

POLITECNICO DI MILANO



“Drosscape” as a potential temporary reactivation tool in the area of Porta Romana District, Milan

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ABSTRACT

Italy and in particular, the capital city of Lombardy Region, Milan have been a scene for mass industrial and infrastructural systems in the 20th century. The past and recent production activities and their distribution efforts have been generating huge numbers of industrial plants and big scale infrastructure systems. Today, the city dramatically has been confronted with a challenge of managing wasted and abandoned spaces originated from this massive industrialization process. According to the Province of Milan, a survey carried out in 1988 by Centro Studi PIM indicated that there were 441 ha wasted industrial spaces in Milan urban region. These leftovers of the city are identified as “*drosscape*” areas in which there is a huge potentiality to be reactivated within the urban fabric. Whilst, significance of reprogramming these wasted areas is well-documented in the literature, in practice there are scarce examples of the “*drosscape*” areas that reactivated and reprogrammed in a sustainable way. In parallel, the potentialities turned into practice have not been prioritized for public use and environmental quality so it is clear that these wasted spaces have received little attention and neglected as a left-over until recently. Being one of the main interstitial landscape remain, the area of Porta Romana and its surrounding has been identified as an abandoned space with an increased insecure places around it and low environmental quality that have been blocking pedestrian circulation, accessibility and permeability of the southern part of the Milan. In this context, the aim of this research is to generate temporary design solution in the Porta Romana and its surrounding area as sustainable landscape and urban design oriented proposals to rediscover the potentialities of “*drosscape*” also by presenting future research hypothesis. This study adopts qualitative methodology, and employs documentary research and data collection tools as mapping. Academic literature drew on analysis of the maps and similar examples representing the same situation facing with similar problems and potentialities of “*drosscapes*”.

“Drosscape” as a potential temporary reactivation tool in the area of Porta Romana District, Milan

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A

THEORETICAL FRAMEWORK

A.1 Introduction

A.1.1 Problem

Dealing with one of the world's most historical and oldest settlement whose history goes back to the 7th century is a challenging task. From the times of Gauls who are credited with the establishment of the city to the times of de-industrialization after the World War II, Milan reflects great chaotic coexistence of both history and de-industrialization all over its metropolitan areas. Major transformations that the city has undergone due to de-industrialization reasonably paved the way for emergence of neglected, disrupted and waste urban areas. Coupled with instant industrialization congestion, urbanization has led to constant expansion of the city which seems to have reached its limits. This trend of occupying space has covered huge amounts of all existing urban space where the dense part of the city is located. Occupied and transformed urban spaces allocated to industrial and mass production activities not only caused high densities but also resulted in low quality space, lack of green and public spaces except for historical ones. As the economic and fashion capital of Italy, Milan is passing through different urban transformations due to the shift from industrial process to the postindustrial and informational era. This shift is radically generating interstitial landscape remains as a sort of reaction to the frustration shared by many regulations, economies, governments and cities. Formation of new postindustrial and informational outcomes with new organisms and compositions have drastically contributed to the transformations of cities for their new identities particularly in industrialized capital of Lombardy region Milan. The city of Milan with its new identity has started to live with this new type of landscape remains due to the shift from the industrial to the postindustrial and informational era. These new formations coexisting with modern urbanized part of the city but seem absurd are described as "*drosscapes*". As put by Alan Berger (2007) "*drosscaping*" refers to the act of scavenging on the urbanized surface for interstitial landscape remains. In this context, one could clearly argue that the situation in the metropolitan area of Milan fits the definition of "*drosscape*". Waste areas remained from the deindustrialized process cause problems reflecting the tension between habitability profile of the city and its inhabitants. Interstitial landscape remains and waste areas generate urban spaces without urban security that can be characterized as blight spots in Milan.

Waste areas as “*drosscapes*” constitute urban spaces that block mobility and pedestrian circulation and threaten environment ecologically and sustainable. Berger (2007) contents that the contemporary nature of horizontal urbanization promotes conditions where productive integration and reuse of waste landscapes coexist. “*Drosscapping*”, which by definition means “the placement upon the landscape of new social programs that transform waste (real or perceived) into more productive urbanized landscapes to some degree”, could be the solution to solve problems caused by these waste areas(Berger 2007). Existing literature review demonstrates a gap in studies on Porta Romana in that it has not been studied in terms of reprogramming these waste areas and reactivating them in order to decrease the level of insecurity by increasing mobility, connectivity and environmental quality.

A.1.2 Aim & Objectives

Under the lights of territorial analysis and literature review, some determinant observations could be the keystone of the area for its future reclamation and reactivation. These observations could definitely help us to reprogram of waste areas, that are described as drosscape by Alan Berger, and understand their potentialities in a productive and an efficient way. He describes drosscapes as “the productive integration and reuse of waste landscape throughout the urban world” (Berger, 2007). Within that ideology of reusing these waste areas in southern part of metropolitan area of Milan by revealing their potentialities could help to survive the landscape. Confronting the problems caused by interstitial landscape remains, design-oriented solutions to reprogram these drosscapes could be stated as a cornerstone solution to re-socialize the inhabitants and enable them to reactivate the zone on a productive, ecological and sustainable way. This design-oriented project aims to adaptively reuse and transform of waste urban spaces in an area Porta Romana and Ripamonti close to the center of Milan. It is a design based research project which is trying to bring up some design criteria and proposals with relevant techniques into the current urban design policy of the Lombardy’s region capital Milano. The project site is located in a part of town which contains both the administrative headquarters, heavy infrastructures and lots of industrialized buildings typical for Milan. On the research project main focus is being directed through interdisciplinary approach to set up a formation of design proposals which will bring residents and commuters to use the area effectively and sustainable. In addition, the idea to reuse these waste areas will bring efficient solution to decrease the level of insecurity by increasing mobility, connectivity and environmental quality.

Objectives

- a. To understand historical, social and spatial values of the “*drosscapes*” in the context of an industrial city of Milan. This will help to set a base to trace the roots of the current phenomenon and to record the transformations of the waste spaces.
- b. Investigating and introducing city’s profile with respect to the waste urban spaces: studying the historical relation between the waste areas and the city. Besides, the research focuses on the “*drosscape*” as a public space and the role of these spaces to alter the relation among the city and public use. Studying waste urban spaces within the context of industrialized city as a Milano and their roles about the environmental evaluation.
- c. Focusing on mentioned temporary solutions and design guidelines, the research project attempts to explore the different strategies and installations as much as sustainable and not expensive to alter the quality of life around the waste urban spaces, its effects on the image of the city and more important the level of success in attracting the people to “*drosscapes*”.
- d. Enabling inhabitants to adopt the alteration between the city and waste urban spaces and use these transformed, hybrid and dynamic waste urban spaces with a smart technology by the idea of smart booking system which enhances to use the space on a maximum efficiency.

The above-mentioned objectives will contribute to identify main aspects of this research project related with;

- I. The features and characteristics of urban space in relation to the waste areas and vice versa,
- II. The relationship between the waste urban space, public&private space and the city itself with respect to existing environmental conditions,
- III. Temporary solutions with respect to industrial city concept influencing the quality of public spaces and public life around the “*drosscapes*” and the level of success in attracting people to use these spaces efficiently, ecologically and sustainable.

A.1.3 Question

How can “*drosscapes*” be adaptively re-activated by temporary design-oriented solutions on the area between Porta Romana and Ripamonti axis in Milan?

A.1.4 Methodology

The aim of this section is to present research design and justify use of qualitative approach in line with the research strategy, research objectives and mapping-data collection techniques that help determine qualitative nature of the research. The methodological framework that guides the research project discusses and justifies the research design, research strategy, project and mapping techniques employed in the empirical collection of data for the research.

To accomplish the above addressed objectives, aims and design proposals, the following research methodology is followed which are initializing with a comprehensive study on different literature regarding the research key words - “*drosscapes*”, waste areas, vacant lots, reprogramming waste areas, transformation of abandoned areas, the relation between derelict sites and industrialized areas and etc. - so as to examine and find out different definitions mentioned by scholars and researchers.

Additionally, while focusing on studying researches about literature review, it is also important to investigate the historical evaluation of waste areas around industrialized city of Milan to possess a base about their characteristics and features of these “*drosscapes*” through their historical evaluation and transformations.

Later on, following methodology is conducted by structuring interviews with inhabitants, site survey on both macro and micro scales and lastly researches by on-line references and journals. The method on researching on-line references and journals is carried out by investigating their suitable profile with my design-oriented research project if they play along with same ideas and dedications on the context of industrialized settlements.

A.1.5 Location

The research project is held on the axis Viale Toscana-Viale Isonza on the north intersecting with Via Giuseppe Ripamonti, Viale Giacomo Antonini-Viale Ortles on the South, Via Carlo Bazzi on the west and Corso Lodi on the East including the railway Porta Romana(Scalo Porta Romana) on the southern part of the metropolitan area of Milan. Milan is the fashion and economical capital of Italy located on the Lombardy Region on the north in the border with Switzerland and Alpines. The project areas are allocated on the between axis above mentioned including Porta Romana railway, unused area with railway remains serial of Porta Romana in front of Historical Recreation area Parco Ravizza attached to Viale Toscana and the company Montecatini's former warehouses on the Ripamonti axe. The project areas are selected based on the outcomes of the analysis and researches and in relation to the theme of "*drosscape*".

All selected areas demonstrate the indicators of the term "*drosscape*" and have vital importance in the context of Milan. The problems occurred on these areas forms contemporary problems mainly in relation to the urban security and connectivity which are blocking the habitability profile of the city on the southern part of Milan. At the same time, these areas are of great potentiality to be reactivated and reprogrammed in the short term process to increase the ecological and sustainable living conditions. These could be the main reasons penetrating the selection process of project areas in which might have activation spots in the next future of the metropolitan area of Milan.



MILAN - ITALY



Figure 1.1 : Location of Milan

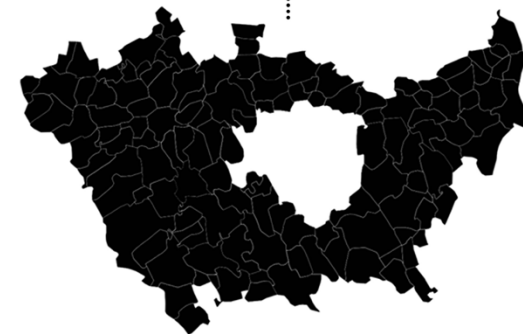


Urban area : 18178,75 ha
 Urbanized land : 14191 ha
 Non-urbanized : 3987 ha
 Population : 1,294,503 city proper
 Urban density : 7122 people/sqkm

→ METROPOLITAN AREA

+

THE GREATER MILAN



(Source : PGT, Rapporto Ambientale, 2009, p.35)

Figure 1.2 : Location of Milan presented through demographic numbers

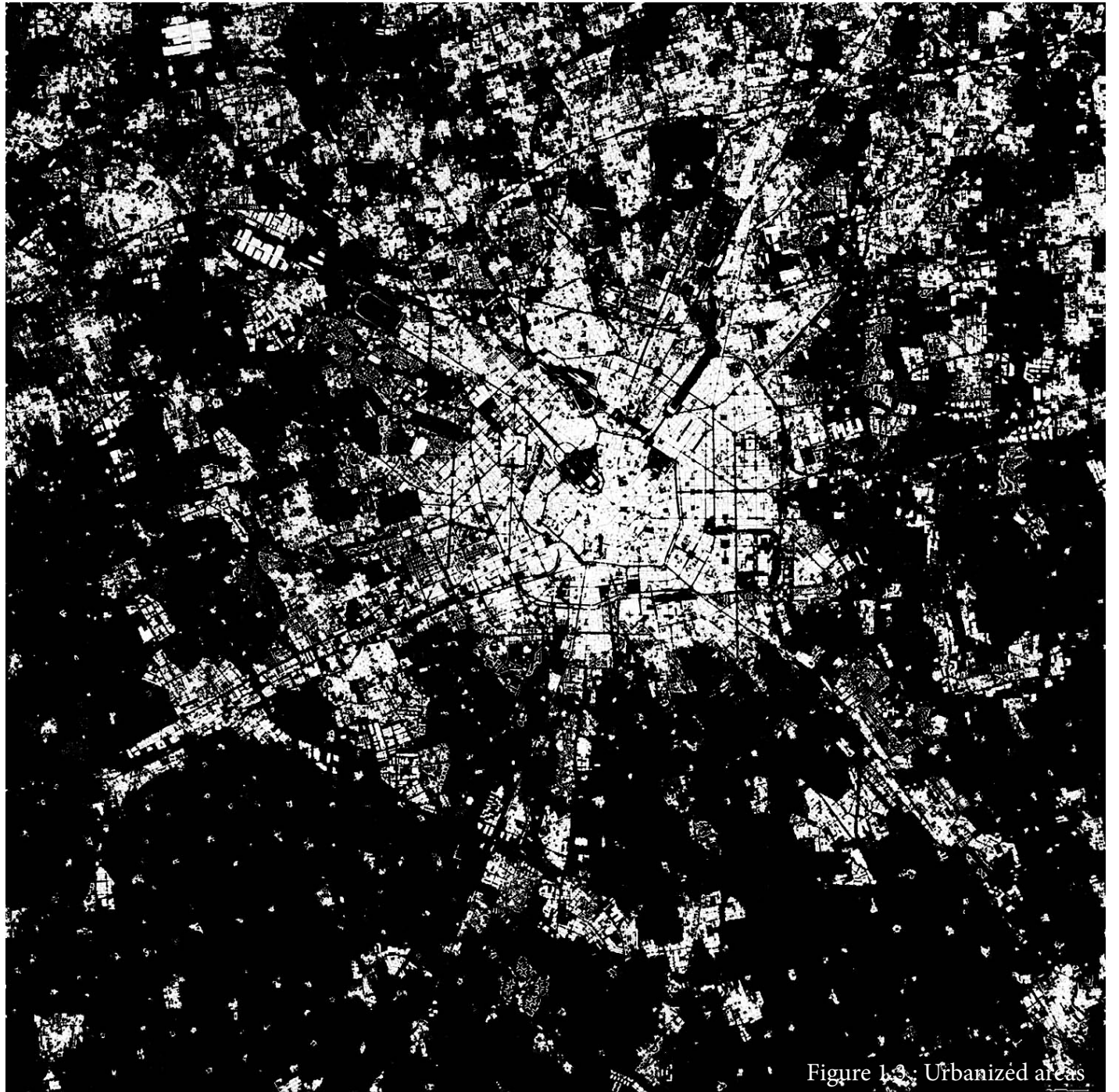


Figure 1.3: Urbanized areas

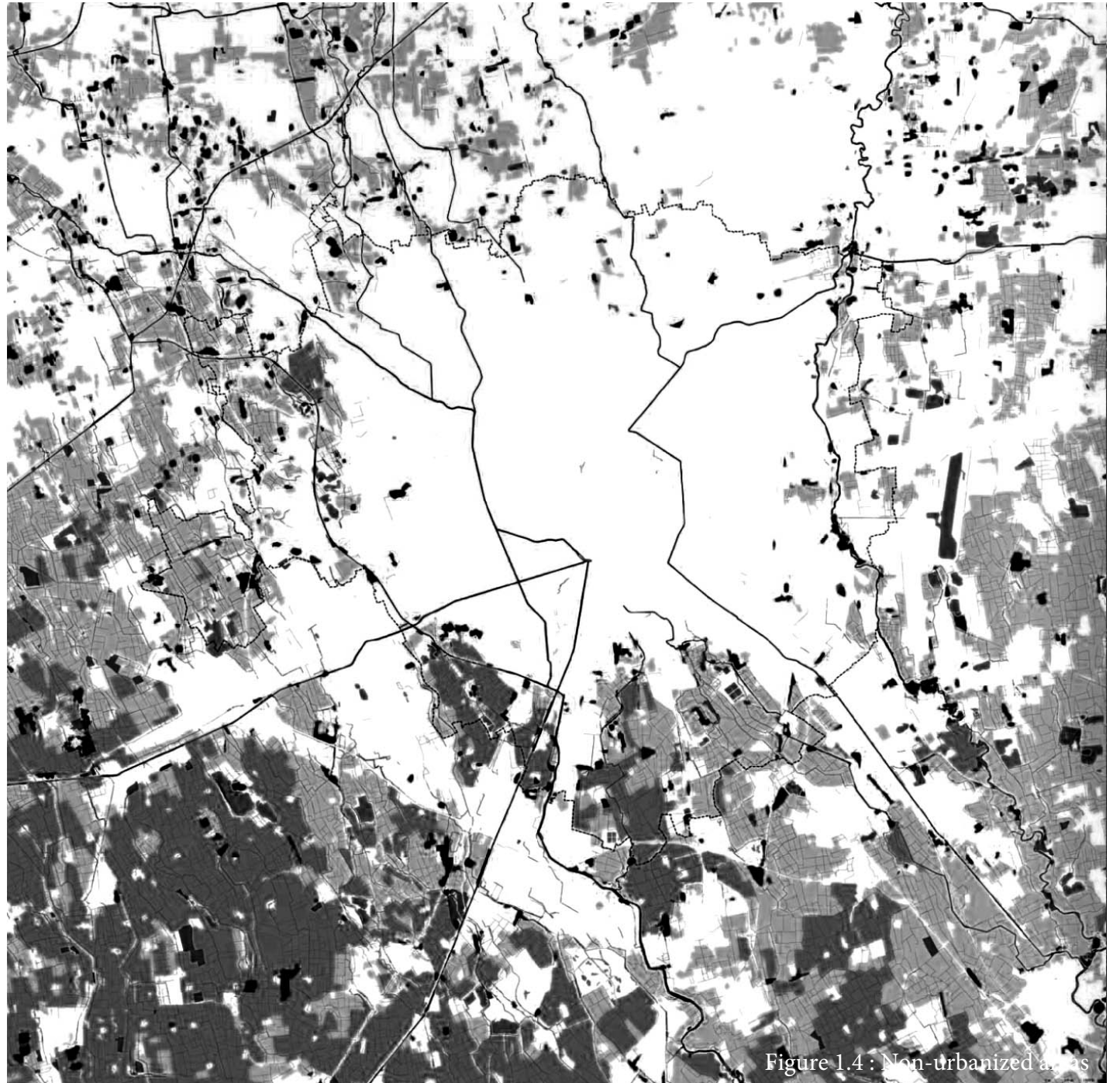


Figure 1.4 : Non-urbanized areas

“DROSSCAPE”.

A.2 “Drosscape”.

A.2.1 What is *Drosscape*?

In order to understand the concept of “*drosscape*”, one cannot deny the fact that it is necessary to search its etymological definition. On the etymological literature it is not easy to find the definition of word “*drosscape*” as it is because it can be utilized as a quite new term coined by Alan Berger. This brings us to search separately terms “*dross*” and “*scaped*” one by one. Etymologically the term “*dross*” means;

1 : *the scum that forms on the surface of molten metal*

2 : *waste or foreign matter : impurity*

3 : *something that is base, trivial, or inferior*

(<http://www.merriam-webster.com/dictionary/dross>)

If we search the term “*scaped*”, it could be defined as;

1 : *a view or picture of a scene*

(<http://www.merriam-webster.com/dictionary/scape>)

The term “*drosscape*” points out that “*dross*” or “*waste*”, is somehow *scaped*, or resurfaced, and reprogrammed by human intension (Alan Berger, 2007). The concepts “*dross*” and “*scape*” can be evaluated as individual terms have different attributes within the context of urban design and planning. These terms combined and coined by Alan Berger represent us spaces which are left over from a man-made process and considered as derelict, blight and wasted areas inside the urbanized areas. He defines the term as waste or vast landscapes which are lack of quality and quantity with respect to urbanization. A term clearly describes the contemporary condition of wasted landscapes over urbanization processes and postindustrial revolution. The existence of “*drosscape*” is an inevitable section of nature created over the urbanization processes all over the world particularly due to the shift from industrial to the postindustrial and informational era. It is a crystal-clear fact that nature produces waste while it is growing particularly in an urbanization process.

Drosscapes are the residual landscapes in nature, -which are abandoned spaces, vacant lots, vast areas, contaminated soils, factory left overs, parking lots, building courtyards and shopping malls- within the urbanized areas. (Alan Berger, 2007) The new condition of wasted landscapes or “*drosscape*” form an interstitial voids between the drivers of cities’ evolution process and explain the condition between these drivers such as economical declines, environmental factors, socio-cultural changes and different planning formations.

The conditions of “*dross*” often represents the existence of instantaneous horizontal sprawl and a previous economic and industrial organization which is no longer services to nurture the habitability profile of the city and community (Alan Berger, 2007). As from this perspective, “*dross*” could be evaluated as a productive spaces in which can be reused and reprogrammed for the benefit of communities. As an urban designer, the main concern and duty to regenerate the term “*dross*” could be the way dealing with the productive integration and reuse waste areas according to Berger. So as to carry out the task of integration and re-usage of the wasted landscapes, initially we “*as urban designers*” have to describe these waste areas and clarify their creations. Additionally, designers should have a role to form circumstances and opportunities to rethink the future scenarios of these wasted landscapes to provide foreseeable future for all communities. By identifying creations of “*drosscape*” or in common wasted landscapes, “urbanization will no doubt be controlled by a wider array of factors in the future(Berger, 2007).

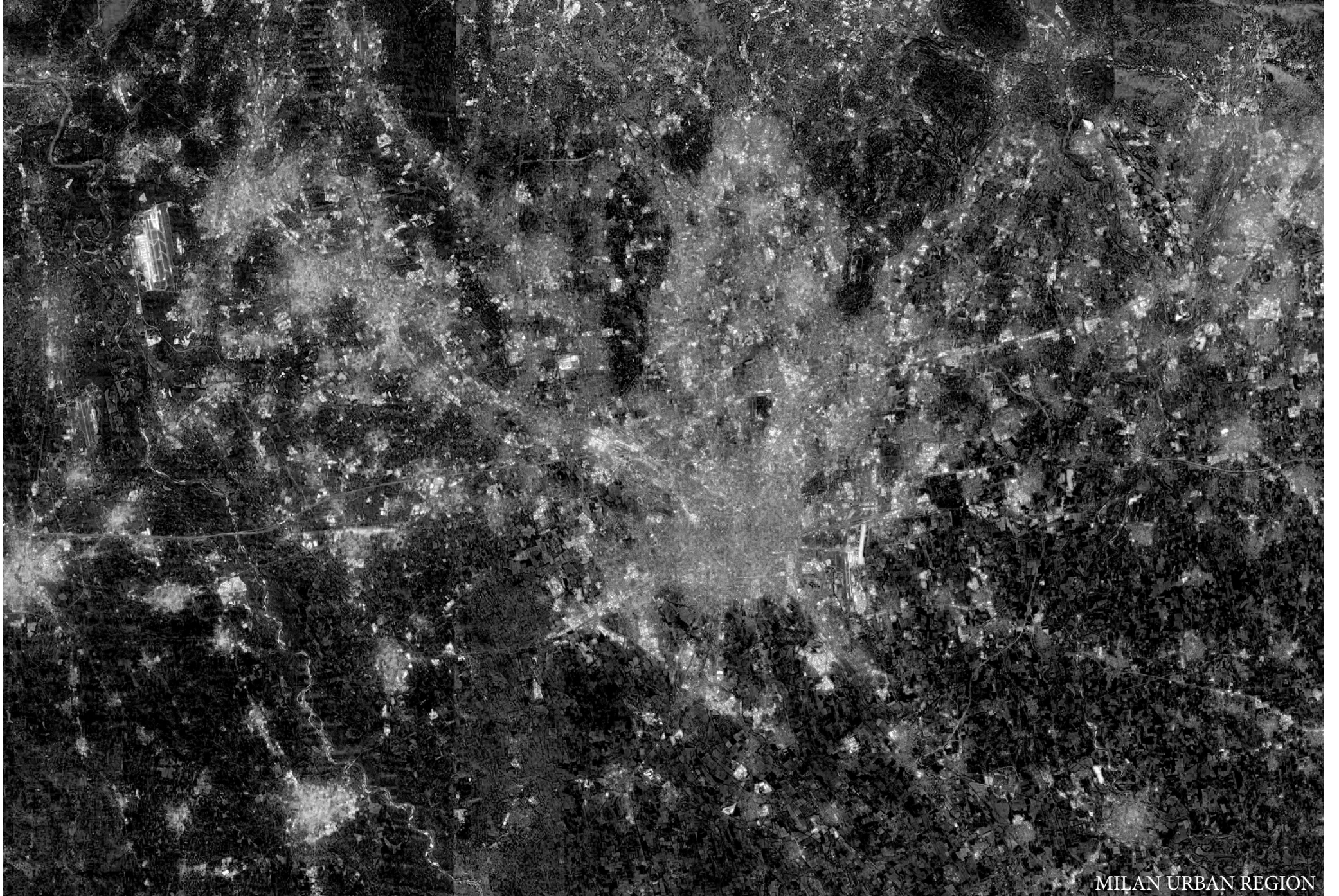
A.2.2 How is *Drosscape* formed?

The territories, cities and landscapes both in Europe and USA have undergone an economic and industrialized transformations based on a metamorphosis due to fast urban development or a technological and productive leftover. Those productive and economic cycles represent new contemporary forms of wasteland. According to Berger, the notion of wasteland transformations according to those technological and economical concepts construct the new original “*topographies*” defined as “*drosscape*” emerging from economic and productive cycles. According to some, wastelands might be seen an unpleasant consequences of our cultural, social and economical values united with land use. However, Berger defines these spaces productive locations and interstitial landscapes in between urbanized areas. He states that the formation of “*dross*” come into views with two primary processes. Initially, nowadays instantaneous horizontal sprawl finalizes these waste areas namely “*dross*”. Secondly, residuals of previous economic, productive and industrialized regimes that are mobilized by the rough and rigid decrease in transportation costs for goods and people over the centuries(Berger, 2007).

The notion of that emergence of “*dross*” might be defined as in two steps which are conglomeration and abrasion. As for the process of conglomeration, the process of cities’ expansion take the leading role by occupying more territories. The phenomena of urban sprawl forms dispersed territories so the more cities expand the more they occupy spaces. Subsequent to that process, creating built environments saturate urbanized regions with wasted landscape on a dense and conglomerating effect. The peripheries and outer parts of cities are somehow utilized or occupied partially and these horizontal sprawl necessarily transformed the topographical condition of the territories highly contaminated and hazardous. The expansion of factories and manufacturing plants might be also thought as a forerunner force to agglomerate the territory and interpret of wasteland concept. The agglomeration of cities and manufacturing facilities of factories intentionally finalize the first step of the notion for the emergence of “*dross*”. The process of abrasion is actually the process of abandonment in which the decay process of cities might be observed after the shift from industrial to post-industrial and informational era. Due to the shift from industrial to postindustrial and informational era, a huge number of factories and manufacturing plants with their facilities formed huge, black holes with abandoned areas.

The process of abrasion might be defined as a process of de-industrialization. After occupying spaces and agglomerating cities, the changes in processes of production methods, consumption habits, economy and political regimes force territories, cities and people to abandon the land to generate new hierarchies and location strategies. As if we think two processes whole, one cannot deny the fact that these processes have opposing outcomes and tactics which are the first by occupying the land and the second abandoning the land to occupy more. As a consequence of these processes, the location of “*dross*” might be formed in two main patterns in which the de-industrialized nucleus and the expanding border and the transitional landscapes in between.

As for A. Berger and Trancik, all these new types of topographical formations and wasted landscapes are the outcomes of urbanization processes linked with post-industrial phenomena which are driven by economical and consumerist effects. Additionally, as Lynch(1981) refers to wasted landscapes as a consequences of fast urban development occurred in post-industrial period. He simplified the concept of wasteland by considering it only as a natural consequence of rapid horizontal growth and productive leftover. Both scholars consider the concept of “*drosscape*” or wasted landscapes naturally is a part of economical and environmental changes on the urbanization process. On the contrary, political regimes and socio-cultural changes determine also the concept of “*drosscape*”. the polarization of public and private initiatives on a planning disciplines and disorganized, unbalanced political decays accelerate also spatial, environmental and contextual problems which cause neglected, blight, derelict and wasted landscapes in the urbanized areas. In parallel, the causes leading to the formation of “*drosscape*” sit upon all these economical, social, political and environmental processes as a whole. However, as for my thesis topic, the main direction of “*drosscape*” formation go along with the factors and consequences related with spatial elements identifying the “*drosscapes*” as a residual and wasted landscapes in the city of Milan particularly between axe Ripamonti and Porta Romana.



MILAN URBAN REGION



WASTED CUSTOM AREA - SEGRATE



EX AREA FALCK - S.SAN GIOVANNI

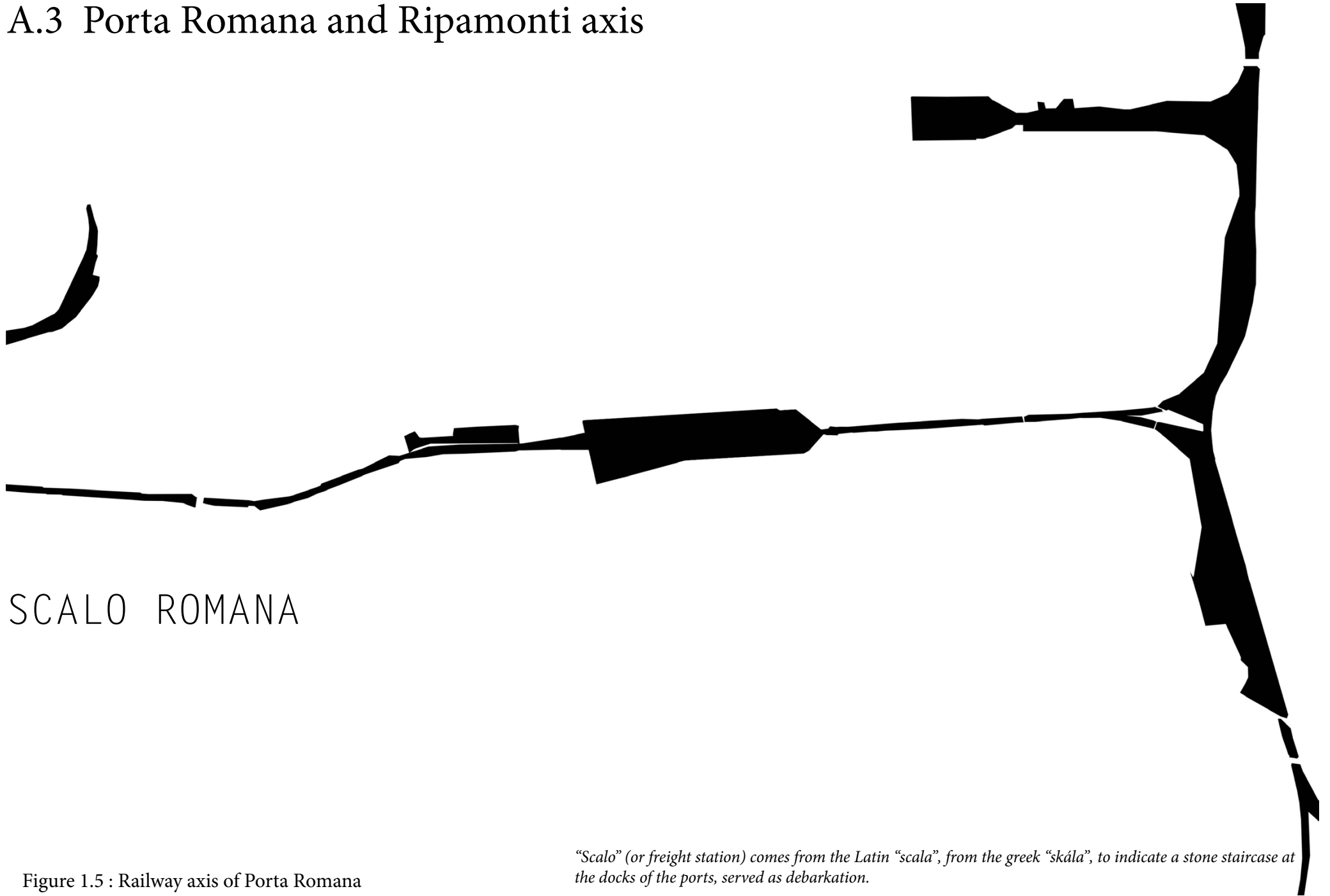


UNUTILIZED AREA IN BETWEEN INFRASTRUCTURES - CORVETTO



RAILWAY YARD (SCALO ROMANA) AND ITS EXTENSION - PORTA ROMANA

A.3 Porta Romana and Ripamonti axis



SCALO ROMANA

Figure 1.5 : Railway axis of Porta Romana

“Scalo” (or freight station) comes from the Latin “scala”, from the greek “skála”, to indicate a stone staircase at the docks of the ports, served as debarkation.

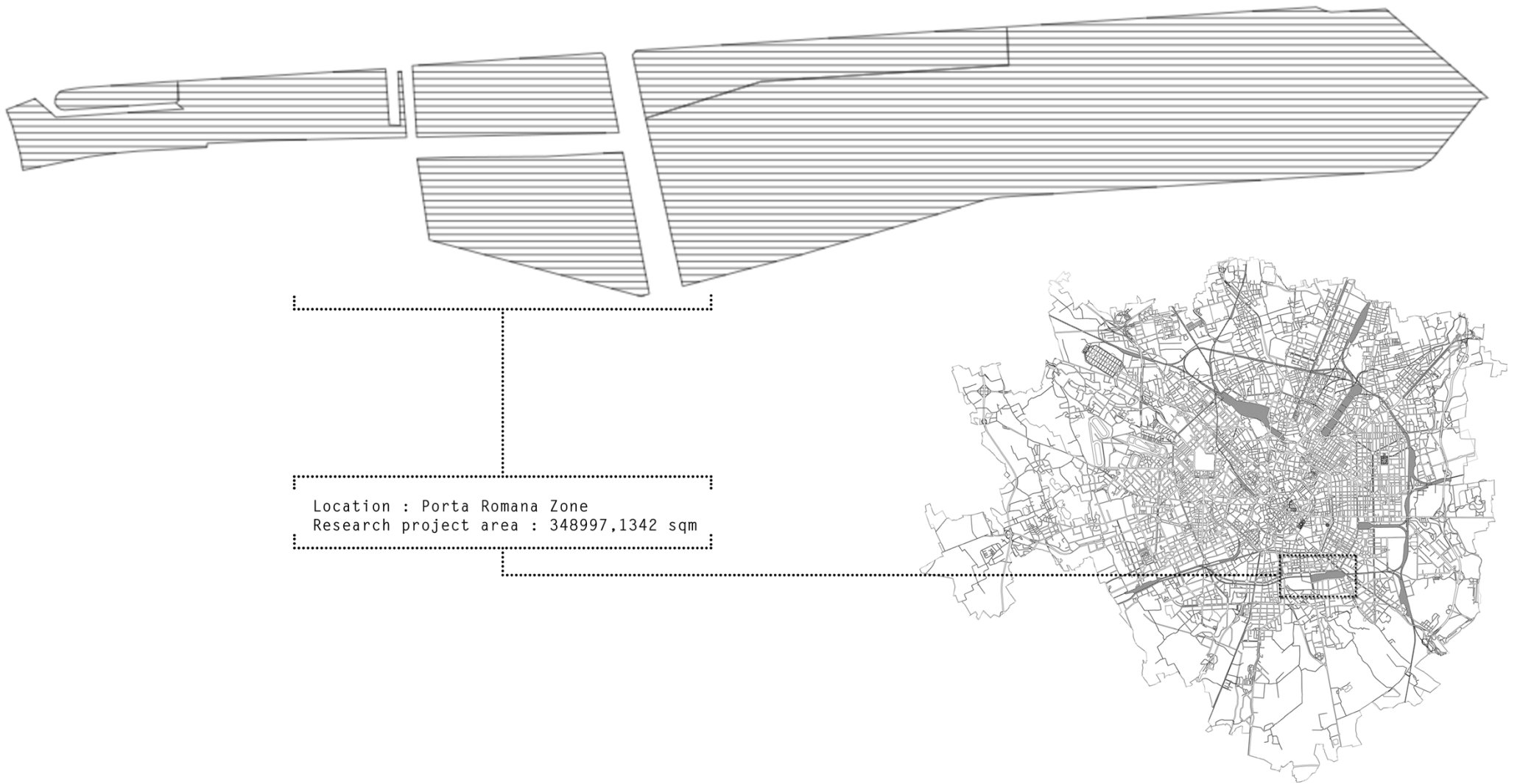


Figure 1.6 : Location of Porta Romana and research project area

A.3.1 The territory & Historical overview

Dating back to 7th century, history of Porta Romana and Ripamonti axis reflects an significant heritage finds in Milan which makes the city a representative and resourceful not only in a view of its fashion and design brands but overall. The city has mostly featured with its historical background in a coherence development. The creativity which the city has itself has effected planning criteria since beginning of 19th and 20th century, as an explicative key of the most modernist and reformer urban revision assets depending on advent styles of living and working. Milan offers a fascinating laboratory for unravelling these historical layers that create the spatial layout of a European city. Milan has played a key role in both country's industrialization and environmental process and might be considered as a gateway to the centers of economic and cultural modernization in Europe. From this perspective, classic and institutional forms of land-use zoning and planning are surpass by encouraging city plans which include a mix-use of urban transformation projects. In parallel, this new mix-use idea generates innovative, avant-garde and reformist synergies between different activities by attracting instantly various typologies of users, promoting a social mix and supplying provisional variations (Bonfiglioli, 2001) in use, hence rebuilding hybrid and energetic previously "*abandoned areas*" such as former industrial sites. The roots of Milan's industrial characteristic are derived from its territory itself with a distribution of its industrial landscape and heritage existence which spread around all parts of the region explicitly. The southern part of Milan named as a wet-plain was a place where it is still possible to see main agricultural activities commonly since the Middle Ages. Particularly from the mid-19th century, the territory in the southern part has been dedicated to carry out production activities mostly along the canals and rivers in which it is possible to see also factories locating their industrial activities. Although first industrial activities had been established to a poor agriculture, such as silk industries, later on production activities had been replaced with a new type of model representing facilities with housing, railway infrastructures and large-scale industries, for instance electricity and distillery that continues today and has a contemplation of the contemporary industry concept. At the end of 19th century railway infrastructure created the concentration of factories close to the main yards such as large-scale industries emerged around the city core along the urban railway ring, particularly at the intersection of the ring with the railway line connecting Milan to Central Europe (through the Gottard Tunnel).

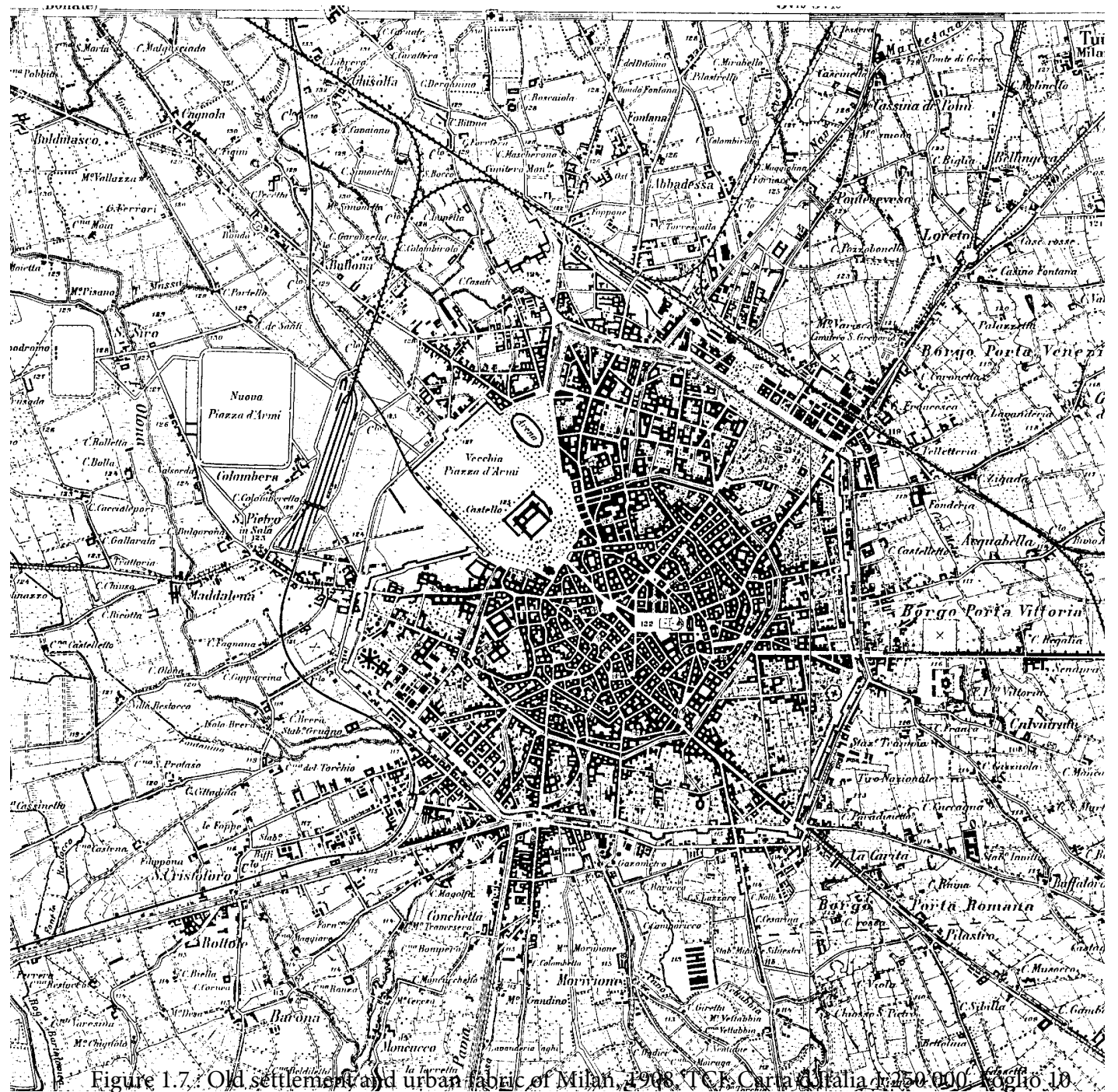


Figure 1.7. Old settlements and urban fabric of Milan, 1908. I.C.K. Carta d'Italia n. 250.000, foglio 10.



Figure 1.8. Old settlement and urban fabric of Milan presented through land-use, 1908. TCI, Carta d'Italia 1:250'000, Foglio 10



Figure 1.9. Railway axis and directions, Milan, 1908, TCI, Carta d'Italia 1:250'000, Foglio 10

RIORDINAMENTO DEI SERVIZI FERROVIARI DI MILANO

Tav. 1

PLANIMETRIA GENERALE

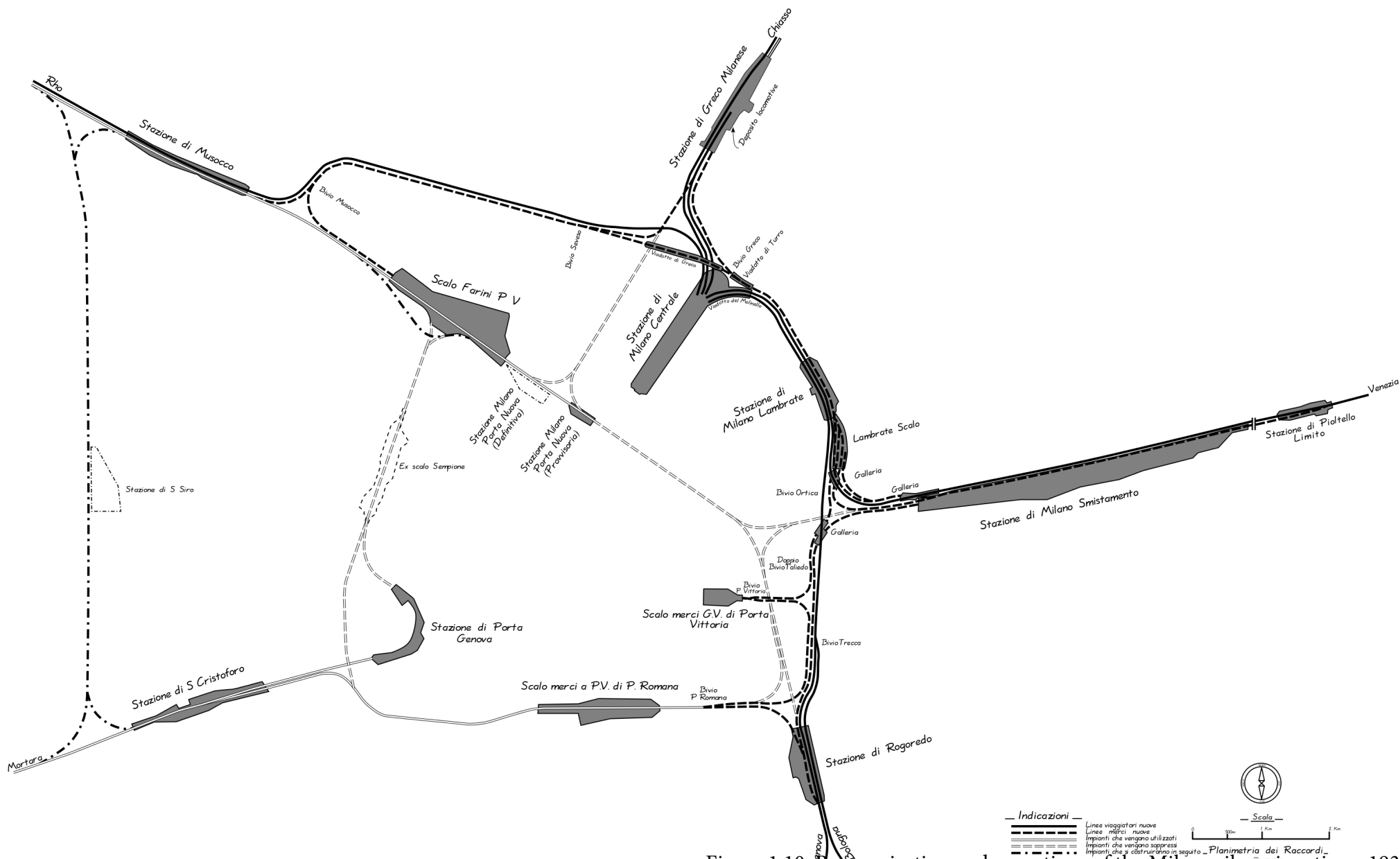


Figure 1.10. Reorganization and operations of the Milan railway junctions, 1930.

At the beginning of the 20th century, large-scale industrial plants and urban sites reinforced and constructed at the municipal borders such as areas close to Porta Romana and Ripamonti. Additionally, due to the energy supplied by close by electric power plants allocated on the Adda River, the area on the north also came into eyes as a potential and base for big industrial companies such as Pirelli, Breda, and Falck. This situation of industrial allocation on the Milan plain represents the largest and biggest industries with their facilities in cities' history. After 70's and 80's, process of abandonment and resettlement has started to take place in city of Milan and its peripheries where industrial activities were carried out. "Within Milan municipality at the end of the 1990's there was about 10 million square meters of abandoned and waste areas; on the contrary, in the northern part of the region, many industrial activities were being maintained" (Mieg, Oevermann, 2014). At the end of 80's and in the beginning of 90's the redevelopment and regeneration process of large-scale former factories, industrial plants and urban sites has started to taken place with huge transformations by abandoning and leaving wasted places all around the city. The area Porta Romana and Ripamonti are the areas where had one's share of these transformations. The continuous development of manufacturing processes and their transformations inevitably reflects on the city spaces and on the industrial sites particularly on this area.

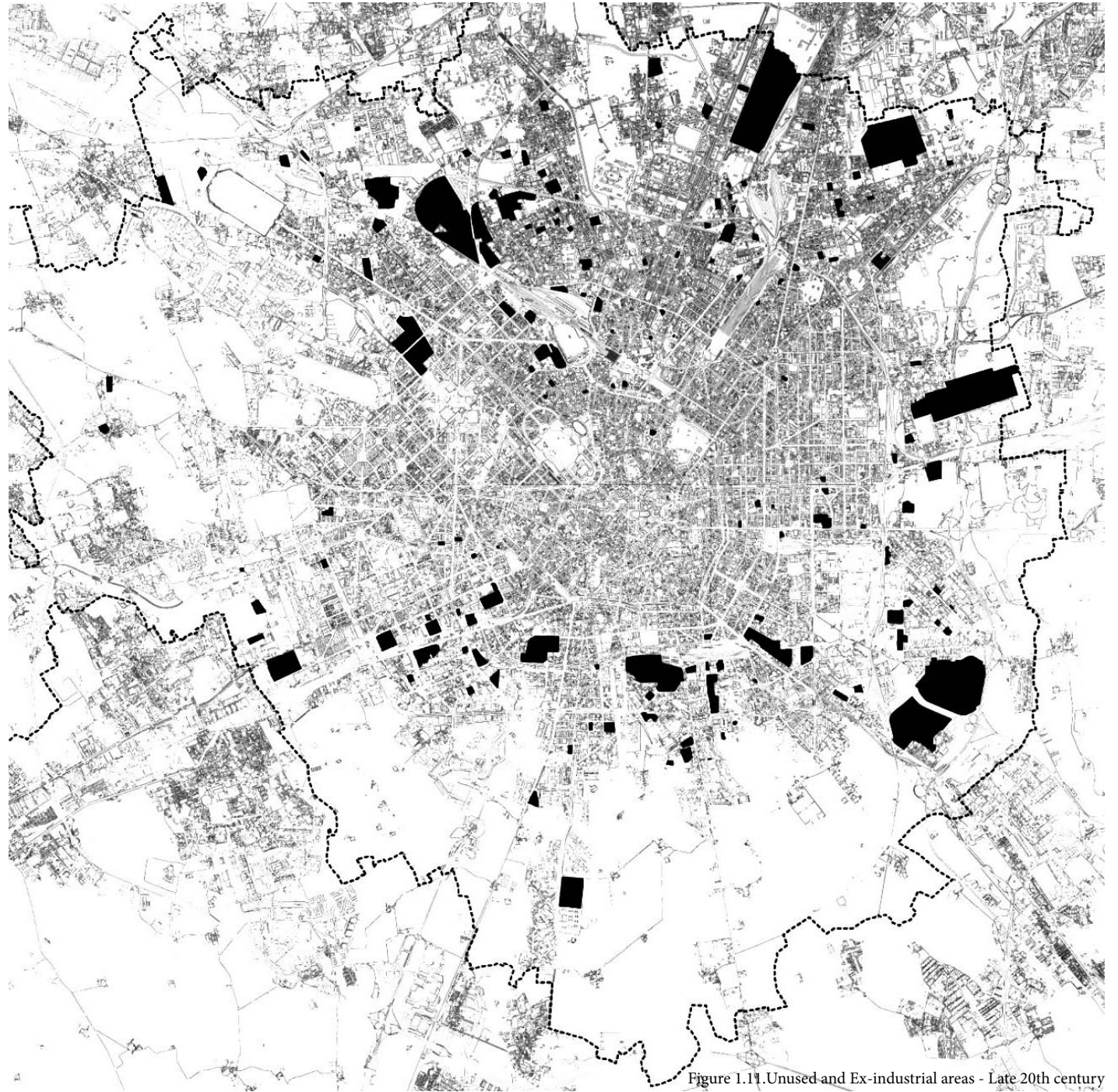
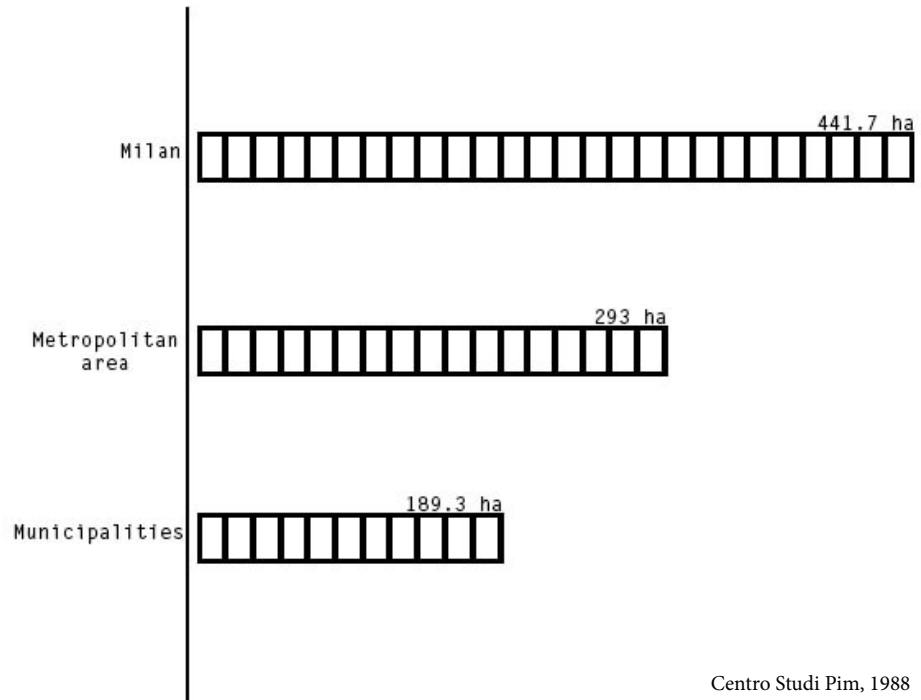


Figure 1.11. Unused and Ex-industrial areas - Late 20th century

Wasted and abandoned industrial ares in the province of Milan



Public Transportation-Wide area
 Railway, Underground and Local
 Public Transport(Hub and Inter-
 changes)

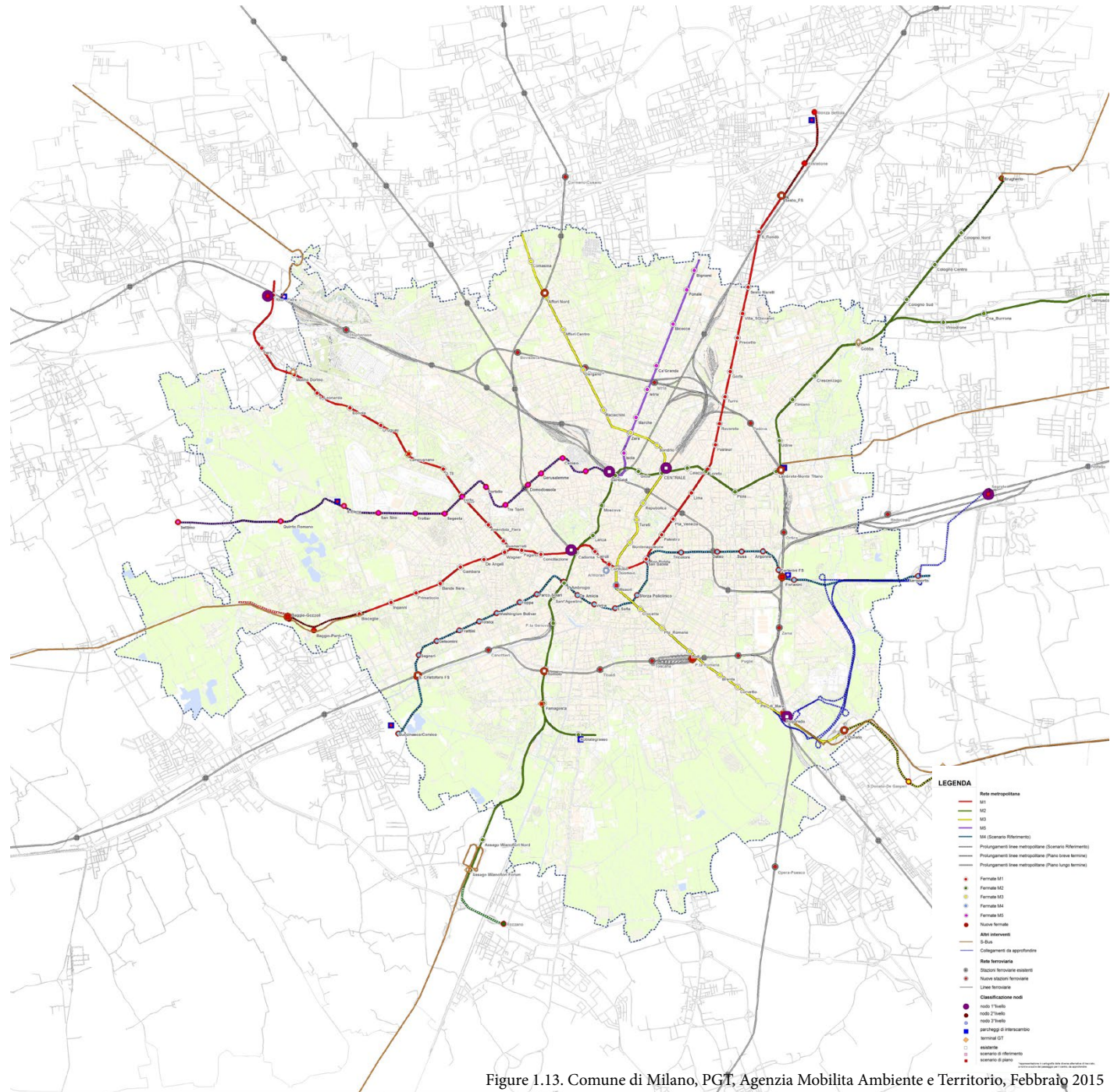


Figure 1.13. Comune di Milano, PGT, Agenzia Mobilita Ambiente e Territorio, Febbraio 2015

Ped-Shed Analysis of Underground Transportation

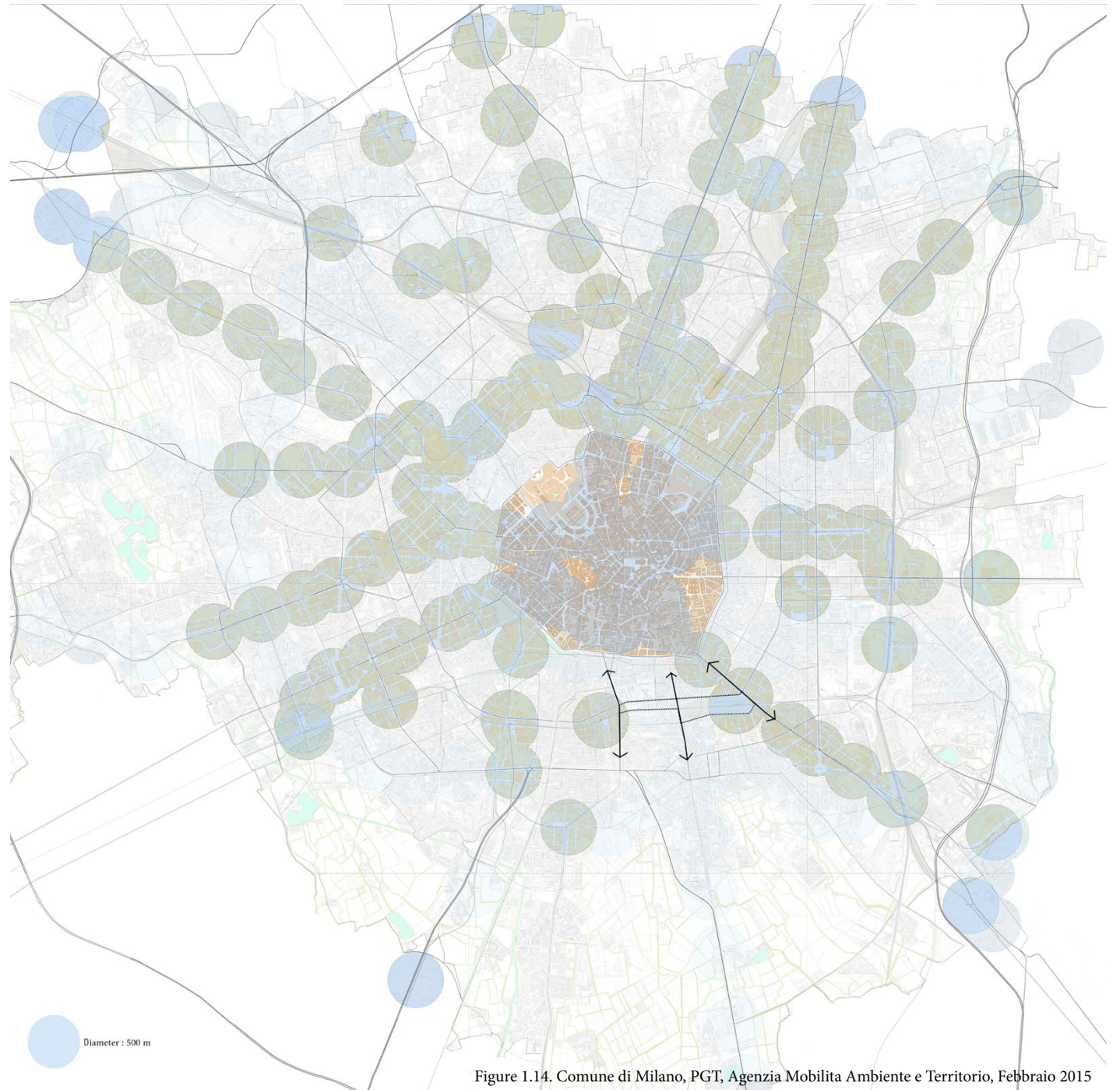


Figure 1.14. Comune di Milano, PGT, Agenzia Mobilita Ambiente e Territorio, Febbraio 2015

Street Network

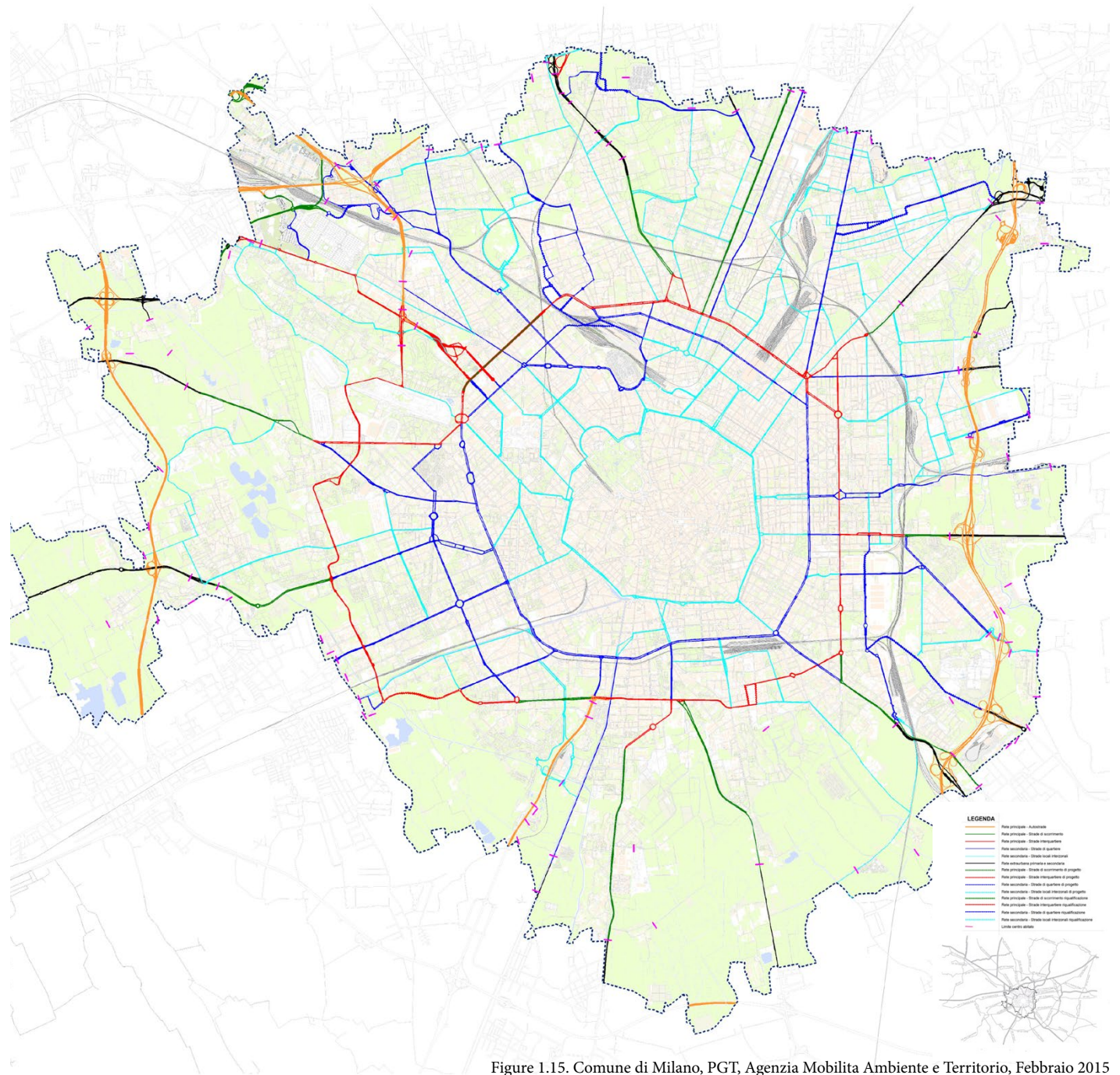


Figure 1.15. Comune di Milano, PGT, Agenzia Mobilita Ambiente e Territorio, Febbraio 2015

Environmental personal services
and technological infrastructure

Existing railway circulation

Porta Romana and Accessibile
Routes

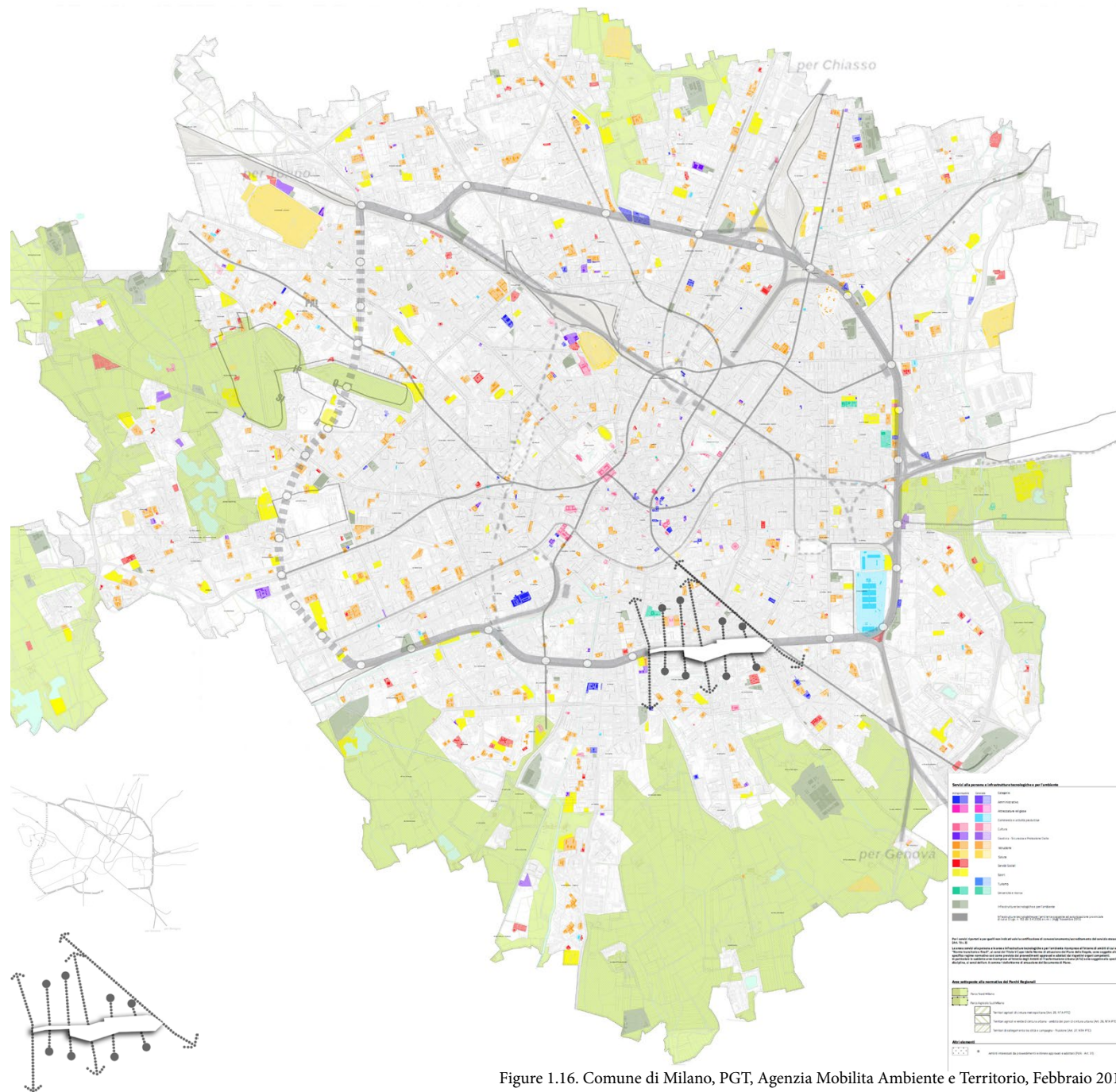
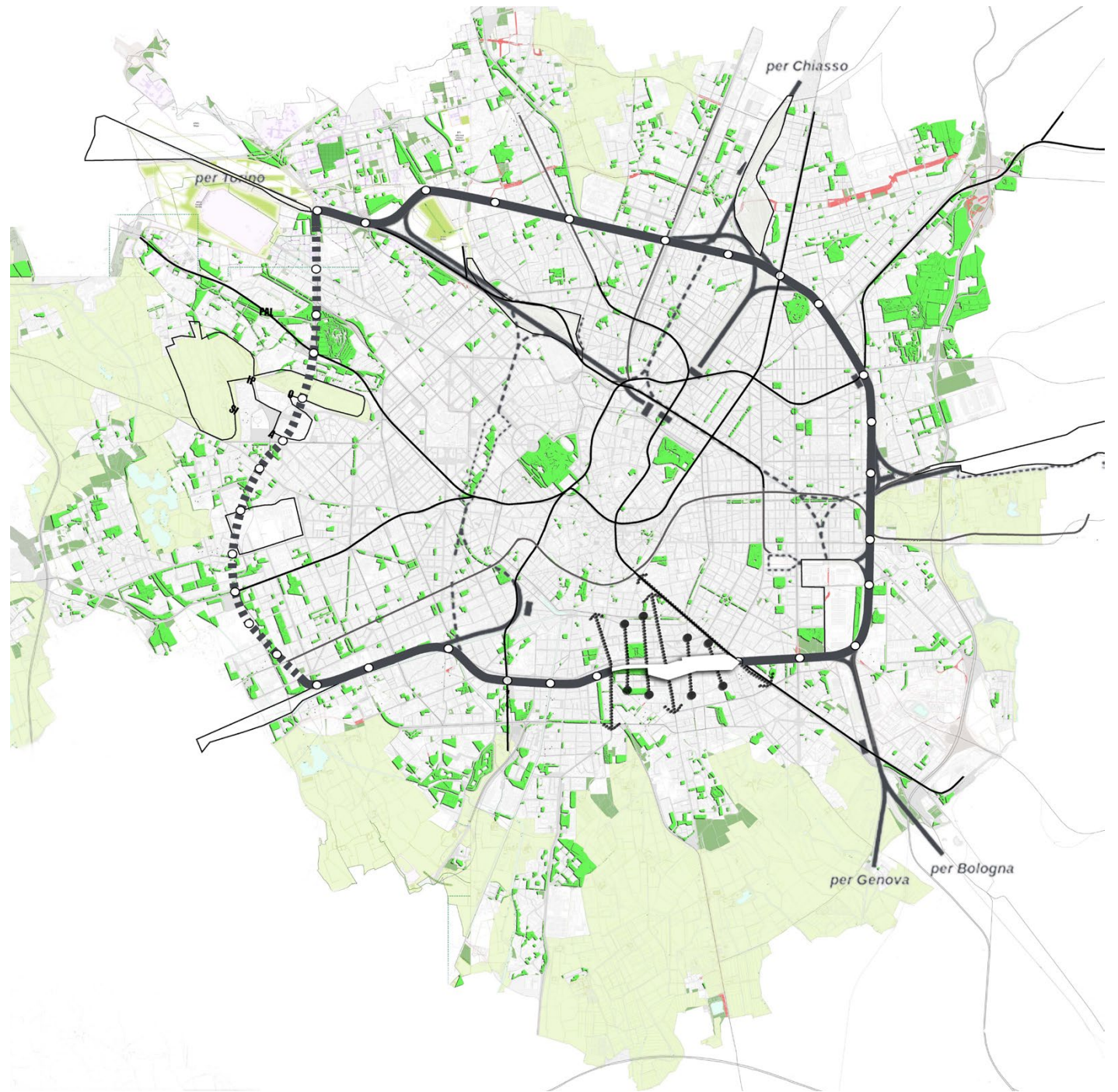


Figure 1.16. Comune di Milano, PGT, Agenzia Mobilita Ambiente e Territorio, Febbraio 2015

Green Infrastructure



Urban Public Transport - Speeding Network (Linea T and fast corridors)

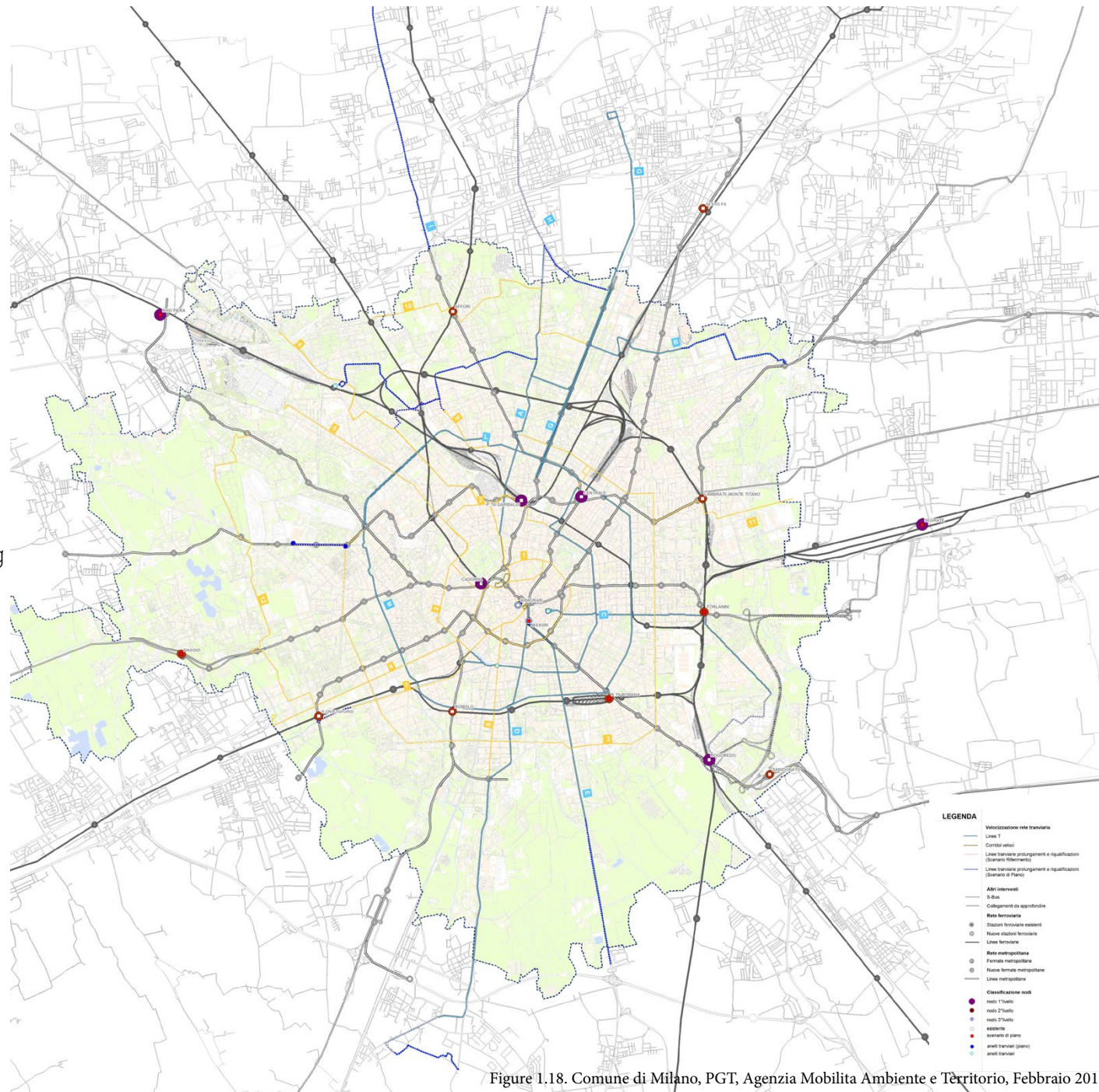


Figure 1.18. Comune di Milano, PGT, Agenzia Mobilita Ambiente e Territorio, Febbraio 2015

Assessment Modeling-Road Network
Performance

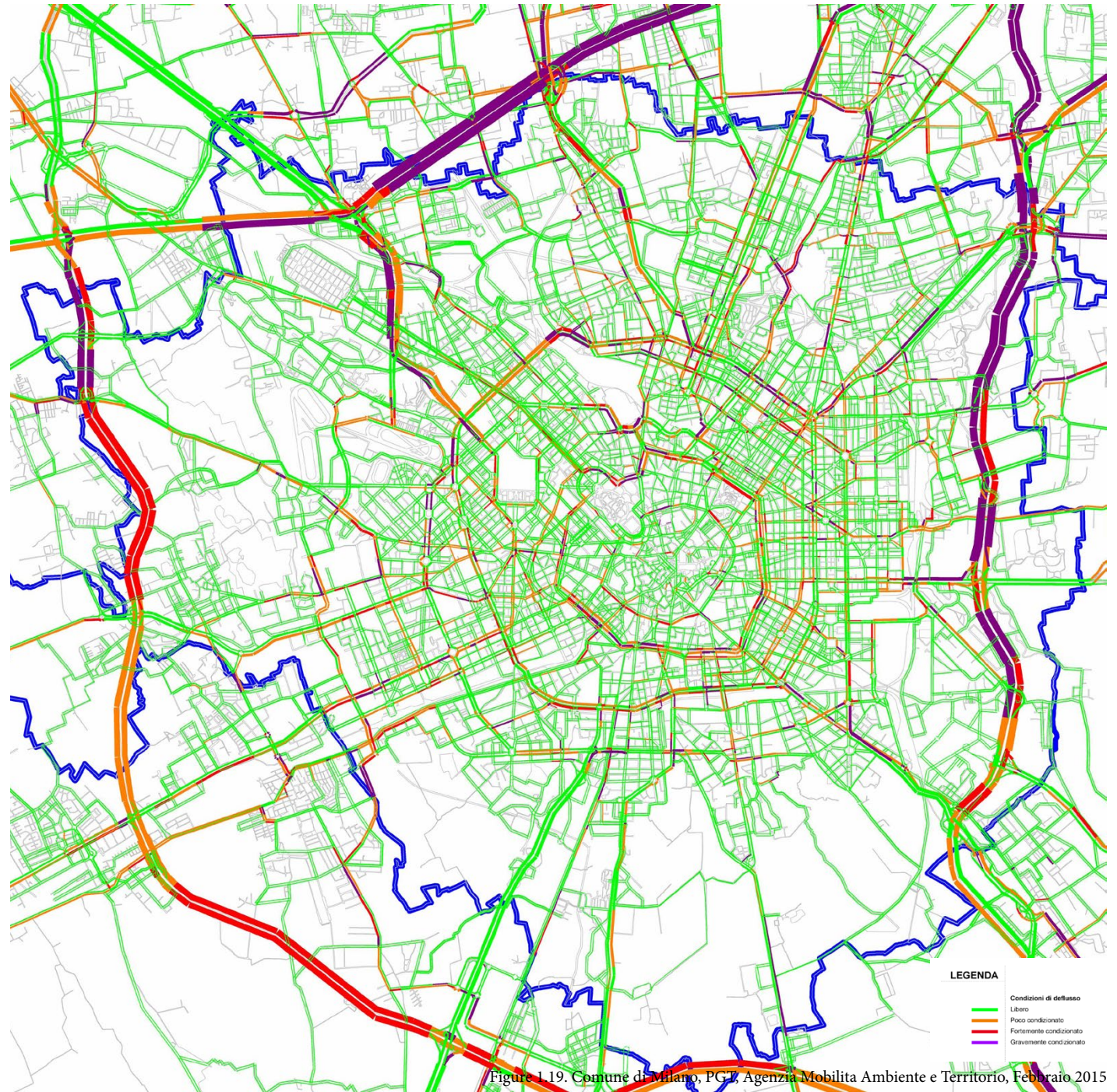


Figure 1.19. Comune di Milano, P.C.T., Agenzia Mobilita Ambiente e Territorio, Febbraio 2015

Assesstment Modelling-Passenger
Flows(Local Public Transport Sur-
face)

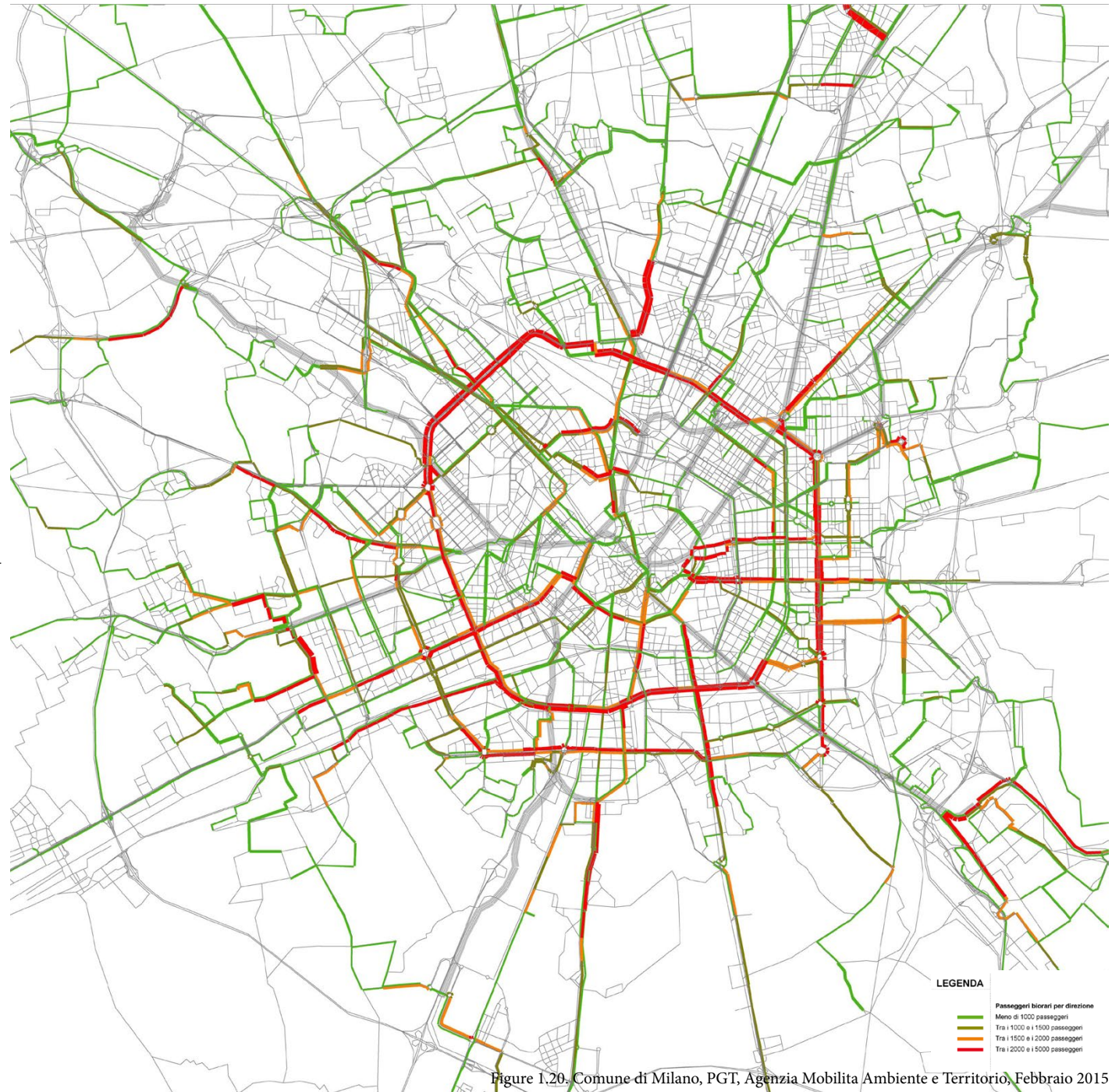
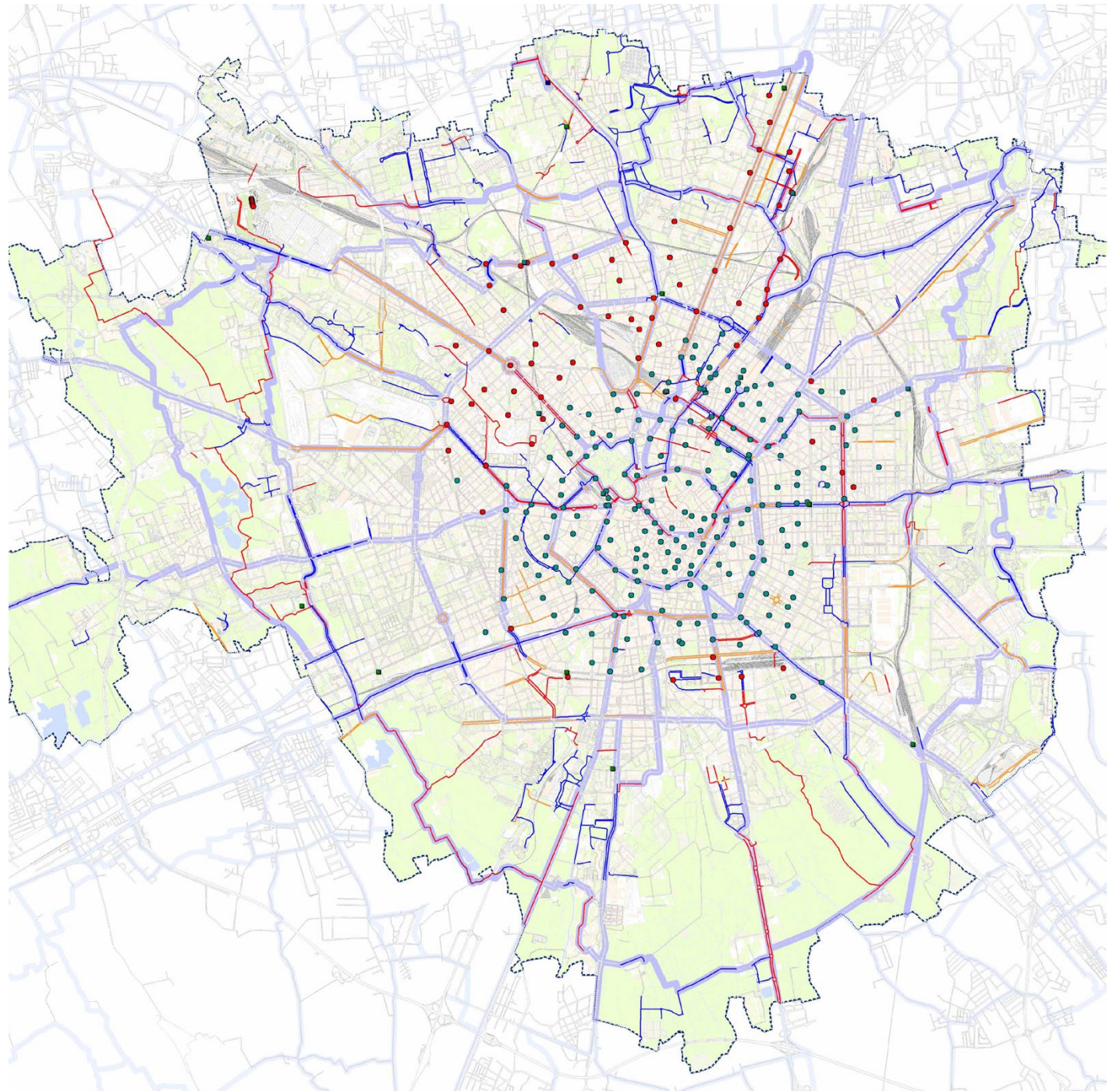


Figure 1.20. Comune di Milano, PGT, Agenzia Mobilita Ambiente e Territorio, Febbraio 2015

Bicycle Mobility



In the case of Porta Romana and Ripamonti axe, the large brownfield sites such as railway extensions and the former derelict industrial plants that had long been a significant part of the urban landscape, which are an indication of the process of profound economic and social transformation that has redesigned it as a city for the tertiary sector. South Milan still retains vestiges of its industrial past and some areas that were once occupied by large factories are like open wounds on an expansion that is still ongoing. That said, many of the old spaces have already been transformed with new uses and some significant portions of the old industrial suburbs have been reorganized around their presence and their operations although some are not. The spaces which are neglected and blight due to the shift from industrial to post-industrial and informational era and could not benefit efficiently from transformation processes come into our eyes with a great potential to be reactivated for the benefit of inhabitants and people of the city. The transformation process for industrial areas in Milan urban region has taken place through urban design master plans for large former industrial areas, mostly having only a few industrial activities in the new mix of uses, or they occur on a building by building basis, via some architectural projects focusing on adaptive re-use within the historic mixed-use districts, where creative industries are leading the re-use process (Mieg, Oevermann, 2014). As for the Southern part of Milan particularly after 90's many private and public initiatives and entrepreneurs found the Porta Romana and Ripamonti axe as an available and a potential land to construct again new factories with lower prices and high accessibility. Waste areas or "*drosscapes*" structure a significant landscape skyline in which city might have a chance to rise from its ashes of these derelict sites. Today, the area shows us a huge proportion of land which is disused, abandoned and "*dross*". The population of the area also represents us the dramatic situation by revealing the fact that all of the area's inhabitants have elderly relatives who worked at the large factories and industrial sites that have since been abandoned (Mieg, Oevermann, 2014). The territory today has a huge potential to be reactivated and reprogrammed in favor of inhabitants because the areas, which are disused, neglected and blight or namely "*drosscapes*" as Alan Berger defines, promotes the phenomena of the combination of built heritage landscape and new innovative production activities as a city brand. Security problems, lack of connectivity between residential areas and recreational spaces, decreased level of public health and lack of pedestrian circulation caused by these wasted, neglected and blight areas have been always the main problematic conditions on the area.

Security problems, lack of connectivity between residential areas and recreational spaces, decreased level of public health and lack of pedestrian circulation caused by these wasted, neglected and blight areas have been always the main problematic conditions on the area. Thanks to some successful transformations those blight areas had been transformed into some residential and mix-use communities but others are suffering. This thesis aims to propose a project which generates a new program by reactivating those “*drosscapes*” for the sake of inhabitants.



Porta Romana, Milan

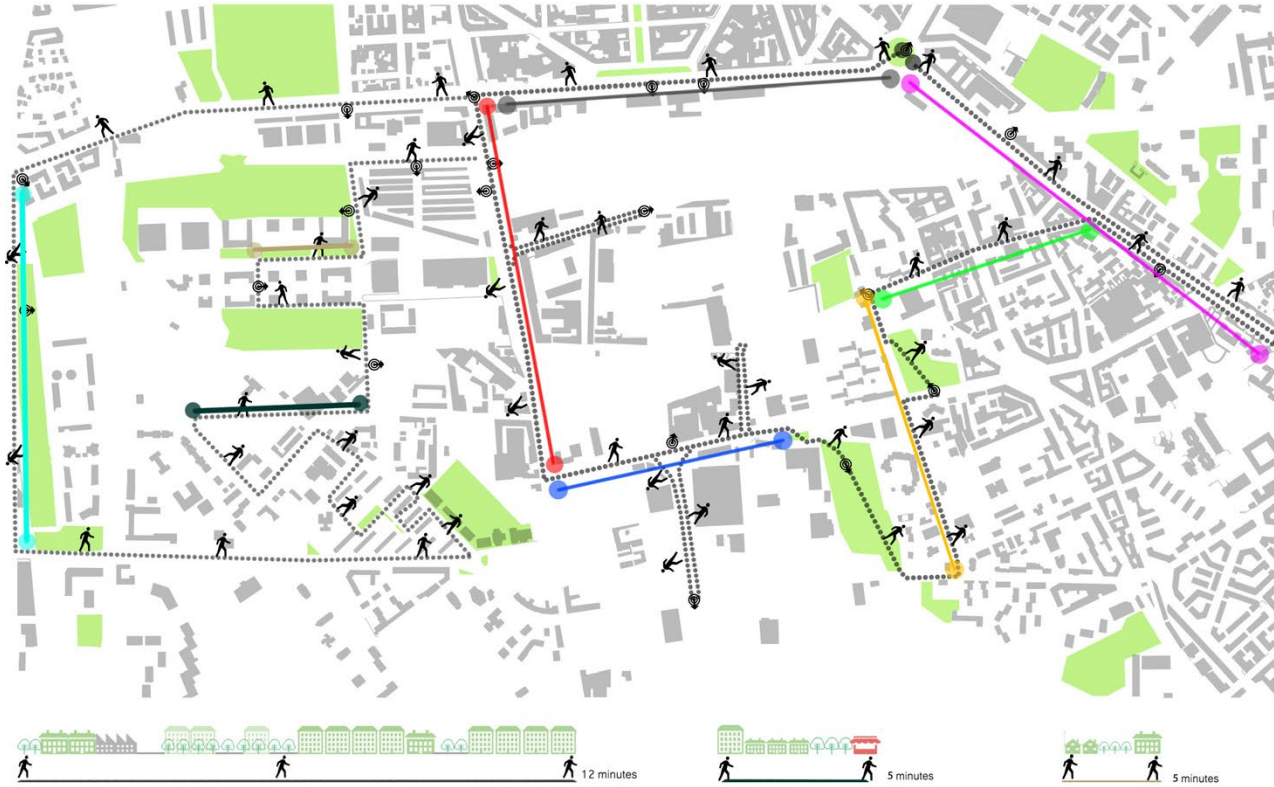


Porta Romana, Milan



Porta Romana, Milan

COGNITIVE MAP



DISTANCES

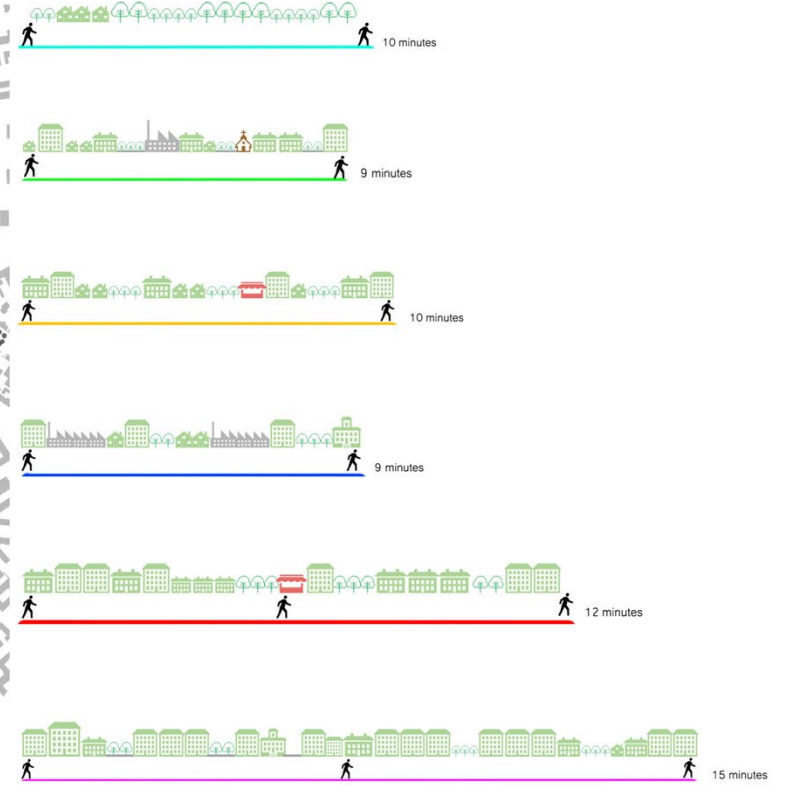


Figure 1.22 : Cognitive map presented through distances





Figure 1.23 : Contextual structure quality

The identification of the compositional structure of the existing building plots and analyze of the quality of the buildings with a focus on habitability, vegetation and access.

GREEN QUALITY

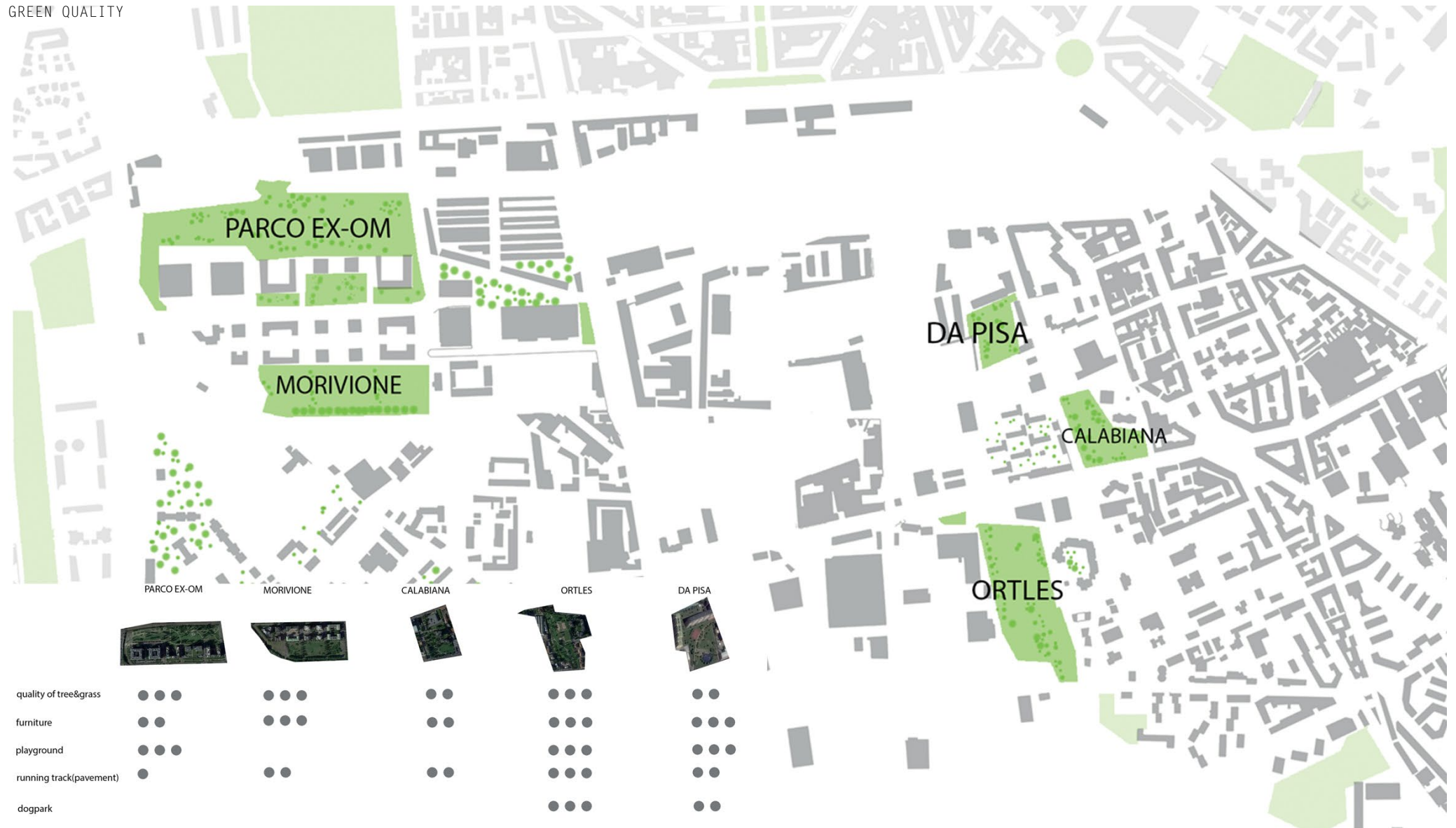


Figure 1.24 : Green quality.

Analyze of the public green areas and identification of the main parks on a local scale

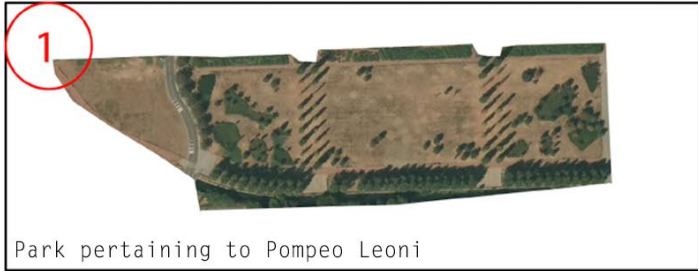
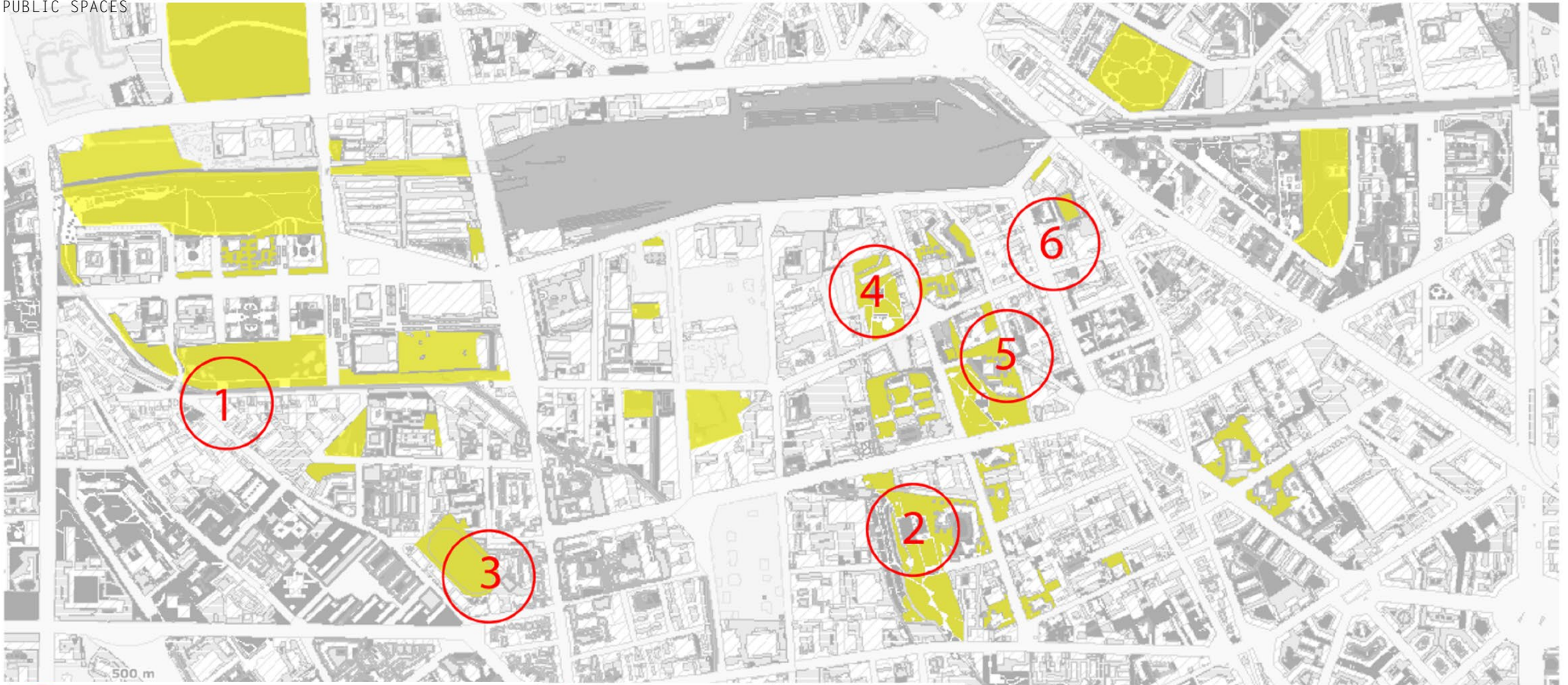
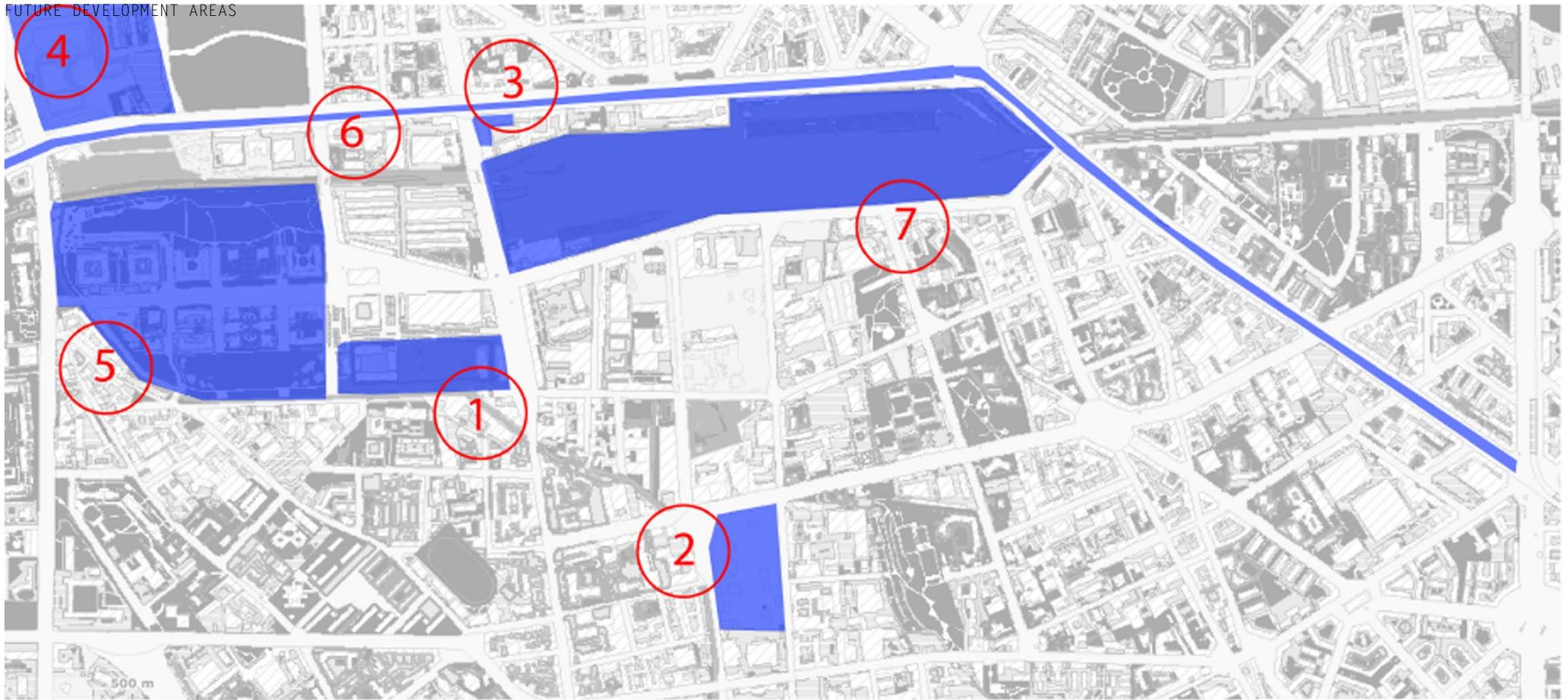


Figure 1.25 : Public spaces.

Mapping and localization of most used public areas on the territory

FUTURE DEVELOPMENT AREAS



Esselunga

Symbiosis

Santeria Social Club

New Bocconi Campus

Project of Pompeo Leoni

Restructuring Roads

Future Develoepment of Ex-scalo Porta Romana

Figure 1.26 : Future development areas

Identification of all areas of transformations, which have occurred in the area and future constructions.

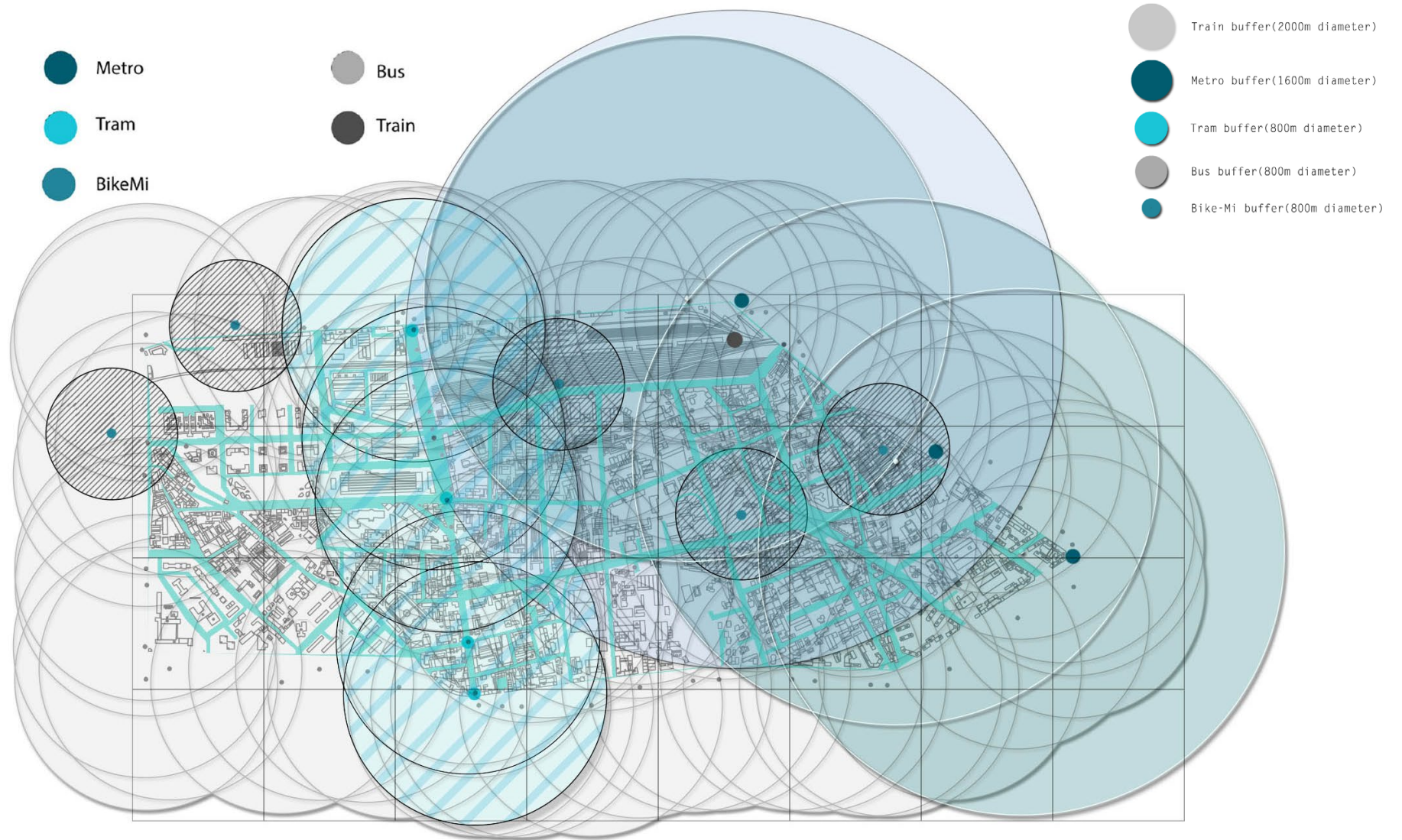


Figure 1.27 : Accessibility assessment of the research project area - general overview and ped-shed analysis



Figure 1.28 : Service assessment of the research project area - general overview

A.3.2 Territorial existence & typologies of *drosscape* formations

The project area includes different typologies of “*drosscape*” formations in which it is possible to see them caused by different territorial and infrastructural conditions. Characteristics and features of the territory relative to water, soil quality, weather conditions and topography might cause different typologies of “*drosscape*” formations and also influence the growth of the city. At the same time, different processes of industrialization and economical factors relative to infrastructure might influence the formations of “*drosscape*” (Berger, 2007). In Milan, the dynamics of the main infrastructural elements related with industrialization process might be the forerunner effect in formations of “*drosscape*”. Through the analysis and site surveys conducted particularly on the Porta Romana and Ripamonti area might confirm the existence of “*drosscape*” formations are mostly left out from the urbanization and industrial process. These vacant lots and wasted areas are the residuals of the industrialization process and economical decays, in other words leftovers of the city. At the same time, infrastructural elements has been generating different and particular focal points in the limelight which directly effect the connectivity conditions on a specific area or at large scale because these focal points and the activities, specified there, are related to those economical conditions, industrial process and service sectors on our time of production era. As Berger explains, “nowadays’ types of industrial activities and production ways which are driven by economical and consumerist effects, contribute to urbanization and the formation of “*waste landscapes*” -meaning actual waste, wasted places like abandoned and contaminated sites, or wasteful places such as huge parking lots, retail malls, etc.” (Berger, 2007, p. 45) The formation of “*dross*” is progressively linked with the urban growth and the existence of “*drosscape*” is an inevitable part of the maintenance and growth of the cities. One must be understood that built environments are always leaving bits and pieces while they are growing through boundaries particularly in industrial cities as in Milan urban region. These leftover bits and pieces of urbanization process which are mainly generating waste landscapes addressing two main steps for the process of “*drosscape*” formation. Theoretically, these concept of “*drosscape*” formations are explained through attrition and accumulation. (Berger, 2007) The shift from industrial to post-industrial era addresses for cities to grow more and more by gaining more territories as abandoning former industrial spaces where the production locates. Flexibility of production modes created more and more waste, abandoned

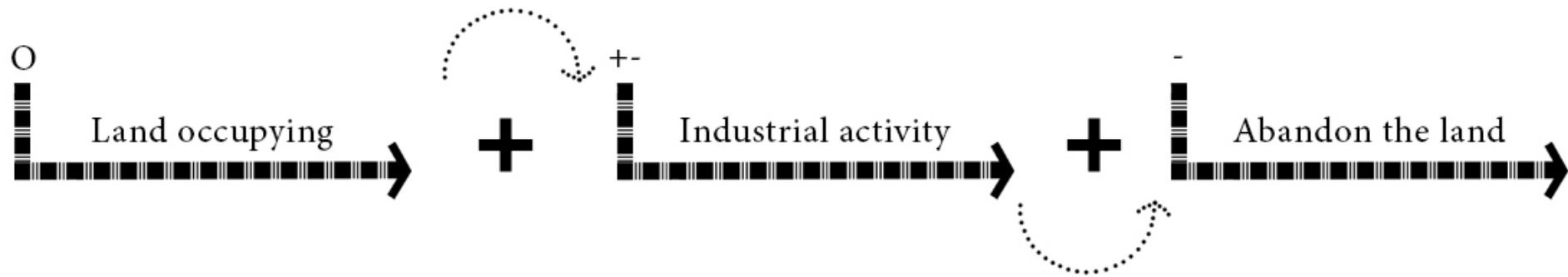
and neglected spaces to occupy more territories and more profits. One of the steps influencing the process of “*drosscape*” formation could be this mode of producing waste landscape through accumulation. Secondly, black and white image presented by Alan Berger through the “*drosscape*” formation of our post-industrial era is the waste landscape formation through attrition. The formation of “*drosscape*” areas relative to attrition identifies and depicts us areas mostly post-industrial areas which are abandoned, wasted or neglected. Therefore, those both processes effecting “*drosscape*” formations take place simultaneously. The expansion of cities and post-industrial production activities with a tendency to occupy more territories and land generate new infrastructural systems with interstitial landscapes, new freed up, abandoned and wasted landscape areas as a result of those two process. Industrial activities relative to urbanization process of Milan might be explained by infrastructural elements with a high level of connectivity. Railway lines and highways which surround the periphery of Milan can form both negative and positive aspects on the city. Railways and train lines has been generating always vital roles to distribute the goods and services through all over the city for both industrial activities and inhabitants. By setting up high level of connectivity between cities, regions and industrial settlements, railways lines could be considered as an important elements for regional and large scales although these elements are considered as a barrier for some specific areas. In the neighborhood scale these barriers generate low permeability and accessibility. The residuals located between or attached railway lines and infrastructures create obvious “*drosscape*” formations which are mostly related with insufficient connectivity issues and low accessibility. In southern belt of Milan this could be the main problem for spaces in which easy to see low accessible areas, insecure places occupied by homeless people, barriers block the usage of open spaces and decreased public health, pedestrian circulation and mobility. These leftover spaces are physically neglected, blight and socially desolate because “*drosscapes*” can gradually form insecure and unkempt spaces that generate unwelcoming and isolated points for neighborhood and inhabitants. These formations, which are mostly caused by post-industrialization processes through accumulation and attrition, relative to infrastructural elements like railway lines and highways are often considered as a distress and grayness of urban areas. (Berger, 2007)





In addition, southern part of Milan particularly spaces attached to Ripamonti and railway axes, as mentioned above due to the shift from industrial process to postindustrial and informational era, has been obviously generating abandoned industrial sites, discouraging social activation points, blight underpasses and unsafe public spaces. This typology of “*drosscape*” leftover from industrial and infrastructural processes through accumulation and attrition is the main and significant formation which is seen in the area but has a remarkable, substantial and considerable influence around the southern part of the metropolitan area.

“*Drosscape*” formation in relation to industrial activities





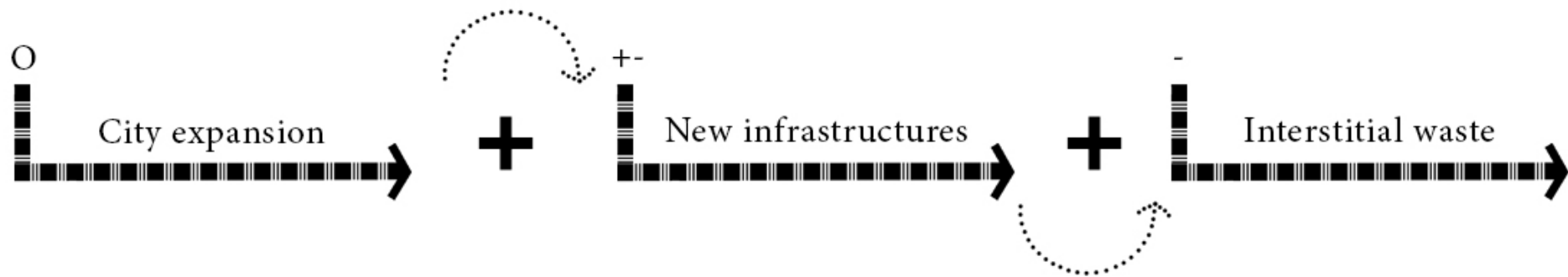


Former Central Milk Production Sheds (New Bocconi-Campus Area) Ripamonti-Milan



Former Plamom Sheds, Corvetto-Milan

“Drosscape” formation in relation to infrastructural changes





An unused and unutilized interstitial landscape remain between infrastructures, Corvetto-Milan



Former Railway Yard, Porta Romana, Milan



Former Railway Yard, Farini, Milan

As mentioned before, the process of “*drosscape*” formation is mainly related with the tendency to occupy more spaces and leave them later on to take over another urban land with respect to changes on the industrial activities or expand infrastructural systems. Therefore, another aspect generates and influences the formation of “*drosscapes*” is related with the expansion of new infrastructural systems which later on generates in between wasted areas causing problematic spaces in the neighborhood scale same as with the leftover or abandoned spaces caused by industrial leftovers. In this matter, the process of formation “*drosscapes*” might be evaluated in a sequence starting from neutral situation (O) and ending up with a negative consequences (-) for the surroundings.

+

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+ -

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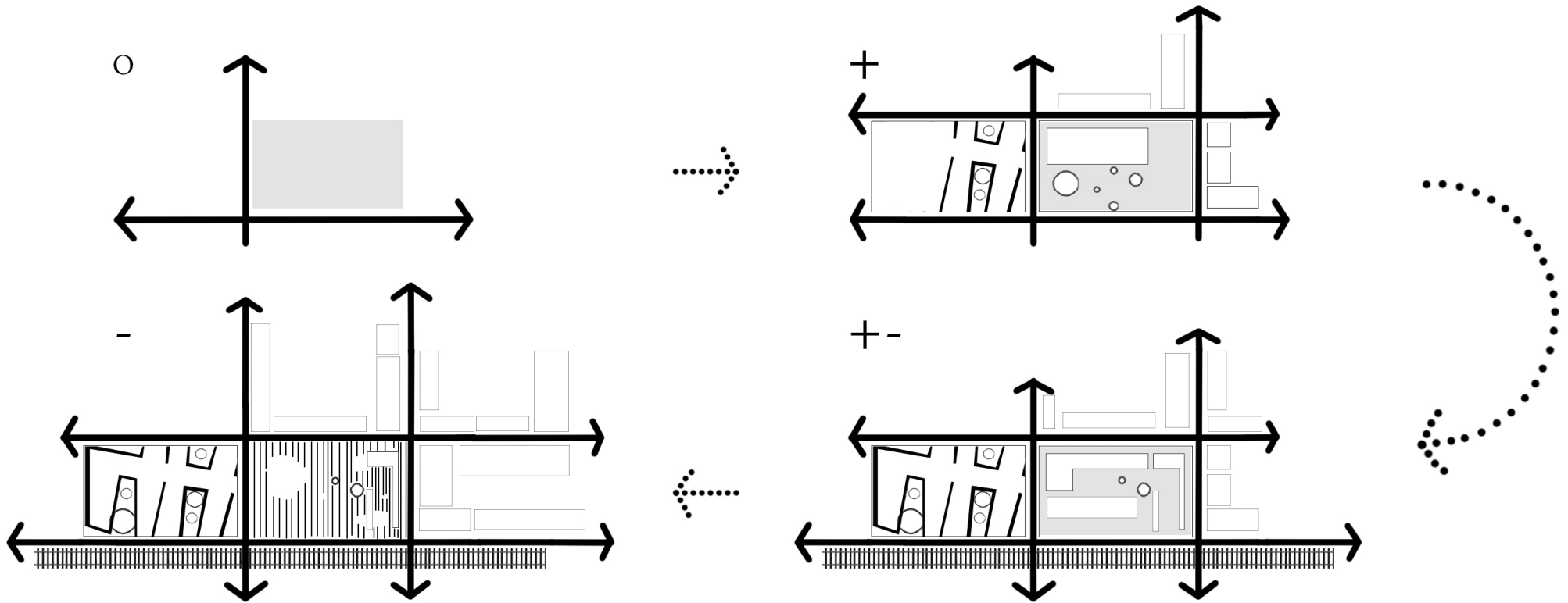


Figure 1.29 : "Drosscape" formation in relation to industrial activities

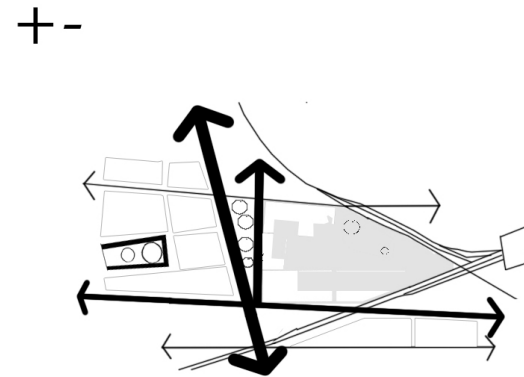
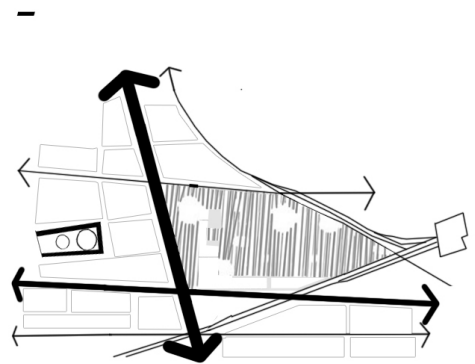
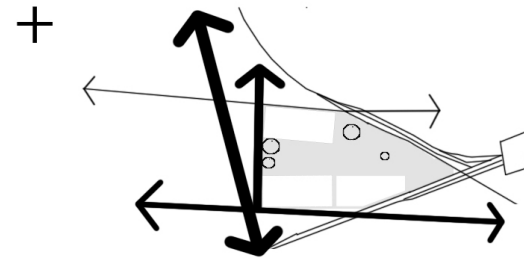
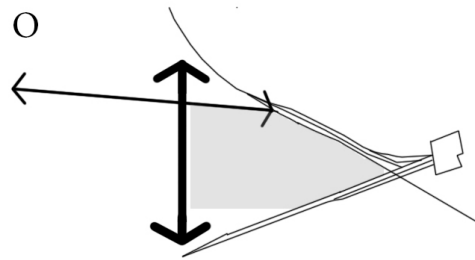


Figure 1.30 : “Drosscape” formation in relation to infrastructural

As it could be understood from the diagrams and schemes mentioned above, “*drosscapes*” formation processes can differ between each other and each step might be observed in different parts of the city itself. Residuals and leftover of the industrial activities might not only be observed through every parts of the city but also on the peripheries. These industrial areas of the city are being blighted, abandoned, neglected, wasted and nowadays these wasted areas are mostly the post-industrial sites. In the city of Milan the first process of “*drosscape*” formation in relation to abandon industrial sites, relative to horizontal urbanization and expansion, might be identified mostly all parts of the city although more specifically along the highway of Milan that connects and circulates the city with the surroundings and interacts other infrastructural systems of the city by enabling its close-yards to attract new developments and industrial activities since the 1940s. As compared to interstitial landscape remains in relation to mainly infrastructural conditions, industrial leftovers might be considered as in the middle and small scale of “*drosscapes*”. Eventually these blighted areas can be allocated inside many neighborhoods and outskirts of the city. Nowadays most of those areas are under the transformation process. Equivalently, “*drosscape*” formation based on infrastructural conditions could be considered as in larger scale “*drosscape*” formations based on industrial activities. Infrastructures like railways, motorways or highways bonding different “*comune*” in the Lombardy Region could serve high connectivity and distribution of goods and services although creating interstitial landscape remains between each other as wasted, blighted and derelict sites that could be named as “*drosscapes*” as in the large scales. Those two processes are intertwined each other as a historically and physically. It is obvious to see that the metropolitan area of Milan consists of a highway “*circolare*” circulating the city as a ring and the areas intersecting with railway lines portraying some interstitial landscape remains that could be depicted as a “*drosscape*”. Physically some “*drosscapes*” based on the de-industrialization and infrastructural processes are located on the same areas in the city and historically they have developed in a complementary process by influencing each other harmoniously. Once a land is occupied by a private or public organization, it is the starting point of a process development and decay. These fundamental flux and reflux take place on both processes generating wasted areas and abandoned places on all over the city.

Mapping and classifying "drosscape" existences

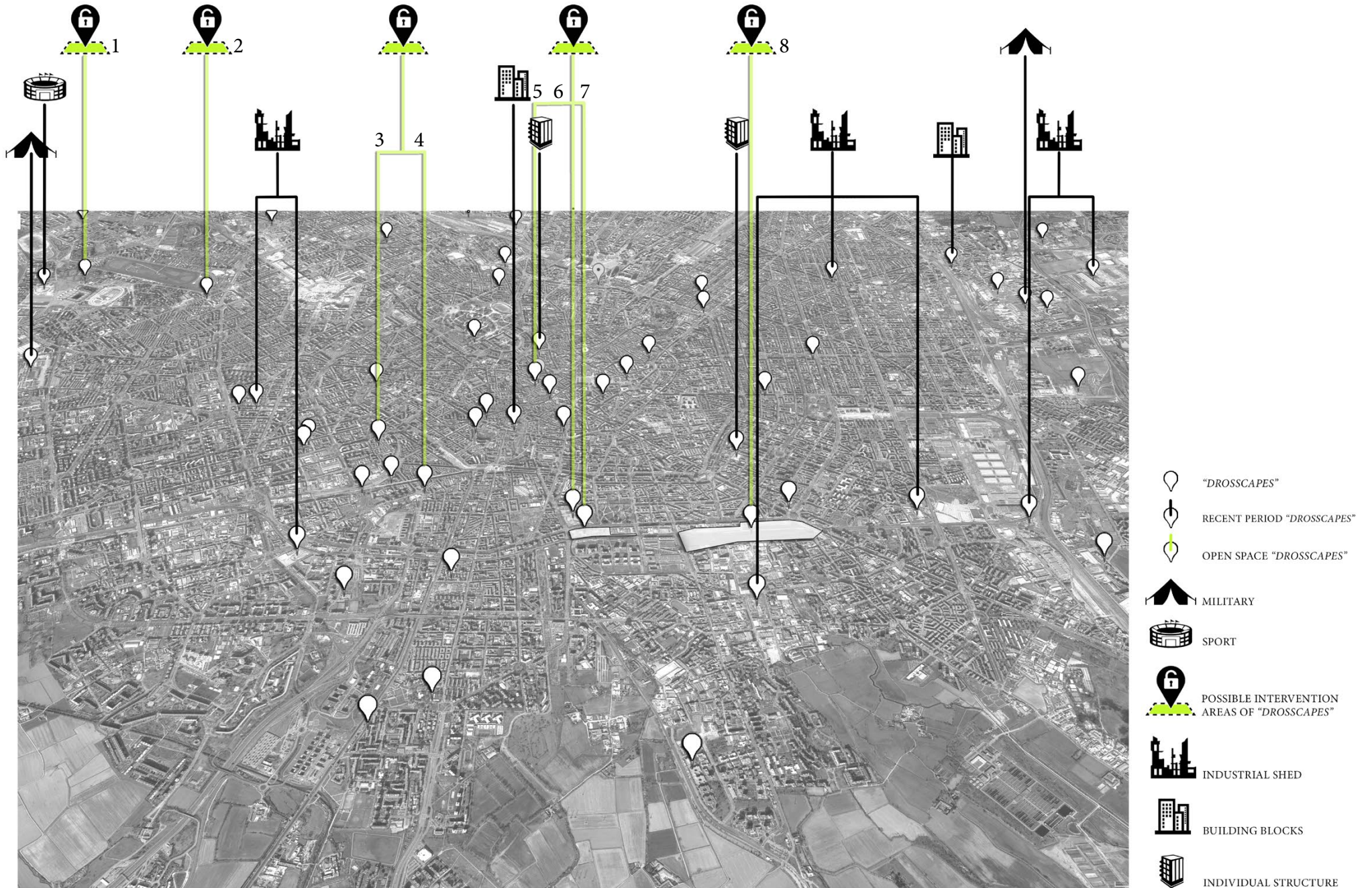


Figure 1.31 : Classified "drosscape" existences

1



2



3



4



5



6



7



8



8.1



Problems

Main problems derived from “drosscape” existence, as mentioned above, are defined as insecurity, blocking pedestrian circulation, generating inaccessibility, lack of mobility and low quality of open space uses. In order to be more precise, it is vital to graph these “drosscapes” out in detail. On the research project area, great existence of some underutilized railway lines and waste landscape areas generate this situation of low accessibility and insecurity across northern and southern part of Viale Toscana axis.

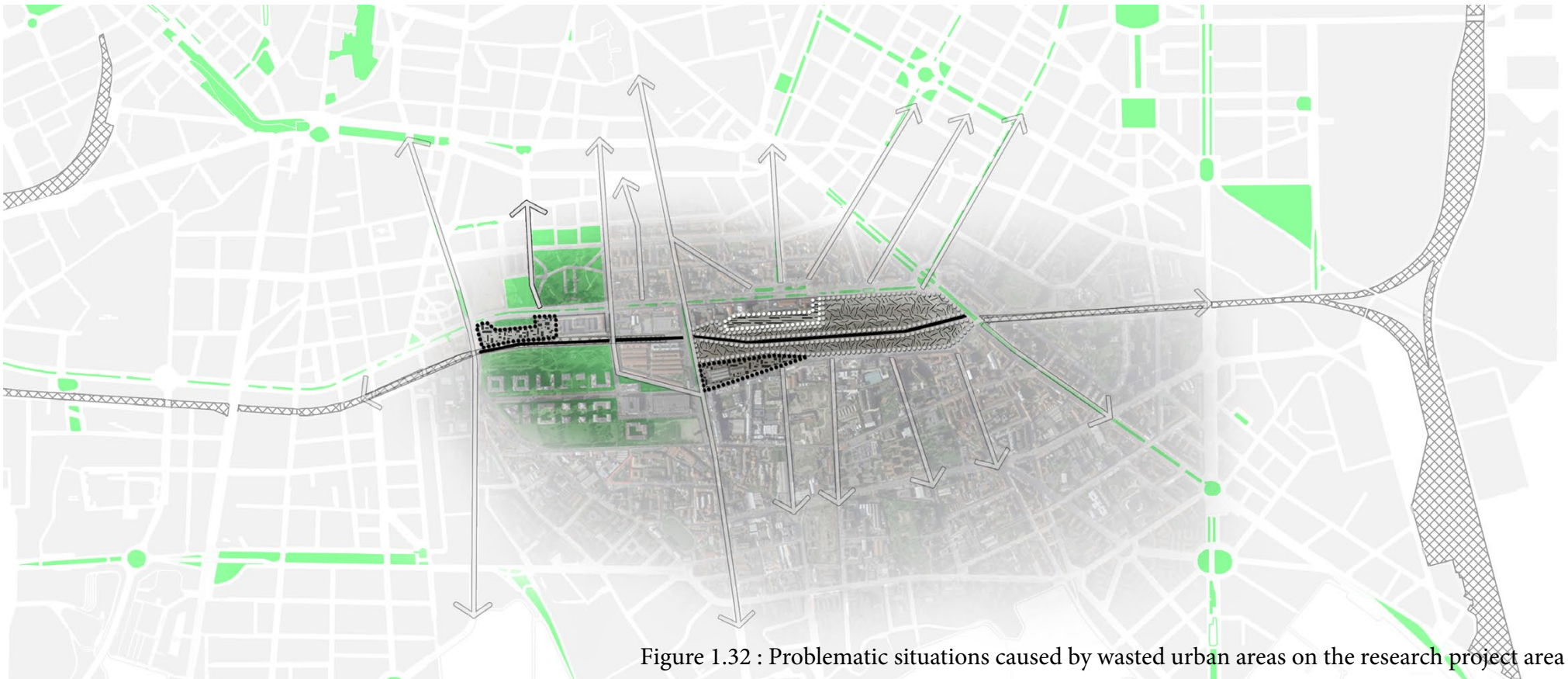
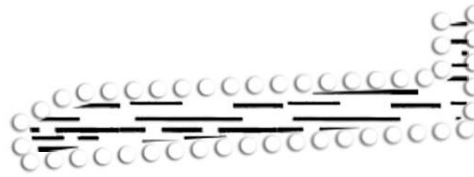
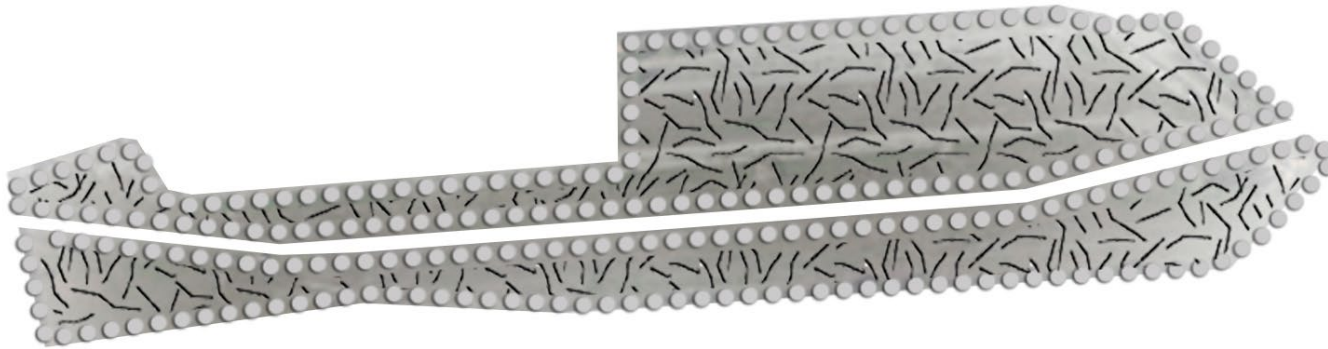


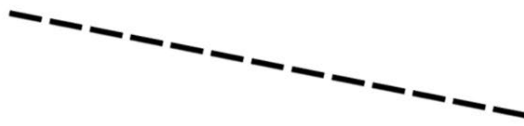
Figure 1.32 : Problematic situations caused by wasted urban areas on the research project area



-----> Low quality usage
of open space



-----> Wasted
area ("*drosscape*")



-----> Insecure areas

Figure 1.33 : Illustrations of problematic spaces in detail



Social Music City Remains, Porta Romana Railway Yard, Porta Romana - Milan



Wasted and Blight Parts o Porta Romana Railway Yard, Porta Romana - Milan



A view of Porta Romana Railway Yard's extensions covered with plants, Porta Romana - Milan



A view of occupied house by drug dealers and homeless people on Ripamonti axe, Porta Romana - Milan

B

PROGRAM

B.1 Design Principles & Guidelines

B.1.1 Principles

Dealing with one of the most difficult and problematic part of the Milan, it is definitely challenging to remediate and regenerate the wasted areas on the Porta Romana and Ripamonti axe. The regeneration of the area can bring solutions but these solutions could turn into some problems in the next future. The existence of strict perimeters, walls and blight spots around the area always generate difficulties which could destruct new life presented by new construction and structures on the area. The area could be considered as a void in the southern belt of the city and this is because it is disconnected from the neighborhood fabric. The main reason of the situation might be explained by the existence of one main road and a railway line which isolates the area of Porta Romana Railway Yard and other wasted extended spaces attached to Viale Toscana-Viale Isonza axis on the north intersecting with Ripamonti axe. Another reason could be explained by the existence of many dead ends which disintegrate the area by blocking pedestrian circulation within its own fabric. However at the same time all these existence of highways and railway lines generate a potential connectivity to reach and use the area efficiently. Main urban connections as it is visible on the accessibility assessment map illustrated before picture us a rich connectivity and approachability to the area around but not inside. The porosity of the area with strong perimeters, walls, blight spots and lack of pedestrian oriented street network depict us also the existence and formation of “*drosscape*” on the area. Under the lights of these aspects, there are some design principles to solve the problems occurred in the area and investigate the potentialities of “*drosscape*”. these principles are followed by design guidelines and at the final part, these guidelines are followed by design proposal which is a temporary solution for the reactivate the “*drosscape*” on the area. By taking the peculiarity and sensitivity of the area into account and based upon the challenging situations above mentioned, main principles are defined as a minimum intervention to the area by preserving its cultural heritage of an important railway yard existence with a maximum usage of the “*drosscape*” fabric. With this principle, it is possible to explore the potentialities of the area. Users might have an opportunity to discover the area and redefine the blight spots as for their own preferences. Thus, main principles to reactivate the area and solve the problems are defined as minimum intervention with a maximum efficiency and rediscovering the area by defining temporary solutions which will not dedicate the area as an one specific use for a long period of time.

Figure 2.1 : Future projection of the area I





Figure 2.2 : Future projection of the area II

B.1.2 Guidelines

The research project involves and defines some set of guidelines match with the temporary design solutions to be implement on the area. Design guidelines are defined as a reactivation tool to improve the habitability profile of the area and rediscover in near future of our time. As working on the difficult and historical part of the city, preserving the existing characteristic of the area and protect its cultural heritage generate vital importance on the project process and implementation. On that sense, design guidelines for the research project area will be bonded with main principles of minimum intervention on the area. To realize the main principles, main guidelines of the project will be related mostly to accessibility, permeability, open space, environmental quality and security for the zone. As an area catering to people with varying degree of needs and abilities, a special emphasis will have to be placed on the accessibility of the area itself and its porous fabric. Through the careful design and location of access ways, choice of materials and provision of amenities, accessible spaces will help to not only increase the variety of users but assist in prolonging the independence of those who wish to use them. Equivalently, landscape design-oriented open spaces and accessible routes inside the area by considering contextually the urban fabric and situation of accommodating the safe pedestrian circulation will be the core consideration for the design process. All these open public spaces facilitate ease of access and greater visibility which decrease the level of insecurity especially at night time. Pathways within open spaces with hard surfaced material allow for the comfortable passage of personal mobility devises. Another important guideline to be implemented on the area characterizes the integrative strategy of using lighting elements both inside and on the perimeter of the area to increase the level of security, which is great problem on the area, to attract inhabitants rediscover the area and enable the integration of the site into its surroundings. the public open space guidelines illustrate a clear and important gateway and linkage between city's existing surrounding open space system and the site itself. Attractive landscape elements located on the open space inside the area create more peaceful refuge from a busy street.

At the same time, public art including temporary installation of some follies, which are structured as easy detachable and removable, will be another important element for place-making and way-finding strategy that seeks to celebrate unique locations within the context and improve the legibility of connections. These follies help to enhance the entrance to the site and allow inhabitants to reactivate the zone with the events. The intention to reactivate the site including main guidelines of circulation, accessibility, public open space and public art will comprise of a whole network and a system which facilitate greater understanding of inhabitants to recognize the area consciously. These guidelines define a temporary solution for the site on the first steps which will enhance the creative ideas about how to use such a potential “*drosscape*” whit landscape and urban design methods to reactivate the site in an efficient way.

Set of guidelines to decrease level of insecurity by proposing landscape design for the insecure part on the project site. Main idea to attract and allow people to enter the site in which including abandoned structure and wasted open spaces inside.

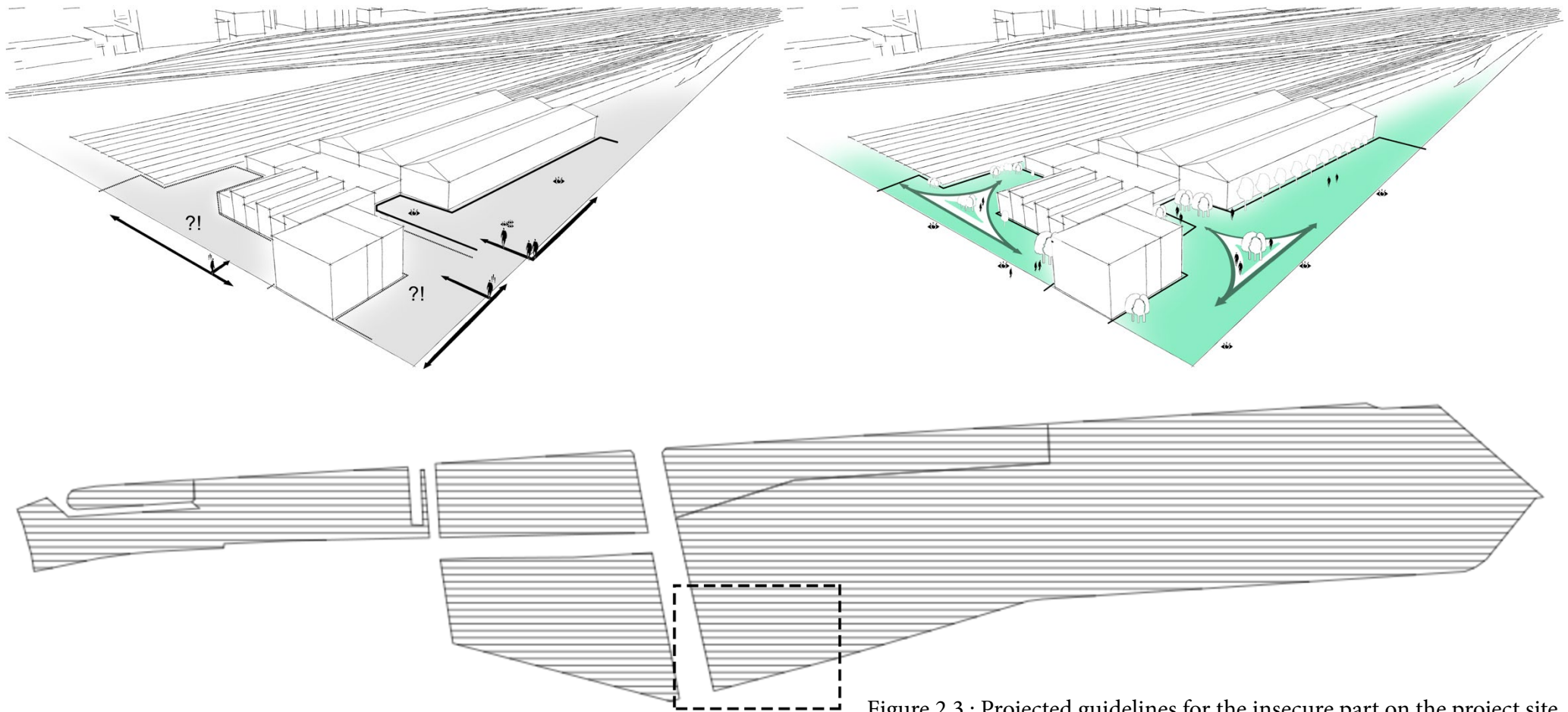


Figure 2.3 : Projected guidelines for the insecure part on the project site.

Guidelines concerning to connect the area with its surrounding in order to create connected and integrated urban fabric within the context. It is aimed to use the area with its existing hard and soft material involving railway lines, epidemic plants and urban elements characterizes the area's own identity. Another important consideration is to generate safe and public open spaces for inhabitants in which it is easy to blight spots so common.

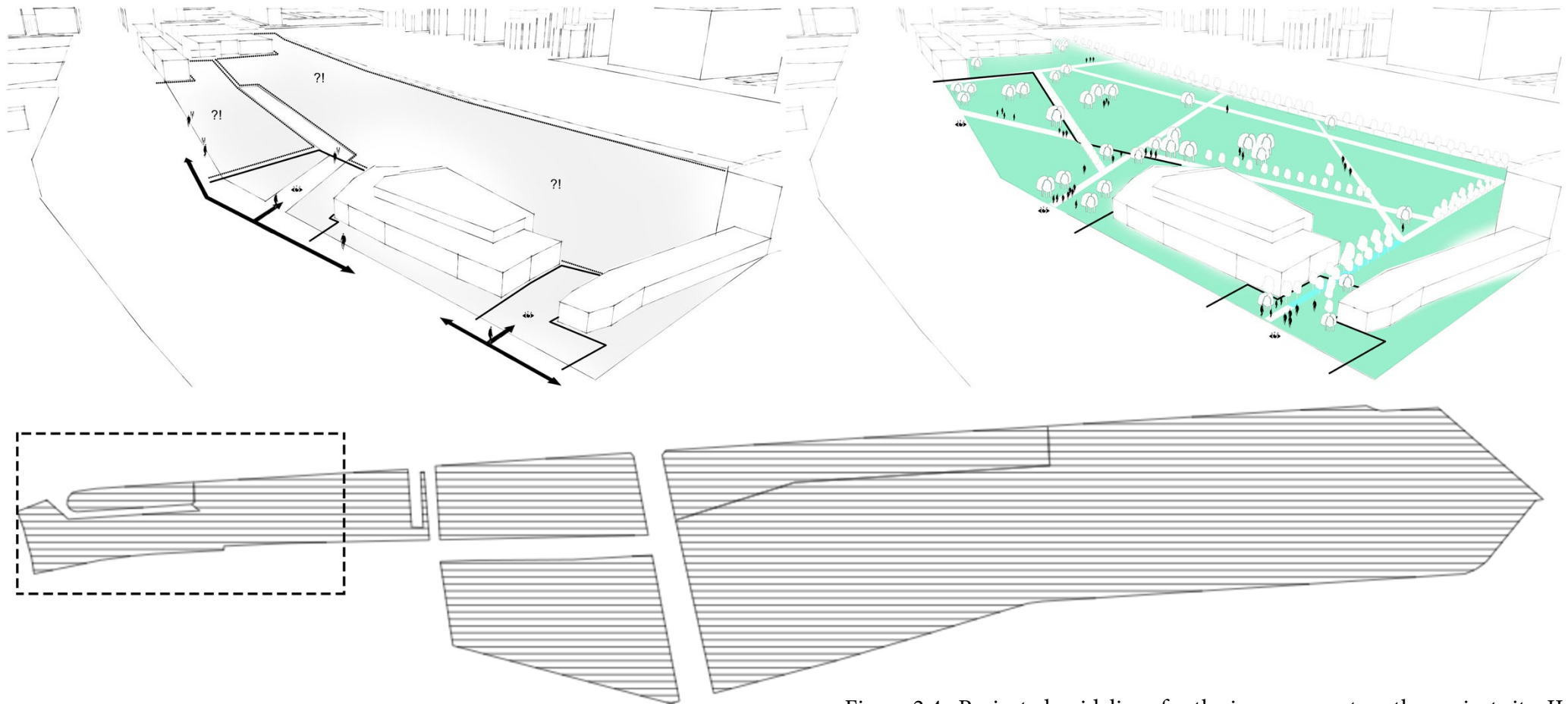


Figure 2.4 : Projected guidelines for the insecure part on the project site II

On the northern part of the site attached to Viale Isonzo, it is aimed to set guidelines to generate more activated open spaces in which users are comfortable and free to enter to make events. Landscape and urban design oriented guidelines are considered to implement into the area to use space not only restricted times but also any time of the year.

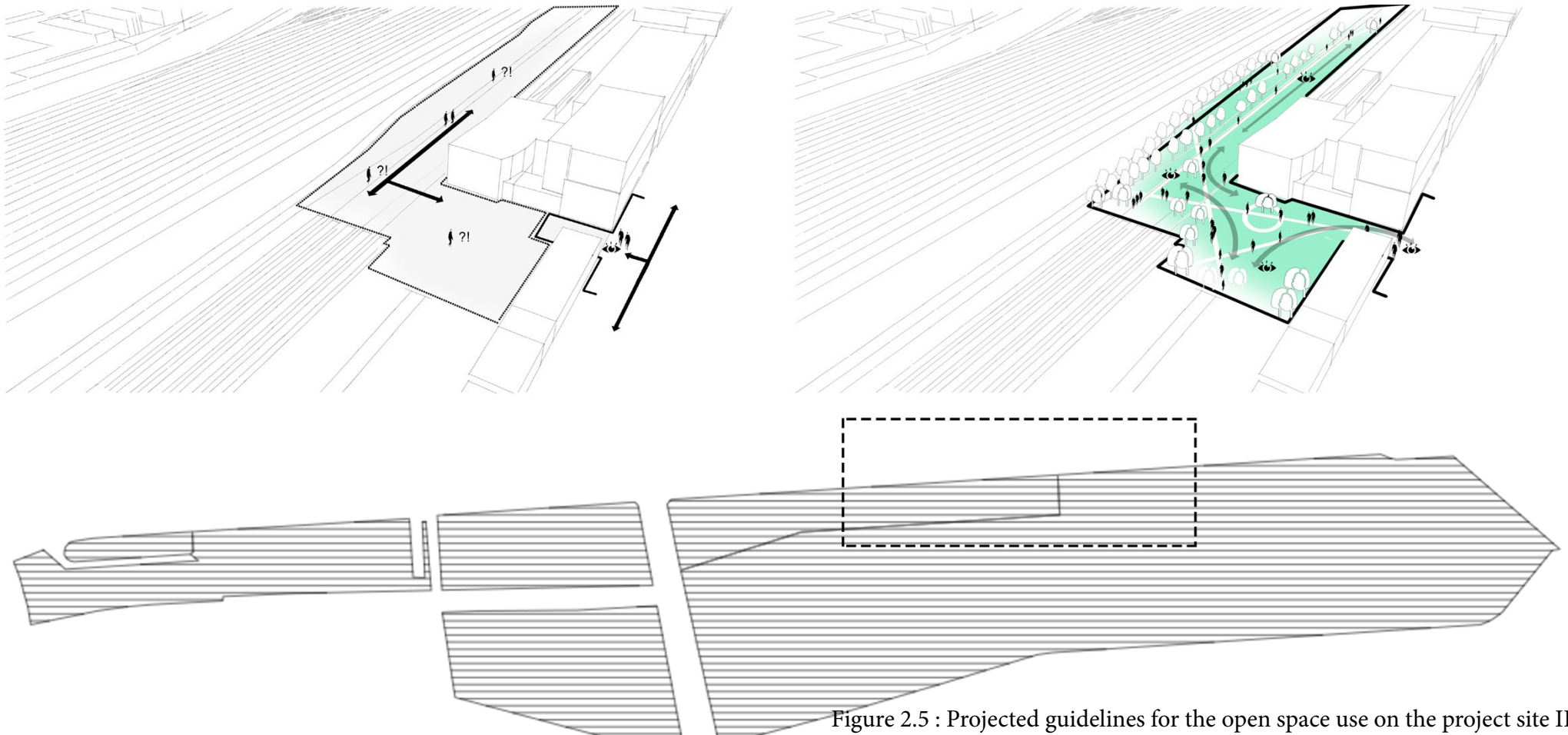


Figure 2.5 : Projected guidelines for the open space use on the project site III

On the main “*drosscape*” of the area involves some set of guidelines and principles which will enhance the habitability profile of the zone by offering wide open spaces integrated with existing railway lines and green space features. Main considerations are to use area from every perspective by gathering people, organizing events, enjoying with the landscape and offering temporary removable follies which will enable users to discover the area.

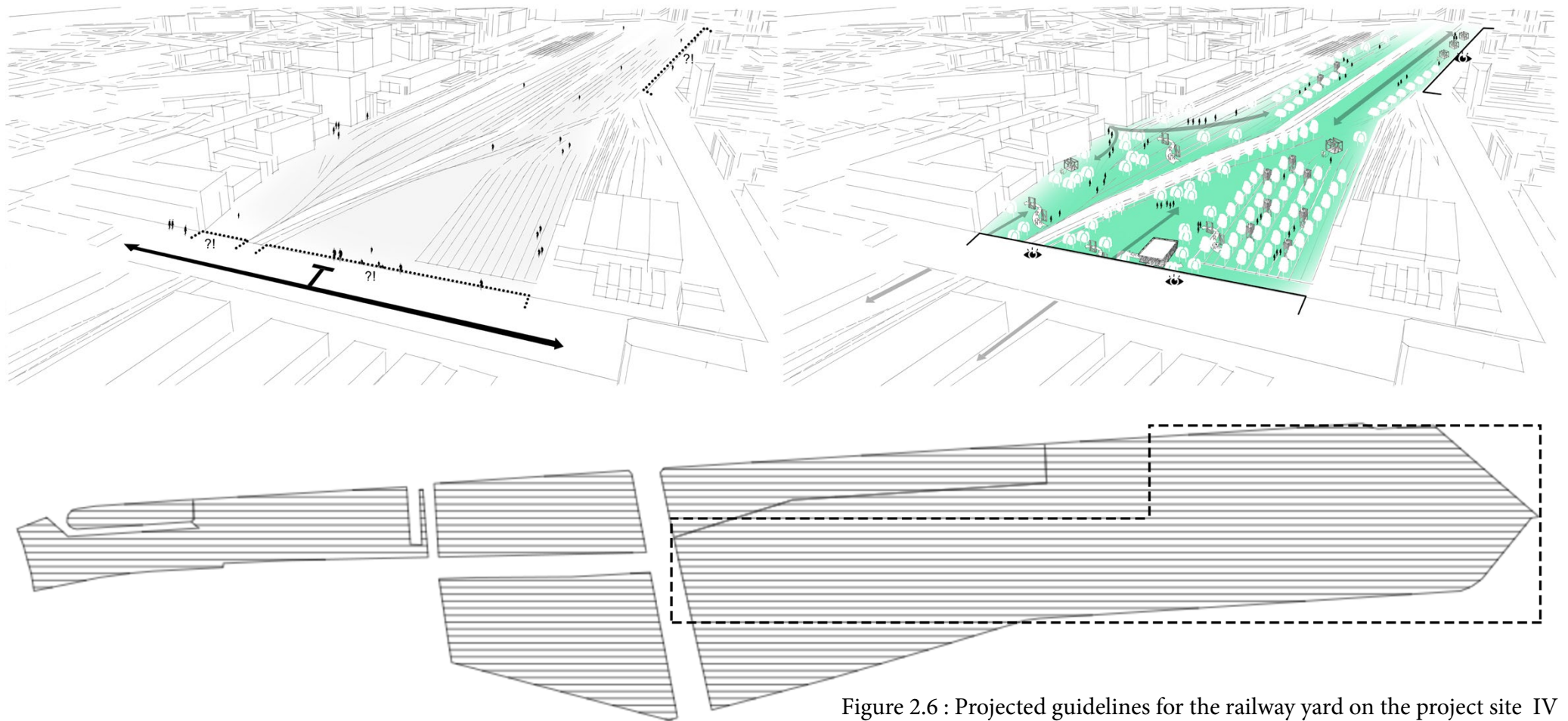


Figure 2.6 : Projected guidelines for the railway yard on the project site IV

B.2 Proposal

B.2.1 Proposal

According to the main principles and guidelines above mentioned, research design proposal is defined as a temporary use of the area which is sustainable and not expensive. In parallel the proposal represents not a long term redevelopment of the railway site and its surrounding but brings some set of design criteria to reactivate the site with a exploration of “*drosscape*”. Research design deals more with the potentialities of the “*dross*” generating a novel attraction hub for the city of Milan. The design proposal draws attention on both at the dynamics of the local scale and the metropolitan scale by generating a holistic approach with the idea of creating whole connected, permeable, accessible and habitable urban fabric. The scenario is redefining not only the Ex-Scalo Porta Romana but also spaces on the Ripamonti axe and Viale Toscana. The “*drosscape*” formations are being rediscovered and redefined by reactivating the area with a temporary use. Proposing wooden bridges and pedestrian-oriented paths deal with the increase of the connectivity both inside and outside the site. Furthermore, design proposal involves both hard and soft pavements integrated with the existing urban fabric to allow inhabitants enter the site. Detachable and removable follies and structures generate temporary and hybrid urban spaces in which it is possible to observe not only the site but also surroundings. These follies serve are served as a “*vista tower*” or “*observation dots*”. The research design project offers tree-lined paths which orient users to reach another points in the area with an easy access. The important point is preserving the existing plants and green infrastructure in the area to create a compact usage.

B.2.2 Master Plan



Figure 2.7

The research design proposal presents us a novel approach for spaces located between Porta Romana railway yard, Via Ripamonti, Viale Toscana and Viale Isonzo with a temporary use of the area considered as a sustainable solution to reactivate the “*drosscape*” on the southern belt of the Milan. This scenario involves wooden bridges for the connection to pass railway lines easily, green extensions to be integrated with an existing green spaces, gathering platforms and follies for users to gather, wide open recreation spaces and pathways to generate accessible environment both inside and outside.

B.2.3 Contextual Green Space Integration



Figure 2.8

The new urban space is a place in which it is possible to see a strong integration and green space continuity between the context and the area. The landscape and green space facilities offer inhabitants to rediscover the potentialities of “*drosscape*” for a collective and shared activities. The continuity of green space with an existing urban fabric fill the gap between the wasted void in the area. The new park and green space interact with the existing green surrounding infrastructures and work as a linking the old and new.

B.2.4 Detailed Plan



Figure 2.9 : Detailed plan of the porta romana railway yard

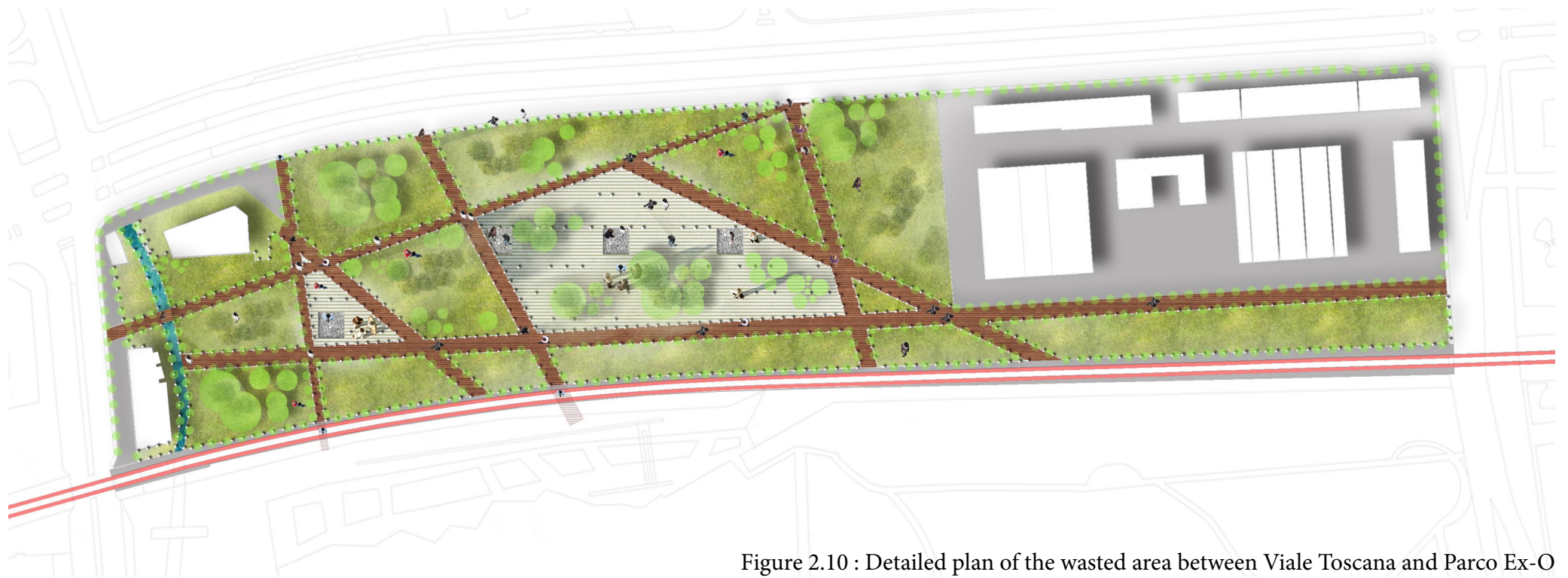


Figure 2.10 : Detailed plan of the wasted area between Viale Toscana and Parco Ex-O

B.2.5 Research Project Phases

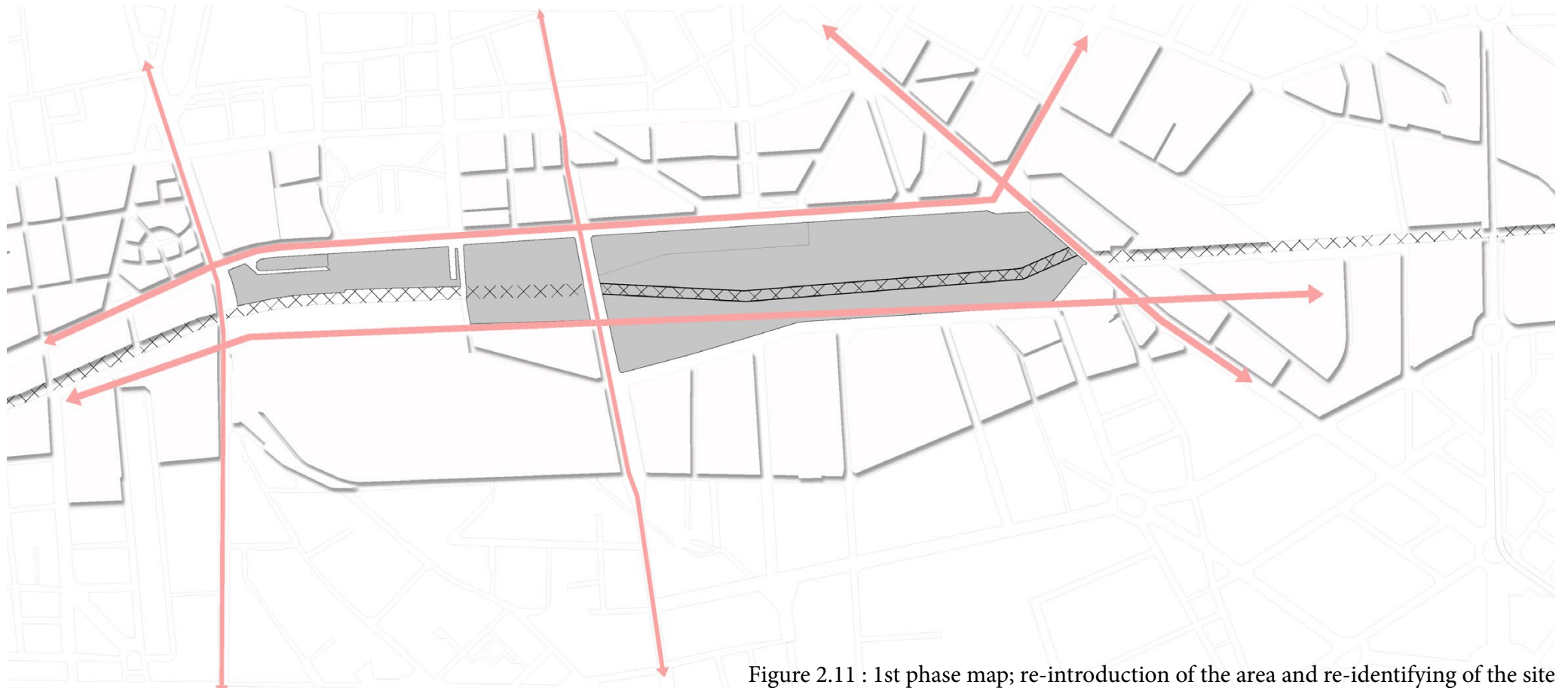


Figure 2.11 : 1st phase map; re-introduction of the area and re-identifying of the site

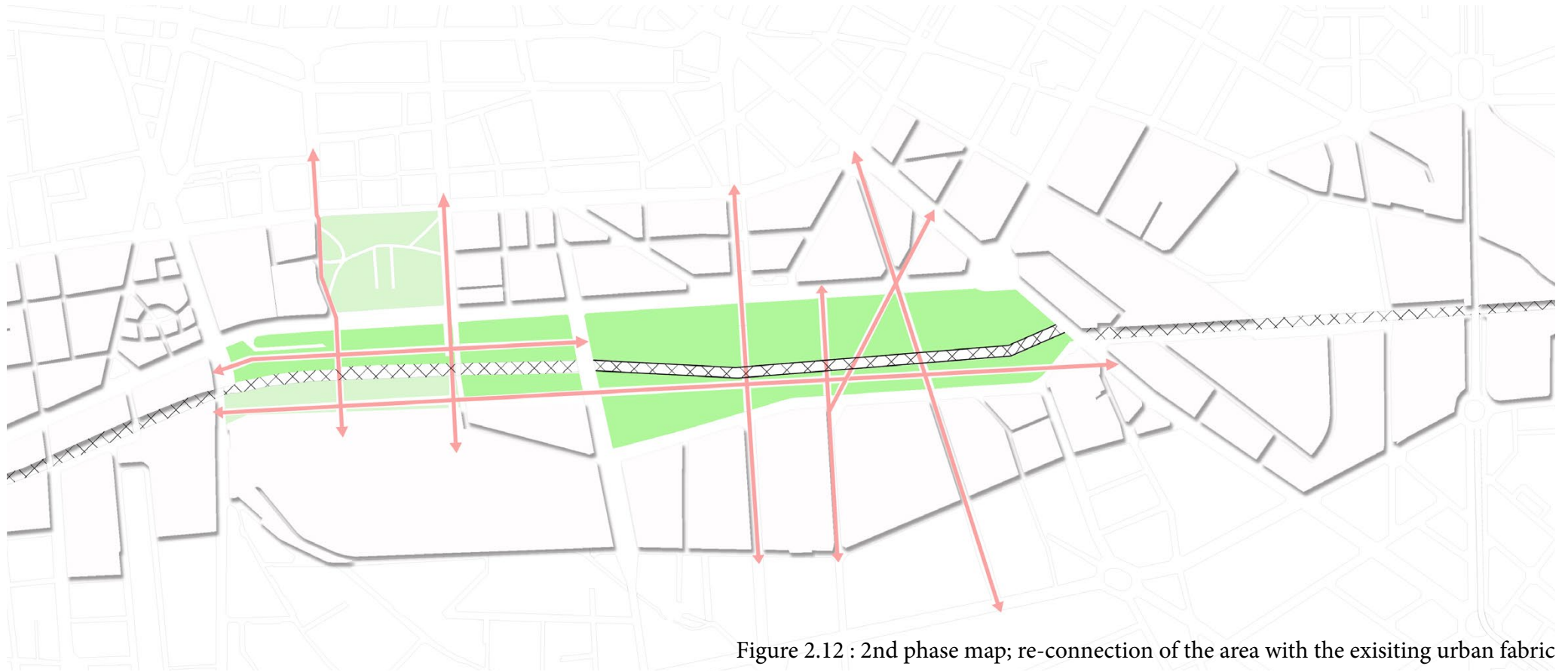
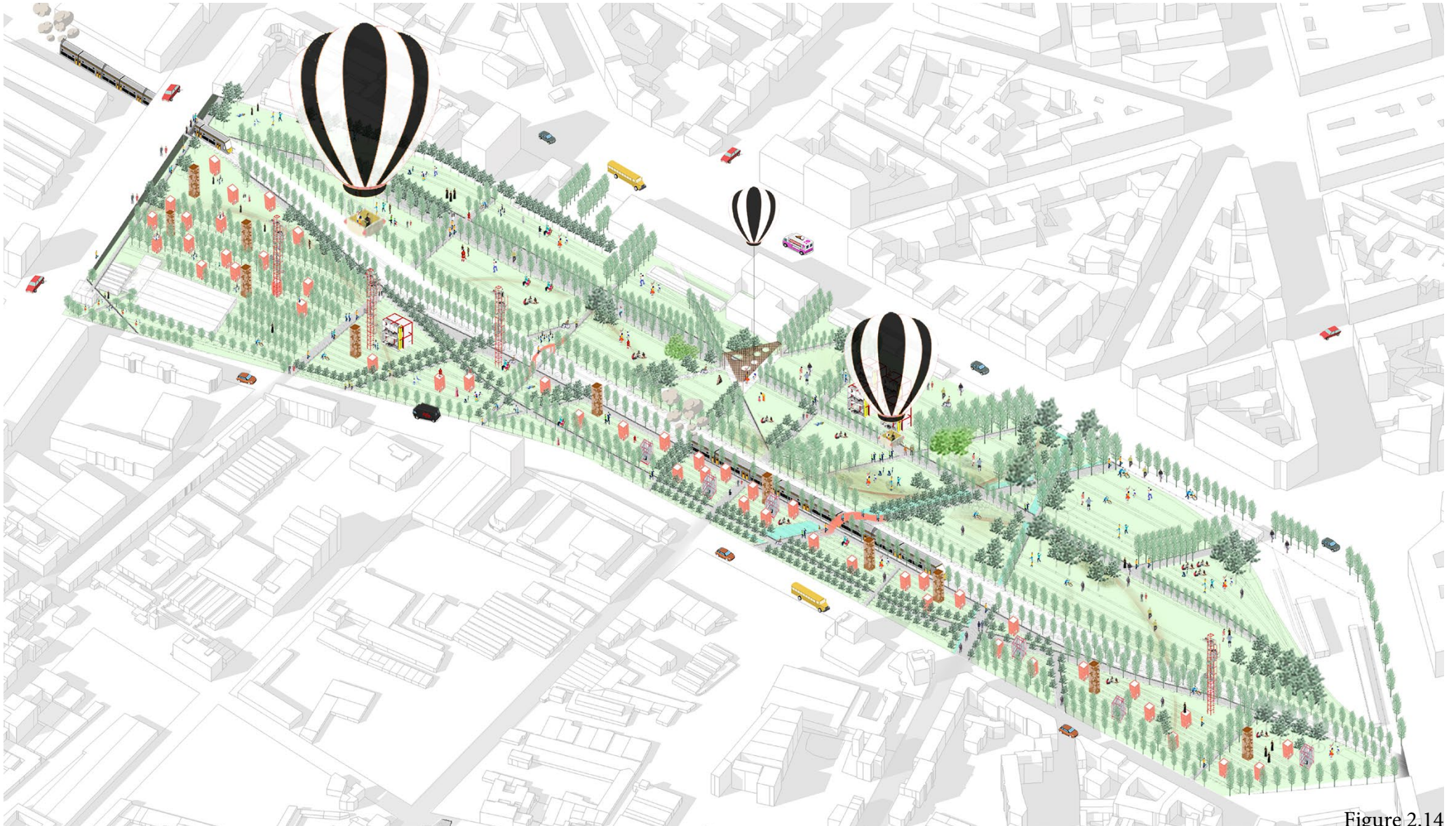


Figure 2.12 : 2nd phase map; re-connection of the area with the existing urban fabric



Figure 2.13 : 3rd phase map; re-activation of the area with an accessible circulation

B.2.6 Research Project Design Illustrations



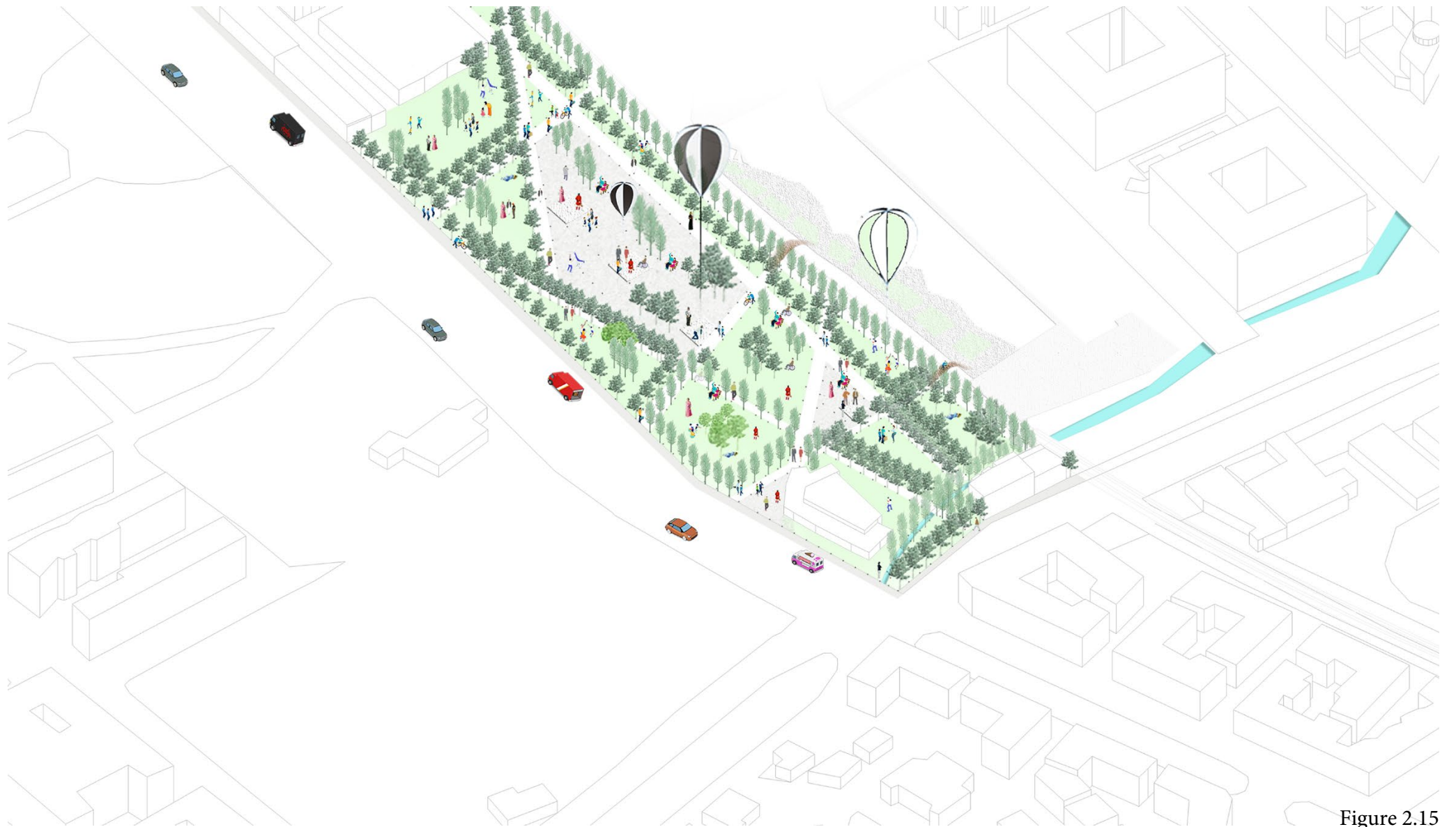


Figure 2.15
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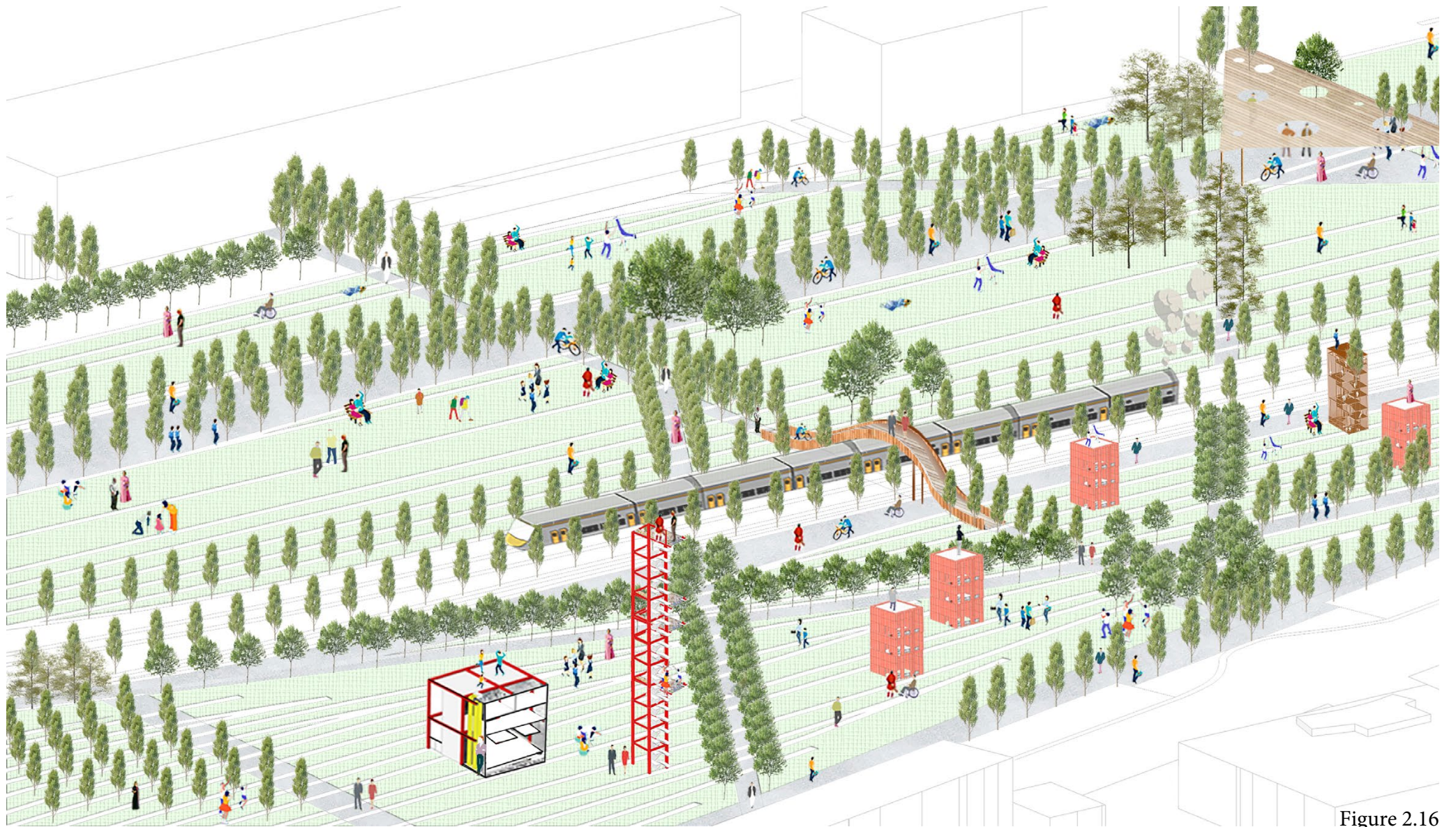


Figure 2.16

C

CONTRIBUTIONS

C.1 Contributions

This research design project for the “*drosscape*” site between Porta Romana railway yard, Via Ripamonti, Viale Toscana and Viale Isonzo axe with a temporary use of the area fills a void in the interstitial landscape remains of the southern belt of the Milan. The project proposal offers a short term development of the area by reducing the insecurity and positions new safe connections and gateways for further economic investment and ongoing public use. My proposal in the area re-imagines the way in which wasted, blight and neglected spaces are treated and planned for programmatically in the next future. Rather than leaving abandoned and wasted these spaces, my strategy proposes a series of phases that will not only enable to rediscover the area, but also reactivate this network of “*drosscapes*” into productive places, even during the night time that makes them safe for human use once again. To cite an example, it is decided to generate new projects close the area I work on, which are New Bocconi Campus Project, Symbiosis Project and already constructed Fondazione Prada, will reach its capacity within the next fifteen to twenty years. Within my research design proposal, it could be evaluated that the newly reactivated “*drosscape*” could be integrated with those future projects in which such landscapes might be considered not as an abandoned and neglected parts in the city but also integrated urban fabric with high potential. Considering this portion of my proposal, the reactivation of the site seeks to motivate users, planners and landscape architects to reconsider alternative short and long term programmatic uses of seemingly useless “*drosscapes*”. Interstitial landscape remains and “*drosscapes*” are load many difficulties to communities and regions where they are located, and because of their complex and largely contaminated existences, they generate irregular conditions to future generations. Thus, it is obvious that temporary design solutions for the postindustrial wasted spaces present flexible and responsive conditions in order to identify and understand the leftovers of the cities to program for the future long term development. The design solutions and guidelines identified on the project generated for the site and the neighborhood illustrate flexible and responsive ways in which design principles and guidelines are possible to be applied to a range of other “*drosscapes*” created by postindustrial processes and same infrastructural challenges.

C.2 Future Research

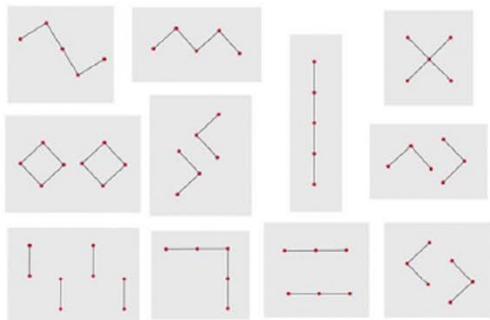
The proposal design for “*drosscape*” located on the southern belt of Milan raises a number of significant aspects and perspectives for future research. Most significantly, the reactivation of the area draws critical attention for the short term development in terms of understanding the necessities of the area and interrelation with the context. Temporary design-oriented solution and experimental process will enable the neighborhood advantageously to identify its future necessities with a sustainable perspectives. Additionally, exploring how these design-oriented and temporary solutions could work together as a compact system on industrial cities with the existing fabric rather than permanent structural design strategies would be effective for future design implementations. As current academic researches mainly draws attention on the economical and real estate effects of permanent design oriented strategies, generating such a practical and sustainable knowledge to every kind of user-oriented solution will present better understanding for communities. Secondly, the user-oriented solutions with the postindustrial wasted landscapes and “*drosscapes*” could be considered as an area of research that has not been largely explored. Investigating and rediscovering how inhabitants could use former industries, interstitial landscape remains, wasted areas or other landscapes of “*dross*” is of vital importance in advancing our design strategies of the postindustrial landscape. Under the lights of these explorations, using smart booking system as solution to use these wasted areas efficiently might be considered as an another future research area. The open spaces, temporary removable structures and hybrid places could be used with the integration of smart infrastructures. Today it is an undeniable fact that we are in the information era of digital technologies. Novel approaches to increase habitability profile of cities and reuse the wasted areas by reactivating them represent important part with respect to use advantages of information era. Thus, this research project could draw critical attention to investigate in detail how smart city principles and ICT tools could enable co-design urban services innovatively and participatory by benefiting from advantages of information era. Additionally, the research enable technological bodies to generate a smart platform that will involve mobile applications to create a smart environment as smart booking system of bringing each citizens and stakeholders into innovative process.

This innovative environment will be investigated with also possible future scenarios offering efficient and practical ways for local scale bodies and municipalities to engage in codesign, e-participation and open-innovation concepts. The smart environment and platform of this novel mechanism in the future could enable citizens to involve themselves for the use of wasted urban spaces and “*drosscapes*” actively and independently. Inhabitants could have an opportunity to book wasted urban spaces in which there are smart installations or temporary structures and organize events, daily activities and their social life. The connection between these smart spaces could be provided by the smart infrastructures allowing inhabitants to navigate between them with other smart urban services and solutions (e.g. electric bikes-vehicles, smart way finding signs, smart lampposts). The possible implementation of the technology can be extended to numerous applications.

C.2.1 Thesis After - milanOtouch

Today it is an undeniable fact that we are in the information era of digital technologies. Novel approaches to increase habitability profile of cities represent important part with respect to use advantages of information era. The aim of this research is to reactivate wasted urban spaces based on demands of inhabitants. For the future research steps, studying on novel solutions through ICT tools and smart infrastructures to reactivate sustainably wasted areas that causes problems reflecting the tension between habitability profile of the city and its inhabitants would be beneficial for neighborhoods and communities. Reactivating these spaces could be the solution of problems and at the same time researching on and generating location based smart booking platform by which wasted areas could become focal points of social events, gatherings and interactions might be another future development for the blight spots in the cities. It is possible to see significant researches and projects implemented for the use of urban services and open areas with the efficient utilization of smart infrastructures to reactivate wasted areas. To exemplify, in cities of Hull (UK) and Cape Town (South Africa), the municipalities generate metropolitan environments that link virtual and physical spaces so as to cure local difficulties and challenges observed particularly on wasted areas of metropolitan region. Under the lights of these perspectives and academic researches, the reactivated “*drosscapes*” could be used within the integration of smart infrastructure namely smart booking system -milanOtouch. This is a platform that could be implemented in the next future by taking research project design guidelines and proposals into account to use wasted areas in an efficient way. Inhabitants can have an opportunity to make events or organize their social life activities by booking independently and freely these re-activated and installed with temporary structured hybrid spaces on the wasted areas or namely “*drosscapes*”.

Exhibition Pavilions



+

Smart Booking

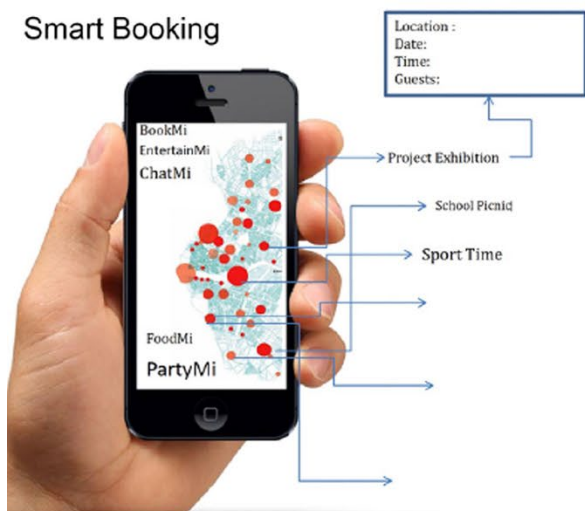


Figure 3.1 : Illustration of smart booking system

D

CONCLUSION

D.1 Conclusion

This research project design draws critical attention on the theme of “*drosscape*”. As highlighted in the theoretical background of the study, “*drosscape*” is defined as the leftover of the cities or in other words interstitial landscape remains. Academic literature and research background illustrate us two main processes of “*drosscape*” formations mainly through accumulation and attrition. These two processes generally take place simultaneously followed and influenced by each others. Firstly, accumulation is the process of the cities expanding means taking more territories and increasing its limits. Result of accumulation process of “*drosscape*” formation is in strong relation to infrastructural systems in the cities. In order to reach new dispersed territories resulted from accumulation process generate highly developed new infrastructural systems which creates new interstitial landscape remains and wasted areas. Secondly, the process of attrition is in relation to abandon the land and process of decay in which it could be observed in mostly post industrial cities. Generating big boxes for the production activities and abandoning them later could be explained for the phenomena of the attrition process on the “*drosscape*” formation.

As a first step of my research design project, the theoretical and analytical frameworks are studied at identifying the concept of “*drosscape*” and factors introducing its formation in relation to post industrial settlements particularly southern belt of Milan. Main considerations and attempts were to have a holistic approach about mainly on the wasted areas and blight spots of the area Porta Romana and their relation to the context.

Under the lights of analytical and theoretical researches, I proposed a temporary design strategy for the problematic part of the city to solve problems caused by “*drosscape*” formation. By observing and analyzing the potentialities of “*drosscape*” formation, some set of principles, guidelines and design proposals are used to investigate possible future opportunities and scenarios for future development. On this sense, my research design proposal is short term development and experiment of the area with sustainable and temporary principles but not expensive. Identifying and discovering the area with a user-oriented solution will enable inhabitants to involve themselves for co-design the spaces and understand the future demands of the territory in an efficient way.

To conclude, it is an undeniable fact that “*drosscape*” appears naturally in relation to city expansion and urban growth. However, understanding and predictions of its today and future formations/effects are of vital importance for territories and inhabitants. It is always important to be able to shape and intervene “*drosscape*” at any time to block problematic conditions caused by it. The “*drosscape*” offers us many potentialities that could be considered as advantage but not always. These “*hybrid*” spaces enable communities and territories to regenerate the ground for great changes and the opportunity for future developments if it could be seen holistically within a reasonable guidelines and strategies for the whole territory and not only for bits and pieces of cities.

As a whole society, it is our important duty and obligation to rethink current problematic conditions of the interstitial landscape remains and look beyond the general biased opinions against postindustrial wasted areas. Today it is an undeniable fact that we are facing obviously increasing populations and horizontally dispersed cities. This condition forces us to question these wasted landscapes of “*dross*” will be our opportunities to rise from our ashes or not. Without question nowadays “*drosscapes*” threats and blight spots in the cities as in Milan. As urban designers, urban planners, architects, sociologists, economists and landscape architects, the biggest responsibility is to integrate current information, knowledge and potentialities into action and create sustainable, healthy, safe environments. The chance to generate a reasonable and positive change for the future development and regaining of the “*drosscapes*”, wasted areas, blight spots, abandoned and neglected parts of post-industrial landscapes of the southern belt of Milan is within reach. Now it must be the time to understand, rediscover, touch, feel and plan for a safer, healthier and more quality future environments.

E

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