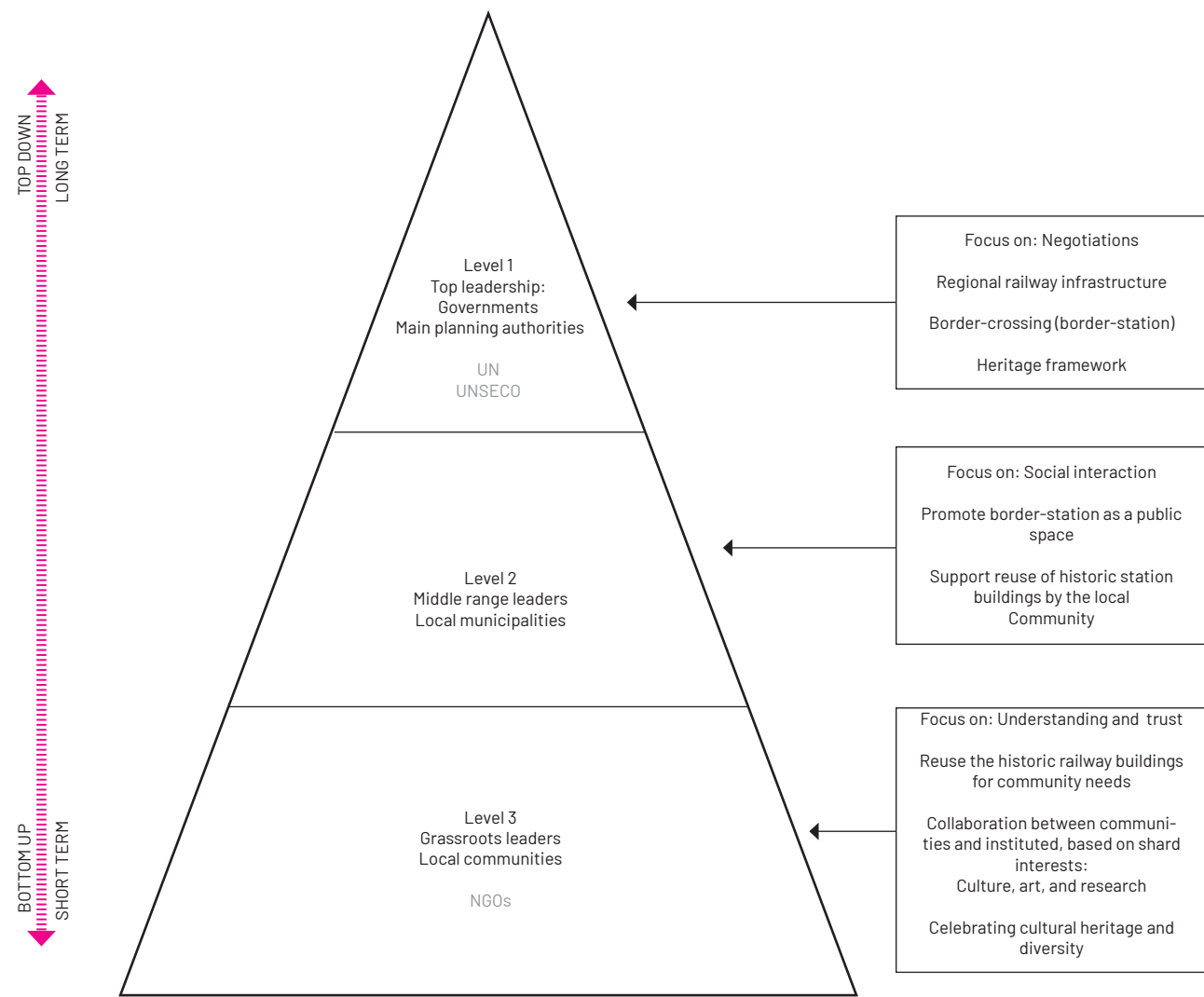


6.4.1 - Stakeholders analysis



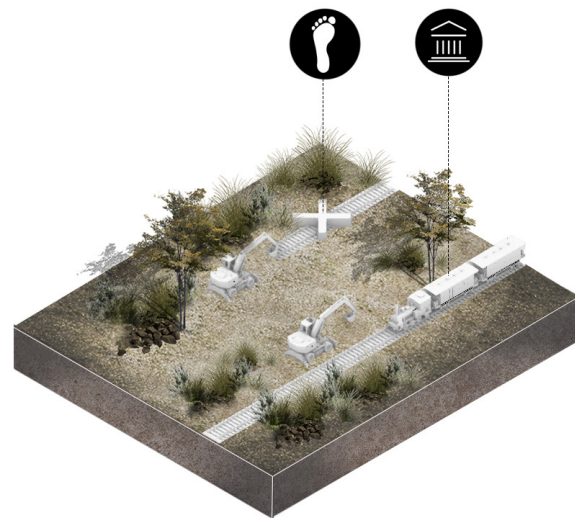
The flow chart above describe the relationship between the relevant stakeholders. The case of Israel is present here. While there might be changes in the process in between different nations, there are some shared principles. First each government\authority should cover three main topics for development: railway infrastructure, heritage framework and broder-crossing. These three topics are top down initiatives. There should be domestic collaboration between these three responsible authorities. There should also be regional collaboration in each of these topics. For example, Israel railways should collaborate with Hejaz Jordan railways. A main planning authority such as the national committee for planning and construction in Israel, should collect the information from all three sectors to make sure there are no conflicting decisions. These are mainly top-down actions . At the same time bottom up initiatives are performed at the stations area. Communities and municipalities will work together to deicide on the reuse of the former stations buildings. NGOs for co-existence, will promote cross-border collaborations between other communities active in the station area.

6.4.2 Strategy and stakeholders analysis summary:

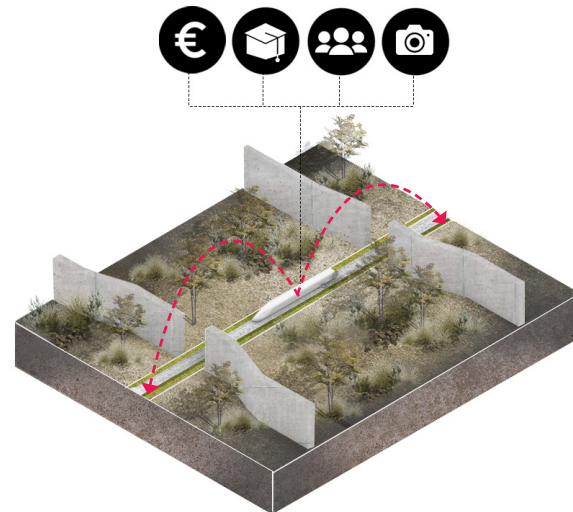


The diagram above draws on Lederach's model of conflict transformation (1995\see chapter 3.4). With modifications to Lederach's model, the chart combines the main aspects from the strategy and the stakeholder analysis. The chart shows the main active actors and their main assigned actions. The actions can be generally divided between Top-down and Bottom-up actions. The actions can be generally divided to short term and long term initiatives.

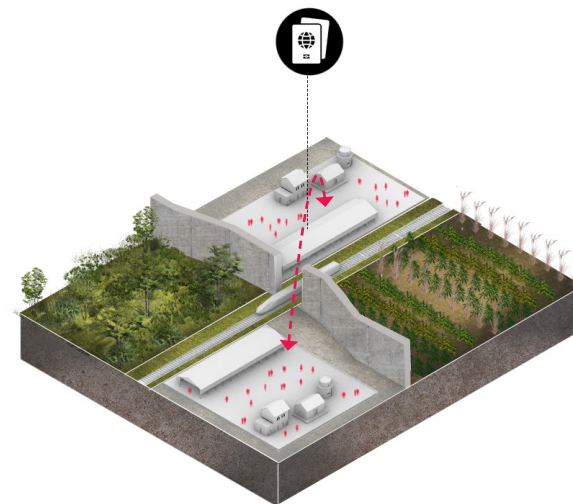




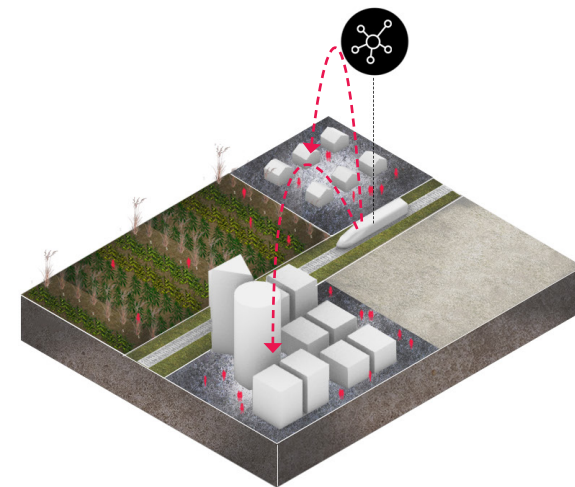
1. Heritage based railway development



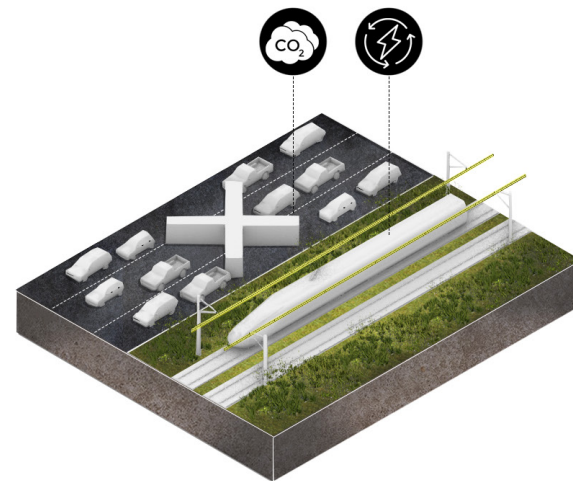
2. Cross-border travel-generating new flows



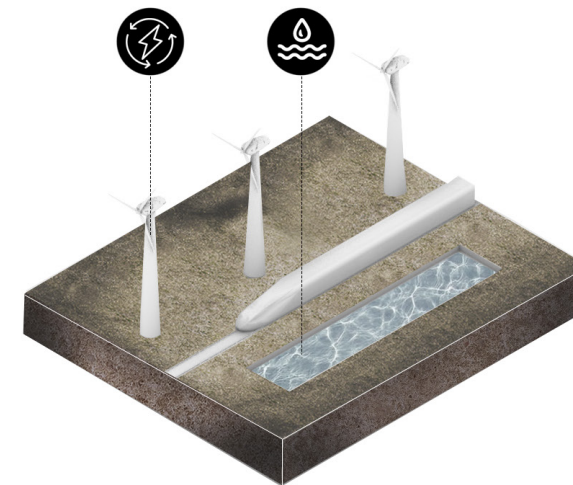
3. Border stations as terminal hubs



4. Rural-urban connection



5. Renewable and energy efficient railway transport



6. Harvesting energy and water



7. Green corridors



8. Ecological bridges (in natural areas)

## 6.5 Design toolkit:

The design toolkit provide planning scheme and design guidelines needed to achieve the vision goal. The toolkit address two aspects the lines - the railway infrastructure and the nodes - the historic stations.

The toolkit illustrates the recommendations and consideration for the implementation of the vision. These planning and design principles ensure social and environmental sustainable redevelopment of the former line. Yet, clearly, as the conditions of tracks and stations vary, not all the guidelines can be implemented along the network. Therefore, the toolkit aims to be used a set of values for the reconstruction and reusing of the former network.

### 6.5.1 Design toolkit Lines - railway infrastructure

#### Towards regional cooperation and social interaction:

**1. Heritage based construction:** Developing railway infrastructure using existing railway tracks and stations as much as possible: A. To ensure sustainable railway development by reducing the ecological footprint of construction and smaller in unbuilt areas. B. Reusing the historical stations and networks to foster heritage-based community development.

**2. Cross-border travel-generating new flows:** Cross-border railway transport can promote accessibility and mobility to opportunities and services around the region. New connection and flows will emerge such as: freights and goods, commerce and labor market, tourism, passengers travel.

**3. Border stations as terminal hubs:** In the current state in the region, border-crossing is extremely limited. The terminal hub stations will allow passengers travel through the region. These will be located in stations that are near the border area. They will replace the current checkpoint on the borders with a civilian, neutral area, resembling airport terminal trailing.

**4. Rural-urban connection:** Railway infrastructure plays an important role in including rural territories in regional and international networks and in establishing urban-rural links.

#### Sustainable railway development:

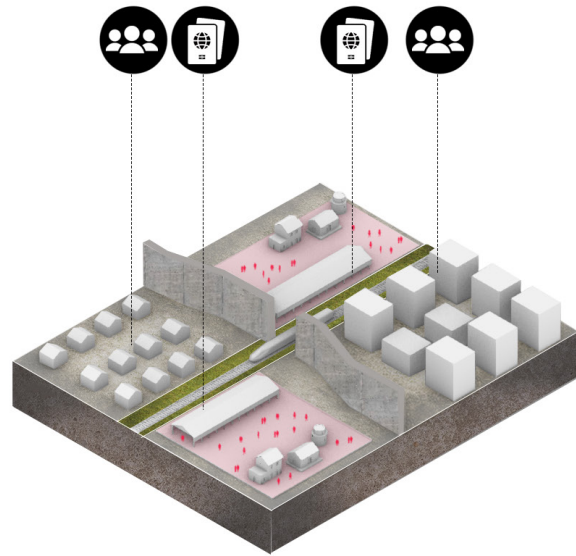
**5. Renewable and energy-efficient railway transport:** A. As part of sustainable railway development, the new train should operate based on renewable and energy-efficient resources. B. Public railways transports provide far more cost-effective and energetically efficient ways of transporting passengers and freight in comparison to motor vehicles and airplanes.

**6. Harvesting energy and water:** The Levant region shared two environmental threats: oil dependency and water scarcity. Both are unevenly spread around the region. Creating wind energy and rainwater collecting corridors along the railway line can help to prepare for future challenges and ease regional distribution.

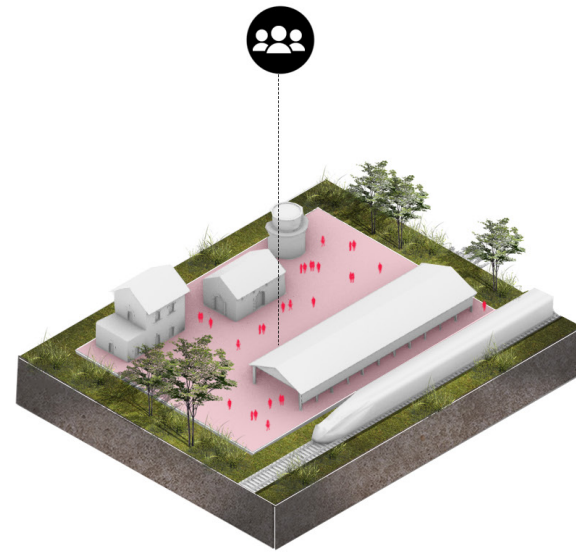
**7. Green corridors:** Since the railway tracks travel long distances, combing gray and green infrastructure can help in reducing the environmental impact and allow connectivity of ecological systems.

**8. Ecological bridges (in natural areas):** Some part of the historical tracks runs through natural reserve areas. In these areas, the construction of ecological bridges is important for wildlife and bio-diversity.

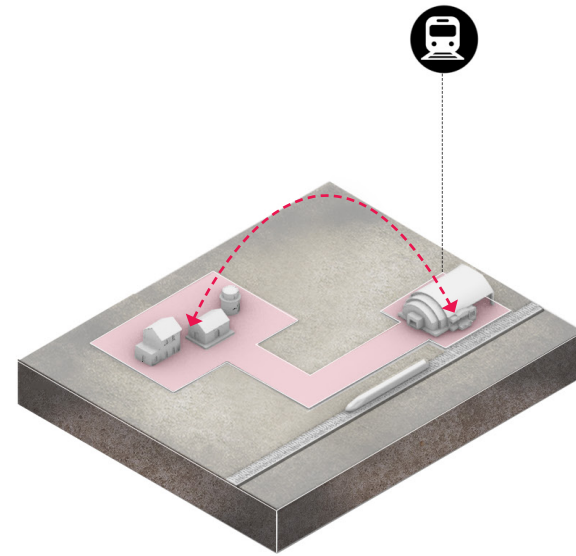




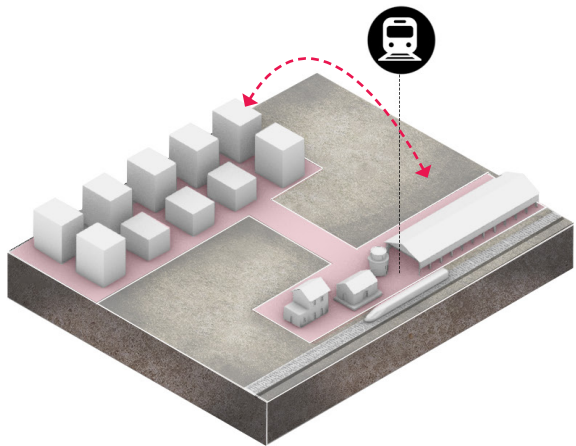
1. Cooperation between border stations and communities



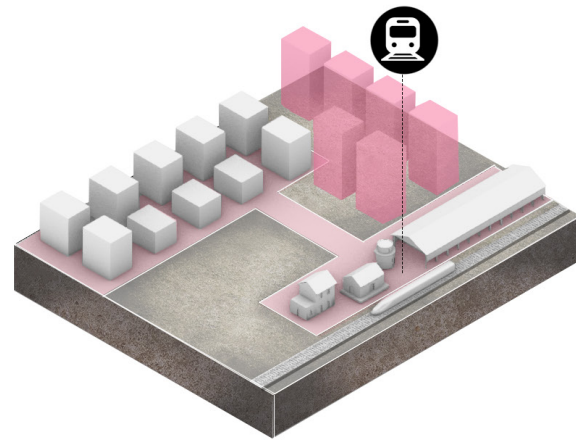
2. Stations area as a public space



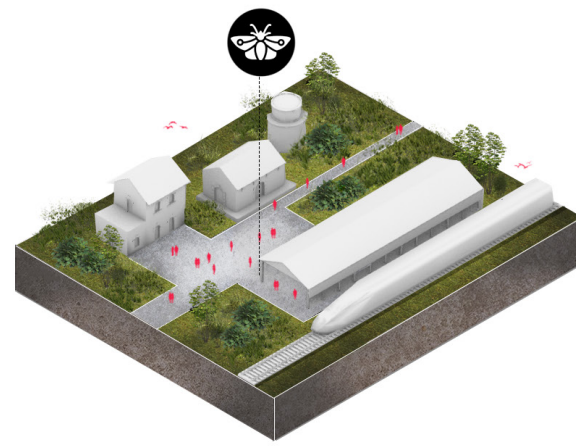
3. Connectivity between historical and operation stations



4. Connectivity between stations and urban fabric



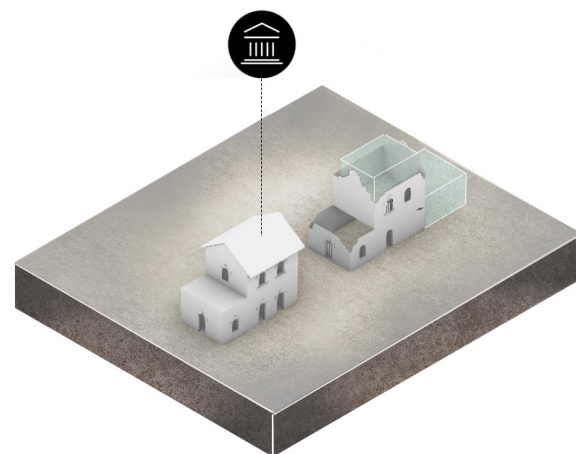
5. Consider future development near station areas



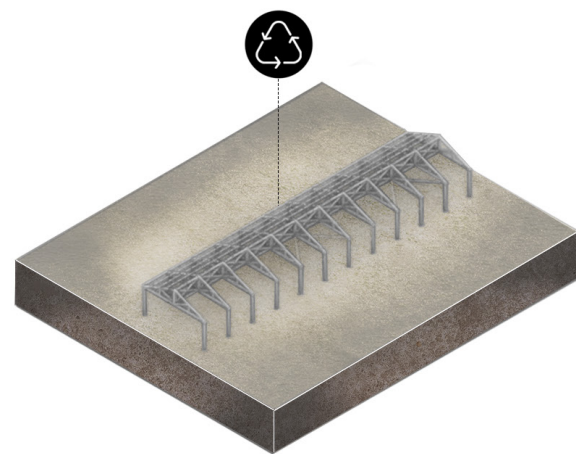
6. Integrating existing natural values in conserved station



7. Reuse of historic stations in natural area



8. Vary conservation approach



9. Local architecture and sustainable materials

## 6.5.2 Design toolkit Lines – railway infrastructure

### Towards regional cooperation and social interaction:

**1. Cooperation between border stations and communities:** The historic station buildings will be used by local communities. Communities across the border, will be able to work collaboratively, remotely and on grounds, visiting and the station areas on both border sides.

**2. Stations area as a public space:** The station area is a place of encounter. Therefore, the station area will be active as an open public space, fostering interaction and collaboration among localities and passengers.

**3. Connectivity between historical and operation stations:** Several historical stations are located near the operating railway station, yet there is no relation and connectivity between them. Integration between old and operating station is crucial for the implementation of the vision.

**4. Connectivity between stations and urban fabric:** to make sure communities will choose railway transport and reuse the historic station buildings, the station area should be well connected by multiple transportation modes to the nearby settlements.

### 5. Consider future development near station areas:

With new flows in the region, future potential for new development might emerge. Considering locating new developments near the station area can reinforce the railway network system and regional connections, and increase the use of the train as a sustainable transport means.

### Sustainable stations development:

**6. Integrating existing natural values in conserved station areas:** Often, natural systems have become a part of the historic abandoned stations' area. Development of the station area should ensure that biological diversity is protected and enhanced, and integrated as open green space as much as possible.

**7. Reuse of historic stations buildings in a natural area:** Some stations are located in protected natural reserves or in places with unique natural values. Besides protecting these areas, the historic stations' buildings in these areas can have two main roles: A. Visitor centers to promote domestic and international tourism. B. Facilitate local and regional research on environmental and biodiversity topics.

### Architectural aspects:

**8. Flexibility in conservation approach:** conservation is always grounded in ideological and even national contexts. Therefore, consideration should be given to the sites chosen for conservation. The approach and means for conservation of the historic railway buildings should reflect local and communal narratives and values. These differ around countries.

**9. New stations – local architecture and sustainable materials:** The historic station buildings are repetitive in their architectural style and provide a share of common heritage value. The new station's passenger buildings, that will be constructed next to the old ones, can reflect local traditions or local architectural values. The new station buildings should be built as much as possible in sustainable technology emphasizing the use of renewable materials.





PART 7 Intervention sites

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This part covers three intervention sites of railway stations. The selected sites reflect the implementation of the regional scale on the local scale. The chosen sites present different context of the railway stations ,and are meant to illustrate possible future scenario of re-networking.

FIG 7 The Historic railway station in Beit Shean, one of the selected intervention sites.



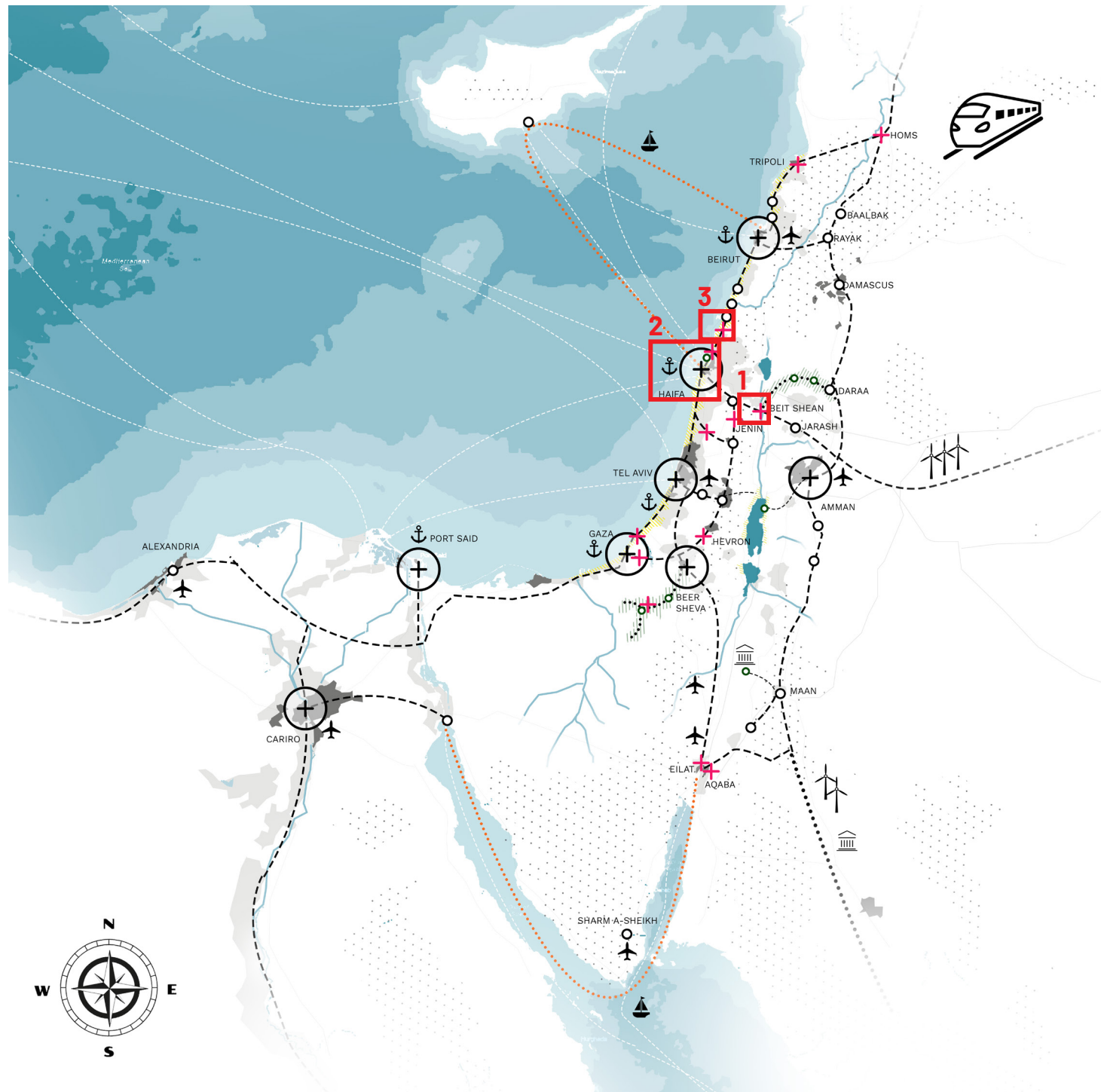


FIG 7 Regional vision - the TransLevant express and the three selected intervention sites.

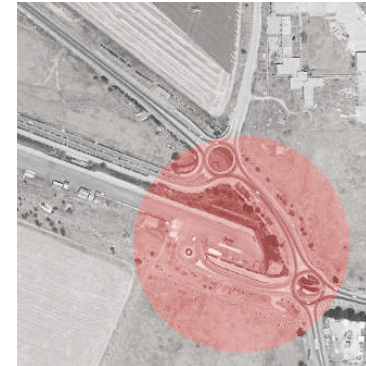


FIG 7.1.1



FIG 7.1.2



FIG 7.1.3

FIG 7.1.1 Beit shean, historic station area. A border-stations case: Israel, Jordan and the West Bank.

FIG 7.1.2 Haifa, historic station area. A hub-stations case: network junction and connectivity to Haifa port.

FIG 7.1.3 Rosh haNikra, historic railway tunnel area. A border-stations case: Israel - Lebanon.

## 7.1 Selection of intervention sites

The selection process was conducted by the following criteria: the intervention points needed to have a strategic importance for the implementation of the regional vision. Therefore, it was clear that at least one site should demonstrate design solutions for border-station, and one for hub-stations. Also, it was vital that the selected sites reflected different contexts in the region. Thus, the sites vary between urban-rural areas and addressed different degrees of political tensions. Furthermore, it was important to choose nodes from the proposed operational railway line. This allowed to address the potential future users of communities near by. Therefore, stations in natural reserve areas or with tourist orientation where eliminated from the selection process. Another criteria was based on the availability and accessibility to sufficient data and material per site. Hence, all three sites are located the territory of Israel. This was also a conscious choice related to ethical considerations (see reflection chapter). Consequently, the chosen design intervention sites are:

**1. Beit Shean border-station:** Beit shean is the closest city to the Jordanian border, and it is also close to the border-wall separating between the West Bank and Israel. Two active border-crossing points are located near Beit Shean: Sheikh Hussein crossing point to Jordan, and Jalamah checkpoint crossing from the West Bank to Israel. Crossing from Jordan to Israel requires a special permit (visa), and the crossing from the West Bank to Israel is allowed under severe restrictions imposed by the Israeli authorities. This main proposed line going trough this site is going eastwards to Jordan and Saudi Arabia.

**2. Haifa Hub-stations:** Haifa is an important node on the network, as this is a crossroads between the north-south and west-east movement. It is also an important node due to its sea and land connection. Haifa is the 3rd largest city in Israel and holds the largest Israeli seaport. It is a city of mixed societies, where both Jewish and Arab neighbourhoods live side by side.

**3. Rosh haNikra border-station:** this station is located on the northern border of Israel and Lebanon. The crossing of this border is not allowed, as the two countries are officially in a state of war. The station is situated in a rural area, surrounded by small scale settlements from both sides of the border. This station demonstrates a case of border-station in an area of increased tension. The main suggested line going through this station is the coastal line.



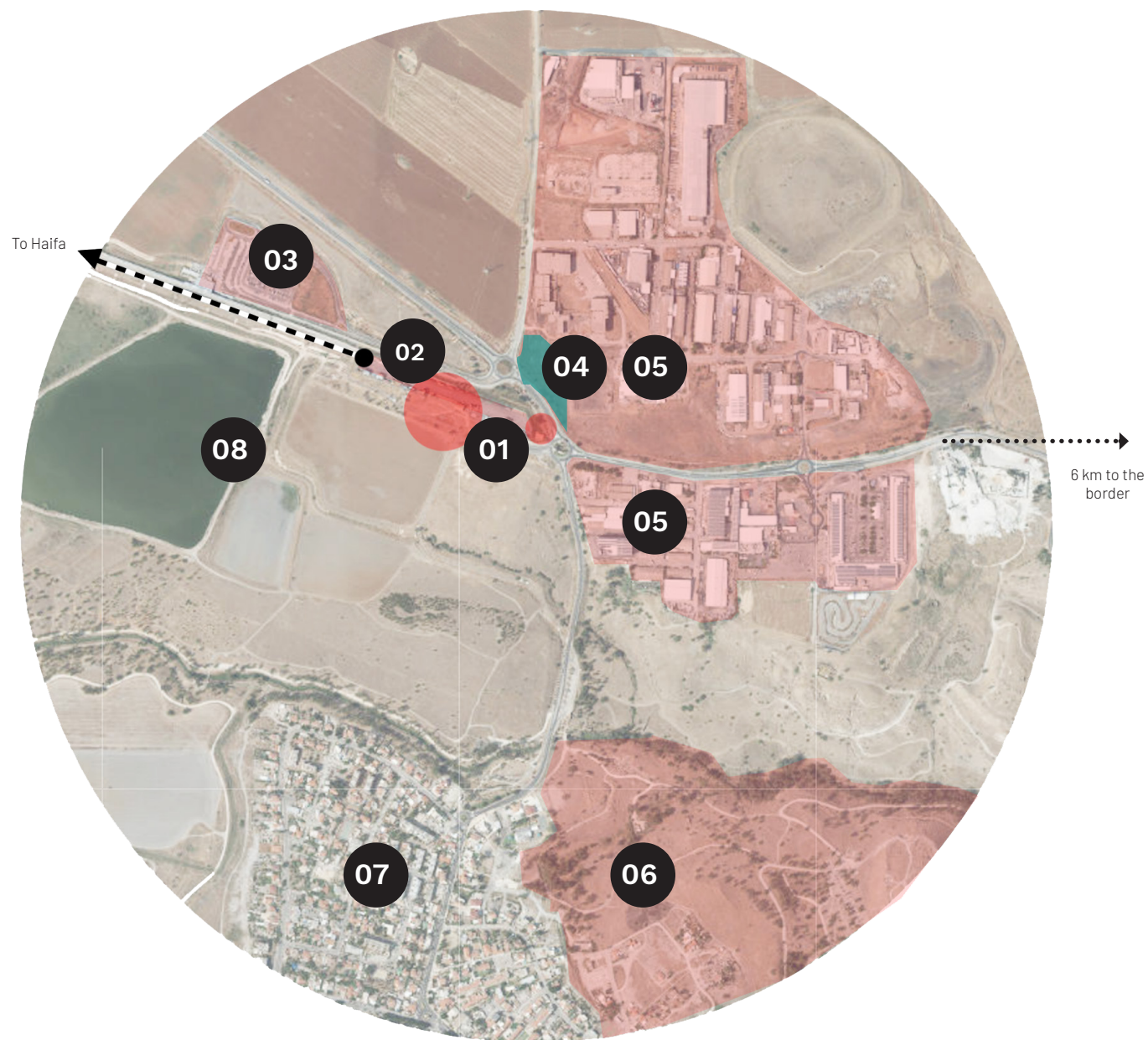


FIG 7.2 A map showing the historic railway area in Beit Sh'ean. 1 - The historic ottoman railway station buildings. 2- logistic railway area. 3- New railway station. 4- Al-Akhmar archaeological site. 5- Industrial area. 6 - Beit She'an National Park. 7- residential area. 8 - Agricultural fields.

## 7.2 Beit Shean Border-station

Beit shean is a small city located at the north-east area of Israel, 6 km from the Jordanian border. As mentioned, the city is located near the Sheikh Hussein crossing\ the Jordan River crossing, a Jordan-Israel border crossing, which was established after the 1994 Israel-Jordan Peace Agreement was signed. Currently, the crossing of the border is used for Israeli citizens and foreigners for tourist purposes and requires a permit (visa). It is also used to transfer goods between countries, mainly by trucks transportation. Beit shean is also located near the wall-barrier between west bank and Israel. The closest crossing point between these areas is the Jalamah checkpoint\ Emek Harod crossing, located near the Palestinian city Jenin. The design proposal for Beit Shean is to shift the border crossing from Sheikh Hussein crossing to Beit shean railway station, and to establish railway connection in the area, based on the Hejaz line and the tracks for regional peace initiative (see chapter 4 and 6.3). The design leverage on the potential connections between Beit Shean, Irbid (Jordan) and Jenin, and seeks to illustrate the potential development for the station area.

### 7.2.1 Beit Shean and the historic railway station

The historic railway in Beit Shean or Bisan Station (the Arabic name of the village before 1948) was established in 1904 by the Ottomans, as part of the valley train connecting Haifa to the Hijaz railway. The Ottoman Sultan Abdul Hamid II decided to set up the station in the small village, to encourage economic development that would increase tax payments in this area. A number of stone structures of the station are still standing today - a passenger station, a management building and a water tower. The station operated until the explosion of Jordan's bridges on May 14, 1948, and ceased operations of the Valley Railroad. Since the station buildings have been neglected and abandoned. The building was declared a heritage site by the Israel Heritage Site Preservation Council. At the moment, restoration work is carried out, yet there are no plans for reuse of the historic buildings (Aderet, 2014)(author translation).

In 2017, The historic Valley railway between Haifa and Beit Sh'ean was reconstructed and reopened for train rides. The new train stations is located at the northern entrance to Beit Sh'ean, 300 meters west of the historic station. Yet, there is no physical or visual connection between the two. Today, near the historic station there is a logistic area related to the operating railway, an industrial area with light industry and Khan Al-Akhmar a small archaeological site.

Beit Sh'ean is a small city in of the northern district of Israel. According the Central Bureau of Statistics (CBS) 18,227 residents live in Beit She'an, with a score of 5 out of 10, in the Socio-Economic index. The average monthly salary of an employee is about 30% below the national average. A famous tourist site in the area is Beit She'an National Park, an archaeological site with the remains of the city from the Roman Byzantine period.

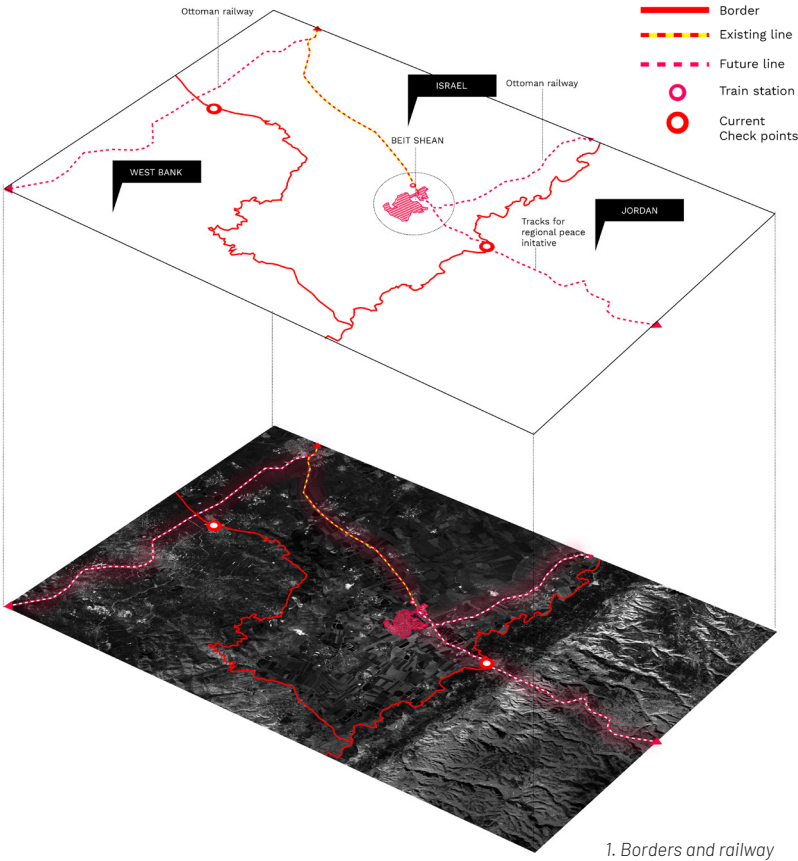


FIG 7.2.1 From top to bottom:  
1- Beit Sh'ean historic Ottoman station buildings.  
2 -Historic Ottoman water tower structure, with logistic railway area behind.  
3- The new railway station in Beit She'an.  
5 - Beit Shean National Park and archaeological site.



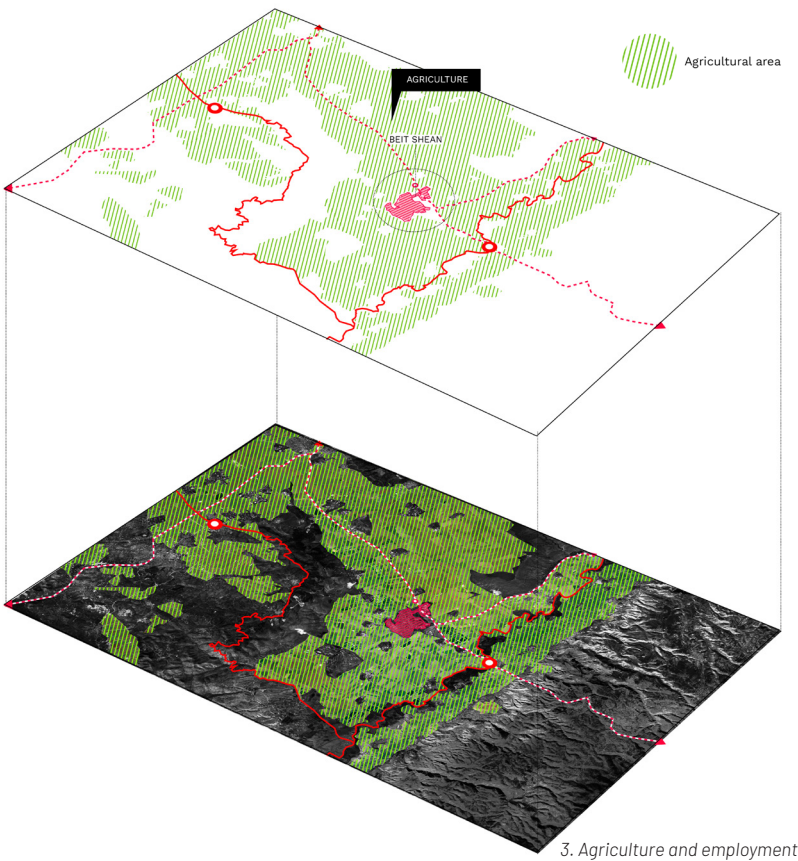
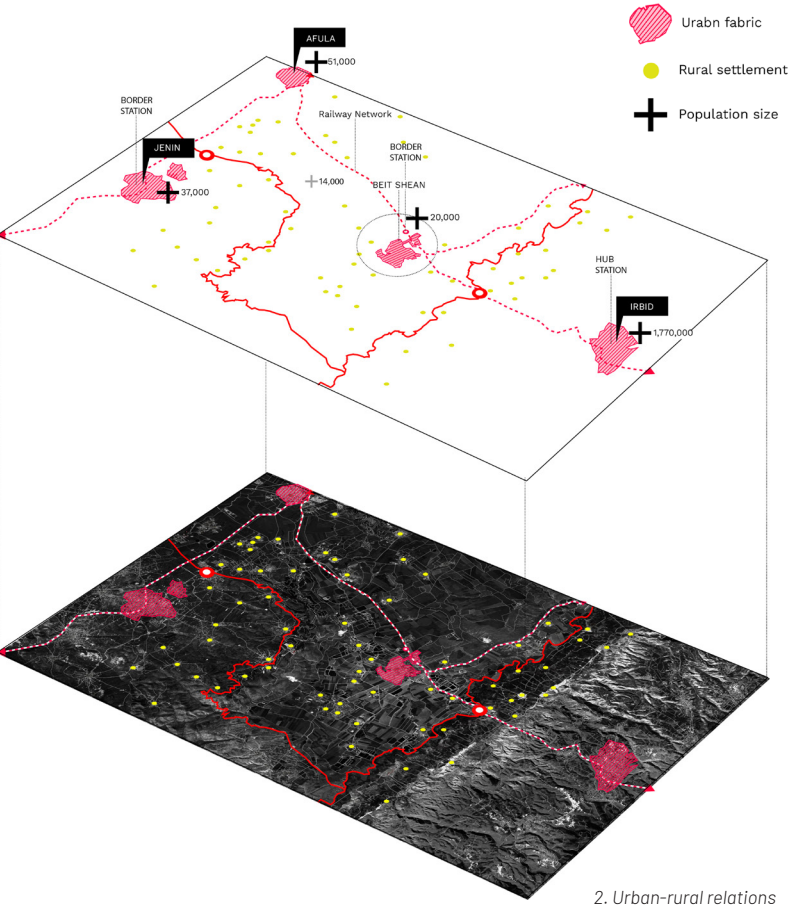
7.2.2 - Potentials analysis

A contextual analysis reviews the current relationship around the intervention area and seeks to analysis their potential related to the proposed vision. These include: border and railway infrastructure, urban and rural relation, agriculture and employment and landscape and truism. These were considered and integrates into the design proposal.

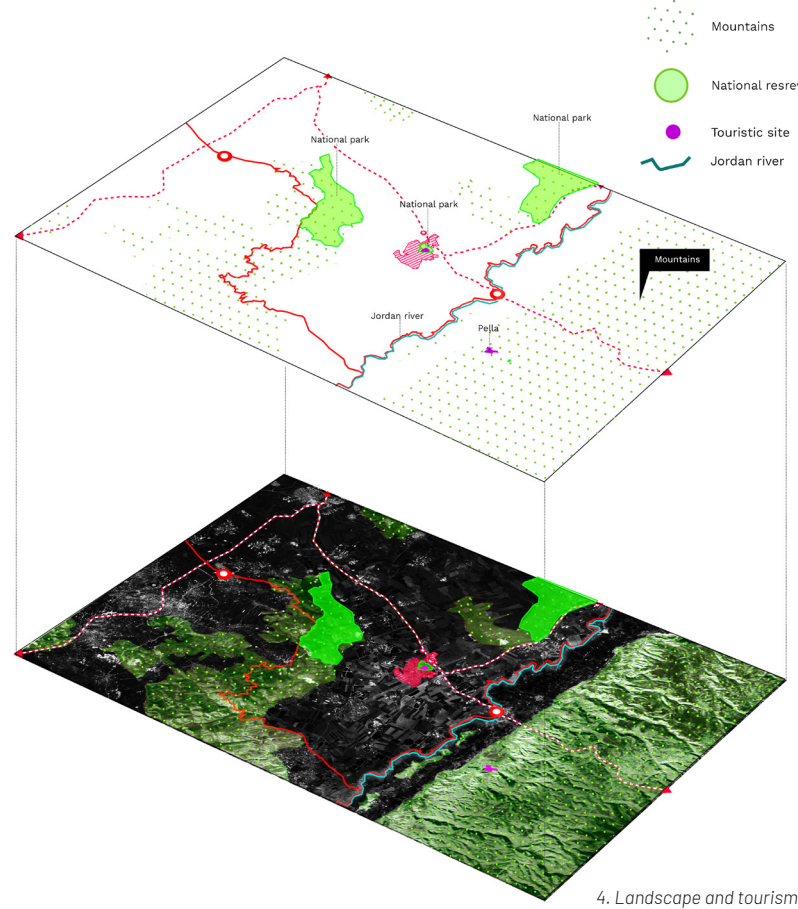


**1. Borders and railway infrastructure:** The following scheme shows the current borders and crossing points in Beit Shean area, between Jordan-Israel and West-Bank and Israel. Currently, there is an operating railway line from Beit Shean to Haifa. As mentioned, this line is based on the Hejaz railway and was reopened in 2017. The suggested future lines are based on the Hejaz line, going north of Beit Shean and south - towards Jenin. An additional line goes to Jordan and further east based on the tracks for regional peace initiative (see chapter 4).

**2. Urban-rural relations:** Beit Shean is a small city with 20,000 inhabitants. The scheme describes the communities that could possibly benefit from railway service, and establish new connections with neighbouring communities. On the West Bank, the closest city is Jenin with 37,000 inhabitants and other small rural villages. Across the Jordanian border, there are several agricultural localities, and further east Irbid, the second-largest city in Jordan with 1,770,000 million people. Beit Shean is surrounded by small rural villages with a total of 14,000 inhabitants, and the closest city is Afula with a population of 51,000 people.



**3. Agriculture and employment:** Agriculture is one of the main employment sources in the area. This is also true for the area of the Jordanian border. Smaller agriculture land can be found near the Jenin area in the West Bank. In Beit Shean the main crops are of fish ponds, spices, fruits and vegetables. The industry is struggling in recent year due to lack of governmental support and competition with form other countries such as Turkey. as this struggle is still going, some farmers are now growing superfoods while others aim to sell their land for housing development (yet, with small rates of success). A railway line can open new markets in the region and beyond and serve the farmers around the area.



**4. Landscape and tourism:** Beit Shean is located in Beit Shean Vally, and is surrounded by the mountains of two national parks. One of the most famous sites in this area is Beit Shean National Park, located within the city itself. Another famous tourist site is Pella, in Jordan. The railway lines development aims to leverage on the tourism potentials in the area and to consider them as extended areas of the network.



### 7.2.3 Design proposal for Beit Shean Border-station

The proposed design for Beit Shean border station is based on the concept of regional railway connectivity and shifting the border-crossing to the railway station. This way, the stations serves the communities of beit shean and its surroundings, and at the same time it becomes a place for interaction and encounter with citizen crossing the border.

#### Main principles:

1. Continuing the line from Beit-Shean towards Jordan.
2. Building a railway station as a terminal hub in which crossing takes place.
3. Creating the station area as an open public space with mixed uses, to serve the community of Beit Shean and the people crossing by the station.
4. Reusing the historic station as a community centre for cultural, arts, education and research and heritage related functions. Cross-border cooperation with communities beyond the borders will be based on a shared interest. The station area will be used as a neutral space, where communities can meet and collaborate (see next page).

#### Connectivity:

5. Integrating the operating railway station of Beit Shean and the historic station buildings to create a single continues area which functions as a public space.
6. Connecting the city centre of Beit Shean and the station area with multiple transportation modes including a light railway, bicycle and walking path, along with the existing road system.
7. Forming a direct connection between the station area, Beit Shean national park and Al-Akhmar archaeological site, to enhance tourist potential.

#### Environmental:

8. The historic station buildings are located near a natural green ridge. The design includes this ridge as a green open area related to the station area and offers to preserves it much as possible.
9. The green ridge and Beit Shean National park will be connected to a continues green structure to increase bio-diversity values.
10. North to the station area, there is a patch of land without a current specific use. This area can be transformed into an energy park, harvesting rain and wind energy. The nearby train system can be used as a means for distribution.
11. Transforming the gray infrastructure to green infrastructure, and use an electric train to reduce co2 emissions.

#### Future development:

12. Currently, the existing operating station in Beit Shean includes a logistic area for goods. The design suggests making this area larger, in order to fit new freights flows coming from Jordan and further east.
13. A designated area northern to the station will be reserved for future development related to the station area for logistic or industrial\ commerce needs.



FIG 7.2.2.A An aerial view of the area presented in the axonometric scheme on the right page.

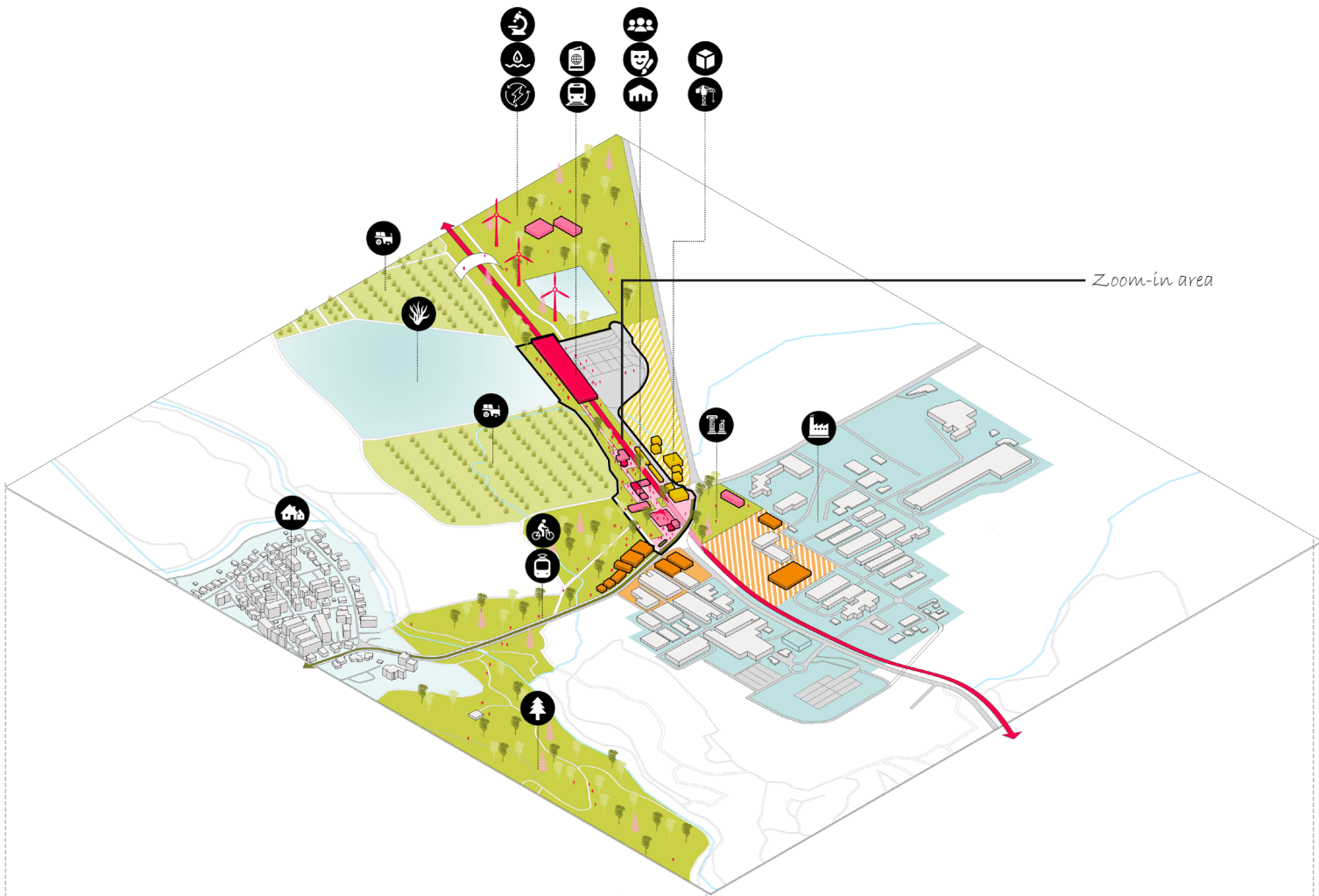
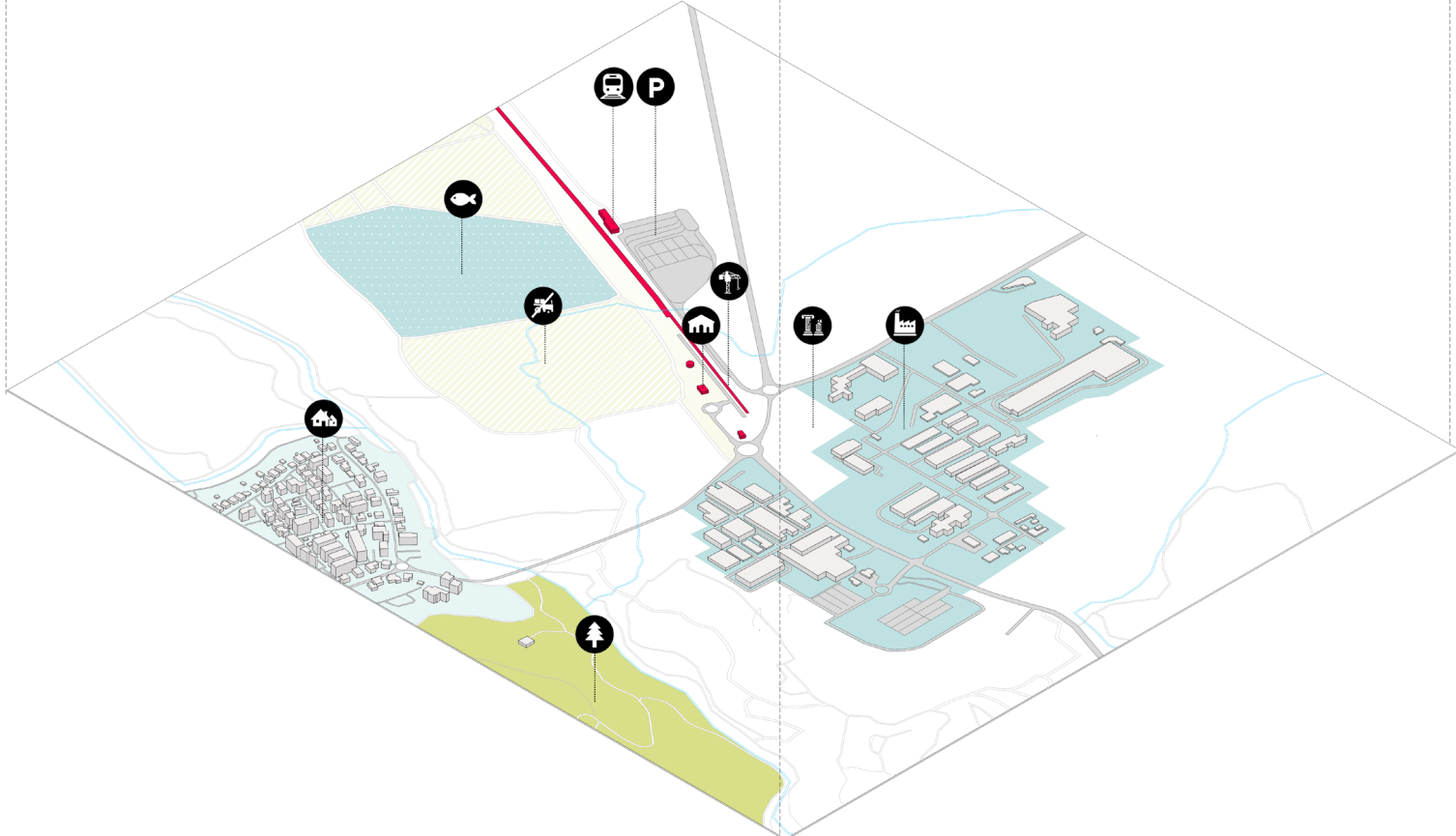


FIG 7.2.2 On the right page: Top - the suggest design for Beit Shean station area, following the principles of design. Bottom - the current condition of Beit Shean station area.

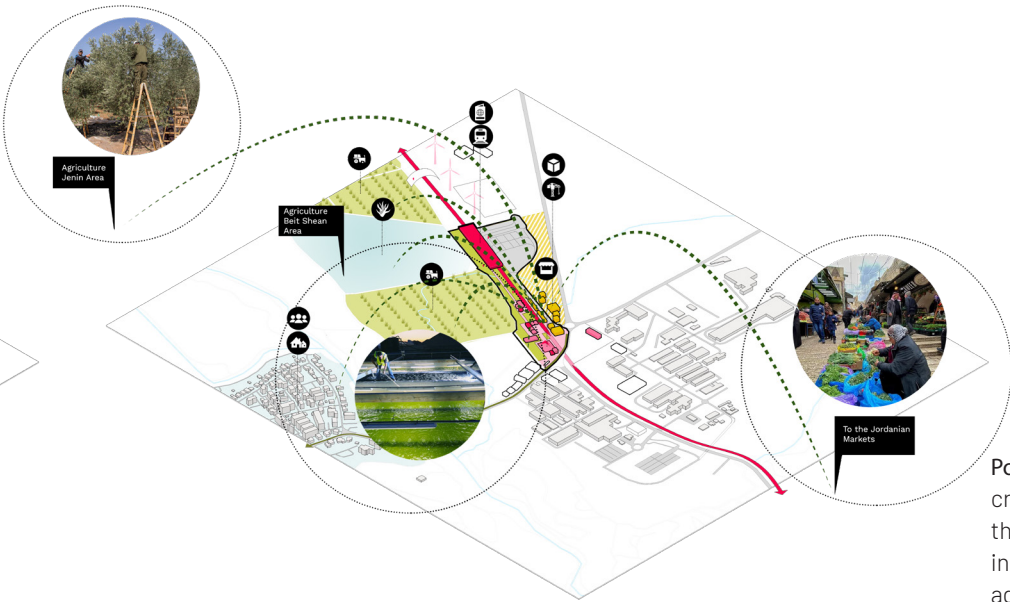
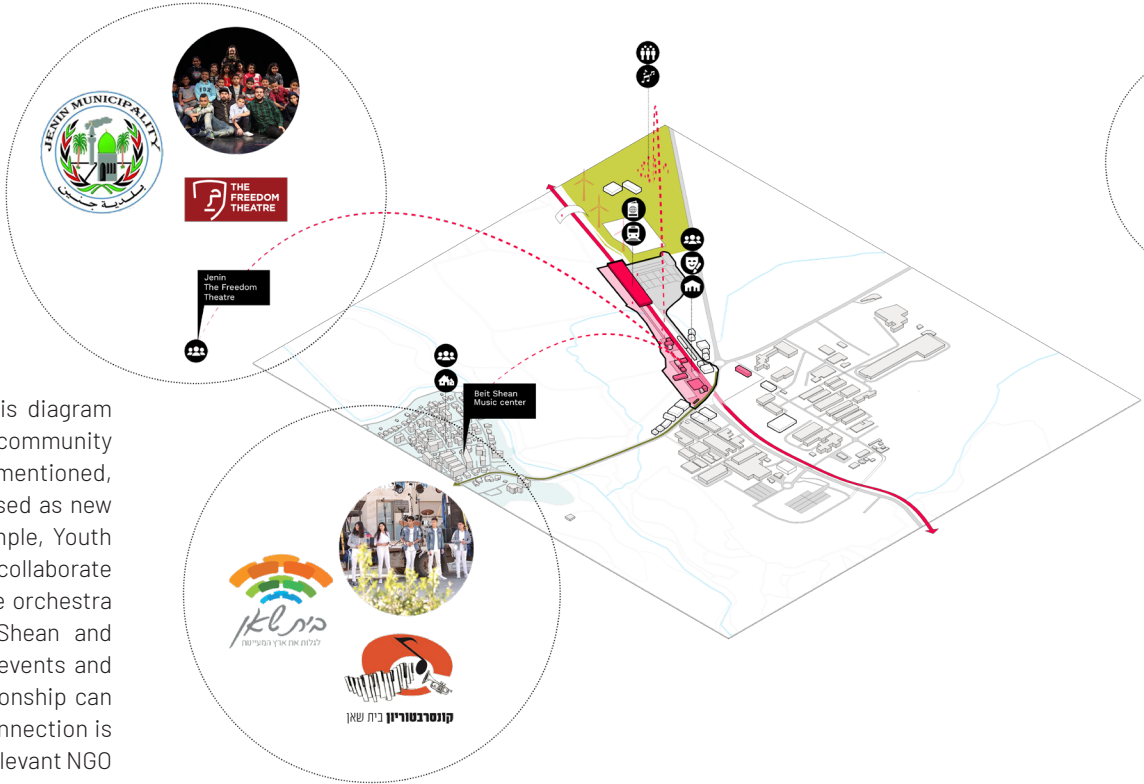
#### INDEX

	Logistic area		Terminal hub
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	Research		Electric power
	Culture		Rainwater harv.
	Heritage site		Energy storage
	Eco. bridge		Future devl.
	Green area		Zoom in area
	Industrial area		
	Future indu.		
	Future logistics		



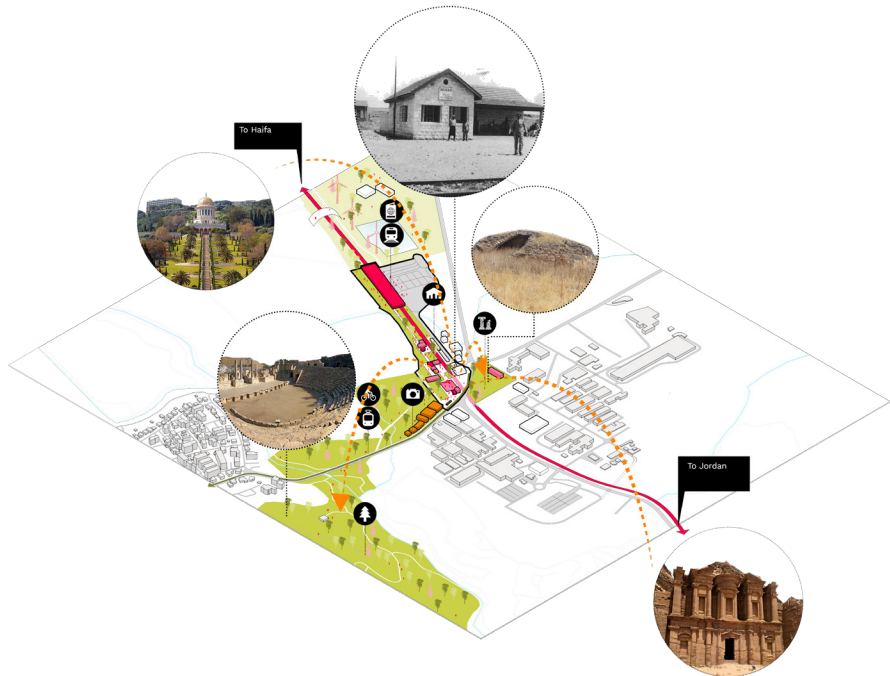
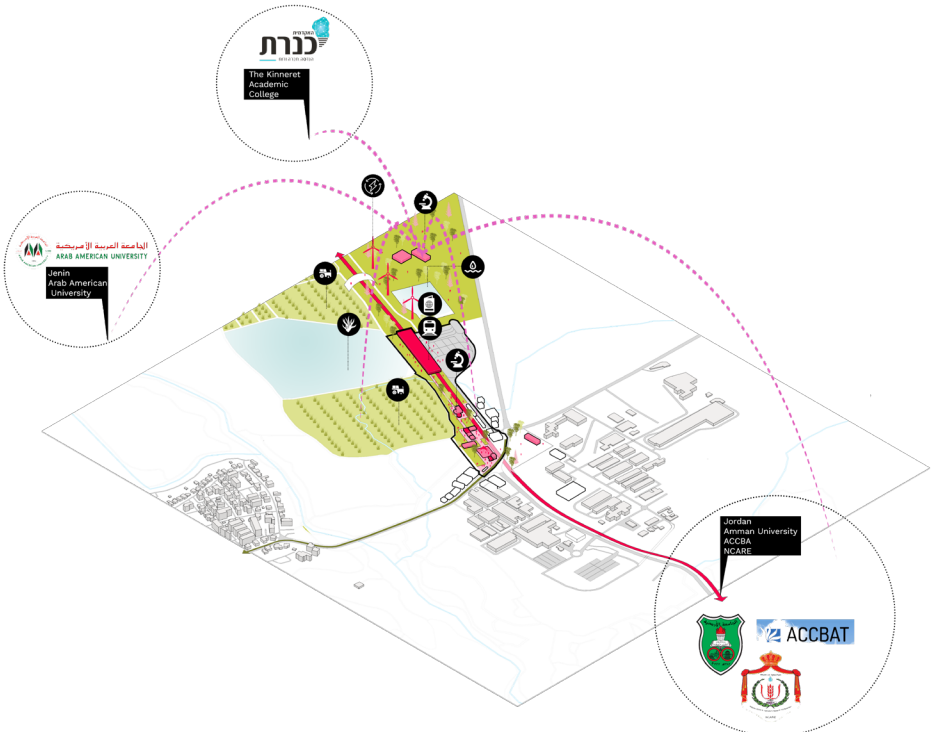
7.2.4- Forming regional connections

**Cross-border community relations:** this diagram shows potential for cross-border community relations based on shared goals. As mentioned, the historic station building will be used as new communities centres. Here, for example, Youth from Beit Shean conservatory can collaborate with youth from the Freedom Theatre orchestra from Jenin. The stations in Beit Shean and Jenin can provide space for mutual events and cultural exchange. This type of relationship can be established before the regional connection is complete and it can be promoted by relevant NGO for co-existence.



**Potential for new markets:** The new network will create an opportunity for new flows of trade around the region. In Beit Shean, the railway station will include a logistic area for the collection of local agricultural products of the nearby communities. These can be then distributed to new markets going east and north beyond the borders. Also, the station area as a public space will include a local market where farmers can sell their crops to the local communities.

**Potential for collaborative research:** the historic buildings and new buildings in the station area, can serve to promote regional research based on shared interests. For example, future research can address adaptation to climate change, improved water management in irrigated agriculture and new technologies for sustainable agricultural practices. There are several educational and institutes in this area that can be interested in such research, such as NCARE and ACCBAT in Jordan, Kineret collage in Israel (water management), and Jenin Arab American university.



**Tourism potential:** tourism potential works on two levels. At the regional level, the railway will connect places with great tourism value, such as Petra in Jordan, and the Baha'i Gardens in Haifa. On the local sale, an immediate connection between the station area and nearby tourist sites of Beit Shean national park and Al-Akhmar will increase tourism potential for the city of Beit Shean.





FIG 7.2.5.A The framed area in the aerial view presents the axonometric scheme area on the right page.

### 7.2.5 - Design visualizations (zoom-in area)

The illustration above depicts Beit Shean station area before and after the intervention. The after image follows the principles as described in paragraph 7.2.3. The main idea here is to present the station area as one continuous fabric, in which the terminal hub and the historic station are integrated into a single unit. Here, the station area act as a vibrant public space, with multiple functions, creating a mixed uses area in which the local community of Beit Shean and cross-border passengers can meet and exchange, knowledge, culture and goods.

This image shows the historic stations and new public buildings around them, forming a lively urban square, the connectivity between them and the terminal hub. It also shows the connectivity of the green area with the station area, the use of green railway infrastructure, an energy park to harvest rain and wind energy, and designated areas for future development.

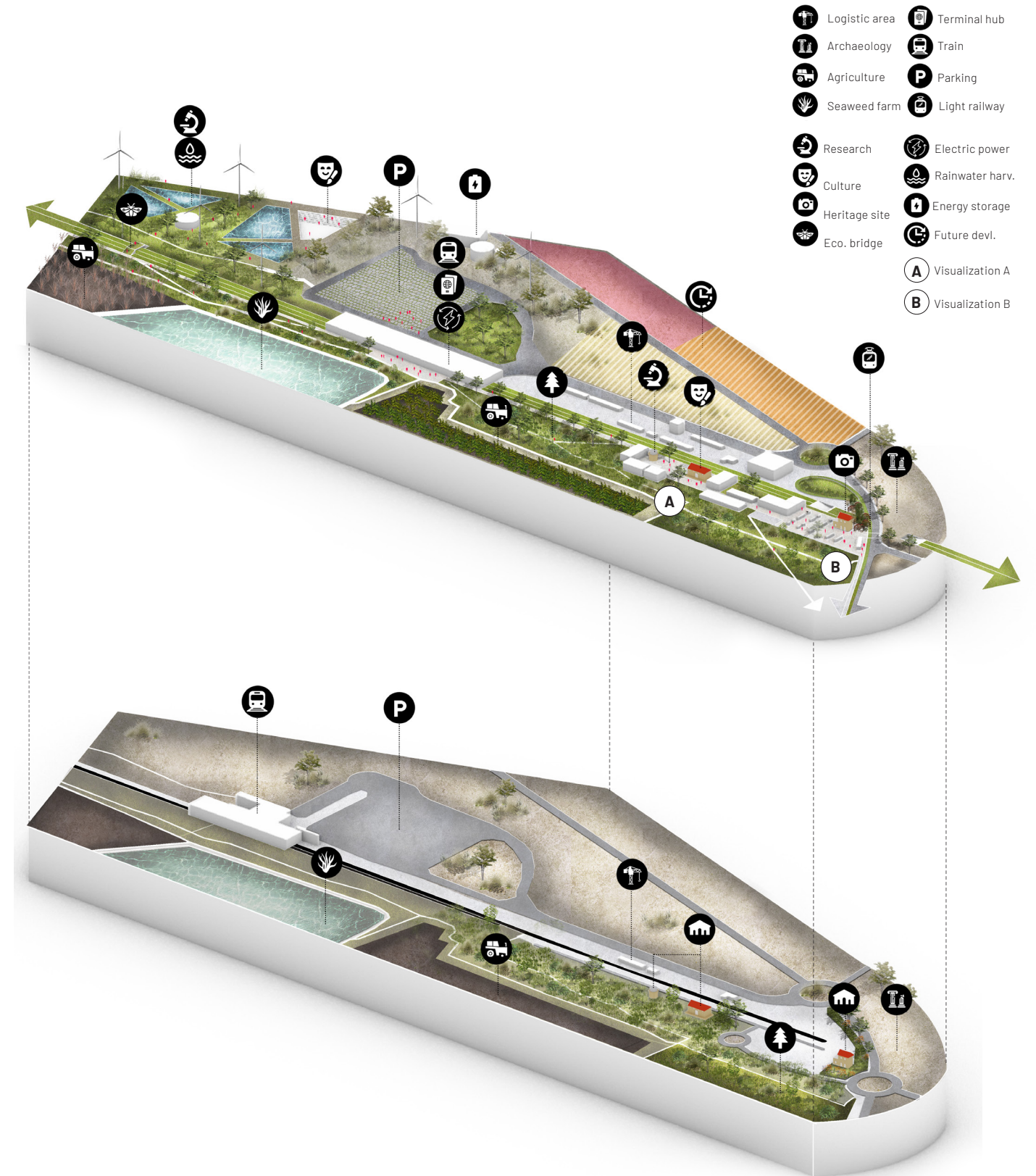


FIG 7.2.5 Top: the suggest design for Beit Shean station area. Bottom: the current condition in Beit Shean station area.



7.2.6 Rehabilitation of station environments



0. Existing condition of the historic station



1. Accessibility



2. Comfortable and inviting space - shadow



3. Comfortable and inviting space - Light

The transformation and rehabilitation of the historic station building is a long-term process that can evolve over time through bottom-up initiatives of community engagement and top down actions implemented by the municipality, the planning authorities and entrepreneurs. The series of images above describe the process, steps and design principles for reusing the old buildings and for the transformation of the area to a vibrant public square open for the public use. Ideally, the renewed station environment will act as a shared space that promotes interaction and encounter between the local residence and passenger visiting by train as the new regional connection will be established. While the presented case is of Beit Shean, the basic principles can be implemented in other similar historic station environments. **0** - The first image describes the current condition of the historic buildings where the buildings are unused, not viable from the main road and there is no access path to reach them. **1** - The first step includes a path, creating a visible and direct path that will create accessibility from the city to the old buildings, to encourage people to visit the place and acknowledge this historic place. **2 and 3** - The next steps is to create a comfortable and inviting space, to make sure that this would become a place to stay and linger. Two main elements are used here: shadow and light. The shadow is necessary due to the warm climate in Beit Shean. The light provides visibility and safety during the evening hours, these are the most active hours due to the cooler temperature and the leisure time after work. The light is also an important for marking this place as an important node in the city of Beit Shean, a place for local pride, heritage and uniqueness.



4. Place for interaction and community engagement



5. Connectivity to train-station to increase people flow



6. Mixed functions, sense of enclosure - public square



7. Integration of green - attractiveness and local landscape enhancement

**4** - The next step will be to foster the reuse of the old buildings through community engagement. This step includes the creation of spaces and facilities to support interaction and community activity. Here, the example of Beit Shean conservatory is used which will require a stage, an outdoor theatre, and the reuse of the building for rehearsals and storage. The rehabilitation process can be made by the local community, as members can support and contribute to the renovation and the reuse of the building and their surroundings. **5** - since the historic buildings are located with some distance (500 meters) from the operating railway station (the terminal hub), it is important to create a direct, short and comfortable connection between the two. This connection will contribute to a larger number of users passing from the city, through the historic buildings area to the operating train station. **6** - in a later stage, as the flux of people will grow with new regional connection, new functions can be placed around and near the historic buildings. These new functions can serve new and growing community needs, focusing on public activity that promotes encounter and exchange. The new buildings should create a scene of enclosure to form an urban square or a plaza where people are invited to take part in the multiple activities in an inviting space. **7** - the last image presents a general principle of preservation and integration of existing natural values. The historic building in Beit Shean is located on a natural ridge. Since many historic stations were left abandoned, natural elements thrive near them. Protecting the green values promote to the creation of attractive open spaces, benefit the well-being, emphasize the local landscape and increase biodiversity.



7.2.7 The travelling experience

The following section describe the sequence of the travelling experience on the local scale, and the connection between the new station hub (operating railway station) and the historic buildings. The case address Beit Shean, yet similar principle can be applied in other station environments.

1 - as the passengers step down from the railway, they reach the terminal hub station where the border crossing takes place. The hub station resemble an international airport, with a more neutral space and international atmosphere.

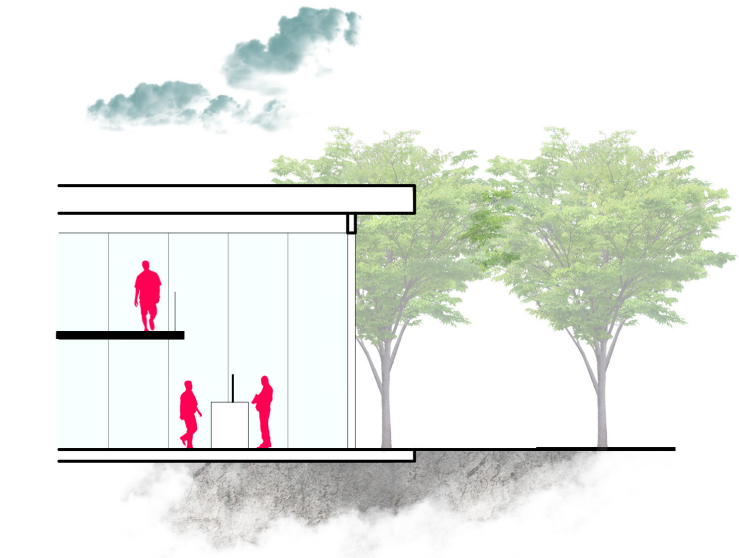
2- As passengers go out of the station a defined and noticeable path will direct them towards the old station buildings.

3 - the path should have a clear direction, it should be a comfortable and inviting way including lights and shadow, and it should serve multiple users, including a bike path.

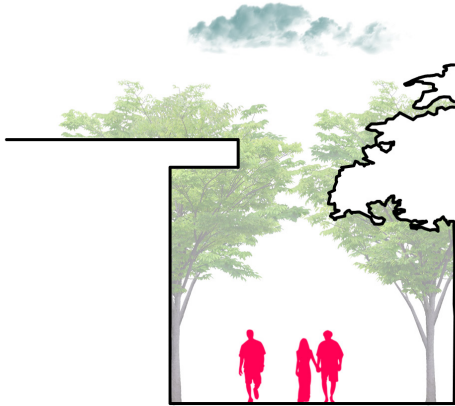
4 - after a short walk, a view of the historic buildings and the public square will be discovered. In this case, the existing hight difference was used to give the visitors an overview over the square and a chance to take part in the community activities by viewing the theater.

5- the visitor will go through the square in order to continue their journey in Beit Shean. Here, visitors can linger and participate in the different activities related to the old and new buildings.

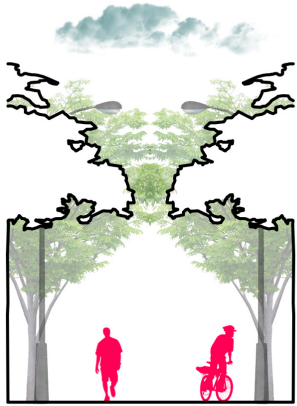
6- finally the public square opens-up to the rest of the city with a direct connection to other transportation modes.



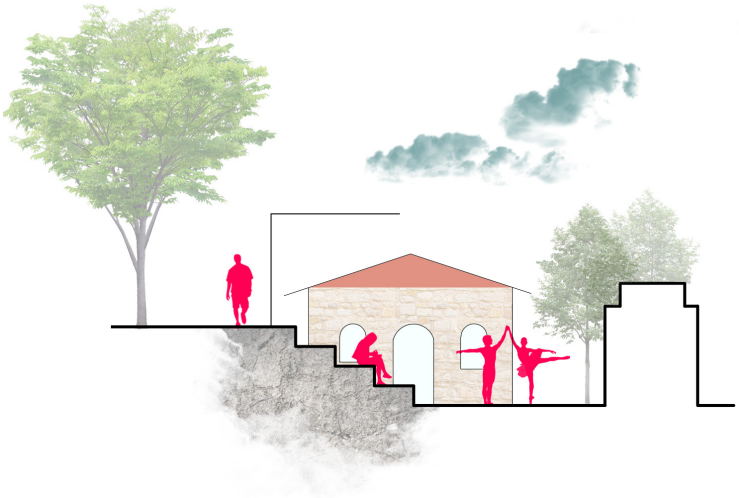
1. Operating railway station: terminal hub - Neutral space



2. From the station towards the public square



3. The connecting boardwalk



4. The discovery of the historic buildings



4. Going trough the public square



5. The square "opens-up" to the city



7.2.7 Before and after impressions

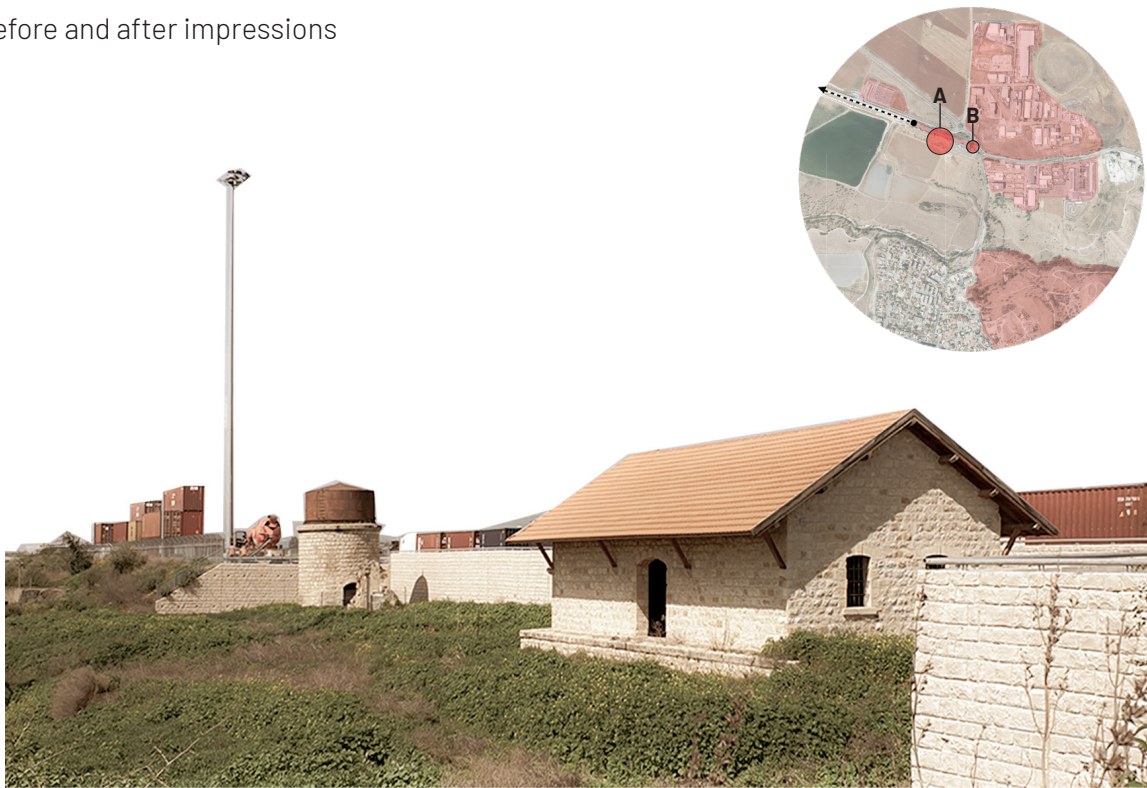


FIG 7.2.6 **Visualization A:** a visualization for Beit Shean station area. The image shows the station after regional connections are completed. The image shows the reuse of the historic station buildings, new public buildings and the green ridge. All forming together a public space, where regional border crossing, social exchange and encounters take place.

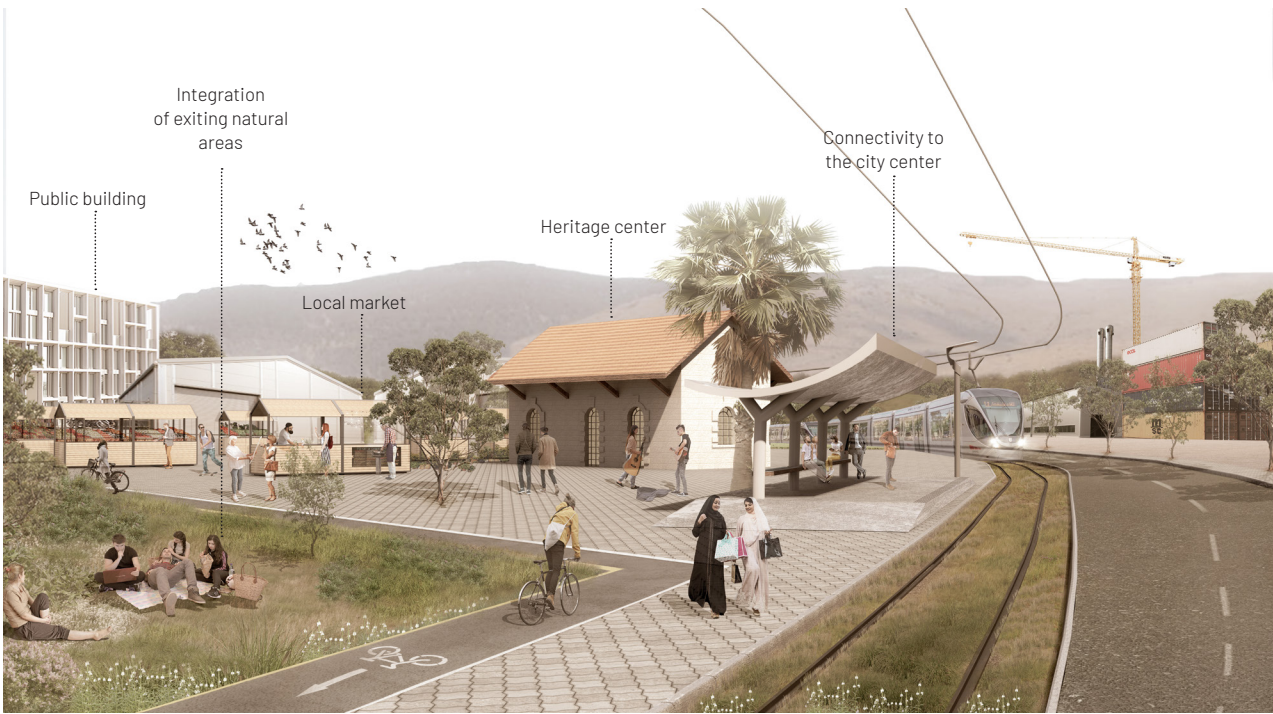


FIG 7.2.7 **Visualization B:** a visualization for Beit Shean station area. The image shows the station after regional connections are completed. The image the connectivity between station and the city, the integration of existing green areas, the reused of the historic station area as a public square with local market and the integration of existing industrial and logistic spaces as part of a new regional exchange network.



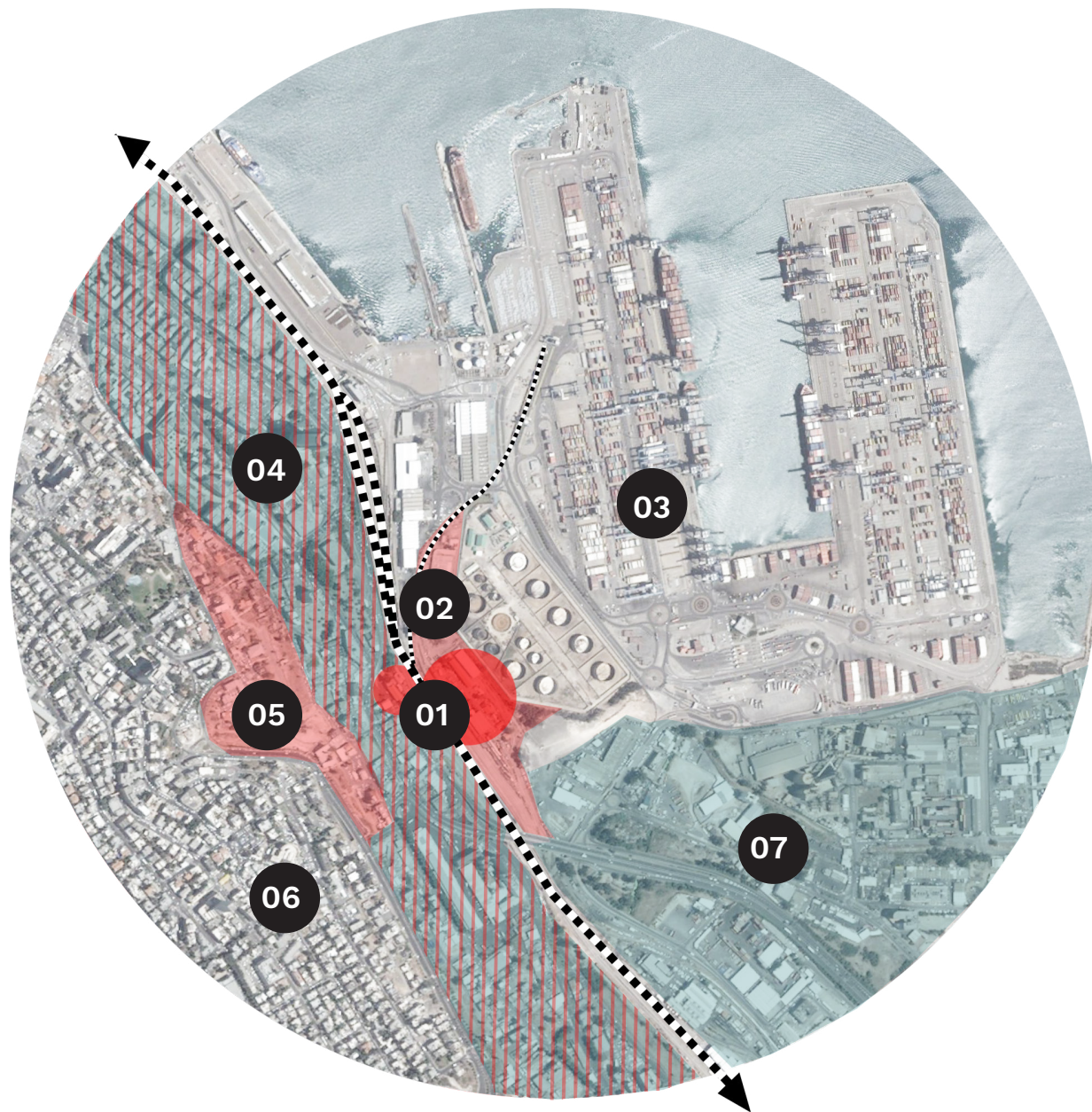


FIG 7.3 A map showing the historic railway area in Haifa. 1 - The historic Ottoman railway station buildings. 2- logistic railway area. 3 - Haifa port area. 4 - downtown. 5- Wadi-Salib abandoned neighbourhood. 6 - Hadar, a Jewish neighbourhood up the hill. 7 - industrial area

The Haifa East station area is surrounded by different components of Haifa city. From east, the station is connected to Haifa port. From west, downtown and Wadi-salib neighbourhood are located. Wadi Salib, was a 19th century Muslim neighbourhood. During the 1948 war the area was abandoned. In the 1950s, Jewish immigrants from Morocco were placed in these houses, yet in the 1960s they were evacuated. From the 1970s, the area was mostly in ruins and its houses were sealed to prevent illegal invasions. Much of the property is left still owned by the state housing agencies. The downtown area connects several central neighbourhoods, and it is the core of Haifa's business activities. Yet in recent years the area is declining. Many streets do not have any urban-civic activities, and some streets are completely abandoned. In the east part there is almost no leisure activity and the area is lacking public green spaces. Also, there is no encouragement for the historic preservation of Wadi Salib houses and the Eastern Railway area. Also, there is a lack in proper housing in this area.

## 7.3 Haifa hub station

Haifa is the 3rd largest city in Israel and it is the largest and only metropolitan of the north district. Haifa port is the largest of Israel's three major international seaports, and it is one of the largest ports in the eastern Mediterranean in terms of freight volume and handles (over 29 million tons of cargo per year). The port serves both passenger and merchant ships. The port stretches to about three km along the city's central shore, with activities ranging from military, industrial and commercial use next to smaller passenger cruising facilities. Other than the port, Haifa holds a large area of high tech industries which is a major employment resource for the metropolitan inhabitants.

In terms of society, Haifa presents a unique case of a "mixed city" in which Jewish and Arab societies live side by side under the same municipal governance. Unlike other mixed cities in Israel, generally, the Jewish and Arab communities of Haifa live peacefully and co-exist with minimum tensions (this is a result of multiple factors that can not be detailed due to limitations and the scope of this research). Nevertheless, it is important to note that, similarly to other places in Israel, the two communities have limited connections. Generally, the Jewish neighbourhoods are located on the upper areas of Haifa hills, while the Arabs neighbourhoods are located on its lower parts. These two groups have different systems and services, such as school and community activities. Yet, the city does have some shared events and shared places where the communities meet.

In the vision, Haifa East will act as a hub station. An important junction on the railway network, connecting east-west, north-south, land and the Mediterranean sea.

### 7.3.1 Haifa and the historic railway station

Haifa East Railway Station was the first railway station built in Haifa. The station began operating in January 1904 as the west and final station of the valley train, a branch of the Hejaz railway (Alon, n.d).

Haifa East Station of the 1920s and the British mandate was a station from which trains departed for three different continents: Africa - (Egypt), Asia - (Saudi Arabia, Syria and Lebanon) and Europe (Turkey). The train station was built as the Ottomans acknowledged the importance of creating rail trade routes to the ports of Acre and Haifa. Haifa East station contributed to the development of Haifa, as the station was a crucial factor in the rapid growth of industry and the rapid growth of the city's population. From 1905 onwards, goods, freight and passengers were travelling from Haifa port to Syria and from there to the rest of the middle east and the Ottoman empire. In September 1946, Haifa station suffered heavy damage due to bombings by members of the Irgun\*, as part of the battles against the British Mandate. After the opening of the Haifa Central Station and other stations in the city, Haifa East station declined, and in the 1990s the station was closed to passenger traffic (ibid).

Today, the remains of the station's historic buildings are being reused as offices for the Israeli Railways, and as the museum of train history in Israel. The trains travelling on the mainline of the Israel Railroad pass through the station, but there is no stopping



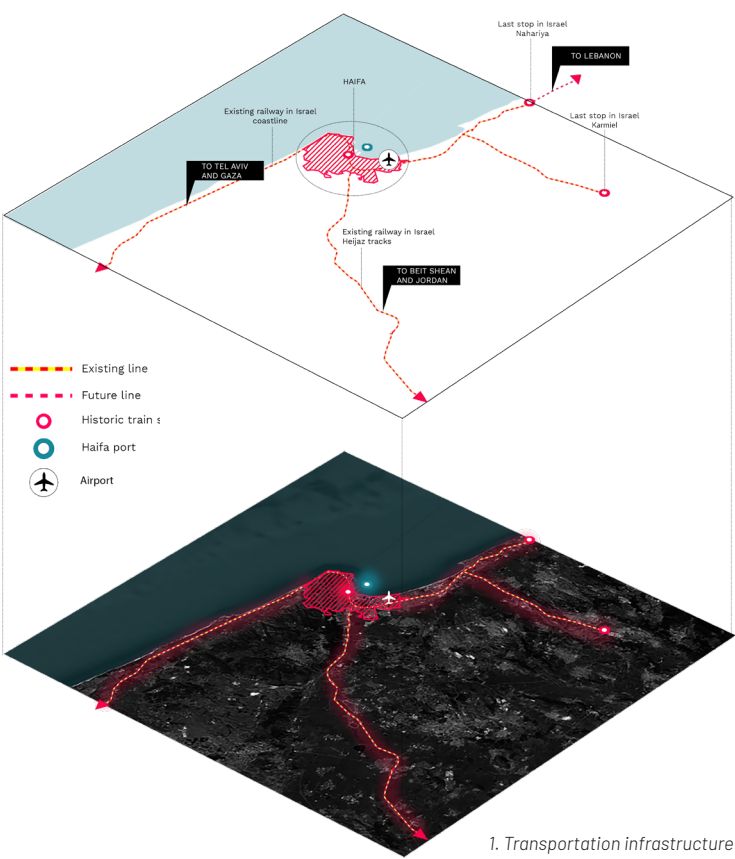
FIG 7.3.1 From top to bottom: 1- Haifa East historic passenger buildings and station area. 2 - Logistics railway area 3 - Haifa port 4 - Downtown Haifa. 5 - Wadi-Salib abandoned neighbourhood. 6- Hadar, a Jewish neighbourhood

\* The Irgun \Etzel a Zionist paramilitary organization that operated in Mandate Palestine between 1931-1948.



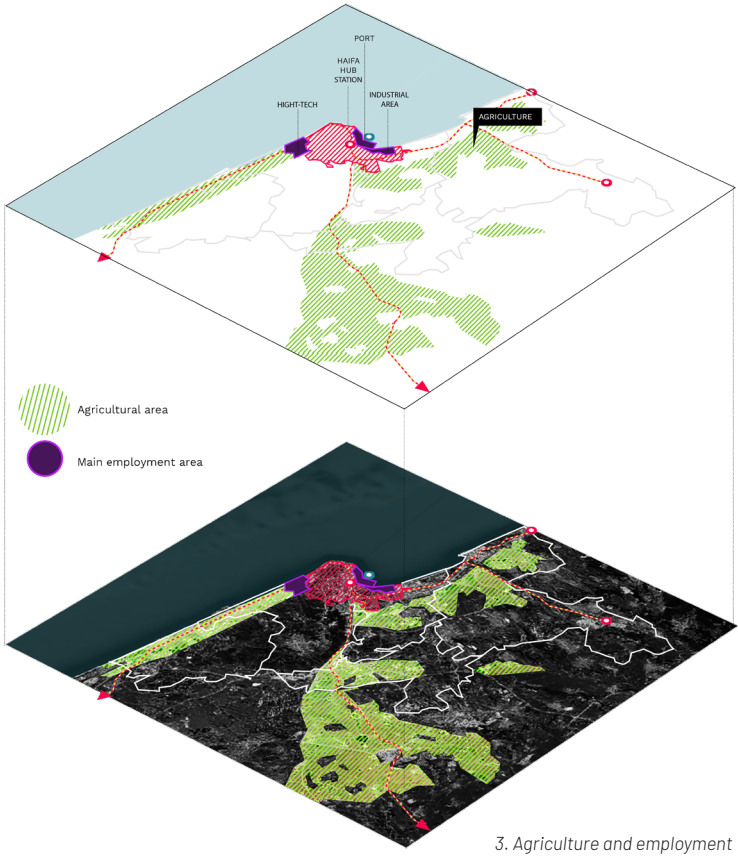
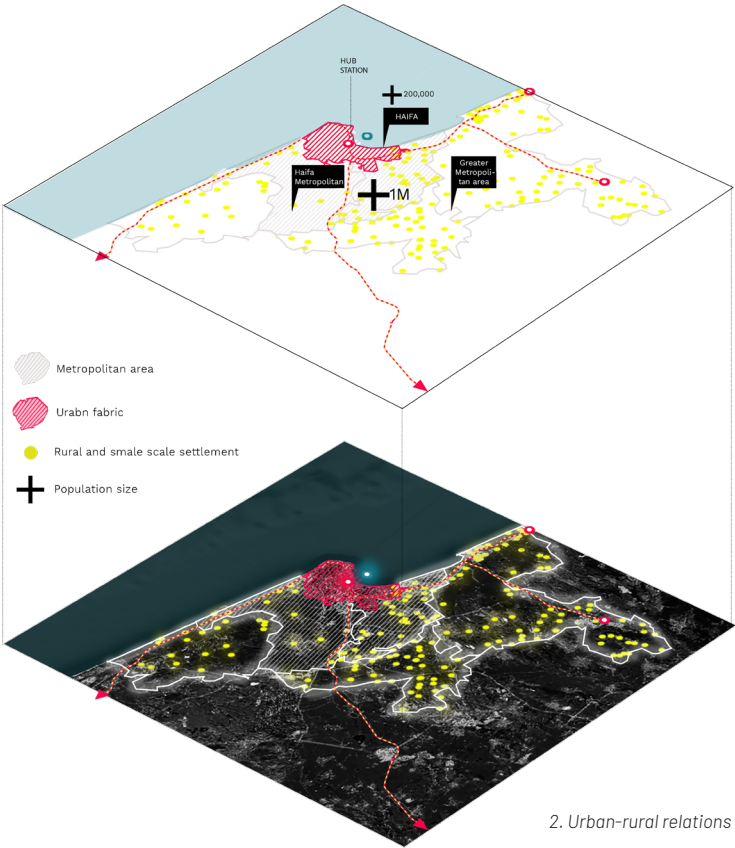
7.3.2 - Potentials analysis

A contextual analysis reviews the current relationship around the intervention area and seeks to analysis their potential related to the proposed vision. These include: transportation infrastructure, urban and rural relation, agriculture and employment and landscape and truism. These were considered and integrates into the design proposal.



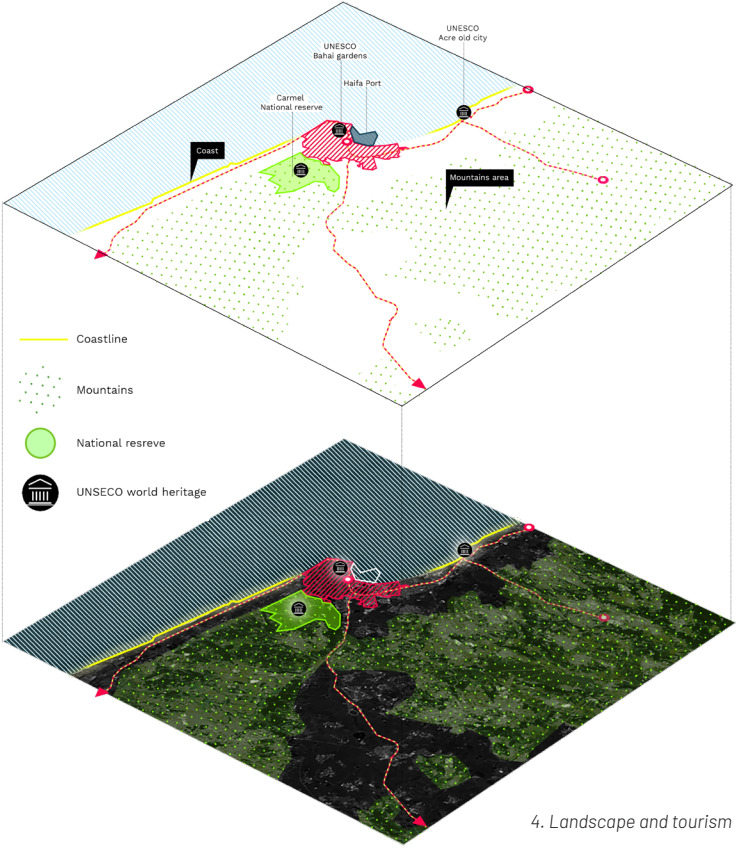
**1. Transportation infrastructure:** Currently, there is an operating railway line going from Haifa east to its final station in Beit Shean, based on the historic Hejaz railway line. There is also an operating line going North-South. The final northern stop is Acre and the south direction goes to the cities of Jaffa-Tel-Aviv and Beer Sheva. Haifa Historic station is located near the port and operating logistic railway connects the station and the port. Also, Haifa Airport is located near the seaport. The port serves for civil flights, and as a military base of the Israeli Air Force. It provides services such as border control, customs and duty free shops. All together, support the potential of Haifa East station to become a terminal hub to provide support for regional freight flows.

**2. Urban-rural relations:** As mentioned, Haifa is the 3rd largest city in Israel with 200,000 inhabitants. As a metropolitan city the city serves approximately one million people of the northern Israeli district. The suggested railway connection can bring new flows and development opportunities to the area, that can benefit the residence of the area.



**3. Agriculture and employment:** In Haifa, there are three main areas of employment: the seaport, the largest high-tech business park in Israel and the industrial area located near the port. There is a small number of agriculture lands around the Haifa area. A railway line can increase the capacity of the three employment resources and create new and larger international business opportunities and collaborations.

**4. Landscape and tourism:** Haifa is located between the Mediterranean coast and the Carmel mountains. The most popular shores are located in the southern part of the city. Near Haifa, the natural reserve of Mount Carmel can be found, including the UNESCO world heritage site of the Wadi el-Mughara caves. Additional two UNESCO world heritage sites in the area are the Bahá'í gardens and the old city of Acre. All three sites have a great international and domestic tourism potential and should be connected as much as possible to the proposed railway network.





7.3.3 Design proposal for Haifa Hub station

The proposed design for Haifa Hub station is based on the concept of regional railway connectivity that will increase the flows and opportunists around the region. The hub station will be a strategic meeting point where freight and passengers are able to travel from Haifa port through the region and beyond. The regional connectivity will contribute to the development of Haifa and Haifa station will become an integral part of the urban fabric as a lively public space, where interaction and encounter takes place.

The design principles:

Main principles:

- 1. Creating international rides from Haifa going north (Lebanon and Europe), south (Egypt and Africa) and east (Jordan and Saudi Arabia).
  - 2. The connection between the port and the railway will be used for the distribution of new goods markets.
  - 2. Today, the train does not stop at Haifa East. Therefore, a railway station will be built. The crossing in Haifa east station will be free, as the crossing process will be done at the border-stations.
  - 3. Creating the station area as an open public space with mixed uses, to serve the community of Haifa and the people crossing by the station. As mentioned, this area is lacking green space and leisure activities. The station area will be transformed to answer this needs.
  - 4. Reusing the historic station as a community center for cultural, arts, education and research functions. The railway museum will continue to work. Several historic building which are neglected will have new public functions.
- The main building station located on the street level should be considered as the gate to the station area. Thus, the current offices should be mixed with other functions, opening the station for public use.

Connectivity:

- 5. Today, the station area has limited connection to the street and the city. The main historic station building, which is located at the street level is closed to the public use by private offices. The other historic buildings and the railway museum, are located on the other side of the railway tracks. The crossing of these tracks is only possible by claiming a single bridge. The access to the bridge is limited by a supervised gate. The design connects the station area to the street level. A railway tunnel will act as a wide bridge to integrate the historic building into a single public area.
- 6. Increase public transportation on two main streets to create a continuation between downtown area and the station. Also, using the topography, a cable car will provide an immediate connection to the Hadar neighbourhood.

Environmental:

- 7. Developing green linear park and green fingers to connect green structures, increase biodiversity and answer the lack of green spaces in this area.
- 8. Transforming the gray infrastructure to green infrastructure, and use an electric train to reduce co2 emissions.

Future development:

- 12. Designated areas are assigned for larger logistic needs, industrial area and business opportunists due to increased flows in the area.
- 13. The proposal leverage on the potential development of businesses and dwelling in the downtown area, promoting to the regeneration of this vital area with increased flows of tourists, passengers, knowledge, and material.

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Green area

Industrial area

Future indu\ businesses

Future logistics

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New Public buildings

New residential buildings

Increased public transport

Green fingers \ avenue

Zoom in area

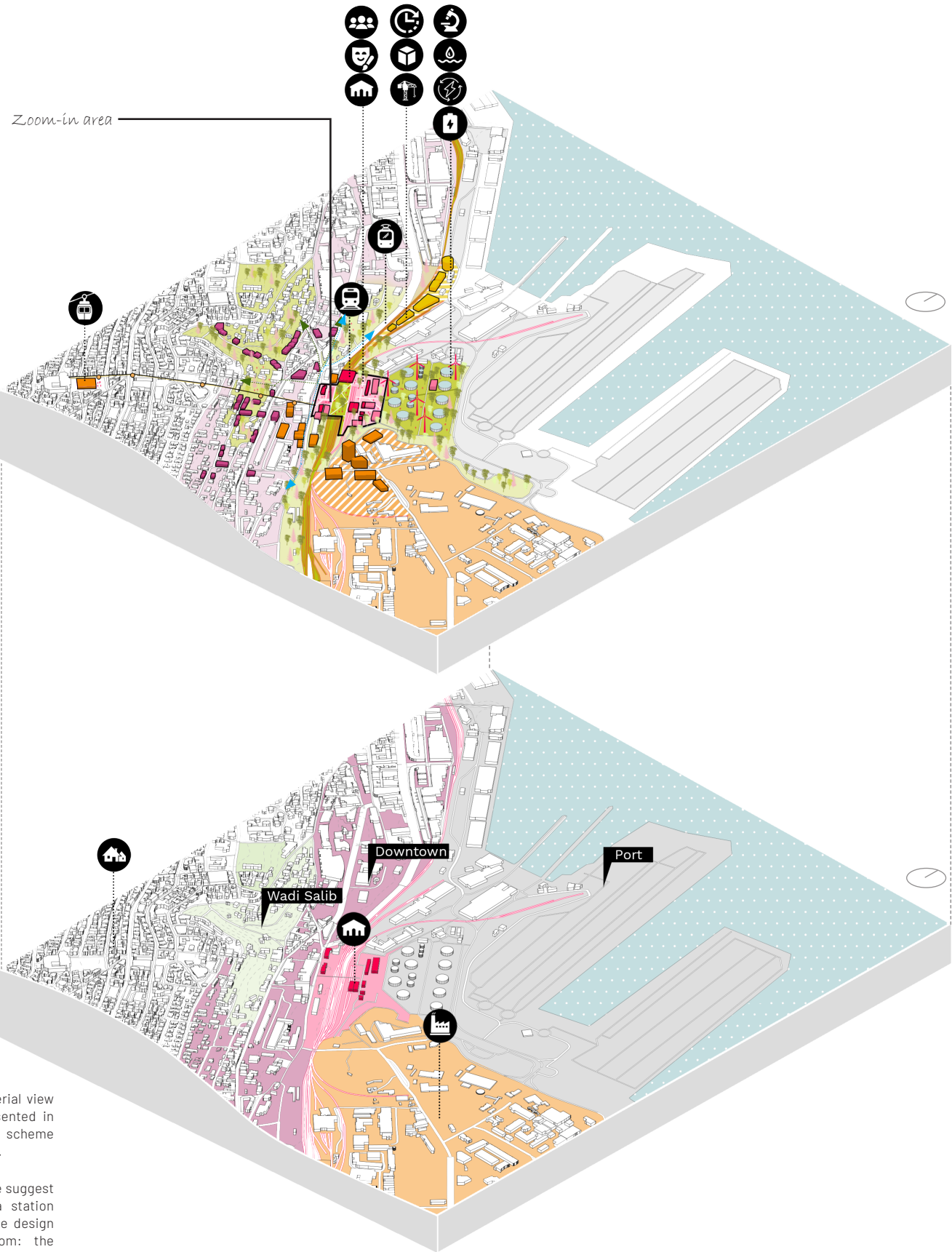
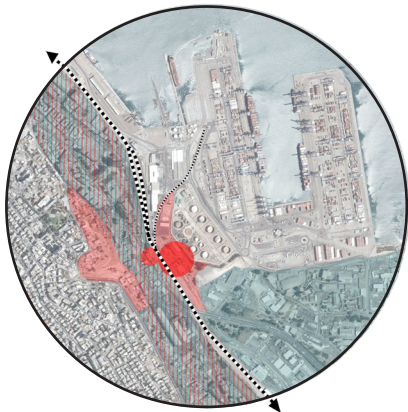


FIG 7.3.2.A An aerial view of the area presented in the axonometric scheme on the right page.

FIG 7.3.2 Top: the suggest design for Haifa station area following the design principles. Bottom: the current condition in Haifa station area.



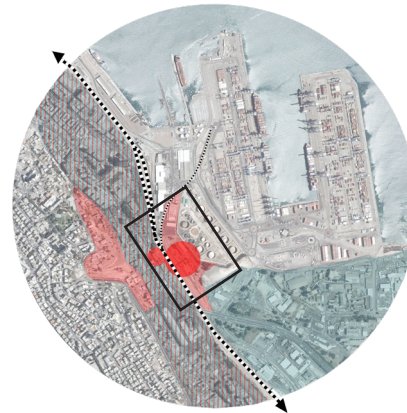


FIG 7.3.3.A The framed area in the aerial view presents the axonometric scheme area on the right page.

### 7.3.4 - Design visualizations

The illustration above presents Haifa station area before and after the design intervention. The after image follows the principles as described in paragraph 7.3.3. The main idea here is to present the station area as an integral urban fabric in the downtown area of Haifa, by bridging the tracks and connection the historic station buildings and railway museum. The station area is used as a public space, that connects the street, the operational area for large logistic, industries , and Haifa port. The station area act as a vibrant square, with multiple functions, creating a mixed uses area in which the local community of Haifa and passengers across the region can meet and exchange, knowledge, culture and goods. The design provides green areas which is currently lacking in the area. It offers to developed the old gas farm on the west to an energy park with harvesting and rain and water. Also, the green infrastructure is expended to the street creating linear green park on the main street. The vision seeks to transform the railway station and the operative park from the backyard to the city's front. Multiple new paths and a cable cart increase connectivity between the station and the city, which is now depends on one bridge. The image also include the potential redevelopment of new housing and small business in the downtown area and Wadi Salib neighbourhood.

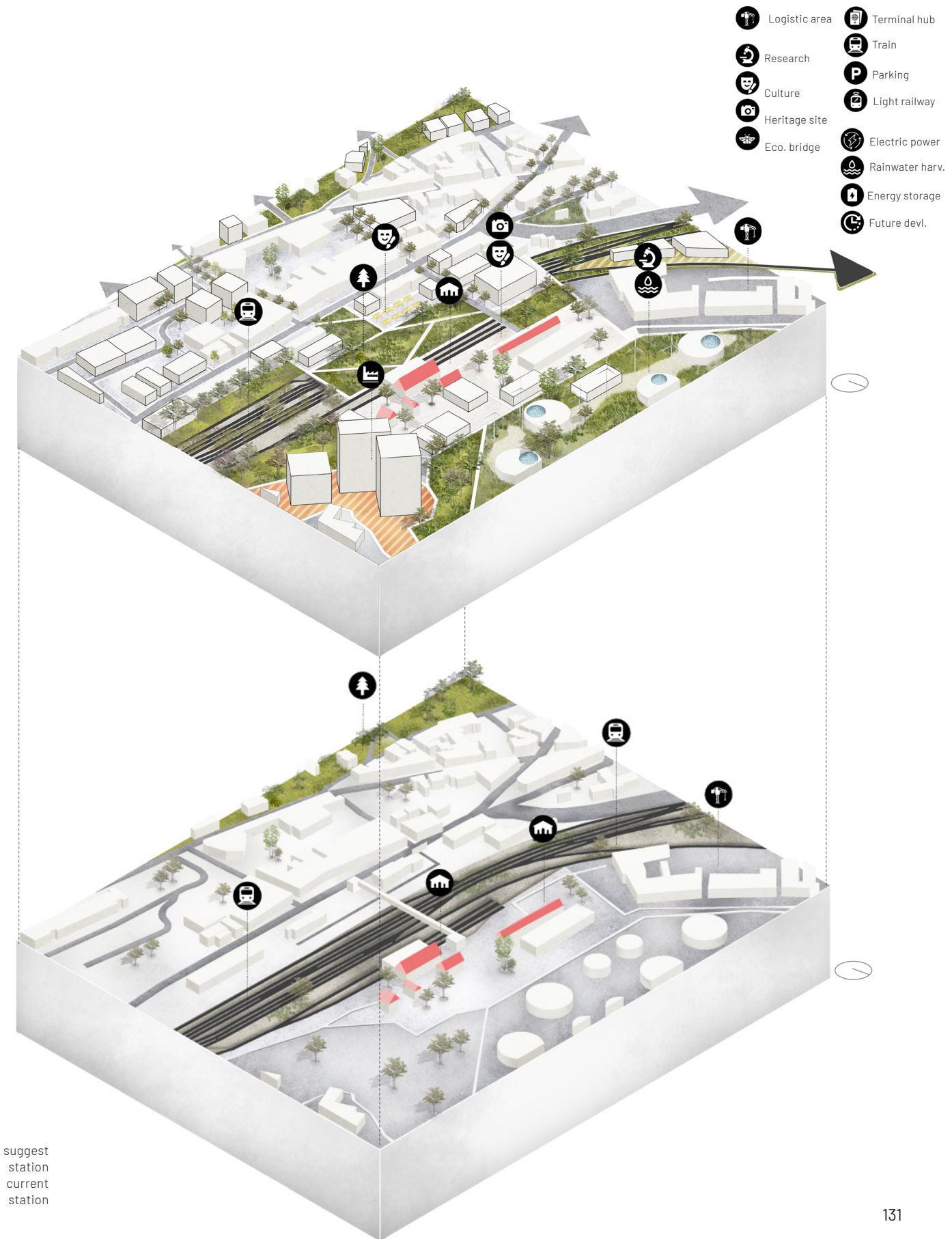


FIG 7.3.3 Top: the suggest design for Haifa station area. Bottom: the current condition of Haifa station area.



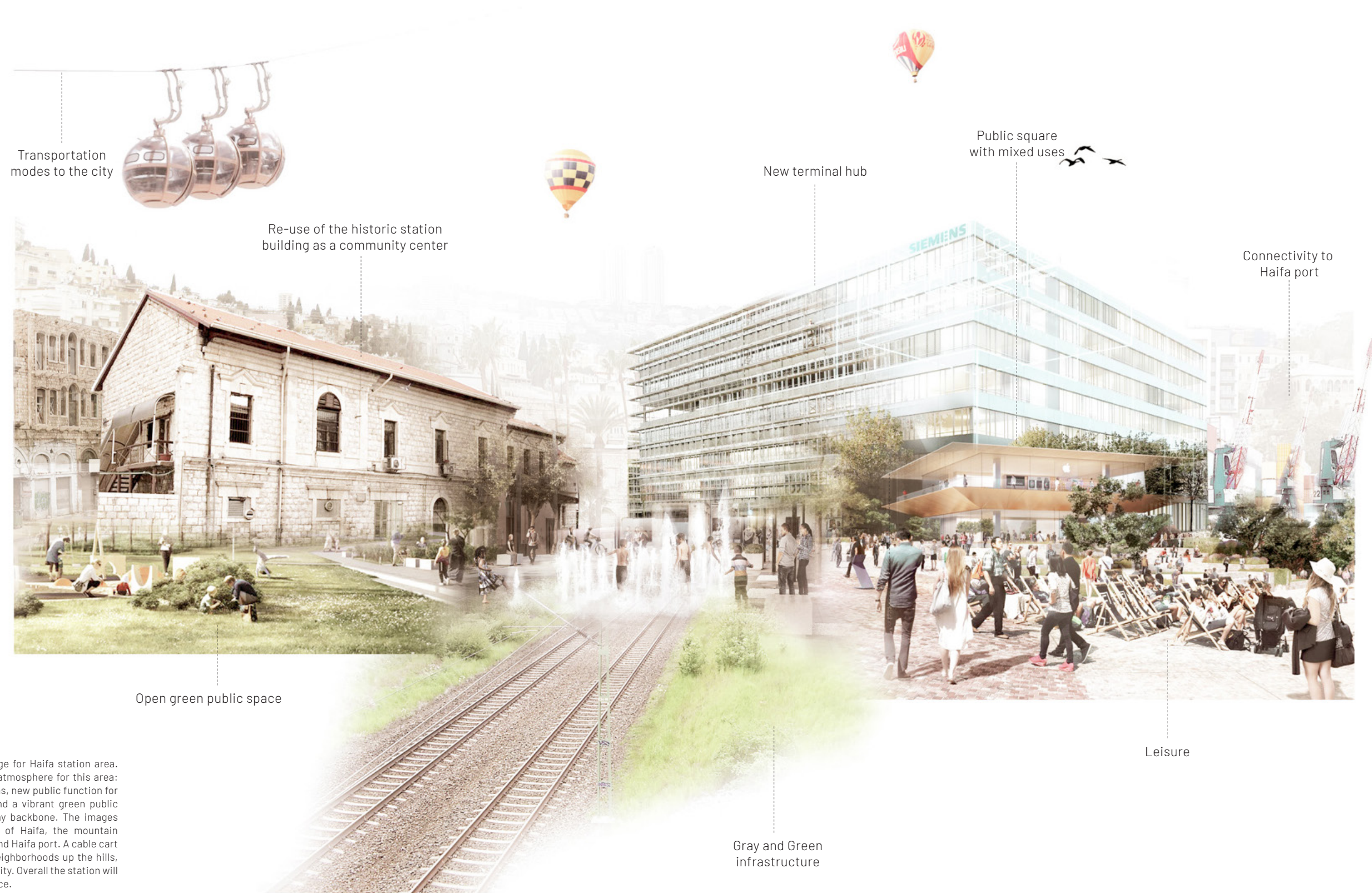


FIG 7.3.4 a visualization collage for Haifa station area. The image shows the desired atmosphere for this area: A new operating railway stations, new public function for the historic railway station, and a vibrant green public space, all based on the railway backbone. The images also include the environment of Haifa, the mountain areas of Hadar neighborhood and Haifa port. A cable cart will connect the area to the neighborhoods up the hills, as it used in other parts of the city. Overall the station will become a regional meeting place.





FIG 7.4 A map showing the historic railway area in Rosh haNikra and the tourist site. 1- The historic tunnels and rail tracks. 2-The grotto caves and natural sea reserve. 3 The border-wall between Lebanon and Israel. 4- Kibutz Rosh haNikra. 5- agricultural lands. 6 -UNIFIL headquarter in Naqoura,Lebanon



FIG 7.4.1 From top to bottom:  
1- The sealed historic tunnel in Rosh haNikra tourist site, where the train to Beirut passed.  
2 - The grotto caves in the Tourist site, a unique landscape feature.  
3 - The border wall between Lebanon and Israel, which goes through the site.  
4 - Rosh haNikra Kibutz, located nearby the tourist site

## 7.4 Rosh haNikra Border-station

Rosh HaNikra is a small Kibutz in the north-western corner of Israel, located less than 1 km away from the Lebanese border. The intervention sites, referrers to a tourist site near the Kibutz, carrying the same name, where the Taurus Express railway passed going from Haifa to Beirut (see chapter 4). The area is surrounded by small scale towns and mainly rural villages from both sides of the borders.

Officially the two countries are in a state of war, crossing of the border is not permitted either for goods, tourist or citizens. From the Lebanese side of the border, since 1978, the United Nations Interim Force in Lebanon (UNIFIL) has been headquartered in the village of Naqoura (see image 7.4). The last war between the two countries was in 2006. In recent years there were numbers of attacks and disputes.

The design proposal for Rosh haNikra aims to present a gradual shift from complete separation to an established relationship that can develop over time. The case here addresses the following: a border area in tensions, a station located in a natural area with rural surroundings and a proposal for a new railway station stop at the border.

### 7.4.1 Rosh haNikra and the historic railway

At Rosh haNikra tourist site two railway tunnels can be found. The Two tunnels were connected by a bridge, pass ing under the Rosh haNikra mountain ridge. These were a part of the railway system at the northern edge of the coastal railway line. The tunnel system is approximately 200 meters in length, and the border between Israel and Lebanon crosses the northern tunnel.

During WWII, after the occupation of Lebanon by the British army in 1941, it was decided to build a railroad from Haifa through Beirut to Tripoli and from there to connect further north to Turkey. These was needed to allow the passage of military forces and equipment. The tracks were constructed by military units from South Africa, Australia and New Zealand under the British Mandate. Its construction took about a year and a half with a massive engineering effort. Throughout the war, the rail and its tunnels were used for military purposes, and even after its end, a line for passengers travel was never opened. During the 1948 war, the bridge connecting the tunnels was bombed to prevent the passage of weapons and soldiers from the Lebanese army, and to cut off the continuation of Lebanon's railroad from the Palestine rail network. At the same time, the Lebanese government also took over the tracks and prevented the railways from crossing the states. After the war, the northern tunnel was sealed to prevent the border crossing.

Today these historic tunnels and railway line are a part of Rosh haNikra tourist sites. The sites combines the history of the railway and the unique landscape feature of the grotto caves.

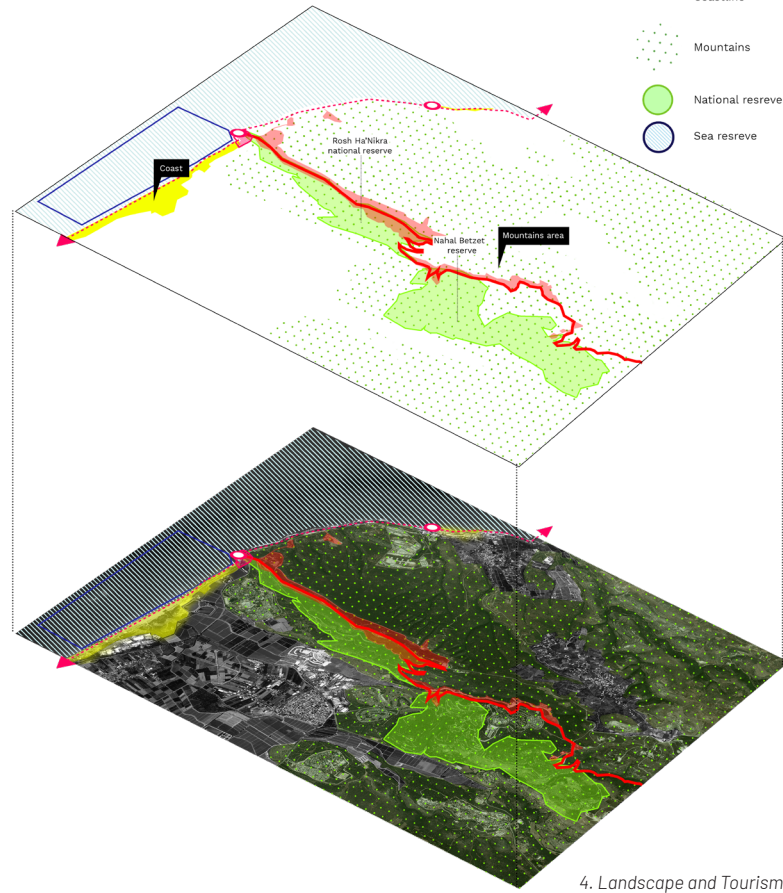
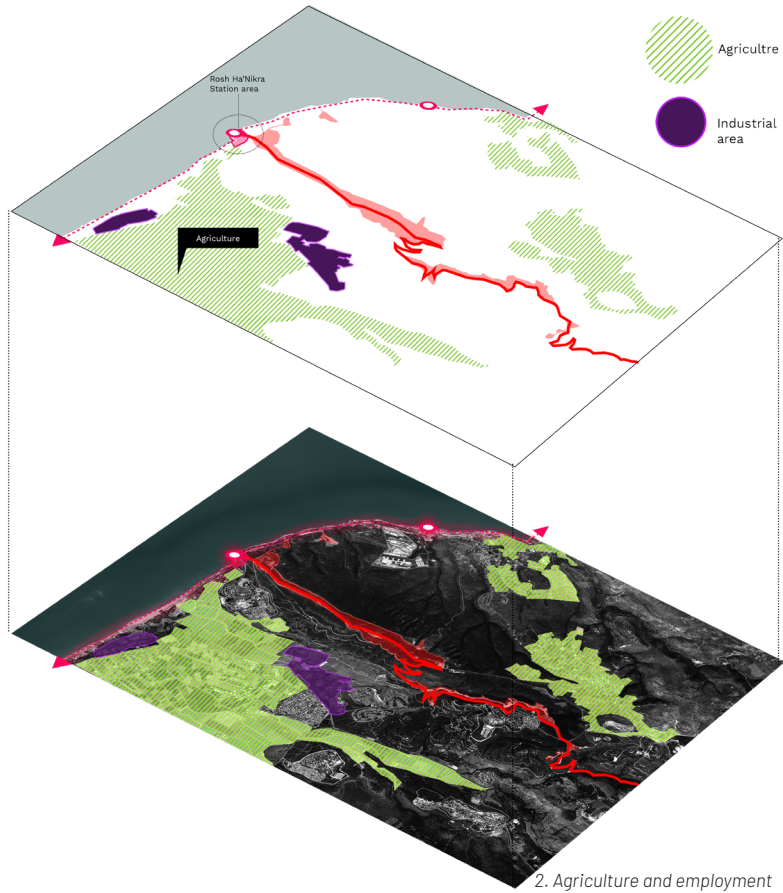
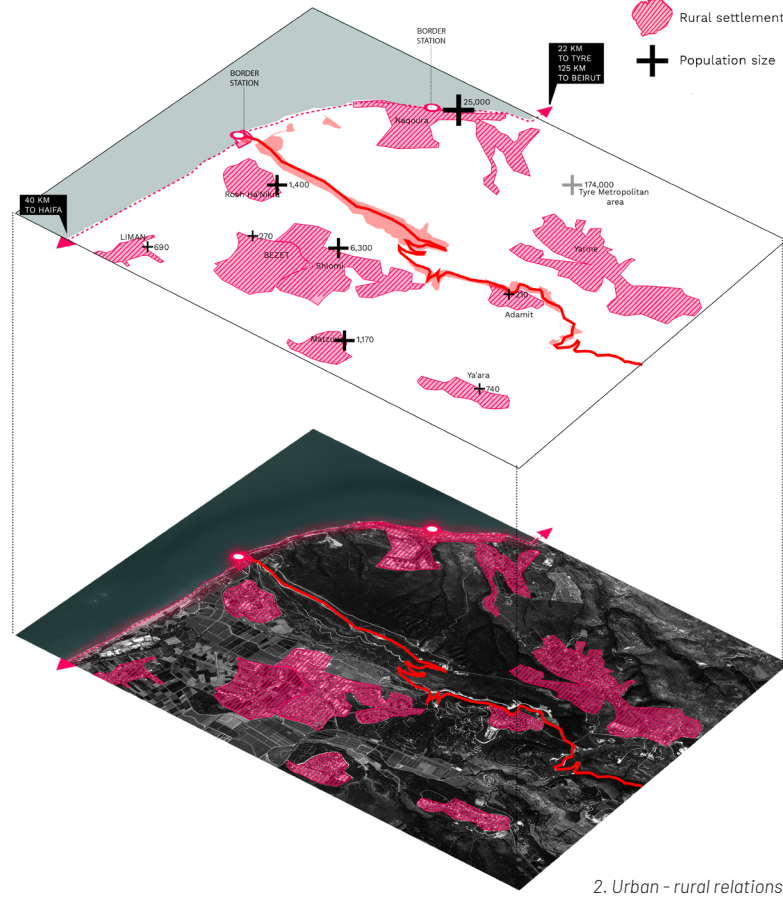
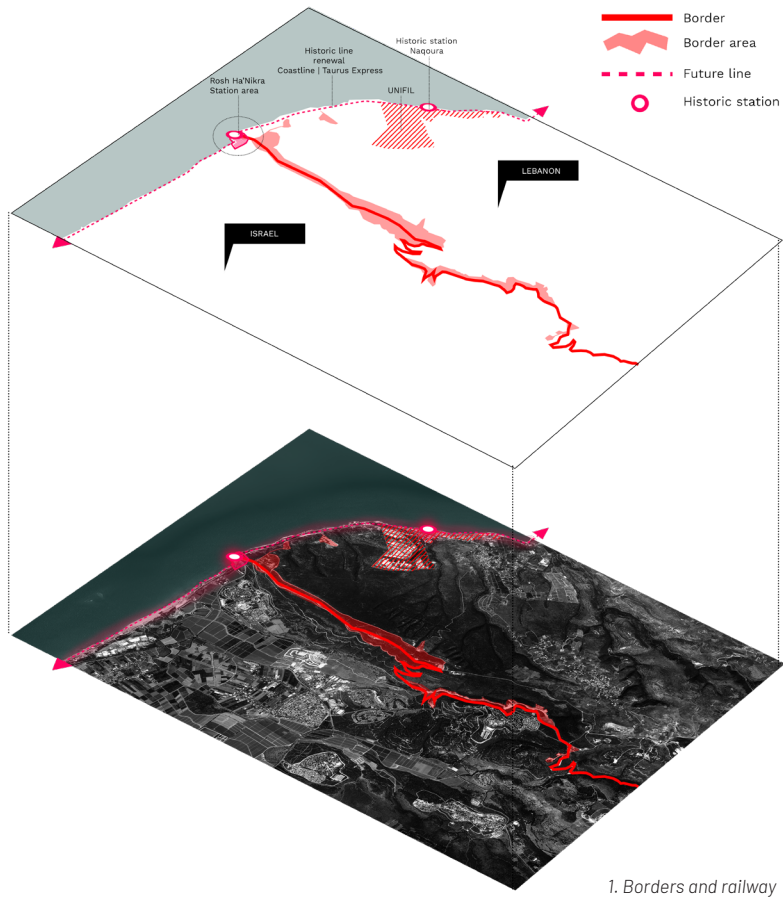


7.4.2 - Potentials analysis

A contextual analysis reviews the current relationship around the intervention area and seeks to analysis their potential related to the proposed vision. These include: border and railway infrastructure, urban and rural relation, agriculture and employment and landscape and truism. These were considered and integrates into the design proposal.

**1. Borders and railway infrastructure:** The following scheme shows the Border between Israel and Lebanon. Near the Lebanon area, a UNIFIL headquarters are located, observing both sides of the border to ensure there are no disturbances and infiltration from one side to the other. There is no operating railway line in the area. On the Israeli side, remains of the infrastructure can be found. The suggested future lines is based on the Taurus Express line, will go north from Rosh Ha'Nikra further to Beirut and Europe. The design proposes to make a border-station in Rosh HaNikra tourist site.

**2. Agriculture and employment:** There is some agricultural land in the plain area on the Israeli side and some small amount of agricultural fields on the Lebanese side, as both areas are mostly mountainous. In Israel, the main income in this area is in the industrial area and factories, along with tourism. In recent years, the nearby kibbutzim (rural settlements) have begun to close factories and the agriculture sector declined due to lack of governmental support. This resulted in dependence on largest city in Haifa area for employment. A railway line can help to the development of new economic relationships between the border localities increase the tourism flows and supporting the existing related businesses in the area.



**2. Urban-rural relations:** Rosh haNikra is located in the border area, at the margins of Israel. The suggested station is located in a rural area, with small town and small rural settlements, from both side of the Border. On the Israeli side in the near by area there are about 10,000 inhabitants and in the Lebanese side approximately 25,000. The scheme describes the communities that could possibly benefit from railway service, and establish new connections with neighbouring communities. The closest main city on the Israeli side Haifa, located 40 km away. On Lebanon, the closest main city is Tyre, located 22 km away. It is also important to mention the The Bedouin village of Arab al-Aramshe, where some of its residents live on the Israeli side and some live several meters away, but on the other side of the border, in Lebanon. In the past, Israeli Arabs could communicate with and visit with their relatives who remained on the Lebanese side, but the IDF's departure from Lebanon in 2000 essentially eliminated the security band that had existed since 1985, a strip that to some extent allowed communication between the two halved villages. The relationship between the two sides is quite loose, and it is mainly maintained through social networks.

**4. Landscape and tourism:** Rosh haNikra is a, mountainous area with the spacial natural feature of the gorge caves. In Rosh haNikra and further north, the mountains meets the sea. On the southern part, there is a coastal plain. There are three natural reverses in this area, one of them in the sea. The most tourist attraction here is the suggest intervention area. The railway line redevelopment aims to support the existing tourism sectors in the area that can benefit from such connectivity.





FIG 7.4.3 a visualization for Rosh haNikra station area. The image shows the desired atmosphere for this area: reopening of the railway tunnels to reconnect to Lebanon, and increased tourist activity in to Rosh ha'nikra site.

### 7.4.3 Design proposal for Beit Shean Border-station

The proposed design for Rosh Ha'Nikra border-station is based on the concept of rebuilding connectivity and allowing border-crossing as a gradual process in which relations are built over time.

This process include a construction of a new train station stop at Rosh Ha'nikra that will act as a border-station. The reconnection can contribute to localities by promoting new types of social interaction exchange.

#### The design principles:

##### Phase 1 - one to 5 years:

In phase one the first step is to reconstruct a railway line, transforming the historic tracks to an operative line. In this phase, each community, from both sides of the border, will establish its own railway station. These new stations will serve the local communities and will contribute two domestic connections, increasing accessibility and mobility to opportunities and resources in the main cities located further away. For example, the local community of Rosh ha'Nikra will be able too easily reach the employment opportunists in Haifa. In this phase, the transformation of the border area from a place of military separation into an area of civic activates will begin.

##### Step 2 - 5 to 15 years:

In phase two, a neutral area will be established at the border and cross-border movements of frights, good and tourist will be permitted. The neutral area will include lands from both sides of the border and will be controlled by a third neutral party such as the UN, as a part of building trust between the parties. A similar solution already exists to some extent between Israel and Syria at the Quneitra crossing point. The Quneitra crossing is the only border crossing between Israel and Syria. The border crossing is not considered an official crossing point since the two states are in a state of war. Movement is allowed by international forces and organizations such as UNDF and the Red Cross. Also, sometimes Israeli residents with a Syrian ID card (mainly Druze from the Golan Heights) are allowed to cross. For several years, humanitarian aid is transferred by Red Cross trucks. This example shows that the act of exchange can be promoted regardless of peacemaking processes, even in the most contested areas. In the second phase, a railway connection and a border-station will be built on the Neutral lands. The border-crossing will be allowed for the exchange of goods, freight and touristic travel for EU citizen and other nationalities that are not in a state of conflict with both Israel and Lebanon. The area will act as an ex-territorial zone, where trust can be established through mutual economics goals.

Localities nearby can benefit from the increased tourist's travellers, and on the regional scale, the new material flow trough the border will contribute to economic growth and new cross-border collaborations. This phase will also include the demolition of the sealing walls of the historic tunnels and reconstruction of the tracks, connection Israel to Lebanon via rail network. Moreover, similarly to Quneitra crossing, citizens for Arab al-Aramshe could meet with their relatives on the Lebanese side on the neutral grounds.

##### Step 3 - 15-30 years:

After cross-border collaboration and trust-building process based on phase 2, phase 3 will open the area for passenger travel. In phase 3, the border-station will allow free movement on the north-south railway tracks, connecting the Levant to Europe and Africa. In this phase, the two separated stations that were been built in phase one will be merged into a single hub-station. Therefore, the previous stations will be reused according to local needs. The development of new public functions will provide space for an encounter between local communities and passengers passing by. The localities could benefit from new cross-border small scale relation such as agriculture products exchange, and business opportunists in the truism sector. The new development will consider the natural values of the area and will be focused mostly on the already built settlements. The touristic site of Rosh haNikra can be connected to the Lebanese side.

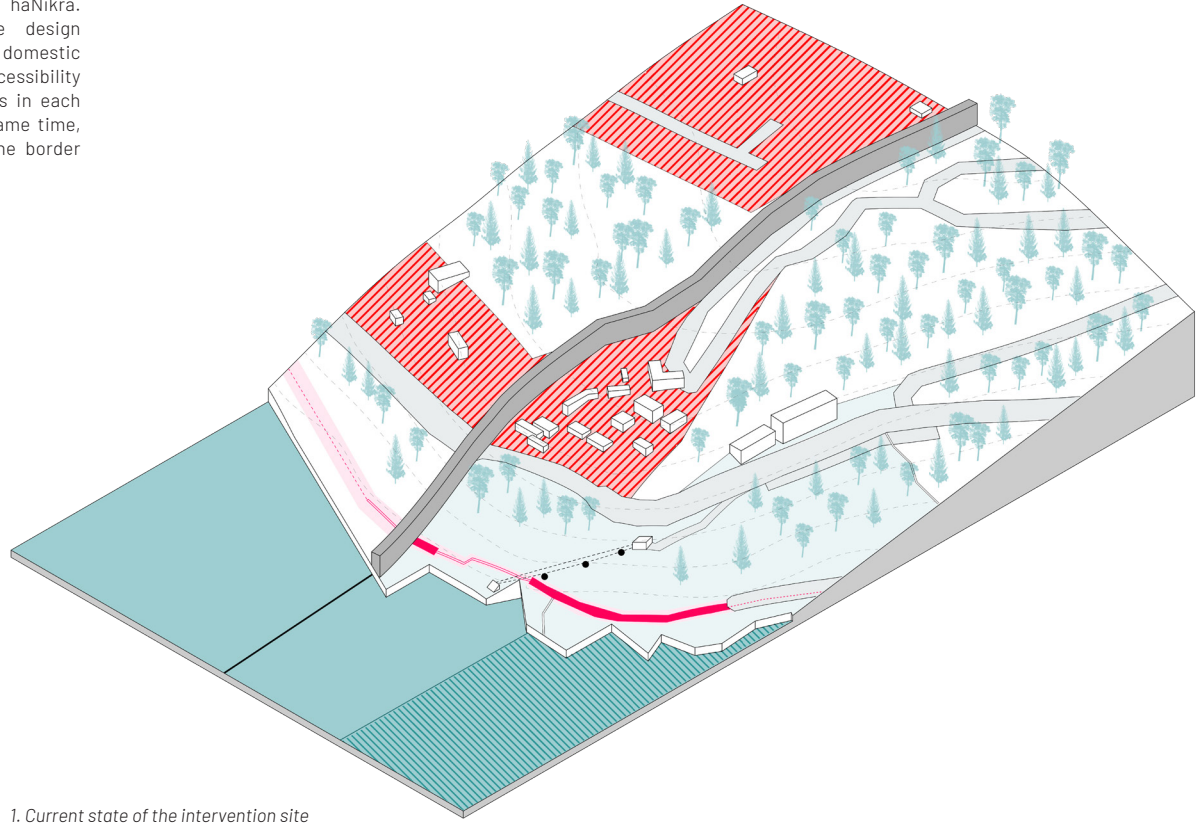
##### Phase 4 - evaluation: 20-40 years.

After phase 3 has been operating for some years, an evaluation of the neutral area could take place. At this phase, the necessity of the 3rd party control can be reexamined. By this point, perhaps new political schemes have been established in the region, in a way that might turn the 3rd party redundant. It is also possible that with increasing cooperation and trust-building in the station area, the land can remain as an ex-territorial zone, yet the control can be done by smaller-scale local governance agents, such as relevant municipalities from both sides of the border.

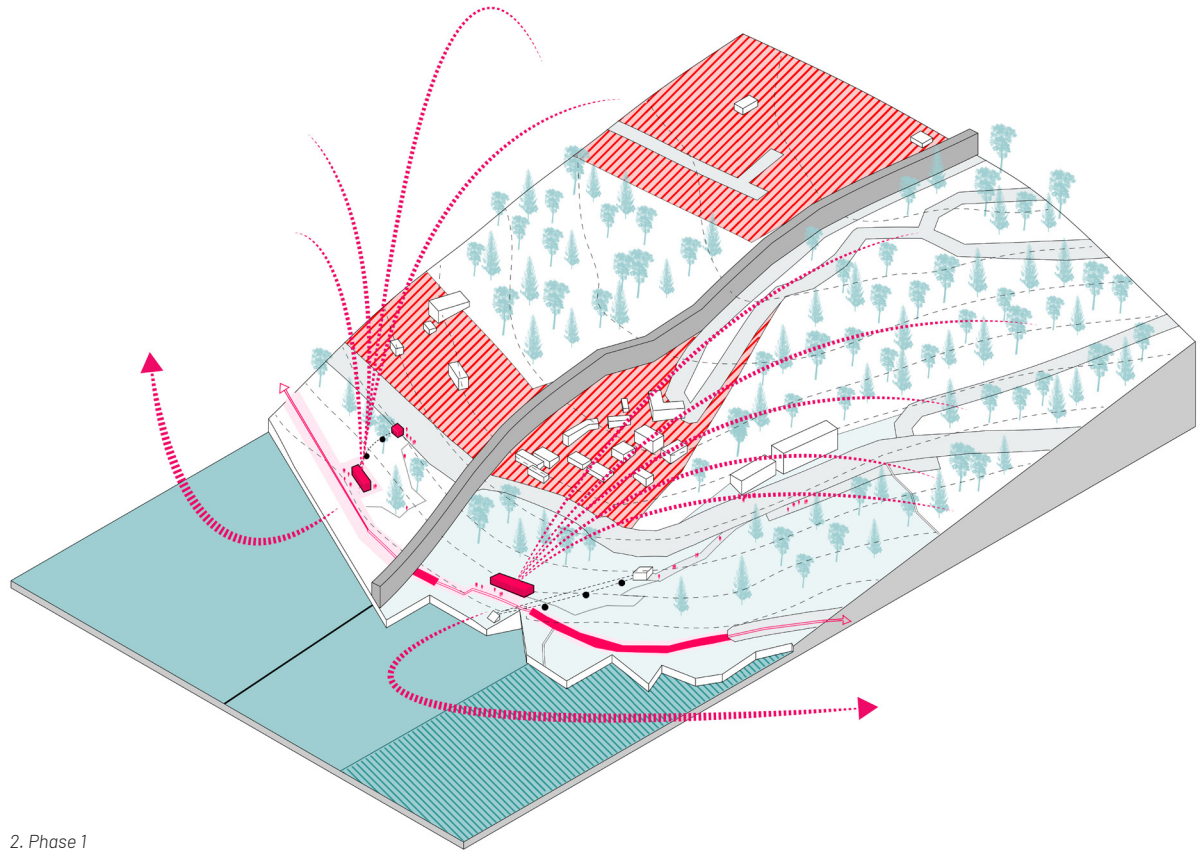


FIG 7.4.1 **Top:** the existing state in the intervention site of Rosh haNikra. **Bottom:** Phase 1 of the design intervention. Focusing on domestic connections, increasing accessibility and mobility to opportunities in each country separately. At the same time, promoting civil activity in the border area.

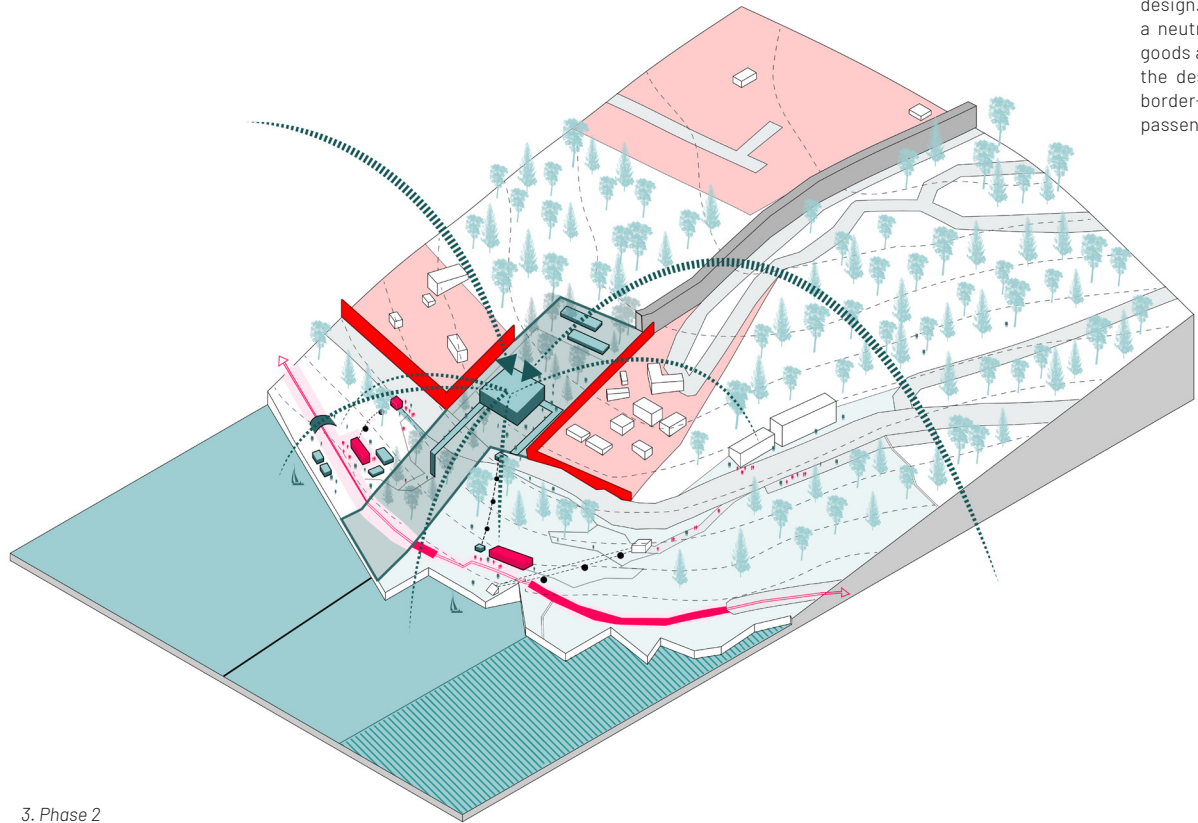
- Rosh haNikra tourist site
- Natural sea reserve
- Railway tunnel
- Historic tracks
- Suggested reconstruction
- Cable car
- IDF base on the Israeli side and UNIFILL facilities on the Lebanese side.



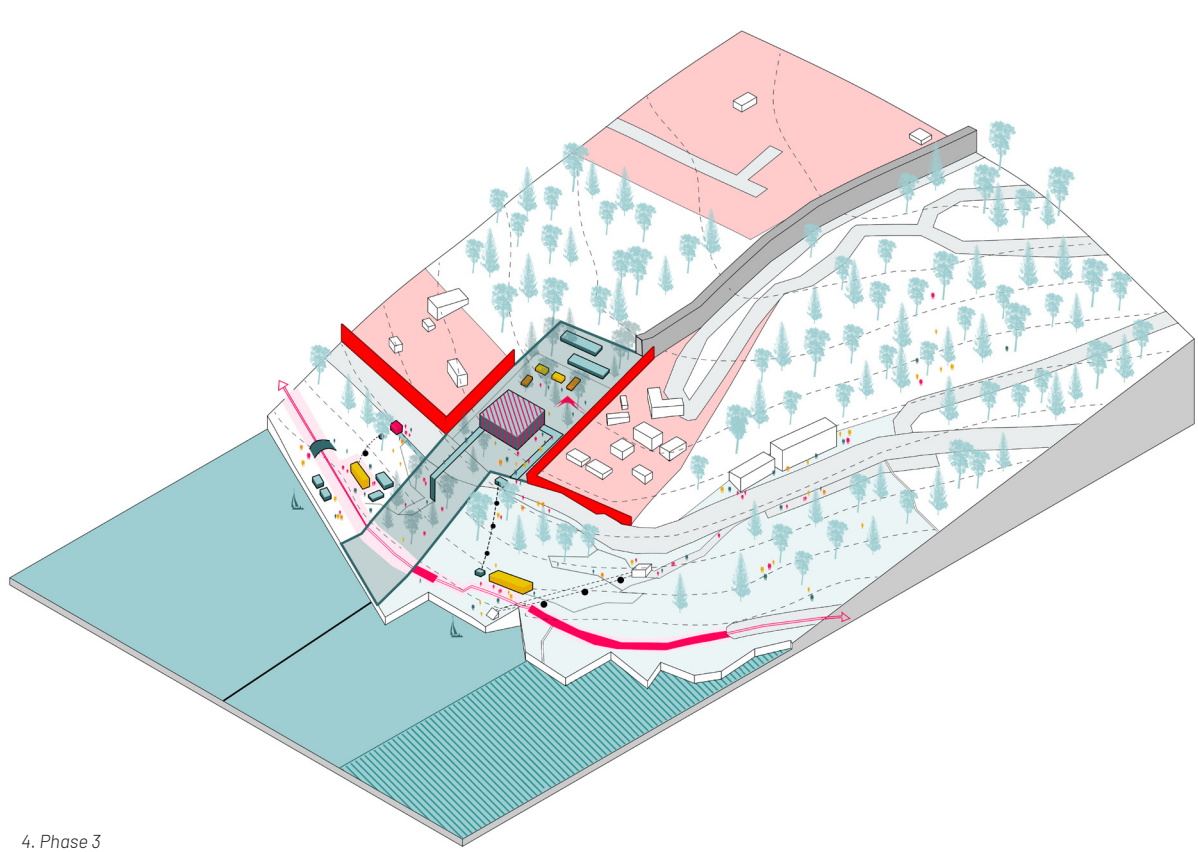
1. Current state of the intervention site



2. Phase 1



3. Phase 2



4. Phase 3

FIG 7.4.2 **Top:** Phase 2 of the proposed design. Focusing on the formation of a neutral area and border-crossing of goods and tourists. **Bottom:** Phase 3 of the design intervention. An operating border-station with free travel of passenger, goods and tourists.





FIG 7.4.4 A visualization for an imaginative future for Rosh haNikra area. The image shows the same area as the historic photo on the right page. The image includes the renewed railway line with the suggested border-station area, the main landscape features and the tourist activities in the area.

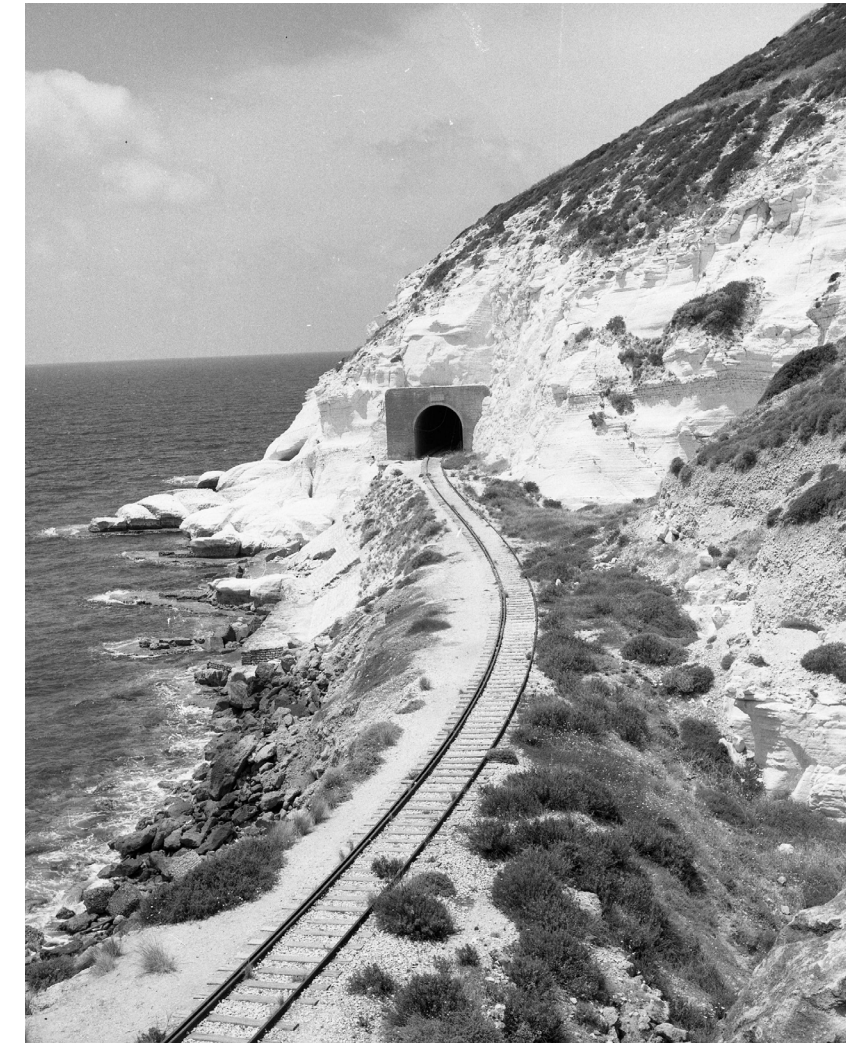


FIG 7.4.5 The historic railway tracks in Rosh haNikra area which were constructed during WW2. Since then, with the development of the touristic site, the area has changed, yet the tunnels are still there. Currently, the tunnels are sealed as the border between Lebanon and Israel crosses them.



# Conclusions

This thesis explored the possibilities and opportunities of reusing the former railway network in the Levant as backbone for promoting regional cooperation and social inclusion.

The context of this work presented one challenge and two main potentials. The two potentials were related to the former railway line. First, it provided an existing infrastructure, that crosses the entire region, situated in its landscapes, “waiting” to be reused. Second, this network heritage is embedded with the memory and historic events of the region. The heritage values of the railway symbolize the shared common history of the region and it constituted the potential of a past-future connection. The challenge here related to the character of the Levant region as a contested area. The theories reviewed in the theoretical framework addressed these two potentials and the challenge and combined these into a single framework from which possible planning solutions has been put forwards. The proposed planning and design solution also integrated these three context components into a single vision and a strategy.

**Overcoming the difficulty of cross-border planning in contested area:**

Throughout the work, the challenge of the contested context has imposed many difficulties and doubts. First, in the current political climate, addressing the Levant as a single planning area is not normative. Such an approach as I suggested, is most likely to be considered as irrelevant or unrealistic by planning authorities and political leaders. Moreover, since the societies in this region have been separated for about a century, the reality of separation has become accepted almost as a given fact. This means, that the research concepts may not be accepted by the communities and inhabitants of the region as well.

Second, the cultural and political reality of mistrusts also rise difficulties in terms of functional relations that the project aims to promote. The parties involved do not have any official relationship or they have very week ones. Accordingly, cross-border cooperation is far from reach.

Finally, another context-related issue was the scale of the project. Since the Levant region is composed of several nation-states and autonomies, the research had to deal with a very complexed system, including multiple parties, actors and stakeholders working on different levels.

To deal with these challenges, the thesis overall approach was of an imaginary planning approach. Considering the current spatial and social conditions, the proposal suggests an alternative future planning for the Levant region, which will require a different political system to be implied. This is done form my personal belief that imagination as a planning tool can be used as a political act, even if only by stimulating discussion, which challenges the current planning and political conventions. As Davoudi(2019)explains, imagination can be used as a transformative planning tool. Imagination highlights the role of individuals as political actors, who can engage with and transform the world. For imagination to be transformative it needs to transcend the boundaries of the world in which it operates (Davoudi,2019).

Nevertheless, it is important to mention that the research was not completely detached from real life constrain. It reviewed the current solution in the region as indicators for possible cross-border collaboration.

First, existing regional plans for railway development of both the Israeli and the Palestine authorities where considered and integrated into the planning process. While these plans were developed separately from each other, the suggested vision connected them as a single continuances regional railway network.

Second, the existing regional cooperation between Israel and Jordan to resolve the water crisis at the Dead Sea indicates that based on shared goals, parties can find ways to collaborate regardless of existing political frameworks.

Third, existing practices of border-crossing are also reflected in the suggested design and strategy. One example is of the Quneitra Crossing point between Syria and Israel. Although the states are in a state of war, a third neutral party (UNDOF and the Red Cross) controls and enables the movement trough the area in specific cases. Also, some of the checkpoints between Israel and the West bank were transformed to allow a more humanitarian system (see fig 8). In these case, the crossing resembles, to some extent, the passing of an airport terminal. While the three given examples are far from reflecting equal and inclusive planning solutions, they illustrate the potential to promote cross-border cooperation in a contested region.

These examples were translated and modified in the development of the plan concepts: (a) the idea of the railway

infrastructure as an instrument that can promote common goals, such as economic and tourist opportunities. (b) The idea that the railway stations can become border-crossing and be used as terminal-hub in which interaction takes place.

Finally, the suggested strategy aimed to deal with the complexity of the scale of the project. The strategic planning focus of lines – the railway infrastructure and on nodes – the railway stations. To address different actors, top-down actions were related mainly to the lines and the railway infrastructure development. Bottom-up initiatives are related to the nodes. In this case, the historic station buildings are to be reused by local communities, and the stations environments will become a neutral public space in which cross-border communities can meet and collaborate. Moreover, the strategy included phasing, to propose a gradual shift, from complete separation to a limited cross-border collaboration, to full extended cross-border relations. Yet, the developed strategy, under the scope of this work, was unable to fully address all the actors and stakeholders involved and to fully address the complexity originating in the scale of the project.

**Findings transferability to other regions:**

There are several ideas, thought and findings that can be relevant to other contested areas and other railway-related developments:

1. The first idea is to shift border-crossing from the checkpoint at the border-wall itself to a civilian context. The research offers to reconsider checkpoint as public space in which the act of crossing is accompanied by public activities where interaction takes place. Shifting the cross point to a civilian context detached the act of border-crossing from the segregating walls and turned in into a normative public activity. This type of crossing can resemble the experienced of an airport terminal where other activities are related to the border-crossing, and the passage is efficient and relatively quick. Ideally, overtime no control measures will be needed, but this utopian situation seems like a very far future in contested areas. Yet, meanwhile, crossing can become a more socialized process. Due to the focus of this work, in this case, railway stations were offered to be transformed into border-crossing and public space. Yet, other public spaces can be considered as well.

2. The research proposed to use the railway network in a system-approach. In this research proposal, the railway infrastructure provided connections which creates new economic opportunities. At the same time, the railway infrastructure also includes a network of public space to create social interaction. Moreover, the railway infrastructure is also related to environmental aspect such as corridors for harvesting wind and water along the tracks or combining green and grey infrastructure. This means that the railway infrastructure can be considered more than a linear line with nodes. It can be related to other systems to ensure sustainable development.

3. In contested areas such as the Levant, the act of border-crossing is sometimes impossible. By referring to the work of Teddy Cruz and Fonna Forman, this research claims that cross-border cooperation between communities can be done remotely. The communities don’t have to physically share the same space to collaborate. Ideally, they will be able to meet face to face at some point as this research suggest. However, remote collaboration can be considered as a first step in promoting understanding and building bridges in contested communities.



1 Qalandia checkpoint 6 month ago



2 Qalandia checkpoint today

FIG 8 Top: the image shows Qalandia checkpoint near Jerusalem. This is one of the most busy crossing from West bank to Israel. Almost 10,000 Palestinians cross here every day in order to get to work. Due to heavy checks done by the Israelis authorises, the pressure to get trough on time is severely heavy. The crossing process lasted 3-4 hours during rush hours.

Bottom: The image below shows the recent transformation in Qalandia checkpoint. 6 months ago and after 300 million shekels where invested by the Israeli authorities, to provide relief and more humanitarian crossing. The quote on the photo (in Hebrew) states: “its becoming almost like a terminal”. Crossing process now takes an average of 3-4 minutes.

# Reflection

The research-by-design project address the divided Levant region, which is characterized by border-walls and spatial divisions, lack of cross-border cooperation and social segregation.

The project explores the potentials related to the reconstruction of former railway lines, that operated in the region until the late 1950s and connected it with Europe and Africa. The research offers an alternative development regional perspective. The main aim of the project is to develop a planning strategy towards regional cooperation and social interaction, based on the reuse of shared railway infrastructure and by creating a network of shared public spaces in its stations.

The reflection will include four parts: a methodological inquiry including its limitations and ethical considerations, recommendations for future research and transferability, societal and scientific relevance, and finally, the relation with the graduation lab.

## 1. Methodology inquiry, advantages, limitations and considerations

A brief methodological inquiry:

The methodology consisted of a theoretical framework and analytical framework, a field research and design process, that together formed the grounds for developing a regional planning approach and support the design outcomes.

The analytical framework consisted of historical analysis, spatial analysis, social analysis and existing regional railway plan analysis. The historical analysis(introduction + chapter 4) provided the context for the tension and disputes in the Levant region and information about the historical railway network and its deterioration. The spatial and social analysis gave an overview of the existing regional social and spatial divisions, as well as an analysis of the current state and condition of the railway infrastructure and stations(chapter 4). The relationship between border-wall constructions and regional division and railway demolition process was explained. Finally, two existing regional railway plans were analysed to support the idea of that regional railway network is a desirable future outcome(chapter 4.3).

The theoretical framework (chapter 3) provided an understanding of the context (chapter 2.1) of the contested region and offered an integration of three different theoretical field that reflect the potentials and challenges of the specific research context. The theoretical chapter revolved around two main questions: how can railway and heritage sites contribute to sustainable development and social inclusion? How can planning in contested area promote social inclusion and cross-border cooperation? The findings were integrated in the planning strategy and the design intervention.

The field trip to Israel contributed to identifying typologies of historical railway stations, the scale and the amount of neglected and abandoned stations, the difficulties in forming a national conservation plan.

The design process explored the possibilities and opportunities of a regional train reconnection. Two case studies inspired the design solution, especially in the local scale design interventions (see chapter 5). The proposal works on two main levels: the regional scale address the lines: the railway infrastructure and the new regional flows (chapter 6). The local scale – the nodes, address the railway stations and the interaction among communities(chapter 7).

Limitations, dilemmas and ethical consideration:

One of the main challenges faced during the research process was related to the scale of the project and data collecting. Since the region is composed of several states and autonomies, I had difficulties in finding and accessing relevant data. This is especially true for the cases of Gaza and the West Bank where there is a very small amount of available demographic and social data. Usually the Israeli authorities do not include the West Bank area in general information accessible to the public (such as GIS data, socio-economic surveys, etc.). Also, due to the language barrier and lack of personal knowledge I was also struggling with finding socio-economic data about Lebanon, Gaza and the West Bank and Jordan. I was only able to access and use mainly materials provided in English or in Hebrew. Therefore, I found it very difficult to map and illustrate the spatial and social segregation and division around the region. Most of the information was based on readings as opposed to maps or other graphic data. This limitation is also relevant for the case of finding data on the former railway line.

Finding historic maps and historic and current photographs of the stations in the West Bank and Gaza was extremely difficult. This was limited also due to time constrain as the scale and the number of stations was overwhelming. A more comprehensive mapping of the current state of the railway infrastructure and station would have required more time, and perhaps help from researches familiar with the topic and with data accessing in other areas of the region.

Another challenge I have encountered is related to the design outcomes. On one hand, the design of different scale levels both regional and local station scale have contributed to the illustration of the research goals. In fact, I believe that working on the station scale was crucial for the understanding of the suggested regional vision. On the other hand, with the development of three different stations introduced some difficulties. The three stations presented diverse station environments, yet, due to time limitation I was only able to present an in-depth design solution to one station. Also, due to time constraints, and with the decision to develop three sites, I was limited with the ability to further develop the regional scale and the international scale.

The main dilemma I have faced with in the development of this work is related to governance and political constraints. As discussed throughout the work, border-crossing and regional cross-border collaboration, is a process related to governance scheme, as this process is dependent on government agreements and diplomatic relationships. In the Levant region, border-crossing is almost non-existing, and it is very limited. It is also mainly related to imbalanced power relationships such as in the case of the West Bank and Gaza (see chapter 4). On one hand, considering the current social and political climate in the region, the research results and the proposed strategy and design are restrained. The research cannot offer resolution nor improvements for the political systems in the region. In that sense, the project is results are limited and are not feasible. On the other hand, the ability to choose an imaginative planning approach encouraged me to rethink outside the existing planning mechanism in the region. As Davoudi states, imagination can be used as a transformative planning tool, yet for imagination to be transformative it needs to transcend the boundaries of the world in which it operates (2019). The proposed imaginary design and vision highlights the planner's role as political actors, that can act to change and transform the world. Dealing with this real – world political restrain dilemma, I personally believe that imagination as

planning tool can be used as a political act, even if only

The main ethical consideration is related to the political climate and history between Israel and its neighbouring countries, the sensitivity of dealing with this area must be considered. Coming from an Israeli background, it is clear to me that multiple narratives and values can revolve around the subject of this research proposal, depending on the countries and communities addressing these issues. Yet, it is to my belief that the role of academic research is to offer opportunities and alternative solutions to such complex problems. Also, in my proposal I have aimed to promote sustainable and inclusive values, and to consider as much as possible all territories and communities in the region. Also, out of this understanding to the complex and sensitive subject, I have chosen to develop three intervention sites which are located in the Israeli territory.

## 2. Future recommendations & transferability

The project examined the reuse of former railway network, its stations and its related heritage, as a tool to generate regional understanding and collaboration in the Levant region. Further development of the research can be as followed:

1. Extensive research of the communities related to the suggested Border-stations. This can help to improve the suggested programs and uses of the stations' area, according to local needs from both sides of the border.

2. A collaboration with researches from other countries and areas in the regions will contribute to a better understanding of the needs and potentials related to the railway network development. This might improve the strategy and serve wider needs in the region. Also, this would contribute to a more accurate understanding and study of the current situation of the historic lines.

3. Throughout the research, I have referred to different writings on the topics of planning in divided cities. Yet, cross-border cooperation theories were lacking a spatial design approach. To overcome this issue, I have used case studies projects from the Us-Mexico border. Future research can consider the development of planning tool atlas, that can



Transferability:

In terms of the transferability, the results of the project proposal could not be transferred directly, since it was derived from the specific case. The combination of relating the border-crossing act to a historical railway line might be a unique opportunity to the Levant. However, the project components and design strategy can be used for future research on similar topics, and can be examined in other border areas or contested areas:

- Border crossing through public space to promote understating in contested communities. This approach can be used in a border area where the crossing is possible, yet limited, for example in the case of the Belfast or US-Mexico border.

- Sustainable redevelopment related to former railway lines and former railway sites. This can be relevant in many countries where railway services are limited, underdeveloped or can be improved. Also, the tools I have introduced for sustainable railway development based on former lines can be used separately in railway development around the region: in Lebanon, Jordan, Israel and the West Bank and Gaza.

**3. Societal relevance:**

*"Walls between nations are the most eloquent material expression of the human inability to coexist and negotiate... the greater the number and denseness of these walls, the grander our fear and our differences can become" (Ronald Real,2017:23).*

As mentioned in the problem field, contested environments are not unique to the Levant. All over the world places of disputes can be found. These are related to conflicts between states over their supposed sovereign territory, religious or ethnic conflicts, or national efforts to constrain the cross-border movement of refugees, immigrants, or illegal workers. While the reasons for the disputes may vary, contested environments are often characterized by spatial divisions which take form with conflict infrastructure. As stated in the problem field, as physical divisions are related to governance schemes, these have severe social implications. Physical division can promote the interests of certain groups while create or sustain inequalities (CinC,2012). These are more than just physical barriers as they can promote or sustain the accessibility to opportunities and resources.

Moreover, populations that are separated physically for long periods, tend to reject differences and acceptance of "the other " (CinC,2012). Accordingly, physical divisions in contested environments are often accompanied by social segregation and social injustice.

In the case of the Levant, which is at the core of the research, for almost a century, the physical division aimed not only to maintain separation but also to implement (Cf.Vallet,2006). Similarly to other post-colonial regions, the formation of segregating borders can be considered as an imposed act of violence, ignoring local dynamics that were established over time through mutual influences (Rael, 2017). As physical division became a preferment reality in the region, societies were unable to communicate and tension where left unease.

In light of the social issues in contested and divided environments, it is crucial to understand the relationship between governance, divisions, and planning. Planning effects, and is affected by division (Caner&Bolen,2016). Taking into account that planning has the power to change the spatial, economic, social, and political dimensions of space (ibid), the question which rises is how planning dimensions can be used to less-en tensions in divided areas and promote inclusiveness?

Consequently, the research offered an alternative vision for the Levant region towards social and spatial inclusion. By using the former railway network as the planning backbone, the thesis proposes a planning strategy and design tools to promote regional cooperation and social inclusiveness. In the thesis imaginative vision, the shared railway infrastructure is used as a means to promote cross-border shared interest and the railway stations are transformed into public space where interaction takes place. The thesis proposal and findings can be relevant to other territories and regions facing problems of spatial and social division.

Furthermore, dealing with former railway networks, I have learned that railway infrastructure which is at the core of this work has great societal importance. Infrastructure is critical for development because improvements in the availability of infrastructure can lead to profound changes in the standard of living of the population by facilitating access to health, education, other social services, and the labour market (Alonso and Sánchez, 2012).

Infrastructure also plays an important role in including rural areas in regional and international networks and in establishing urban-rural links (UNDP/Government of Chile, 2014). Recently, infrastructure has been incorporated into the Sustainable Development Goals of the 2030 Agenda of the United Nations as a crucial tool to improve the population's living conditions and promote greater social stability (United Nations, 2017).

Finally, the research overall approach relates to Sustainable Development Goal (SDG) 9 -developing quality, reliable, sustainable and resilient infrastructure, and SDGs 6, 7 and 11 - the need to "make cities and human settlements inclusive, safe, resilient and sustainable," (ibid). Thus, the transformation of railway infrastructure in the region represents a change needed in the region, as mobility and accessibility to resources and opportunities are a crucial part of achieving just a planning approach.

**4. Scientific relevance:**

The main research question is: how can redevelopment of former railway networks [in the Levant] contribute to regional cooperation and social interaction in a contested region? Hence, there are three main knowledge fields that the research topic can contribute to: planning and regional cooperation in contested regions, planning and social inclusion in contested area, and railway redevelopment.

First, a large body of theories can be found on the topic of planning in divided cities, yet little knowledge can be found on planning in contested areas at a larger scale (regional scale). I have reviewed the main theories addressing planning in contested environments and I have also addressed theories for planning in divided cities in order to develop a planning solutions to deal with the research context. Furthermore, while there is a vast literature on spatial planning and regional cooperation and integration, these mainly address European cities or the EU and do not address issues of regional collaboration in contested regions. I have mainly addressed the work of Andreas Faludi in order to come up with a strategy for achieving regional cooperation in the Levant. The research also drawn from existing practices for collaboration in the Levant and two other case-studies as a part of the planning and design development.

Therefore, the research overall approach, suggested strategy, and design solutions for promoting cross-border cooperation and social inclusion in a contested area can add to the knowledge of inclusive spatial planning in contested regions, and cross-border planning in contested regions.

Second, the research focused on the former railway in the Levant. First, the design addressed the railway stations heritage values as means to promote inclusiveness and understanding among communities, following the principles of the UNESCO world heritage policy for the integration of a sustainable development perspective into the processes of the World Heritage Convention (UNESCO,2015). The research can add to the growing knowledge of using heritage sites as promoters of sustainability. Also, following the policy, the research also presents a case in which rehabilitation of heritage sites can contribute to conflict resolution. Therefore, heritage sites can also be related to topic of planning and conflict resolution.

Moreover, the research can add to the knowledge of railway development and sustainability. In the suggest research, the railway was developed in a system approach, in which the railway infrastructure was related to other systems such as water collection, renewable energy, and a network of public spaces.

Finally, the photography, material and mapping collected can add to the historic information on the former railway network in the Levant and its current condition.

5. Relation with graduation lab:

As mentioned in the problem field (chapter 2), contested environments and divided regions are not unique to the Levant, and processes of rebuilding and re-closing borders are evident across the globe. These territorial disputes are often manifested in space by conflict infrastructure and impermeable borders, which are accompanied by social segregation, and limitation of mobility and accessibility to opportunities and resources. Social injustice and social exclusion are one of the main topics that are addressed in the Planning Complex cities studio. Fitted with the studio approach, the research examines the current spatial, social and governance systems in the Levant, and proposes a spatial planning design to achieve more sustainable and inclusive solutions. The research outcomes include a spatial vision plan, strategy and design interventions, that demonstrate how by reusing former railway networks, an alternative and more inclusive governance and spatial outcomes can be achieved. By creating encounters, exchange and interaction based on the former network, a societal and special change can occur, both on the regional scale and the local scale, among communities across the borders. The methodology addresses the existing governance schemes, and therefore, the design offers a gradual shift in the transformation process towards regional cross-border cooperation. Also, the research considers a new relationship that needs to be built (between local communities, municipalities, governments and other stakeholders).



FIG 9 Abandoned Ottoman railway tracks in Saida, Lebanon, 2007.



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# Images list:

\*All images that are not listed below are author’s drawings or author’s photography.

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FIG 7.4.1.2: Retrieved from: <https://m.weekend.co.il/25348>

FIG 7.4.1.3: ABC gets Lebanon border wall story completely backwards [Photo].(2018). Retrieved from: <https://aijac.org.au/featured/abc-gets-lebanon-border-wall-story-completely-backwards/>

FIG 7.4.1.4: Kibbutz Rosh Hanikra from west [Photo]. (2007). Retrieved from: [https://he.wikipedia.org/wiki/%D7%A8%D7%90%D7%A9\\_%D7%94%D7%A0%D7%A7%D7%A8%D7%94\\_\(%D7%A7%D7%99%D7%91%D7%95%D7%A5\)#/media/%D7%A7%D7%95%D7%91%D7%A5:Kibbutz\\_Rosh\\_Hanikra21.jpg](https://he.wikipedia.org/wiki/%D7%A8%D7%90%D7%A9_%D7%94%D7%A0%D7%A7%D7%A8%D7%94_(%D7%A7%D7%99%D7%91%D7%95%D7%A5)#/media/%D7%A7%D7%95%D7%91%D7%A5:Kibbutz_Rosh_Hanikra21.jpg) (Hebrew).

APPENDIX



**BEYOND THE WALL**  
**From Modern-State Borders Towards New Perspectives for Cross-border  
Cooperation**

**AR3U023 Theories of urban planning and design**  
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**Abstract**

After the fall of the Iron Curtain in 1989 and the end of the Cold War, practices of wall building between nation-states were presumed to have come to an end. However, recent processes and events of reinforcement and re-closing of borders brought up the attention to borders and social injustices among different scholars. In this paper, I will review relevant literature regarding the problematization of borders, emphasizing the relationship between borders and social justice. This will be followed by a presentation of alternative perspectives of rethinking borders, calling for cross-border cooperation as a means to cope with societal issues. In the first part of this paper, I will briefly introduce the concept of the modern-state as a territorial entity marked by recognized borders. In the second part, I will review borders and social justice issues. Thereafter, I will present three critical articles that challenge these issues by emphasizing the need for cross-border cooperation. Finally, I will underline the need for broad cross-border perspectives in order to achieve a more just society.

Keywords

Borders, social justice, cross-border cooperation

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**Introduction:**

Today, it is possible to notice a dual worldwide phenomenon in which along with globalization processes and the formation of extensive relationships between nations national borders are becoming higher and impermeable (Kolossoff&Scott,2013). Thus, resulting in social segregation and injustices. This paper will elaborate on border issues and introduce selected alternatives for rethinking boundaries. I will bring together several ideas introduced by different scholars from various fields of studies, ranging from border studies to geography, architecture, and others, which address borders and

societal problems. I have joined and assembled their work in an attempt to emphasize how borders form challenges in achieving social justice.

The first part of this paper will introduce a brief historical background, which will explain the formation of borders with the emergence of the modern-state. After this, a quick overview of borders in the twentieth and twenty-first century will be made, to stress the relevance of border issues today. In the second part, I will discuss borders in relation to social justice. In this part, three sections will elaborate and demonstrate this faulty relation. The first section will address social justice and border-wall, focusing on the physical reinforcement of barriers between neighboring nations. After that, I will discuss the question of the right to a border, reflecting on minority groups' rights within the boundaries of a nation-state. The final section will address borders and injustice in the time of globalization. After that, the third part of the essay will be dedicated to suggesting alternatives for addressing social issues and borders. Due to the limitation of this work, I will introduce only three selected perspectives, which differ in scale and approach. The first theory will be of Andreas Faludi, offering to rethink the EU as a Neo-medieval Empire. The next work will be by Teddy Cruz and Fonna Forman, which reconsider border lines as border regions. Finally, the ideas of Ronald Rael will suggest using the border as an infrastructure of public space. Lastly, I will conclude with a summary and my thoughts. Throughout the entire paper, various examples and cases from all over the world will be used to elaborate on the ideas and issues as described, and to point out how these issues are relevant today.

To make the flow of the argument clearer some primary definitions need to be made. While each of these definitions has a broader societal and historical meaning, in this paper I will take a more simplistic approach. First is the definition of a *border* (referring to the borders of the modern state). In this manner, a border is "the line that divides one country from another" (Border, n.d). I will explain what the meaning of borders in the context of social issues is, yet, I will not dive into the ontological questions on borders (what is a border?) nor to processual questions (what does a border do? how a border is formed?). I will also mention several times the notions of *modern-state* and *nation-state*. By modern-state, I refer to an entity in which power is centralized and exercised by



sovereign control over a clearly defined territory. This notion goes back to “Peace of Westphalia”<sup>1</sup> and the 17th century (Axtmann,2004). The nation-state can be seen as an evolution of the ideas of the modern-state as it developed during the 19th century. The nation-state is one in which the majority of its citizens (and not only its rulers) come to develop a sense of common identity based on shared history, culture, language (etc.), bounded by clear territorial borders (Axtmann,2004). Next, I will address social justice as the “fair distribution of rights, opportunities and resources” (Carmme and Diamond, 2009:3). Lastly, as I will discuss the globalization process, I will consider this as an “interconnectedness of people and businesses across the world that eventually leads to global cultural, political and economic integration” (Fox & Hundley,2011).

#### Part I - Borders of the Modern-state and why borders matter today:

Before discussing contemporary social justice issues related to borders, a brief historical background is needed to explain the formation of borders as we perceive them today. Borders of the 21st century can be understood as a result of the modern-state, which was a direct outcome (generally speaking) of the Westphalia Peace Agreement.

The ‘Peace of Westphalia’ referees to a series of treaties signed in the cities of Osnabrück and Münster in 1648. These agreements are credited with establishing the foundation of the modern-state system and the concept of territorial sovereignty (Lesaffer,2014), under which state supremacy and fixed borders over a defined territory were developed (Pickering,2013). The Peace of Westphalia marks a fundamental change in European politics, as it dissolved the supreme authority of the Holy Roman Empire while granting each party (state) sovereignty over its lands, people, religions and agents abroad. Moreover, the treaty promoted a norm against the interference in another state’s domestic affairs, supporting the concept of sovereignty once more (Lesaffer,2014).

Moreover, the Peace of Westphalia was also important to the formation of borders as a crucial part in the formation of the state and justifying its sovereignty (Pickering, 2013).

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<sup>1</sup> See part one: Borders of the Modern-state and why borders matter today

In pre-Westphalia Europe, borders were areas of varying widths (marchlands<sup>2</sup> or frontiers), mainly of a domestic-political and financial significance rather than an international one. These areas were not clearly defined and demarcated lines as we perceive borders today (Black, 1997). Looking at maps prior to the peace treaties, “there was little...to indicate where one country ended and another one began” (Pickering, 2013:111)(figure 1). In post-Westphalia Europe, the new states began using lines on maps to define the boundaries of the territorial area under their control (Pickering, 2013)(figure 2). Thus, the emergence of borderlines on maps as we know them today is a direct outcome of the modern-state promoted in the Westphalian treaties.



Figure 1: No obvious borders. Source: *Europe brevis* [Cartography].(1568). Reprinted from: “Borderlines: Maps and the Spread of the Westphalian State From Europe to Asia Part One - the European context” by, S. Pickering, 2013, *The International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences*, Volume XL-4(W3), 113.



Figure 2: Two-color border and solid colored states. Source: Nicolas Sanson [cartography]. (1651). *L'Europe*. Reprinted from: “Borderlines: Maps and the Spread of the Westphalian State From Europe to Asia Part One - the European context” by, S. Pickering, 2013, *The International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences*, Volume XL-4(W3), 114.

Borders as a concept of the modern-state are still very evident in today's world. The twentieth century was characterized by a state-centric system of national borders, economies and societies. Protectionism and autarkic development behind state borders

<sup>2</sup>In medieval Europe, marchlands were mostly neutral buffer zone (areas) under the joint control of two realms, in which different laws might apply. Marchlands served a political purpose, such as monitoring trade and movement of armies (Axtmann,2004).



reached its peak in the first half of the twentieth century, increasing up to WWII (Donnan&Wilson,2001). Later on, after the fall of the Iron Curtain in 1989 and the end of the Cold War, practices of wall-building between nation-states was presumed to have come to an end (Donnan&Wilson,2001). Yet, in reality, a line of political events brought to a rise in the number, type and intensity of border disputes. These are related to conflicts between states over their supposed sovereign territory, like in the case of Iraq and Kuwait, Israel and Lebanon, Serbia and Bosnia and Croatia; or cross-border ethnic conflicts such as Ireland and the United Kingdom, Palestine and Israel, Serbia and Albania; or national efforts to support or constrain the cross-border movement of refugees, immigrants, illegal workers, and terrorists, for instance along the US–Mexico border and at the many external borders of the EU (Donnan&Wilson,2001). Therefore, questions relating to social justice and borders are still relevant in today's world.

## Part II - Social Justice and borders:

As mentioned above, borders around the world are a source of numerous tensions and conflicts. Human relations and interactions related to borders are charged with social injustices. In the next paragraphs, I have linked together the ideas of several authors that discuss borders and societal issues. I have combined and reorganized their claims to highlight the relationship between borders and social justice. The first part will address border-wall and social justice, the second will address the question of who has a right to a border, and the third part will examine social justice and borders in times of globalization.

Andreas Faludi (2018) explains borders are abstract lines on a map marking “the ending of one sovereign territory and the beginning of another, where controls take place over the movement of people, services, and goods”(p.27). Consequently, if borders are where the control and distribution of resources take place, it is relatively easy to understand their relation to social justice. By addressing the common notion of social justice as the “fair distribution of rights, opportunities and resources” within the society (Carmme and Diamond, 2009), clearly, borders have a role in determining where and how (fair or not) this distribution will take place, affecting the people inside and outside the enclosed territory.

Border-wall and social justice:

The control of the state over resources within its boundaries is even more evident when these are walled sealed. Thus, to make the link between social justice and borders clearer, I would like to elaborate on this idea by addressing first to social justice issues relating to border-wall. As Eyal Weizman states:

“If borders are abstract lines which designate the edges of jurisdictions barriers make those limits physical. Borders were fortified to control movement of armies, as well as to regulate the movement of goods, labor, information, wealth and disease into the body of the state”. (Weizman,2006:84)

These barriers or fortification of a borderline can be referred to as *border-wall*, meaning a border in which there is a physical separation and no movement of people, goods and resources, between one side to the other (or where the movement is restricted or allowed under certain conditions)(Cf.Vallet,2006). These physical elements between neighboring nations, whether concrete walls, razor wire fences or checkpoints, emphasizing the need to maintain separation. In fact, border-wall is aimed not only to maintaining separation but also to implement difference by limiting the exchange and distribution of resources (Cf.Vallet,2006). While border-wall may be perceived as an extreme act of marking the sovereignty and the territorial limits of states (Donnan & Wilson,2001), these are, as I have mentioned above, not uncommon nor far from disappearing.

One of the problems with the construction of border-walls is that these often result in a valuation of rights. This is since this construction can be considered as an imposed act of violent, ignoring local dynamics that were established over time through mutual influences (Rael, 2017). Therefore, the border-wall in most cases divides communities and landscapes and discourages interaction and crossing (Rael, 2017). Actions of separation by a wall have caused numerous violations of human, civil and political rights, such as in the cases of separation between family members, displacement of people (and loss of property), limitation on movement, and loss of community and economic ties. This is evident in many places around the globe, to name just a few, one



can think of the cases along the border between Israel and Lebanon, Israel and Palestine, Cyprus, Ireland and Belfast, the United States and Mexico.

Moreover, the permeability of the border-wall directly relates to the distribution of rights, resources and opportunities. According to Kossolov and Scoot (2013), power elites decide when and in whose interest it is to construct and constitute borders. Those in power also determine how stringent the management and the crossing of borders will be. Simply put, as long as the crossing of border-wall by humans or resources will be in the hands of those in power, it will always serve their interests and needs. Kossolov and Scoot (2013) explain that border-wall are unevenly permeable for different groups, depending on origin, citizenship, material situations and professional background, thus they are inevitably related to discrimination and social injustice.

Another issue of uneven distribution is related to border-walls and the creation of socio-economic asymmetries. Border-walls generate economic asymmetries within the societies related to them, creating enclaves of wealth and sectors of poverty, often affecting more the poor population (Rael,2017). To illustrate this point, Ronald Rael (2017) uses the example of the US - Mexico border. In this case, communities from the Mexican side used to have small economic relationships with communities on the American side. The construction of a new wall along the border, made it almost impossible for this exchange to exist, affecting more on the economic state of those on the Mexican side. Moreover, such asymmetries can be related to the uneven distribution of natural resources. As border-wall divides or assigns natural resources to one state, it prevents others from reaching it. Throughout history, this phenomenon has resulted in conflicts, battles and wars. For states, rivers are often “natural” borders that mark the edge of territories (Weizman, 2006). In the middle east, for example, a region defined by droughts, water was in the center of several conflicts as states would use their borders to prevent water from flowing into their neighboring territories (Israel - Jordan, Israel - Lebanon, Israel - Syria). Another example can be seen along the Mexican border, where

the wall has divided 11 watersheds that were shared by communities on both sides, resulting in environmental damage<sup>3</sup> (Broken nature, 2019).

The right to a border:

Of course, borders and social justice issues are apparent not just in the case of a border-wall. As I've mentioned in the first part, borders have been a main component in the processes of nation- and state-building (Donnan&Wilson,2001). The formation of the nation-state during the 19th century promoted the idea that "all nations have the right, if not the destiny, to rule themselves, in their own nation-state, on their own territory" (Donnan&Wilson,2001:7). Nevertheless, numerous minority groups are deprived of a chance of fulfilling this right (Donnan&Wilson,2001). Therefore, another question arises: "who has a right to a border?"

According to Donnan and Wilson (2001), ethnic groups have a shared defining characteristic with the nation-state: an essential relationship to a real (historically recognized) territory, or to a homeland (to which they can only aspire). Therefore, ethnic groups can be seen as minority-nations controlled by a larger nation in a shared territory. Yet, it is a challenging task to allow all minority groups to role themselves in their own defined territory. This is since some ethnic groups might be related to a larger nation elsewhere, in a much more distant location, or right across the border, or they aspire to form their own nation within the borders of the state in which they are located. In either case, forming new boundaries for minority groups contradicts the nation-state's interests confined by the existing borders (Donnan&Wilson,2001). Furthermore, states have several internal structural requirements. There are simply not enough natural resources, territories (actual space) or wealth to allow all minority groups to exist as a nation-state. In other words, there is too much power in the hands of too few to allow minority groups to achieve the degree of independence and they aspire to (Donnan&Wilson,2001). Thus, a nation-state defined by borders is not an equal right for all.

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<sup>3</sup> For more information on this see: Triennale Milano.(2019,January 21). "Broken Nature - symposium no.2 - Fonna Forman Teddy Cruz" [Video file]. Retrieved from: <https://www.youtube.com/watch?v=UMwf9FEXuhs>



Globalization, borders and social justice:

Numbers of authors are debating social justice and borders aspects brought up by the globalization process. In the debate on globalization and social justice issues, social mobility, safety networks and economic justice are key concepts to be achieved (Agartan,2014).

Today, cross-border economic, cultural and political relations have resulted in the widening of the wealth gap between developing and affluent countries. Simultaneously, the ability of nations to control and distribute rights, opportunities and resources within their borders is declining due to the liberalization of their own economies (Donnan&Wilson, 2001). Achieving social justice in a globalized world and within states themselves is, therefore, very challenging. The question of how to overcome this challenge remains vague and is still under debate<sup>4</sup>.

During the 1990s, and with the rise of the globalization process, scholars have thought that the role of the nation state's borders would turn redundant. The concept of "borderless worlds" was characterized by cross-border fluidity and movement along global networks, that will takes little account of fixed borders. In this perspective, globalization processes would have resulted in the opening up of borders and with less control and limitation of the movement of people, goods, capital and ideas (Donnan&Wilson, 2001),(Anderson,O'Dowd&Wilson,2003). Nonetheless, scholars are pointing out that in multiple cases around the globe, in light of globalization related issues, borders have been made stronger and more impenetrable (Donnan&Wilson, 2001). As Kolossov and Scott (2001) describe, on the one hand, open and more flexible borders are essential for economic relationships, and on the other, more closed borders are important for security measurement. These security measures are a consequence of shared global problems: migration crisis, the global war on terror and on drugs (among other problems). The securitization process has also resulted in the re-closing of borders. This is perhaps most evident in the external European borders and along the US-Mexico line. In this case, the re-closing was against the flows of illegal immigrants

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<sup>4</sup> More on this topic can be found in many articles regarding social justice and globalization. Among these is Kaan Agratan work, cited in the reference list (Agartan, 2014).

from poorer to richer countries, seeking better work opportunities and improved quality of life (Kolossoff & Scott, 2013). Here, once again, a border-wall has formed (whether a wall, checkpoints or surveillance). But this time, as a result, or as a counteract for the globalization process, consequently creating an unfair distribution of rights, opportunities, and resources on a global scale. Two other examples used by Kolossoff and Scott can emphasize the injustice formed by borders in times of globalization. The first is related to mobility. The growing closure of EU external borders can be compared with legalized apartheid: "The law of birth", which determines the people's mobility across the world. The second is related to fair economic network: while for some companies cross-border transaction costs are negligible, for individuals or for medium and small local businesses the same borders can be an important obstacle (Kolossoff & Scott, 2013). Thus, globalization did not result in breaking barriers to allow social mobility, and economic justice is far from reach.

### Part III - New perspectives and alternatives:

In light of the problems I have mentioned above, different authors, thinkers and researchers are looking for ways to address, ease and resolve these issues. This includes a broad range of ideas from very theoretical discussion to concrete solutions. Moreover, these new approaches incorporate varied fields of knowledge and disciplines, such as border studies, geography, architecture, urban planning and more. Due to the limitation of this work, in the next paragraphs, I have chosen to discuss three representative perspectives. All three suggest solutions that are relatively feasible and concern real-world problems, parameters that as a future urban planner I find extremely important.

#### A Neo-medieval Empire:

In his book, *The Poverty of Territorialism*, Andreas Faludi (2018) presents his idea for new ways of a global organization that goes beyond territorialism<sup>5</sup> (nation-states as we know them). While his approach mainly addresses the notion of territorially, borders

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<sup>5</sup> Faludi is aware of both the advantages and disadvantages of territorialism. He is also aware that territorialism is far from disappearing, the uncertainty of a world without it, and the challenges to realise his idea (Faludi, 2018).



can be seen as a main pillar related to it. Faludi himself refers to territoriality as “states securing their borders and executing jurisdiction within them” (Faludi 2018: 43). The neo-medieval empire as Faludi describes it, differs from territorial states since it has no precise borders. Instead of nation-states fixed and rigid borders, he seeks a softer borders approach and trans-border planning. Faludi's main suggestion includes the setup of zones of authority with overlapping boundaries that resemble a medieval type of governance functioning more via interactions and rules than via fixed boundaries, as an alternative to current forms of territorialism (Medeiros,2019). The results are territories with enclosing borders (absolute spaces), complemented by numerous overlapping relative spaces. In his view, The EU should become a meta-governor which provides rules and room for negotiations for its active agents within various networks (Zaucha,2019). The way to ensure that such negotiation will not be exploited by well-organized entities with power interests remains unclear to me.

Faludi states that while the EU supported cross-border cooperation, it has resulted in a mosaic of strategies, rather than an overall transnational vision for the European space. This might be since member states are not willing to reduce control over their territories (Medeiros,2019). Therefore, he explains the advantages of a neomedieval approach such as the ability to facilitate functional relations, which do not necessarily have a territorial sequence or territorial elements, such as in the case of cyber-space or transnational institutes. Moreover, this way of reorganizing networks by shared interests will allow planners to rethink and act outside the boxes of defined borders. Instead, they will be able to explore states' interaction with surrounding areas (Faludi, 2018). This perspective could contribute to solving global challenges such as pollution, biodiversity, global warming, desertification, ocean acidification, etc. (Medeiros,2019).

Border regions and Cross-border citizenship:

Architect Teddy Cruz and political scientist Fonna Forman are engaged in cross-border research and practices. They address the global issue of migrants and human rights, claiming that though vast populations are in jeopardy, too many cities are “closing their doors” (Broken Nature,2019). In their work, an imaginary political equator line links

border-conflicts worldwide<sup>6</sup>. They use the US- Mexico border as a case study to challenge the rationalist borderline imposed onto complex systems, and ask to rethink boundaries in a more ecological manner (Broken Nature,2019). They suggest regional interdependence in which border areas will be organized around shared interests and values among the communities related to it. This counters the division by a wall representing nationalism and identitarian politics.

Essentially, they present the US-Mexico border as a region rather than as a line. This region is based on the shared cross-border social and environmental flows related to (and affected by) the existing systems of watersheds (figure 3); such as protected lands, croplands, urban crossings and indigenous tribes. Accordingly, they suggest creating a continuous area that will act as an uninterrupted political, social and ecological zone (figure 4). This suggested area will be based upon cross-border citizenship, which would allow interdependencies and co-existence between the divided communities (Smith,2016). Therefore, un-walling is an essential process needed to achieve this proposition. Cruz and Forman propose a starting point for this process in what they call cross-border community stations. These stations will create a network of public spaces, where resources and knowledge are mobilized between states, municipal governments, communities and universities, to promote cross-border cooperation and socio-economic inclusion (Broken Nature,2019).

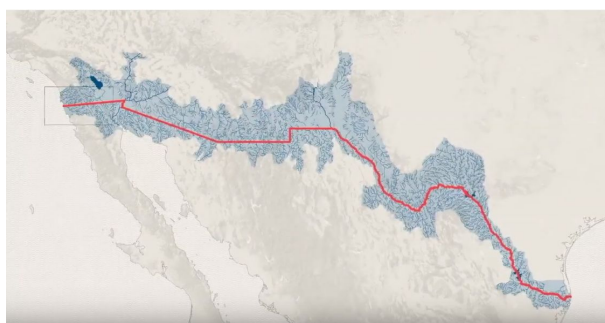


Figure 3: Screenshot of the watershed splitted by the US-Mexico border wall (in red) taken by the author from the video *Broken Nature - symposium no.2 - Fonna Forman Teddy Cruz*, Youtube, 2019. Retrieved from: <https://www.youtube.com/watch?v=UMwf9FEXuhs>

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<sup>6</sup> The political equator links: San Diego-Tijuana and the United States, Strait of Gibraltar, the Mediterranean and Europe, Israel-Palestine and the Middle East, India- Kashmir, and North and South Korea. For more information see reference: (Broken Nature,2019)



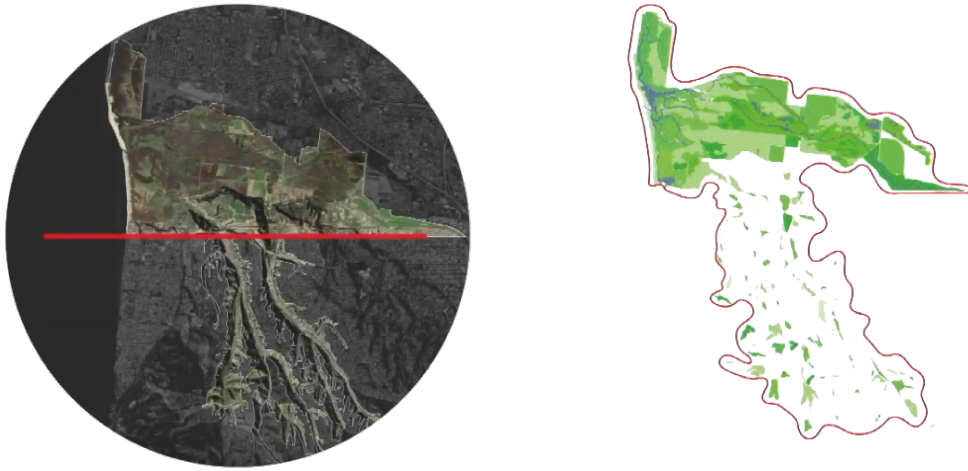


Figure 4: Screenshot of San Diego-Tijuana existing border wall (left) and the suggested border region (right), taken by the author from the video *Broken Nature - symposium no.2 - Fonna Forman Teddy Cruz*, Youtube, 2019. Retrieved from: <https://www.youtube.com/watch?v=UMwf9FEXuhs>

#### The border as a public place:

In his book, *borderwall as architecture*, Roland Real tries to extend the exclusive interpretation of physical barriers as an infrastructure of security, and provocatively interprets the wall architecture as a possible public space charged with social interaction. His approach is both a protest against the reinforcement and construction of higher walls along the US-Mexico border, and a projection for a possible alternative future. Beyond the provocation, Real accepts the challenge of designing and imagining different border-walls, in an attempt to correct what he describes as social and environmental violence, produced by the top-down, forced act of building barriers (Rael,2017).

In a series of imaginative interventions along the US-Mexico border, Real seeks to create a connection between the wall and human dimensions. These connections are based on dynamics that can take place around the wall, suggesting a form of cross-border contact, not necessarily linked to the act of crossing itself (the action in which one person tries to cross the wall in order to get to the other side of it). Reading through his book, Real's experiments along the border-wall are used as "laboratories to reimagine citizenship beyond the nation-state" (Rael,2017:Xii), and his main idea is that "a cross-border public and awareness can be mobilized around shared interest"(Rael,2017:Xii). These ideas are manifested through different interventions

such as making the border as a binational theatre, where people can come together with performers and musicians (Rael,2018)(figure 5). An additional suggestion proposes turning the area into a playground, in which a swing would operate only when people from both sides of the border meet and play (an installation that was released in July 2019)(O'kane)(figure 6).



figure 5: Screenshot of the border-theater as imagined by Ronald Rael, taken by the author from the video *Ronald Rael: An architect's subversive reimagining the US-Mexico border wall*, Youtube, 2018. Retrieved from: [https://www.ted.com/talks/ronald\\_rael\\_an\\_architect\\_s\\_subversive\\_reimagining\\_of\\_the\\_us\\_mexico\\_border\\_wall](https://www.ted.com/talks/ronald_rael_an_architect_s_subversive_reimagining_of_the_us_mexico_border_wall)



Figure 6: installation of swing at the US- Mexico border-wall by Ronald Rael. Reprinted from *Seesaws at the border: 'what happens one side impacts on the other'*, 2019 july 30, Retrieved from <https://mexiconewsdaily.com/news/seesaws-at-the-border-wall/>



## Conclusion - Can we move beyond the wall?

In this paper, I have shown how border formation resulted in several social justice problems. As explained through the theories and examples, borders accelerated an uneven distribution of opportunities, rights and resources. Some injustices occur on a more local scale, affecting communities near the border, such as the case of the Tijuana-San Diego border, while some act on a larger, global scale, such as the case of Fortress Europe and the refugee crisis. As presented in the first part, border-walls rise multiple problems in achieving equality of human rights, accessibility to natural and economic resources, as well as opportunities. Furthermore, while some social groups can form a nation within defined boundaries, other minority groups are deprived of this right. Lastly, while globalization might be preserved as a process related to the opening of borders, it is constantly accompanied by re-fortification, resulting in unjust environments and societies. I have indicated that borders and border-walls are far from disappearing from our reality, therefore new ways of addressing social justice concerns is unavoidable.

In the second part a relatively more optimistic approach was taken, to show the possibilities of addressing the issues above. I have presented the works and thoughts of Andreas Faludi, Teddy Cruz and Fonna Forman and Ronald Real. None of their approaches suggest a “borderless” world. Yet, the offer to re-imagine the essence of the concept. Therefore, I find this to be a positive feature of their work as this turns into a helpful attitude for future planners. First, these works open one's mind to rethink and study territories not only within boundaries dictated by authorities, as seen in the metaphors of Faludi, by the concepts of Cruz and Forman and through the interventions of Real. In that sense, urban planners can be encouraged to explore relations and connections of natural systems and communities beyond a line on a map. Second, all three present changes in the perception of borders that can be done in a gradual shift - from a line to a region, from a wall to a public space, from strict boundaries to overlapping territories with shared interests. This is again helpful as a vast transformation of existing concepts at once might be too intimidating and impractical. Finally, as these projects address borders as a given fact that is here to stay, in one way

or another, they propose ideas for taking actions of protest or change around border areas already today.

Nonetheless, as much as urban planners might be able to contribute to the reorganization of the built environment, they alone will not be able to change border injustices by themselves. Clearly, borders are related to policy, governess, state policies and culture. A much larger societal change will be needed to form new types of permeable boundaries, not to mention the unimagined disappearance of borders. Therefore, an interdisciplinary and cross-section action and thought is needed to break these walls and achieve cross-border cooperation to support a more just society.



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