

POLITECNICO DI MILANO
Department of Architettura e Società
Urban Planning and Policy Design Course of Study



**'GROWING ORTOMERCATO:
a strategic project for Milano
Mercato Ortofrutticolo'**

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PART I - INTRODUCTION

1 - REASONS AND ABSTRACT

GROWING ORTOMERCATO

The thesis that I chose to develop, has as object a big logistic area, actually used and exploited for its wholesale function: the Milano Mercato Ortofrutticolo, the so-called Ortomercato. The aim of the thesis is related to a project idea for the area that hosts the market, giving a new face to this portion of territory.

First of all is necessary to pass through the history that this area has met during the years and the centuries. Analyzing the history of the Ortomercato, its origins, its different locations and functions that assumed through the years, is useful to understand how the city has always been in relationship with this function, before more oriented to retail and local production, after with a strong wholesale print. After analyzing the historical locations and functions in relationship also with the urban context, the right comparison is to do with the function and the location that this area has today, the main characteristics of the area nowadays. The idea is to describe the historical characters and the modern ones, to give the perspective of how the relationship with the context has changed but also how the functions and the reasons of existence of this area are changed and developed during the last century. After having described what is the Ortomercato and what has been in the past, I thought was appropriate to introduce the existence of the ban, that the principal property of the market (So.Ge.Mi.) proposed, for the renovation of this big area. The ban is mentioned in relationship with the context, and with the main policies and projects that are hosted by this portion of territory. My idea is to consider the existence of the ban, because some of its requests in my opinion are very strong and should be considered for the future of this area, especially the two main objectives: the renovation of the spaces because of their inadequacy of today, and the creation of a new urbanity space. At this two great objectives I added the priority of a new kind of integration with the existing city, also considering great European and extra-European experiences analyzing how the city communicates with a market structure of different dimensions but insert in an urban area (wholesale, commercial, or any function that this area could host). In this way the next step that I made is a brief analysis of the strategic context, as also the ban offered by So.Ge.Mi. proposed in its main text.; I analyzed the strategic context and the presence of the main big logistic areas, markets and wholesale structures that insert in the urban context had to face with the existing city, and how they are communicating with it.

After facing with the context at different scales, from the area to the strategic context, I wanted to start to show my intentions for the future of the Ortomercato, introducing a key theme, connected both to the function of production of vegetables and agricultural products of the market, and the power that this sector is now obtaining in this last decade: the agricultural sector. The chapter dedicated to the new renovated imposition of agriculture, in particular urban agriculture, is in relationship to the importance of the function of production that the Ortomercato has developed through the years, and that hosts today, but also the easier idea of the importance of food production and of urban farming in different projects and in different context. This is a key theme, that I wanted to develop in order to build up a project oriented in this way, giving a new function to this area but keeping the main production face, and from here I decided to justify my title: 'GROWING ORTOMERCATO'.

The territory and the urban context of the area of the Ortomercato are very articulated, and proceeding with the analysis of the context I developed some analysis of this one, in the direction of what I wanted to enhance and show of this portion of the city of Milan and its surrounding. The analysis proposed are first of all focused more of the accessibility, paths and green themes, but also on what is really now going on in this area, in terms of functions (residential, industrial..), but also in terms of urban morphology, open spaces, liveability and walkability, flows. The finalization

of the analysis is the definition of critics and potentialities that are emerging from these, that can be resumed in:

CRITICS:

- the lack of connections between the area and the existing city
- the fragmented areas that the area create with its urban context
- the presence of green but fragmented in the surrounding

OPPORTUNITIES:

- the great presence of green spaces
- the production function of the Ortomercato related to the agriculture theme
- the existing urban resources and the strategic location of this area

Starting from those points of reference, I placed the idea of the future area as I chose to develop. In order to explain my idea, I developed a concept part, in which I describe the main objectives, starting as I said especially from critical points and from resources that could be developed in different ways. The concept is the product of the fulfillment of the four objectives that emerged from 4 questions:

- 1 - HOW TO IMPROVE URBAN QUALITY AND CONNECT THE EXISTING CITY?
- 2 - HOW TO GIVE A NEW IDENTITY TO THIS AREA?
- 3 - HOW TO ENHANCE AGRICULTURAL AND PRODUCTION THEME?
- 4 - HOW TO DEAL WITH EXISTING SPACES?

The four questions arose from what I thought were the main critical points or resources of the territory in this area that could be developed, gave birth to the four main objectives, associated to different scales (territorial/city scale, area/local scale mainly), and they are:

- 1 - LET THE CITY GO INSIDE, which purpose is to break limits and boundaries and integrate this area with the existing city, in different ways and at different scales;
- 2 - PROVIDE A NEW STRONG IDENTITY, to make this place liveable and make it not only as a passage but as a destination;
- 3 - URBAN AGRICULTURE, to enhance the function of production of vegetables of the market and also develop agricultural theme, connected to the presence of agricultural green in the city but also in connection with Expo theme and food related activities;
- 4 - ADAPT EXISTING SPACES, to give a new liveability of the spaces adapting the market but overall their surrounding to be more public.

The key-concept will show how this area is going to be developed and is going to be connected with its urban context, and is also showing the main intentions for the future of this area anticipating the project and showing the actions that will be developed in different spaces inside the area.

After having defined and gave a description of the objectives, it's important to develop a strategy for the construction of the real project, defining actions for every objective, the spaces and the layers and possible actors involved. I also take into account the requests of the existing ban, that I consider but I chose to don't follow, to see what specific requests I supplied or didn't supply in order to have a common view with the existing document even if the project itself doesn't follow its strong points.

1 - REASONS AND ABSTRACT

The actions are applied at different scales and reflect the objectives, every action has a different range of influence and tries to improve or solve what it currently going on.

Before to define the actions, i decided to classify general guidelines related to different sectors that they will affect:

- POLITICAL
- SOCIAL
- CONNECTION
- ENVIRONMENT
- ADAPT
- CULTURAL
- INFRASTRUCTURE
- OPEN SPACES

For each category or sector, there are some general guidelines that represent the foreward to the actions, declined at the three main scales: building, local, city/territorial.

The real actions are at the end related to different sectors, different scale of influence, and responding to the four questions emerged from the concept, shuffled in different way with different point of view. On the basis of the objectives, and the scale and the guidelines, starting from the bigger scale, the territorial scale, i decided to introduce actions oriented to the flows analysis and the connection them, in terms of mobility certainly, but also for the green areas and the accesses. For the medium level scale, the area or local scale, the actions are oriented to the new functions/activities proposed in the surrounding of the pavillons for the wholesale market, there will be spaces for different kind of green, mainly agricultural and production green at different level but also open green spaces where people can live the area in a new public way. The aim is to give a new identity to this area, that will give something new but preserving the origin function, and to be well blend into the existing city, giving a new liveability for people who could enjoy of different aspect of agriculture. In this phase its important to underline the aim to propose new paths, to give a new importance of pedestrian and cycle paths, that now are not present inside the area.

The last scale, the smallest is deducated to the actions at the building scale, in terms of organization of the spaces, how they could be lived by people and not only by workers, and about their functions.

The whole idea of the project is to give a new pole dedicated to the theme of green, production, urban agriculture, also integrated with different kind of activities, to let people know how the things are going on inside the wholesale area but also more in detail about production and agricultural activities. In this way the idea is to involve people as much as possible offering various possibilities: the huge presence of equipped green areas, to enjoy and restoring beside the rural paths; other typologies of green are oriented to vegetable gardening, that could be rent to farmers or people, that could directly sell their product or the derivatives. The idea is to show people the cycle of life pf production from the growing to the consumption, and also to the wholesale distribution (as the Ortomercato).

The buildings or the pavillons in this way will offer a new liveability for people, with a new relationship between spaces, where people could directly see what is going on.

Beside the existing structures i propose new different typologies of buildings, especially i propose a big system of 'green houses'. Why green houses? they are flexible, are useful for production and they could host different kind of activities; based on those reasons i propose different kind of green-houses: green houses for production and storage activities connected to agriculture and vegetable gardening, green houses for restoration activities, in a system with different typologies of food offered, and at the end green houses to develop classes and educational activities connected to food, agriculture and growing.

Close to the presence of the greenhouses of different types. I expected the presence of a part of buildings made of container, taken from a great example as homes for students of 'La Cité Docks', for mixed-use and they can ensure an appropriate mix-use area of new construction. All new buildings and new constructions in anticipation of this strategic project they want accomunarsi for the fact of being high flexibility both structural and functional, to accommodate different functions and to be easily manageable for the future. Also just like the buildings container made for students, the so-called container offer flexibility at the level of available blocks thanks to the materials and forms; Also greenhouses as already anticipate prove very flexible in terms of being functional for basic crops in our regions and could also become places of refreshment or didactic to spread the culture id this great theme, involving a varying size actor who can create an integrated of interactions.

The scale of the building, the project focuses on how they lived and how they can be places existing wholesale level, keeping the large area where logistics are located warehouses and larger areas of large refrigerators as well as the headquarters of So.Ge .I. north, and most of the pavillons of sale located in the central part. I thought it would be interesting to focus more on living conditions and the relationship between the spaces for a new livability by the people rather than the shape of the building itself, being functional to transport materials and the loading and unloading of goods for the size of the space. Inspired by the demands of the call for the renewal of this great area, I found interesting and functional play on the height of the halls rather than the shape or relocation, concentrating on adding new spaces that could be lived daily by citizens and dedicated to a more retail sector in collaboration with the activities of urban agriculture within the same project area.

Concluding this trail that led me to build this project for an alternative vision for the future and different area of Ortomercato, I can sum up my main objective that I would emerge from this paper in all its parts and chapters, namely the will to create a place that retains its original function but enriched and can give something back to the city but also integrate with it as part of a gear, and amalgams that connects with its urban surroundings a large logistics area, and to work alongside two different worlds as the wholesale and the most basic of agriculture to the urban scale to make the people live a new experience through one of the most productive of the city of Milan, a new destination different but that integrates the territory existing as a functional bridge but also a not typical bridge of exception.

2 - MILANO ORTOMERCATO

HISTORY

'Verziere' was the old vegetable market in Milan. Now it is located in Via Cesare Lombroso, and it is called "Wholesale Market" or, more generally, "General Market", a wholesale market run by SOGEMI.

In 1911 it moved from Verziere (street that still bears his name) to Corso XXII Marzo, adjacent to the cargo terminal of Porta Vittoria (Park Vittorio Formentano).

In this same period the Verziere had to move again, going the same direction towards the east. This was required by the changing needs of a roadway, because the new location represented an adequate response in terms of improved roads (the ring roads) and parking for the means of transport of the traders, generally farmers who mainly came from the outer belt of Milan.

The chosen area, now Largo Marinai d'Italia, also offered a new important feature, which is its proximity within a few meters of the new station of Porta Vittoria, actually inaugurated in 1911 (later abandoned in 1991 and demolished in 2003).

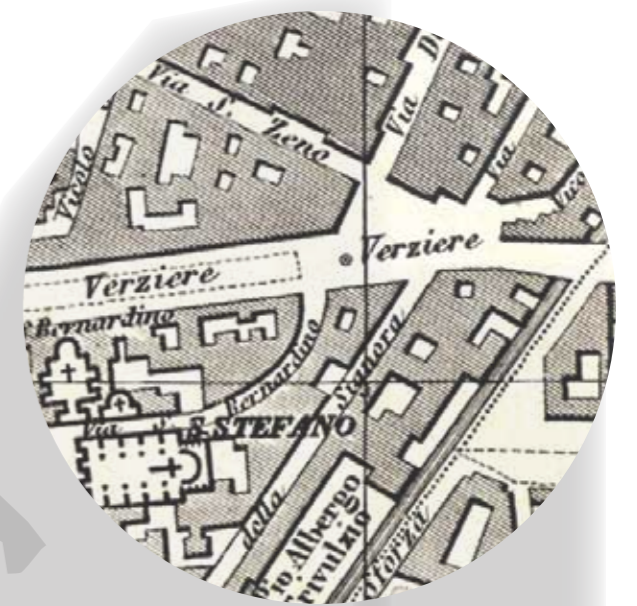
The proximity of the railway station so allowed the new Verziere, which at that time also changed its name into the more appropriate Italian name Mercato Ortofrutticolo, to expand both in terms of number of sellers and in terms of buyers, making it one of the most important sales areas in this sector on the national scale. Unlike the previous ones, the area used for the market was equipped to provide individual exhibition spaces suitable for people and goods, with special constructions of which now only a small (but beautiful) mark remains: the Art Nouveau building erected in 1908 by architect Alberto Migliorini, where the theater company of Dario Fo was also based in the 70s. Also in this case there was perhaps little foresight in choosing the place, because in 1965 the Verziere had to move to the current location of Via Cesare Lombroso.

As I said, in 1965 the ortomercato moved to via Lombroso, where it still is: the previous premises were outdated and its location, closer to the center, used to cause huge traffic problems. The large facilities that still remain are the Liberty Palace, which housed the old central bar of the market where the "Borsino Market" took place. Nowadays this building has taken a big role in the cultural life of the city as a venue for cultural events.

Historically, the presence of a vegetable markets has been documented in many places, such as Largo Richini, Fountain Square, Largo Augusto, Piazza Santo Stefano. Another heir of the Verziere was also the market of Piazza Beccaria, founded in 1954, moved to Piazza San Nazario and then finally to Largo Richini, which is currently just a kiosk.

About Verziere near Piazza Fontana only the name of the space remains today, simply called Verziere, without specifying "street", "square", or other urban characteristics, and the column with Cristo Redentore, today in Largo Augusto.

The drawing describes the different locations of the Ortomercato through the history, the pictures show how was the 'Verziere' in the past



2 - MILANO ORTOMERCATO

This is the area identified for the new ortomercato, with the aim of concentrating structures of the city's wholesale markets, enhancing a core of urban services, which were, however, already present, such as the Macello pubblico, Mercato Avicunicolo and the poultry market. The plan of 1953 defines, in fact, in this part of the perimeter of the city "zonannonaria existing and planned". Developed after the approval of the Planning Law of 1942, the plan shows different characteristics from the previous ones.

The master plan was drawn up in 1958 by Ing. Guido Amorosi, Municipal engineer, Silvio and Giuseppe Parrella Cattorini.

IN 1959, Law n. 125 of March 25, was passed, requiring the participation of traders in the sector of the production, trade and processing of products in the institutions that manage the wholesale markets, therefore representatives of the local Chamber of Commerce, Industry and Agriculture were also admitted to the "Society for the plant and the exercise of the vegetable market of Milan" and the status date approved in November 1959. The Memorandum of Understanding between the City and the Company thirty It was entered into in May 1960 and the works began on June 25 of that year.

The property and organization of the Ortomercato since 1956 is under So.Ge.Mi. s.p.a.

The long process towards the birth of SO.GE.MI S.p.A. began on Feb. 24, 1956, when the company Ortomercato S.p.A. was formed, which allowed the City of Milan to become the first municipal government in Italy to entrust the management of wholesale markets in a joint stock company established ad hoc. On June 25th, four years later the first stone of the new Mercato Ortofrutticolo was laid, which was to see the beginning of its commercial activities in August 1965.

The company itself, in the form we know now, was not until active 1979, when the City of Milan turned the existing Ortomercato SpA into the current Society for Plant and Financial Markets ration Wholesale of Milan, the current SO.GE.MI SpA, with the subject "the establishment, installation and operation of wholesale

markets of fruit and vegetables; flowers, seeds and plants; meat; poultry, eggs, rabbits and wild game; fish products; and structures ration for the wholesale marketing of all products of agricultural origin - Food and wine, fresh and preserved. The Company will also examine the task to study, design and implement the renovation of existing facilities ration, including those concerning the activities of slaughter and also examine the management and operation of the latter, and only for them in under concession". With the agreement of 27 May 1980, the Milan City Council revoked all its previous actions relating to the establishment of public wholesale markets ("poultry, meat, fish products, flowers and vegetable products"), revoking the earlier concessions also for the management of the public slaughter, contemporarily given to SO.GE.MI S.p.A. .:

"The right to the surface after their deregulation, on the areas, equipment and fixed equipment, already constituting the public wholesale markets with effect from 1 July 1980 and for a period of 60 years and to be used for the establishment and management of markets Public Wholesale "own" the SO.GE.MI S.p.A. .;

the concession for the operation of the public slaughter of the City of Milan.

In implementation of this mandate, after approval from the Region of Lombardy on 12 June 1980, SO.GE.M.I. SpA authorized the construction in the city of Milan of the wholesale markets. The operations were established and started immediately to meat, fish products, fruit and vegetable and poultry and rabbit. Only later SO.GE.M.I. S.p.A. provided for the construction of two new structures in which, in August 2000, the fish market Sammartini was removed and given to the flowers, officially opened on October 25 of that year.

The drawings represents the different road and street system in the surrounding of each location of the market, while the pictures are about the new location in Via Lombroso and the initial project

VERZIERE



1911- CORSO XXII MARZO



TODAY



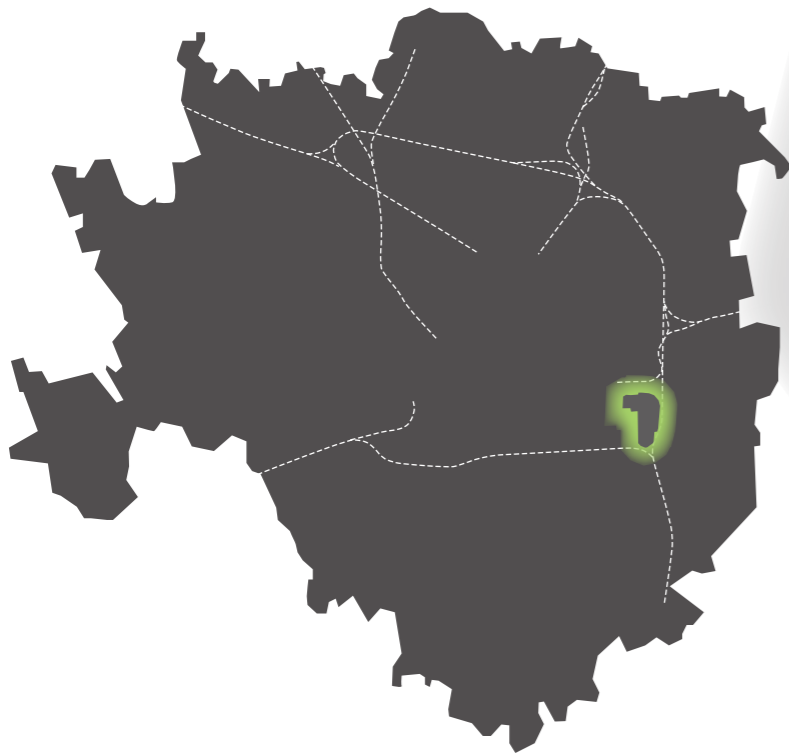
2 - MILANO ORTOMERCATO

TODAY

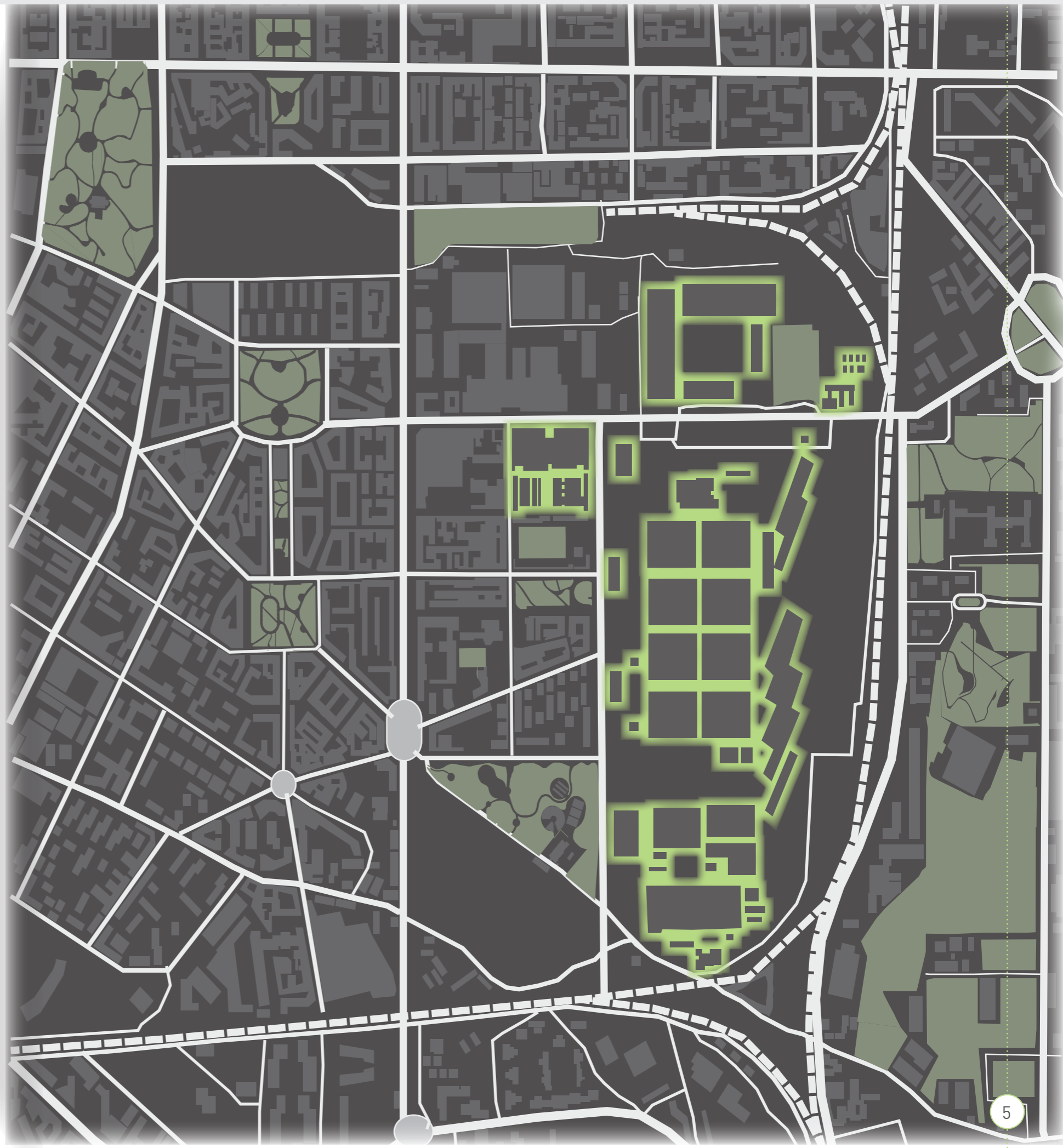
Today, the modern area of Wholesale Market is located at the center of a great transformation area in the context of metropolitan Milan.

In the surroundings of this area present different kinds of tissues and ongoing project. The grid is mainly regular, the area is located in the expansion area of the metropolitan city of Milan, in a part of the city that is also object of different kind of transformations, starting from PGT, but also other programs and projects interesting and affecting the surrounding of the Ortomercato. Its location is in fact in one of the two main expansion areas (East and West) of the city that are in continuity with Beruto city plan, strenghtening the historical radial axes. This way, the context of the Ortomercato has been orientered since the period between the World War I and the World War II to guarantee different services, especially as for the housing matter, after the war.

The context that today hosts what is the new Mercato Ortofrutticolo so is various because it offers a lot of possibilities in relationship to the wholesale markets area, which exerts a remarkable influence on the territory at National level, being the biggest and most relevant wholesale market structure in Italy.



The new location of the Ortomercato today



2 - MILANO ORTOMERCATO

The Ortomercato of Milan is the largest wholesale vegetable market in Italy, with a total area of ca 445,000 square meters. divided into four pavilions of exhibition and sale, marked with the letters A - B - C - D.

Inside the structure there are 109,000 cubic meters of cold storage for the controlled preservation of the products. The market sees an audience of about 9,000 people a day.

Two companies are involved in the processing and packaging of the goods, the wholesale companies with 160 shop, 162 manufacturers with the store.

The Businesses (with 3,000 employees in total) are 400, 95 exporters, 110 drivers and 3 cooperatives portorage.

Marketed products reached 1,000,000 tons per year, with 16% of import and 20% export.

Commercial companies have 400 employees with approximately 3,000 total.

The wholesale companies with store are 160 manufacturers with 162 sales point, 95 exporters, processing companies and packaging 2, 110 drivers and the Cooperative portorage 3.

Since Monday, March 9th, 2015 the Ortomercato Milan has been open to the public from Monday to Friday, from 10 am to 12 pm, in addition to the usual opening on Saturday from 9 am to 11 am.

The new opening times were decided by the Fruit and Vegetable Market Commission (composed of wholesalers, retailers, hawkers, farmers, Sogemi and representatives of the city administration), in order to meet the needs of customers and citizens.

The opening of Ortomercato Milan during the week is in fact just one of many initiatives that will be undertaken by Sogemi to promote excellence in agri-food sector in the area and make it a more efficient supply chain.

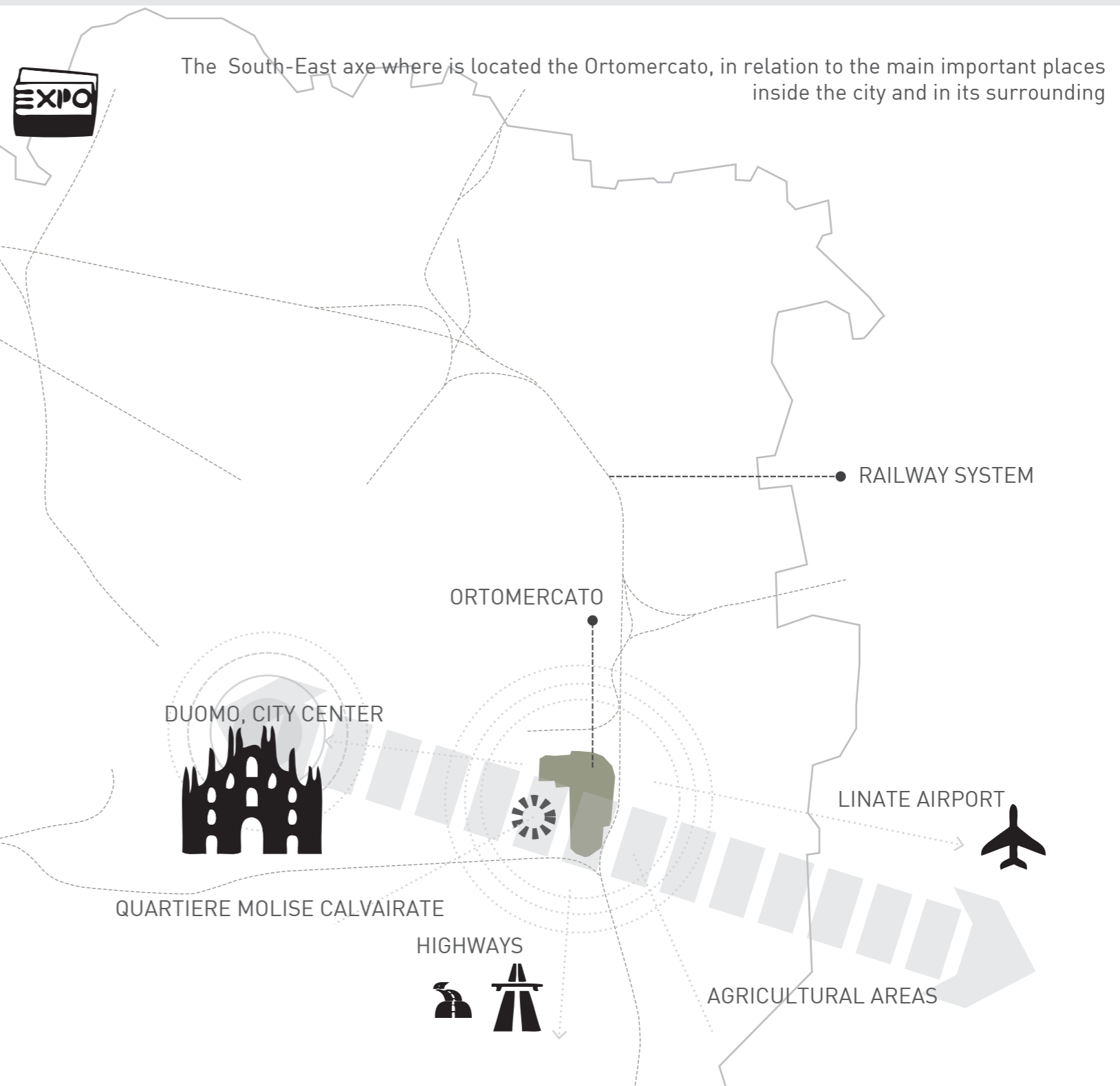
The area of the Fruit and Vegetable Market in Milan was also the subject of an international design competition for its redevelopment, launched in October 2014.

Currently the Ortomercato Milan is one of the leading European wholesale markets and it sees the transit of 10% of goods transiting total in all the Italian fruit and vegetable markets. The new Polo Agribusiness in Milan, which will become a real gathering place open 24 hours on 24, will enhance the value chain of local markets and provide greater capacity for choice and quality to consumers.

The geographical position, the center of Northern Italy and the main international transit corridors, together with the wide range of products, available all year, and the excellence of the quality of products sold to ensure the Milan market leadership in the distribution of fruit and vegetables in Italy and in other European countries.

The export amounted to more than 300,000 tons of fruit and vegetables, marketed by wholesalers with annual sales point and the export companies present in the market. On the import side, the market of Milan plays an important redistribution function in Italian fruit and vegetables from abroad, importing 33% of the total fruit and vegetables marketed each year.

Particular attention is paid to providing for both the tracking and tracing, the highest health and hygiene safety on the marketed fruit and vegetable, including the controls carried out directly by the operators as part of the HACCP system. Ortomercato is visited daily by over 10,000 people.



Via Cesare Lombroso



Via degli Etruschi



Wholesale pavilions



Parco Alessandrini



2 - MILANO ORTOMERCATO

So.Ge.Mi. palace and the main gated entrance



The South Pavillons near the high flows street



Another 'gated' view about existing logistic pavillons



PANORAMIC VIEW

3 - THE EXISTING BAN

ORTOMERCATOMILANO_2.0

concorso internazionale di idee

'La città si sveglia. Contro il sole già alto le case si levano bianche, ognuna persuo conto, quasi ammodernate torri, dal verde vivido della pianura, che apparesottilmente ovattata dalle prime sue nebbie: i treni rallentano la lunga corsasopra i canali e le rogge, lungo gli stendimenti di infaticabili lavandai. Le linee elettriche ad altissima tensione sorpassano i pioppi, accostano l'agglomerato delle case e delle fabbriche fino alle sottostazioni periferiche: ivisi disarmano, come l'armato potere dei consoli davanti la silente legge e le porte dell'Urbe. Gli apparecchi di Taliedo già ronzano, con le ali ombrate o dorate, sopra la testa degli spazzini insonnoliti; rientrano pedalando lenti i guardiani della notte, con una sigaretta tra le labbra; i gatti salutano il giorno accoccolandosi presso la macchina dell'espresso, nelle più mattutine tabaccherie. Un andirivieni di biciclette senza incrocio possibile.'

Carlo Emilio Gadda, "Una mattinata ai macelli", in Le meraviglie d'Italia, Firenze, Parenti, 1939.

The document which explains the ban for the renewal of the new Ortomercato, its requests and its strong points, with the objective of creating something new and which could be part of the existing city in ways still unexplored and with different scales objectives opens with this quote by Emilio Gadda:

"Il Comune di Milano, SO.GE.M.I.S.p.A., gli Operatori economici del settore hanno condiviso il principio di riorganizzare completamente l'attuale Mercato Ortofrutticolo di Milano, nella prospettiva di creare un polo integrato di attività legate alla filiera agro alimentare. "Ripensare il Mercato sul Mercato", attraverso la totale rigenerazione dei 49 ettari dell'area attualmente occupata, è una scelta che prende in carico la volontà degli operatori pubblici e privati del commercio all'ingrosso di essere in prima fila nella costruzione di Milano Città Metropolitana."

From the beginning the objective of this competition, held by the main society which is the proprietress of the group of the whole wholesale different markets, is to orientated

towards a transformation in order to make the new Ortomercato a protagonist in the development of the metropolitan city of Milan; to create a complex area connected to the agricultural-food related sector, that today is becoming one the more interesting sector in our Country.

In this way Ortomercato has a great opportunity, choosing to maintain the main function of wholesale, but adding new ideas and proposals, in order to integrate the area with the existing city, also in a sustainable way.

On the one hand, the new Ortomercato, will have to develop synergies with other structures already present and in progress revitalization (the Fish Market, the meat market, the Flower Market, etc.); on the other hand, it will have to mend relationships with the city and the local society.

As even the structure built in 1965 are obsolete, the project for the future Ortomercato of Milan must respond to two objectives:

- Realizing totally new and modern infrastructure and environment, which will be the main gear of a new food pole of reference, bringing together all the functions that the transformation of the traditional model of the wholesale market have indicated as urgent possible;
- Building a wholesale market in the third millennium who can also be a pole of new urbanity to Milan Metropolitan City, rejecting the choice of discontinuity with the history of places, migration out of the consolidated city and the additional land consumption, the market in the city is a challenge to the ability of imagination architects, urban planners, industry experts, investors: The starting point of the competition is based on the description and the individuation of the Problems and Opportunities that characterize this area.

ORTOMERCATOMILANO_2.0

MERCATO ORTOFRUTTO
 International ban competition
INTEGRATION CONNECT
 New Urbanity area for Milan
 Metropolitan development
 Agriculture and food
 Wholesale role
 Existing city and
 Surrounding city
 Cooperation with
 Production and
 Pole of new urbanity
 Modernity a
 Sustainable
 New functional
 hierarchies
 Green

3 - THE EXISTING BAN

The starting point of the ban is based on the description and the individuation of Problems and Opportunities that characterize this area.

GUIDELINES

OPPORTUNITIES:

- the recovery of the role of main attractor of this sector in Italy and in Europe
- the possibility of a growing in the export activities
- the presence of the Expo 2015 and the renovated importance of food and growing sector
- the build up as a possible quality brand also in this way with the role of the Expo 2015
- development of ecological and sustainability themes
- the 50th anniversary of the Ortomercato

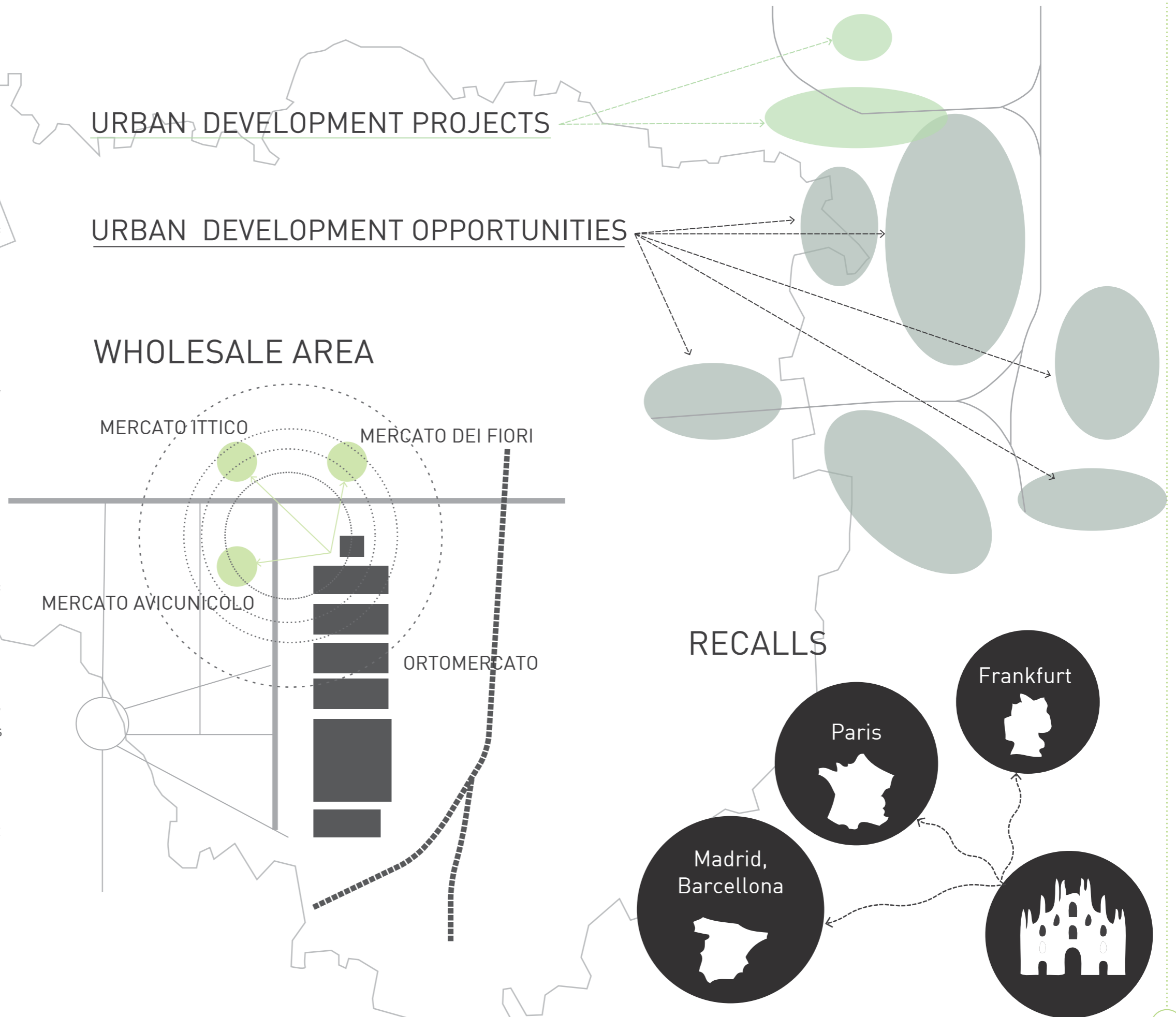
PROBLEMS:

- the non adequacy of the actual structures
- logistic and management difficulties
- the reduction of the commercial volumes

The ban speaks also about the current location of the wholesale area, as we seen object of different moves. In this way it underlines the current location as place of different advantages that should be developed and used:

- the south-east area is the area which hosts the main flows of the road network and rail network in this part of the city and this is very important for transportation costs and logistics
- the area is connected with other wholesale structures, and having a unic big pole of wholesale could bring advantages
- the presence of the big intervention applied on the railway node in this area, in order to limit road traffic.

The idea is also to follow some of the best practices that are present in a lot of European cities: Madrid, Paris, Frankfurt, Barcellona.



3 - THE EXISTING BAN

Without a wholesale market would not have ability to supply retailers, street vendors, the same local markets. In many countries, such as Britain, it is being policies in favor of these proximity networks, where the small business is a powerful factor for socialization and integration, allows the activation of everyday relationships "face to face" and values the interpersonal relationship.

In this regard it should be noted the process initiated by the City of Milan to entrust SO.GE.MI S.p.A. the management of the 23 local markets covered citizens, a network in which are housed about 240 small food business operators.

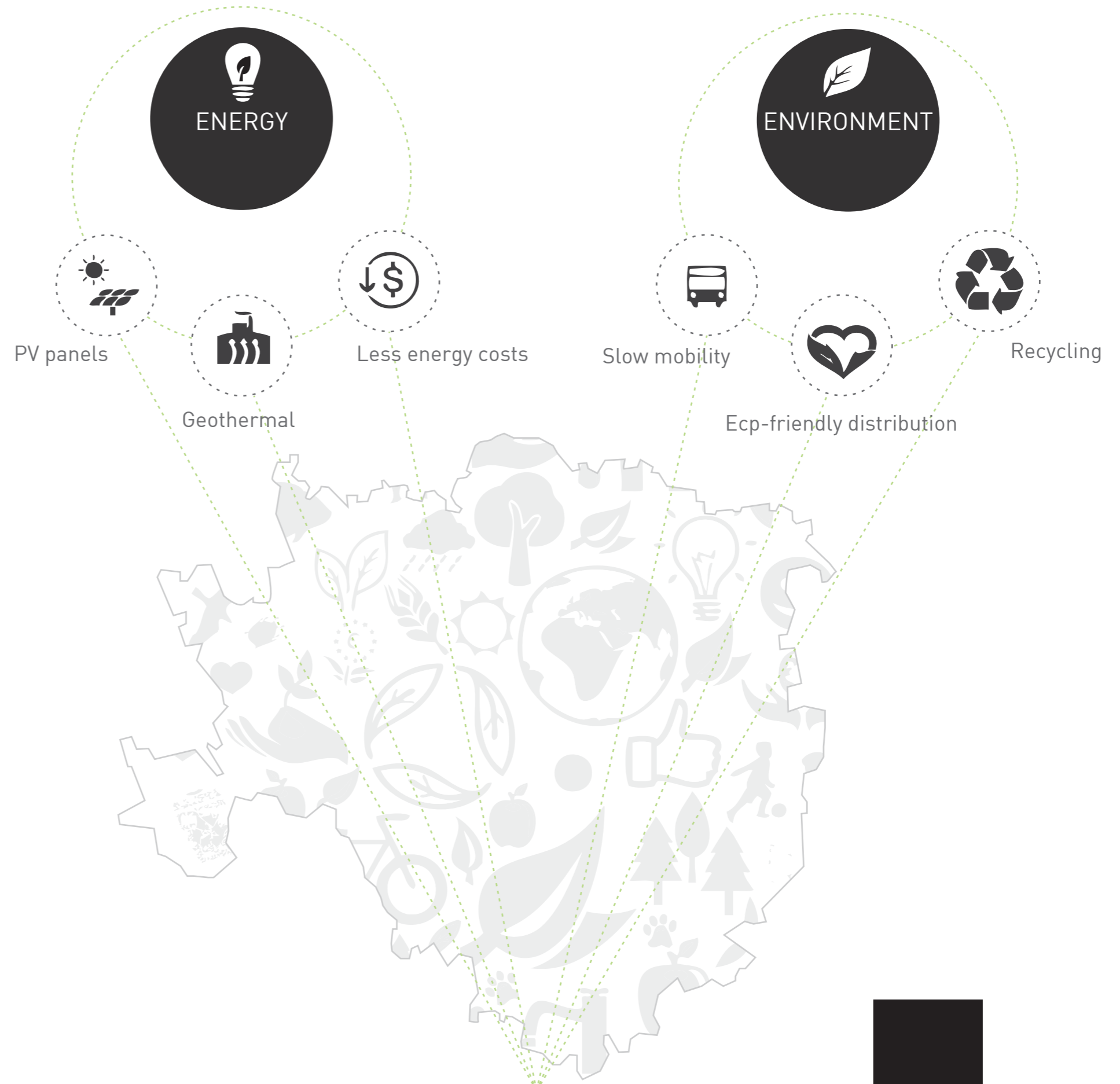
In summary, the traditional wholesale market if it wants to maintain its central role in the food chain, must:

- Increase the share of mass retailers (GDO) and Export
- Increase the value provided in the traditional channel, relying on the report with end users and allowing them to compete at the highest level GDO.

A new wholesale structure must rely on certain indispensable strengths :

- Reference channel for retailers and merchants
- Place of training and detection of the reference prices for the whole sector. Elements of security (hygiene, traceability etc.) Some replicable outside Market, other exclusive.
- Provides for producers free access to the market.
- Social function of voluntary organizations.
- Educational function: to become a place where new generations soprattutto learn the culture of food.

The New Ortomercato will be a cutting-edge facility is in the field energy and environmental.



3 - THE EXISTING BAN

The data contained in this announcement should be considered a guideline is not binding on the competitors.

It remains the responsibility of the Competitors adequately justify any discretionary decision, albeit legitimate, that were to differ from the indications

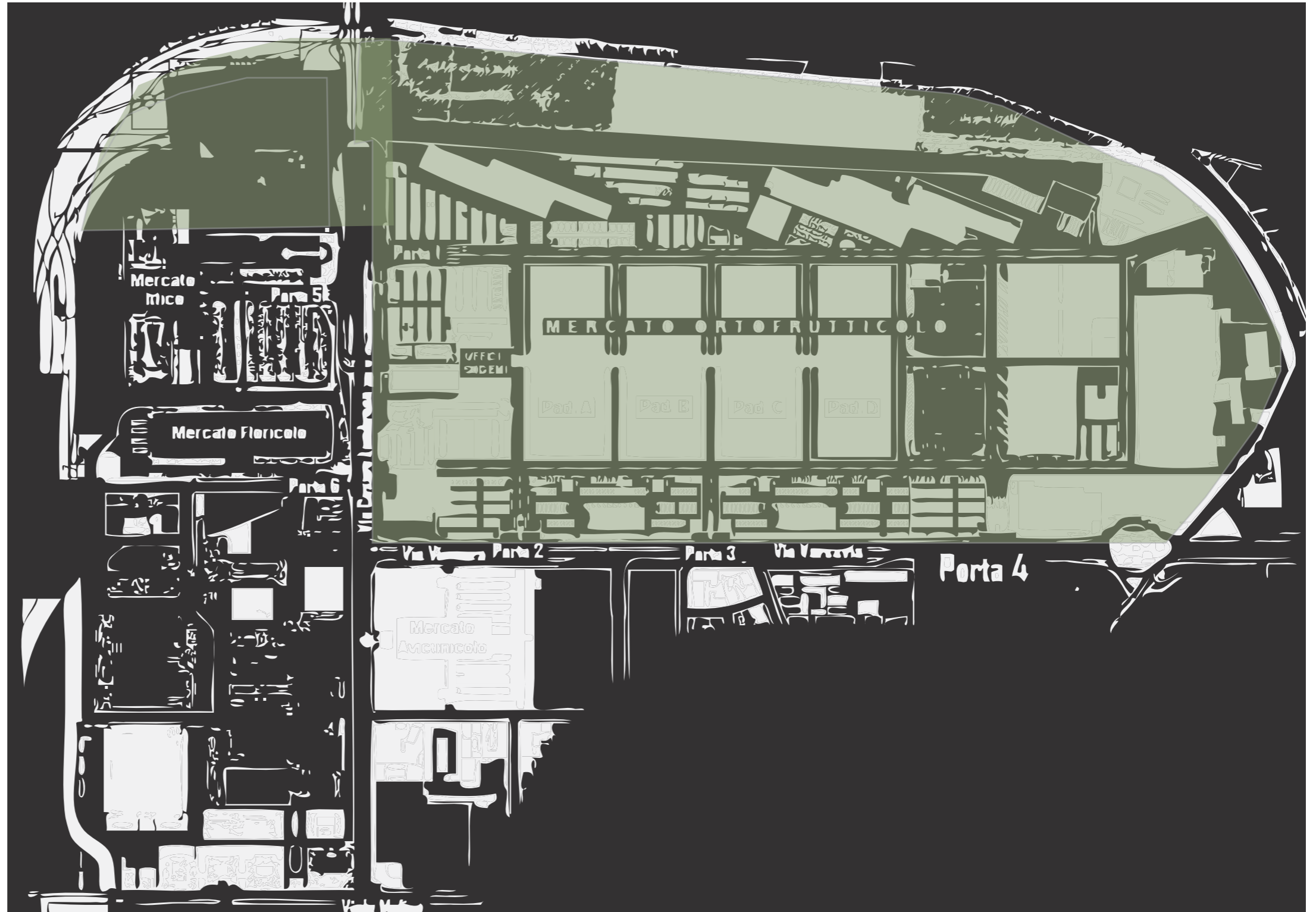
The new complex to be realized on settlement areas currently engaged by Ortomercato will cover a total area of approximately 49 hectares. The area will be divided into two main parts:

- Area A, or "Regulated" in which will be realized equipment of the Ortomercato;
- Area B, or "Free", to be allocated to activities, however afferent food sector, associated with the presence of large wholesale market.

Competitors will be the task of defining the typological characteristics during the design and size of retail spaces, reaching even to pre-figure the possible typical layout.

The 'dimensionamento' of the project must be considered in the New Ortomercato two-way relationship with the investment plan.

Therefore, power is left to the competitors to offer their optimal dimension of the plan for all the new structures ("Regulated" area and "Free" area), taking always into account the requirements of the PGT regulations.



THE BAN AREA



REGULATED AREA



FREE AREA

3 - THE EXISTING BAN

The ban is also specifying some exigences by the two main actors taken into account, So.Ge.Mi. and PGT (Comune di Milano). Those exigences are not totally mandatory but they describes some existing situations, with different kind of aspects that could be developed and other that could be localized and solved.

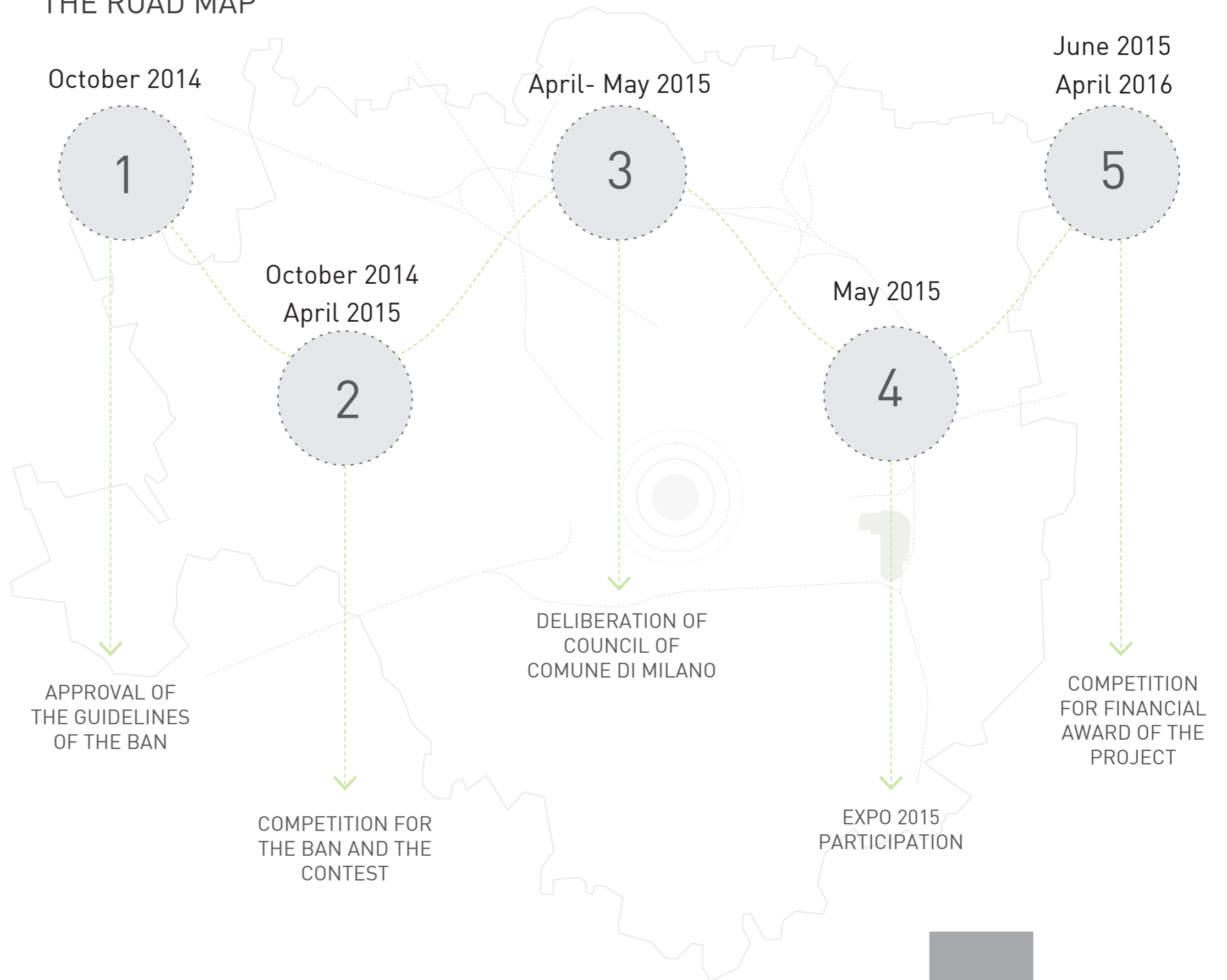
EXIGENCES OF SO.GE.MI. TO SATIFY:

- adequacy of the logistic system ;
- best efficiency in operations of loading and unloading activities;
- less energy consumption;
- use of alternative sources of energy;
- the new project constructions shouldn't produce a slowdown of the Market functions;
- develop promotional events;
- educational programs for schools;
- promote economic and social sustainability;
- develop a more open structure and opening of the market to attract more potential users;
- create synergies with commercial networks;
- offer more facilities and services for people;
- have a different and better accessibility to this area, not only by car;
- optimization of the spaces.

EXIGENCES OF PGT TO SATIFY:

- new order of the urban tissue and of the morphological asset in relation with the context;
- guarantee architectural and urban quality;
- requalification of the functional asset and new equipment of functional-mix;
- give a better mobility and transportation system in order to strenght connections and mobility flows;
- pedestrian facilitation;
- individuate and solve traffic problems;
- spare of non renewable resources;
- reduction of negative externalities;
- development of a better security system.

THE ROAD MAP



4 - DIFFERENT EXPERIENCES

THE STRATEGIC CONTEXT

Wholesale markets contribute to the organization and operation of the circuits of distribution of agricultural products and food related activities. They are the guarantee of the conservation of the local trade and the number of distribution activities, without neglecting the contribution to the dynamics of competition, as demonstrated by the attraction that these places carry on other business structures of independent wholesale. In addition, according to the size and location, wholesale markets play a major role in urban regeneration policies.

Wholesale markets are characterized as meeting places between supply, represented by wholesalers, manufacturers or importers of agricultural products and fresh food, and demand, represented by retailers, food service operators and traditional collective restoration activities, but also the purchasing power of large retailers that are markets. The recent evolution of wholesale facilities is characterized by two general trends, recognizable despite the diversity of the context: the first is characterized by the logistical functions, related to wholesale markets activities; the second one is more oriented to marketing activities, to quality and synergies; the third one is connected to the possibility to create local network of production oriented to a trust relationship with consumers.

So, strictly speaking, one should not speak of a wholesale market but to multiple manifestations of this type, and European context (but not only, also Extra-European) can provide a lot of different situations, in some cases those could be best practices or examples of what does it mean to live and to have a big logistic area, and a wholesale market, inside a city, and how this relationship could work.

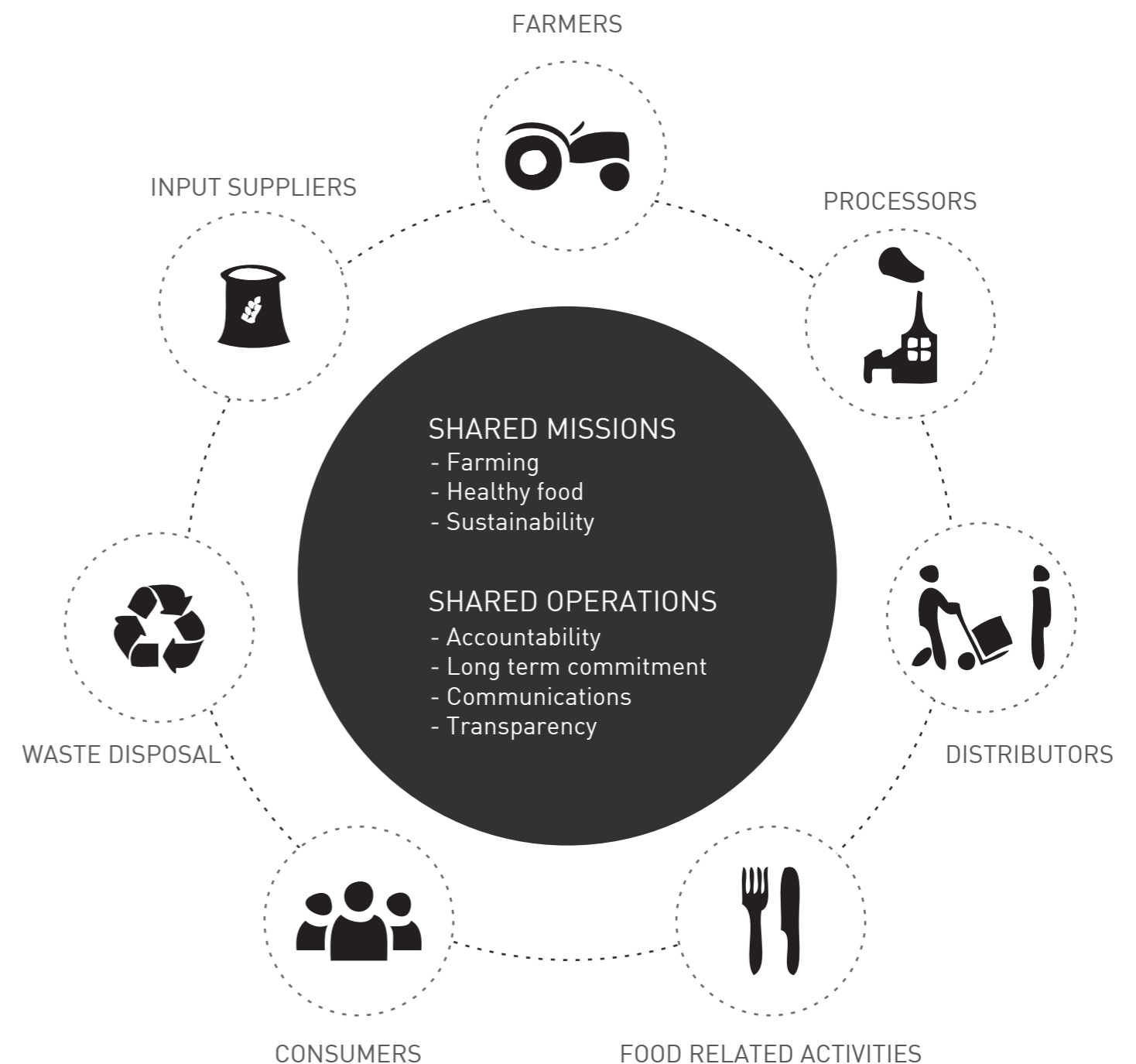
Wholesale markets have drained two opposing tensions to change:

on the one hand, the transformation of the production structure in agriculture and, on the

other, the multiplication and differentiation of distribution channels, which, in fact, reveal the attempt by producers to have more and more direct relations with the end consumer, bypassing the intermediate levels of mediation and this is to maximize "value capture" is to fully exploit the new ideologies of "short-chain" of small-scale production, bio, etc. In this context, every wholesale market seeks his way, fits in a more or less effectively to changes in the operating.

The modernization of facilities for wholesale is accompanied by some questions: relocate or redevelop structures existing? And if the choice, most of the times required, is for moving, for go where? And what to do with empty spaces, normally placed in strategic location, fully integrated transport networks at different scales, center of gravity of urban contexts that around the function of the wholesale had over time created urbanity full of social and economic relations. Decentralization is accompanied usually to rising rank territorial structure: the growth in size of the space is occupied motivation in expanding markets, both for activities traditional that for the new. The areas are released in the consolidated city the object of recovery operations but there are cases in which the remains link with the original intended use: the facilities are upgraded to host response to new patterns of consumption and the opportunity is seized to make it even tighter relations with the urban context of membership. In summary, the site development issued by macrofunctions ration is placed in relation to a project that is urban still in the food chain, revised according to the latest innovations, its reasons characteristics.

FOOD VALUE CHAIN



EUROPEAN PATTERNS

FRAMEWORK AND OVERVIEW

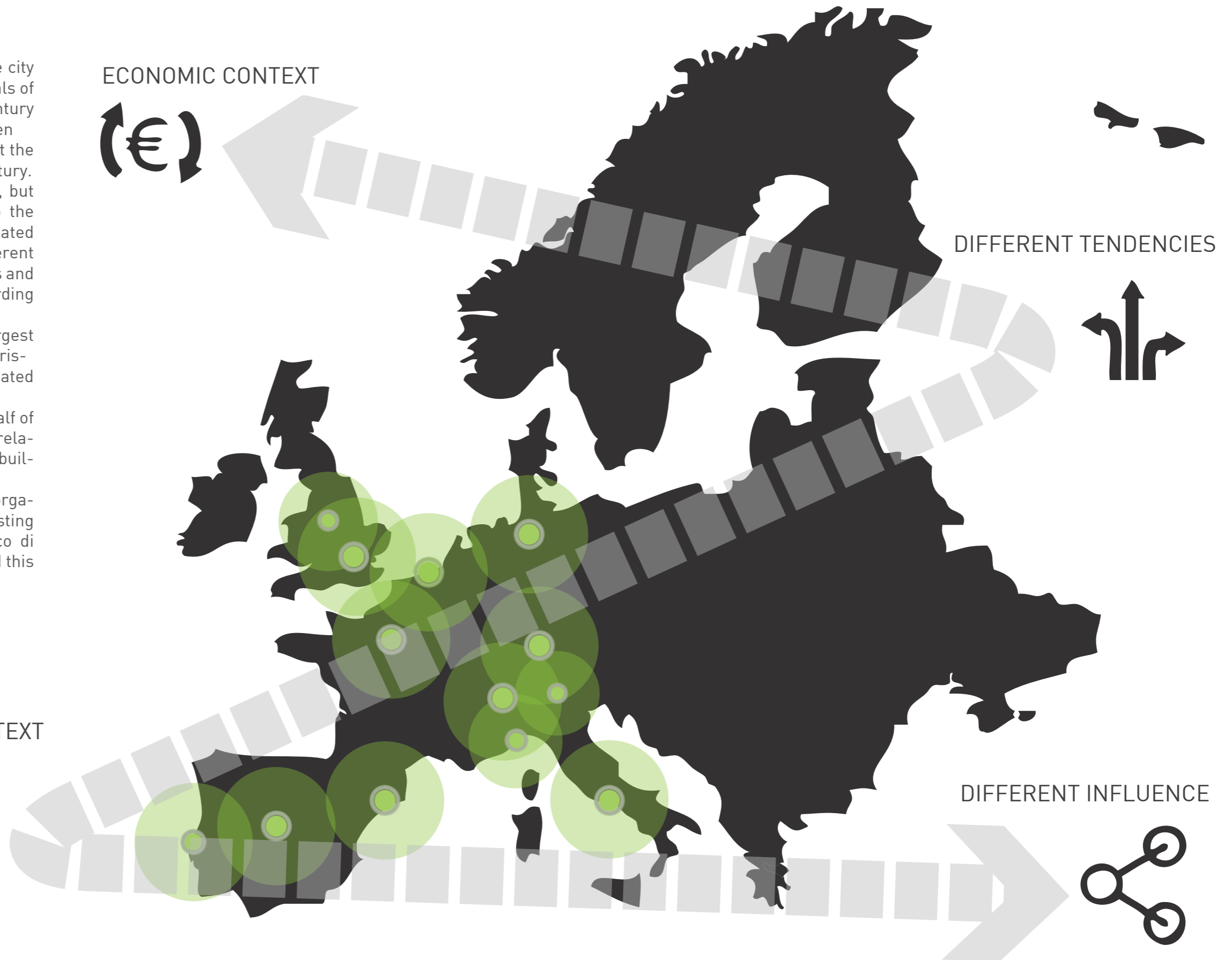
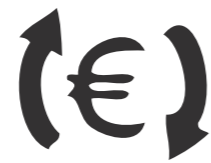
The relationship between markets and the city has always been difficult. A lot of testimonials of the growing city, the great nineteenth-century vaulted structures of the markets have been anxiety victims of modernization that swept the city in the Sixties and Seventies of last century. This relationship is certainly complicated, but could bring different positive changes to the different context; every context has treated logistic areas or wholesare areas in different ways, and Europe is full of the most various and different experiences and tendencies according to what the city really needs.

The case of the Halles in Paris, the largest wholesale market in the world, or Paris-Rungis, which is the most famous and debated but it is certainly not the only one.

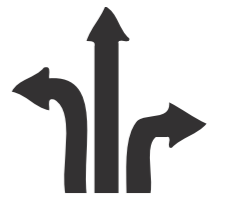
Large facilities for wholesale the second half of the twentieth century have broken the relationships between the division of land and building types.

Another big example of the tendency to reorganize and adapt to the new needs of existing structures, such as took place in Monaco di Baviera, without breaking the ties that bind this function to the life and spaces of the city.

ECONOMIC CONTEXT



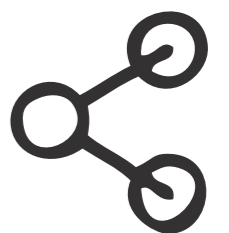
DIFFERENT TENDENCIES



GEOGRAPHICAL CONTEXT



DIFFERENT INFLUENCE



4 - DIFFERENT EXPERIENCES

LES HALLES, PARIS

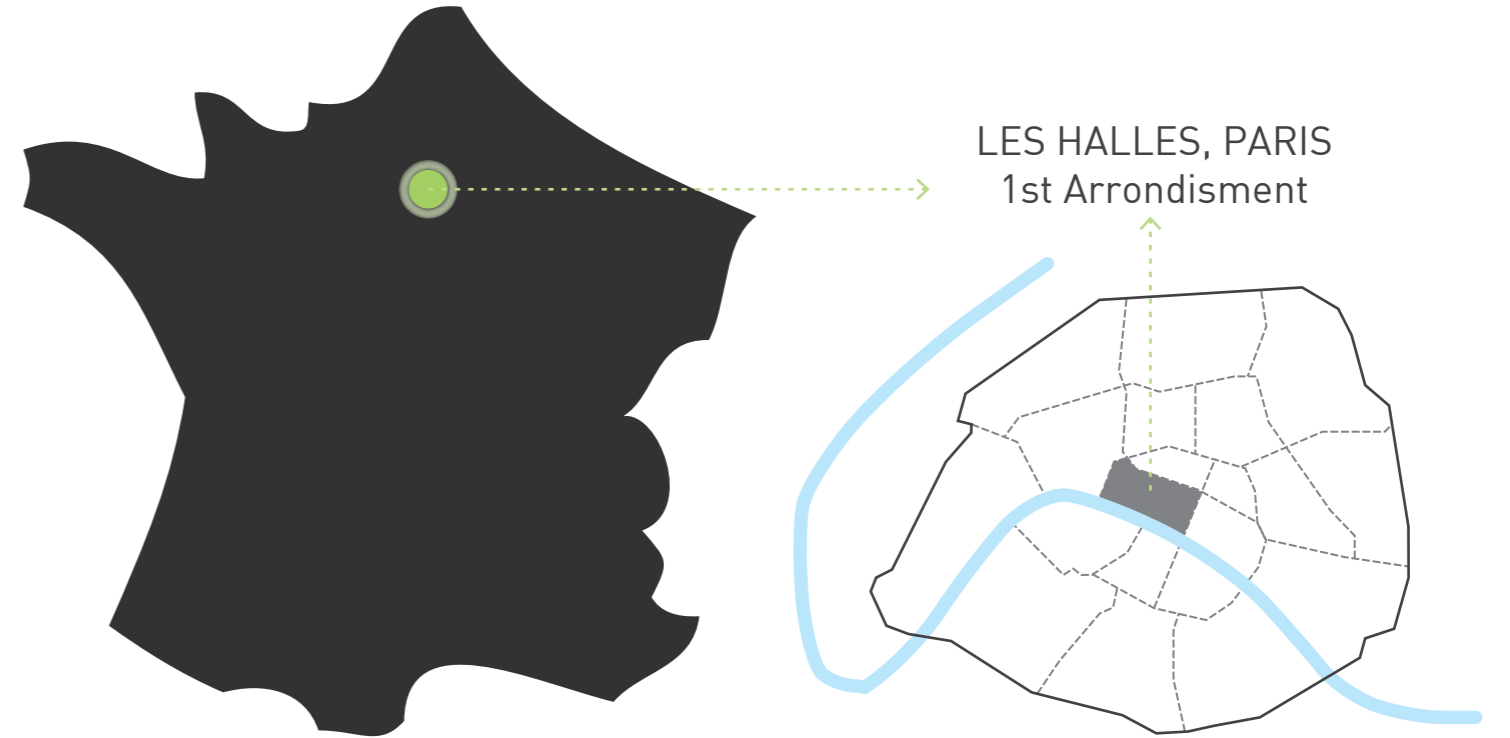
Les Halles de Paris was the name of the market of wholesale of fresh food, located in the first arrondissement of Paris, the heart of the French capital. Les Halles is also the name of the surrounding neighborhood. A mid-19th century architect Victor Baltard was commissioned to design the famous pavilions that hosted the market until the seventies of the last century, when they were transferred to the Marché international de Rungis. As part of a broad restructuring of the district, the Baltard pavilions were replaced by the Forum des Halles, an underground shopping center, and the surface of the Jardin des Halles. A new renovation project takes place in 2012 with the renewal of the Jardin des Halles, the Forum and the construction of a wide coverage, Canopée, in the eastern part of the site.

Unable to compete in the new market economy and in need of major restructuring, Les Halles were dismantled in 1971; the entire general market was transferred to Rungis, in the Paris suburbs. Two of the original Les Halles pavilions were dismantled and rebuilt elsewhere, one in Nogent-sur-Marne, Ile-de-France, and the other in Yokohama, Japan.

The site would later become the point of convergence of the RER (Réseau Express Régional), a new transport network completed in the sixties of the last century. The three lines linking the city to the south, east and west were extended and they needed a new underground station. For several years, the site was a huge open-air workshop, dubbed "le trou des Halles" (trou = hole) at the foot of the historical church of Saint-Eustache. Construction was completed in 1977 at Châtelet-Les-Halles, the new rail hub of Paris. The Forum des Halles, a partially underground shopping center, opened in 1979 in the east of the site. In 1986 it was opened the Jardin des Halles, a garden of more than four hectares. Over time many of the surrounding streets were pedestrianized. Since 2010 in Paris are being a serious work to restore the complex of Les Halles, formed by the Forum, an underground shopping center, and the Châtelet - Les Halles, the largest underground

station in the world and the busiest of all Paris (with about 750,000 passengers per day). The project includes an expansion of the station and the shopping center (which will always be called "Forum"), and new gardens. The structures are no longer suitable to the strong attendance at the station and the shopping center: 150 thousand customers every day trample the eight levels, five of which are underground. That by virtue of its three lines of RER, five metro lines, fourteen bus lines (750 thousand passengers a day from the Ile-de-France and beyond) can be defined as the main door of Paris, it is no longer compliant safety regulations. Yet security reasons are at the origin of the renewal and enlargement of outdoor spaces, today fragmented, degraded and cramped, little can be attended at night.

The winning project by architects Patrick Berger and Jacques Anziutti, is strongly characterized by the cover, a futuristic glass skin organic inspired by nature: the Canopée (Canopea), a term commonly used to define the canopy of tropical forests. Like a huge leaf waving and translucent at the top of the trees, the roof lets in light but protect from rain and sun. With a maximum range of 96 meters, covers and connects the two wings of the complex, which will host public services and cultural businesses. At the center, a patio and bright protected from warmer light, due golden appearance of the structure. The Canopée ensures natural ventilation. As a plant canopy, coverage will capture solar energy through photovoltaic cells. To see the spectacular video below, for details of the work.



France map and Paris subdivision in Arrondissements



4 - DIFFERENT EXPERIENCES

NEW COVENT GARDEN, LONDON

New Covent Garden Market is the largest wholesale fruit, vegetable and flower market in the UK. Located in Nine Elms between Vauxhall and Battersea, South West London, the Market covers a site of 57 acres (23 ha) and is home to approximately 200 fruit, vegetable and flower companies. The Market serves 40% of the fruit and vegetables eaten outside of the home in London and provides ingredients to many of London's top restaurants, hotels, schools, prisons, hospitals and catering businesses. The Flower Market, which offers an extensive range of flowers, plants, foliage, sundries and interior decorations from the UK and from around the globe, is visited by 75% of florists in London, many of whom place morning orders and return to restock during the day as needed. The Market is run by a statutory corporation, the Covent Garden Market Authority (CGMA), which reports to the Department for Environment, Food and Rural Affairs (DEFRA). The CGMA was set up in 1961 and charged with modernising and overseeing the administration of the vegetable market, which was considered strategically important as a wholesale food and flower market.

The Market opened for the first time on 11 November 1974, construction having started in 1971 on the site of the former Nine Elms Locomotive Works. The Market is so called because it transferred directly from its previous location at Covent Garden in central London.

Since 1990 it has been the policy of successive governments to dispose of the market as a going concern. Following a report by PricewaterhouseCoopers in 2005, the CGMA and DEFRA agreed on a plan (known as Project Chrysalis) to reform and redevelop the market to enable it to be eventually sold. The CGMA, which had previously paid any profits as dividends to HM Treasury, was allowed to retain its profits to fund the initial planning work. On 7 January 2013, the CGMA signed a contract with Vinci and St. Modwen for the market's regeneration. Most of the redevelopment will be funded by releasing spare land to the developers to build residential properties, with

the overall project worth £2 billion. Work is expected to start in 2015 and be complete by 2020, allowing the government to then disengage from the market.

The plans with the Covent Garden Market Authority will lead to the transformation of the 57-acre site situated next to Vauxhall Cross in the Nine Elms regeneration zone.

The multi-phase scheme will take 10 years to build and includes development of 550,000 sq ft of modern facilities to house the 200 businesses that make up the UK's largest fruit, vegetable and flower market.

Construction work will be funded from the release of 20 acres of surplus land for a residential led mixed-use regeneration scheme.

Much of this will be built on a separate site joined by a 1km linear park. In total more than 3,000 new homes and 135,000 sq ft of new office space and 100,000 sq ft of retail and leisure will be built.

Development work on the new market will commence in 2015 and on the first phase of the surplus land in 2017.

Vinci Construction UK has been earmarked to construct the new market, with other firms likely to be brought on board to build the later housing projects.

The developers have agreed to pump £91m into local infrastructure improvements.

The money will be spent on a series of local transport upgrades including the now approved Northern Line Extension.

Separate northern site in Nine Elms integrates a mix of residential towers and low rise buildings and will be linked to the market by a 1km linear park. Part of the main market site will also provide housing and residential.



NEW COVENT GARDEN, LONDON



4 - DIFFERENT EXPERIENCES

MARKTHAL, ROTTERDAM

Following in the footsteps of many European cities, October 1, 2014 opens the Markthal, the first large covered market in the Netherlands. Here shopping is a real experience: under its spectacular arch, the market also offers apartments, restaurants, terraces and possibility parking.

Over 96 manufacturers sell their goods to the Markthal, where each has its own cooling system, a warehouse and an area for the preparation of directly under the surface of the market, which also 15 grocery stores, restaurants and 8 1,200 parking spaces. With hundreds of daily visitors from the surrounding areas, the Markthal is open seven days a week until 20:00, offering fresh products that are on the agenda. It is estimated that this market will welcome from 4.5 to 7 million visitors a year, thanks to the wide range of products. Bread, dairy products, meat and fish, fruit and vegetables, seasonal delicacies, flowers and plants: everyone can find what they want in a very good quality. The Markthal is also a great place for lunch, dinner or drinks: on each side of the structure, both on the ground floor and the first floor, you can find restaurants, shops and non-specialized, such as coffee and tee shops. Still in progress is the creation of "The World of Taste", a cooking school with classes and workshops that teach to combine flavors and fragrances using only fresh produce under the watchful eye of professional taste.

What is not possible in other parts of the world, it becomes reality in Rotterdam: dwell on the Markthal. In the arch of 11,000 m² designed by Arno Coenen that dominates and covers the surface of the market are for rent 102 apartments, other 129 are on offer, including 24 penthouses, with an area ranging from 80 to 300 m², with two to five rooms. Each house has a unique view: on one side you can see the Meuse or the Laurenskerk, the other the sparkling life of the underlying market, without any kind of noise. With lively Laurenskwartier and Meent one hand, and the Koopgoot other, it will never be overwhelmed by boredom. In addition, the proximity of the two schools, the

library, the outdoor market and other convenient services, increases the pleasure of daily life.

The Markthal is easy to reach by train, metro, trams and buses all stop at station Blaak, just 100 meters from the market. In addition, the railway has direct connections to the Central Station of Amsterdam, The Hague and Leiden. Just below the Markthal is a large underground car park accessible from Blaak, with 1,200 parking spaces. From here is possible to access to the market thanks to spacious lift.

But the real work of art is the mural that was installed on the inner wall of the structure: 15 000 m² of designs printed on aluminum plates attached to acoustic panels to reduce noise inside the building. Both sides of the market are also provided with windows to protect customers and workers in the cold and rain without blocking the view of the scenery outside.

The building stands on Binnenrotte Square in the center of the city, in what is called the Soho district of Rotterdam.



MARKTHAL,
ROTTERDAM



4 - DIFFERENT EXPERIENCES

MERCABARNA, BARCELONA

In the past, wholesale food markets were situated in central locations within the city of Barcelona and occupied buildings which are now used for important social, cultural and leisure facilities, such as the Mercat del Born, the Parc Joan Miró and the Teatre Lliure.

The growth of the city and of its population led to problems of all kinds for these central markets in terms of capacity, communications, the environment and so forth. Gradually, therefore, they relocated to the Mercabarna precinct.

In 1967 was founded of the limited company, Mercados de Abastecimientos de Barcelona SA (Mercabarna). In 1971 the precinct's first wholesale market opened, the Mercat Central de Fruites i Hortalisses (the Central Fruit and Vegetable Market) which had come from the iconic Mercat del Born in Barcelona. Barcelona's slaughterhouse, the Escorxador de Barcelona, also moved. Until then the municipal slaughterhouse had been located on the site currently occupied by the Parc de Joan Miró in Barcelona, near the Plaça d'Espanya.

Later, in 1983 the Mercat Central del Peix (Central Fish Market), which until then had been located in Carrer de Wellington in Barcelona, started operations in Mercabarna.

Mercabarna's Multi-purpose Hall was built to house wholesale companies marketing prepared and semi-prepared products. The Mercat Central de la Flor (Central Flower Market) also moved to Mercabarna. Since 1964, the Market had been located in Carrer Lleida in Barcelona in a building which now houses the acclaimed Teatre Lliure. In 1989 the Hospitalet de Llobregat fruit market joined up with the Mercabarna Central Fruit and Vegetable Market.

Finally, the new Central Flower Market (Mercabarna-flor) located between the municipality of Sant Boi and El Prat de Llobregat was inaugurated on October 2008.

Mercabarna benefits from Barcelona's privileged historical and geographical position as the capital of Catalonia, as a large European conurbation, and from its importance as a trading city and tourist destination.

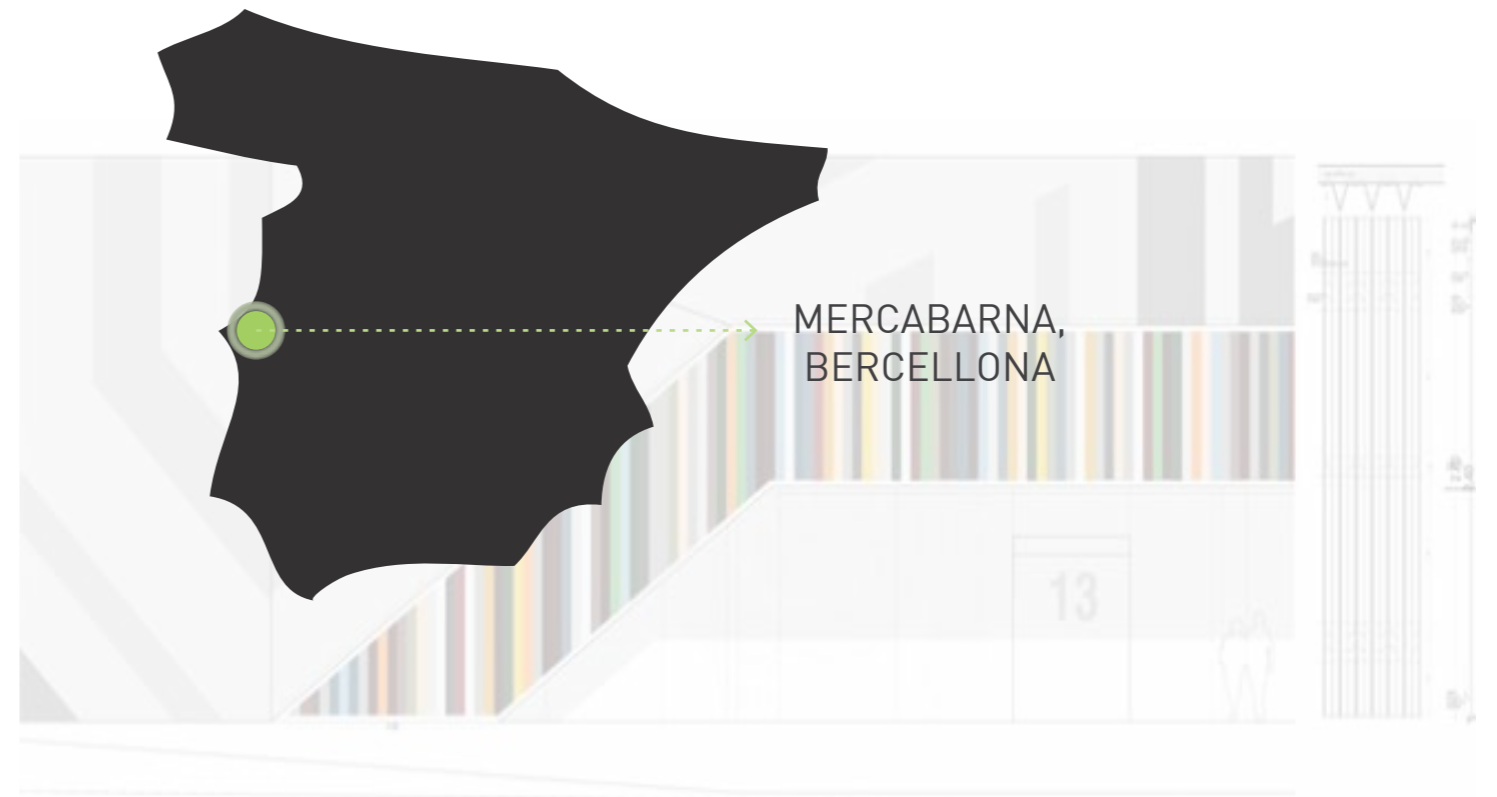
Furthermore, from a logistical point of view, Mercabarna is located in a strategic position which facilitates the arrival and dispatch of goods by land, sea and air. It is but a few kilometres from Barcelona international airport, the Port of Barcelona container base, the TIR terminal, the rail freight terminal, the Llobregat road interchange which provides direct access to the urban ring road and external highway system, and it is only ten kilometres from the city centre.

This strategic geographical situation is one of the factors that have made Mercabarna one of the main centres in Europe for the distribution of fresh produce.

The building of the new Flower Market, the new project, will cover 16,000 square metres within a plot of 44,000 square metres.

The various zones in the project reflect the different kinds of product traded. There will be one zone for cut flowers with cold store facilities to keep products in optimum condition; a zone for plants designed with natural light controls (similar to a greenhouse); and another zone for dried flowers and complementary items with a large display and storage area.

Mercabarna-flor will be an advance on current market models. Its strategic position, its studied infrastructure and its wide variety of products and services will make it a large, specialised business centre with the ambition to be the leader in its sector.



4 - DIFFERENT EXPERIENCES

GROSSMARKT, HAMBURG

Hamburg Wholesale Market is a wholesale market for food and flowers in hammerbrook (formerly Hamburg-Klostertor). In 1907 a provisional, additional marketplace was taken with landing facilities between the Meßberg, the Deichtor and the Old Wandrahmsbrücke in operation.

Already in 1911 the old markets in the hop market and Meßberg canceled, and the new Deichtormarkt including the Deichtorhallen on Klostertor were opened. This drew in 1962 in the new wholesale market in southern Hammerbrook between the also newly created Amsinckstraße and the upper port, so that the Deichtorplatz could be transformed into a transportation hub (eastern end of the East-West Road and the southern end of Wall ring and Wallring tunnel).

In the market hall on Klosterwall / Deichtorplatz still remained a food market, the southern Deichtorhalle served the wholesale flower. The northern part of the market hall at the monastery wall was also used for furniture and antiques, from the 1970s under the name of "market hall" for events, in the southern part moved to the end of the food market in 1990, the Kunstverein.

1984 pulled the flower market of the south of the Deichtorhallen Deichtorplatzes in a new building at the Bank Street. This is now free Deichtorhallen could be some time later rehabilitated with funds from the Körber Foundation. In 1989, the renovated halls were opened as a cultural center for exhibitions and cultural events Deichtorhallen.

In 1954 the "Veiling Hamburg", a logistics company, opened on the new terrain in Hammerbrook. As early as 1958 began under the direction of architect Bernhard Hermkes at the same location of the building of the Grossmarkthalle. Four years later, the wholesale market was opened.

Both the Deichtorhallen and the halls on the Hammerbrook are now a protected monument: the latter as an example of prestressed concrete in Hamburg. Further examples of the prestressed concrete construction in Hamburg are

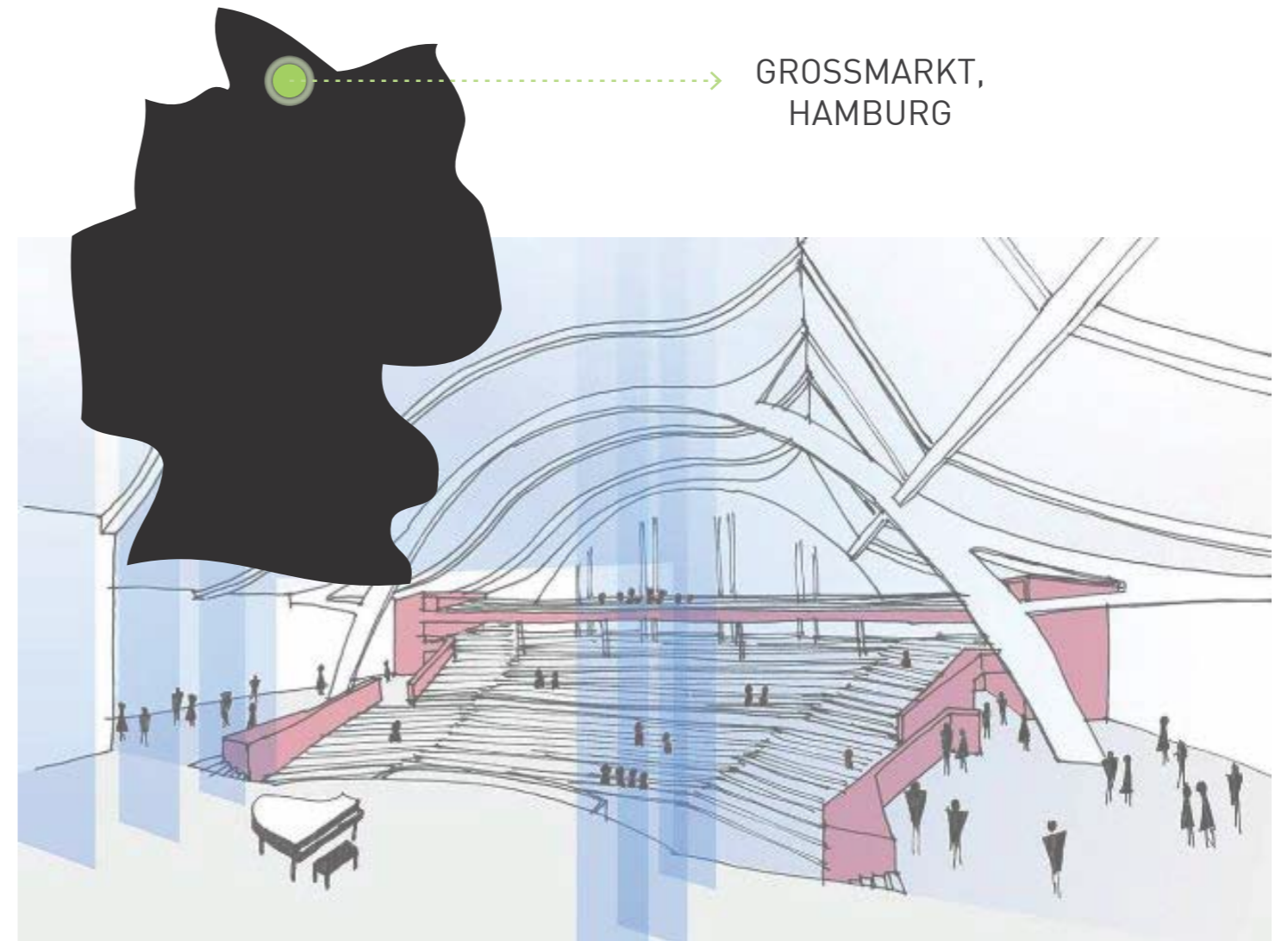
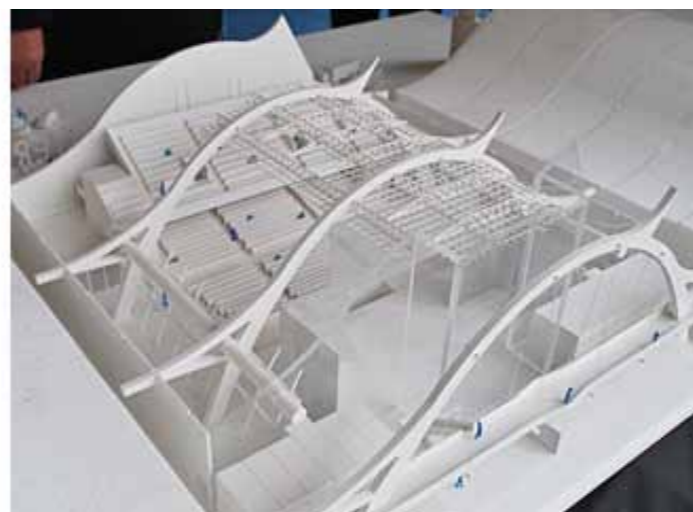
the main auditorium, the Alsterschwimmhalle and the Lübecker Straße.

In addition to the wholesale market business and the German Additives Museum and the student laboratory SCOLAB are located on the premises.

On March 7, 2015 was the new more. Theater opened on wholesale market. The theater was integrated into the existing wholesale market. Operators of the theater is the company more! Entertainment and wants to use the theater not only for musical performances, but also for events, concerts and other events. The hall has a capacity of up to 2,200 spectators.

As its name says, what counts above all else in a fresh food centre is, of course, the freshness of produce. And in that respect Hamburg Wholesale Market has a decisive strategic advantage. Right by the port, with the main rail station just round the corner and the motorway practically on the doorstep, transport to and from North Germany's biggest fresh food centre couldn't be better. The rapid flow of goods in and out of the market guarantees that the produce arrives at the shops as fresh as possible. Goods leave Hamburg for the surrounding states via retailers, street market vendors and restaurant buyers, travelling as far as Scandinavia and Eastern Europe.

Since 2004, the Office Dittert & Reumschüssel in the renovation of buildings and the outer surfaces of the wholesale market in Hamburg operates. After an annual action plan for. B. concrete ceilings and walls and facade are renovated at the time.



GROSSMARKT,
HAMBURG



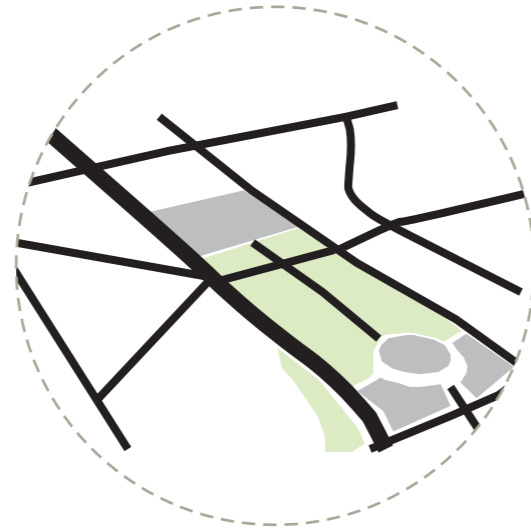
4 - DIFFERENT EXPERIENCES

VARIOUS APPROACHES

The chosen examples and approaches represent different ways to integrate and offer a relationship between a big logistic area or a market structure and the existing city. The case of the new commercial area of Les Halles in Paris shows how the new project communicate with the existing city, enhancing the connections of the existing streets' network and using a big park to integrate the new structures with their surrounding. In the same way New Covent Garden in London enhances green areas to connect a mixed use area with the structures of the new pavilions of the market. A different case but very interesting is the Rotterdam city Markthal, a different structure studied and projected to host both a market and residential spaces in the upper part of the structure, is also particular for its amazing architecture and design concept. Another case is the Mercabarna in Barcelona, another beautiful structure for the architectural and design principles located in the city, but its location is the distinguishing element, because it's in a very strategic position, near the airport, the harbour, the sea and a big logistic area. The last analyzed example is the Grossmarkt in the city of Hamburg, this structure for its very empty and only logistic surrounding (but still inside the city) is very similar to the Ortommercato situation, but the approach here is oriented to a new way of living the market, adding a new function like a theatre inside the structure of the pavilions, in this way a new involvement of people will arise in the future. The different situations could be taken as example or references, but I thought as interesting to show how different metropolitan realities not only Italian but in the rest of Europe communicate with big logistic areas in their urban contexts.

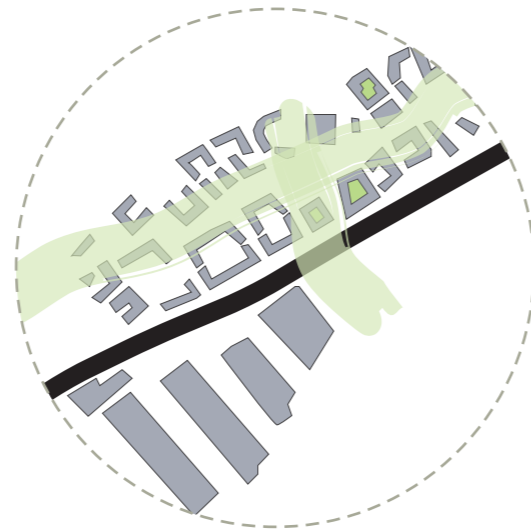
LES HALLES, PARIS

The commercial center is inside the city continuing the existing grid and using green connections



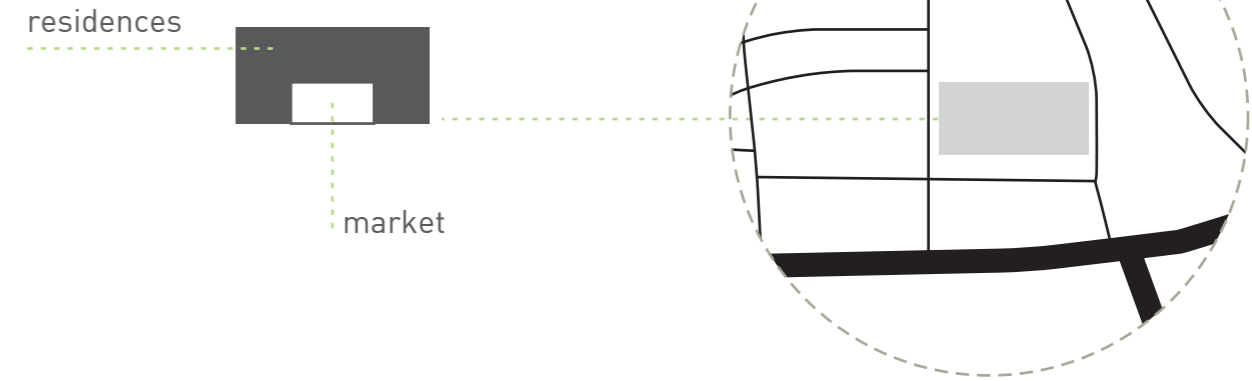
NEW COVENT GARDEN, LONDON

Green as a hinge to connect the city and the market



MARKTHAL, ROTTERDAM

The structure is both market and residential area, inside the existing city



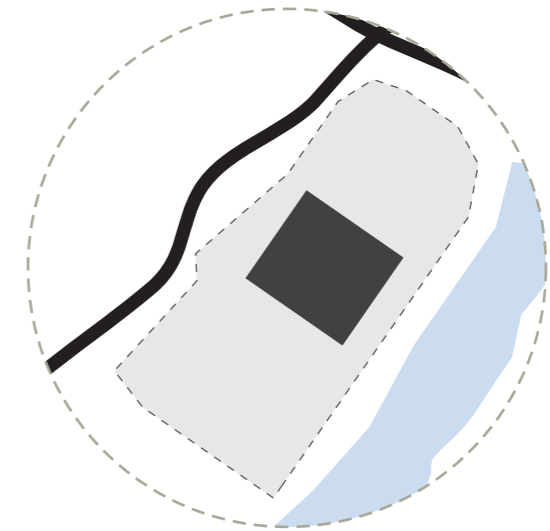
MERCABARNA, BARCELONA

The structure is in a strategic territory and offer a new renovated architecture and function



GROSSMARKT, HAMBURG

The structure is similarly gated as the Ortomercato but offer a new innovative function, involving the community



5 - THE IMPORTANCE OF AGRICULTURE

AGRICULTURAL NEW IMPOSITION

Agriculture in the broad sense is the most important sector in the economic life of a country and even more worthy of attention are the questions about the effects on the environment and safety of food. From the nineties onwards, agriculture is trying new ways to preserve the environment and reduce the negative impacts of certain agricultural practices without threatening the viability of crops. In parallel, organic agriculture, the "zero kilometer", the "short", the "farming in town" are all practical, to a greater or lesser degree of development and diffusion, equally committed to respecting environmental balances and biological and conservation of ecosystems and biodiversity. Quality, traceability and food safety have become paradigms of actions of industry, chiefly for operators with the legal nature and purpose wholesale markets. In these structures, agriculture occupies always a place particular. Between wholesalers and manufacturers must establish a network of relationships of trust and long-lasting, because that is the origin depends on the quality of supply. In time between administration of the wholesale market, wholesalers and manufacturers forming close relationships that are a factor of competitiveness and strengthening their respective market positions. The manufacturers have long- considered, with some justification, the wholesale markets only as a destination for the surplus. A wholesale market, instead, values a very wide range product and allows farmers to diversify their crops, to the benefit of products with high added value, unlike other ways of distributing products that promote standardized and normalized. The system appears to be particularly beneficial for small productions, for and particular/local products, in cases where the economic viability must be compatible with the sustainability of the forms of production.

In this way, production and agriculture have become (or recently returned) to be a major sector, trying to activate different kind of activities, aimed at running against the food waste, poverty, the relaunch of food activities and commerce of local product. Agriculture in this sense have had a lot of progresses, and today is constantly proposed in many urban project, also because of the continuous tendency to build over and over the so-called suburban areas. Those projects are implemented not only to give something new in terms of function and activities, but also in terms of nature and ecology, sustainability.

During the expansions periods in the last centuries many cities have lost natural areas, rural areas in favour of a lot of buildings often because of a renovated house emergency, and in this situation natural and rural landscapes lost out.

The agricultural sector could be a very effective solution for cities, obviously in terms of urban farming and urban vegetable gardening overall. In correspondence with existing activities such as Wholesale areas, different kind of wholesale markets, could arise a lot of synergies and create new production mechanisms that could bring a lot of advantages in a multiplicity of sectors, especially for big and metropolitan cities like Milan reality.

Agricultural landscapes and places are an effective element to increase the value of environment, that some places have lost during the decades. For 2025 demographic projections indicate that more than half the population of developing countries, around 3.5 billion people, will live in urban areas. For policy makers and urban planners in poor countries will be confronted with this challenge, cities 'more green' could be a real possibility for ensuring safe and nutritious food, sustainable livelihoods and better health.

The concept of more green cities is usually associated with urban planning in more developed countries. But it has a special application, and economic and social dimensions are very different, in developing countries with low incomes.

The progressive expansion of urban areas to make way for new buildings and infrastructure annually erodes precious agricultural land, while the production of fresh food is pushed further into rural areas. The costs of transport, packing and refrigeration, the poor state of rural roads, and losses in transit affecting prices and are responsible for the reduced availability of fruit and vegetables in urban markets. The challenge is to change course from the road unsustainable urbanization undertaken by promoting greener cities that offer the residents opportunities, choice and hope.

Growing fruit and vegetables in urban areas increases the availability of fresh, nutritious produce and improves access to food for the poorest sections of the population.

Agricultural production has always been an important presence, although intermittent, within cities. It was vital in times of economic and social crisis, after environmental disasters or during conflict. Today, urban agriculture is experiencing a period of great expansion, which began in the seventies and has suffered a strong acceleration in the last fifteen years.

This revival started from the cities of the southern hemisphere in response to soaring food prices, and was soon recognized by the Food and Agriculture Organization (FAO) as a key tool to counter the rise extreme poverty in the cities.

In North America and Europe, the phenomenon has been enriched by new motives, such as environmental sustainability and the search for alternatives to eating patterns dominant patterns. In many cases the creation of unauthorized urban gardens is part of broader political projects born from below, where citizens play an active role in the definition of public spaces, countering speculation and the abandonment of certain areas.

The organization of the United Nations recognizes urban agriculture as an economic activity that creates employment for women and disadvantaged groups and that contributes to the spread of food education and the fight against hunger. In urban and peri-urban areas can grow from vegetables to fruit to cereal, they can be raised sheep and cattle, as well as poultry and breeding fish. A contribution to society that provides access to a wide variety of local products, most healthy and nutritious, at competitive prices, through a positive impact on the development and food security of populations, especially during times of crisis or famine.

Estimates report that the production of food in the city can be higher than rural, in terms of crops and the ability to sell products. However, urban agriculture is not recognized between agricultural and urban planning in many countries of the world, because of the backwardness of the systems in place. According to FAO the aim it is to get integrated planning and agricultural development globally more equal.



5 - THE IMPORTANCE OF AGRICULTURE

URBAN VEGETABLE GARDENS

Specifically, I focused on the analysis and study of the multifunctional urban vegetable garden and evaluating how its development, through projects of landscape, will outline opportunities for improving the quality of the territory of the urban edge, and then the whole city, also responding to needs for social gathering.

Consider the landscape project as a process of re-evaluation of the historical and natural quality in rural areas belonging to a context difficult to interpret, as the contemporary city, it is not a simple task. Changing shape and size, cities seem to change nature. This urban theorists never cease to question. No shortage of answers, but also in the plurality and evolution is the main indication: the city is a place of ever-changing forms of human association. Normally, the term used to refer to this arrangement is urbanity: On the redefinition of this today need to focus, as city and country are no longer separated by a groove impassable, that divided them, even when fields even existed inside the city walls because different types of companies and social, urban and rural. The new suburban context is often in a state of sprawl, or urban sprawl, where civic identity is increasingly uncertain. Once the county, or the band farm around the city, praised the difference between urban and rural, but has almost disappeared. Today the countryside, the agricultural perimeter that traditionally separated the city from the countryside, is in transformation. The confusion of physical forms, is also present in the language that defines the new compounds and highlights the difficulty of measuring the mingling of the rural and the urban as a society. The development of cities in the metropolis and megalopolis has not eliminated the countryside, as problematized the distinction between urban and rural. So if some scholars prefer to focus on the continued expansion of the urbanized area, others go to look in the interstices to discover new 'urban countryside'.

"Here, then, that in major urban areas over the first crown of the periphery of history, and a

second suburban recently, we find a third crown characterization still mostly rural but increasingly and continuously 'parceled' in different ways" (Camagni 1994).

The vegetable garden space as well-defined, to mark an area of order and vitality with free and measured, Europe has witnessed its heyday in the Middle Ages, also due to the influence of Persian gardens, where it was an element Central iconographic imagination and literature, although more difficult to establish effective dissemination and characters. However in the industrial society also tends to specialize the garden, separating flowers and vegetables, aesthetic sphere and the sphere of production, the first sanctioned positively, marginalized, hidden behind fences and viewed as relevance of the popular classes the second.

In particular social gardens are a modern form and are particularly developed in some countries to tradition, especially in Eastern Europe, but also in countries such as the Netherlands or Sweden. In fact this type of vegetable garden given officially licensed by a public or charitable, as a form of welfare, originated in the UK in the early nineteenth century, when they were intended for the poor and unemployed. Subsequently also born in Germany, and then spread, however placed, generally, in marginal places and not urban. Often the gardens have had great importance during the two world wars. Italian law allowed the gardeners to cultivate any land fallow to increase food production. As a general decline since the sixties, are today, now at least the end of the eighties, and witnessed a renewed interest, which sees them take on different functions, however, with more emphasis on the environmental, recreational and social.

Today the keyword related to the gardens, and more generally peri-urban agriculture is multifunctional or rather multifunctionality. Not only is it interesting to connect this to the evolution of the company that was made from industrial and post-industrial experiences forms, after

differentiation typical modern, de-differentiation. It is also interesting to note, as most often is done, based on the history of the gardens, such as multi-functionality is certainly an innovation compared to the recent past, but also a return to the combining of functions of a more distant past.

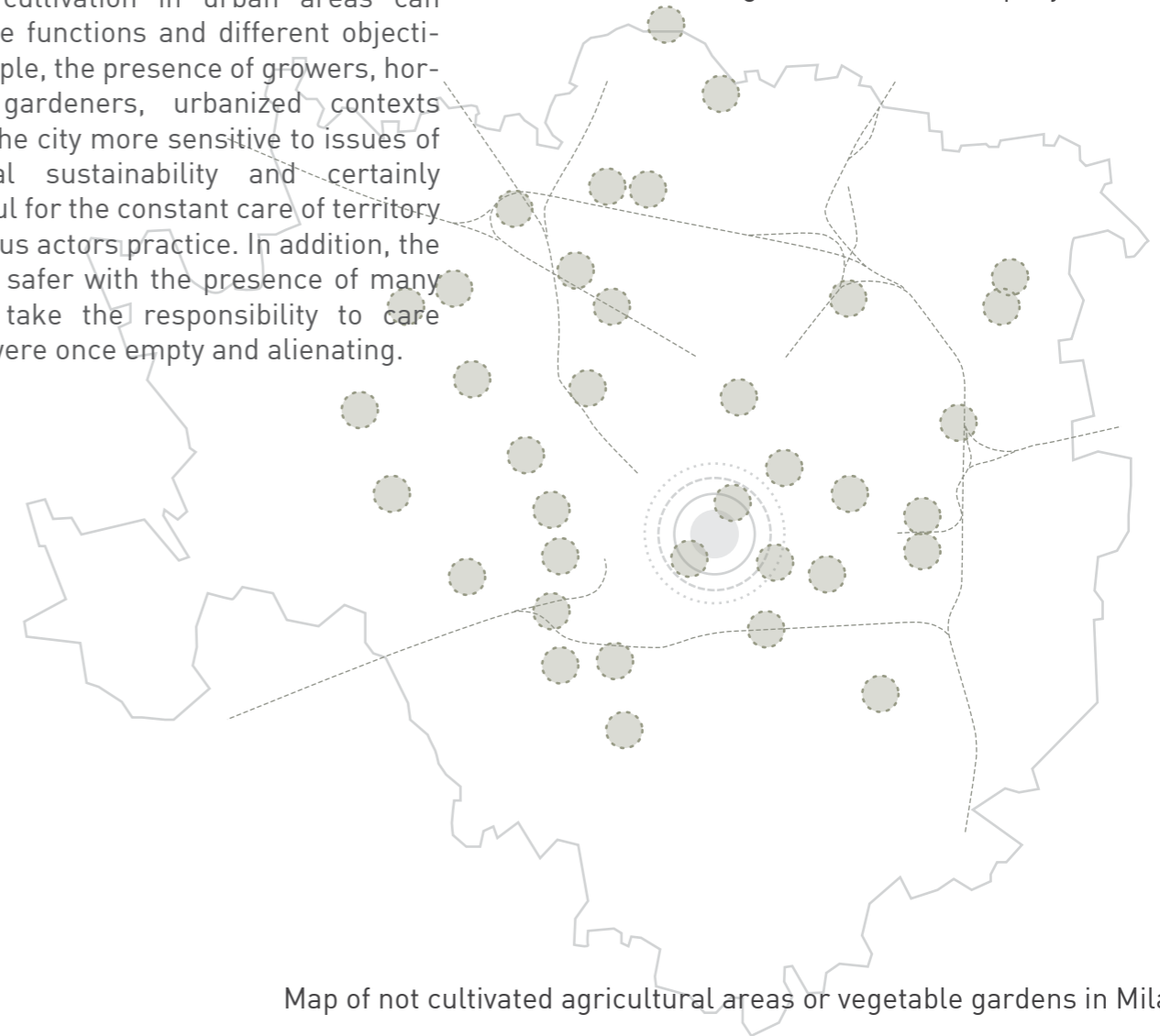
Degradation traditional horticulture, are developing forms of horticulture that we can define innovative, because they combine differently than in the recent past elements that individually may also have a long tradition.

As the examples of horticulture through innovative Europe, one of the attractions of horticulture contemporary social is that it is perceived as active participation, recovery and control of subjectivity on the part of those who dedicate themselves.

Agricultural cultivation in urban areas can fulfill multiple functions and different objectives, for example, the presence of growers, horticulturists, gardeners, urbanized contexts could make the city more sensitive to issues of environmental sustainability and certainly more beautiful for the constant care of territory that the various actors practice. In addition, the city may feel safer with the presence of many people who take the responsibility to care spaces that were once empty and alienating.



Milano Urban Vegetable Gardens Map, by OrtoDiffuso



Map of not cultivated agricultural areas or vegetable gardens in Milan

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WORLDWIDE ACTIONS OR ASSOCIATIONS

URBAN FARMING



Urban Farming began in 2005 with 3 gardens and a pamphlet, now its mission is to create an abundance of food for people in need by supporting and encouraging the establishment of gardens on unused land and space while increasing diversity, raising awareness for health and wellness, and inspiring and educating youth, adults and seniors to create an economically sustainable system to uplift communities around the globe. You can join the community and add your garden, see through an interactive map the other gardens that are part of the iniciativa spread into the world and with the website participate and make donations or buy products.

AGRICITY



The Milan's platform dedicated to urban agriculture, held by Comune di Milano and Assessorato all'urbanistica in collaboration with Polittico di Milano, inside the Cariplo AgriCultura project, for the construction of a Cultural Agricultural district in Milan. Agricity offers different research and policies, like Urban Agriculture Europe, in collaboration with COST(European cooperation in science and technology), to develop a common approach and for urban agriculture with scholars and professionals through the construction of a European Atlas of urban agriculture that allows European policy-makers to implement the Common Agricultural Policy.

FAO ACTIONS



Organizzazione delle Nazioni Unite per l'Alimentazione e l'Agricoltura

Over the past decade, governments of 20 countries have requested the assistance of FAO for providing incentives, inputs and training to low-income urban horticulturists. FAO has also provided tools, seeds and training to start in more than 30 countries, thousands of school gardens, a proven means of promoting child nutrition. FAO has helped governments promote irrigated gardens in urban peripheries, simple mini-cultures in the slums of the big cities, and green rooftops in densely populated city centers. In the Republic of Congo, in five cities, FAO suggested measures to regularize the ownership of 1,600 hectares of gardens. The project has been introduced best varieties of fruits and vegetables and 40 installed irrigation facilities that allows to have water for the whole year. To ensure the quality and safety of products, for 450 farmer associations were organized training courses on best agricultural practices, for example on the use of fertilizers and bio-pesticides. The gardens of the capital, Kinshasa, now produce between 75,000 and 85,000 tons of vegetables a year, a figure that represents 65 percent of supply in the city.

GUERRILLA GARDENING



movement that interacts with the urban space through so-called "attacks" green, occupying and detecting a piece of land abandoned to make you grow plants or crops. The cultivation of public land is not limited to areas specifically dedicated but, in the most "intensive", can also be extended to the urban fringe, such as flower beds, riverbanks, railway margins, often on the initiative of citizens, that is, without doubt is an award recognized by the public.

EUROPEAN FEDERATION OF CITY FARMS (EFCF)



EUROPEAN FEDERATION OF CITY FARMS

The association falls under the current regulations of title III of the Belgium law of 27th June 1921, concerning the non profit making associations, the international non profit making associations and the foundations. The mission of the European Federation of City Farms (EFCF) is to work with our members through city farming to actively build a future in which their community lives in harmony with nature; by enhancing their local city farm's and communities natural environment through mainly biodiversity, air, water and soil, and ensuring that the use of renewable resources are sustainable and to minimise pollution and wasteful consumption.

ORTO DIFFUSO



Orto Diffuso is a project for distribution and mapping of gardens in urban spaces. The vegetable garden is a widespread system of production of vegetable plants (and others) as part of the balconies to get more space, that part of the town into the country, running from a single individual (or family) for create a social network, where the skills of each can become a common heritage. The diffused vegetable garden is actually a network, which connects the spaces more immediately available (balconies, terraces, window sills) with the spaces more traditional. It 'a virtual community but also physics which is divided by all the people who use these spaces to rethink the city, but also their lives. The garden recreates a diffused bond with the land, a territory and its real, not illusory and imagined by others for us. It is not isolated from the tissue of the city.

5 - THE IMPORTANCE OF AGRICULTURE

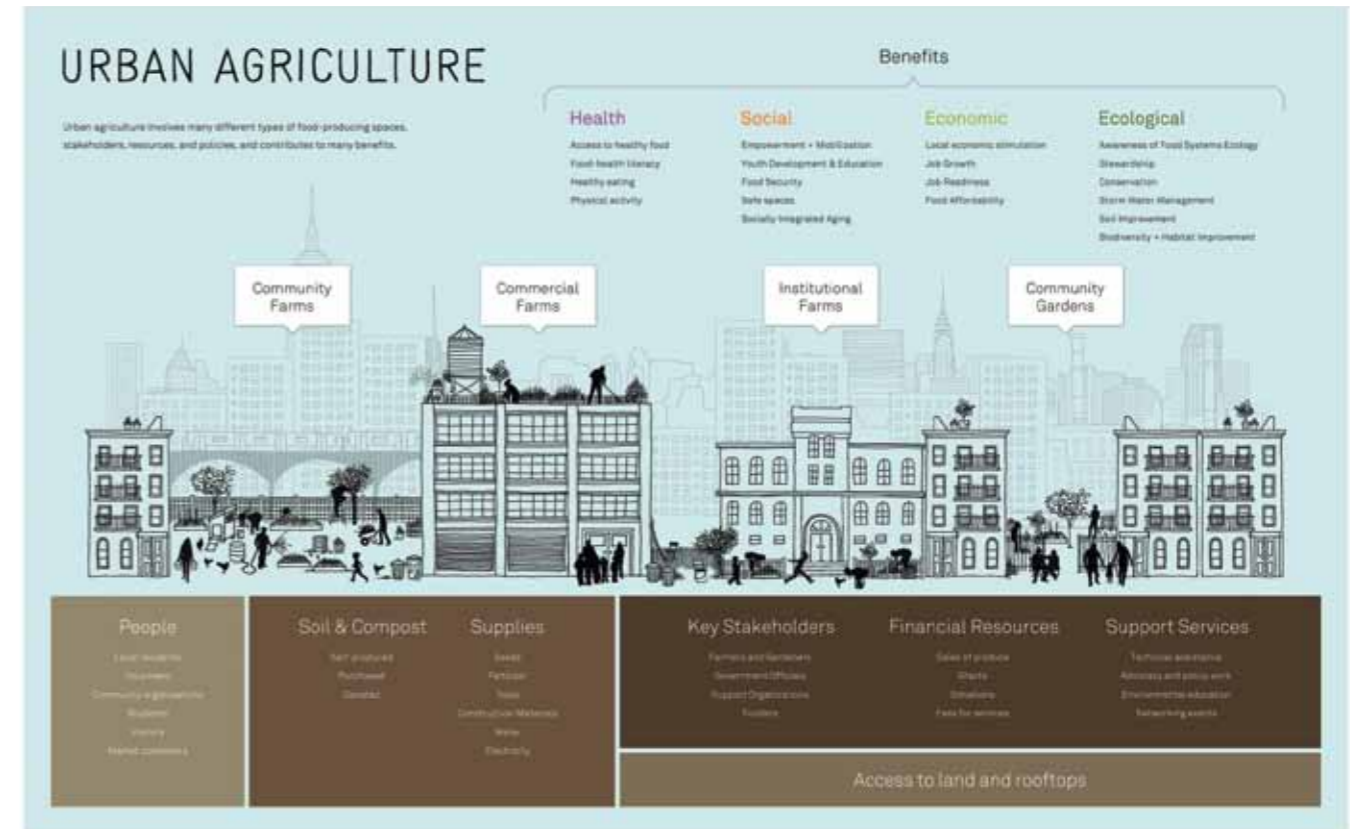
INTERESTING URBAN PROJECTS

New York , 'Five Borough Farm' project, seeding the future of urban agriculture for NYC

Five Borough Farm, a project of the Design Trust for Public Space, offers a roadmap to farmers and gardeners, City officials, and other stakeholders to understand and weigh the benefits of urban agriculture. Phase I (2009-12) was conducted in partnership with Added Value. Phase II (September 2012 - March 2014) was conducted in partnership with the NYC Department of Parks & Recreation. Phase III, in collaboration with Farming Concrete, will run from March through December 2014.

In 2009, the Design Trust for Public Space issued an open call for projects to improve public space in New York City, receiving twenty submissions from organizations citywide. The nonprofit organization Added Value (with the assistance of the design firm thread collective) submitted a proposal to address urban agriculture. This proposal was one of two selected by an independent jury of architects, policy experts, open space advocates, and Design Trust board members for the Design Trust to take on as a project. The project goals can be resumed in three points:

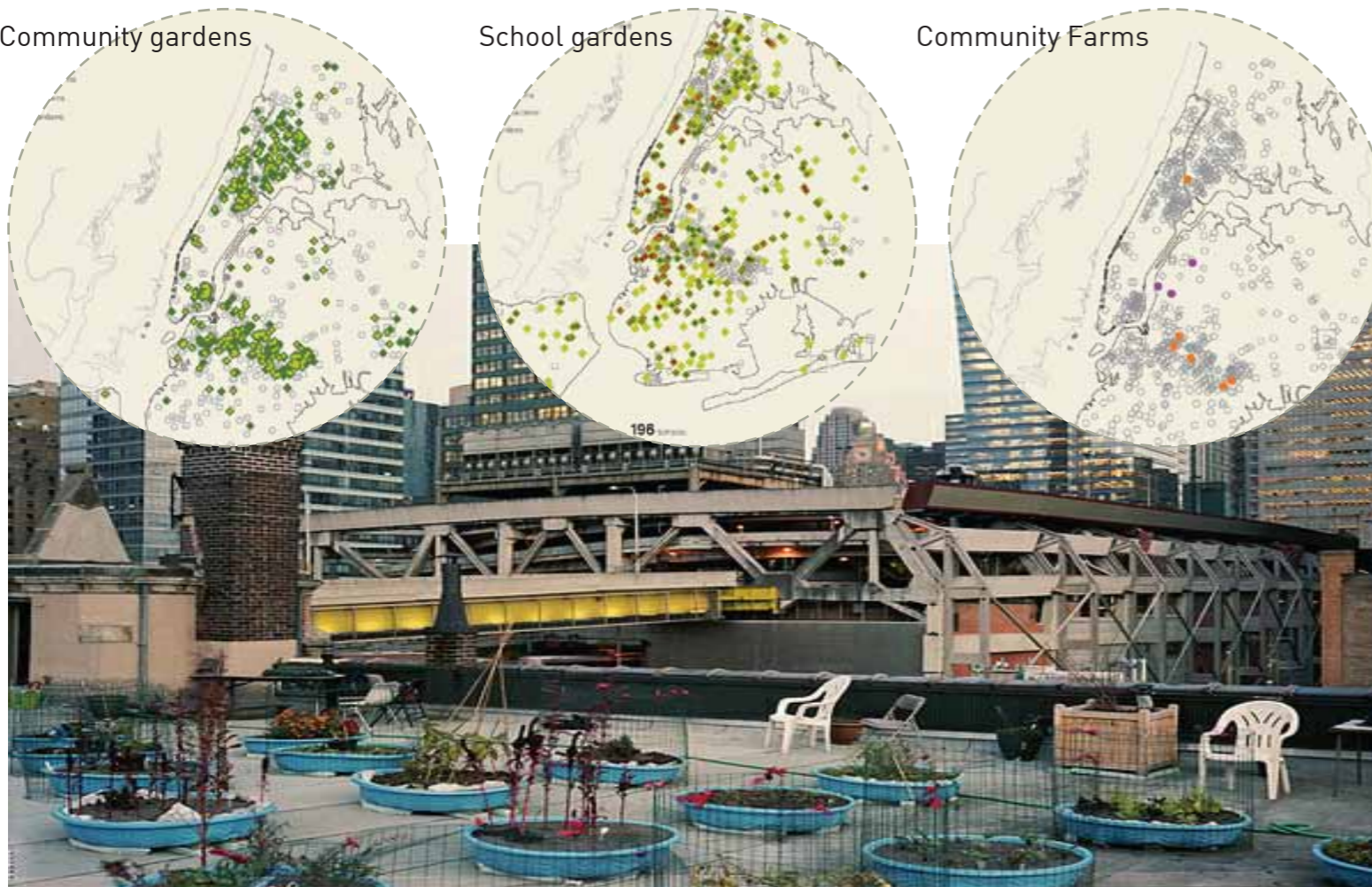
- Survey and document New York City's existing urban agricultural activity using photographs, maps, and infographics.
- Establish a shared framework and tools to enable farmers and gardeners to track urban agricultural activity and evaluate their social, health, economic, and ecological benefits.
- Develop policy recommendations that will help make urban agriculture a more permanent part of the city's landscape and governance. Each urban agriculture project arises in response to the particular needs and opportunities of a given community, organization, or site.



Community gardens

School gardens

Community Farms



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The GrowUp Box, London

The GrowUp Box is a small-scale agricultural production unit as well as a space for events and community engagement. The GrowUp Box so is an upcycled shipping container with a greenhouse on top which is a highly productive demonstration of aquaponic urban agriculture. In the shipping container, they farm tilapia. Tilapia is an omnivorous white fish which taste great. They farm the tilapia at the right stocking density so they have enough room and are in a comfortable sized shoal that means their stress levels are kept low and they can ensure that we are producing the best tasting fish.

Inside the greenhouse, using vertical growing techniques, they can grow 400 salads and herbs at any one time as well as producing delicious microgreens. During the summer we were harvesting an average of 8kg of salad from the box on a weekly basis and selling it to local restaurants.



H+ of Erik Giudice Architects

H + EGA Erik Giudice Architects is one of the most ambitious urban regeneration projects in Sweden, and aims to radically transform the area south of Helsingborg connecting it with the sea through the "Blue-green connection", an urban design and landscape wheel around the theme of water. The core of the project is located around the area of Bredgatan, an existing industrial sector already under transformation and upgrading due to the presence of the University Campus Helsingborg and other companies, but no residential spaces, public services and public spaces. Along the Sjöгатan a barrier consisting of containers filled with soil separate the internal roads of the danger of the traffic outside. These containers create a protective buffer against the dangers of traffic and noise, including acting as large pots for trees.

In order to increase the index of green spaces in the neighborhood, green roofs and facades are intensively used, along with greenhouses and urban gardens, creating a dynamic and varied landscape and contributing to air quality and microclimate.



Not a Cornfield, Los Angeles

The Cornfield is an area of about 13 hectares located less than a kilometer from downtown Los Angeles, near the border with the district of Chinatown. The area, an urban void with an artery-located between self-road and a railway line, abandoned for not until 2001, when the administration decided to create an area park and start Designing-it's Los Angeles Historic State Park. Not a Cornfield led to it is inserted as a demonstrative action in the years of deadlock during the design phases of the area by the California Department of Parks and Recreation, it was intended to bring the attention to the very meaning of true co-participation in an urban area in continuous transformation and the waste of such a wide area within the city that for years has only seen the creation of a spontaneous corn plant grown from seed fallen by freight trains. This project developed and having from "Metabolic studio" in collaboration with associations of the city sensitive to issues of sustainability and urban agriculture has brought to light one of the hundreds of derelict present at an inner-city of Los Angeles.



Le 56 / Eco-interstice, Paris

In 2006 the group "Atelier d'architecture autogérée" promoted a consultation among citizens on the future use of a gap abandoned urban district of St. Blaise in Paris. The development process has allowed a co-participation of local institutions, associations, professionals and citizens in order to return it to locals. Through the use of temporary devices and the development of a series of activities proposed by the citizens themselves, the site has gradually passed to the management by the community and has been transformed following ecological guidelines. Currently the space is occupied by an organic garden and a small greenhouse edifice that has been raised. The area is used by more than 70 people practicing gardening, sales of organic food, exhibitions, screening of film, meetings and laboratories. An important point of the project is the notion of proximity and active borders. The walls of the quarter turn limits the place for active devices that rather than separating, multiply exchange and connections. Other important aspects are those relating to energy, recycling, low environmental impact and the laboratory of compost created internally to raise awareness especially the schools in the district.



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Pasona Urban Farm, Tokyo

The Japanese company Pasona Group, company specializing in recruiting labor for agriculture, in 2005 started a project in the area of its headquarters in Tokyo: Cultivation of rice without natural light, the plants grow through vertical farming, using LEDs, halogen lamps and sodium lamps. The high temperature and humidity environments are constantly checked and corrected by a computerized system, fertilizers sprayed daily. This process of cultivating highly evolved and allowed the controlled cultivation of plants in the absence of chemical substances and pesticides. In 2010 started a second experimental phase called "Pasona Group Headquarters-Urban Farm" in which it was decided, thanks to previous experience, to extend the project to all nine floors of the new company headquarters, with a program defined "Symbiosis with Nature". The entire front of the building and largely the interior spaces are hosted over 200 species of fruit trees and plants of various native and exotic quality. The focus of this Urban Farm is located in the lobby of the building, where a large tank used to grow rice is lit by lamps and has high energy efficiency.



Prinzessinnengarten, Berlino

Community Garden, which began as a meeting place and exchange for youth, schools, gardeners and especially for the integration between the local community and the many immigrants in the area. The basic idea is the sharing of a task, the sharing of knowledge. On an area of about 6000 square meters is the brainchild of Robert Shaw and Marco Clausen, after a trip to Cuba. The idea was to try to grow vegetables directly into the city then they eat, choosing Moritzplatz, area in a state of disrepair, and turn it into a large urban garden. The space is for the community, so there are no individual plots. Are used flowerbeds transportable, independent from the floor and furniture, using recycled materials, come with bread plastic containers or bags of rice. Much importance is given to common areas, because of the friendly nature of the place. Before the implementation of the project was founded the not-for-profit Nomadish Green, who as a result of events in the city, managed to have the funds necessary for the first phase. The plan is for the garden is self-sufficient, since the materials that are used are all recycled, those who work there and keep volunteers are being rewarded with the products. Another source of income are the bar and the garden shop that have been set up in the garden.



Veg-Out, St.Kilda (Melbourne)

Community Garden with 145 individual plots and areas collective. Veg Out is a collective organic garden, where no chemicals are used, run by a group of volunteers. The commitment to a sense of community, conservation and organic gardening are the principles underlying all activities. In 1998 the municipality of St. Kilda provides the grounds of the former sports club to a group of local artists, in a few months it has grown to form a real community. The buildings there have been converted into studios of art and the outside areas after a period of neglect have been used for the realization of a community garden. The first harvest was in 1000 sunflowers, a collection event to promote the initiative, and a style of life directed to respect the environment and health. And it is administered by the city of Melbourne and run by a group of volunteers. Unlike other urban gardens is not present any kind of barrier, if not a series of mazes that guide the visitor to the discovery of space, a series of works of art and cultivated fields; This choice also aims to ensure the peace and quiet of those who work inside, gardeners and artists. The whole project is designed to encourage socialization among the community members and visitors.



Harvard Community Garden, Cambridge

The University of Harvard in 2010, after years of research, started the project to create a "community garden" within the campus to create a meeting place for students, teachers, researchers and community members, who live in the neighborhood of the university, in order to increase their awareness about the role that nutrition plays on the environment and on our health. Considered the heir of the historic botanical garden of Harvard, the vegetable garden, includes a mix of raised beds for growing vegetables, a patio for lectures and events and a large green space. The paths and flower beds are fully accessible to people with disabilities in the design phase to the help of "Disability Services University". In the later stages of the project involves the construction of greenhouses so that production is continuous throughout the year. The project is entirely financed by the university and provides patterns of production cyclic, such as the collection of all organic waste canteens, which are used for the production of compost. It is run by the head of the "Center for Health and the Global Environment" at Harvard, as well as students of the last years are involved in production, maintenance, teaching and research throughout the year. An integral part of the project are the citizens of the district who have the opportunity to actively participate in educational activities and practices.



5 - THE IMPORTANCE OF AGRICULTURE

RISKS AND THREATS

THE OLD CONFLICT CITY-COUNTRYSIDE

The city is described as the largest construction man. Indeed no other human creation is comparable to it by size, by impact on the territory and for the complexity and sophistication of its articulation. For this reason the city is the core to read the history of mankind for thousands of years inside buildings and between them creating networks of structures, activities, reports, making reason the history of man. The city is building, integration and destruction of material. The cities of the twentieth century with their exaggerated extensions and population have suffered rapid and radical transformations related all'intensification of urbanization, industrialization, progress technological, accompanied not only by improvements in human life, but also to unemployment / underemployment, marginalization and degradation, as extremes of excessive concentration in relatively limited. One of its highlights it is the expansion exaggerated that urban areas are gaining on the surrounding territories.

The first agricultural areas, source of food resources, is among disfigure-in peripheral urban areas, often degraded. The new edification fact preferably occurs in peripheral areas previously used for agriculture and on this border, you have moved the conflict in place between town and country.

NEW RISKS

Some data of workshops conducted by the UN, Legambiente and other bodies in charge of development and environmental sustainability have answered some questions that arise spontaneously talking about urban gardens.

The garden city is healthy? spontaneous question when you think of growing fruits and vegetables in a polluted city like Milan can be.

Since the vegetable gardens in the city are

becoming an increasingly consolidated in Italy and especially abroad and that on several occasions promises can be part of a new "farming system" for the future, the doubts on the effective non-toxic products born in a polluted environment like that of big cities come spontaneously. Have been conducted chemical tests for verify ones the presence of heavy metals which could have deposited on the surface of the vegetables, these are in fact chemical pollutants, lead and unburnt that derive from traffic, copper, chromium and other heavy metals from by industrial activities in the city can make toxic vegetables; but the level of these substances found in vegetables was far lower than the reference fixed by the European Union, the National Institute of Research on Food and Nutrition, USDA (United States Department of Agriculture) Nutrient Data Laboratory. The "test reports" of Conal (Conal Milano52 interdisciplinary service company composed of professionals with diversified skills, which Opera particularly in the food industry and environmental working among others for Legambiente and 'UN concerning products agricultural biological arising from urban gardens located in Milan) then say that vegetables from these gardens, the toxicological point of view, do not show any abnormality or problem. Two other issues of urban pollution are the fine dust which is deposited on vegetables, and the soil: as regards the fine particles do not create any alteration of the product, in fact by a simple washing with water and bicarbonate you can remove any deposit potentially toxic. A speech (erent applies to the soil: the soil at greater risk lies in the former industrial areas where often you can find toxic waste and heavy metals, even in residential areas is, however, important to note that construction waste, asphalt, and abandonment of wastes

abusers can make the land unusable.

For this reason, in addition to the importance of making the analysis on the ground before starting the crop, generally urban gardens resort to carry earth in boxes, in raised beds, creating a fund with insulating the ground below, thus avoiding any contamination of the products.

In a context such as peri-urban industrial Ortomercato is right one ask questions, but we must emphasize that the analysis and the existence of rportano nomerose techniques and ways of reducing the risk of pollution that in any case the analysis is not verified.

5 - THE IMPORTANCE OF AGRICULTURE

DIFFERENT SOLUTIONS

VERTICAL GROWING: OrtiAlti, Turin

OrtiAlti was born from the meeting between Elena and Emanuele, two architects with different search paths and professional, that are perfectly merged into the new project.

Sustainable design, urban marketing and cultural programming on the one hand; participatory planning, urban sociology and social innovation from 'other: knowledge, experience, methods, approaches and passions that converge today in a new shared challenge. OrtiAlti turns flat roofs into green roofs planted with vegetables. We use the technology for the green roof, comprising a series of textile materials and plastics that are placed on flat roofs, make them waterproof and allow water to be retained and at the same time to slide easily. On them we hold a special soil, very light and easy to work. To make a vegetable garden are enough 15 to 20 centimeters.



RAISED BEDS: Todmorden, England

From our beginnings with herb gardens, they plant and grow veggies and trees and around town they have planted several orchards and there are more to come, working with Public sector and Education.

Every school in the town is now involved in growing with them and they also promote food-based learning for the community as a whole. The grounds of Ferney Lee old people's home have had a Incredible Edible exterior make-over, with help from Community Payback, mental health groups and the Futures Jobs Fund.

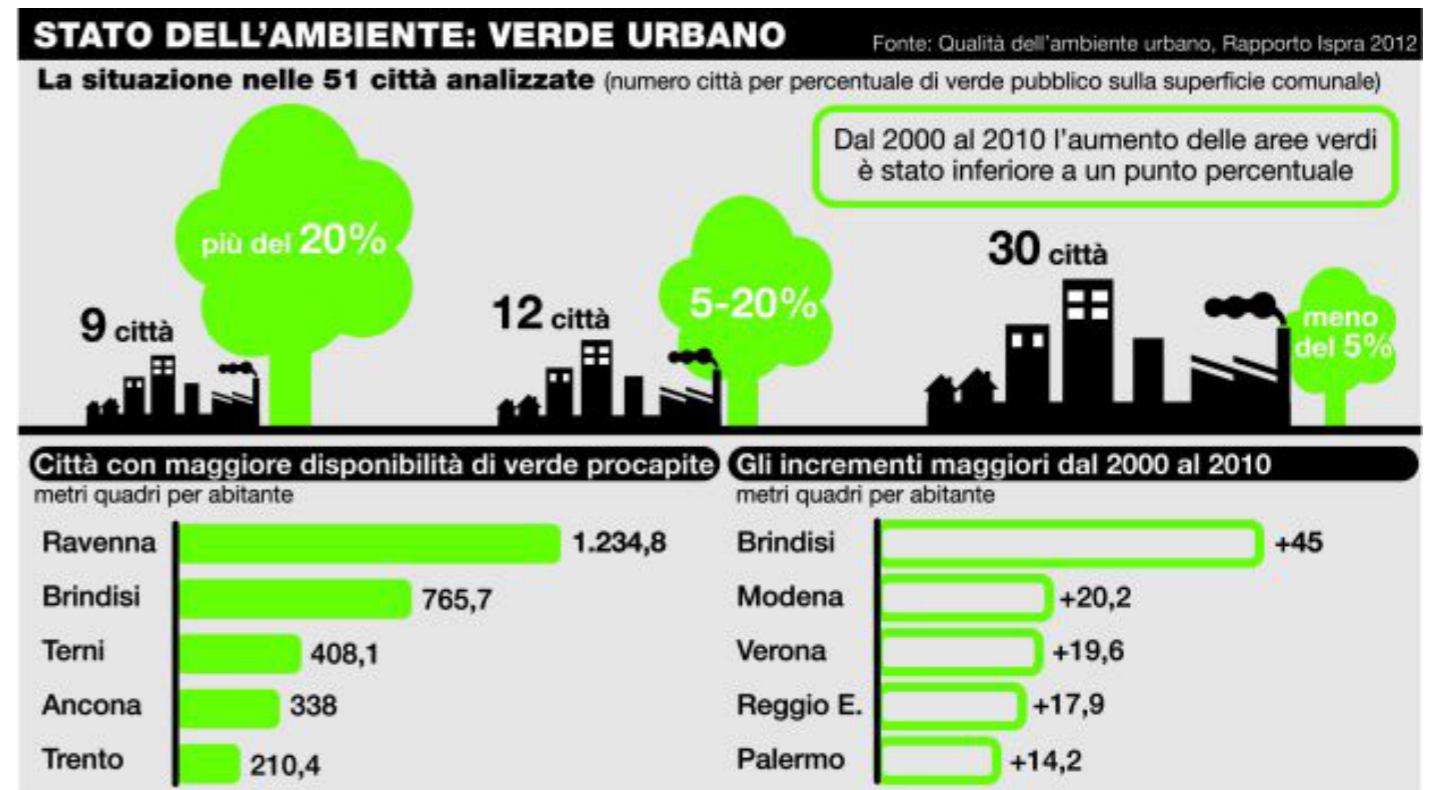
They have greenhouses there, and many raised beds adopted by members of the community. Volunteers have been growing vegetables around Todmorden for three years now, and herbs for longer. Mostly they have had permission; sometimes, well, they just have to go ahead and do it.



MITIGATION: Urban Green against pollution

The urban green spaces are a key resource for the quality of life. Not only improve the microclimate of the city and help to mitigate the pollution, but they help the well-being of citizens, making the urban environment more beautiful and pleasant.

The data, unfortunately, show that in the Italian city green areas are still few. According to the report Ispra on the urban area of the public green of the total municipal area, in 30 of the 51 cities analyzed, it is still poor with values less than or equal to 5%. Only in 9 cities the percentage of green is higher than 20%, and in 6 of these the public green occupies more than a quarter of the municipal surface. The good news is that from 2000 to 2010 the percentage of public green has not diminished, even though more than half of the cities of the sample positive changes did not exceed one percent. The largest gains were recorded in Palermo (+4.8 percentage points), Pescara (+4.4), Turin (+3.4), Verona (+2.7), Milan and Modena (+2.1).



PART II - THE AREA

1 - OVERVIEW

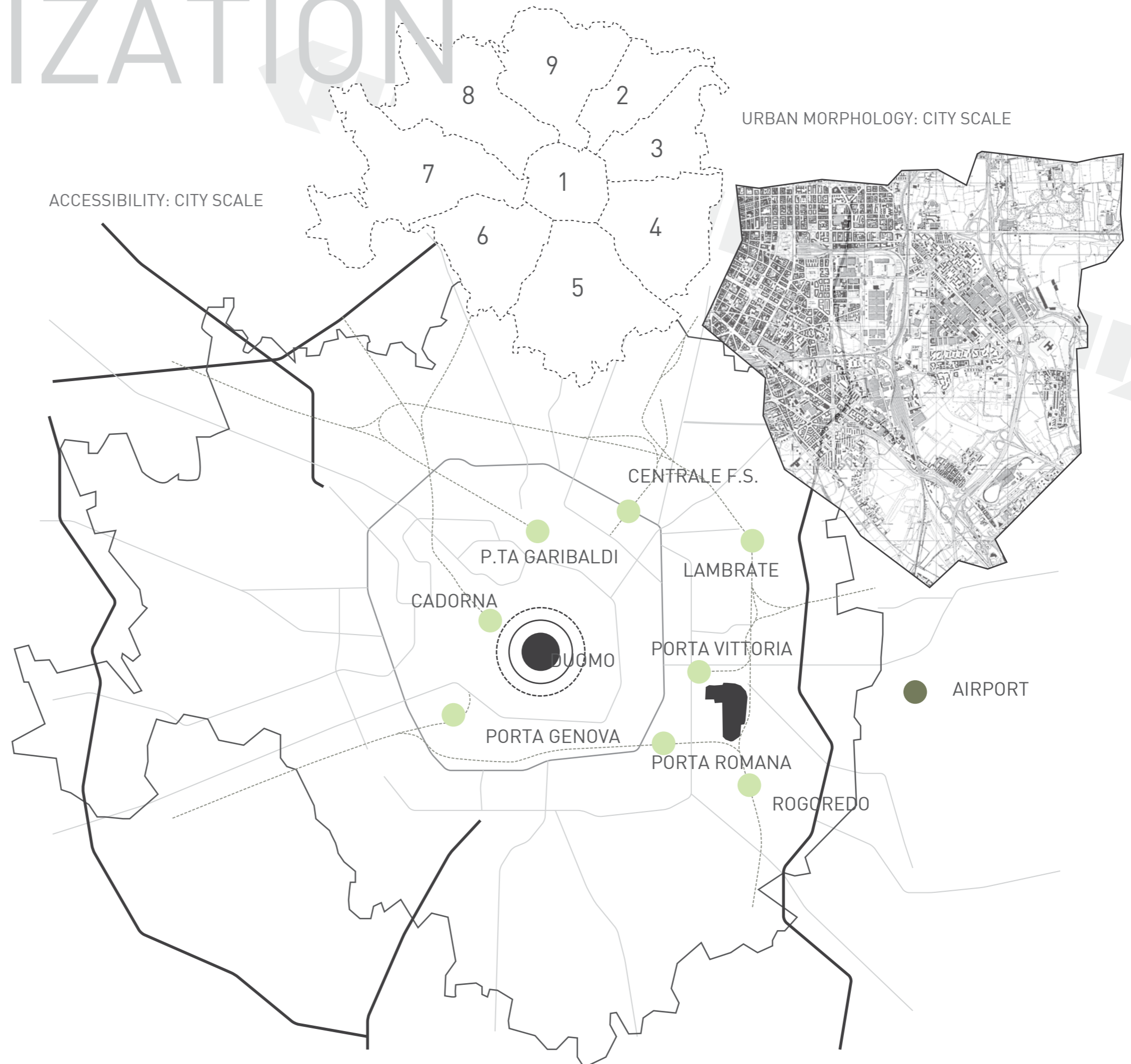
LOCALIZATION

The area of the Ortomercato, the wholesale vegetable market of the city of Milan, is located in the area characterized by the concentration of all the major wholesale food commercial activities. The area is localized in the South-east part of the metropolitan city, in an expansion zone, well connected to the center of the city and the outside (especially to the presence of Linate airport) and surrounded by a lot of recent urban transformation areas. Specifically the area is localized in Zona di Decentramento 4, individuated by the PGT and Comune di Milano.

Zone 4 extends eastward from the city center and includes the following areas: Porta Vittoria, Porta Romana, Acquabella, Cavriano District Forlanini, Monluè, La Trecca Taliedo, Morsenchio, Ponte Lambro, Calvairate, San Luigi, Gamboloita District Corvetto, District Omero, Nosedo, Castagnedo, Rogoredo Santa Giulia, Triulzi Superiore.

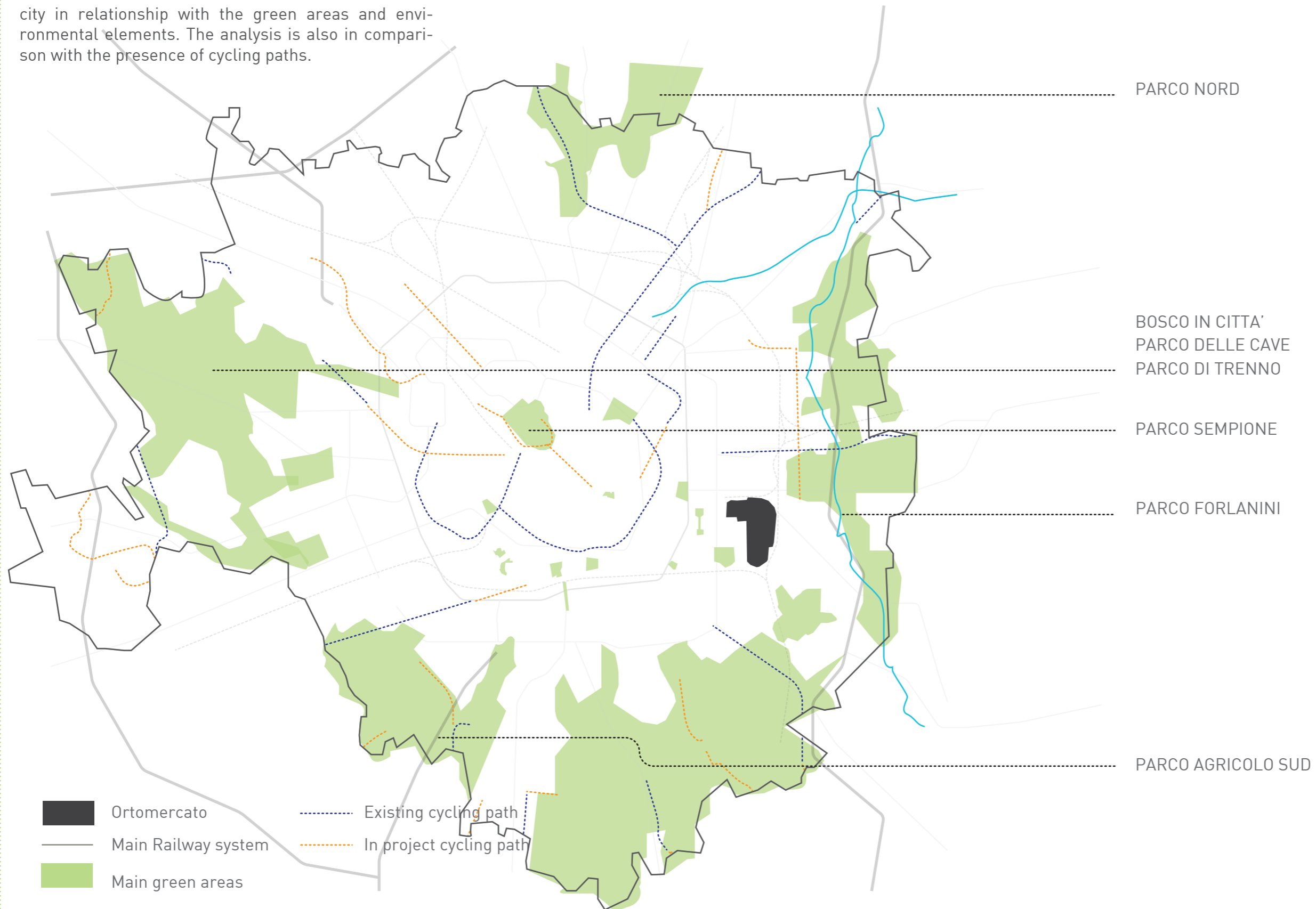
This area is located near two main transportation nodes, the stations of Porta Romana and Rogoredo, well connected to the main underground lines that are protagonist in the urban flows of slow mobility of the city. The area of the Ortomercato itself is also protagonist of big transformation, according especially to the PGT and also to the ban offered by the main property, So.Ge.Mi.

The society takes into account territorial analysis about the context and the area itself, proposing a strategic vision of this part of territory. The exigences of the society are connected with territorial characteristics and starts especially from the location and from what is going on on the 'outside' and on the urban realities that surrounding of the wholesale market's area. This expansion area presents different aspects to be enhanced and in this analysis phase I tried to focusing on the main strategic ones.



GREEN NETWORK: CITY SCALE

The localization of the area of the Ortomercato in the city in relationship with the green areas and environmental elements. The analysis is also in comparison with the presence of cycling paths.



1 - OVERVIEW

FLOWS: CITY SCALE

Jobs

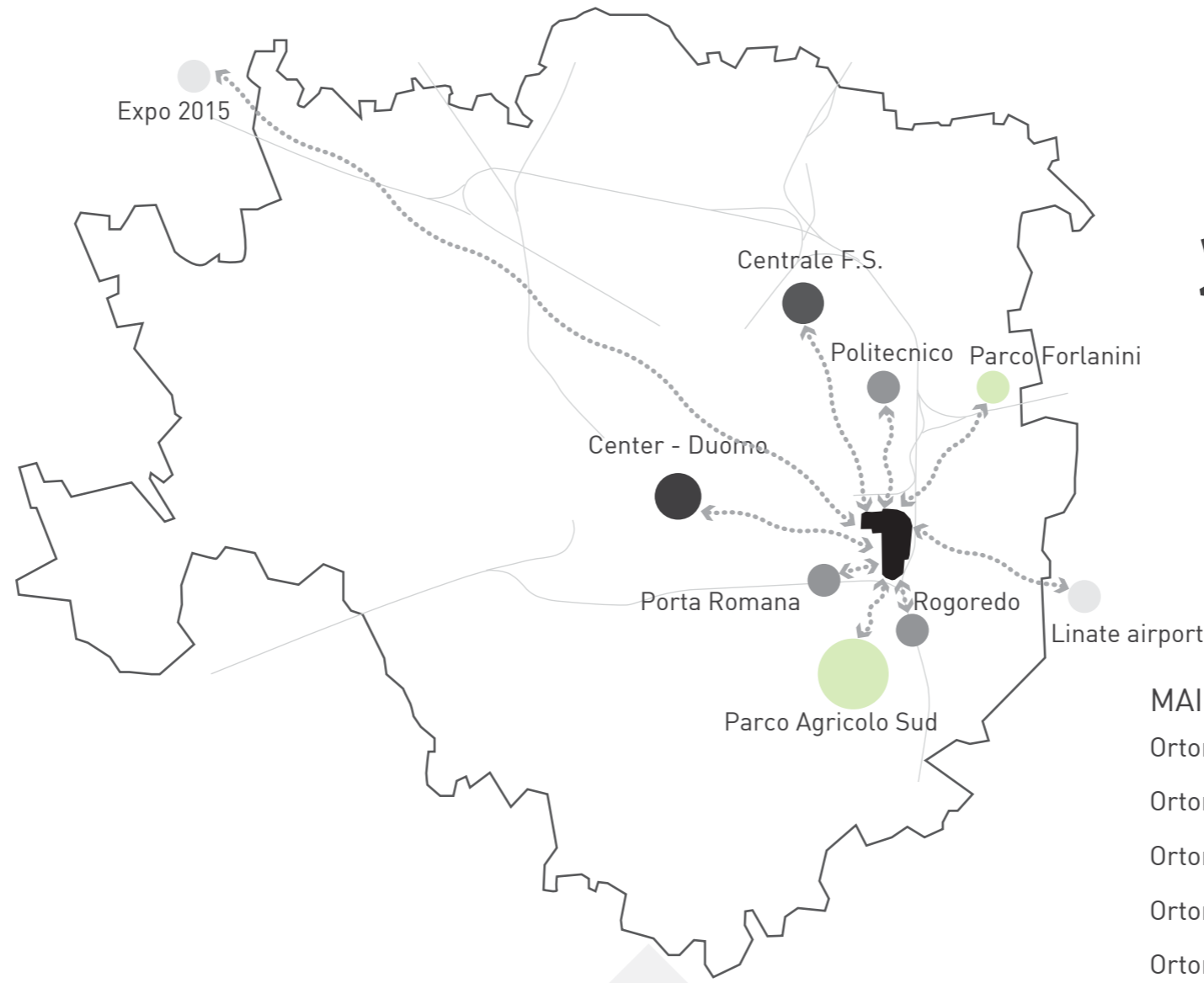
People flows coming from different directions should come for different objectives. First of all the new area of Ortomercato could offer new job possibilities opening also to public, offering different kind of services, connected to the role of the market but also relatives to people facilities, like restoration, restoring places, commercial businesses and other kind of activities, also coming from the existing businesses, local shops present in the surrounding, but also connected to the agricultural/productivity side of the city.

Tourism/visitors

Other flows could come from the renovated interest for food and production of food related activities, also looking at the Expo 2015, that brought a lot of tourists and visitors, enhancing the touristic sector in this way. The vision and the project proposed is oriented also in this direction, considering to give new functions but also to be an attractive point also for different typologies of visitors.

Logistics

The main function of the Ortomercato is still the logistic/wholesale production function. The flows that interest this function are relatives to loading and unloading activities for wholesale market of vegetable and growing products. This function should be facilitate and maintained to guarantee the continuity of the main wholesale objective of the area, that will on the other hand put side by side with another face of production.



MAIN DISTANCES

Ortomercato - Center-Duomo	----->	3,5 km
Ortomercato - Centrale F.S.	----->	3,1 km
Ortomercato - Politecnico	----->	2,46 km
Ortomercato - Porta Romana	----->	2,13 km
Ortomercato - Rogoredo	----->	2 km
Ortomercato - Parco Forlanini	----->	4,6 km
Ortomercato - Linate airport	----->	2,4 km
Ortomercato - Parco Agricolo Sud	----->	2,6 km
Ortomercato - Expo 2015	----->	12 km

EASILY CONNECTED



REDUCING DISTANCES



Slow mobility

Accesses and parking





















2 - SITE ANALYSIS

LEGIBILITY

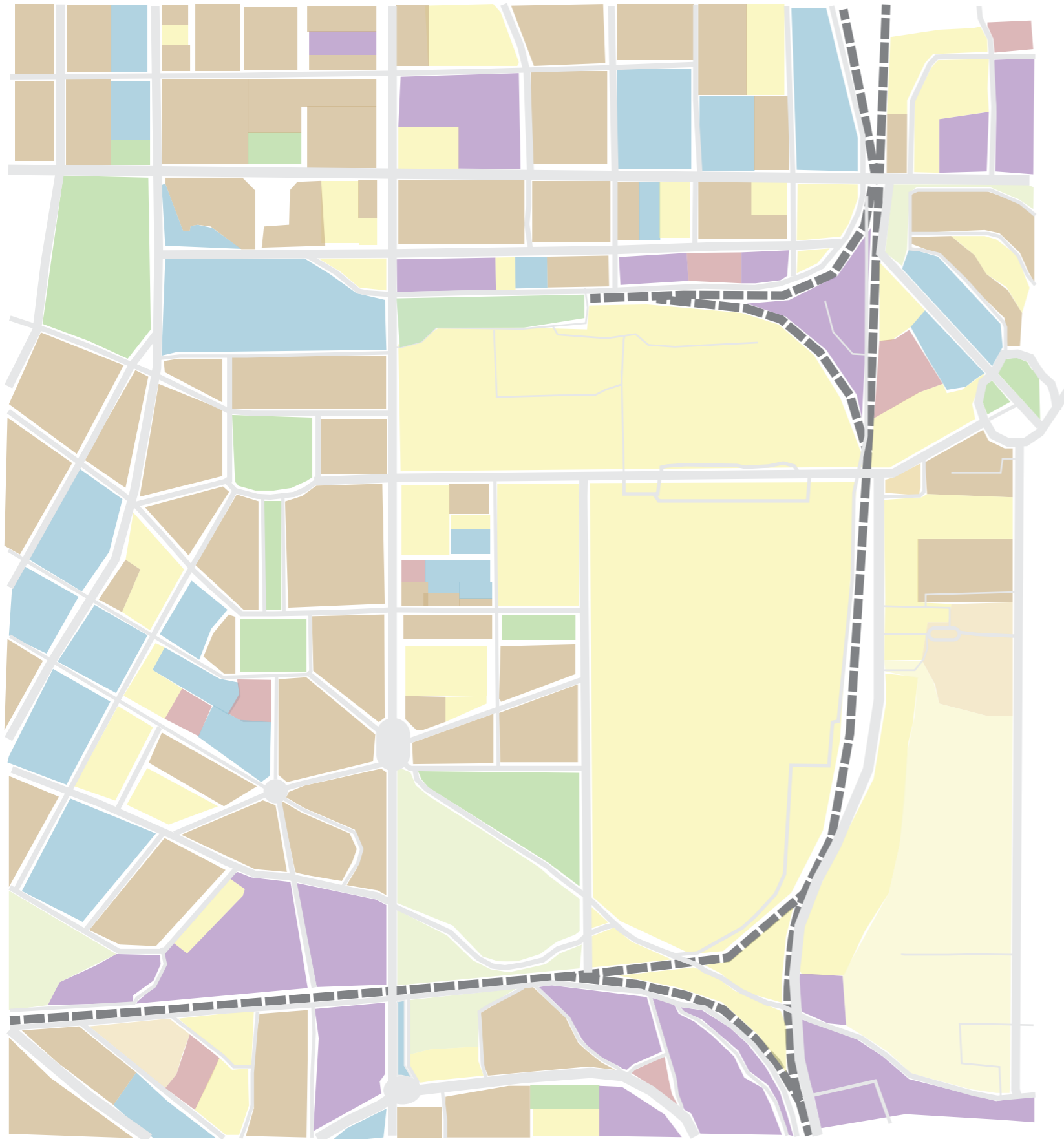


This analysis shows the legibility of the site; in this portion of territory are present the main structures dedicated to the wholesale market of food production; in fact we can observe that are present in the area the Mercato Ittico (fish production), Mercado dei fiori (flower market), Mercato Avicunucolo (meat production, and Mercato Ortofrutticolo /Ortomercato, which occupies the largest part of the whole sector.

On the area is also visible the presence of some green nodes or other kind of nodes, represented by the main green areas on the territory (Parco Alessandrini, Parco Formentano, Piazzale Martini, Parco Galli) and the areas object of new intervention or districts, as Quartiere Calvairate or Porta Vittoria, or also the main mobility nodes on the area, such as Lodi and Porta Romana. I also highlighted the paths that are protagonist on this part of territory and are represented by Via Cesare Lombroso and Via Varsavia, which enclosed the Ortomercato, but also Corso XXII Marzo-Viale Corsica-Viale Forlanini in the North part of the area. Is also important to underline the presence of the railway.

-  Landmarks
 -  Green areas
 -  Centralities
 -  Main characteristic paths
 -  Barrier : railway
 -  Mercato dei fiori
 -  Mercato avicunicolo
 -  Mercato ittico
 -  Ortomercato area
 -  Area Subject Of The Ban
-  Parco Alessandrini
 -  Parco Galli
 -  Piazzale Martini
 -  Parco Formentano
 -  Porta Vittoria
 -  Quartiere Calvairate
 -  Porta Romana
 -  Via Lombrono
 -  Via Varsavia
 -  Viale Corsica

LANDUSE



The analysis of the land use according to the research of Ordine degli Architetti di Milano shows the different functions present on the territory, the existing one and the functions in project according to different project but overall to the PGT of Milan. The area of the wholesale market, of every gender, is characterized by 'green-public facilities and general interest areas' present and in project.

The higher presence on the area is represented by the residential function, because this part of territory is essentially an expansion area with a basically regular grid, and is mainly characterized by residential functions and projects, but is also not to undervalue the existence of a high level of industrial buildings and multifunctional areas.

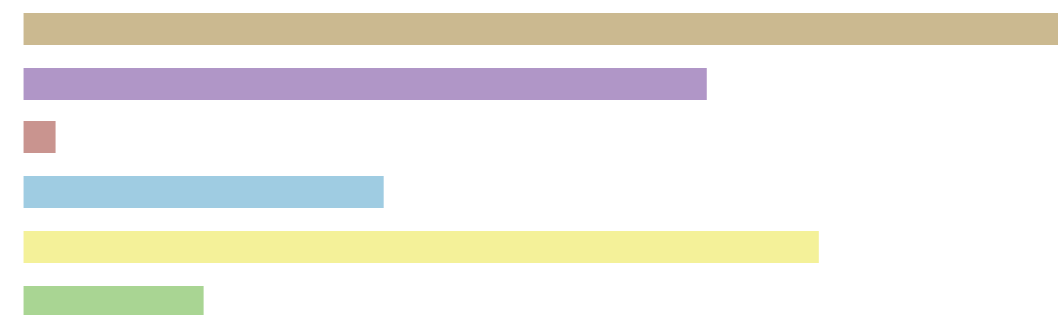
Existing

- Predominantly residential area
- Predominantly Industrial area
- Tertiary area
- Multifunctional area
- Green-public facilities and general interest areas
- Equipped green, municipal and over-municipal parks, sport facilities

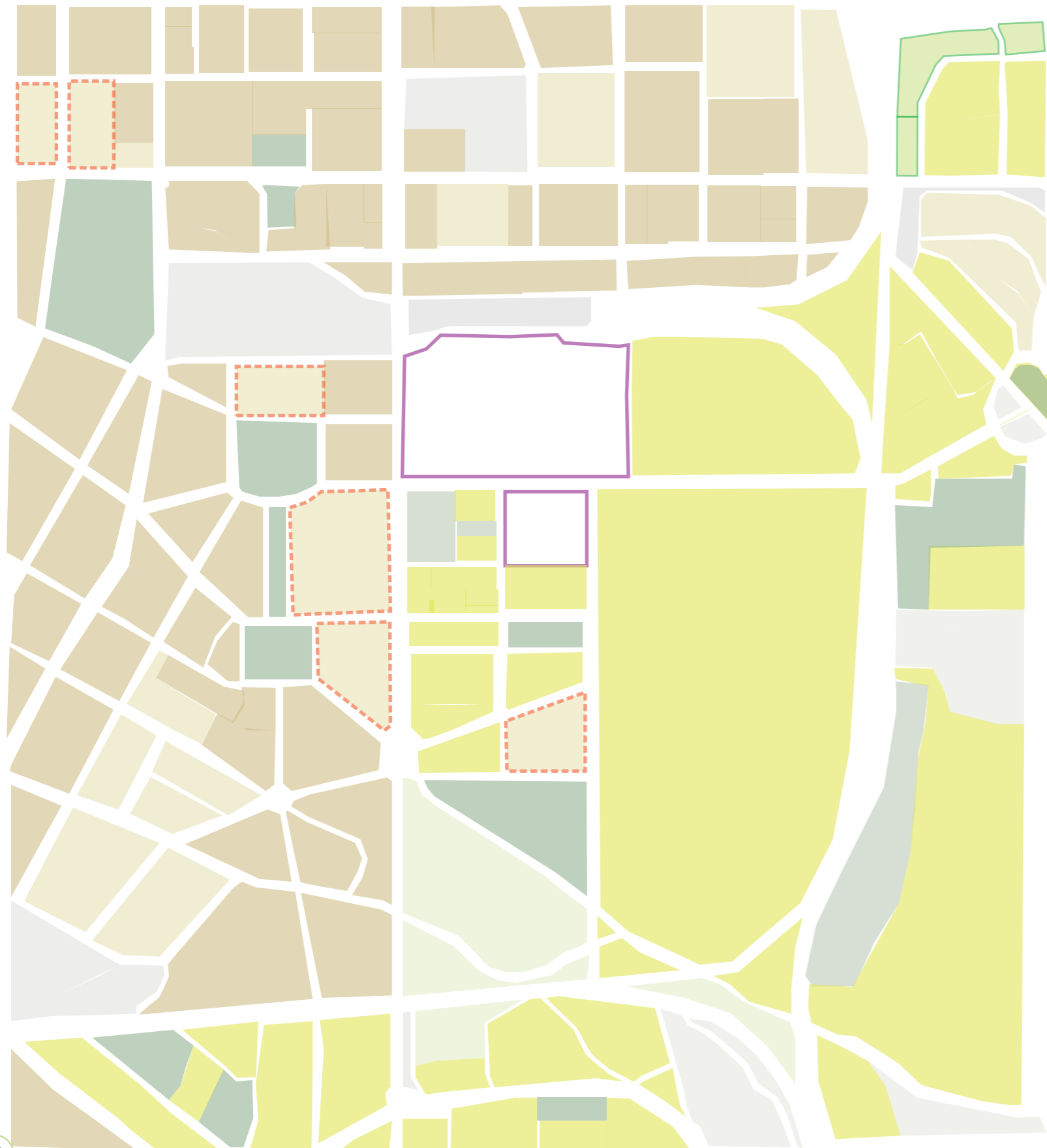
In project

- Green-public facilities and general interest areas
- Equipped green, municipal and over-municipal parks, sport facilities

Presence on the area



URBAN MORPHOLOGY



Pgt indications for urban morphology

- TUC - Tessuto urbano consolidato (Consolidated urban tissues)
- NAF - Nuclei di antica formazione (Ancient development nucleus)
- Ordinary, Extra-ordinary, restoring and renewal interventions
- Ordinary, Extra-ordinary, restoring and renewal interventions, maintaining the facade on the public space
- Ordinary, Extra-ordinary, restoring interventions
- Ordinary, Extra-ordinary, restoring, renovation interventions and new-built interventions
- Maintenance or restoring of continuous facades
- Completion of continuous facades
- ADR - Ambiti contraddistinti da un disegno urbanistico riconoscibile (areas recognizable by the urban planning tissue)
- Court urban tissues
- Open System urban tissue
- United urban tissues
- ARU - Ambiti di rinnovamento urbano
- Urban renovation tissues
- Area sottoposta alla normativa dei parchi regionali (Areas on the Regional Park norm)
- Parco Agricolo Sud
- Norme transitorie e finali (Final and Mandatory Norms)
- Approved development actions
- Piani Attuativi obbligatori
- Ambiti disciplinati dal Piano dei Servizi
- Urban green
- Urban green in prevision

2 - SITE ANALYSIS

Morphology and different typologies of urban fabrics

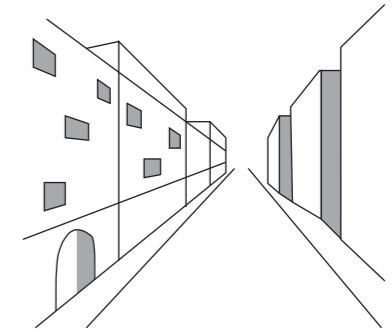


The analysis of the different morphological aspects of this portion of territory is done according to the PGT datas and researchs by Ordine degli Architetti and Centro Studi P.I.M. The first analysis shows the PGT indications, build up on the differentiation of TUC- Tessuto Urbano Consolidato, and NAF - Nuclei di Antica Formazione, and for the previsions for every category. There are also different categories under NAF, that reflect different pattern of the area.

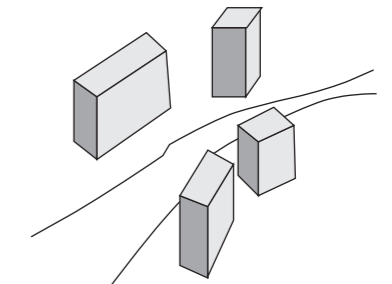
The other analysis done for the urban morphology, is about different typologies of the build environment and directly fabrics. I underlined the different presence of each category in the surrounding of the area of the wholesale markets, in this way the drawing shows how the tissues looks like in the surrounding area nowadays.



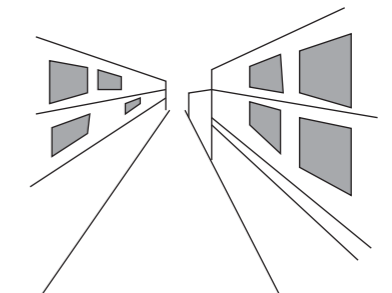
Court houses



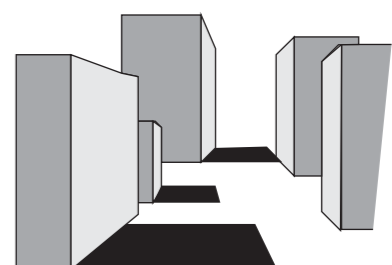
Isolated buildings



Open Court houses



Defined blocks

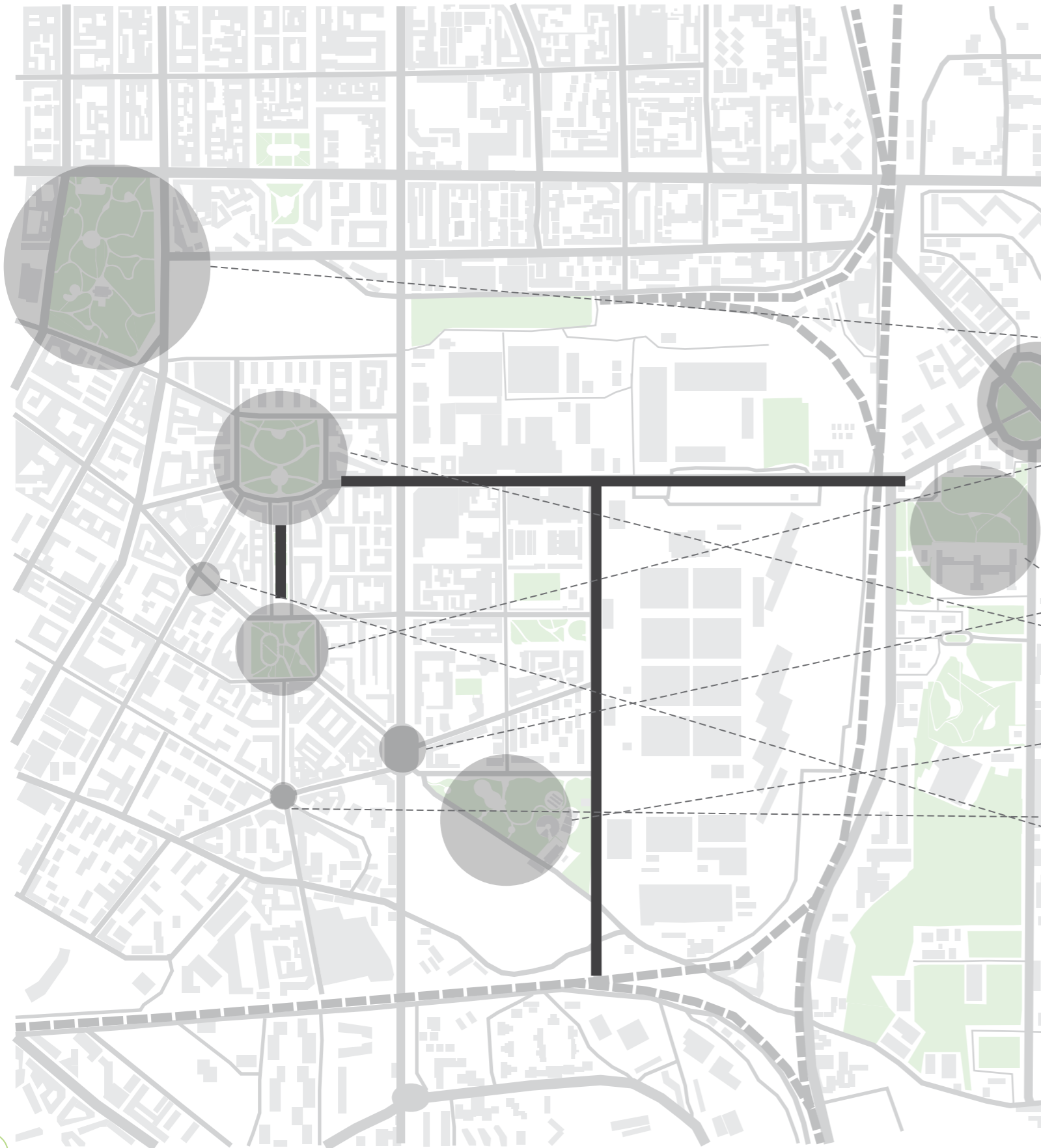


Green Spaces



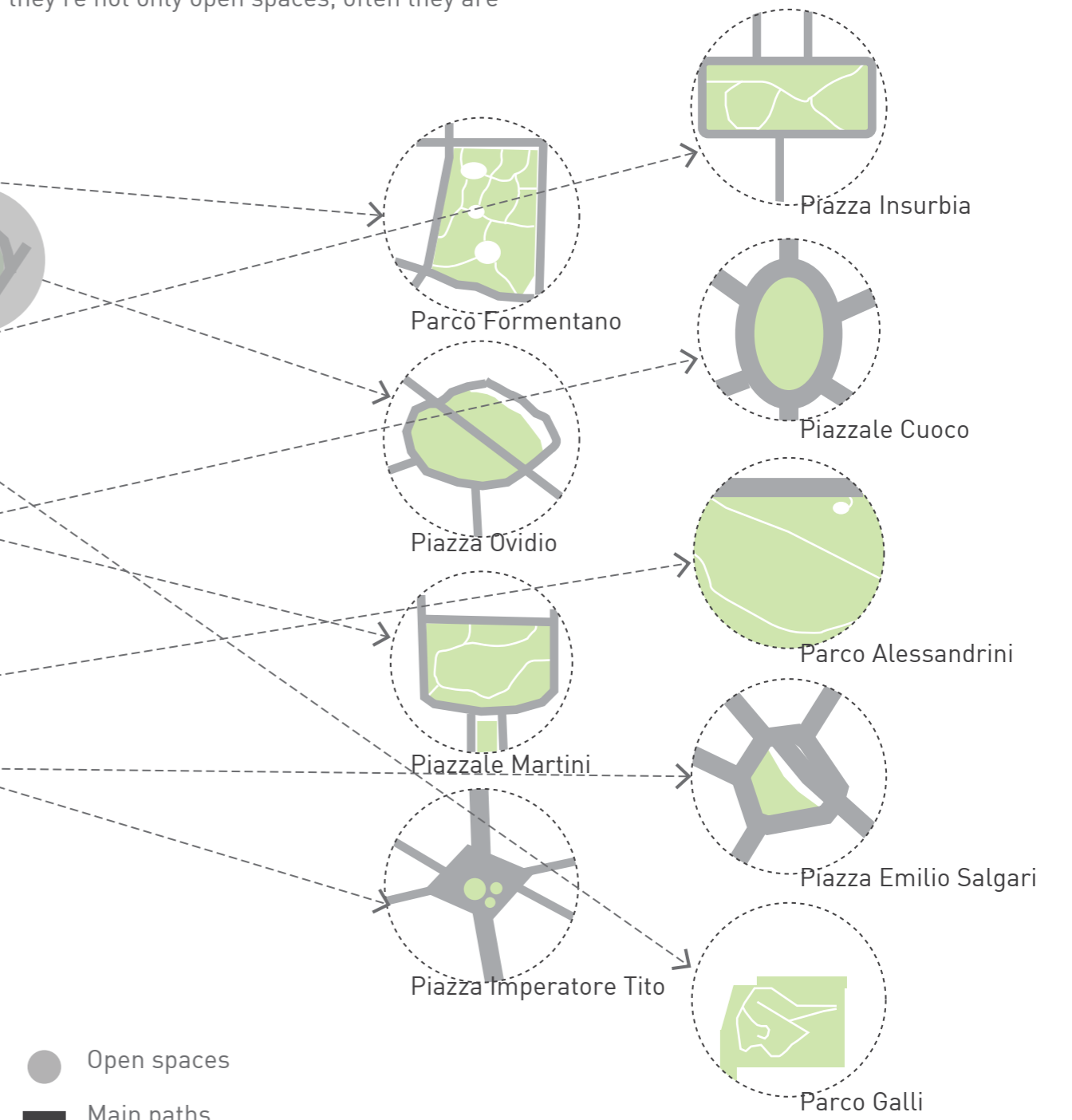
Mercati area

OPEN SPACES



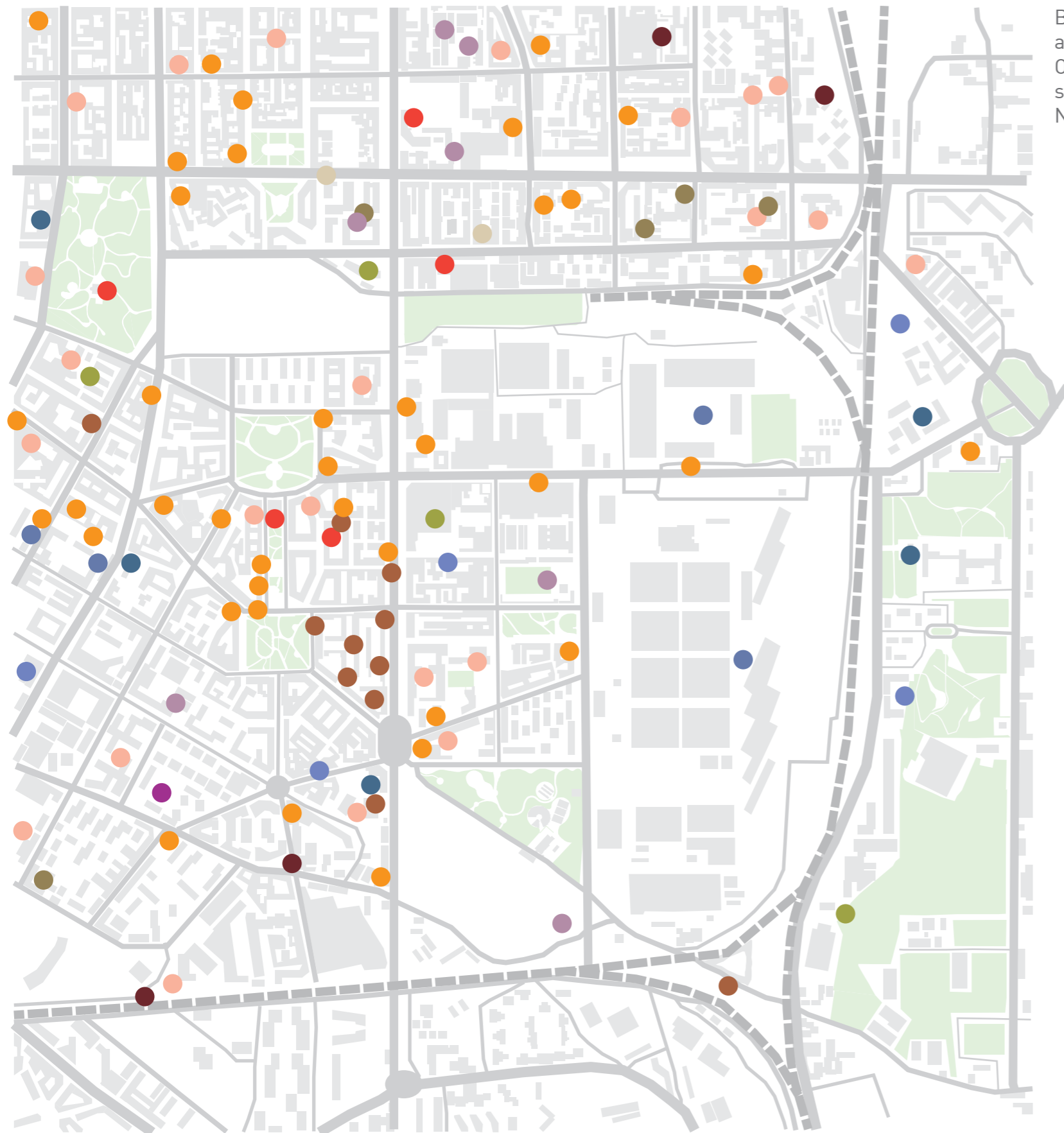
The presence of open spaces on the territory is various according also to the functions that those spaces host. Here in this analysis I wanted to show the main open spaces that offer are networks and nodes for mobility and transportation, but also green areas equipped or not enough developed in this area. But they're not only open spaces, often they are

spaces that could be enhanced as open spaces but now, they are pretty underused and don't reflect their potentiality. The higher presence is represented by green parks and transportation and mobility nodes, often they're squares.



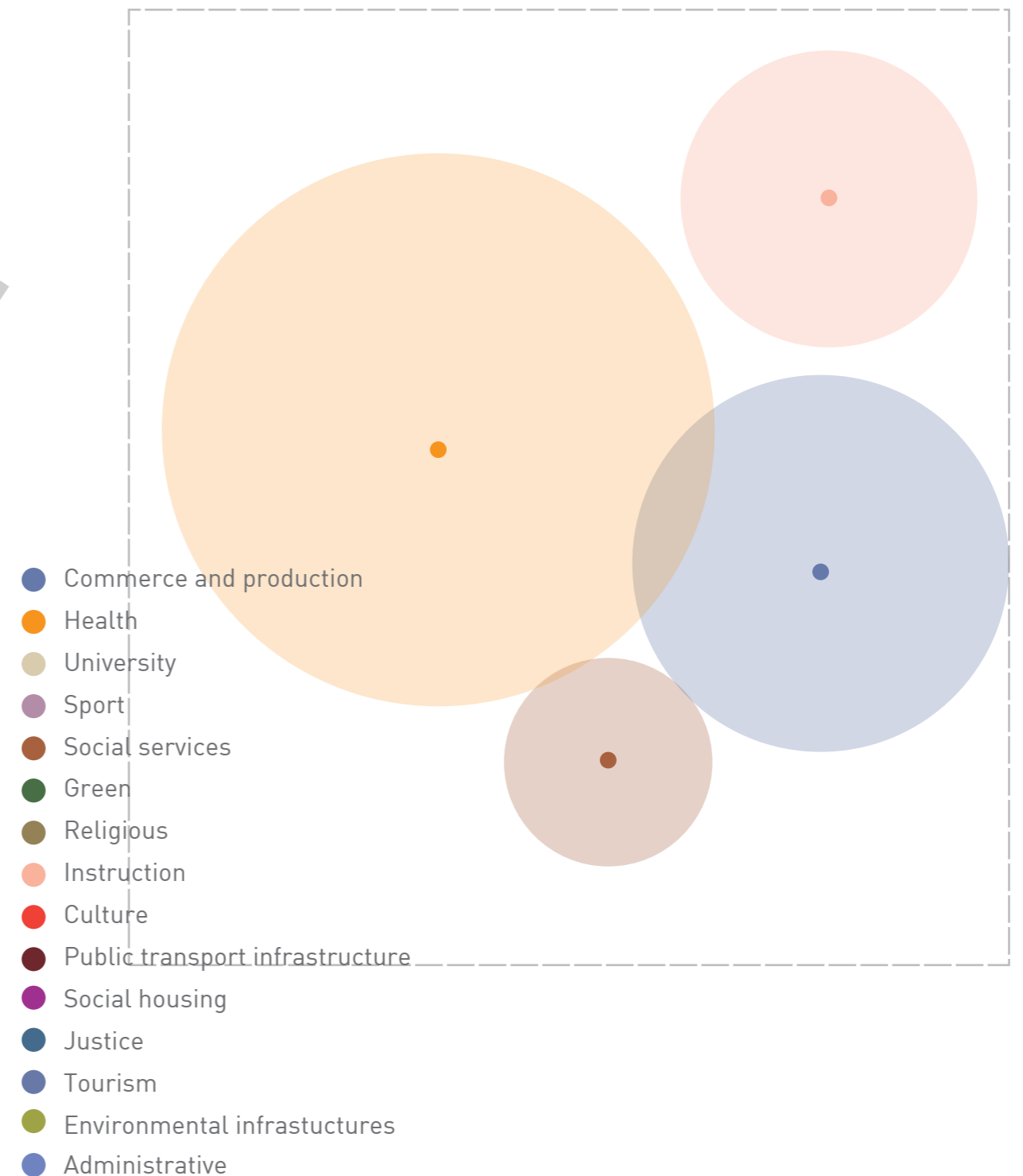
- Open spaces
- Main paths

SERVICES PRESENCE



Beside the functions of the building another analysis to understand the context of the Ortomercato's area is about services' presence. This map is done according to NIL - Nuclei di Identità Locale, built up by PGT.

The PGT for this area identifies the presence of different services, but the higher presence is represented by health services, and after by commerce and production, instruction and social services.

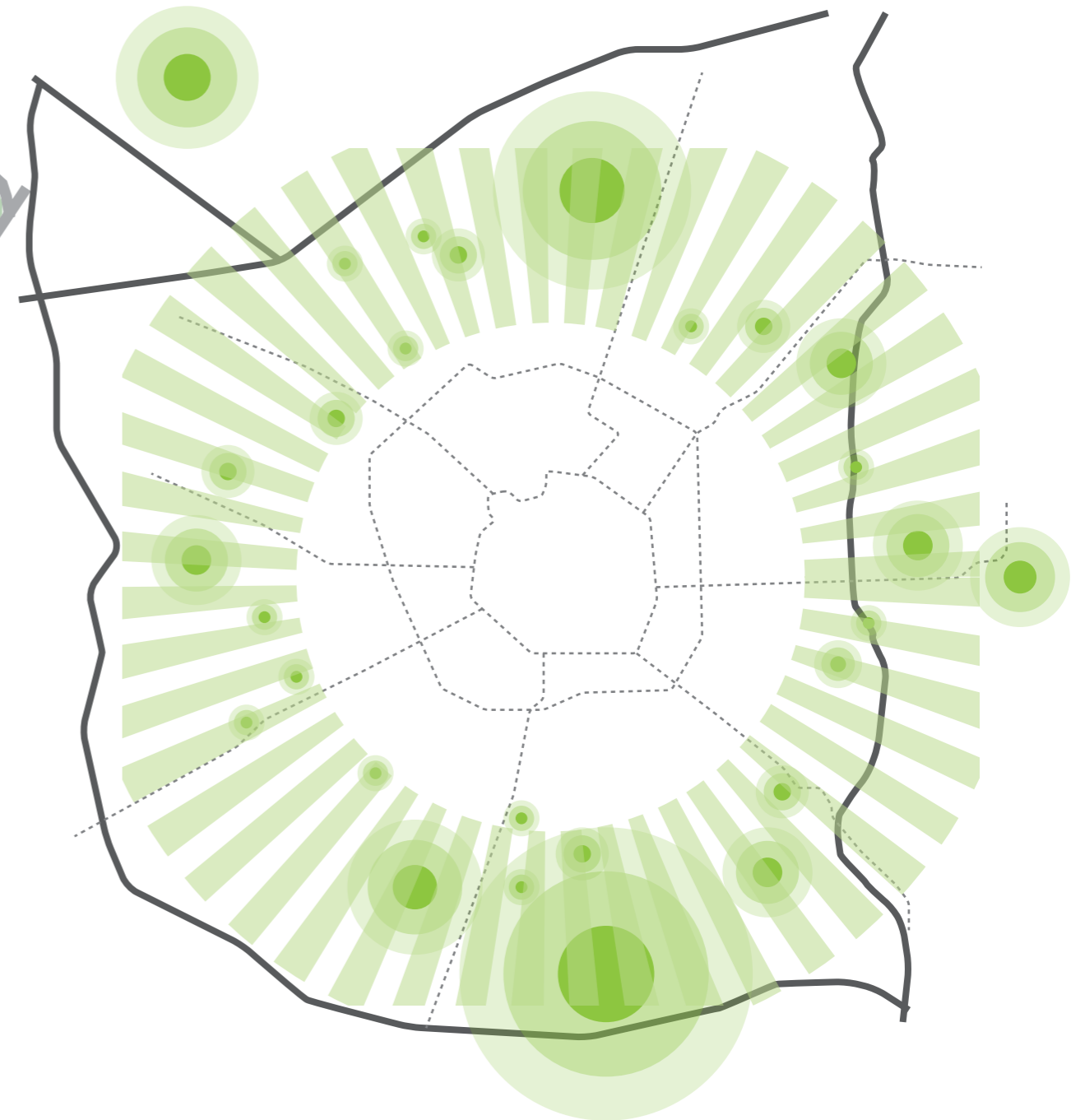


GREEN SYSTEM



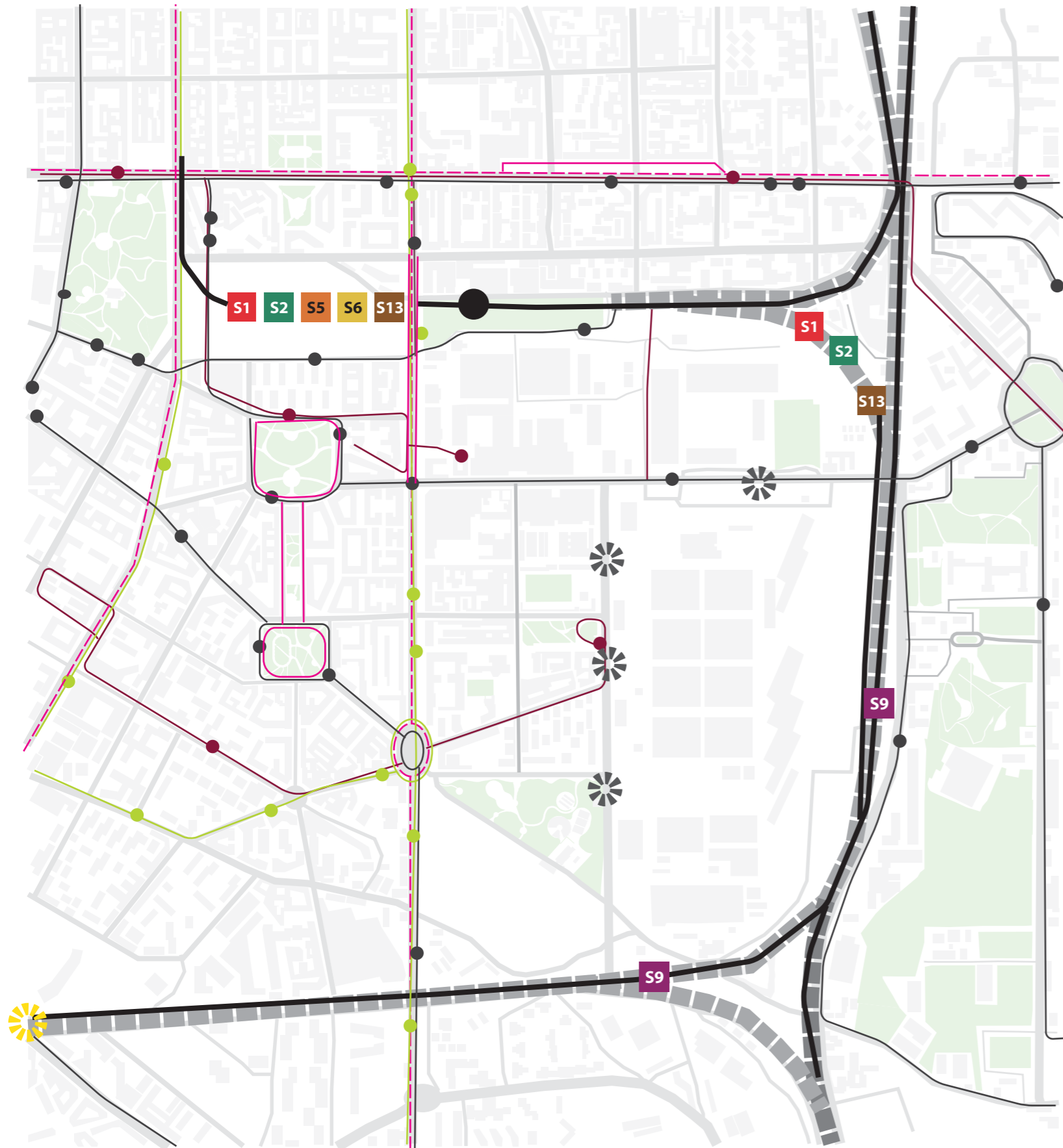
- Parks
- Accessory Green
- Equipped green Squares
- Sport Green
- Equipped green

In this analysis are compared the green areas on the site and the green areas present in the city of Milan, there is a great presence of green in this portion of territory represented especially by small parks, but also in the surrounding there are bigger green areas that influence this part of the city.



2 - SITE ANALYSIS











MOBILITY SYSTEM

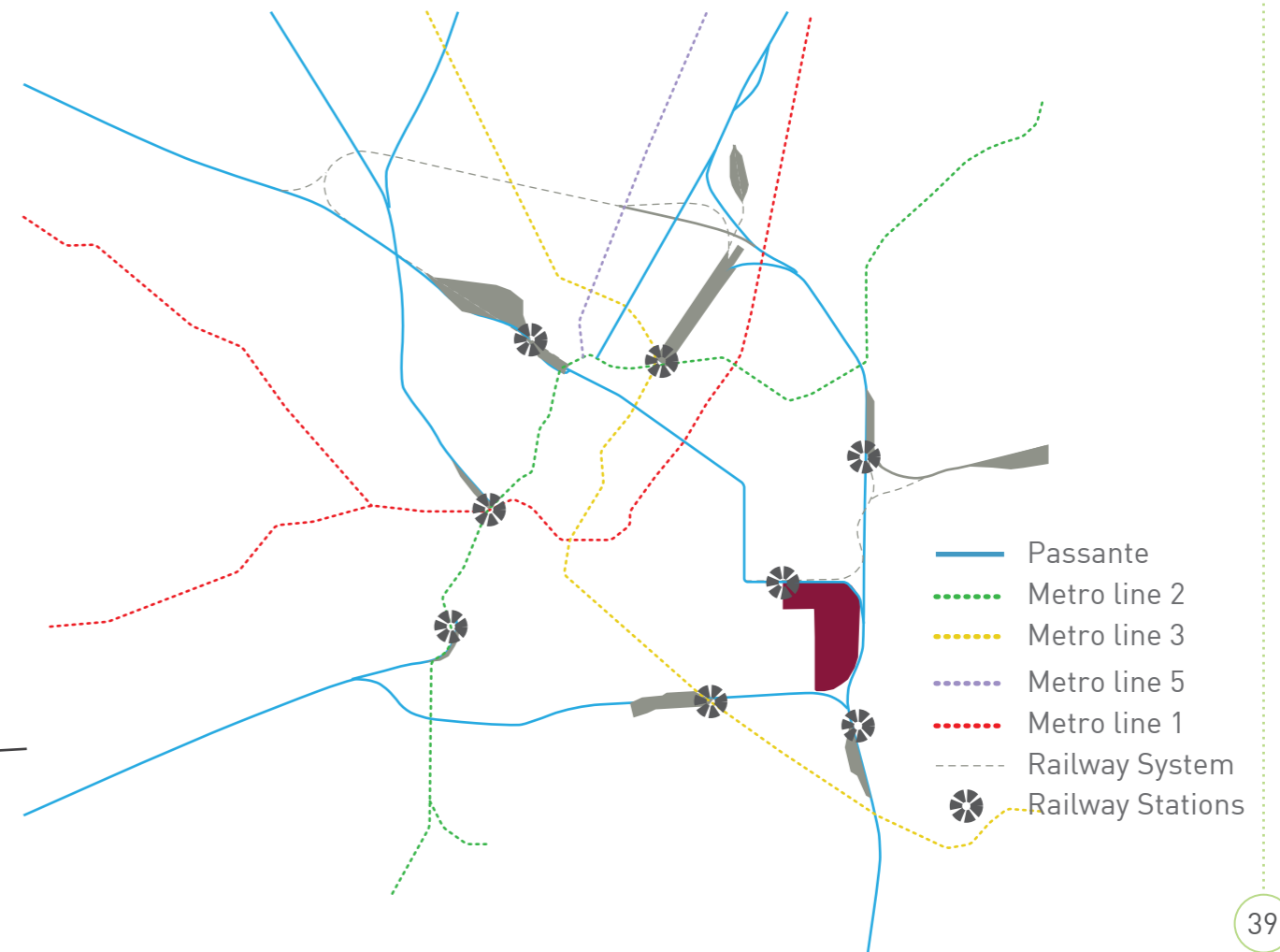


SLOW AND PUBLIC TRANSPORTATION

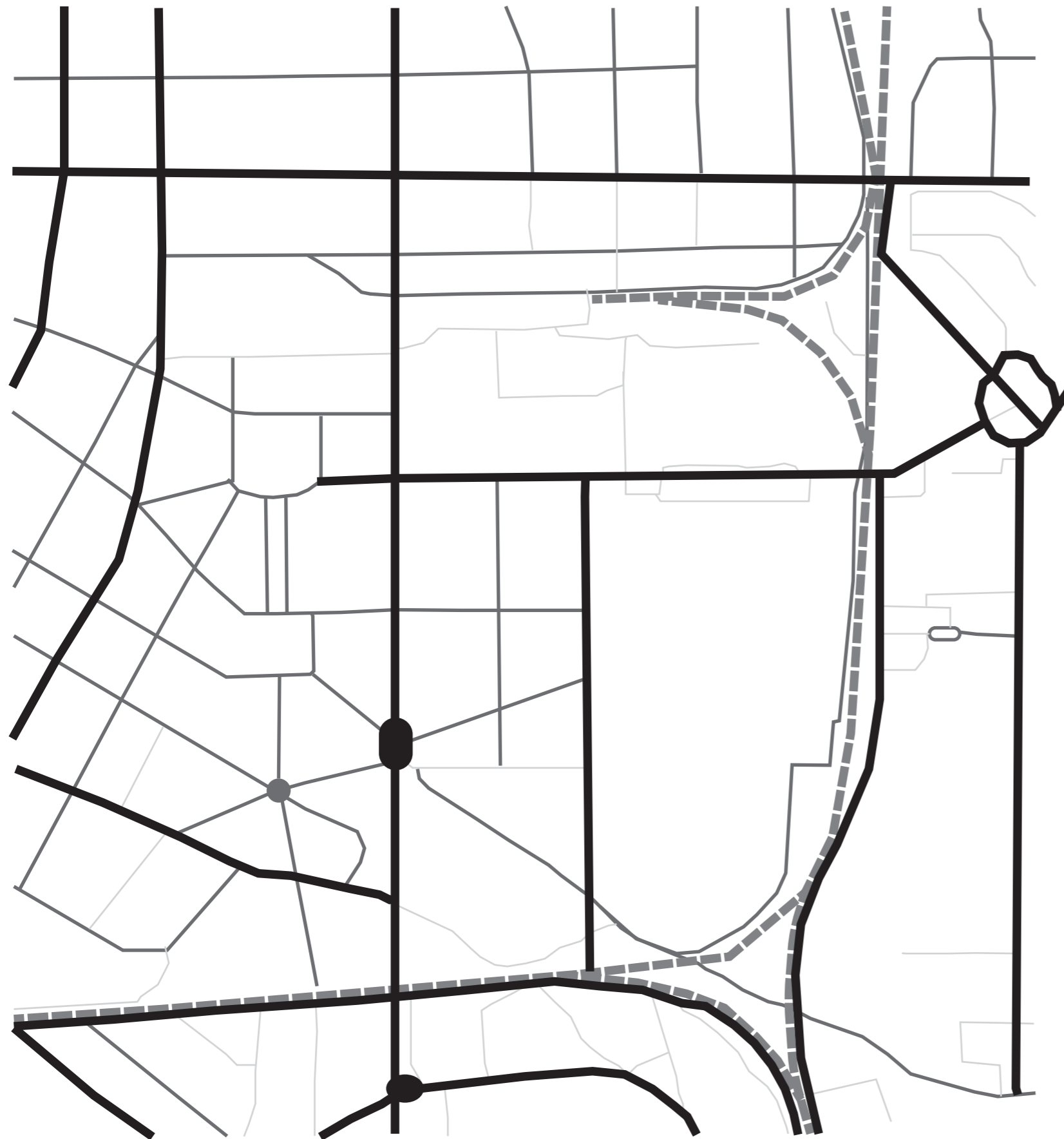
The transportation system in this area, relative to the system of the slow mobility, is characterized by the presence of the bus line, trolley bus line and trams. The presence of those transportation system is spread in the surrounding of the Ortomercato but is not continuing inside the area and in proximity also of the other markets is pretty weak.

There are a few paths dedicated to the use of cycling ways, and also in project according to the PGT for this portion of territory but they're present most of all in the streets with the main flows and traffic. There is the important presence of the railways system that guarantee a certain connection of this area with central areas.

-  Station Porta Romana, line M3
-  Existing cycling paths
-  In prevision cycling paths
-  Tram
-  Trolley-bus
-  Bus
-  Suburban Railways
-  Stations
-  Railways
-  Accesses to the Ortomercato



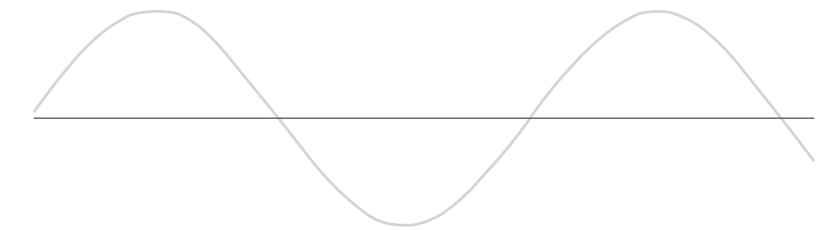
2 - SITE ANALYSIS



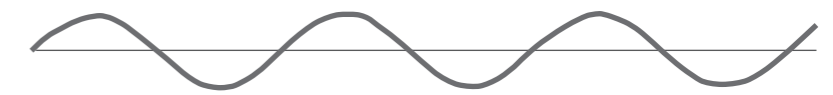
STREETS' HIERARCHY AND FLOWS

This schematic view of the streets' network shows the different frequency according to streets' hierarchy in the surrounding of the area of wholesale markets. The main flows are located in Viale Corsica, via Varsavia, Via Lombroso, Viale Molise and Via Zama, and some of them completely enclose the Ortomercato. Other paths are mainly a medium frequency streets, that are also in connection with the accesses of the wholesale areas, and they represent the major percent of typology of frequency on the area. Smaller and low frequency paths are the lowest presence on this part of territory and characterize most of all industrial areas, parks or private areas.

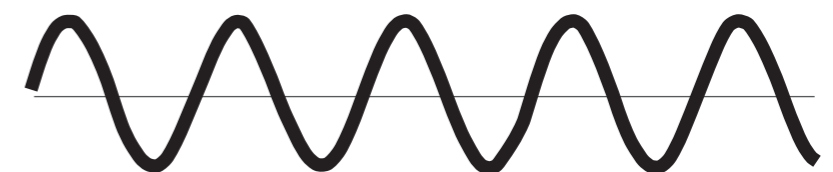
— Low frequency



— Medium frequency

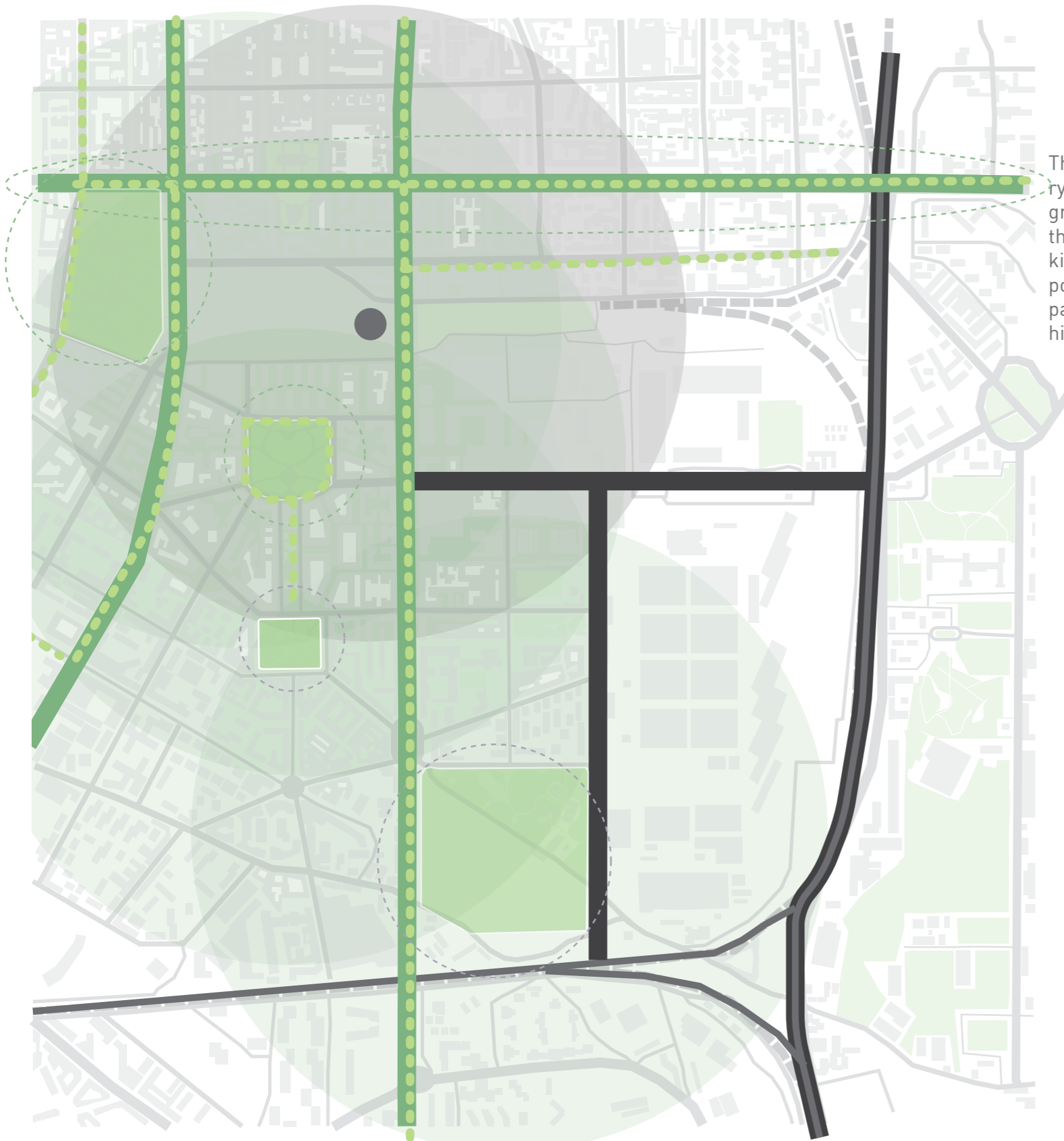


— High frequency













--- Railways

WALKABILITY, COMFORT AND LIVEABILITY

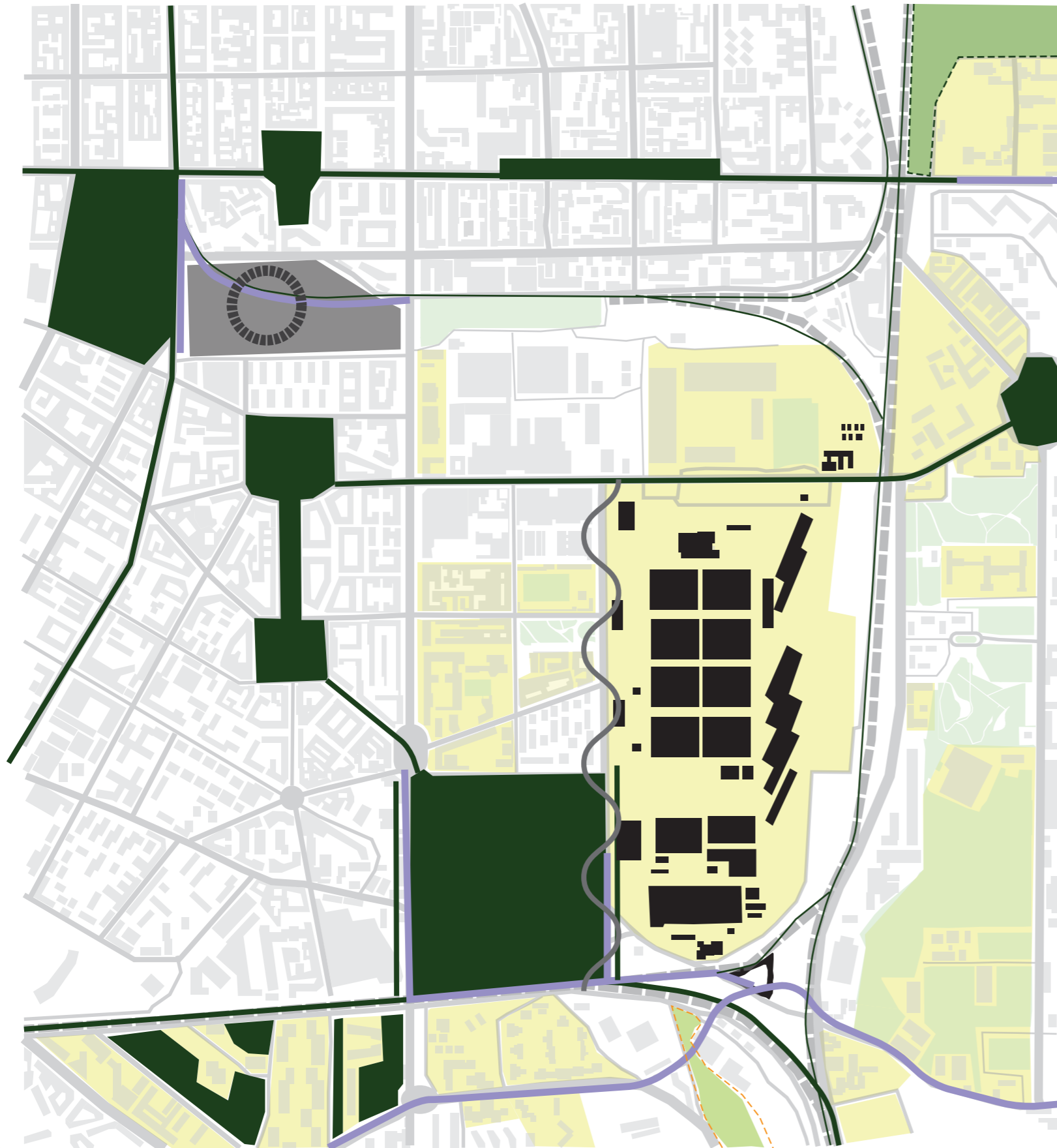


The main green areas present on the territory, analyzed in the drawing relative to the green system, are creating comfort zones in the surrounding of the Ortomercato, and this kind of presence is resulting to be a great potential to this area. Here i show the main paths and streets (according also to the hierarchical scale of the frequency), and i

underlined the main liveable or less liveable paths, and the less walkable. The more walkable are the streets with an adequate furniture, for example instead the railway creates a low liveability of the street (Viale Zama) and could be developed in different ways to facilitate pedestrian paths.

-  Green areas creating comfort zone: 10 minutes pedshed
-  Streets with trees
-  Low walkability
-  High Liveability
-  Low Liveability
-  High accessibility
-  Medium accessibility
-  Porta Vittoria Station: 10 minutes Pedshed
-  Green areas Pedshed
-  Station Pedshed











EXISTING PROJECTS





The area is object of different kind of projects ATU and ATP (different kind of transformation programs, according especially to the PGT of the city of Milan. The area of the Ortomercato directly as we said is in an expansion area of the metropolitan city of Milan, Other projects are present in the surrounding, the most important is the Piano Integrato di Intervento for Porta Vittoria. In the surrounding area present

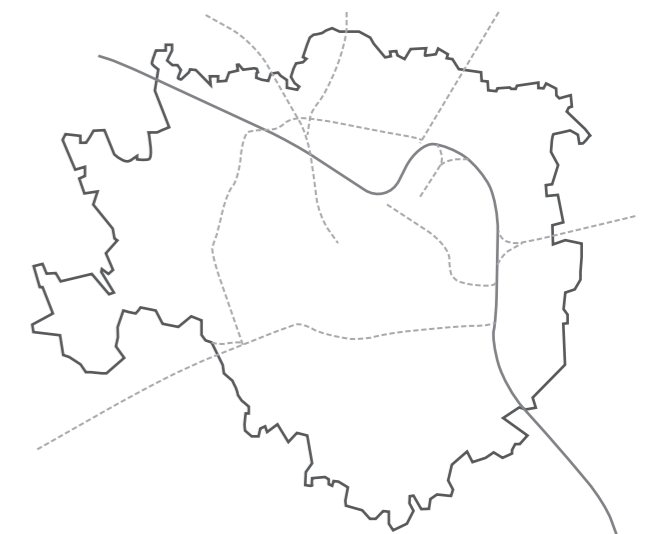
PGT INDICATIONS

Grandi progetti di interesse pubblico (Public interest projects)

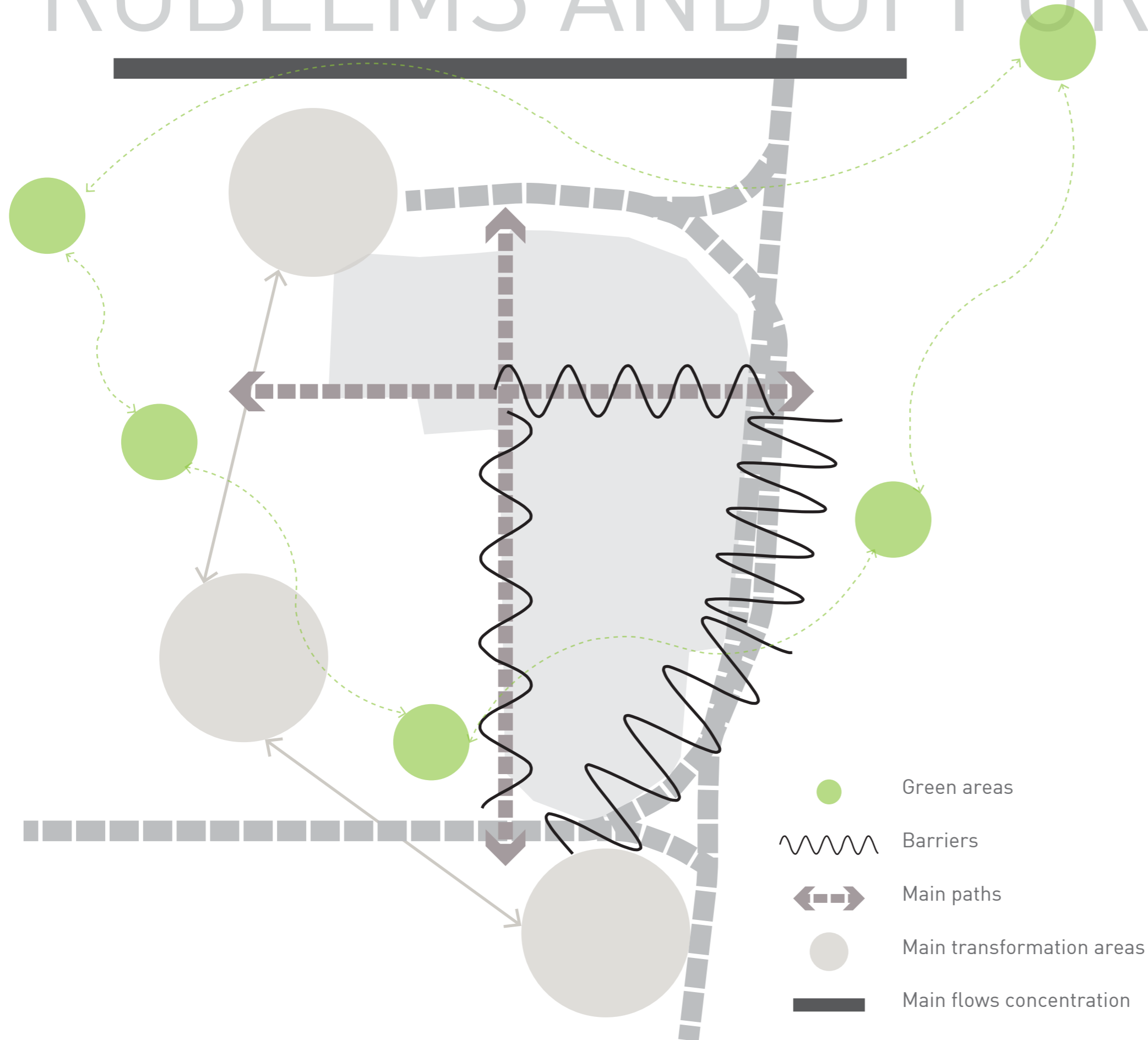
-  Temi di progetto (Project areas)
-  'Circle Line' and 'Cintura Verde' path projects
-  'La passeggiata urbana dei bastioni' and 'Il ring dei viali delle regioni' path project
-  Ambiti di Rinnovamento Urbano (Restoration urban areas)
-  ATP - Ambiti di trasformazione periurbana (Suburban transformation areas)
-  Verde e spazi pubblici (Green and public spaces)
-  Greenway regionale Adda-Ticino in project
-  ATP perimeters
-  ATU - Ambiti di trasformazione urbana perimeters
-  Requalification Viale delle Puglie

OTHER PROJECTS

-  PII Porta Vittoria
-  Area subject of the Ban



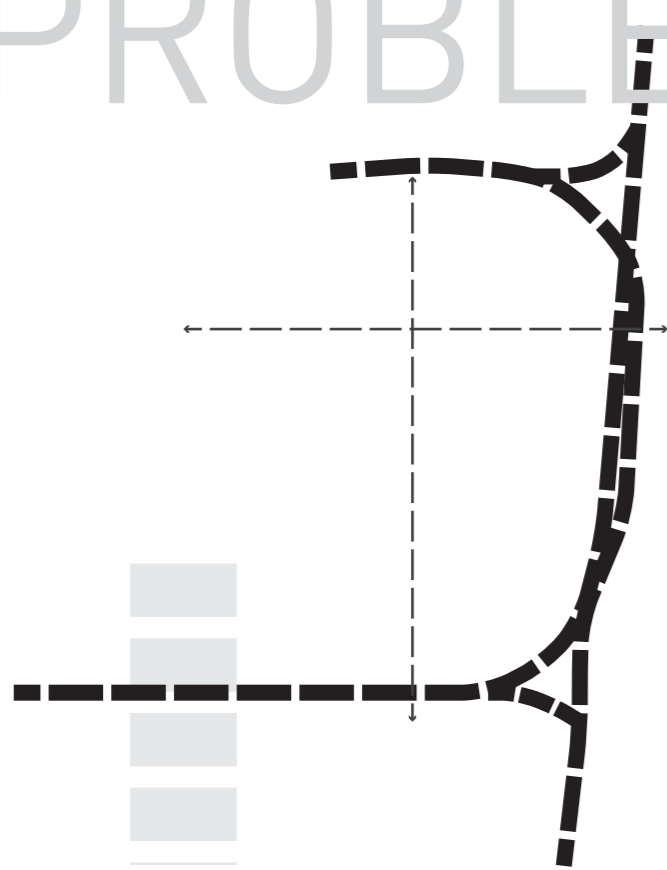
PROBLEMS AND OPPORTUNITIES



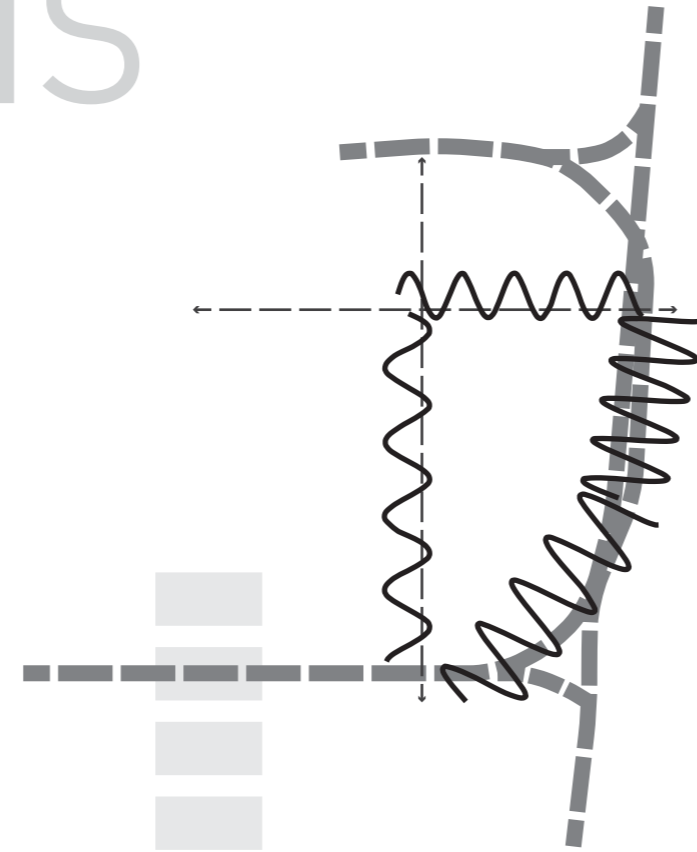
Concluding the accurate analysis of the area and of its surrounding, we can arrive to a whole vision of the Ortomercato and the critical and potential element that could arise from its urban context. Starting from the area itself, the main critical point is represented by the closed fenced wholesale part. It separates radically the area of the Ortomercato from the everyday life of people, who can't be part of an important and strategic part of the city, and not only, because Ortomercato's influence goes behind the city boundaries to the National level. Another critical point is the non integration of the functions of the wholesale market with its urban surrounding, that could be the key to develop a different urban continuity and integrity to this East part of Milan. The green areas also, are certainly a resource that could be enhanced but they result like spots of island and are not connected each other.

The positive aspects or potentialities are instead different and various: the first potentiality is directly related to the Ortomercato main function of production and buy/selling of vegetable products. Nowadays food sector and production, urban vegetable gardening or urban farming and agriculture are a new idea to give a different identity to many city areas, but are also a resource because of their many advantages in terms of production, consumers' point of view, natural resources and environment preservation or creation. Urban landscape because of this could have a new aspect more dedicated to environment and agriculture. The presence also of other projects or finished projects in the surrounding gives a certain vitality to the area and could guarantee to the future a relationship with a new possible vision for the Ortomercato, and in the same way could be seen green spaces, that gives comfortable spaces to stay for people and residents.

PROBLEMS



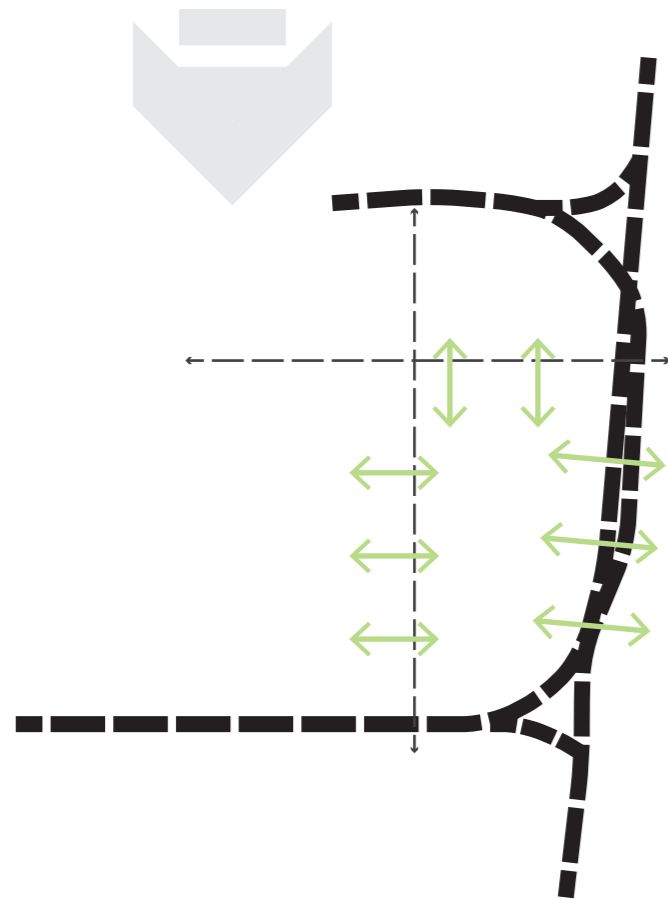
LACK OF CONNECTIONS



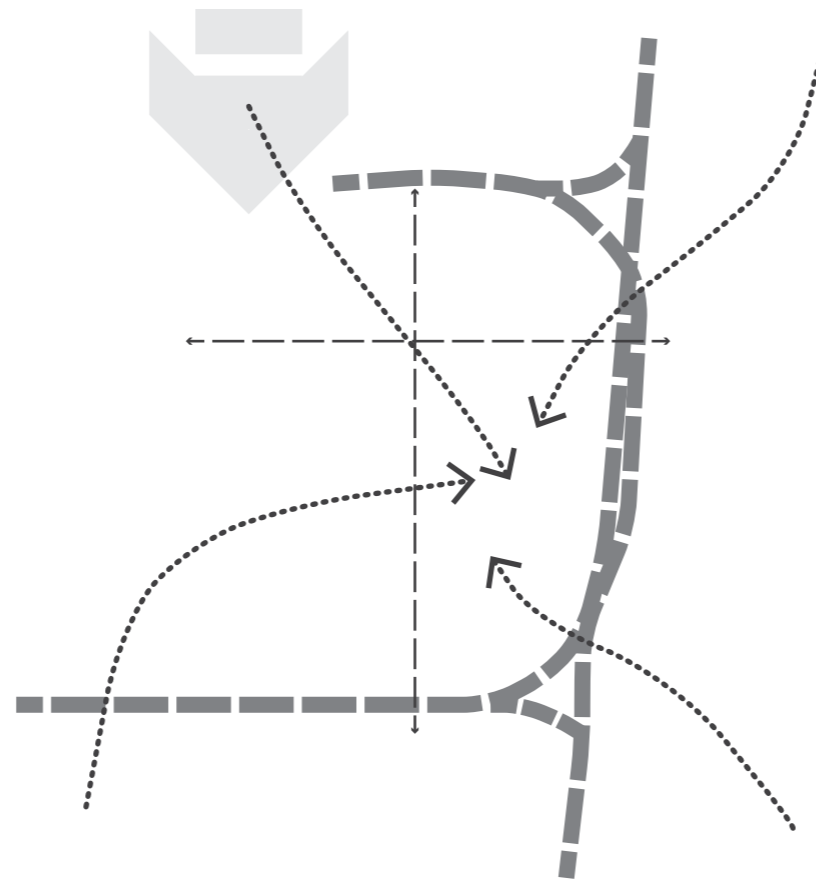
FRAGMENTED AREAS



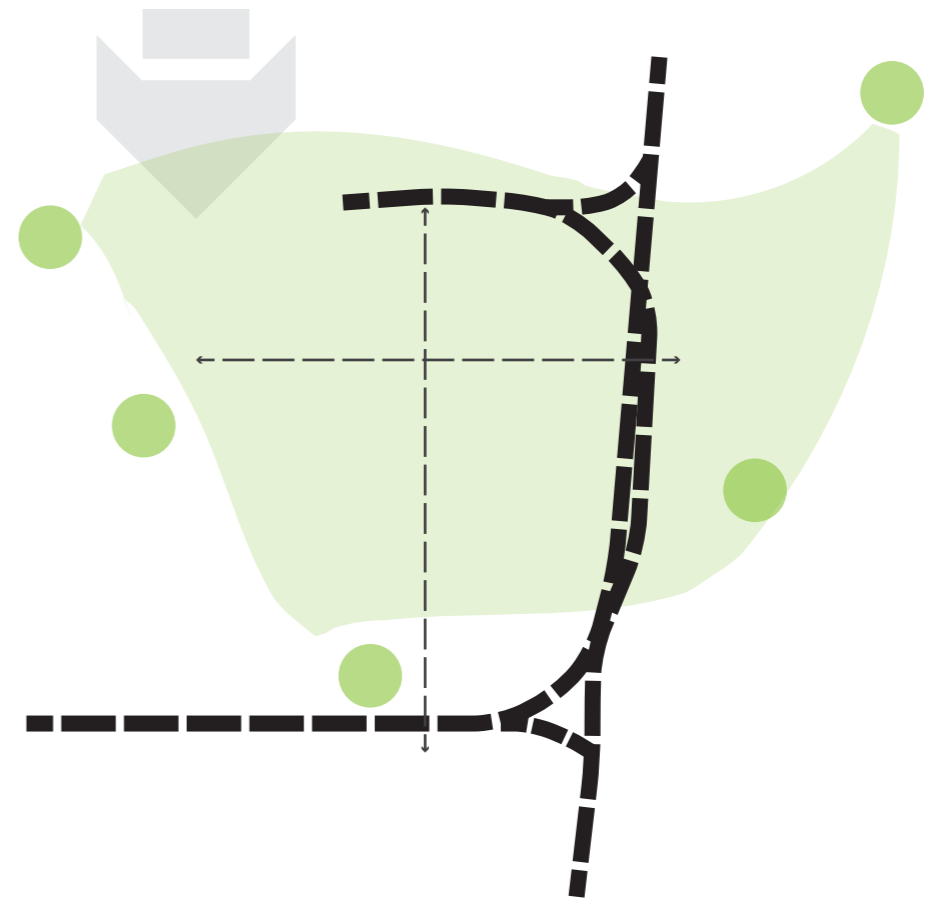
FRAGMENTED GREEN



MORE CONNECTIONS



CREATE ATTRACTION AND COMMUNITY

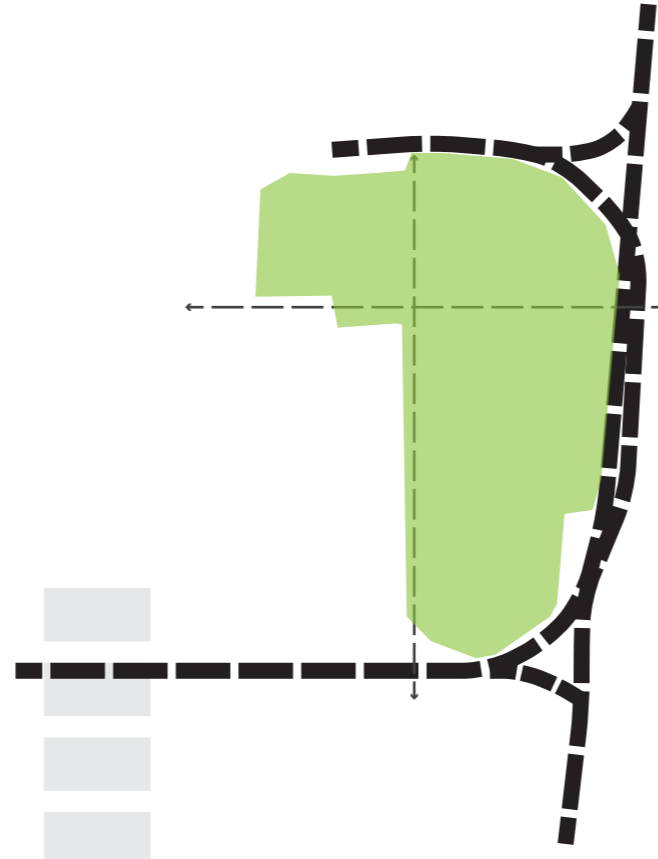


ECO-DEVELOPMENT/CONNECTION

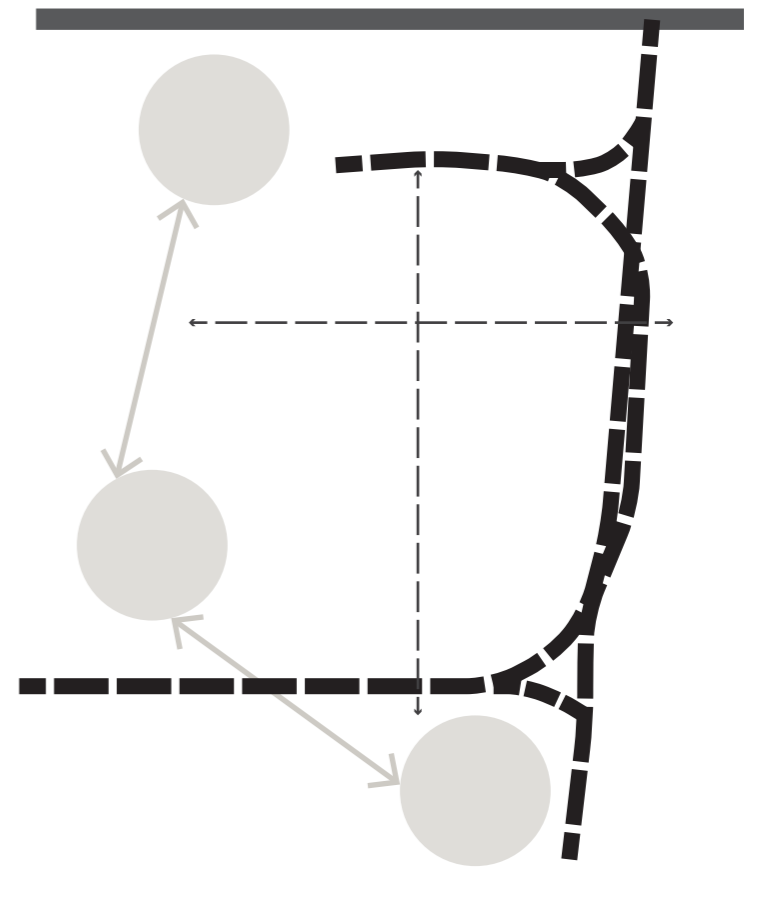
OPPORTUNITIES



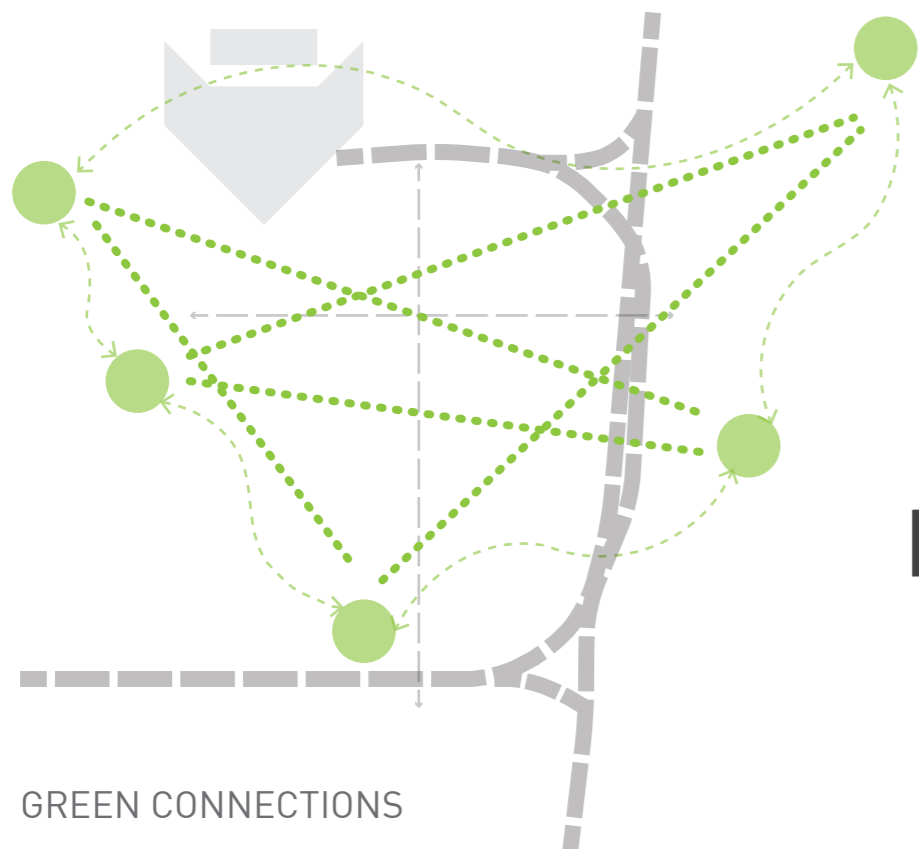
GREEN PRESENCE



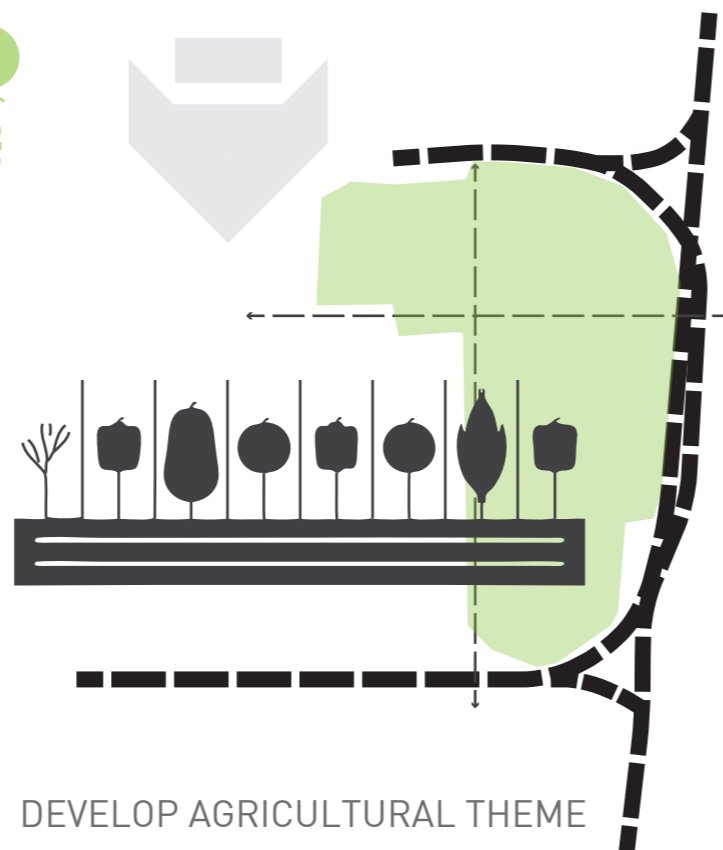
ORTOMERCATO AS A TRANSFORMATION AREA



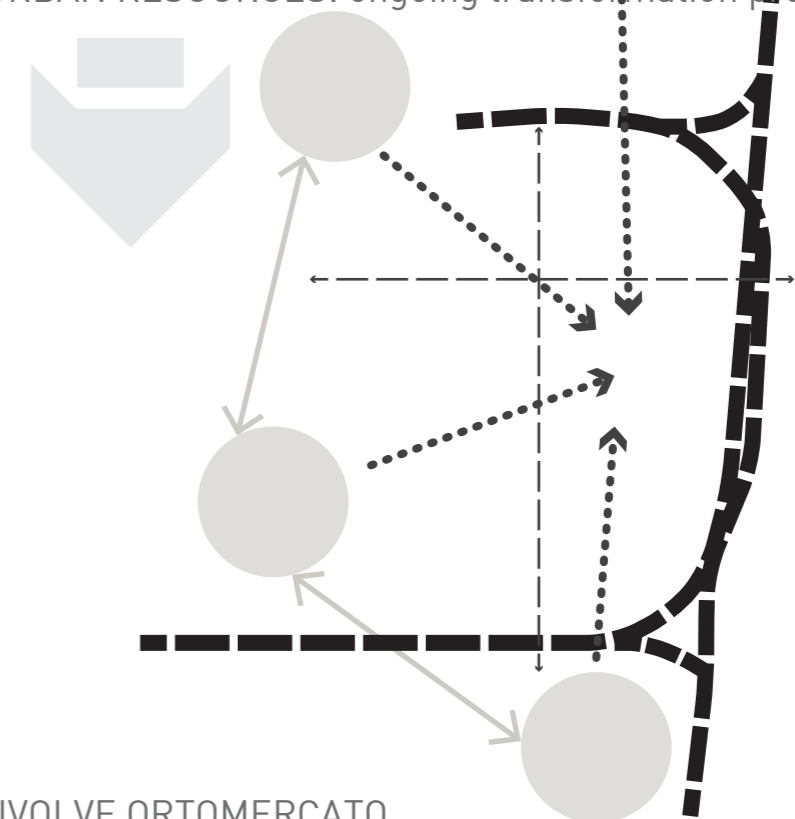
URBAN RESOURCES: ongoing transformation processes



GREEN CONNECTIONS

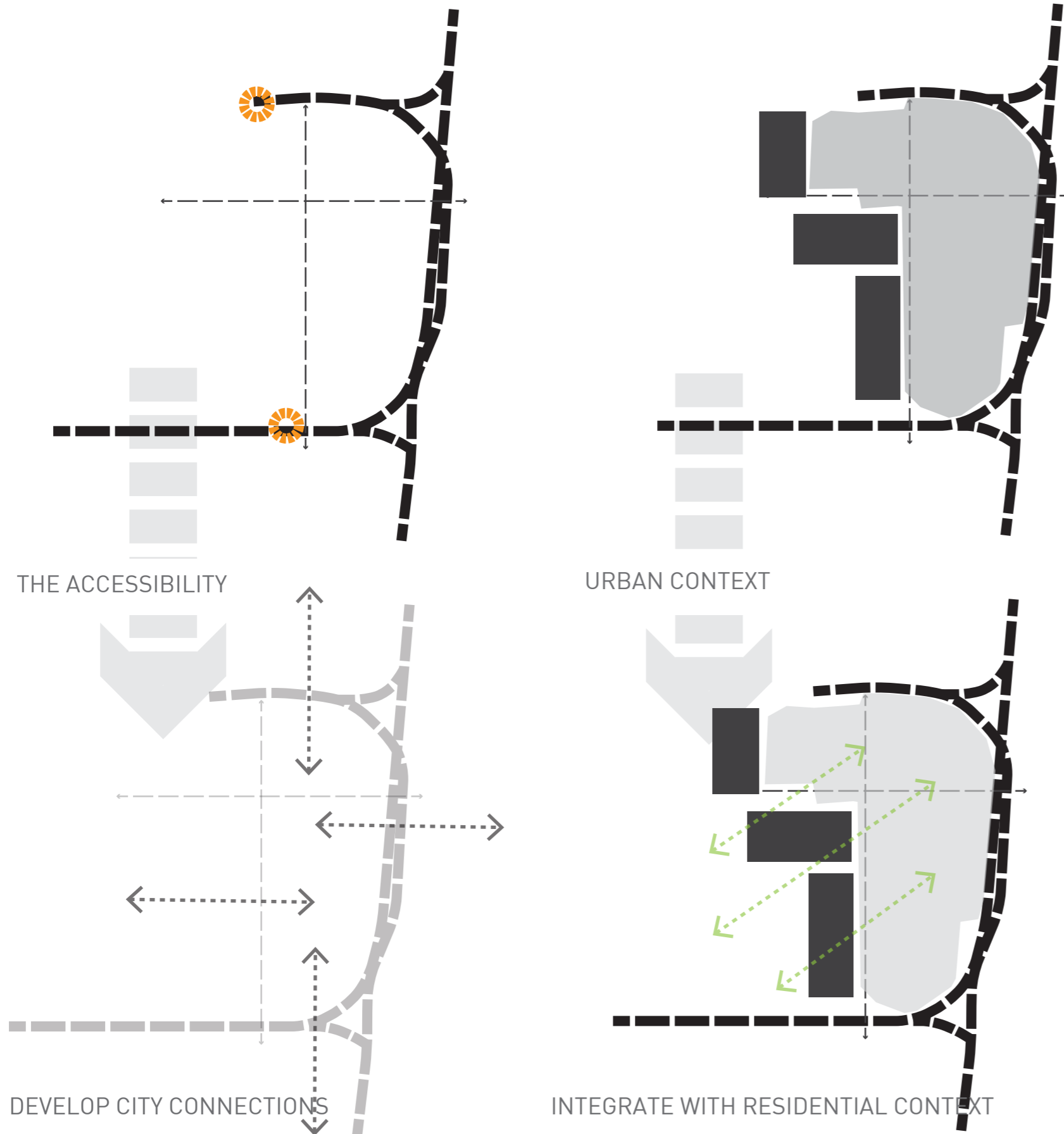


DEVELOP AGRICULTURAL THEME



INVOLVE ORTOMERCATO

OPPORTUNITIES



PART III - OBJECTIVES AND STRATEGIES

1 - CRITICS AND OPPORTUNITIES

STARTING POINT

NOT INTEGRATION

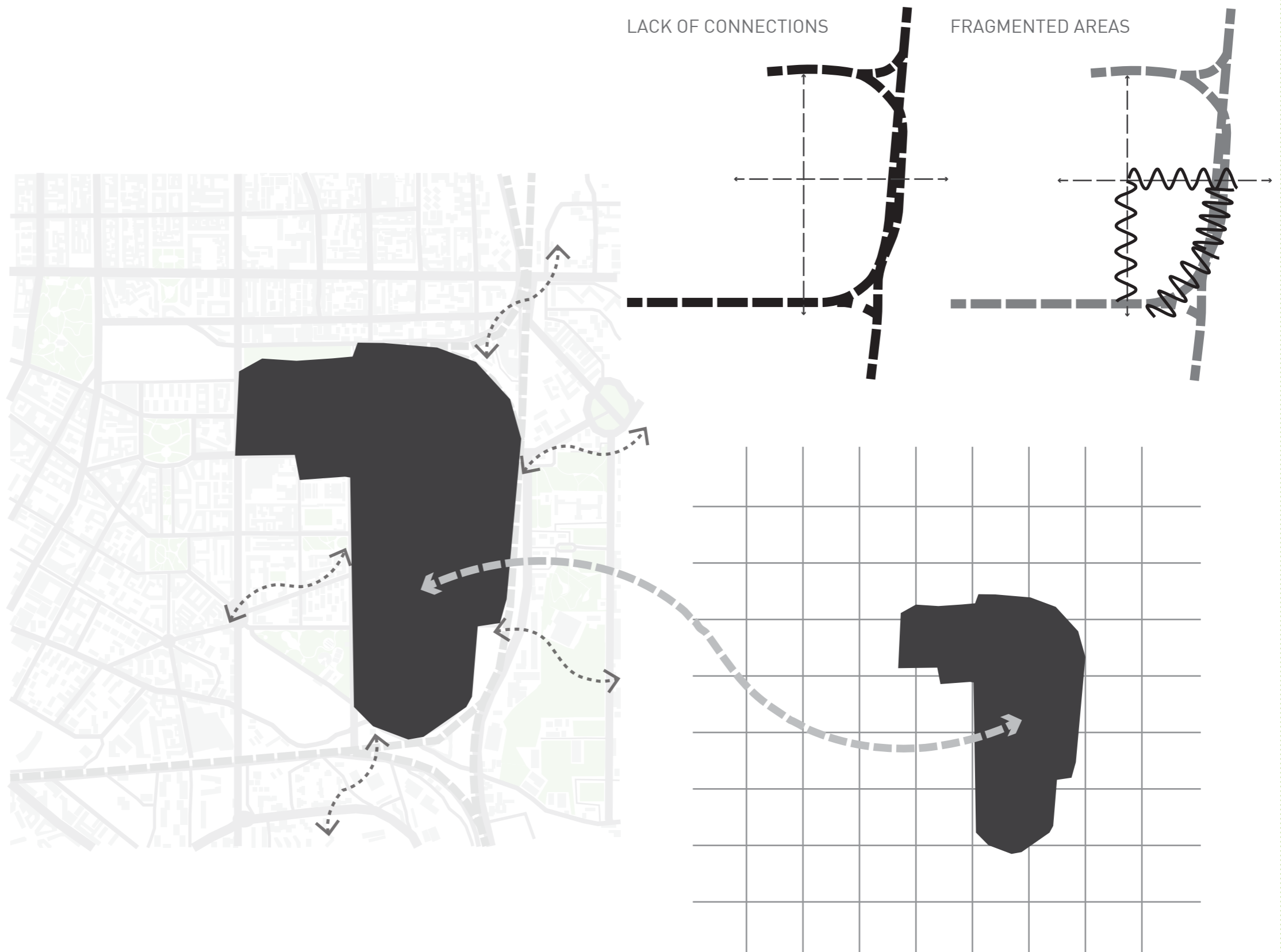
The starting point of the idea for the project, is an urban and territorial situation characterized by a closed path, not liveable and very less enjoyable by people, tourists and different kind of flows that now are passing through this area and that in the future could pass. The area of the Ortomercato, after the analysis done, we can say that is in a good territorial location because of its surrounding and the connections that it has with the rest of the city, that could be strengthened (and a lot of projects are supposed to fulfill this objective) but now are not enough to make this area almost reachable by everywhere. The area itself by contrary is very closed, and is characterized by a sort of exclusivity from people which are not involved in the actions of the wholesale activities. In this way the starting point is a different kind of segregation, is a non-integration in terms of function especially but also under an urban point of view.

LIMITED SPACE

The area where is located the Ortomercato is characterized as we analyzed by a regular surrounding grid, but the structure of the market (and also the presence of the other kind of wholesale structures) impose itself like an 'island' inside the existing urban tissue.

The main problems are in fact related to the 'closed' and gated space that the market represents, in different terms: it is closed to the public being closed by fences and gates, it's not connected with its urban context, and doesn't involve its urban surrounding especially in terms of people, who are not able to live or enjoy the experience of such a unique area of this kind of importance for wholesale commerce in the city of Milan.

Now the whole wholesale area is an element of fragmentation of the territory, even if its function is efficient.



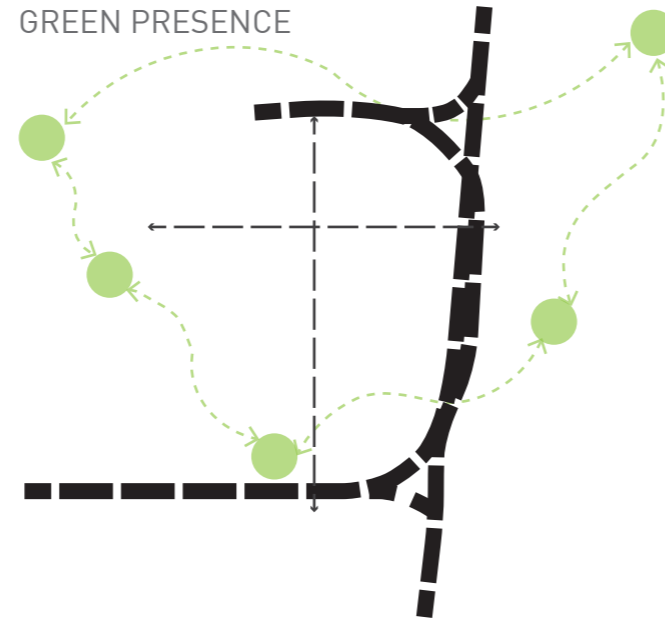
1 - CRITICS AND OPPORTUNITIES

RESOURCES

INTEGRATION

From a situation of territorial and urban segregation also in terms of functions, the aim of the project is to develop a system of integrated activities, and a territorial cohesion area, which could unify this big logistic area with its urban surrounding but also bring something new to the territory giving a new identity that could attract different kind of flows and users. The existing grid should develop inside the area giving continuity to the territory, at different scales and levels, also of transportation (the project will be oriented to a strengthening of pedestrian and slow mobility paths), integrating the area with the surrounding and make it more liveable and walkable in terms of time and in terms of public spaces. People should enjoy of the functions of wholesale markets areas and learn something new, but also have new public spaces with new functions to live everyday.

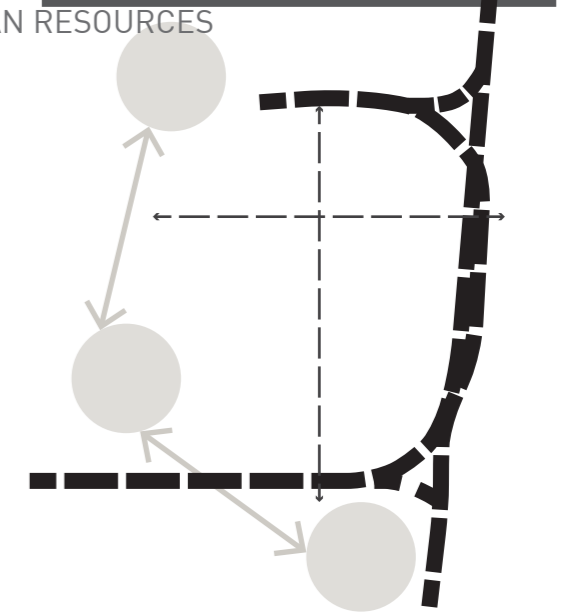
GREEN PRESENCE



ORTOMERCATO FUNCTIONS



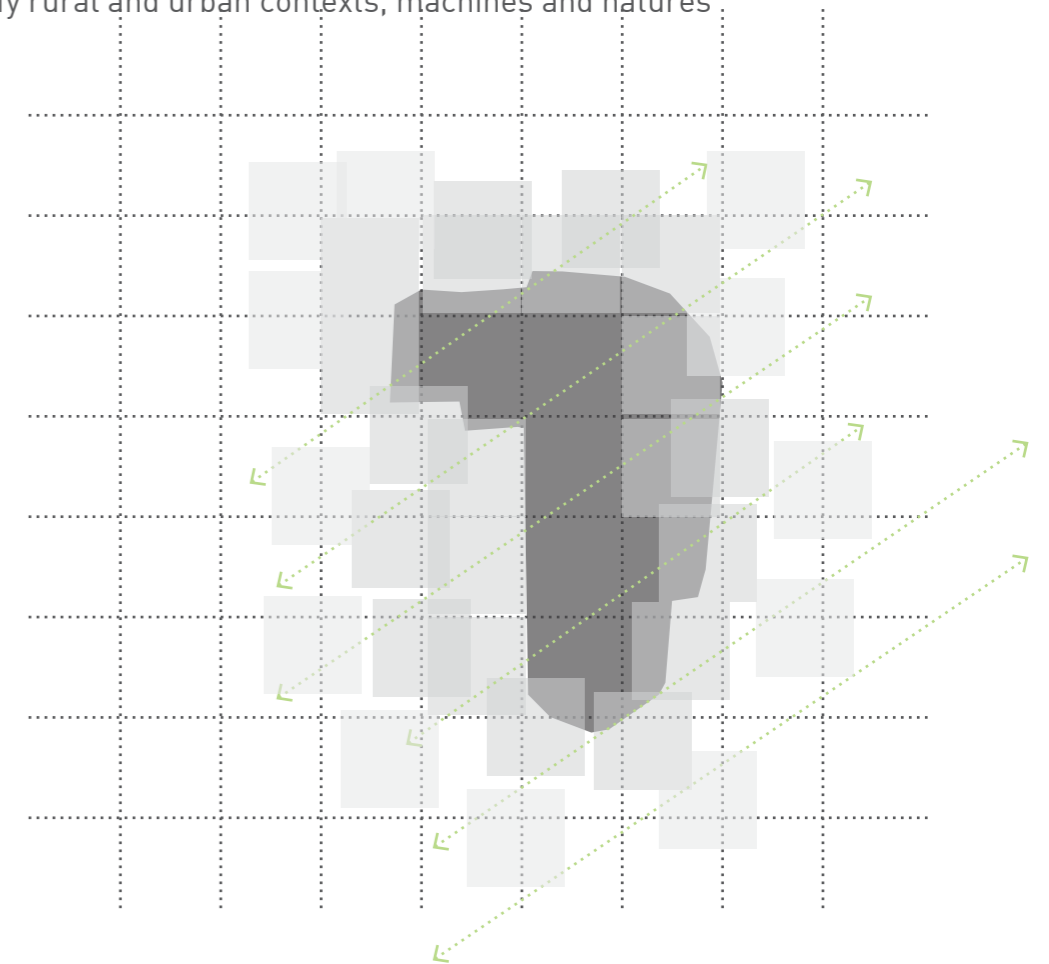
URBAN RESOURCES



The area as a 'hinge' inside the existing grid, or a ring of a chain that unify rural and urban contexts, machines and natures.

DESTROYING LIMITS

The situation that distinguish the Ortomercato area in particular is the gated area and the scarce liveability by citizens, there are no elements of connection for people. The future perception of this spaces should be different and should develop strategies of action oriented to the development of the strenght point or potentialities arised from the previous analysis. This territory is characterized by a huge green presence, but now fragmented, is located in a very strategic allocation for its current function but could be a reference point also for different kind of activities.

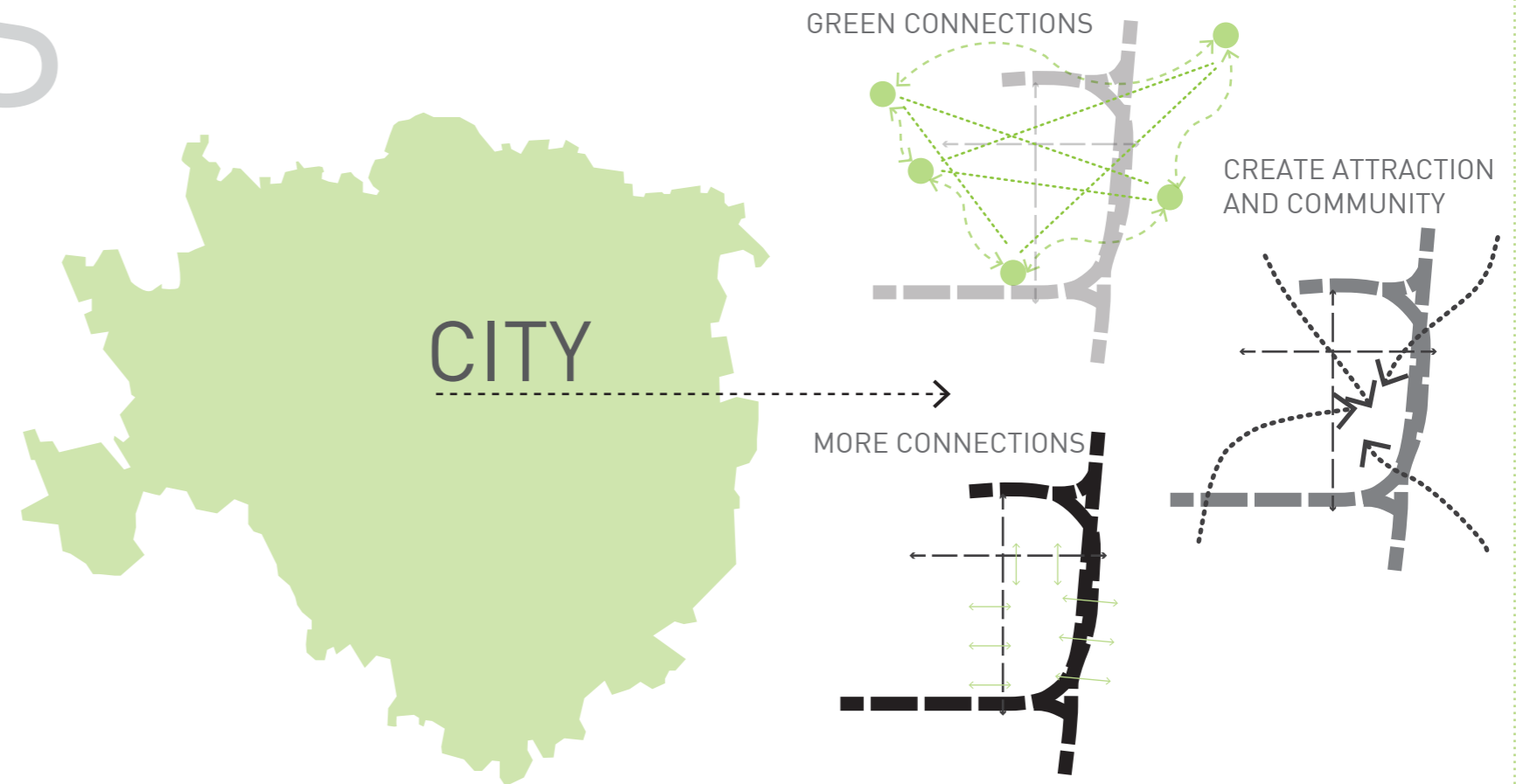


2 - DEFINITION OF THE OBJECTIVES

QUESTIONS

After having considered which problem to solve and which opportunity or resource to enhance and develop, according to the analysis done on the territory, the idea is to develop a project that could give something new to the territory, but taking into consideration the main difficulties that this areas has to face nowadays.

Going in this way, before to define the principal objectives of the project i decided to state four main questions. The objectives will be the answer to these questions, considering different scales, the city or territorial scale, the bigger scale, that involve forces and resources not only binded to the area of the Ortomercato, the area scale, the local scale, that is related to the market pavillons and their surrounding spaces, involving the whole wholesale market area and part of their urban surrounding, at at the end the building scale, not in strong architectural details, but in terms of functions and in terms of liveability for people and workers. The four questions are related to the critics and the opportunities and i chosed for them considering the main resources that the territory in this area gives to the city and could give according to the function of the Ortomercato and of what is going on in this area.

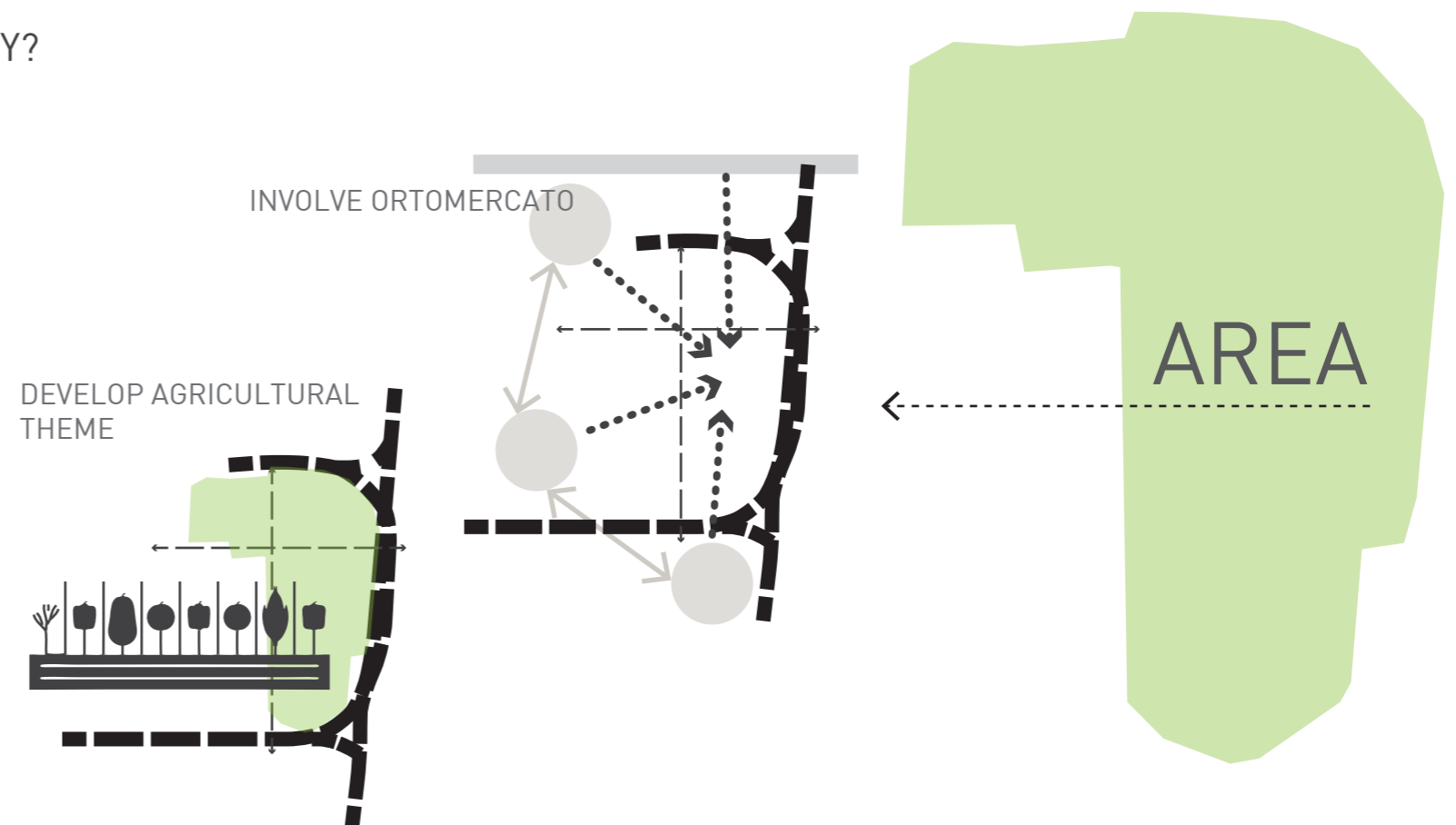


1 HOW TO IMPROVE THE CONNECTIONS WITH THE EXISTING CITY?

2 HOW TO GIVE A NEW IDENTITY TO THIS AREA?

3 HOW TO ENHANCE AGRICULTURAL AND PRODUCTION THEME?

4 HOW TO DEAL WITH EXISTING SPACES?



2 - DEFINITION OF THE OBJECTIVES

OBJECTIVES

1 HOW TO INVOLVE THE CITY AND INTEGRATE?

LET THE CITY GO INSIDE



...an important object of the project is to involve the area of Ortomercato with existing city, try to integrate in harmony of what already exist, to be less invasive as possible and less according to the idea of big logistic area that until now has been protagonist of the territory. The area is lucky for its location, not far away from new active policies and processes of urban renovation directed to housing and new urbanity themes, but also green projects and mobility improvements, that together could be a strong starting point.

2 HOW TO GIVE A NEW IDENTITY TO THIS AREA?

PROVIDE A NEW AND STRONG IDENTITY



...an important object is to maintain the central logistic and wholesale role of the markets' areas, but the project aim to give a new identity and diversity to this area, according to the idea to live these places not only like a transition space but like a destination where people can enjoy of new functions and areas.

3 HOW TO ENHANCE AGRICULTURAL AND PRODUCTION THEME?

URBAN AGRICULTURE



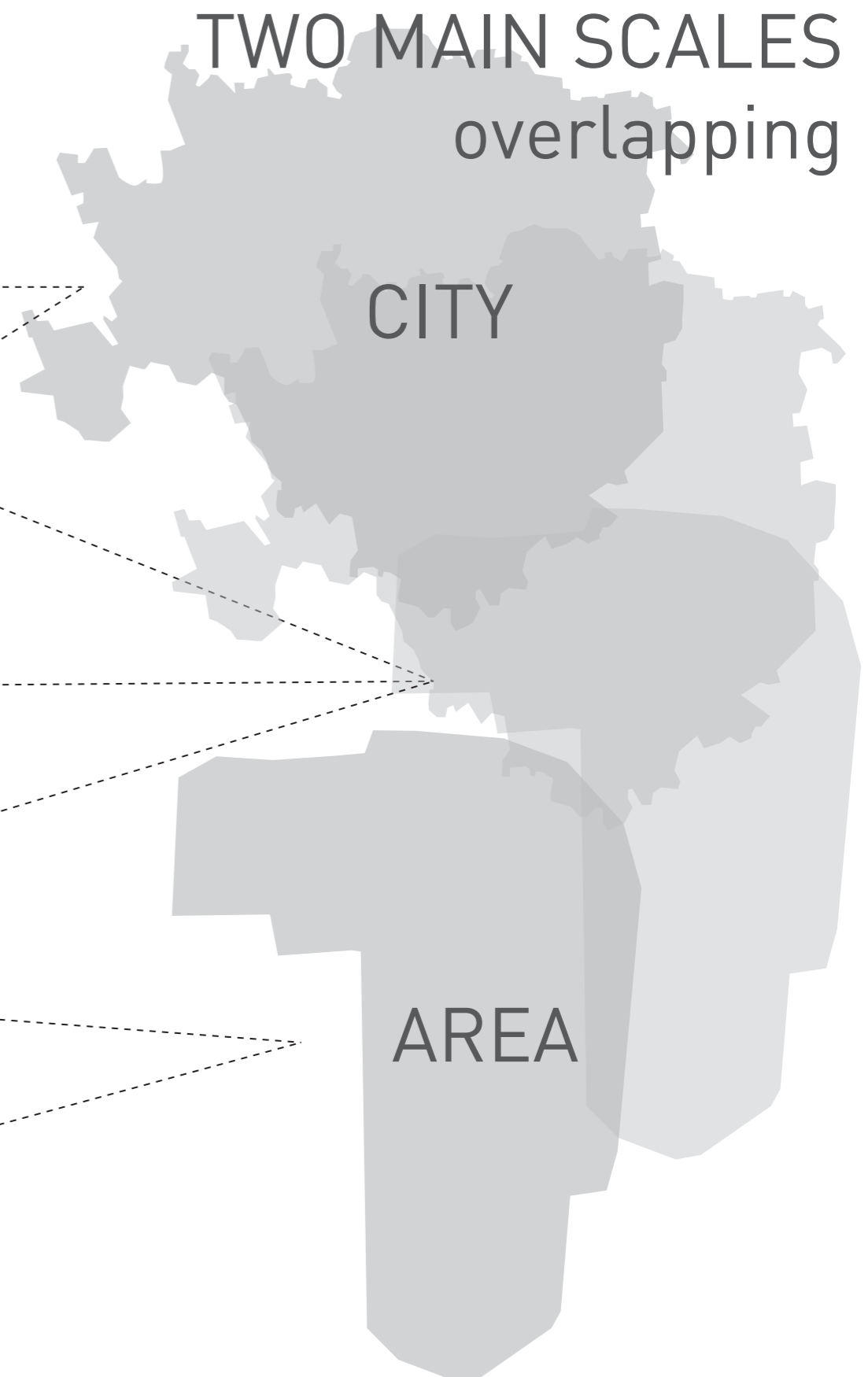
...give space to the theme of production that is the main point of interest of the Ortomercato itself. People should enjoy this theme and learn from existing activities about production methods, agricultural tools and growing processes, distribution exchanges and different type of work that the wholesale markets' area had offered until now. Participation and true 'feeling' of production and growing processed and contact with nature are the main topics.

4 HOW TO DEAL WITH EXISTING SPACES?

ADAPT EXISTING SPACES



...try to maintain structures that are now efficient but adding new temporary and flexible architectural element which gives more mixed-uses and guarantee the functions of the Ortomercato. Adapt shapes and heights of existing buildings according to the new idea of this portion of territory and the new liveability which could be offered.

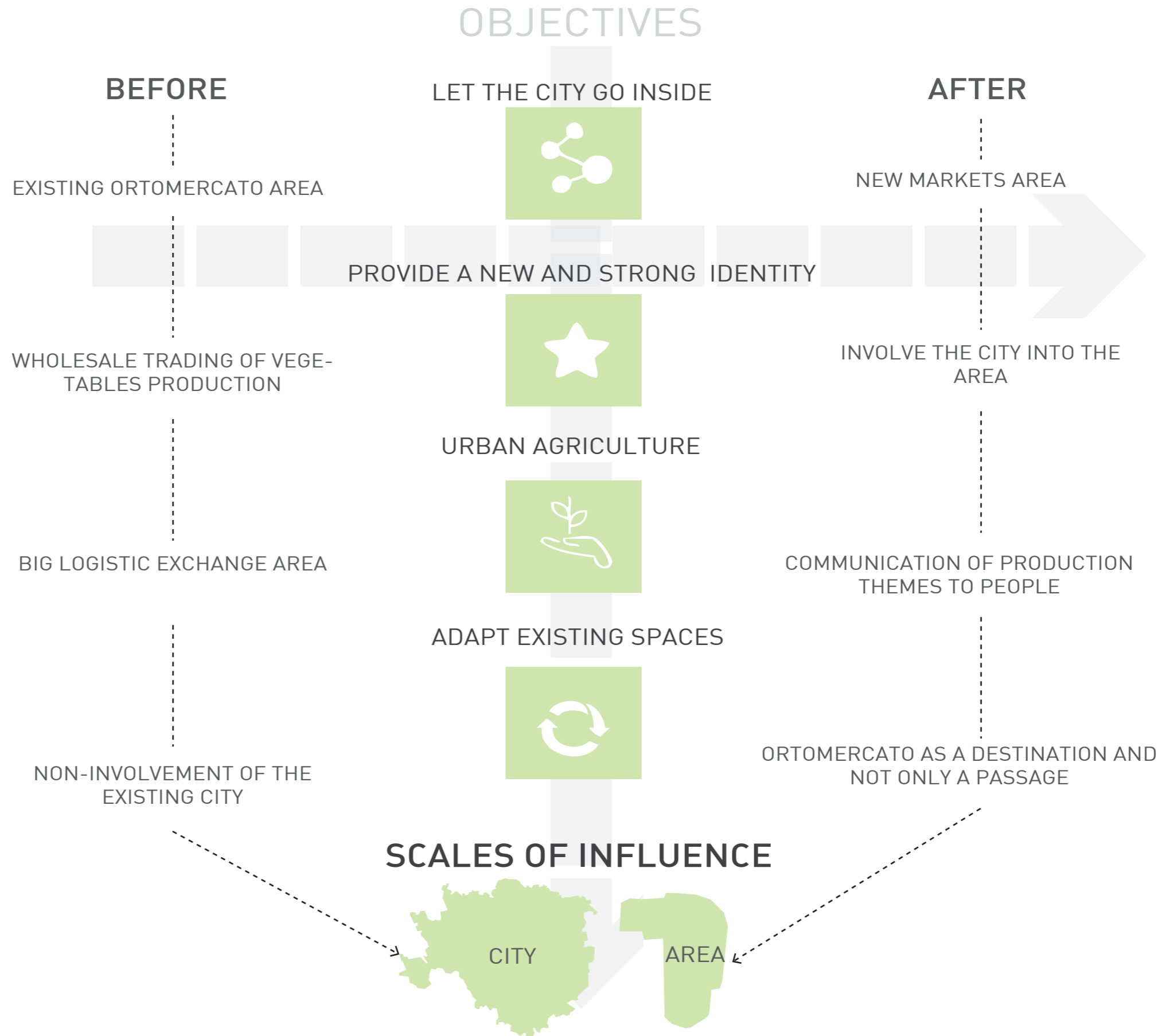


2 - DEFINITION OF THE OBJECTIVES

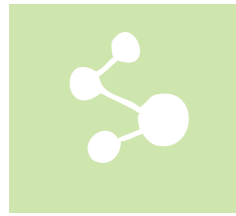
EXPLANATION

The main idea is to start from the existing base, and then consider the important presence of a logistics wholesale located in a strategic place and of great importance not only local but above national and city transport and production and wholesale of products related to agriculture and the cultivation of fruit and vegetables. The market is also situated not far from the more agricultural areas of the city to the south. Wholesale Ortomercato functions are efficient but could be significantly improved and made a pole dedicated to an increasingly growing as the cultivation of fruits and vegetables and agriculture.

The problem faced by many metropolitan cities in Europe and beyond as analyzed in the introductory chapter, is to communicate a large logistics area with the city to live every day and its functions and flows without that it has a serious impact on 'urbanity and that integrates with the existing historic or not. The proposed objectives that address the four major needs emerged from an analysis of problems and potential, will serve to make this largest integrated logistics, which will retain most of its original function, but that offer a new, they can reflect a different future-oriented to a booming business and a theme by far become more important due to the presence of the Expo. The idea is to make this area like a hinge in this part of territory, integrating and unifying the existing urban parts that form this urban sector, but also adding a rural context in an urban and productive/logistic area, as a green ring inside a chain to unify rural and urban elements, machines with natural landscape.

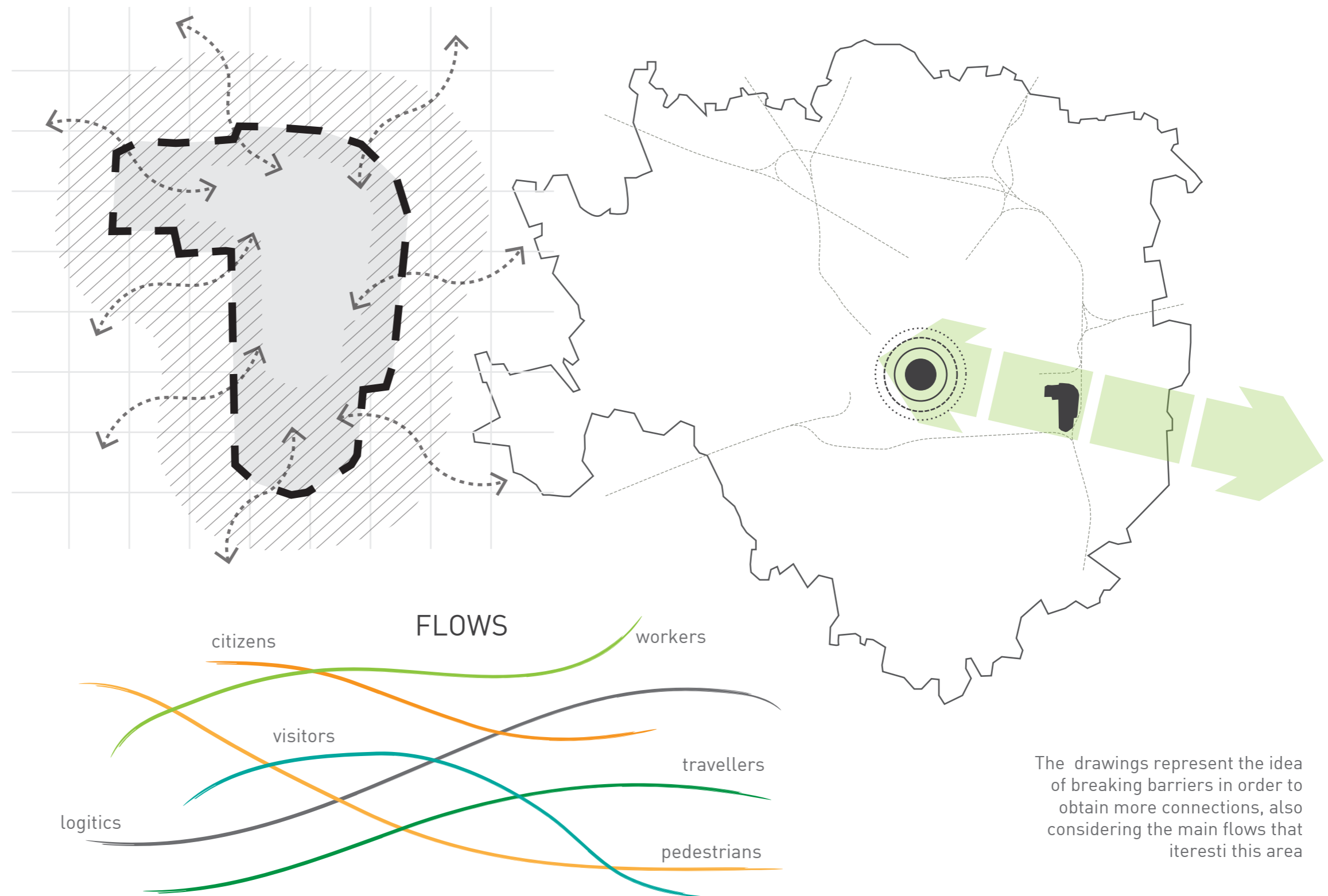


3 - DESCRIPTION OF THE OBJECTIVES



LET THE CITY GO INSIDE

The first response / objective mainly concerns the connection of the project with its urban surroundings and with the city. The goal is to be able to integrate the area with the existing wholesale market, in terms of connections of different types of paths: driveways, slow mobility, walking and cycling routes and also public places and open spaces where integrate Ortomercato with the rest of the city. In this way the city and the inhabitants may get a sense of what provides this part of the territory in functional terms and also as a place of passage. Actions and guidelines that characterize this type of lens will be at different levels: at the regional scale will be geared mainly to the issue of access and edge that today characterize the area of the wholesale market and making it closed little livable by people outside the narrow the wholesale functions. The average scale, the area and the local level, the issue is dealt with actions that will communicate the area itself with its urban surroundings in functional terms, to experience the place as something different, a new experience, but it will also offer new routes (in continuation of the existing road network) dedicated to improving the existing poor mobility Ortomercato slow inside, and so provide bicycle and pedestrian facilities and public areas. The scale of the building the theme is much less emphasized as the buildings that now house the wholesale functions will be retained for their efficiency but also adapted to try to integrate a more public and livable flanked wholesale, bringing citizens, tourists and anyone who comes in the market to taste the production.



The drawings represent the idea of breaking barriers in order to obtain more connections, also considering the main flows that interest this area

3 - DESCRIPTION OF THE OBJECTIVES



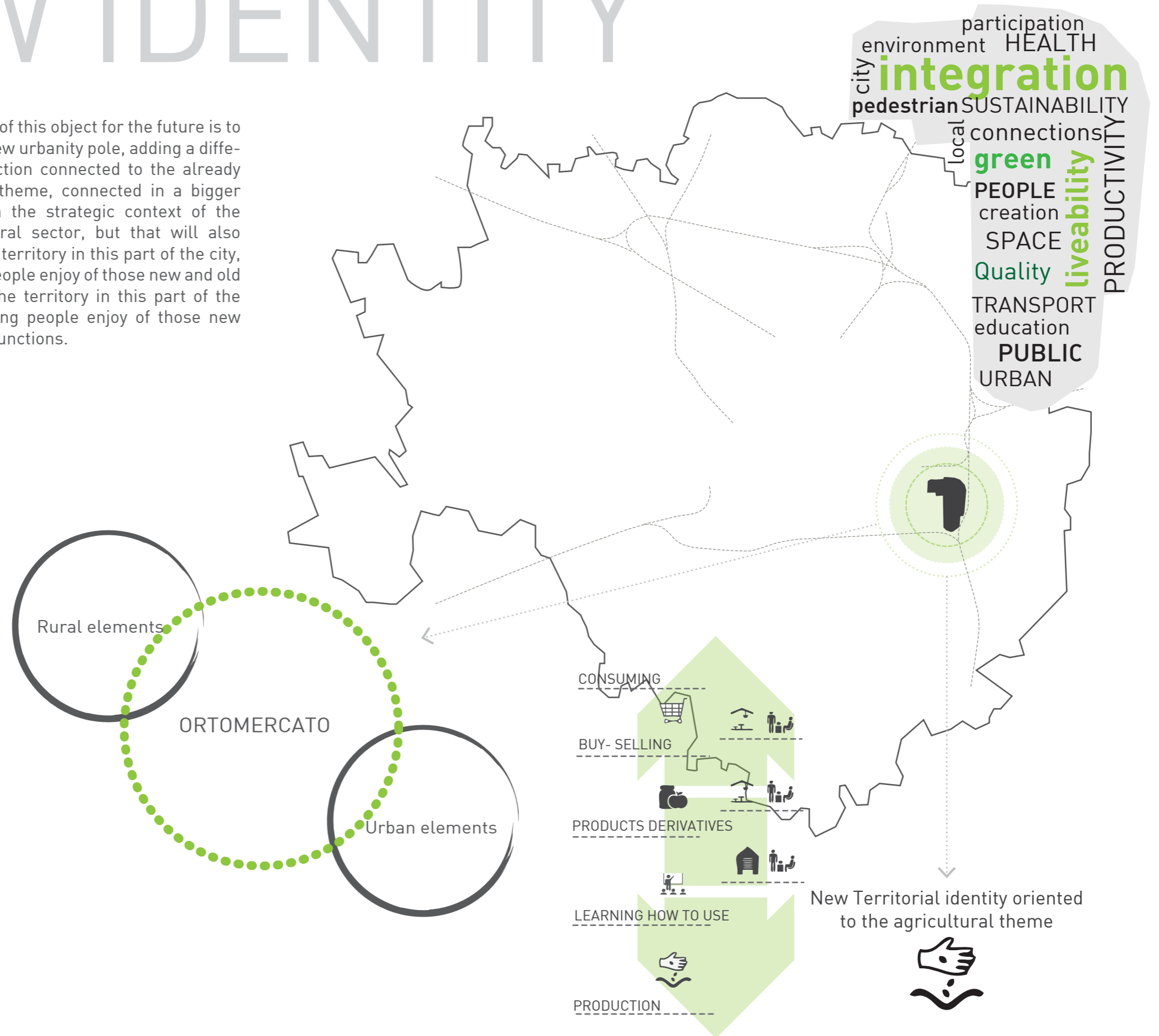
NEW IDENTITY

Do not underestimate the intangible that affect the formation of identity (and also on urban design). In particular, it must emphasize the importance of the urban imaginary and social representations, what the city thinks of a certain neighborhood, the idea that often common sense gives a certain place.

Here too we must consider how the processes are quite complex in the transition conditions exhausted to the construction of social representations produced locally, to the formation of a common sense, the relationship with an image in a defined elsewhere and often imposed through the means of communication, including in their time evolution.

The strong image proposed on this page shows that in all reality there is a strong stereotyping of spaces based on the false perception of what is present, the urban identity I want to imply moves away from the stereotypes and bring new opportunities to the city. The aim of these considerations is to explain why for this future idea of the area of Mercato Ortofrutticolo should be important to be not only a passage, but to be seen as a destination for its unique or innovative functions; people should enjoy of the wholesale market but also of new ones provided. In this sense the objective to 'provide a new identity' is connected to the theme of agriculture and production, that will be the new face of the Ortomercato, giving something new but also trying to involve the community through the different aspects that urban agriculture could offer for people. functions.

The idea of this object for the future is to have a new urbanity pole, adding a different function connected to the already existing theme, connected in a bigger way with the strategic context of the agricultural sector, but that will also unify the territory in this part of the city, letting people enjoy of those new and old functions.



3 - DESCRIPTION OF THE OBJECTIVES



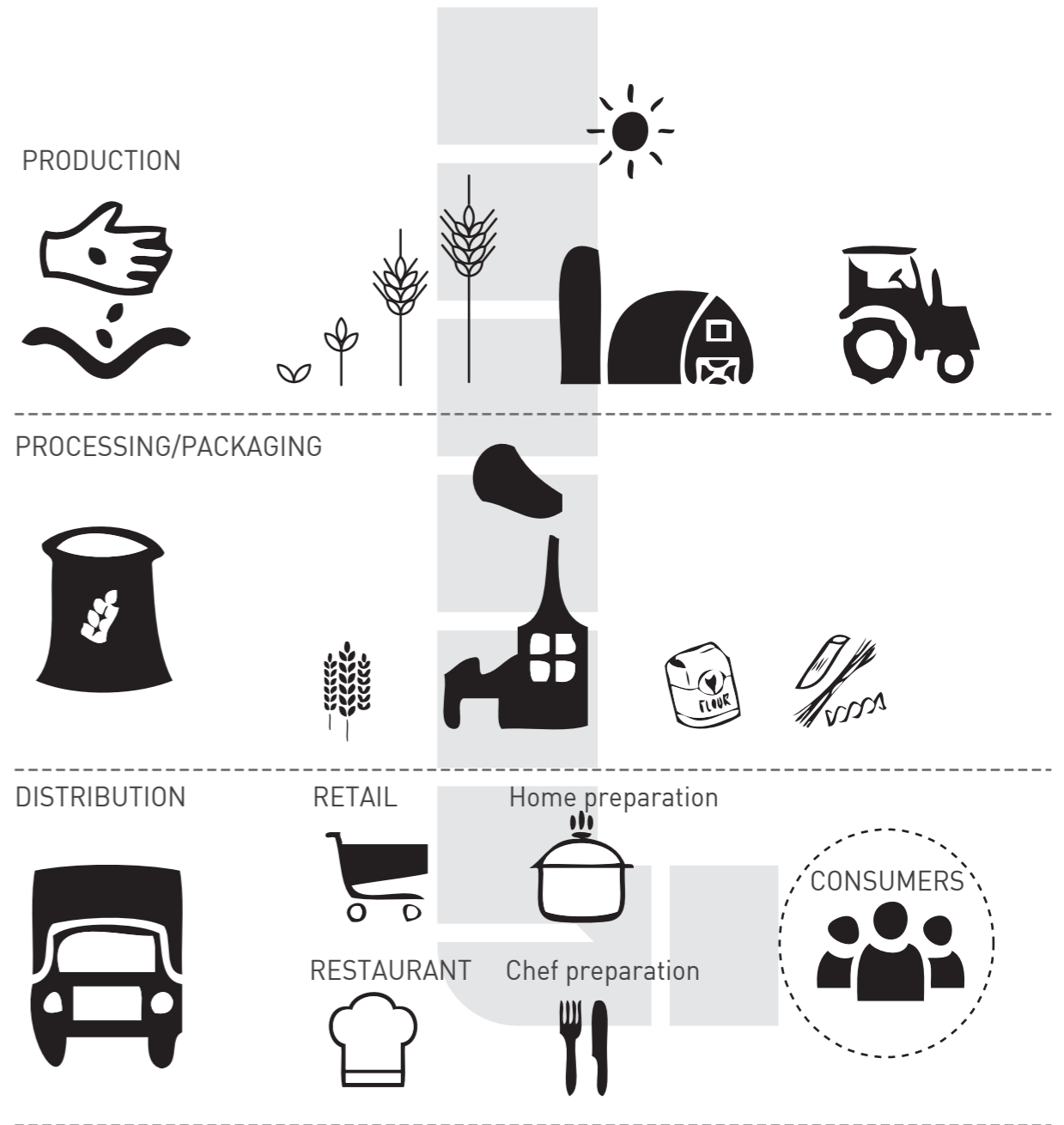
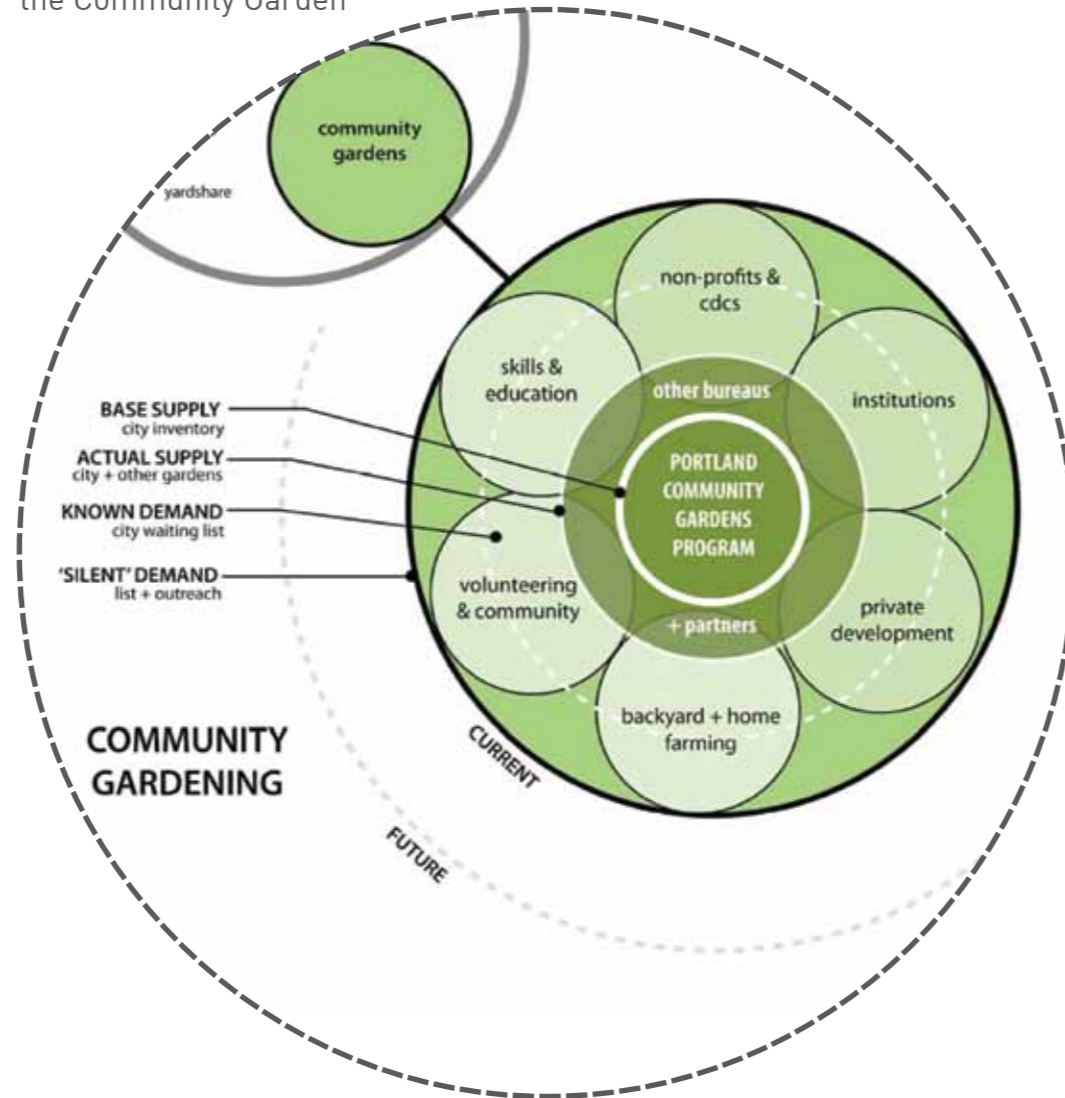
URBAN AGRICULTURE

What distinguishes urban agriculture from rural agriculture, is that it is integrated into the urban economic and ecological system: urban agriculture is embedded in -and interacting with- the urban ecosystem. Such linkages include the use of urban residents as labourers, use of typical urban resources (like organic waste as compost and urban wastewater for irrigation), direct links with urban consumers, direct impacts on urban ecology (positive and negative), being part of the urban food system, competing for land with other urban functions, being influenced by urban policies and plans, etc. Urban agriculture is not a relict of the past that will fade away (urban agriculture increases when the city grows) nor brought to the city by rural immigrants that will lose their rural habits over time. It is an integral part of the urban system. The contribution of urban agriculture to food security and healthy nutrition is probably its most important asset. Food production in the city is in many cases a response of the urban poor to inadequate, unreliable and irregular access to food, and the lack of purchasing power. Most cities in developing countries are not able to generate sufficient (formal or informal) income opportunities for the rapidly growing population.

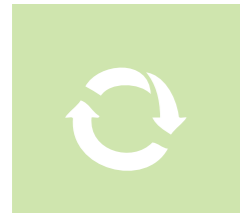
THE PRODUCTION CYCLE OF LIFE

The idea in the Ortomercato context according to the present investors and actors and possibilities is to show people how the methods of production are going on, develop urban agriculture at 0 km and involve the community as much as possible to educate and sensitize people and citizens to those themes.

Portland, Oregon:
the schematic program for urban agriculture in prevision in the city for the Community Garden



3 - DESCRIPTION OF THE OBJECTIVES



ADAPT EXISTING SPACES

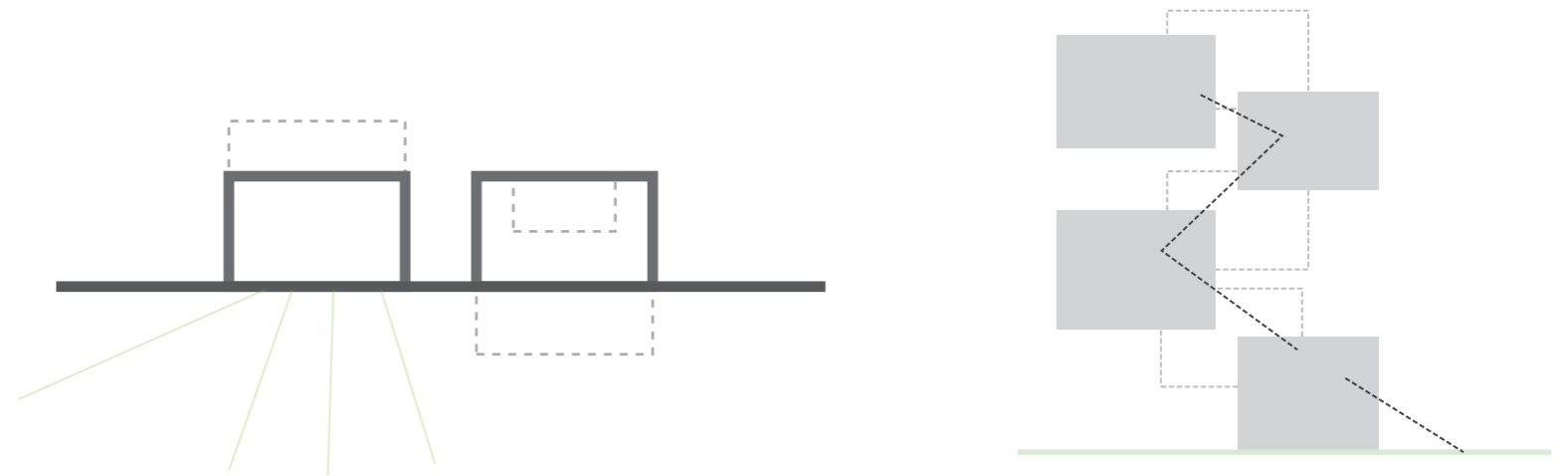
PLAYING WITH HEIGHTS AND SHAPES

The project on the scale of the building and therefore relative to what already exists in dell'Ortomercato, is geared to objectives aimed at improving the level of livability and public-private relationship of space, for a different involvement of outsiders that are not part of the inner working relating to wholesale activities within the halls and logistics areas. As for the transformation of logistics areas, the proposal is to maintain unchanged this part to date functional and also localized in prossimità di one of the main entrances to the market area, which is home to the logistics areas and also areas of large refrigerators for fruit and vegetables. The areas of the pavilions are being affected by the actions proposed by the project; as suggested by the notice issued by SO.GE.MI. for the redevelopment of the areas of the market, raising the issue of the inadequacy of the areas of wholesale and the decay of the pavilions, the actions proposed in this context will be oriented to the creation of spaces with a public-private relationship wholesale more integrated without an absolute separation of spaces but enhancing flexibility, temporality, and the sharing of places, trying to make the most livable areas can then install these to the public. The new buildings in anticipation will be mostly related to activities linked to urban agriculture and services for the population, citizens and visitors, places or sempicemente innovative options, to make the area more livable in everyday life.

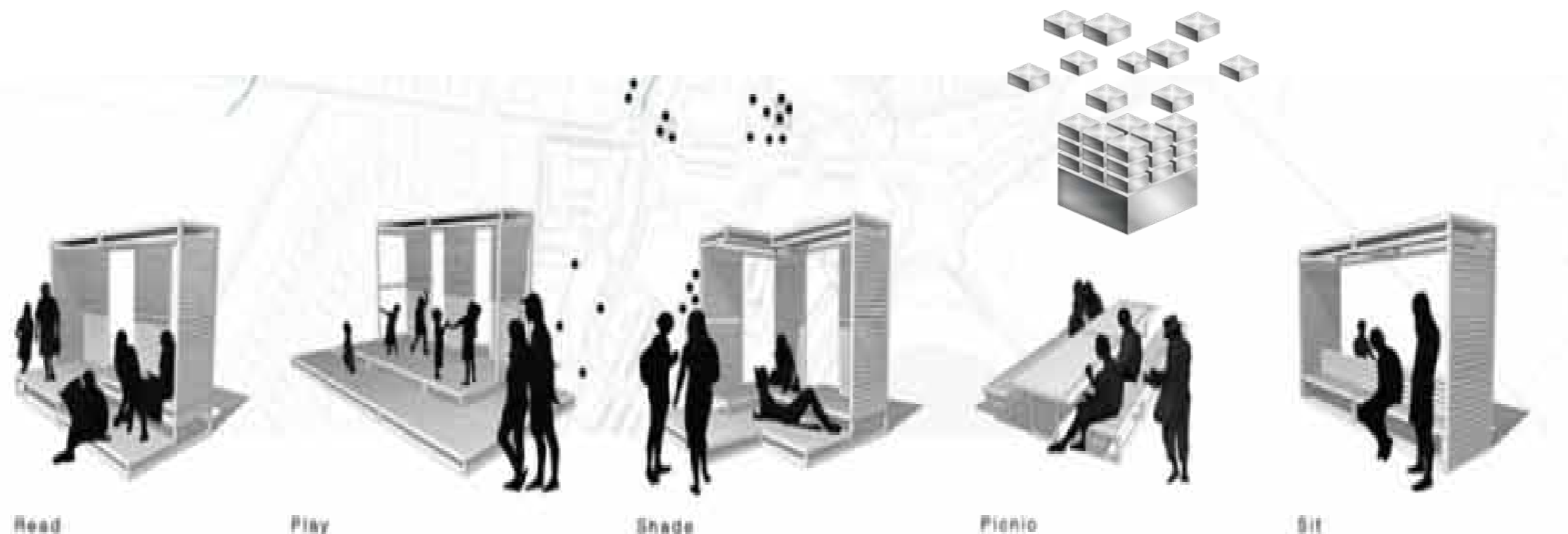
NEW LIVEABILITY AND MATERIALS

The relationship between the spaces changes and gives rise to a new living conditions, the lens beyond the adaptation of existing places of sales is to show the public what happens inside dell'Ortomercato, production, and as you play the main functions and activities related to it. In this way the spaces or adapted additives will have a new relationship, made of different materials able to accommodate flexible functions and faces to the re-use and to ensure a different relationship between the spaces such as the glass.

Height as a tool to change the liveability of the spaces and the creation of Different Relationship Between Spaces: flexibility and temporality are the key-words



New Shapes and Architectural schemes: flexible, repliable and modular architecture



Dunsborough Studio, Landscape Architecture, UWA. Design solution for fluctuating population with flexible structures

4 - STRATEGY

TRANSFORMATION TOOLS

The strategy that i decided to follow is oriented to the statement of initial guidelines, based on the exigences of the answers that the four key concept questions require, according to their four main solutions:

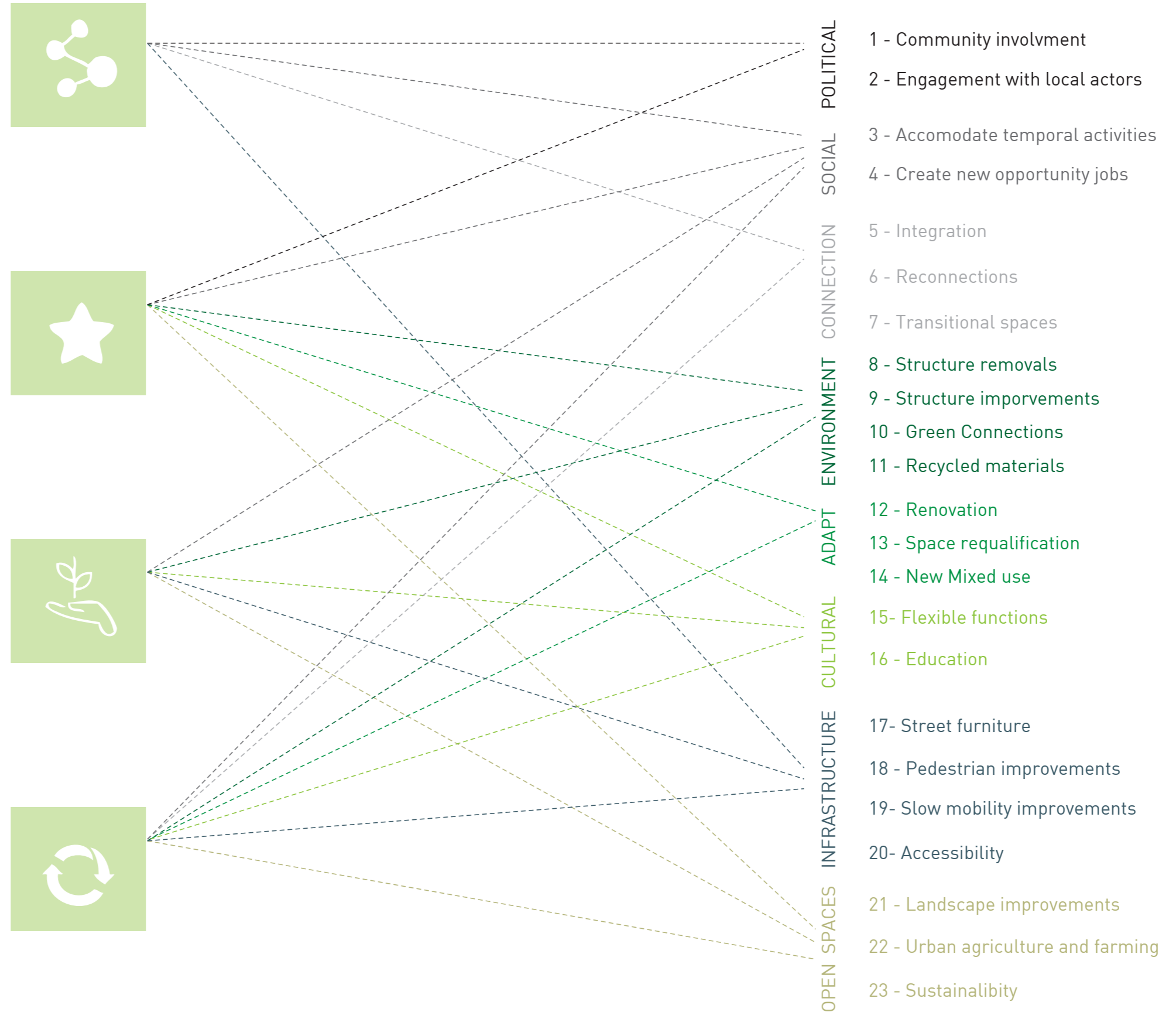
- 1 - LET THE CITY GO INSIDE
- 2 - PROVIDE A NEW STRONG IDENTITY
- 3 - URBAN AGRICULTURE
- 4 - ADAPT EXISTING SPACES

Here i define at different sector or category, different kind of actions, that could answer to the questions and be the forward for the real actions. These categories are based on their sector of influence:

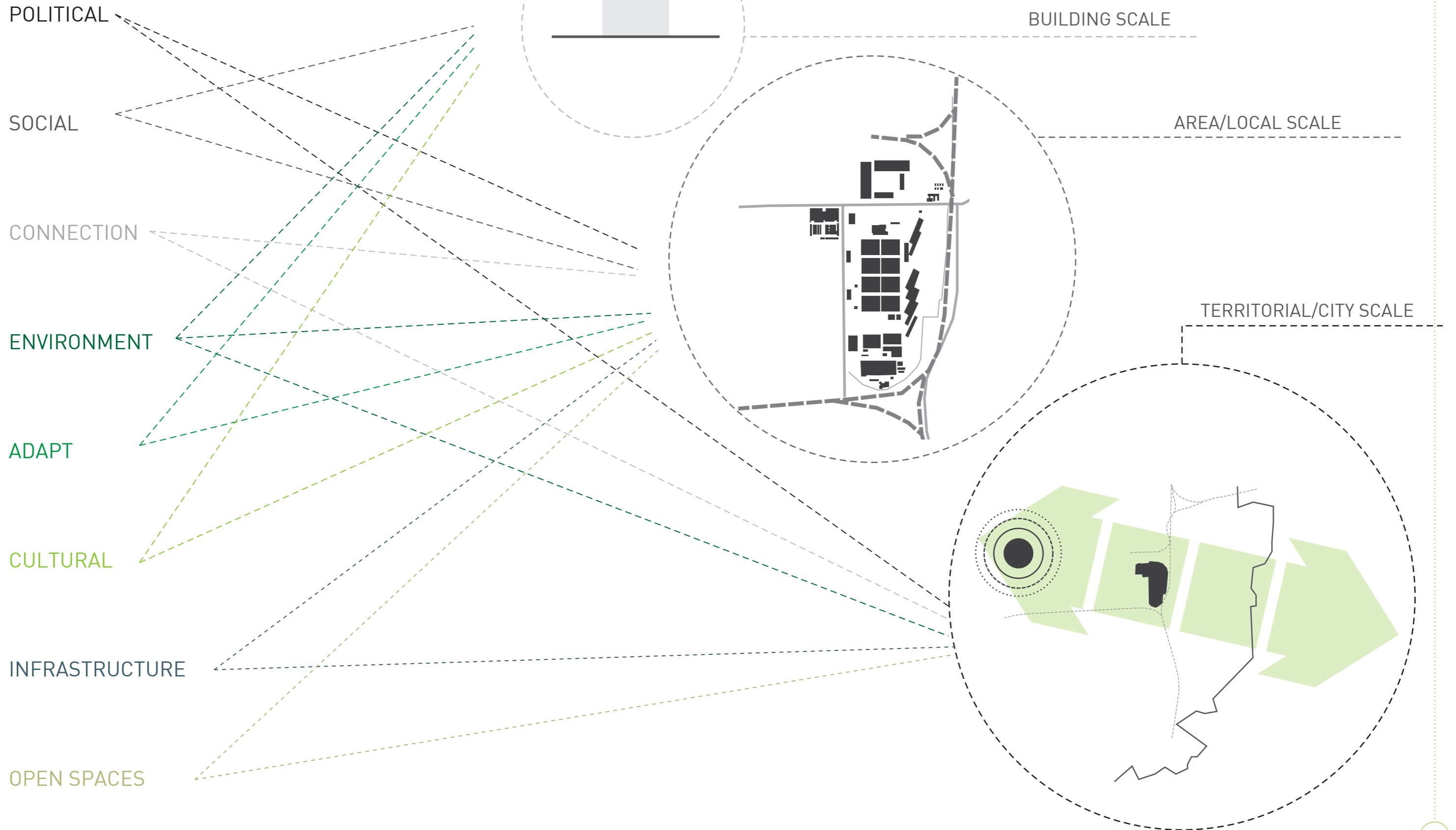
- POLITICAL
- SOCIAL
- CONNECTION
- ENVIRONMENT
- ADAPT
- CULTURAL
- INFRASTRUCTURE
- OPEN SPACES

The guidelines that i defined are twenty-three and they represent in certain cases the actions, and they are referred to different scale of influence as i show after the scheme that shows them in this page. The three scales are: 1 - micro-scale, the building, 2 - the area scale, or local scale, 3 - macro scale, the territory or the city.

The actions that will be referred to those guidelines are approached to solve the problems found and arised during the analysis, but also to develop themes like agriculture, food production or activate processes of involvement of the city, to re-connect this area with its surrounding and create a certain continuity with the existing city, but giving something of new and innovative at the same time.

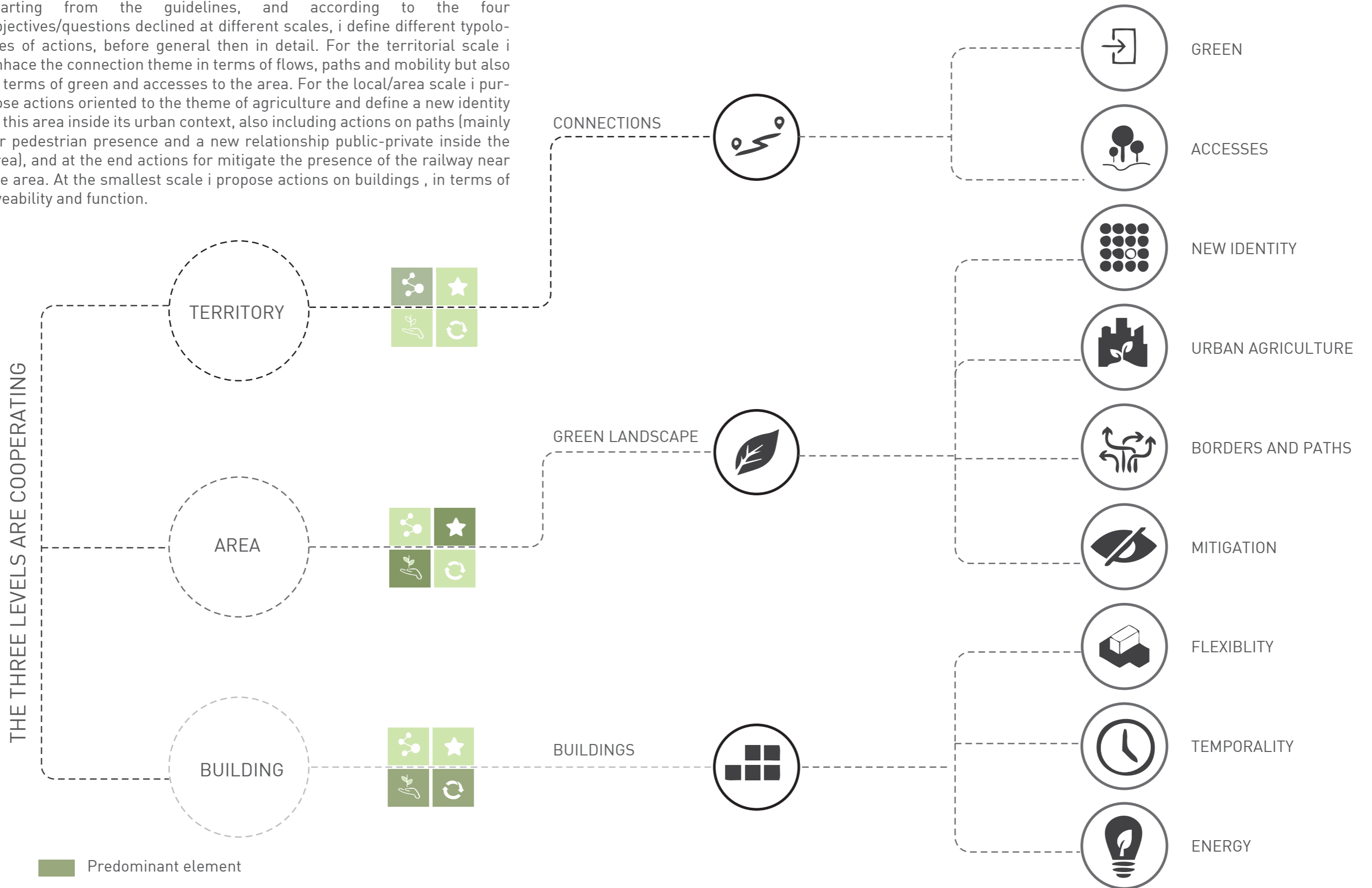


ACTIONS' SCALE



GUIDELINES AND ACTIONS

Starting from the guidelines, and according to the four objectives/questions declined at different scales, i define different typologies of actions, before general then in detail. For the territorial scale i enhance the connection theme in terms of flows, paths and mobility but also in terms of green and accesses to the area. For the local/area scale i purpose actions oriented to the theme of agriculture and define a new identity of this area inside its urban context, also including actions on paths (mainly for pedestrian presence and a new relationship public-private inside the area), and at the end actions for mitigate the presence of the railway near the area. At the smallest scale i propose actions on buildings , in terms of liveability and function.



FOLLOWING THE BAN

The existing ban as i analyzed i the first chapter of this thesis refers its main intentions to problems and opportunities, on which it found its guidelines. Those are:

OPPORTUNITIES:

- the recovery of the role of main attractor of this sector in Italy and in Europe
- the possibility of a growing in the export activities
- the presence of the Expo 2015 and the renovated importance of food and growing sector
- the build up as a possible quality brand also in this way with the role of the Expo 2015
- development of ecological and sustainability themes
- the 50th anniversary of the Ortomercato

PROBLEMS:

- the non adequacy of the actual structures
- logistic and management difficulties
- the reduction of the commercial volumes

The strategy that u chosed to follow for the project is in part based on some problems that i wanted to solve, but also on some opportunities. I chosed to interview only on the ban's area, but not considering all the metric impositions and constrains that it posed at the beginning. In this way my project will reply to the main requests, but is more free and independent compared to what it asked.

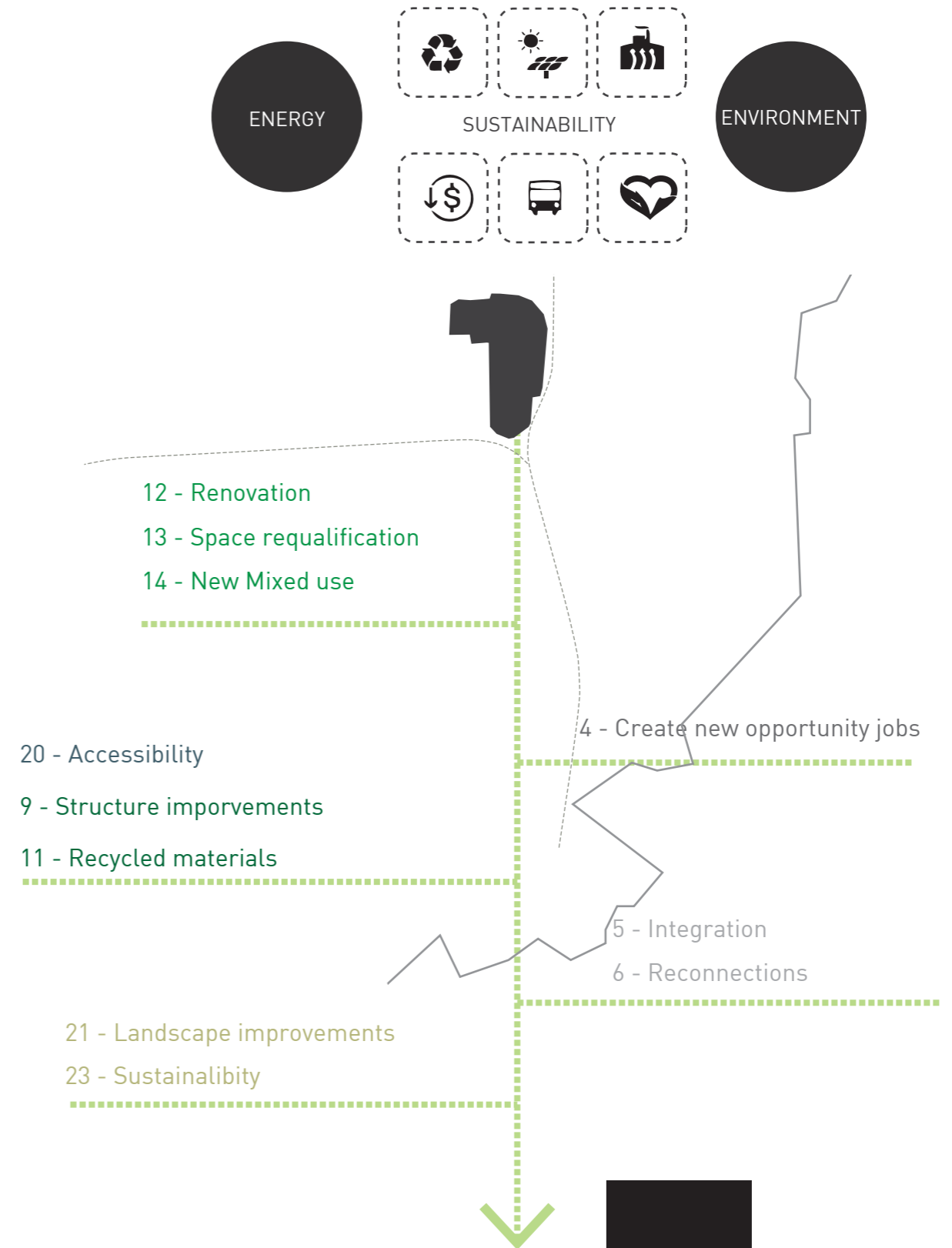
I decided to develop in particular the 'green' aspect and the productivity feature of the area, and to develop a project based in this way on the agricultural productivity function of the Ortomercato, thinking about it like a very important resource for the territory; it could enhance the environmental resources present in the surrounding creating like a system and a green pattern of this east portion of the city, but not only, it could create more territorial cohesion, more sustainability, and job opportunity.

As the ban asked, my idea is to give a new identity to the territory, but oriented to the agricultural production and vegetable gardening, placed side by side to the wholesale market of vegetable products already existing on the area. The other side of the project id ea is based on integration, following partially ban requests and ideas, trying to involve the surrounding in different ways, physically but also in terms of functions.

ENERGY ATTENTION

The ban is explicitly asking from the beginning to ultimate an ideal project that could consider energy and environment as main guidelines for the development of the Ortomercato in the future. The idea of the project that i want to propose is oriented to this thesis and those actions, expecially to the environment that will be enhanced by the additional functions connected with the wholesale ongoing market, to the production of vegetables and agricultural products. In this way solutions such as urban farming, urban agriculture, urban vegetable gardening, could work in different senses: could bring people inside the area and make it live differently with another urban identity, make people know about production and live wholesale passages from behind and directly, bring attraction in terms of tourism offering new and unique activities and events, strenghtening the eco-friendly idea of the territory underlying the importance of nature and growing food, work with existing sectors and local buisnesses, spare energy using natural resources and other advantages that a project oriented in this way could offer. This part of territory is also located in a lucky position, except for the closed railways that have a huge territorial and environmental impact, and could be a interesting new territorial network adding something new and sustainable for the city.

MAIN GUIDELINES IN COMMUNITY WITH THE BAN



6 - BAN INFLUENCE

The ban offer all the datas about the area and the buildings of the Ortomercato and indicates approximately (because of the flexibility of the project that could be proposed) the surfaces that should be covered and that should be build up. It indicates also the actual heights and the maximum and minimum heights that should be covered by the project in order to fulfill the objectives and the guidelines. The ban is oriented to a loss of build surface in order to add more open spaces and to involve the collectivity to the activities of the Ortomercato. Here are indicated the actual surfaces covered and the dimensions of the project (according to the ban) sizes.

ACTUAL COVERED SURFACES

Selling pavillons: 90.000 sq S.L.P. (Superficie Lorda di Pavimento)

Platfoarms : 20.000 sq S.L.P. (Superficie Lorda di Pavimento)

Covered spaces for producers: 8.000 sq S.L.P. (Superficie Lorda di Pavimento)

ACTUAL ORTOMERCATO AREA:

S.F. (Superficie Fondiaria): 488.902,00 sq

S.C: (Superficie Coperta) : 152.427,42 sq

TOTAL S.L.P. (Superficie Lorda di Pavimento): 221.309,20 sq

S.U.P. - Superficie Utile di Pavimento =
 S.L.P. = S.F. of the plot X 0,35 sq =
 488.902,00 X 0,35 = 171.158,00 sq

ACTUAL HEIGHTS OF THE BUILDINGS:

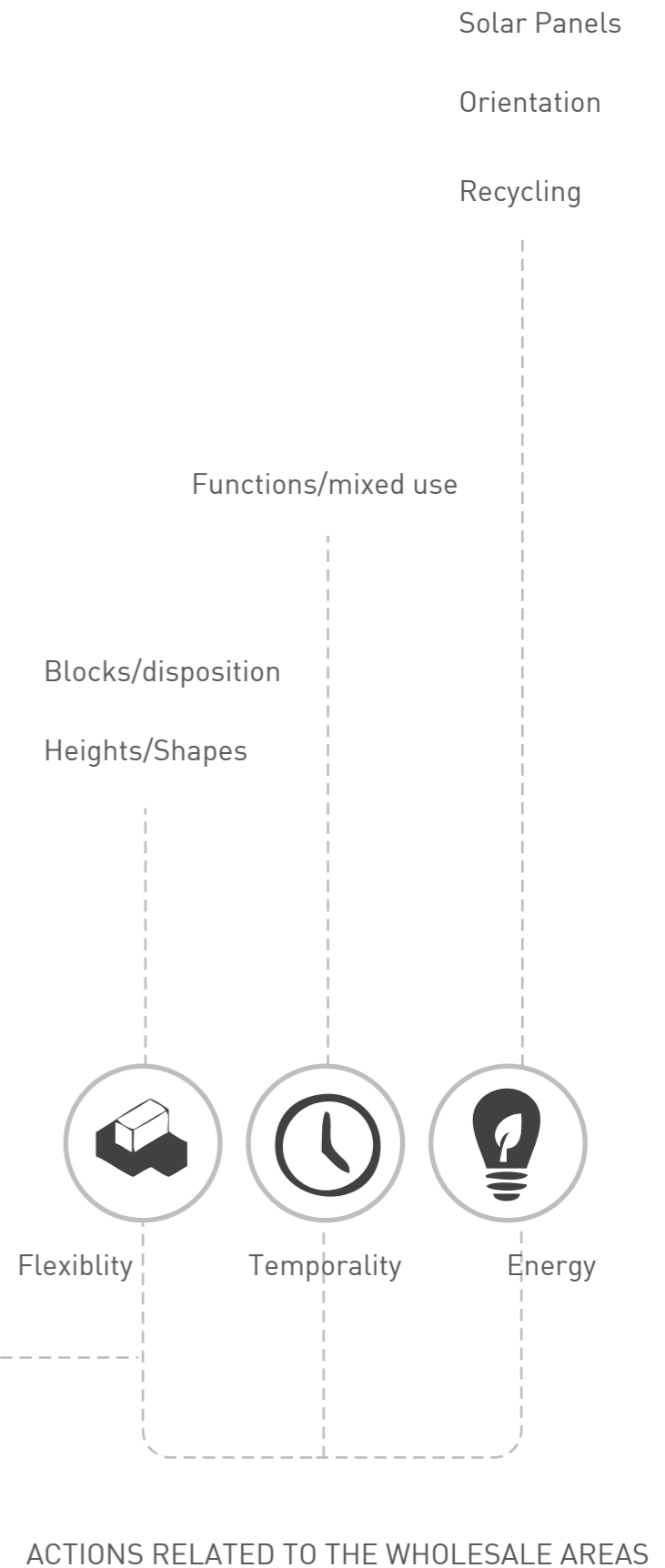
MIN: 110 meters above sea level

MAX: 112 meters above sea level

BAN REQUESTS:

MAX S.L.P. (Superficie Lorda di Pavimento): 110.000,00 sq

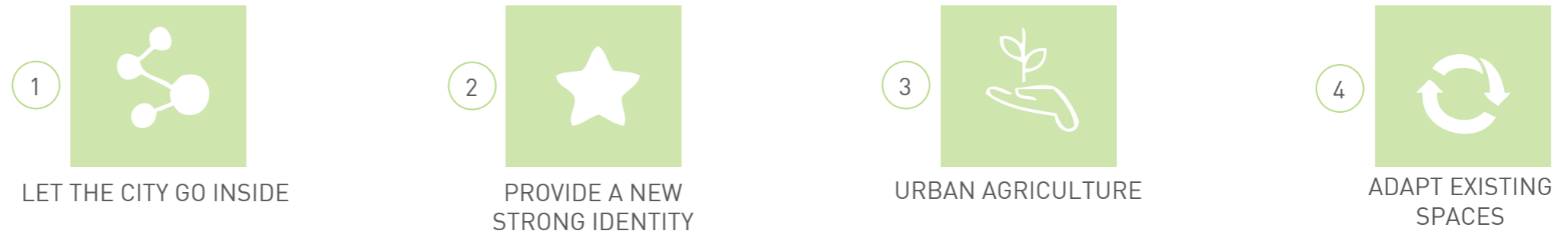
MAX HEIGHTS: 150 Meters above sea level



7 - CONCLUSIONS

RESUMING

FOUR OBJECTIVES



GUIDELINES



SCALE OF INFLUENCE



OBJECTIVES



ACTIONS



CONCEPT

DIFFERENT VISIONS

The final concept derived from the objectives and the strategy reflects the intentions of the project with its objectives to be obtained. In the proposed schemes on this page summarizes the main objectives declined at different scales. Ortomercato will have value at the metropolitan level by offering a new green landscape in an already green and agricultural and becoming part of a system of green connected, and will also be able to offer a new territorial identity and local in this portion of territory now residential and industrial (thanks to the fact of hosting all the major wholesale structures of the city), more oriented to the green and urban agriculture in particular as the theme for the future of the city and this area in particular. At the local scale of the area of Wholesale Market it will be aimed at developing activities of urban gardens and agriculture, placed in a landscape just urban. The scheme on the next page shows schematically the main connections between the different parts and functions that are going to fit in the new area, and how this new project can communicate with the outside and with its urban context but also what will give back to the citizens and how you will be able to provide new open spaces and a new public-private relationship.



NEW IDENTITY

CONNECT GREEN

MIX-USE

NEW PATHS

ADAPTING SPACES

URBAN AGRICULTURE

WHOLESALE

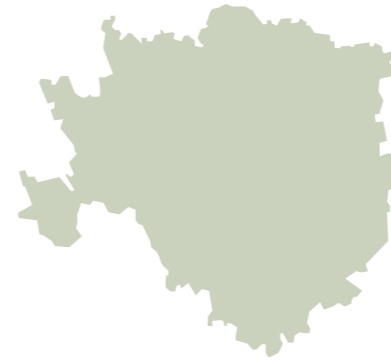
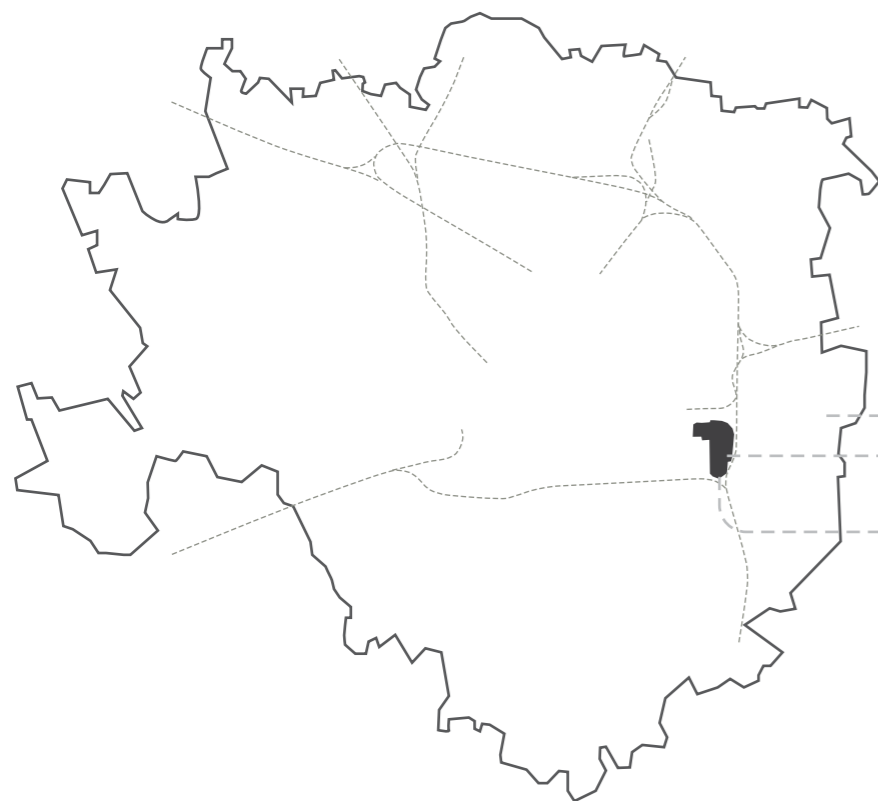
MITIGATIONS

PART IV - ACTIONS AND SCENARIOS

ORGANIZATION OF SPACES

The project that I would like to propose for the area dell'Orto-mercato uses then of several actions that will have effects on different scales territorili, as already mentioned, the largest that are territorial and the city, the local and referred to the area, and finally to the scale of the building in more detail level certainly functionally and liveability. The three spatial scales relate and emphasize certain goals more than others of the four in charge at the level of the concept; in this chapter we will be proposed the idea progttuale to the area of the Mercato Ortofrutticolo of Milan, and actions / main guidelines will be declined in specific actions for each level of influence and for each scale. For every action I tried to show examples, references, places of change and specific visions of how I would like the project to work.

Here briefly summarize the three scales of influence and project, indicating for each the objectives corresponding to the concept, but all equally matched important to seonda scope with a different significance and influence. Also I'm going to describe specifically the actual places of transformation declined at different scales and for each specific action, defining spaces, influences and users. The three scales can influence between them, they are not totally separrated but are part of an integrate transformation process.



The actions in prevision in those spaces and locations have an influence at the city level and the territorial scale, because their fulfilling will not affect only the area and what is going on in this part of the city but also the city and the whole mobility and transportation system but also green areas seen as a whole:

CONNECIONS

- ACCESSIBILITY
- GREEN CONNECTIONS



Actions in prevision in those spaces are oriented to influence the local scale, the area itself, creating new spaces or adaptin the existing ones, integrating the area with its urban surrounding, to create a not segregatged space and involve the existing urban reality.

GREEN LANDSCAPE:

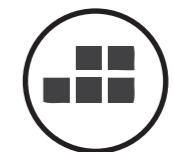
- FEELING THE EARTH
- URBAN AGRICULTURE
- PATHS
- MITIGATION



The actions in prevision in the building at the smallest scale are oriented to influence in terms on function the area, but also in terms of liveability and relationship between public and private spaces, proposed in a new perspective compared to the present:

BUILDINGS:

- SPACES AND SHAPES
- FUNCTIONS
- ENERGY












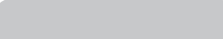
2 - THE PROJECT

CONCEPT PLAN

Before to start with real actions i developed a concept plan to show what I am going to develop inside the area, showing functions that will be located in specific areas and the relationship between them. In this

way i included every action of every influence scale, that after I am going to split into different context of action. The concept plan consider the actions of connections, functions, spatial function, inter

project relationships, indicates elements to develop and elements to solve or delate in favour of a more integrated area and a new identity of this part of the city.

-  The area of intervention
-  Market's buildings to adapt with public spaces
-  Open spaces
-  Logistic areas to maintain or create and connect
-  Existing green areas to connect
-  New mixed use buildings
-  Green surrounding with urban agriculture developments
-  Green connection
-  Accesses to create or develop
-  Continuous paths from existing grid
-  New mitigation on the railway system
-  Gates and fences to break



2 - THE PROJECT



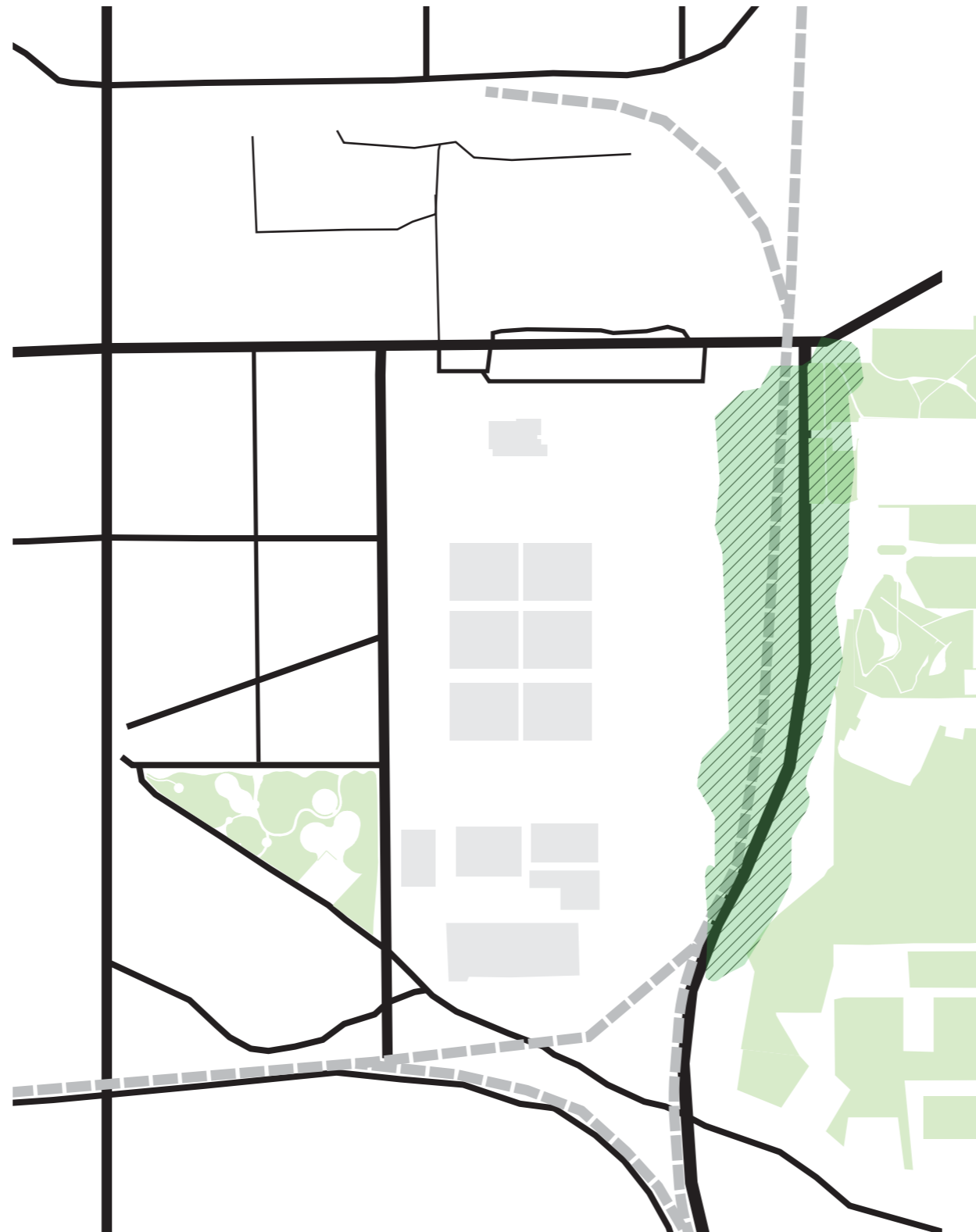
CONNECTIONS

The first scale to be object of the transformations with the relative actions is the biggest one, the territorial or city scale, related to actions that affect the city as a whole in its urban system, in this case especially mobility and transportation system after having analyzed the main flows that could interest this area.

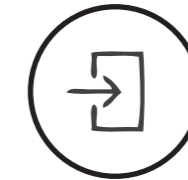
As I said the phase before the real actions is an analysis phase looking at the main flows that could interest in different ways this area after the project and which kind of flows are already present and protagonist of this portion of the city; the main flows are relative to citizens, workers, visitors. The objective is to make this big area as much as possible accessible. In correspondence with one of the main arteries of the streets' network (Via Cesare Lombroso) there is the main underpass that let vehicular traffic come inside and go outside the area crossing the railway barrier. The interventions proposed in this part of the project are oriented to give more of this underpass in correspondence if the north part and one in the south part, to facilitate the access to the mainly logistic area located in the south part of the Ortomercato.

The key word for the actions that have influence at this scale, is 'connections'. The connections are relative to the mobility and transportation system as I just described, but also green areas. The idea is to create a connection at city scale, to make the green as a connective tissue to unify green existing spaces and create a sort of 'green entrance' in the South East part of the city, that is already a very rural area with a green landscape in some area more than in other.

Connections are both unifying the area with the city but they also help to make this place less segregate and separated from its urban context in order to gain a different kind of integration also for community, to perceive the area in a different way.



ACTIONS

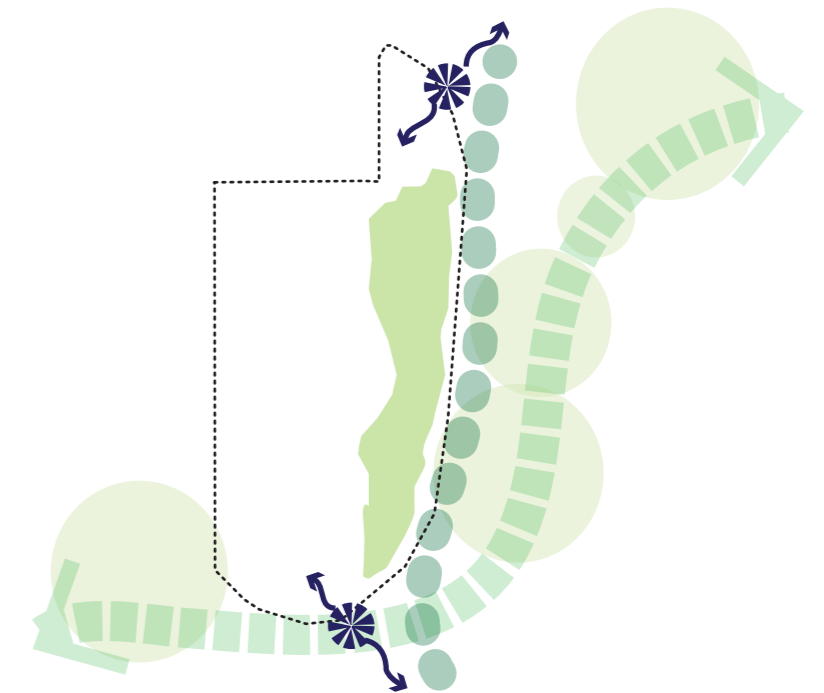


ACCESSIBILITY



GREEN CONNECTIONS

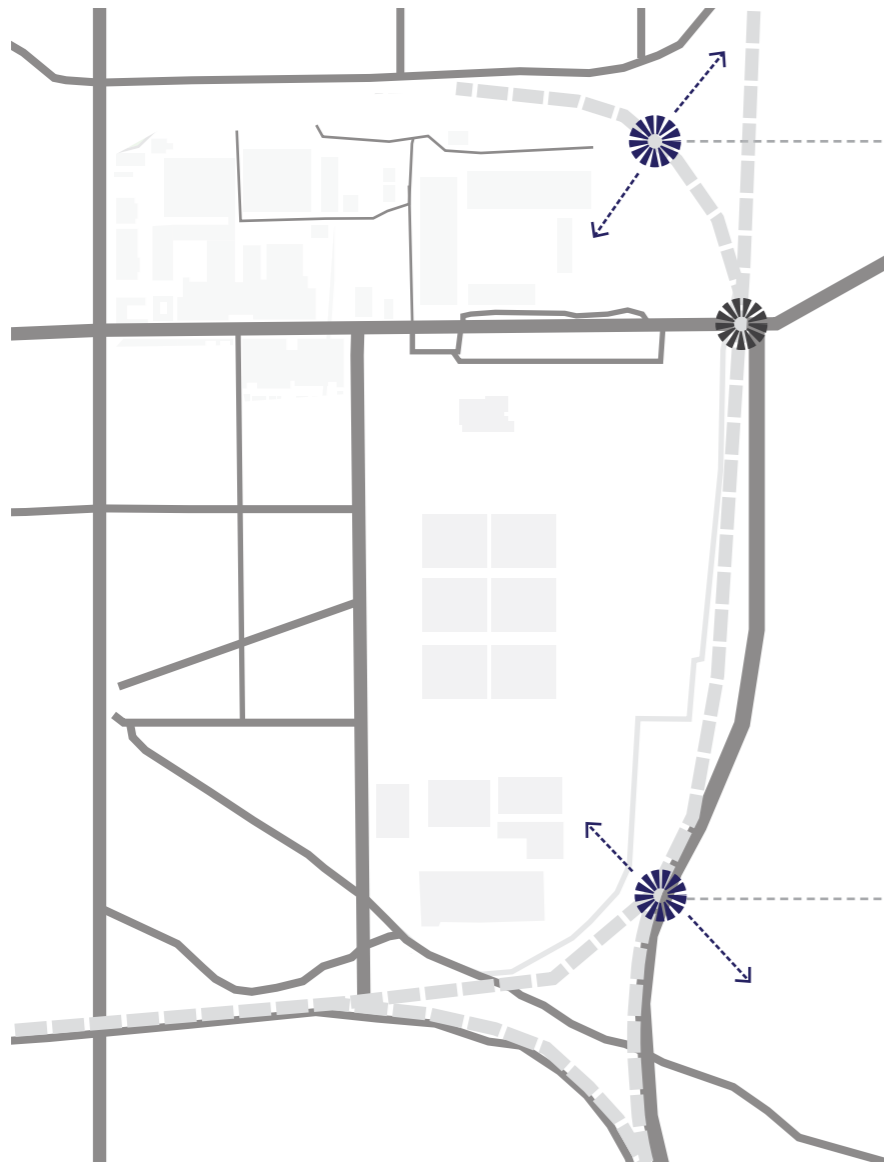
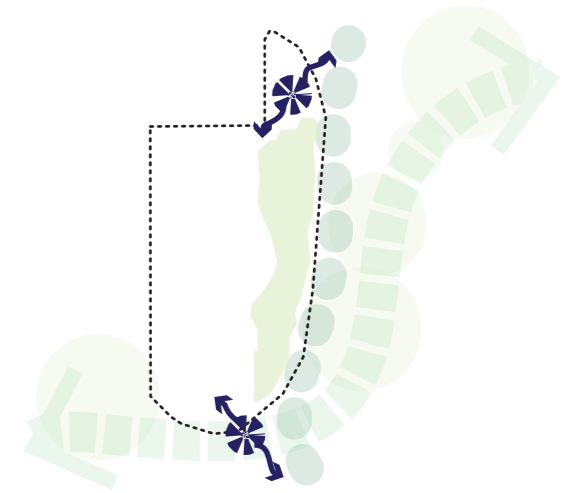
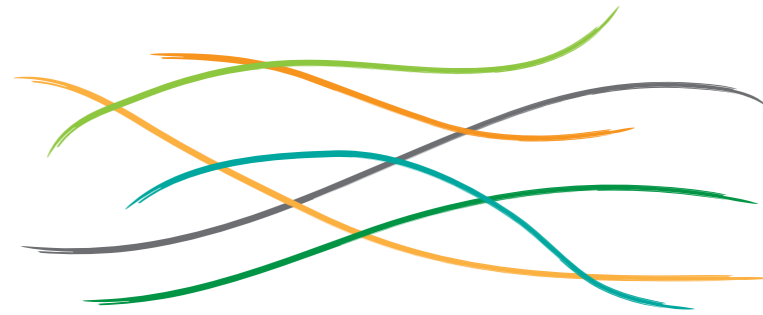
CONCEPT



2 - THE PROJECT

ACCESSIBILITY

The aim of the project is also to have a better integration not only in terms of functions but also territorially speaking, thinking about creating more accesses on the area, not connected to the gates of fences, railways, a new underpass for vehicles.



New underpass



To be restored underpass

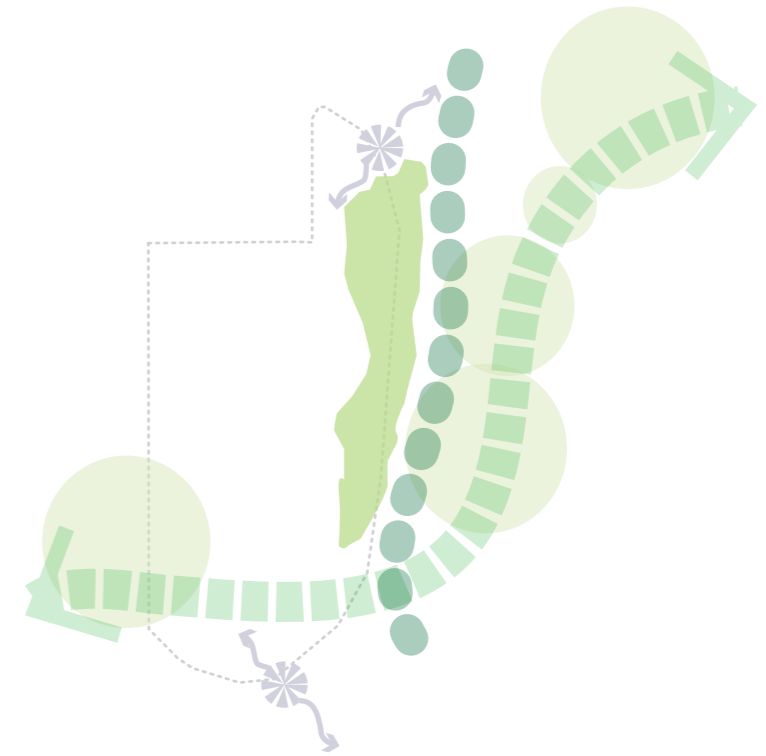


2 - THE PROJECT

GREEN CONNECTIONS

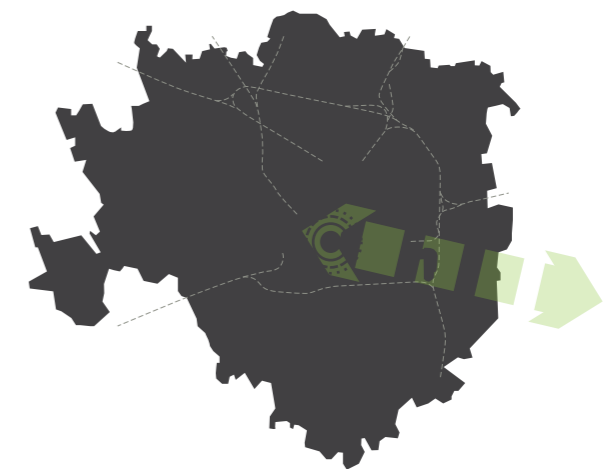
The idea of green entrance is in relation with existing green project areas and PGT indications in the surrounding of the area which hosts the markets. Making stronger connections between the area and the center of the city and the periferic areas at

East (near Parco Forlanini and Linate airport), this portion of territory can be seen as a new 'green entrance' for the city, enhancing green urban furniture and green areas already present and in project in the surrounding.



REFERENCE: XERO PROJECT, Downtown Dallas

XERO Project in the Downtown of Dallas is a project that goes beyond the city block to propose a series of greenways that intersect Downtown based off of both new and existing open spaces. These greenways incorporate public orchards, and community gardens and act like a connectivity tissue.



2 - THE PROJECT

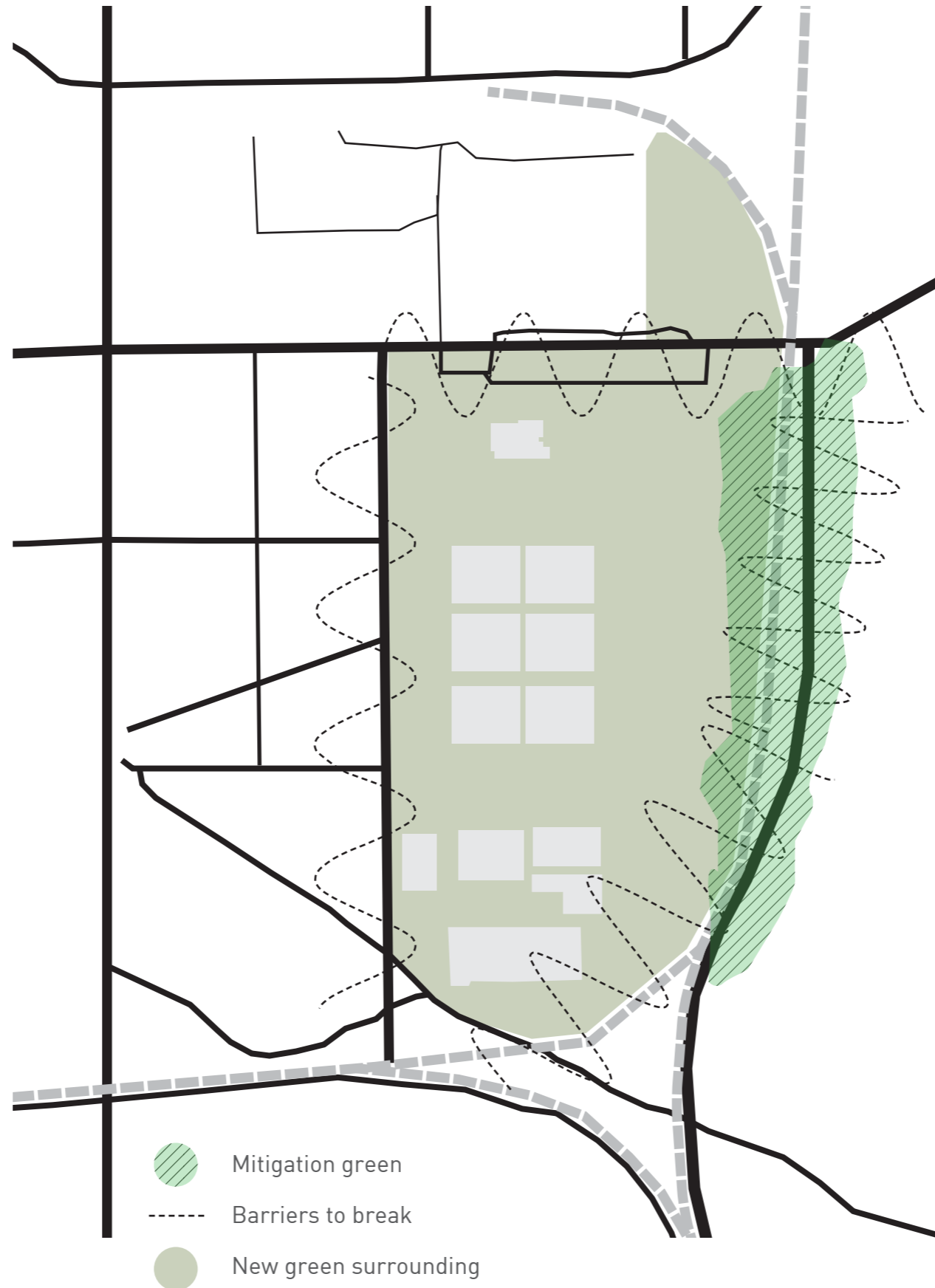


GREEN LANDSCAPE

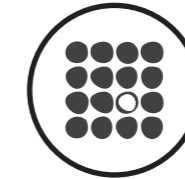
The actions that i am going to propose for this influence scale, that is the local scale, the area of the Ortomercato including paths and the surrounding of the selling pavillons, are oriented first of all to add a new and different value in environmental terms, anhacing urban agriculture in its most various declinations.

In the actions that i chosed for the surrounding spaces of the pavillons, there is a differentiation of the main green spaces that are going to create a new green urban landscape inside this part of the territory. The idea is to create a rural landscape inside the city but shaped in urban agriculture terms, with people who can walk inside the production and growing activities, enjoy of nature and being educated to those themes, in collaboration with schools and university but also in everyday life; choosing what to eat, observe how production and growing methods are going on and also see how products are managed starting from the idea of cultivating and urban vegetable gardening until the wholesale activity that takes place inside the pavillons.

The paths that are going to pass through the area and the cultivated spaces are following the existing urban surrounding, the city grid give the rules to guarantee a continuity with the existing city and integrate as much as possible this area with the city and this portion of territory. Inside the rural elements put into an urban context the project give also new guidelines for what concerns the pavillons and their function seen as a whole, in this way new cycling and pedestrian paths beside the vehicular traffic are in prevision in the spaces that are going inside the pavillons, to show people and integrate citizens or visitors or simply consumers how the Ortomercato works everyday, adding new functions and facilities to adequate the existing structures.



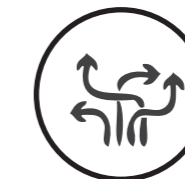
ACTIONS



NEW IDENTITY: FEELING THE EARTH



URBAN AGRICULTURE

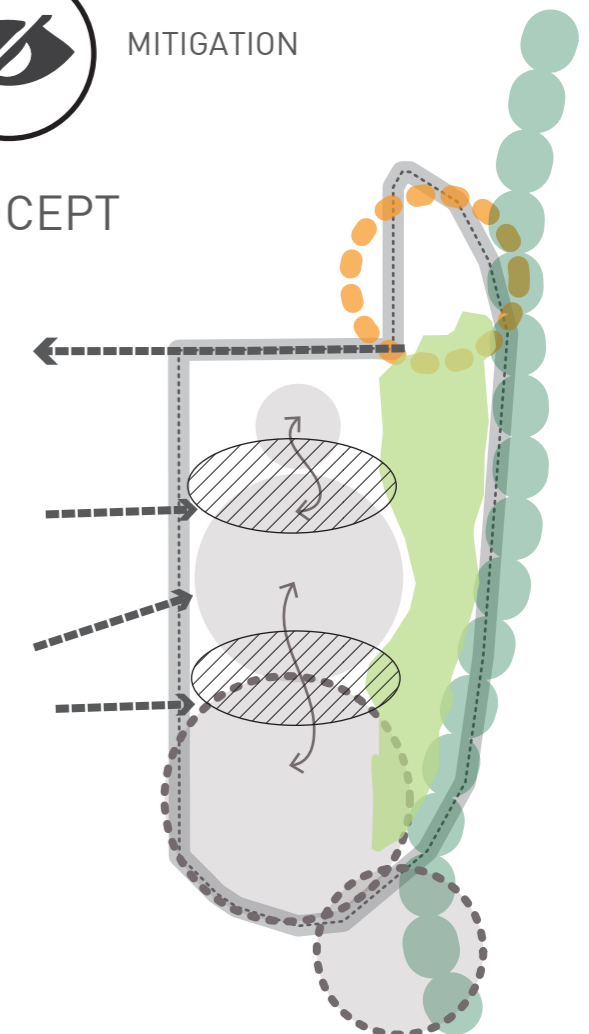


BORDERS AND PATHS



MITIGATION

CONCEPT



2 - THE PROJECT

NEW IDENTITY: 'FEELING THE EARTH'

FUNCTIONAL IDENTITY

Growing, cultivating, 'feeling the earth'

The identity of this area should emphasize the presence of the agricultural production at every kind of level, especially through different typologies of activities and functions connected to this theme that are proposed on the area as a whole and in particular in addition to the existing selling pavilions, today only dedicated to the wholesale market buying-selling activities.

TERRITORIAL IDENTITY

Adding value to the East of Milan

The project as a whole aims to develop a territorial structure/compartment dedicated to the presence of urban agriculture in the city and in this area,

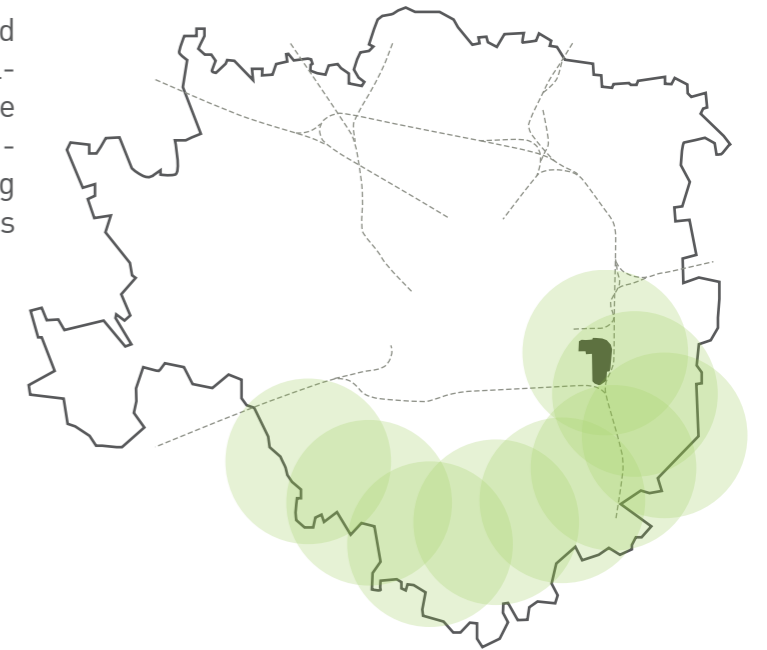
adding value in landscape terms, natural terms and also in terms of sensibilization to the food theme behind the important presence of the Expo 2015. This part of the territory should be unifying in terms of breaking barriers but is also adding something innovative that could enhance territorial identity mechanisms oriented to a change in perception ways to this area. The project aims to develop a new concept of this portion of territory, now closed and not liveable by citizens. The idea is to give a strong new identity to this area, maintaining the main character which already fits it, the production and the commerce of vegetables and agricultural production. In this way this new vision of a wholesale area could be lived by people, that will learn more about the most important logistic area of

wholesale market in Milan, and can enjoy the experience of production, feeling the earth directly and be in contact with nature, seeing from the beginning the cycle of life of basic agricultural products.

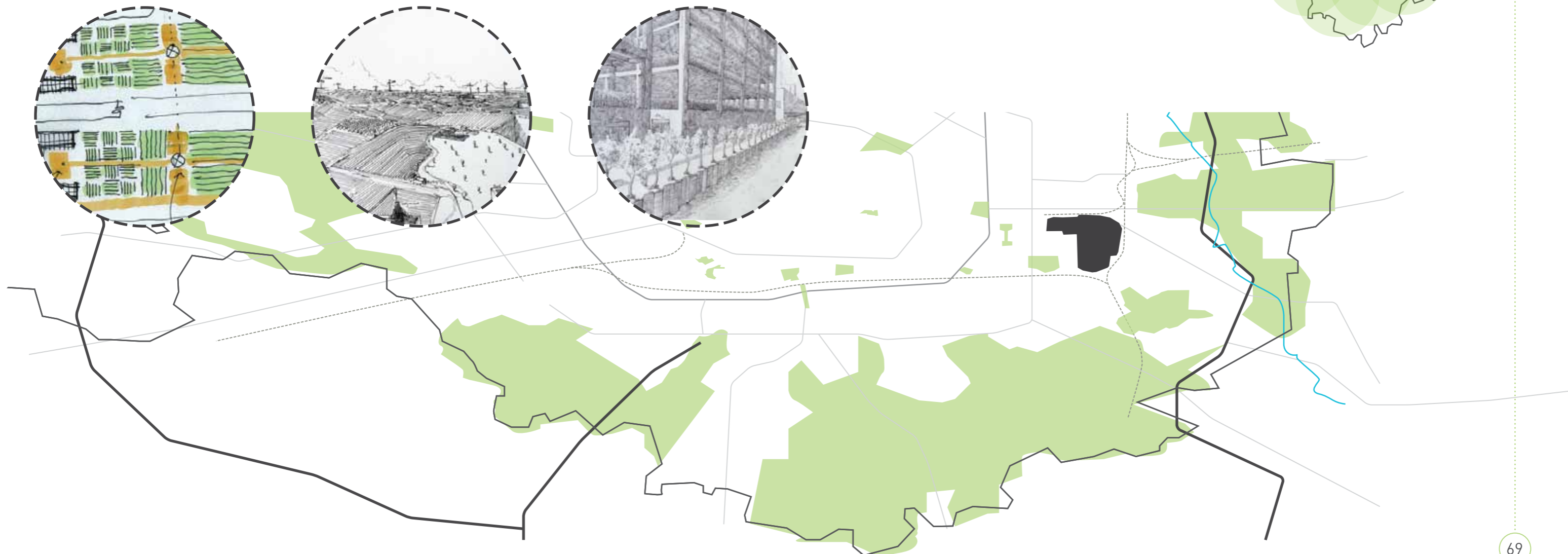
The future image of the new Ortomercato should host different kind of events, connected to agricultural production, learning programs, food theme events and every kind of agricultural related activities that such a big area could host according also to the development of old and new buildings that characterizes the wholesale logistic area.

KEY-WORDS

URBAN FARMING
URBAN VEGETABLE GARDENING
VEGETABLES WHOLESAL
PUBLIC REALM



Urban agriculture landscape: sketches



2 - THE PROJECT

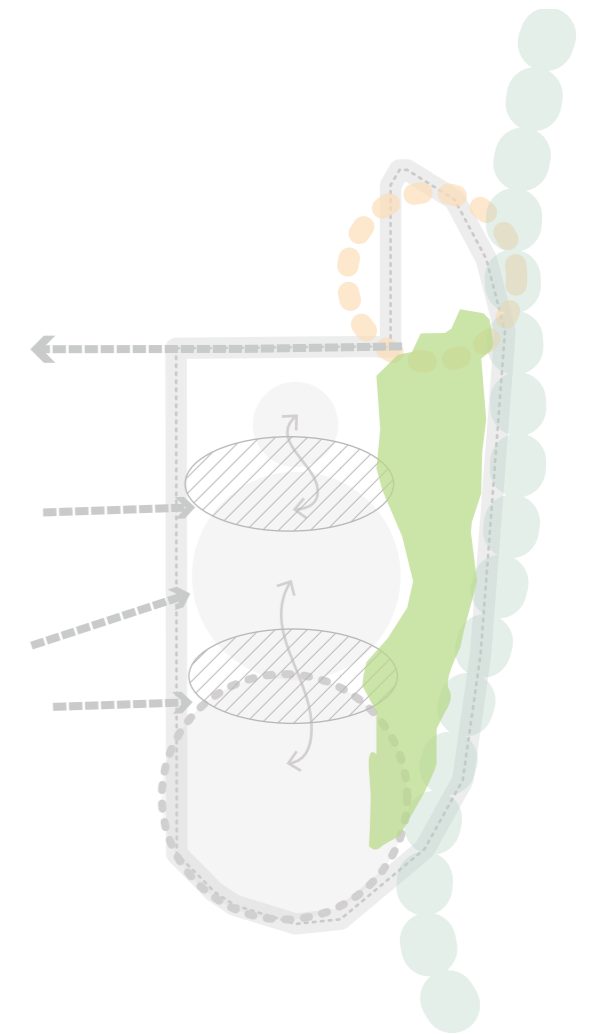
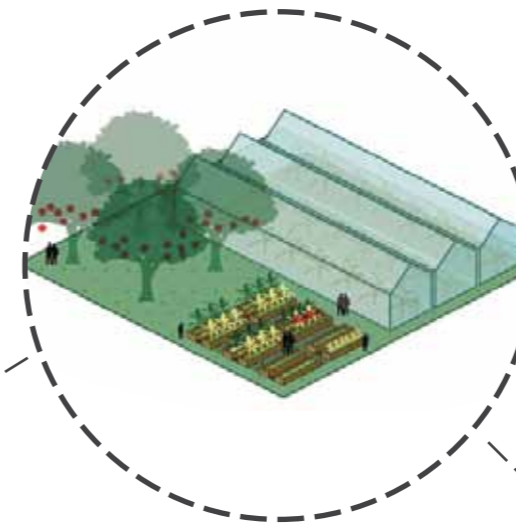
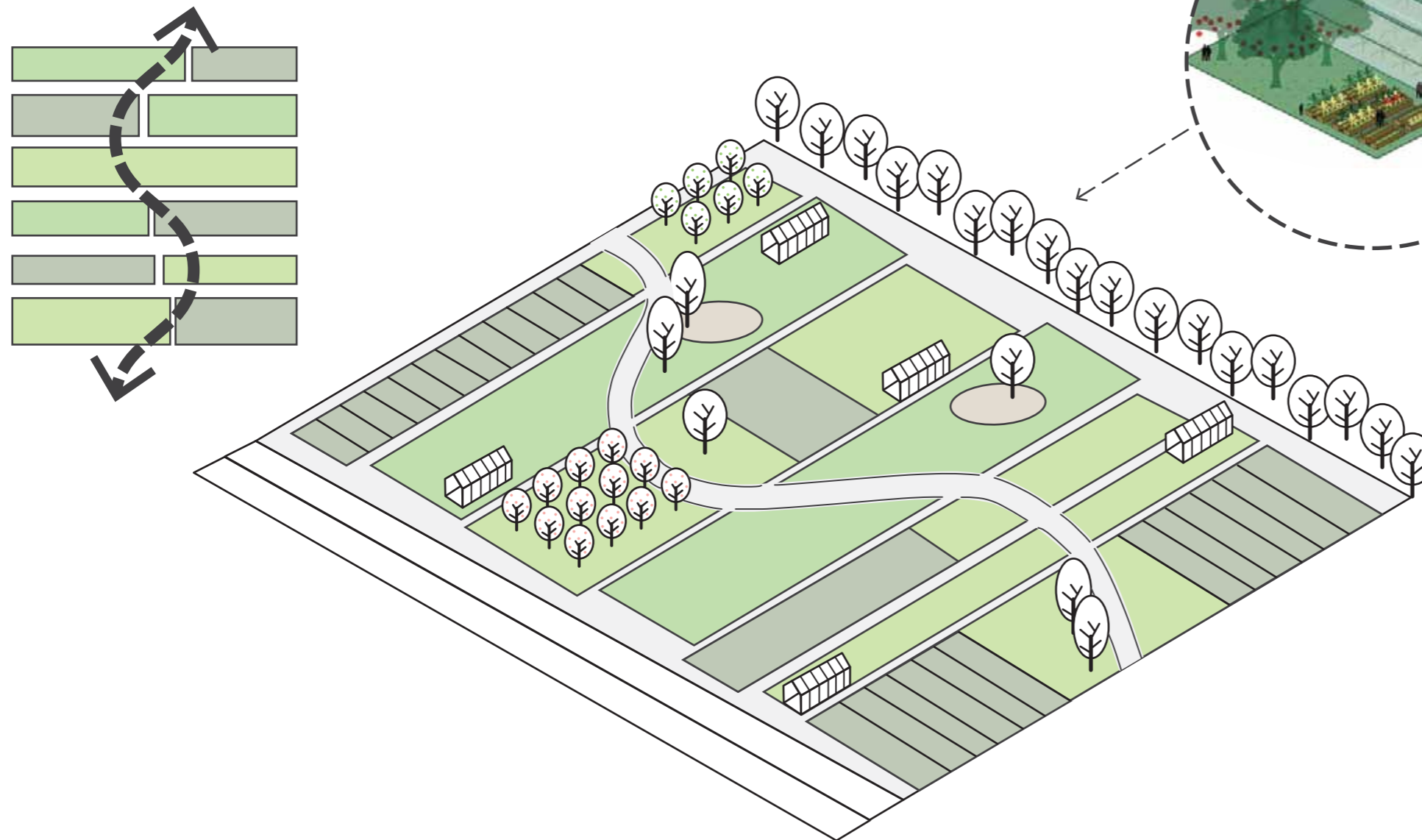
URBAN AGRICULTURE

In the future vision of the Ortomercato the project maintain only the main buildings trying to reduce the impact that this big logistic area has on the existing city in the surrounding (especially considering the enclosure which make the area very closed and not easily reachable by public). The functions in the resultant pavillions and platforms is maintained because the main function of wholesale market in my project idea should remain, but should be valorized with a different kind of surrounding at different scales, territorial, area and building scale.

The portions of territory in the surrounding of the built pavillions and platform of ortomercato in the project are oriented to the new main additional function connected to production and wholesale of vegetables and agricultural products: urban agriculture and urban vegetable gardening. In this way a new rura landscape will work as a hinge between existing build environment and the market areas, adding something new but already connected with the functions of the Ortomercato and the agricultural surrounding of the city.

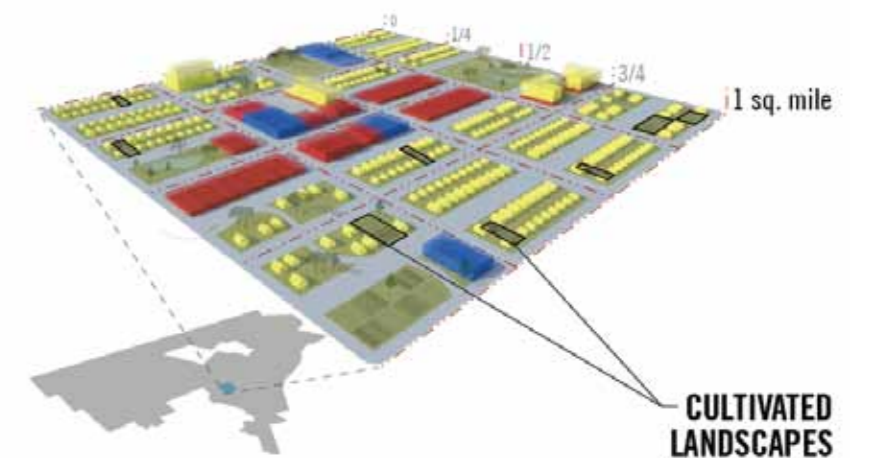
An initiative that this new organization of territories could host are farmers' markets, cyclically organized. Some of the cultivated areas should be retable by citizens or shared and property of the Municipality, instead of others that could be sold to farmers and connected to existing cascinas in the surrounding of the city and especially in Parco Agricolo Sud, not so far from the area of Ortomercato.

DIFFERENT GREEN AND PATHS INSIDE



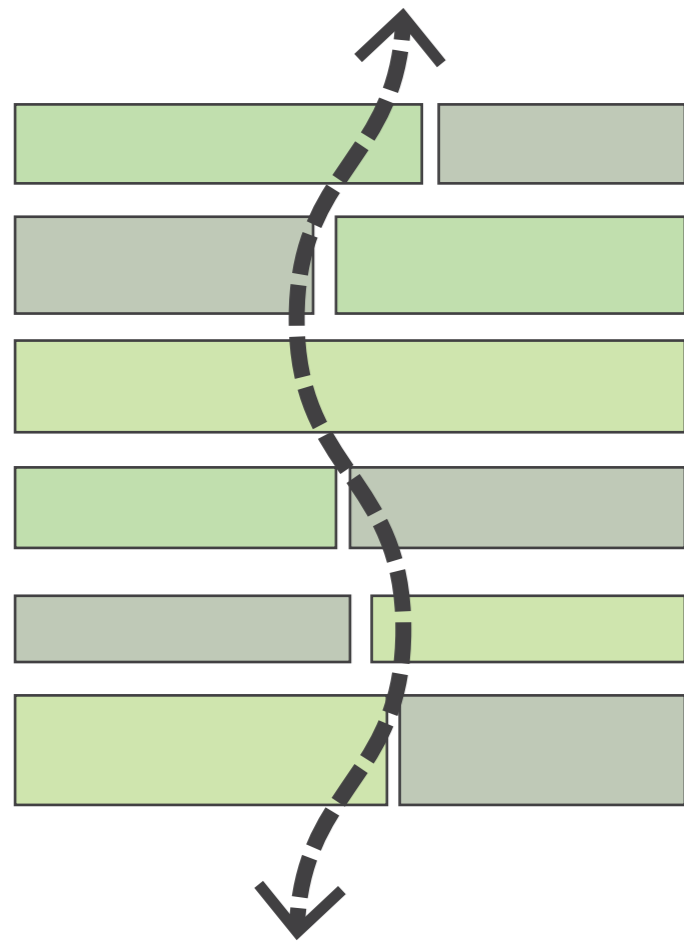
REFERENCE: URBAN FARMING DETROIT, Detroit - Michigan

BUILDING BLOCKS
BUILDING BLOCK SCALE DIAGRAM LONG TERM



2 - THE PROJECT

DIFFERENT TYPOLOGIES OF GREEN



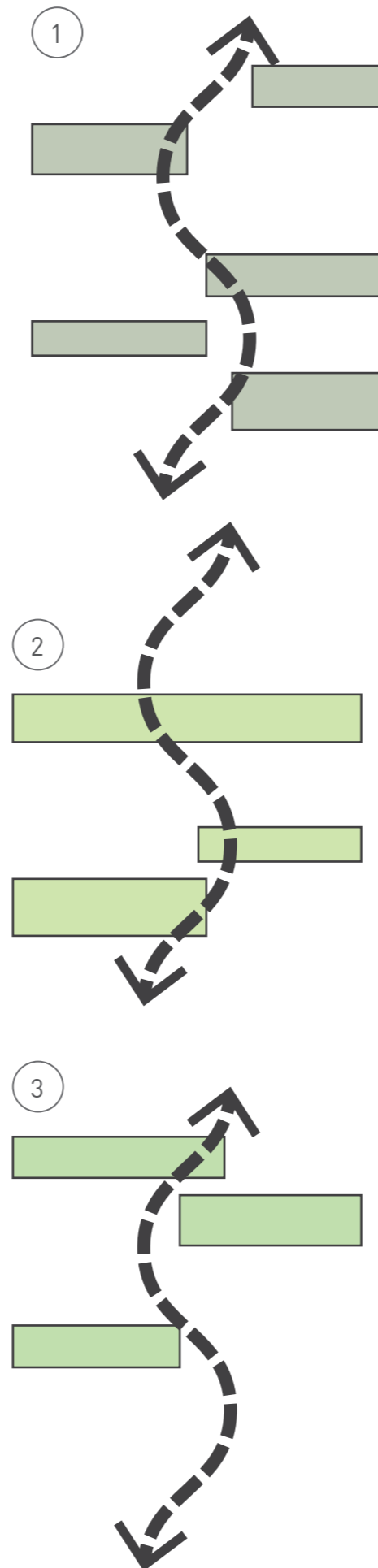
Urban agriculture

1 - Urban vegetable gardening, shared or rentable for citizens

2 - Farmers' cultivations

Green spaces

3 - Green equipped areas for restoring activities



REFERENCE: Value Farm / Thomas Chung

Value Farm creates value by cultivating the land as a collective effort. The project intersects issues of urban transformation, architecture and urban agriculture with an international cultural event, and explores the possibilities of urban farming in the city and how that can integrate with community-building. It forms part of the Shenzhen Hong Kong Bi-city Biennale of Urbanism\Architecture 2013, within Ole Bouman's Value Factory located at the Shekou Former Guangdong Glass Factory in Shenzhen.



REFERENCE: Almere plan for 2022 Floriade

The Dutch city of Almere has won the bid for the Floriade 2022 and will host the prestigious world horticultural expo in the year 2022. The exposition takes place once every ten years in the Netherlands and is currently ending in Venlo. The MVRDV-designed plan for Almere seeks to be not a temporary expo site but a lasting green Cité Idéale as an extension to the existing city center. The waterfront site opposite the city centre will be developed as a vibrant new urban neighbourhood and also a giant plant library which will remain beyond the expo.



REFERENCE: Highline Park, New York City

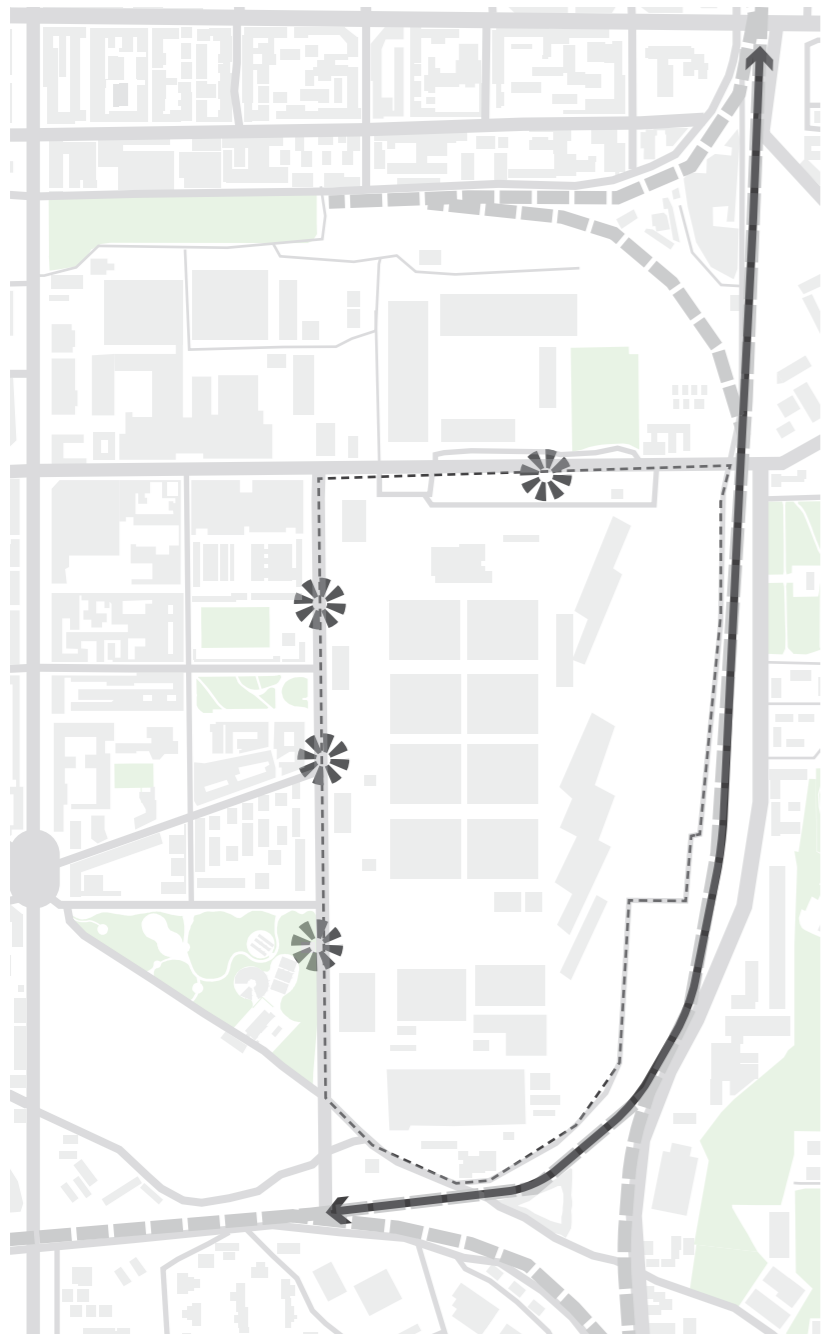
The High Line park in N.Y. is one of the most inspirational urban landscape regeneration projects of the past few years. 2011 will be a landmark year when the park will double in size. Built on top of an abandoned, elevated, Manhattan railway, the High Line is a remarkable success story that has generated tremendous support.

2 - THE PROJECT

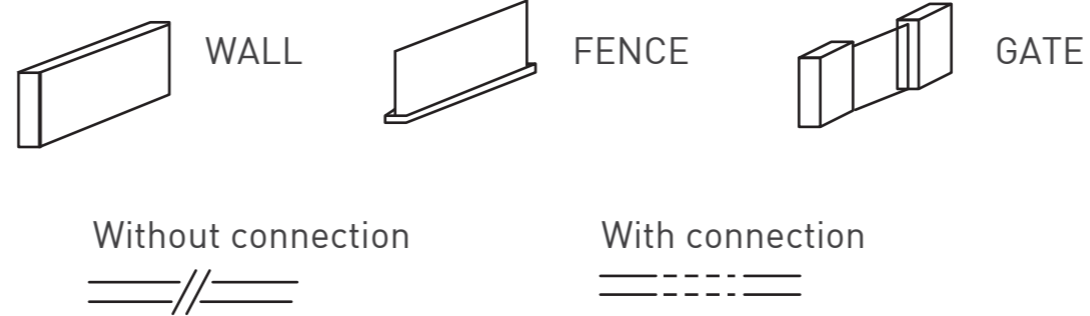
BORDERS AND PATHS

This action is more focused on the area of the Ortomercato, and on the accesses that let people, sellers and wholesale buyers go inside the markets and the logistica areas. The Mercato Ortofrutticolo is completely surrounded by a fenced area, making this area completely strange for people and who

ever passes through this places on the outside. There are four main gates for different functions in different places spread in the whole market. I tried to identify the characteristics of every element that make the market open or closed to people and transportation system, and what kind of element defines this parts.

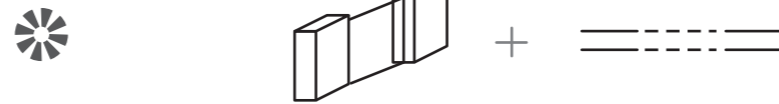


SYMBOLS



CURRENT SITUATION

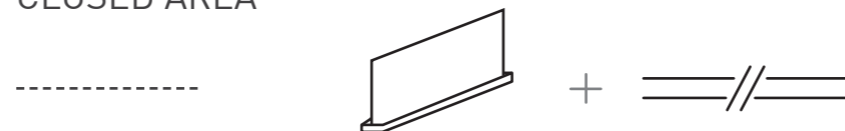
ACCESSES



RAILWAY

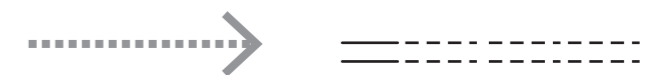


CLOSED AREA



SOLUTIONS

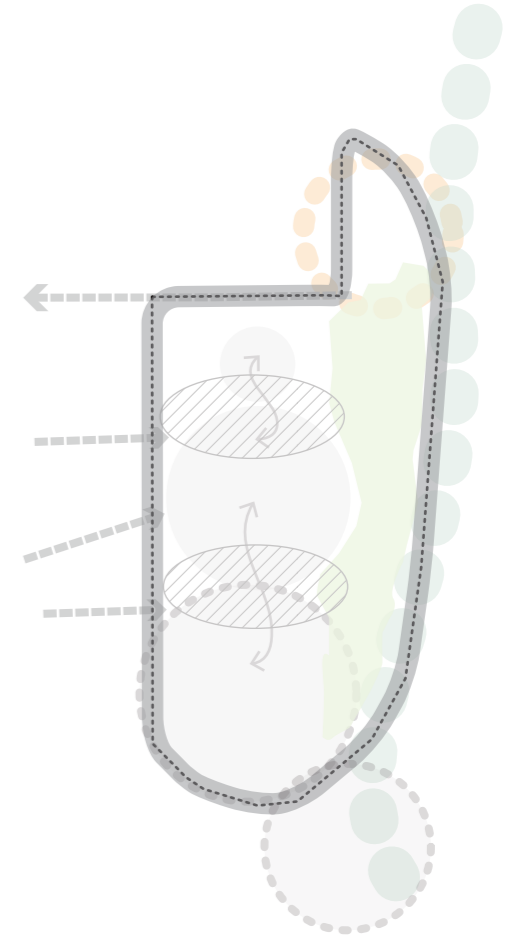
Open accesses



Adding new accesses



Breaking gates and adding connections

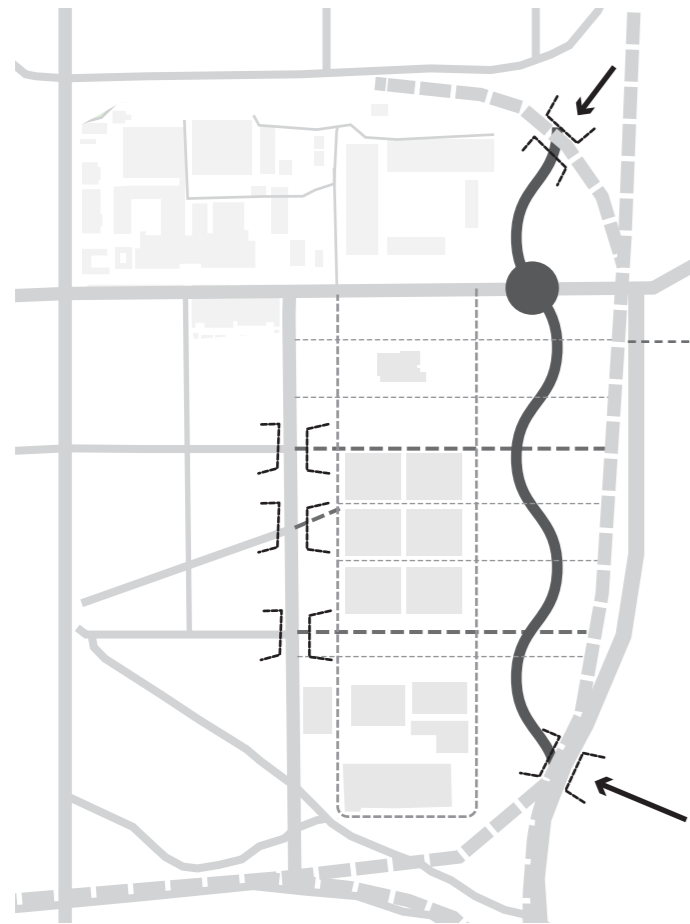


2 - THE PROJECT

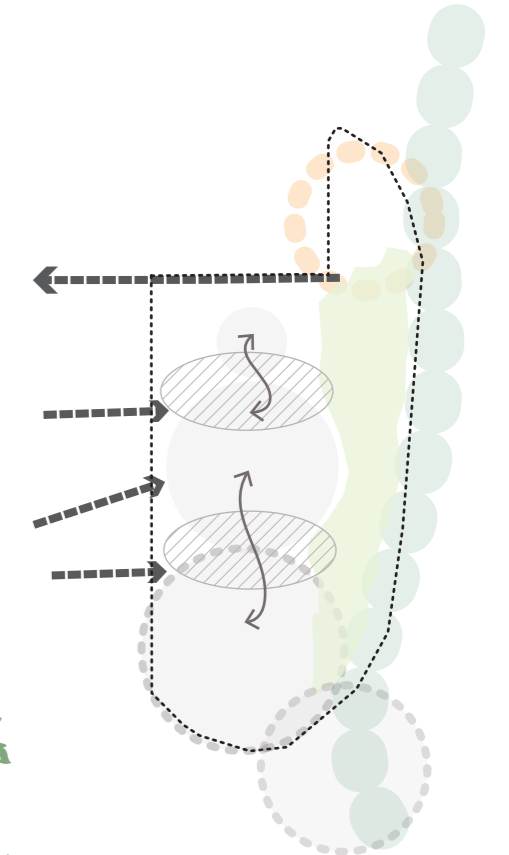
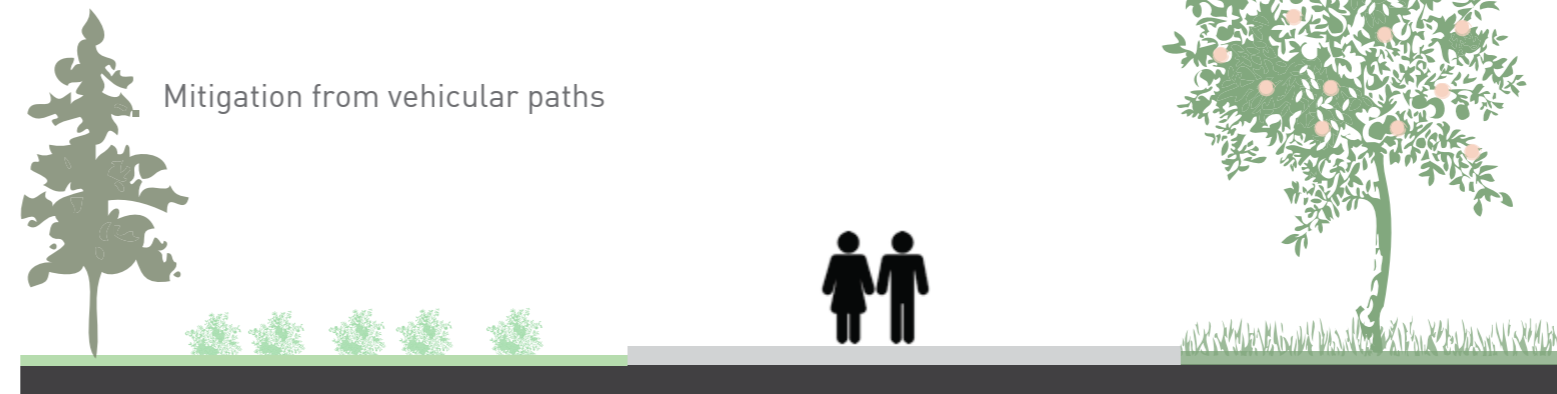
TYOLOGIES OF PATHS

The most important objective of the project after the additional function connected to the wholesale market and production, is to give a new importance to pedestrian paths. Adding new paths, passing through existing pavillons that can give a new perception of the Ortomercato to people, that could enjoy of this experience and directly see what is happening. Is also a new way to connect the area with the surrounding and create a new axe of development in the direction of east part of the city.

Next to pedestrian paths could be useful to develop and a strenghtening of existing cycling paths already present connections in the surrounding. The main path that i propose in the project will host pedestrian and cycling paths, connecting the whole area but in a more sustainable way compared to the existing logistic area that requires different kind of transportation facilities. The new paths will be organized to be exploited by citizens, and to give also restoring areas.



PEDESTRIAN-CYCLE PATHS INSIDE AGRICULTURE



COMMERCE

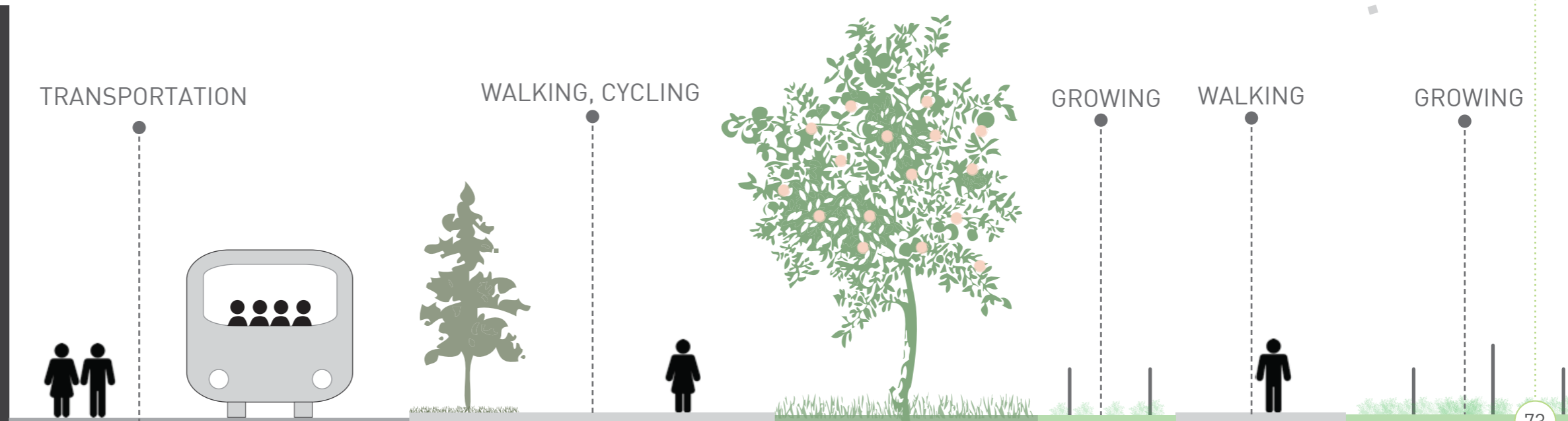
TRANSPORTATION

WALKING, CYCLING

GROWING

WALKING

GROWING



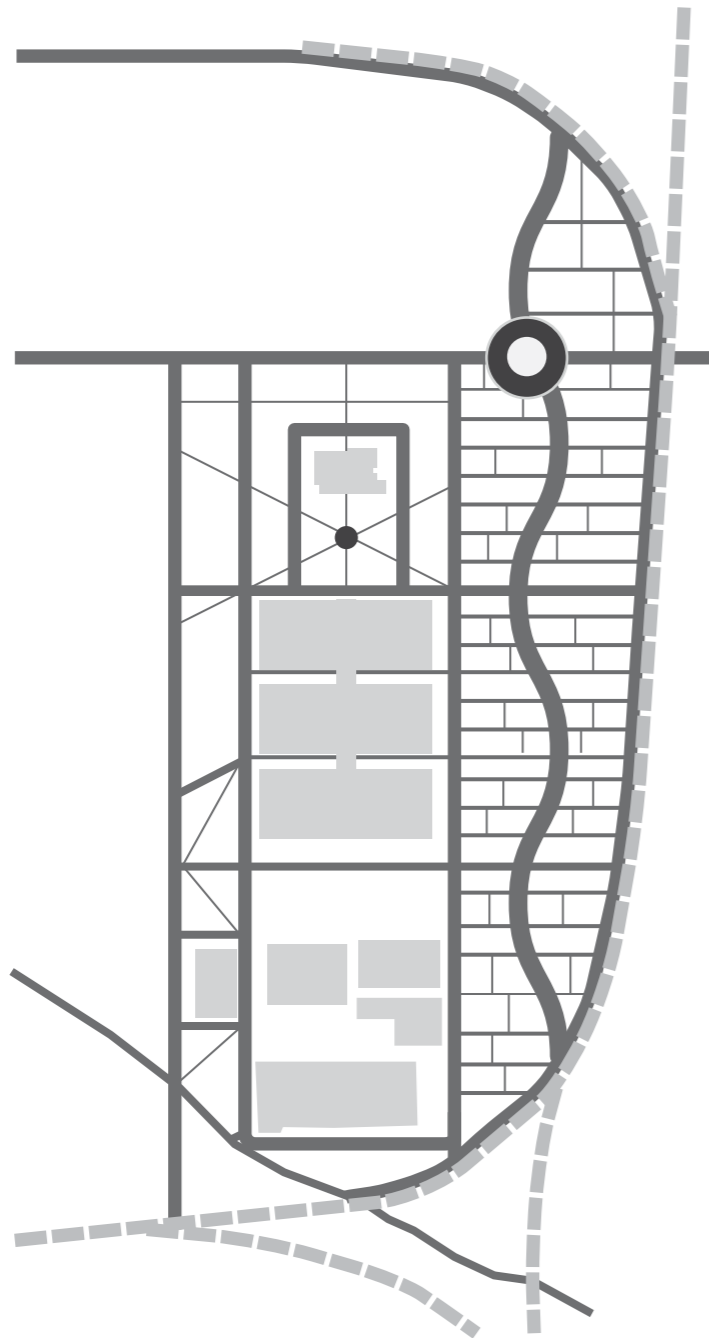
2 - THE PROJECT

REFERENCE: Sustainable Flower Market, Ruichang China



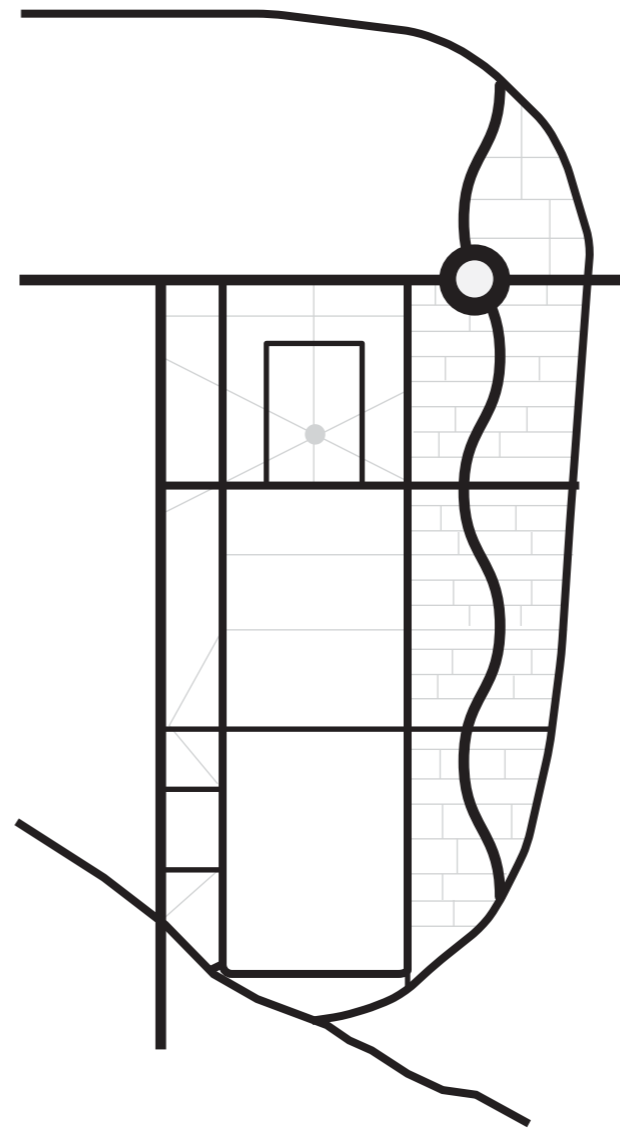
The design of this part of the city seeks to connect the core of the Molewa area with the Flower Garden theme and at the same time create a modern sustainable city center which is deeply connected with Chinese culture, making architecture and the city a tourist destination of it's own. As a result a vibrant town centre would be created which provides a neighborhood feeling and showcases a practical, green sustainable approach. Layered residential, commercial, and parking areas, from top to bottom, respectively, throughout four unique buildings, surround the courtyards with an open and friendly atmosphere.

STREETS' NETWORK AND SLOW MOBILITY



VEHICULAR PATHS

The streets' network in project is built up in harmony with existing street and mobility grid, trying to give a certain continuity to the territory and to its streets that are already offering the main system of accesses to the area of the wholesale markets. I tried to build two main streets of a skeleton system, unified by a central element like a square that should be also the center of the diffusion of the slow mobility and cycling paths. The structure of the vehicular streets is in correspondence of the logistic function of the area also having the access to the main parking area already existing located in the middle of the logistic area and the selling pavillons.

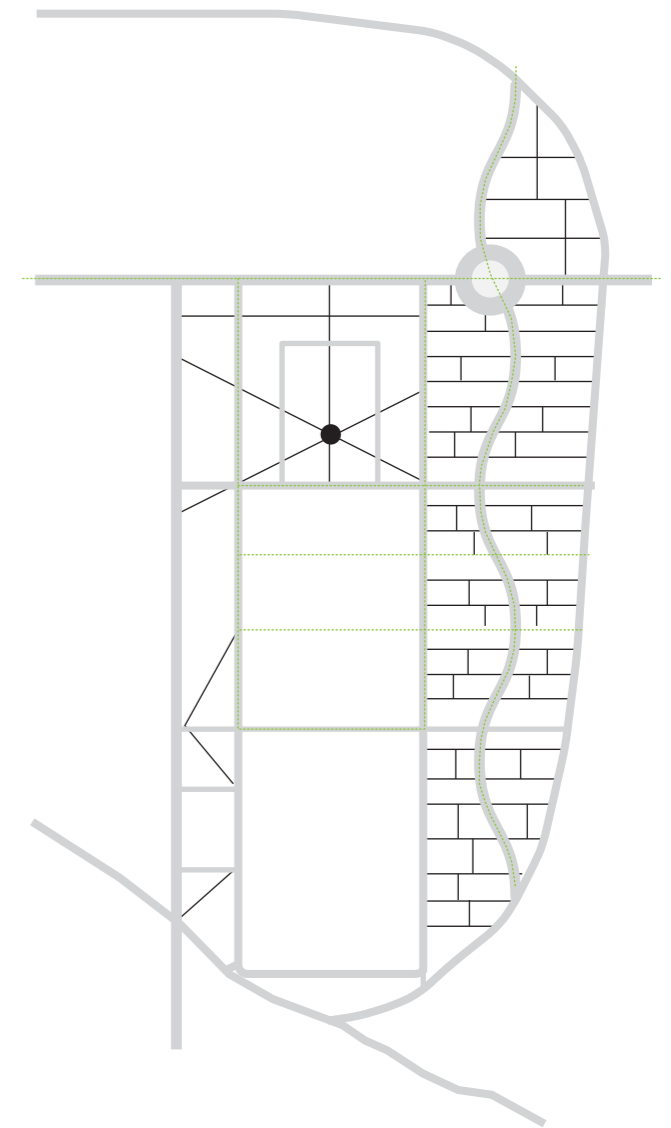


— Vehicular paths

PEDESTRIAN AND CYCLING PATHS

The network of the pedestrian and cycling paths is connected with the existing paths but also built up in relationship with new new streets network scheme, in particular in the surrounding of the pavillons of the wholesale activities in the Ortomercato area.

Inside the agricultural landscape are in prevision paths and passages dedicated especially to a re-newed pedestrian presence on this part of the territory, but also letting come inside cycling mobility in connection with existing path (already existing or in project in the surrounding). Slow mobility in support to the pedestrian mobility should be strenghtened inside the area.



— Pedestrian paths

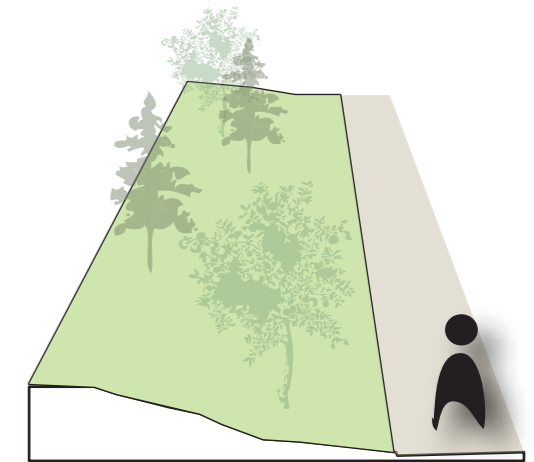
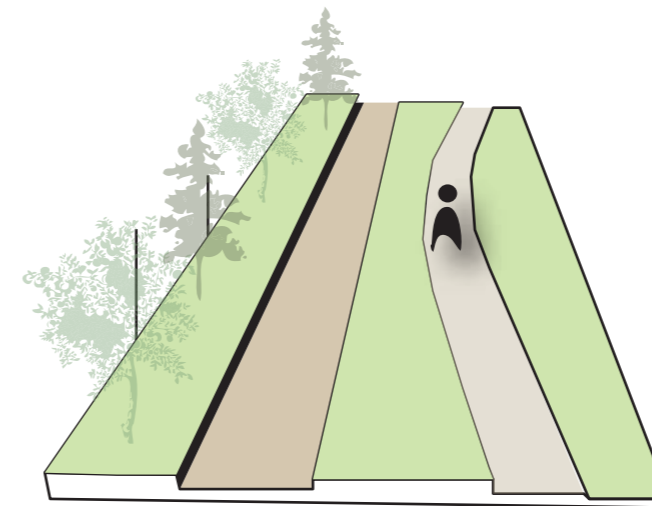
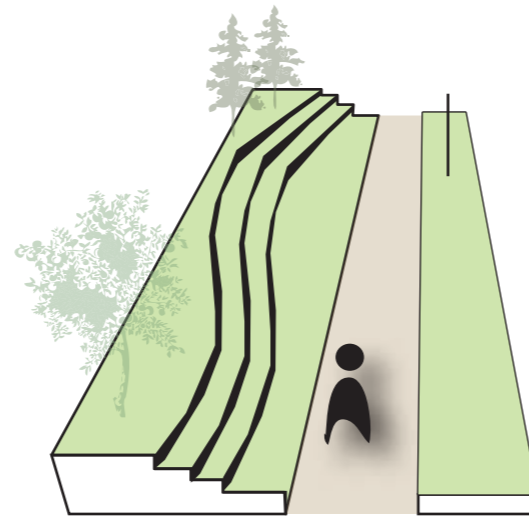
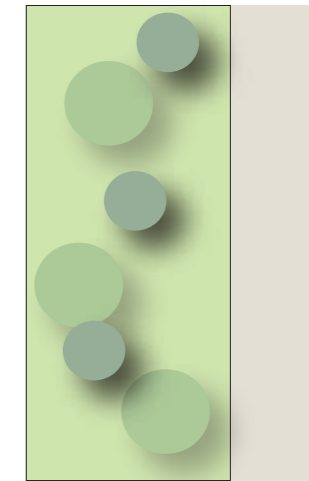
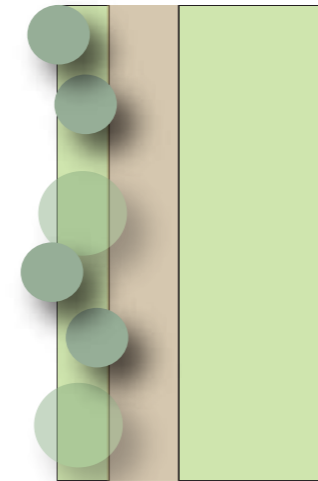
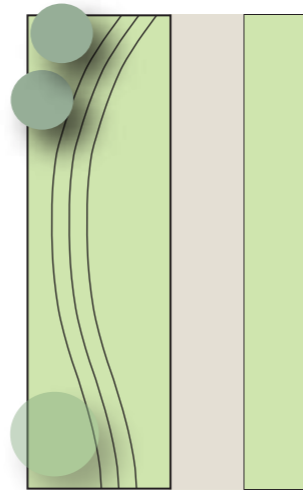
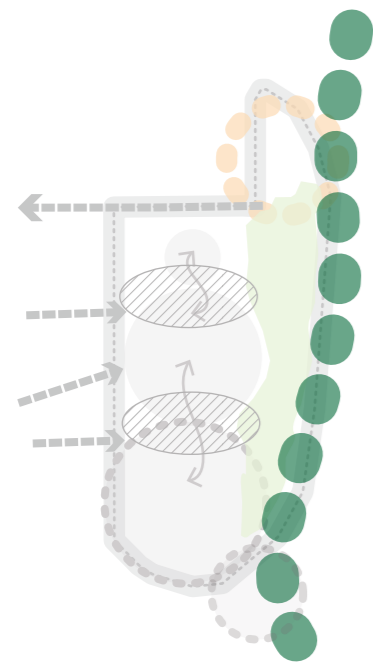
..... Cycle-pedestrian paths

2 - THE PROJECT

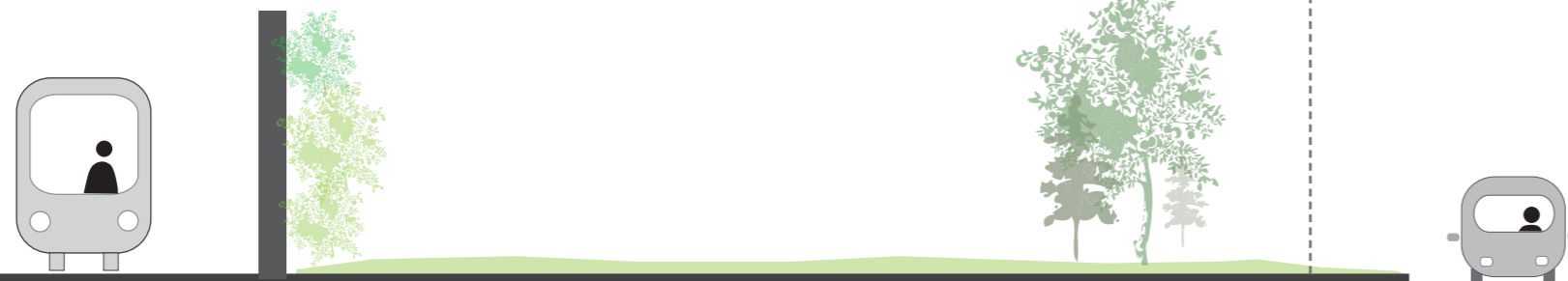
MITIGATION

Green barriers

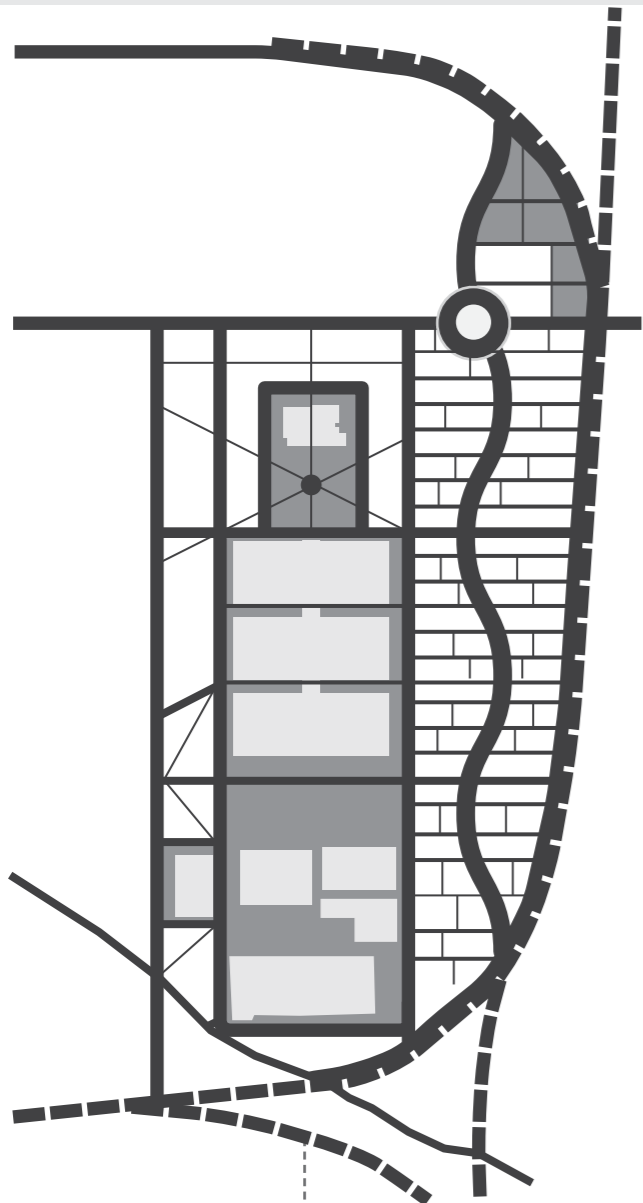
The idea is to organize in different ways the existing green spaces in the surrounding of the railways to mitigate but also to give new open spaces in connection with existing built environment. The organization of those spaces could be arranged with different solutions, using existing green and giving best urban furniture, or providing cycling path to create a strongest slow mobility and also pedestrian paths. Vertical green is the solution for the barrier near the railway that should better mitigate the strong infrastructure that characterize this part of the territory. The sections show the different solutions that could be interesting to have beside the wall that separates the street from the railways and that should mitigate this important infrastructure.



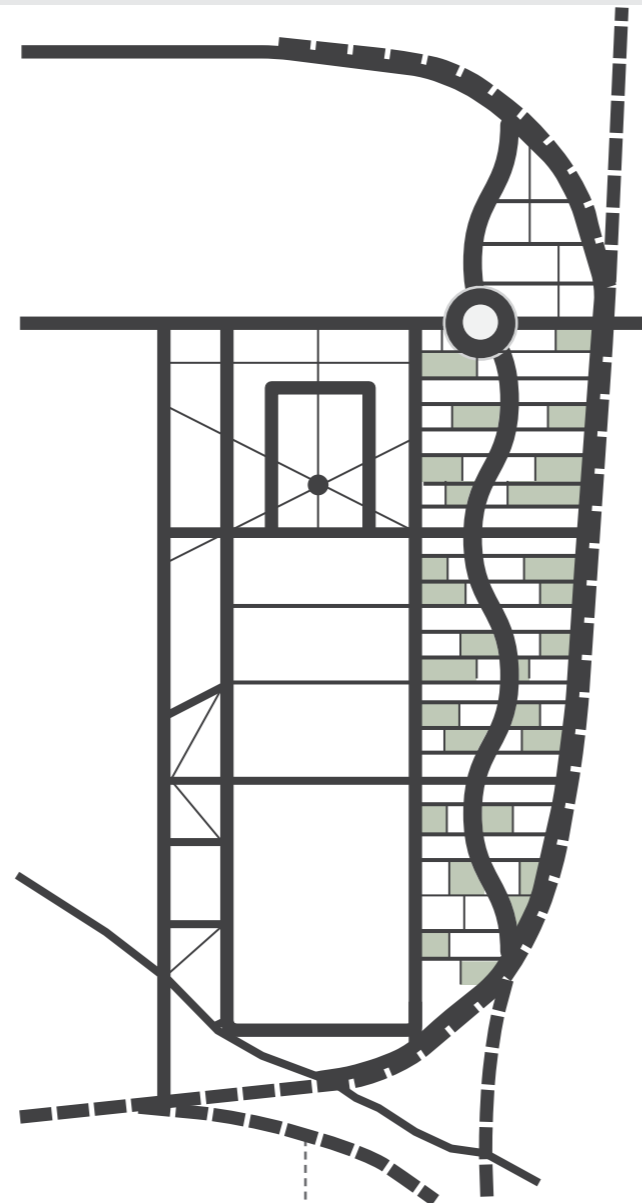
↑
DIFFERENT SOLUTIONS



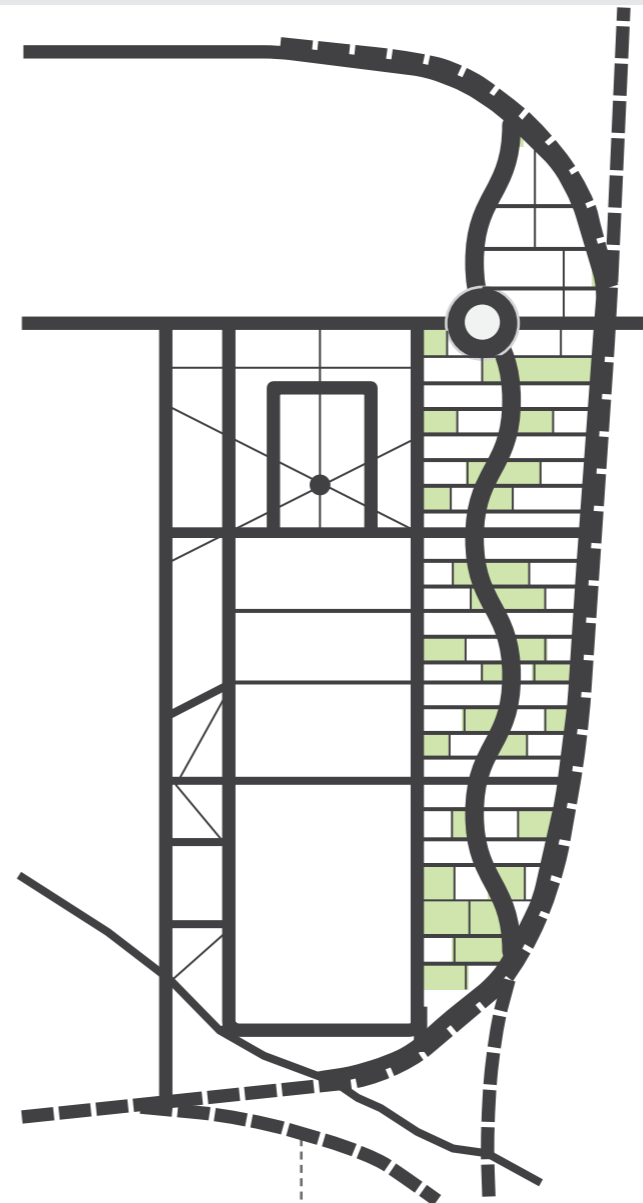
2 - THE PROJECT



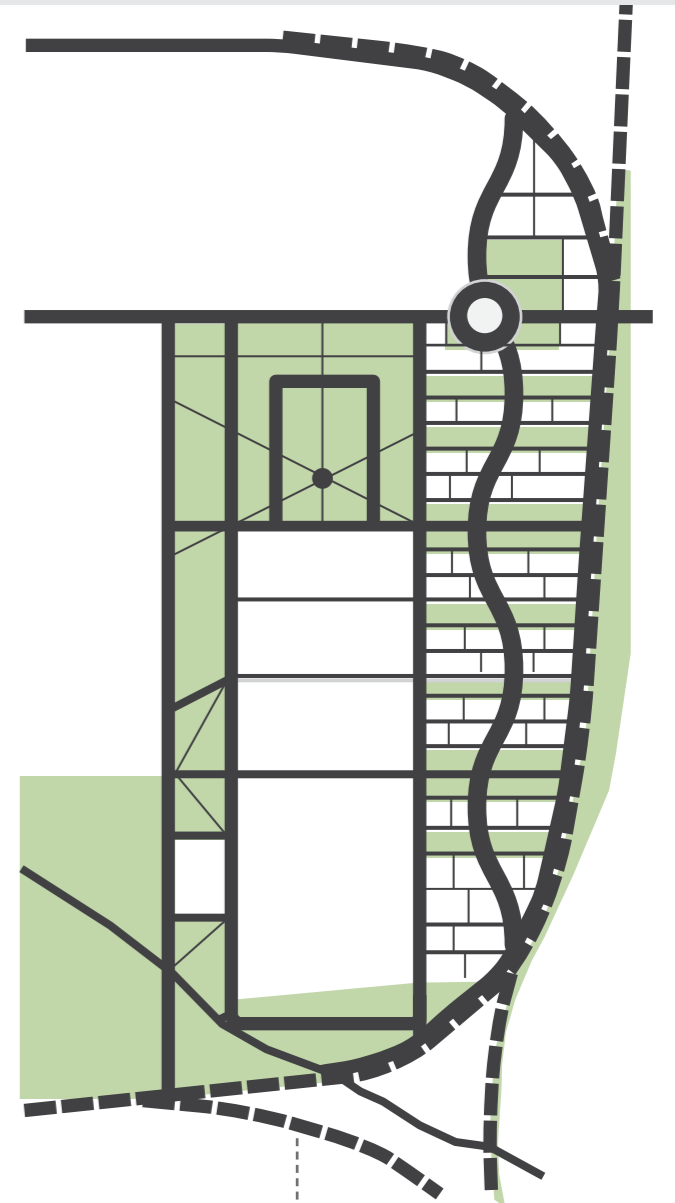
PAVEMENTED
AREA



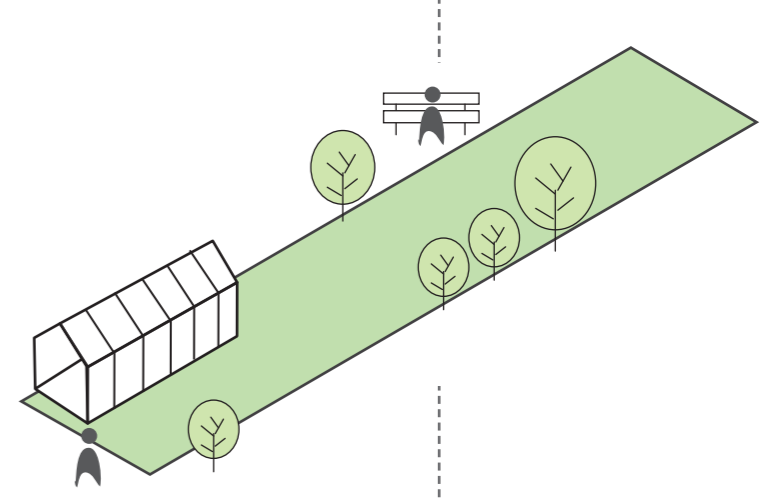
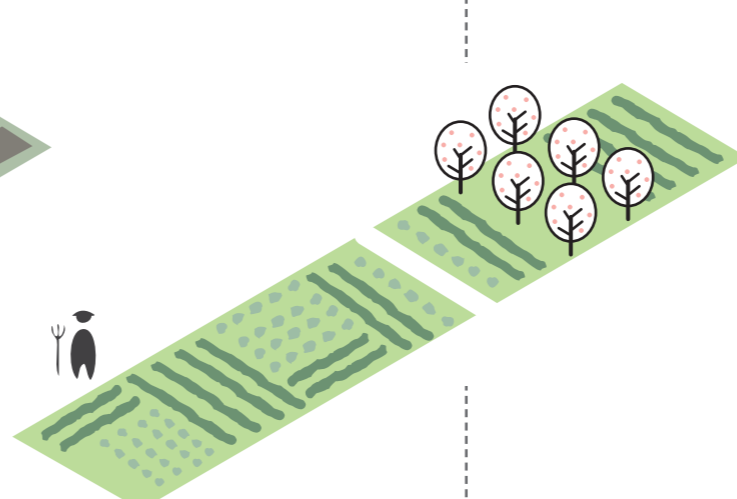
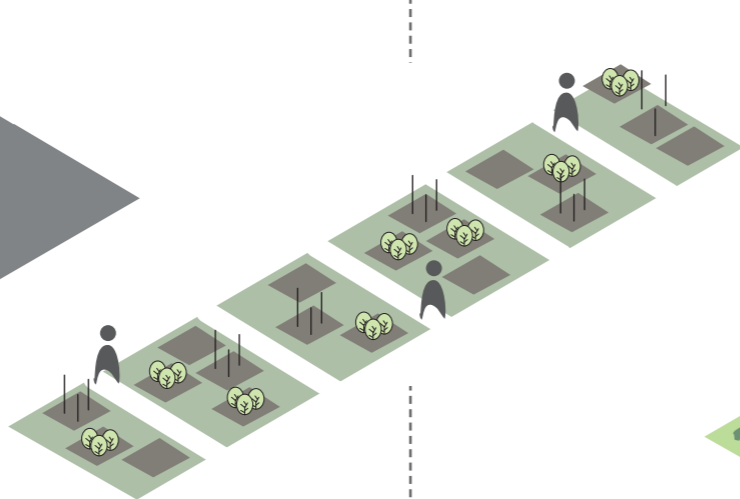
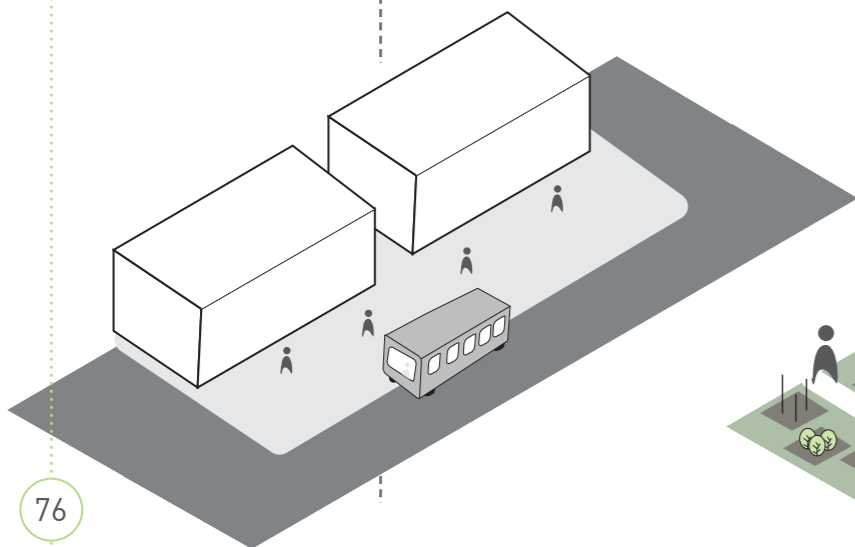
SHARED URBAN
VEGETABLE GARDENING



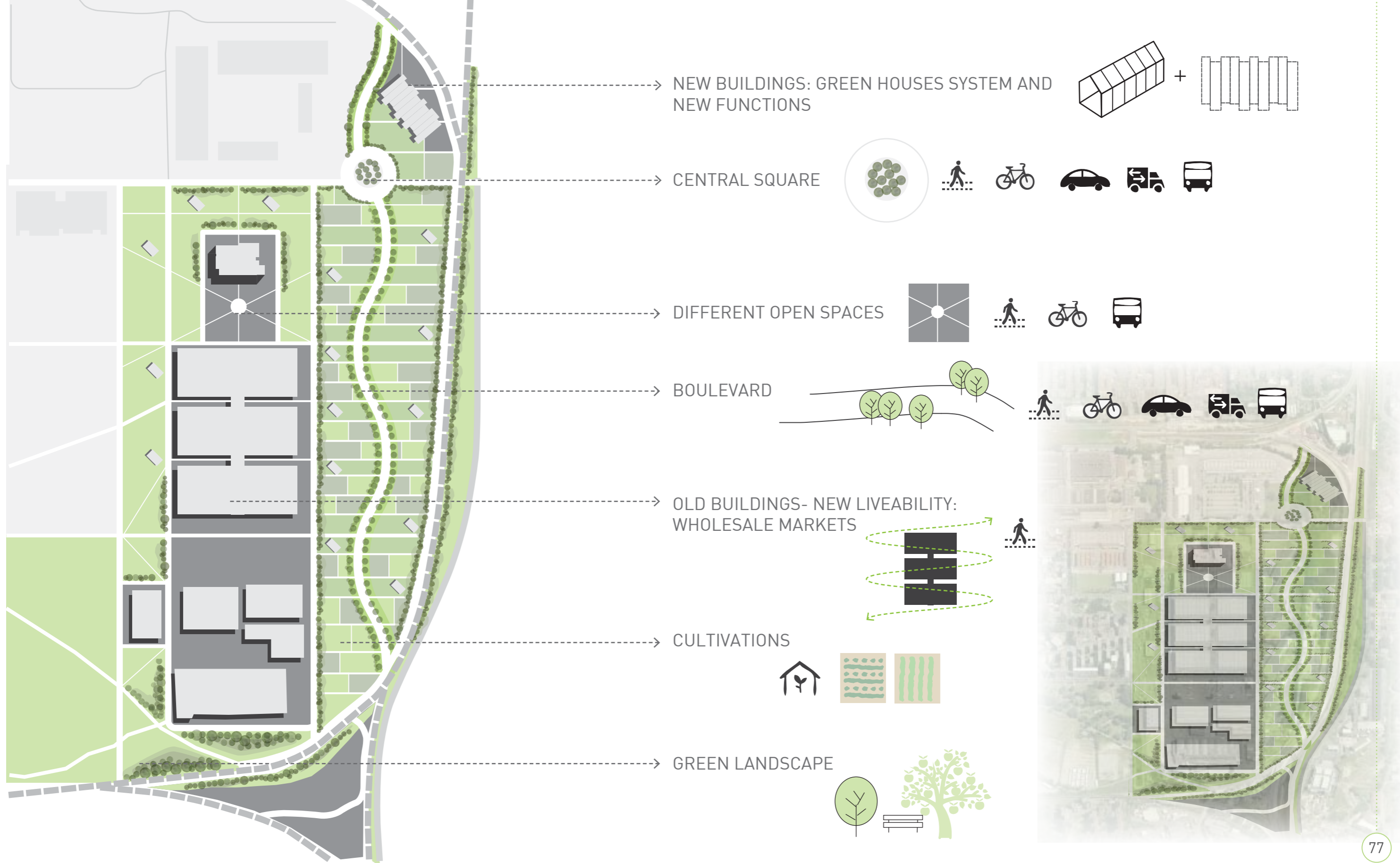
AGRICULTURE,
FARMERS' MARKET



GREEN LANDSCAPE



MASTERPLAN



2 - THE PROJECT



DIFFERENT COLTURES



GREENHOUSES SYSTEM



PATHS INSIDE AGRICULTURE



RENTABLE GARDENS



RURAL LANDSCAPE



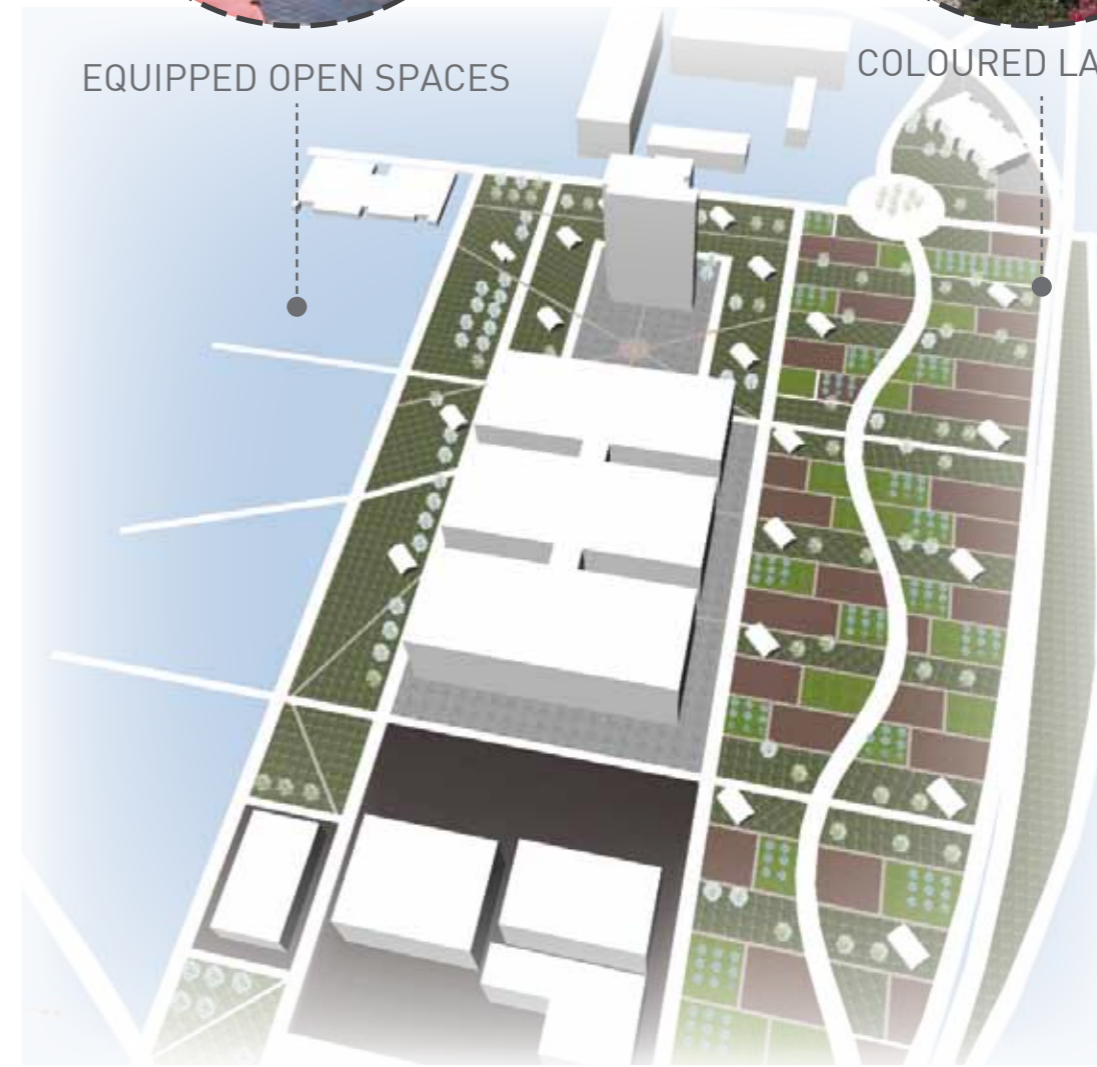
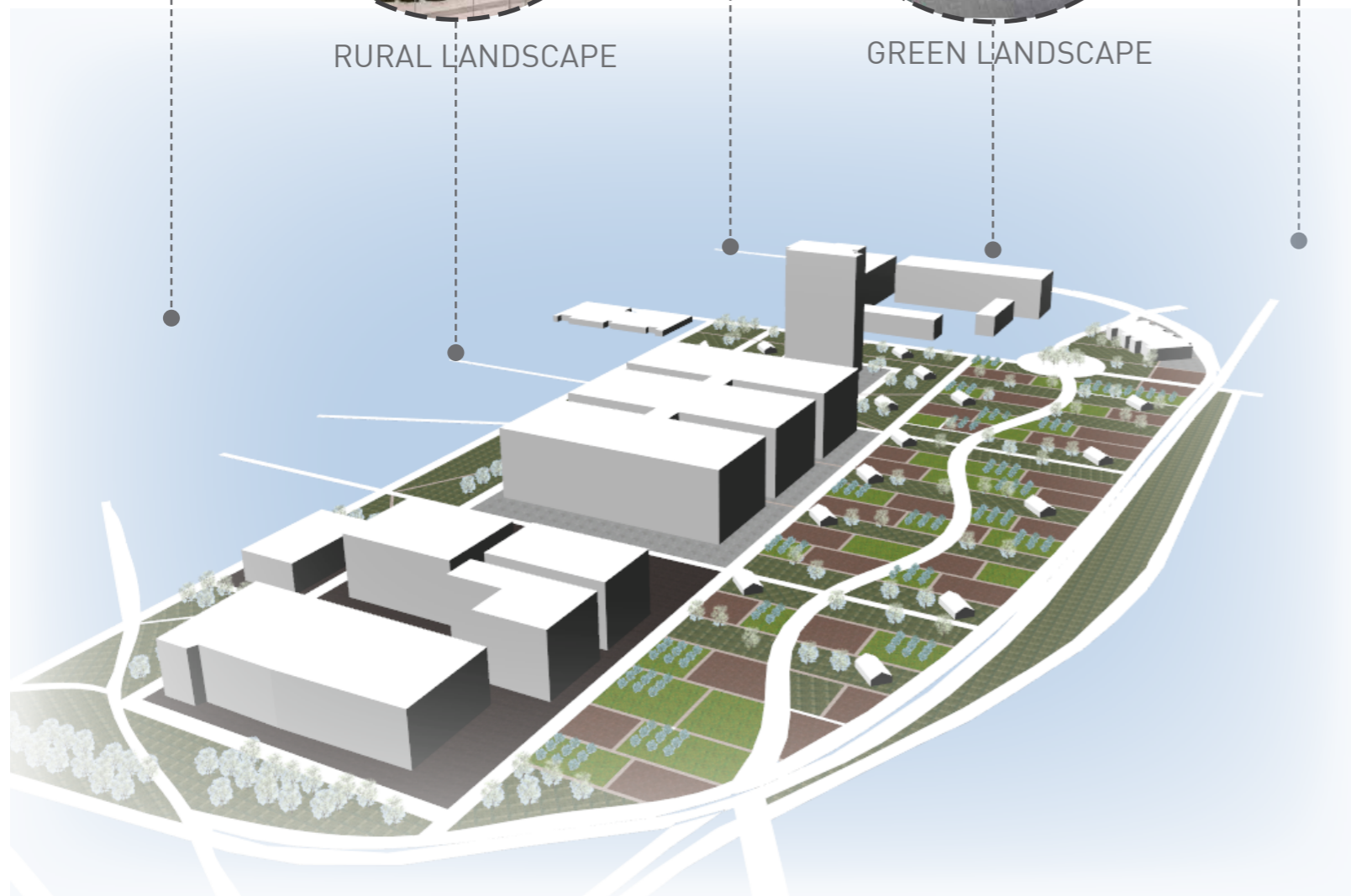
GREEN LANDSCAPE



EQUIPPED OPEN SPACES



COLOURED LANDSCAPE



3D MODEL

2 - THE PROJECT

TWO DIFFERENT SIDES



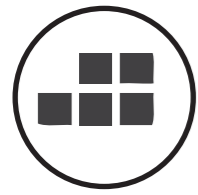
VISIONS

2 - THE PROJECT



VISIONS

2 - THE PROJECT



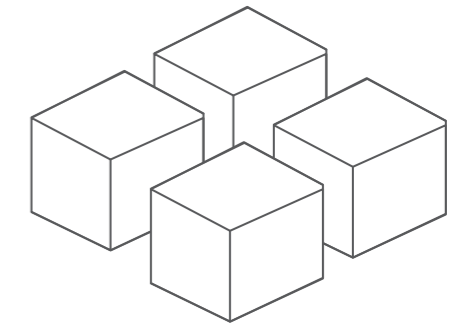
BUILDINGS

FUNCTIONS AND SPACES

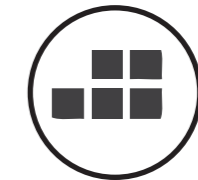
The last and the smallest scale of the project is the building, in particular i proposed actions addressed to the selling pavillons of the Ortomercato. The actions are in prevision in terms of functions more than of architectural issues, i thought was very important to review the relationship between public and private inside the selling pavillons, reducing their territorial impact and adding new spaces dedicated to a more retail function, but also restoring spaces or facilities for the public. I added also new buildings, oriented to a repliable and modular architecture and shaped by flexibility in various forms.

Anothe element that i tied t enhance with the actions is the relationship among different spaces inside the pavillons but also in the new buildings, finding various solutions to find away of comunication each other. In this manner people and citizens coming from outside and external to the functions of the Ortomercato could watch the processes and continuously learn more about the market.

Temporality is another key word for the new functions and the new buildings inside the green spaces. The most diffuse buildings that i wanted to propose is the 'greenhouse', for its flexibility in terms also of temporality but overall of functions, and i tried to build up a system in which every greenhouse has its functions, but mainly divided in three macro contexts: educational greenhouses, restoration activity greenhouses and typical agricultural greenhouses (or storages functions). Building a system inside the green area develop also an integrated system of different functions new and innovative on the territory in this part of the city of Milan. The last point to underline is the sustainability of the interventions, i chosed the kind of structures that could be sustainable for environment but also reduce and produce energy with different tools, especiallu through solar panels, recycling methonds and a certain orientation for solar heating during seasons.



ACTIONS



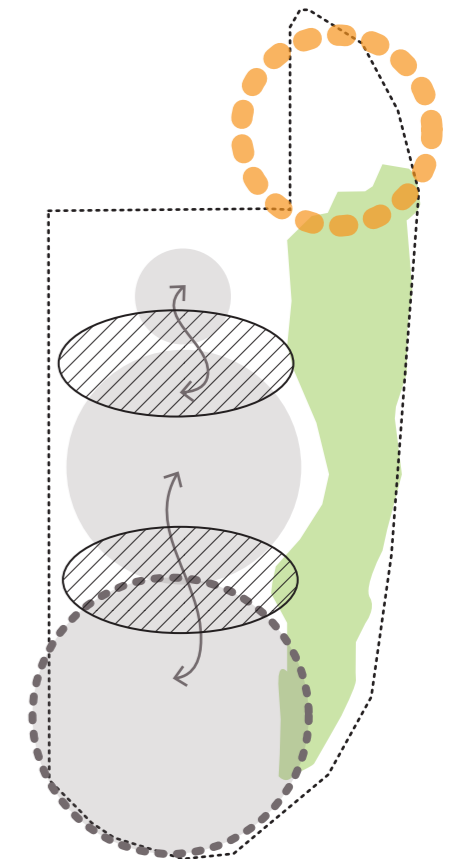
FLEXIBILITY



TEMPORALITY



ENERGY

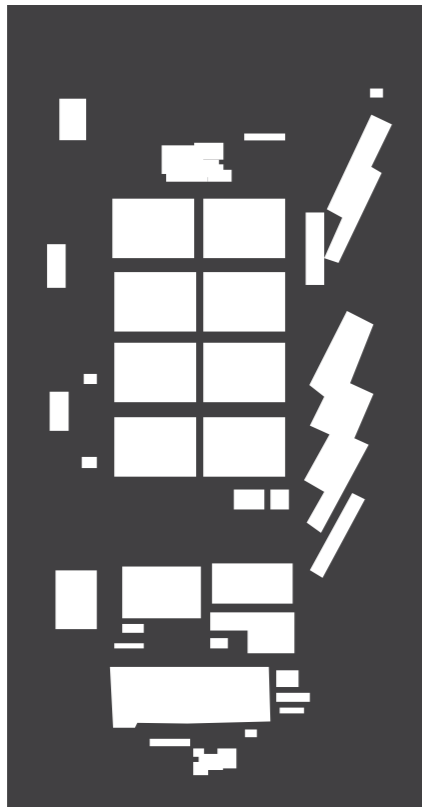


2 - THE PROJECT

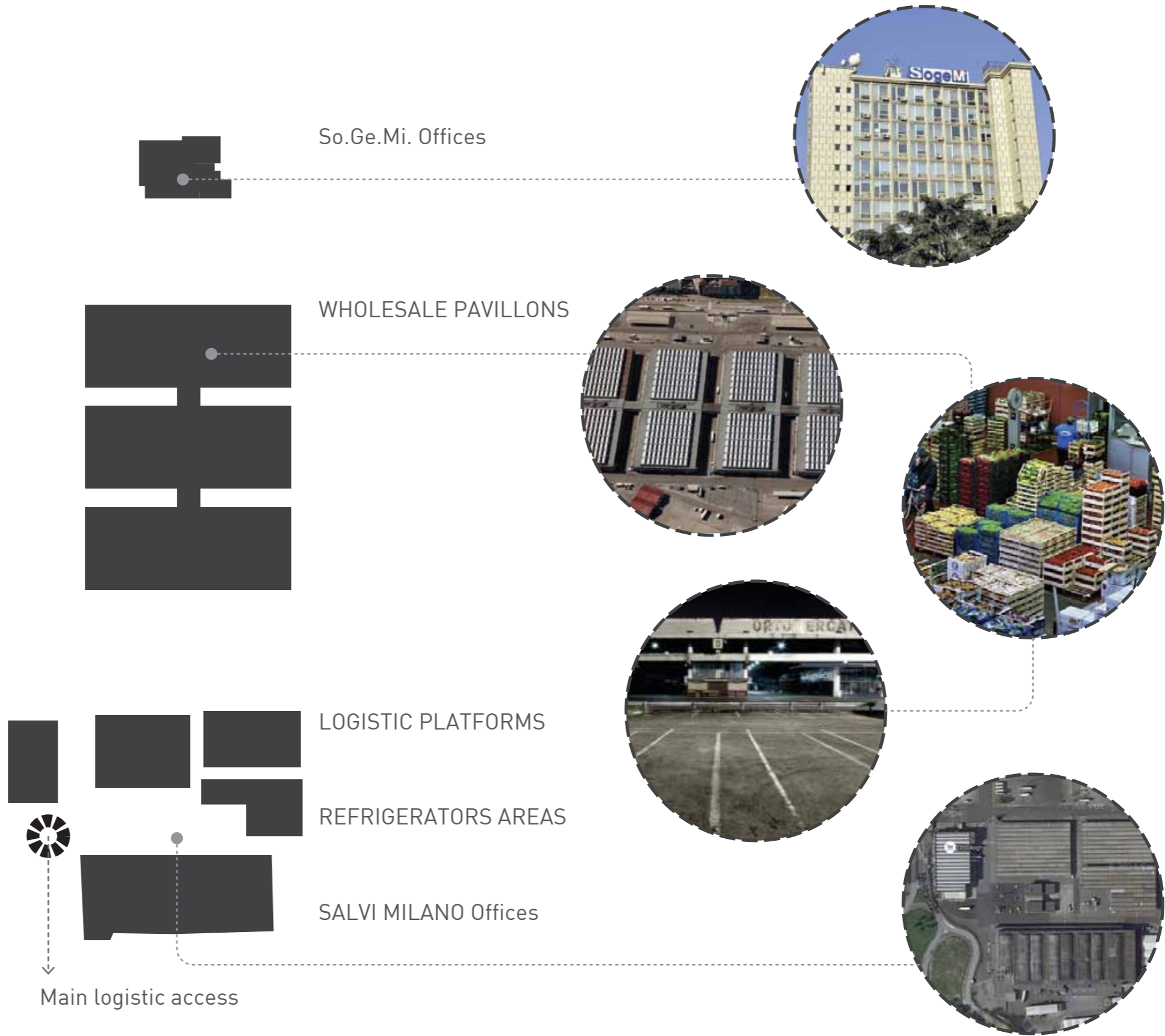
CURRENT SITUATION

Flexibility is about the disposition and the new organizations of buildings on the territory. The idea is to keep the wholesale pavillons (at least the majority) because of their functions to be maintained. Also the main offices in the project are supposed to stay, because of their logistic functions (like for examples refrigerators, storages), but the idea is to reduce as more as possible the presence of other pavillons in order to give a more flexible and developable in agricultural terms the surrounding.

In order to fulfill those objectives the idea is to play with existing pavillons, the main idea is to give flexibility about heights, what the project proposes is to use heights to add new functions and a new way to live the markets not only oriented for the wholesale function. Also shapes and public/private relationships. The idea is to make the most of all public spaces, where people could look directly what is going on inside the pavillons.



Ortomercato total surface:
438.426 sqm



PAVILLONS SCHEME



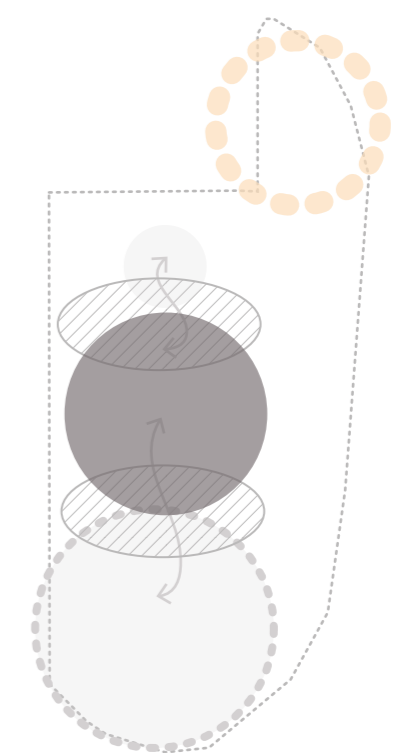
2 - THE PROJECT

FLEXIBILITY

THE STRUCTURE OF THE PAVILLONS

The project for existing pavillons has in prevision actions oriented to changes in terms of function and liveability as i said. In this way the objective is to play with the existing spaces adding a new level dedicated to a more public development working with the activities offered by the external landscape of urban agriculture and vegetable gardening activities, building a system integrated of activites also of restoration and for free time to guarantee people to enjoy products and the urban-rural life in the same place. The interesting point of view is to show how the things are

going on inside the pavillons to people, opening those areas (as the municipality of Milan and the area's property just did, opening to people the pavillons 6 days a week) to everyone and working with new and existing activities or organizations sensitive to the themes offered by the project for this area. The example/reference case of the flower market of Ruichang (China) is very exhaustive for what concerns the idea of the new liveability of the spaces, and the schemes below are showing the proposal for Ortomercato pavillons.

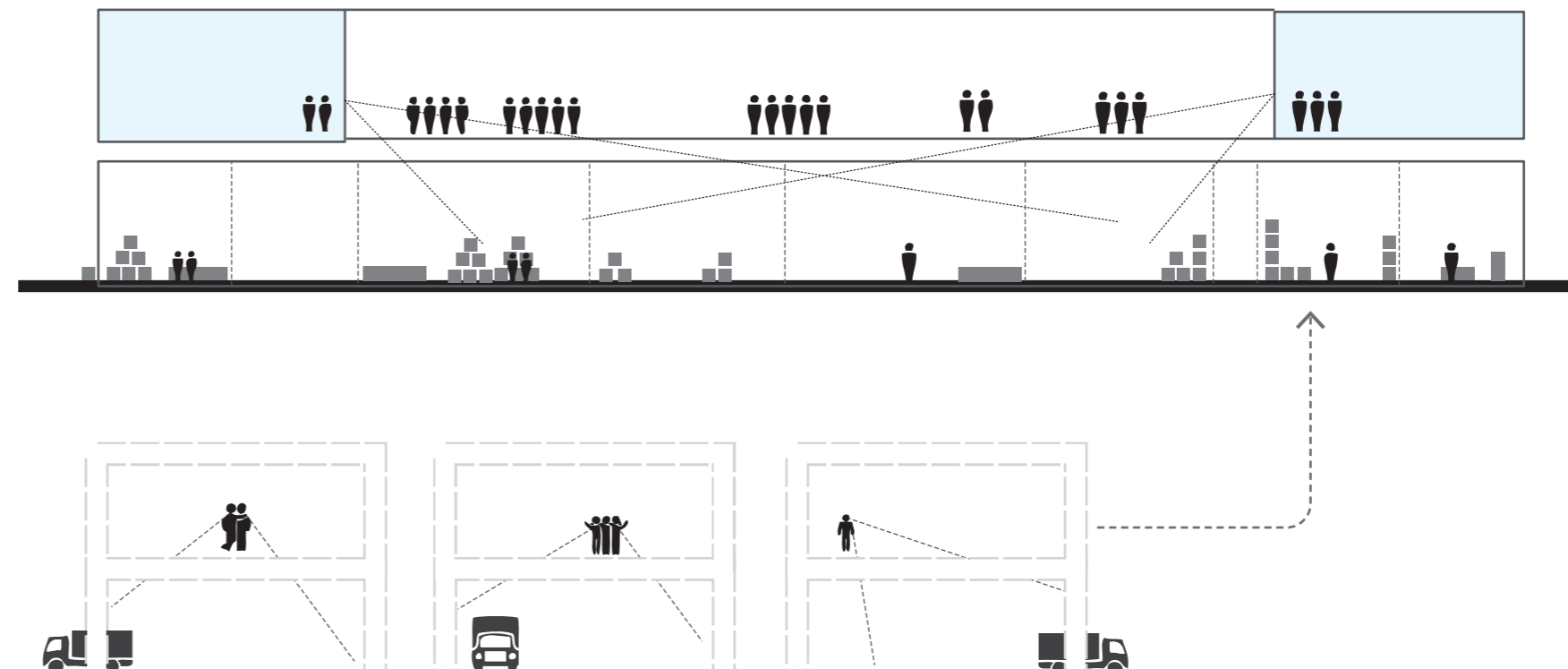
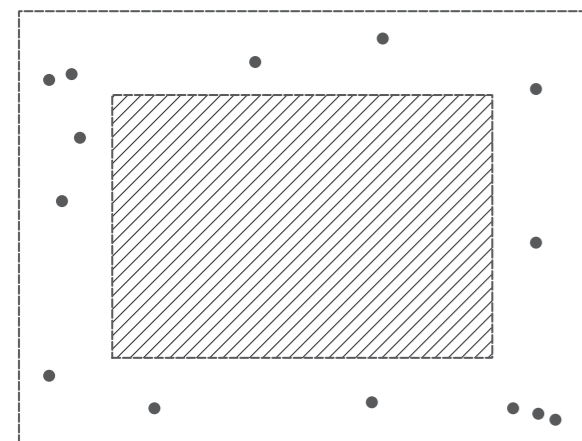


REFERENCE: Sustainable Flower Market, Ruichang China

The building would consist of a series of shopping streets with shops and partially detached offices all accessible from an external path, referencing the spatial arrangement of traditional Chinese merchandising alleys, stacked on top of each other. It's facade would be extended in specific places and fully glazed including also it's undersides, allowing to improve the commercial value of presented high-end products by maximizing it's exposure from the street level. Rather than creating a continuous perimeter building the idea

of openness would be emphasized not only by creating groundfloor openings to the courtyards but also by separating the shopping block from groundfloor market areas to allow control depending on the tourist season. This would create a hybrid structure with a vernacular market offering special or traditional goods, mostly flowers but also handmade craft, artworks, souvenirs sold in small separated blocks.

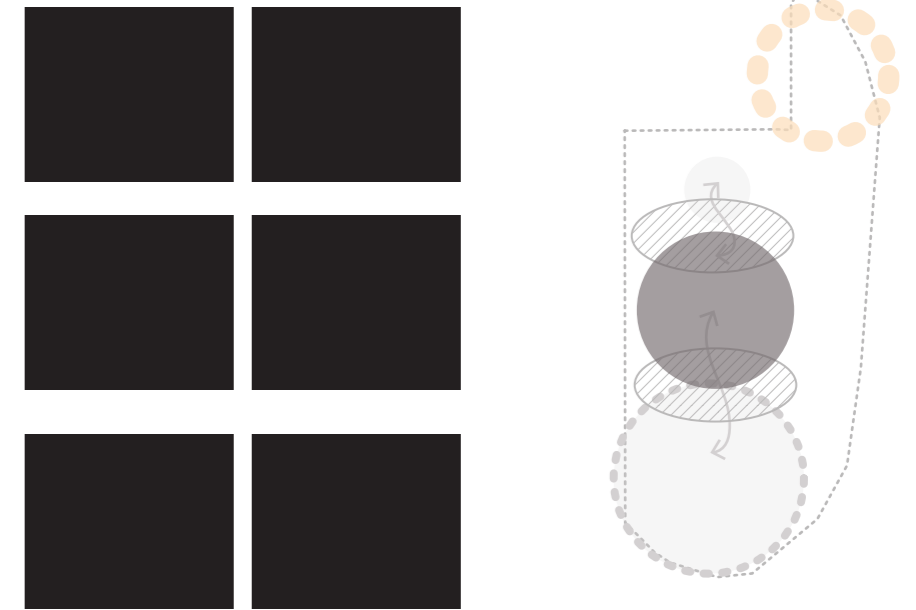
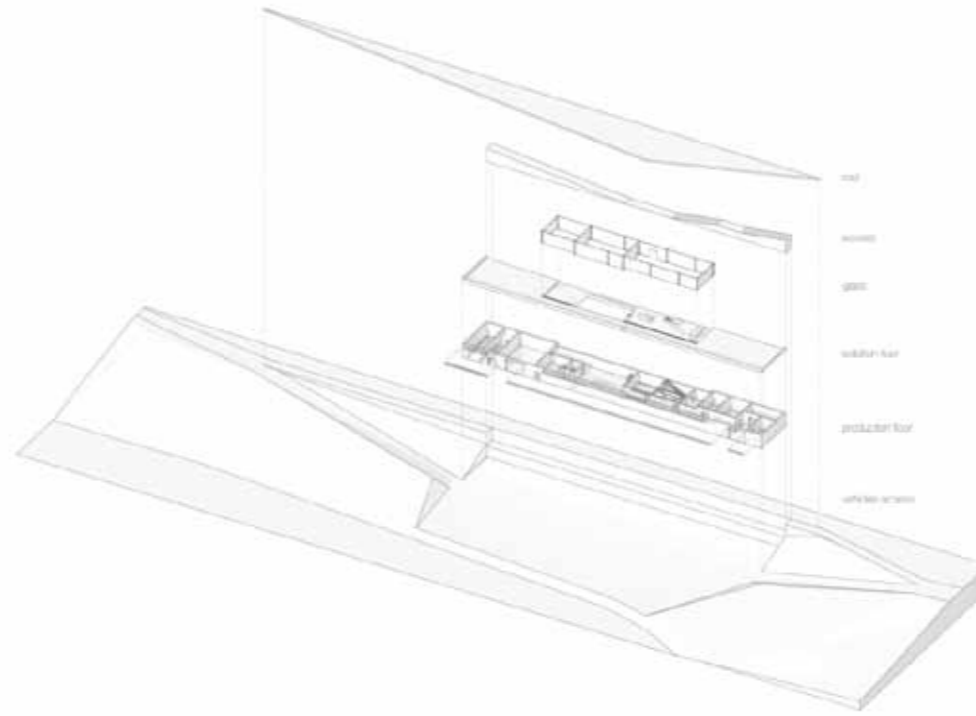
Schematic plant and sections of the pavillons



2 - THE PROJECT

RELATIONSHIP BETWEEN SPACES

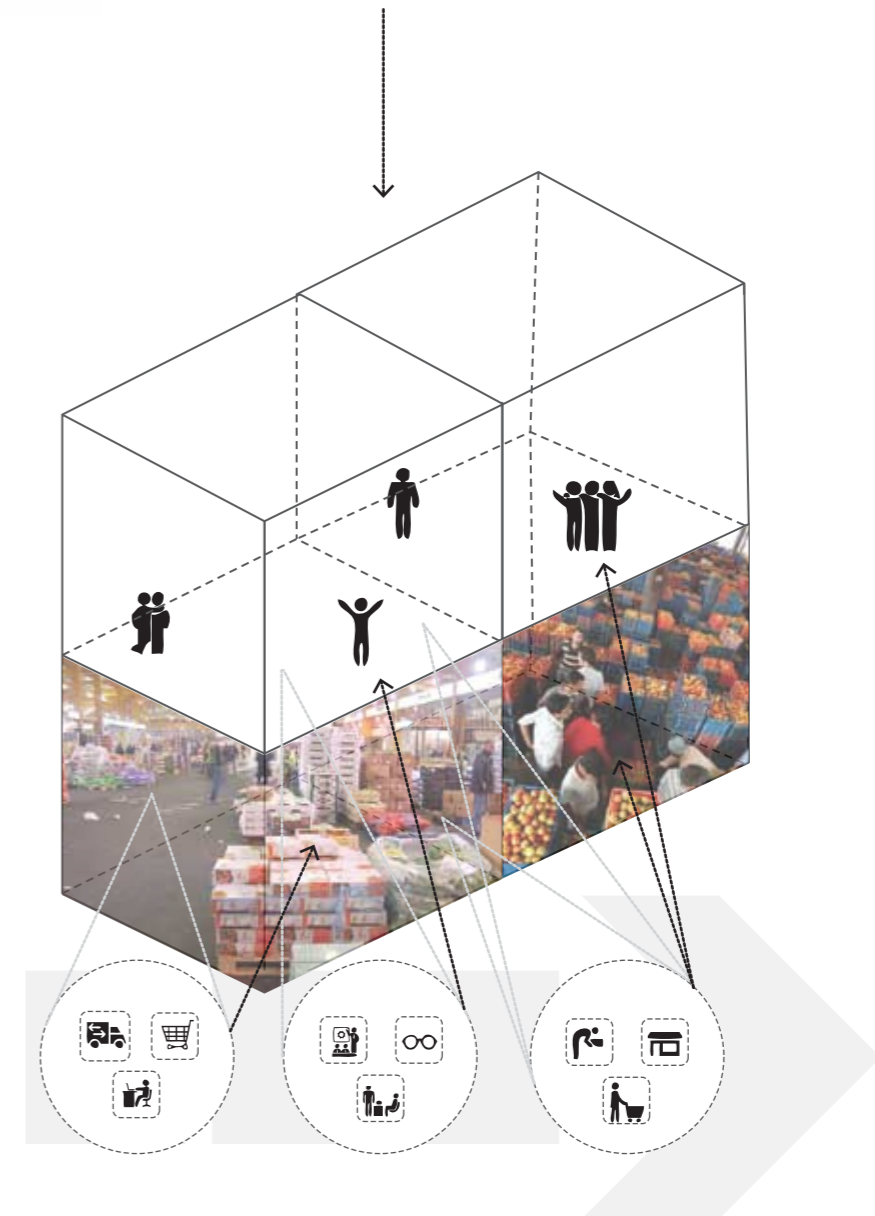
As the case reference chosen showed in this page, exactly the project for the renewal of a winery, tells us, the idea is to manage with spaces with the aim of the best way of communication and direct observation of every function by everyone; in this way the idea is to play with shapes but also with materials adequate to have this generation of communications and visions of the different activities inside the pavillons, with different levels of liveability and relationship between public and private spaces. Glass materials are an efficient solution to show below activities and also a court shapes of the pavillons, that should host more public activities on the upper level.



REFERENCE: WINERY, project by Lazar Djuric

Location for the winery is at the edge of the vineyard field descending towards the water channel. By analyzing the site, panoramic view south of the channel popped out like one of the best attributes of this location. Furthermore, the physical extension of the vineyards towards the panorama creates an interesting relation between the existing nature and its consumers. In this way, winery blends with the ground. Surrounding space suddenly becomes a single unit with the project. This long extension has a purpose of a roof and a cover for the big terrace below. At the same time it creates a polygon for further development of the project. Right below the roof is the

exhibition space which has access to the big terrace which offers panoramic view to the south. There is also an office which has direct connection to the production part. The natural slope was used to position the production part in the ground which requires dark and cold space. Production and exhibition parts are closely connected with vertical communication and with openings in the floor through which the visitors can observe the wine cellar below. These floor openings are covered with transparent glass tables. In this way, strong multi-purpose unity is achieved. People are connected with nature and wine. Nature and vineyards are represented as singular continuity.



2 - THE PROJECT

⌚ TEMPORALITY

According to the idea of the whole project to bring something new that could offer a differentiation of functions also to integrate people with different exigences, the aim is to bring a mixed-use into this area, and the idea is to do it through new flexible buildings, in architectural terms but overall in terms of use, re-use and function.

GREENHOUSES

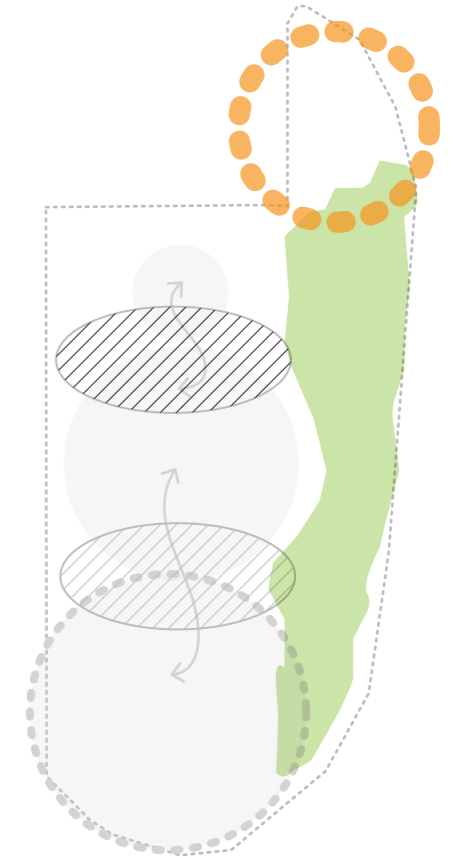
The dimensions of traditional greenhouses can go from 6.00 m with heights of 2.15 m and 3.00 m ; 8.00 m with heights of mt. 2.15 and mt. 3.50; mt. 10.00 with heights of 2.15 m and 4.00 m



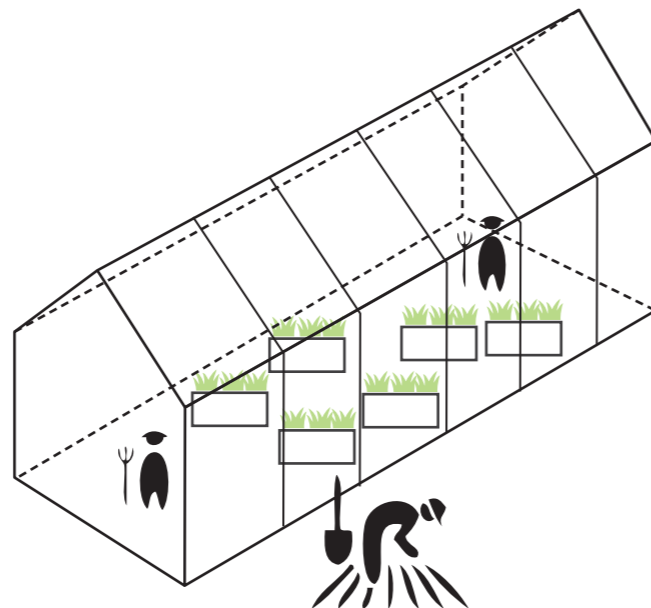
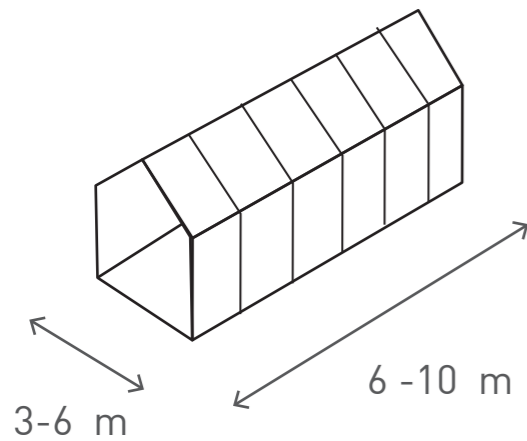
REFERENCE: De Kas oasis, Amsterdam

In 2001, top chef Gert Jan Hageman, who had earned a Michelin star in Dutch haute cuisine, found a new direction for his own career and a new purpose for the old greenhouse that belonged to Amsterdam's Municipal Nursery, which dated from 1926, and was due to be demolished. With a lot of luck and help from the municipality and his family and friends, Hageman succeeded in converting the unique 8-metre high glass building into a restaurant and nursery.

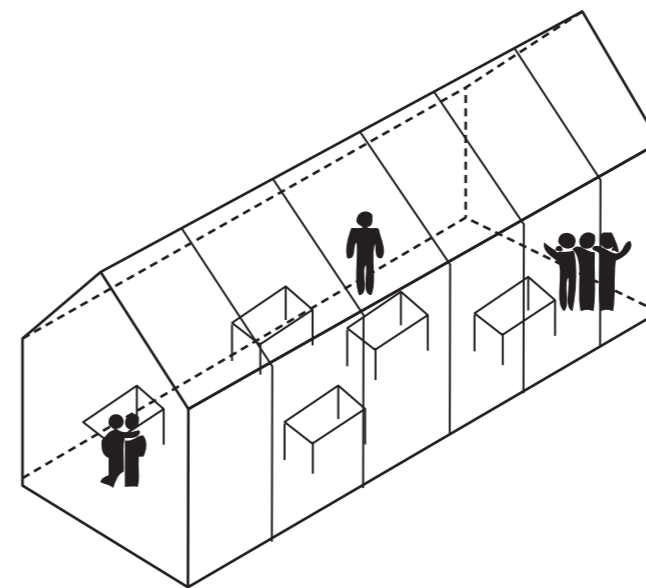
Located in Frankendael Park, De Kas is an oasis of calm for the fifty-thousand guests who dine there each year; either in the breathtaking dining room designed by Piet Boon, or outside in the herb garden. It's like a kitchen surrounded by fertile soil where vegetables and herbs thrive where daylight shines in from all sides and where the chefs are free to express their creativity daily using the best the season has to offer.



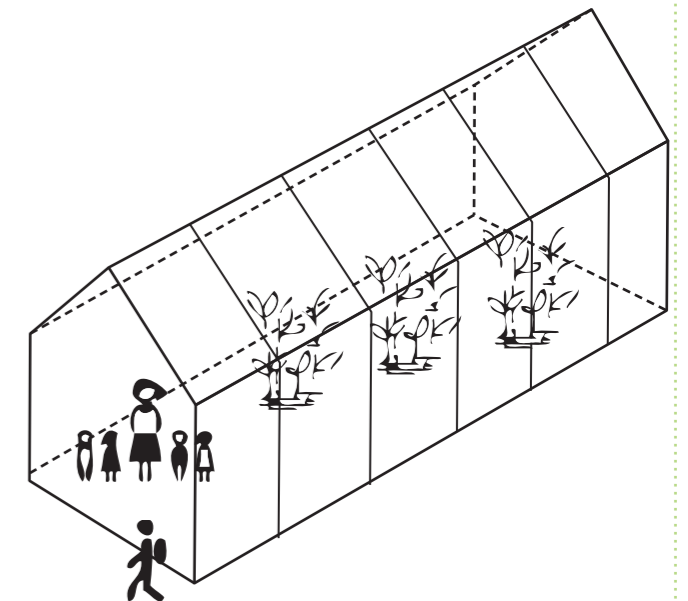
CULTIVATIONS



RESTAURANTS



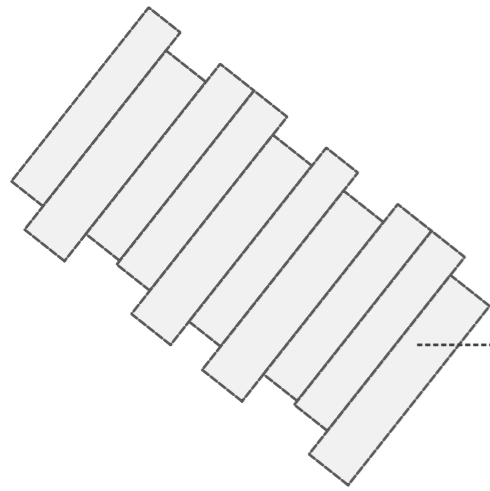
EDUCATIONAL SPACES



2 - THE PROJECT

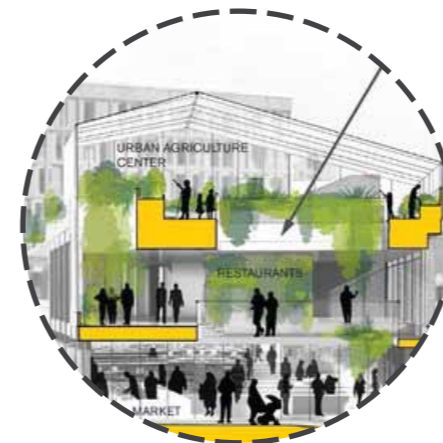
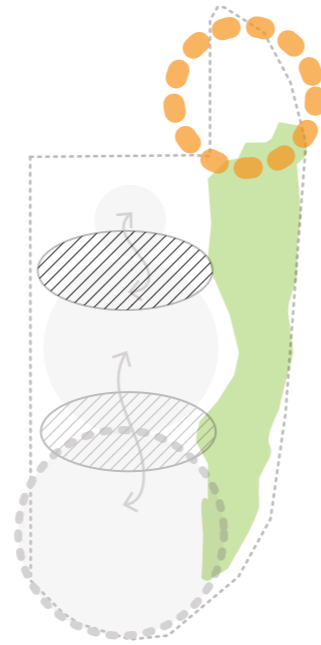
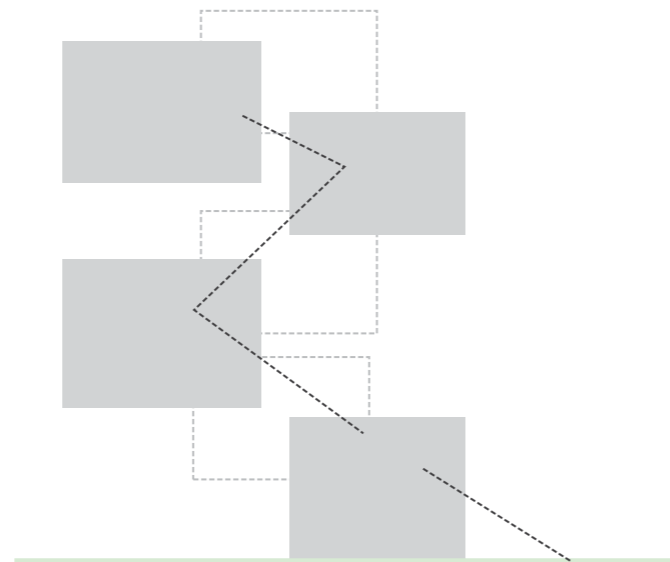
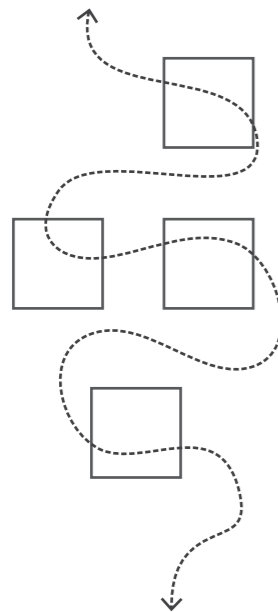
CONTAINERS BUILDINGS: FLEXIBLE SOLUTIONS AND MIX-USE

The area that result to be central to the structure of the wholesaler market as a whole is located in the north part of the area of the Ortomercato; in this space where once was located an old kennel, the proposal for the project is to locate a mixed-use area oriented to functions of integration between the different markets (especially the flower market, as suggest the activities located in cascina Cuccagna in Milan, hosting flower cultivations for people), or activities for restoration or resting places (as hotels and bed and breakfast) with facilities and shopping spots always dedicated to food related or urban agricultural activities of products but more dedicated to people and more in detail, in collaboration with local buisnesses and privates.



Possibility to host different functions:

- Hotel and bed&breakfast
- Spaces for convention centers
- Shopping and facilities
- Integrated activities with other wholesale markets



REFERENCE: La Cité a Docks, Le Havre

Built in just five months, the Cité à Docks cost about five million Euros, financed 20% by the French government. The land made available by the town, falls within the redevelopment of former port area.

The nw citadel is the result of the transformation of old container in modular units equipped with every comfort. Assembled on a metal grid, the containers have given shape to a four-storey building that houses 100 apartments of 24 square meters each. The solution was found in a metal structure that acts as a structural support to the old container, while enabling to stagger the individual units, and create new space for walkways, terraces and balconies. Instead of just stacking the boxes right on top of one another, they staggered them and left alternating areas between containers empty so that they act as walkways and balconies.

REFERENCE: Fioreria Cuccagna

Fioreria Cuccagna supports anyone who cares about nature and manual labor. It 'a place to discover and learn about reality independent artisans, a place to share and exchange where to take a course, listen to a presentation, look at pictures or paintings on display temporarily, a space in which to propose activities. Is a workshop of seasonal flowers, essences forget, organic plants and flowers unusual, coming from nurseries and producers virtuous.

REFERENCE: BLACKSTONE MARKET, Boston

Blackstone Market has been thoughtfully conceived as a critical piece in Boston's emerging Market District. Together with the Haymarket pushcart vendors, the food purveyors on Blackstone Street, the Public Market in Parcel 7, and the nearby small-scale food shops of the North End, Blackstone Market will draw nearby residents and office workers, foodies, and tourists. This new market building on Parcel 9 will contain a ground-level market featuring farm-grown produce and products, destination and casual restaurants, a rooftop farm, and 50 residential rental units.

2 - THE PROJECT

ENERGY

PV PANELS

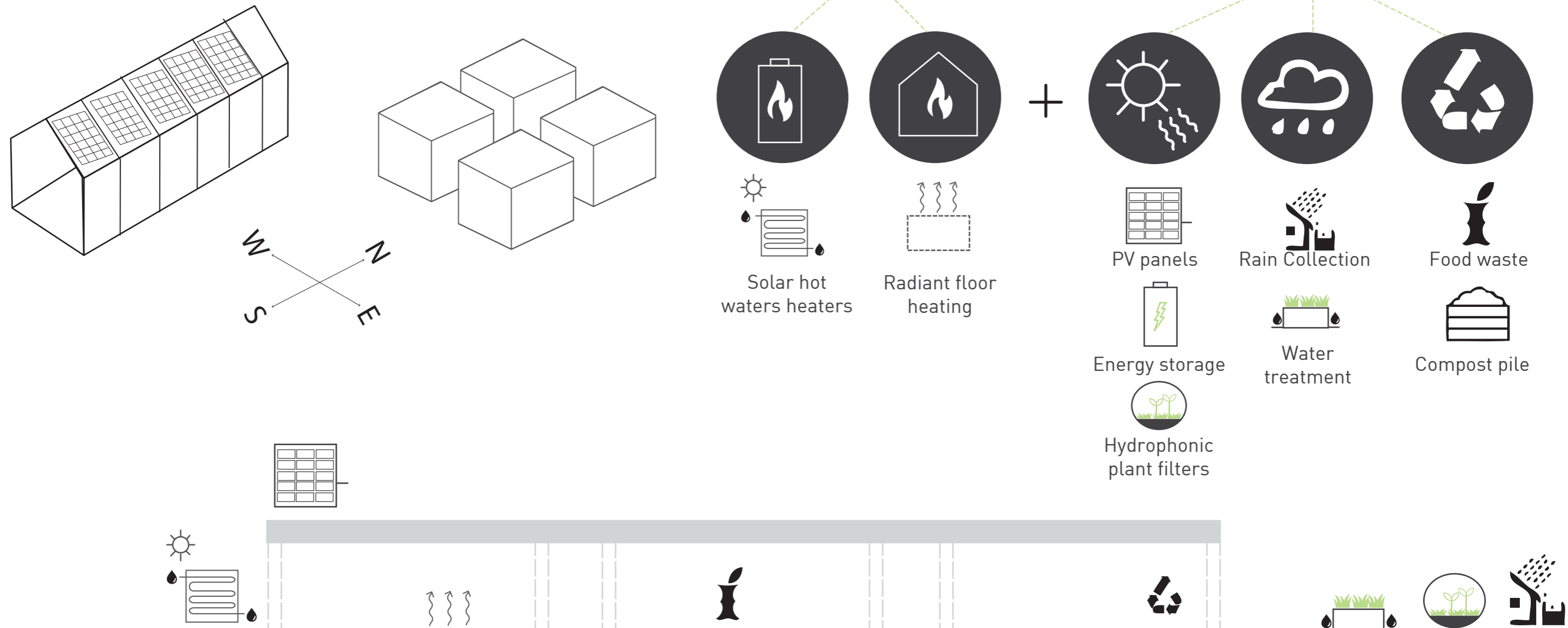
The photovoltaic cell, or solar cell is the basic element in the construction of a photovoltaic module. It is an electrical device that converts light energy directly into electricity through the photovoltaic effect. In this way the base of the energy saving cited in the draft proposal is where possible the localization of areas with photovoltaic panels aimed at the production of electrical energy, in particular for ow regards the greenhouses pavilions and the new buildings provided.

BUILDINGS ORIENTATION

the correct orientation of a building and 'one of the fundamental prerequisites as part of good design and not only, as mentioned above in terms of green building. The overall conclusions of the scholars tell us that (and could not be otherwise), whereas in our hemisphere arc apparent size of the sun across the sky takes place in a southerly direction, the opposite to the south is the optimal one for the solar heat gain conversely the northern front invested from cold winds will be more susceptible to heat loss. in general regard-

-ding the Italian temperate climate, the orientation of the main buildings in the direction east-west, or with the layout of the main facades to the south and north, taking care to properly shield the transparent components south so that solar radiation can penetrate in winter and be hampered in the summer, as a good practice for the optimization of solar heat gains.

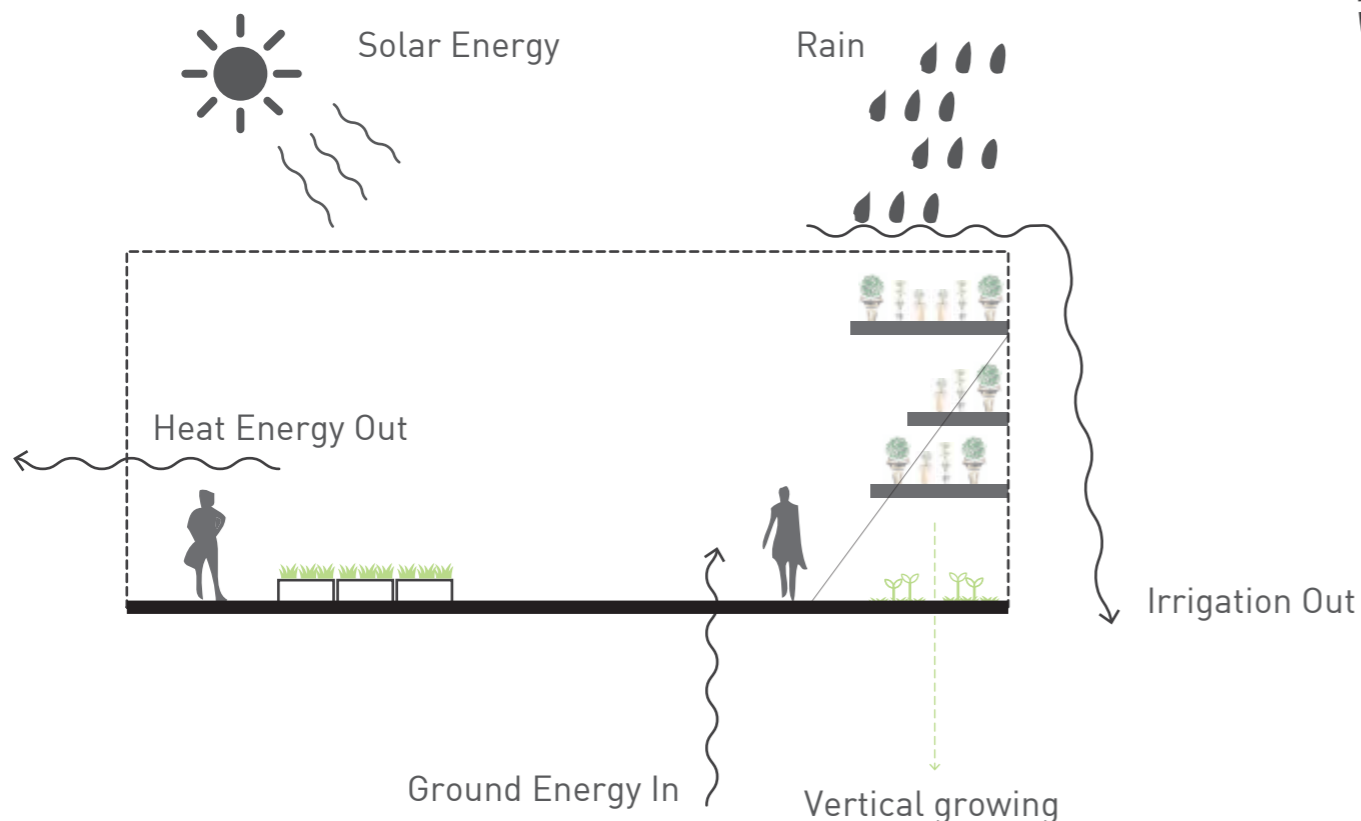
Schemes of different energy saving project techniques and methods



2 - THE PROJECT

GREENHOUSES

The greenhouse is an environment built specifically for growing flowers and plants with the same characteristics of their natural habitat or for drying agricultural and forestry. In a heated greenhouse in Northern Europe then they can grow plants that typically grow in countries with tropical climates; equally, in greenhouses chilled you can get the opposite aim. Greenhouses then have the privilege of being able to create the perfect setting for the type of plants you intend to grow. In this context beside the creation of new functions inside the greenhouses in the agricultural landscape, as restaurants or educational spaces, the project aims to develop also indoor-agriculture, to improve and maintain agricultural activities during all the periods of the year, and in this sense the objective is to use and develop sustainable new ways of cultivating inside the greenhouses, as the Chicago example of 'The Plant' as reference teaches; the Plant is a project of Bubbly Dynamics, LLC. Founded on a model of closing waste, resource, and energy loops, now is being converted into a net-zero energy food business incubator. A complex and highly interrelated system, The Plant will hold indoor demonstration farms and educational facilities operated by Plant Chicago, NFP and will incubate sustainable food businesses by offering permanent tenant spaces at low rent and low energy costs through Bubbly Dynamics, LLC.



REFERENCE: The Plant, Chicago

The Plant's aquaponics system is operated by Plant Chicago, NFP as a demonstration farm. Aquaponics is a closed-loop growing system that creates a symbiotic relationship between aquaculture – raising fish, and hydroponics, growing plants in water instead of soil. The fish produce ammonia, based waste that is sent through a biofilter where solids settle out and the rest is broken down into nitrates. Those nitrates are then fed to plants growing in hydroponic beds. By absorbing the nitrates, the plants clean the water, which is returned to the fish. Plant Chicago's system was also custom-built and incorporates recycled materials into its construction. Visit our Non-Profit's Farms page for more information.



REFERENCE: Jellyfish Barge, by PNAT, Florence University

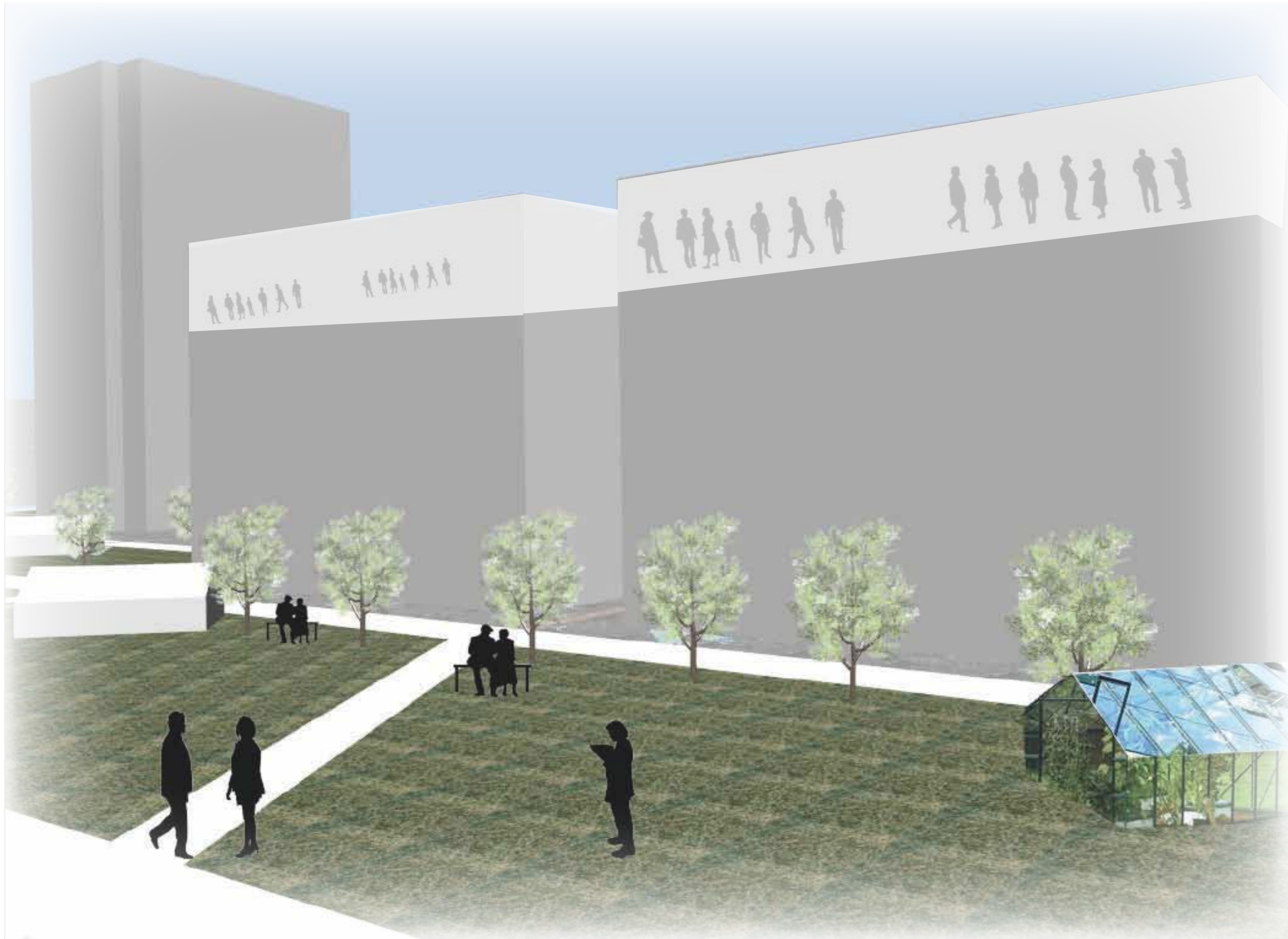
In the case of Jellyfish Barge, fresh water is obtained from solar desalination seven places along the perimeter, designed by environmental scientist Paolo Franceschetti, arriving to produce up to 150 liters per day of clean water through the natural phenomenon of solar distillation (replicated in small scale), using brackish water, salt or even polluted. The energy for the operation of fans and pumps is provided by plants, integrated in the structure, which exploit renewable sources. The glasshouse is presented as a modular unit, built on a floating platform in wood of about 70 square meters, resting on 96 drums of recycled plastic and covered with a glass dome in lattice structure. The dimensions are contained and adapted to support two families, providing water and food security without impacting on existing resources.



REFERENCE: EXPO 2015, Vertical greenhouse

The cultivation in a closed cycle allows to have no waste and to produce no waste or waste, avoiding pollutants such as pesticides or plant protection products. The greenhouse, made of plywood overlaid on plans, is a prototype of a 3 x 3 x 4.5 meters high, reproducible and industrially not even create noise, except for a slight hum. The environment is enclosed by windows and is completely sterile, they do not enter insects and pests, thus product quality is excellent. The lettuce and basil, here grown on twelve levels, one square meter each, according to the technique of hydroponics (sod peat pressed and totally immersed in water with nutrient solutions to continuous recycling), provide a production practically double compared to crops traditional, from six to fourteen harvest cycles per year for each level and obtaining a saving of 95% water; only two liters for a kilo of lettuce against the traditional 40-45 liters.

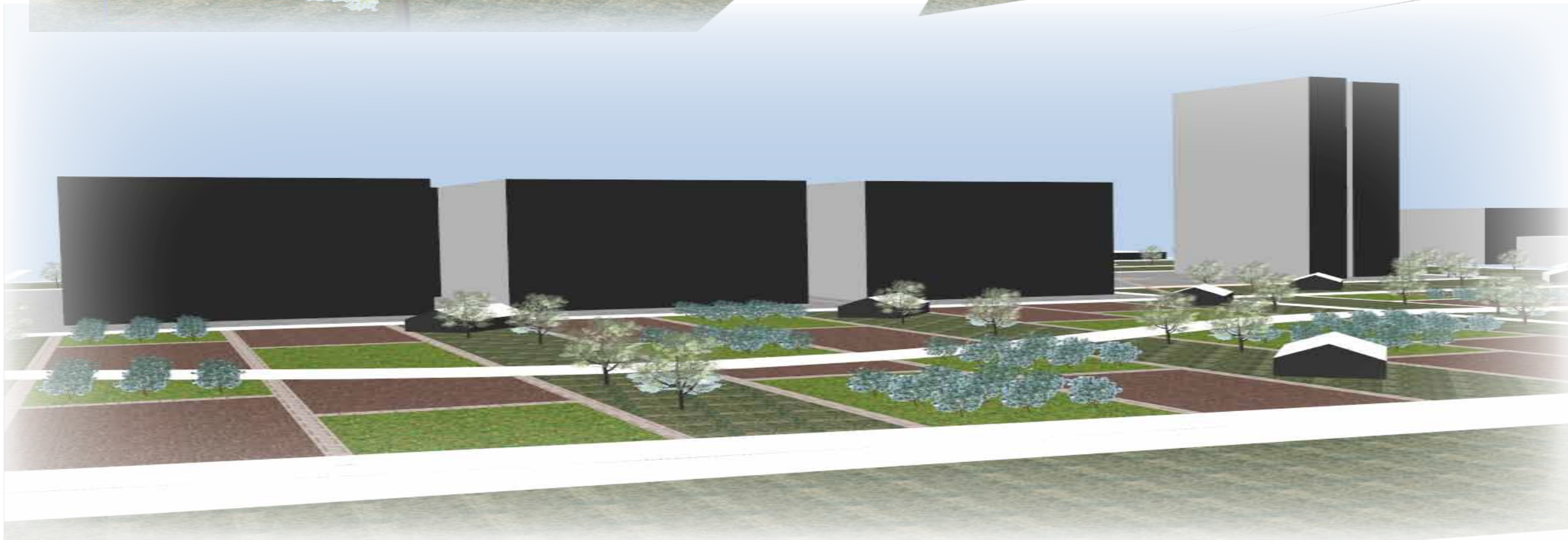
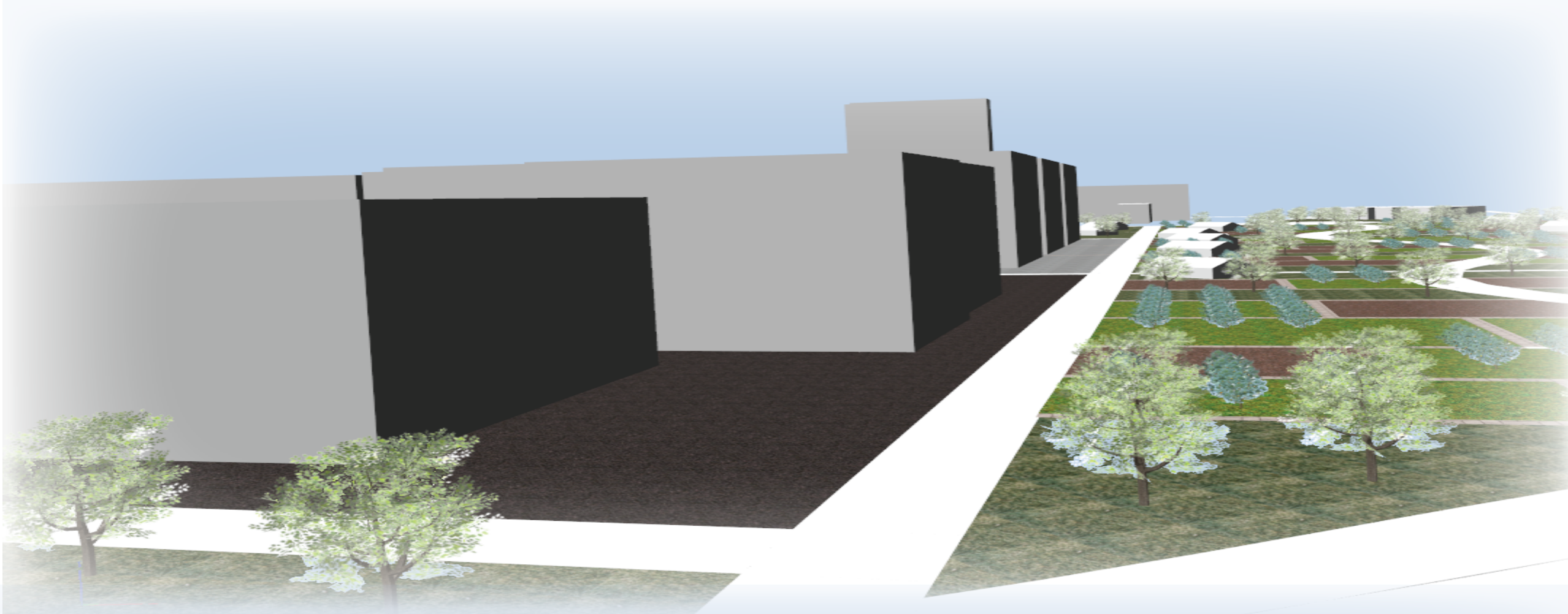
2 - THE PROJECT



VISIONS

2 - THE PROJECT

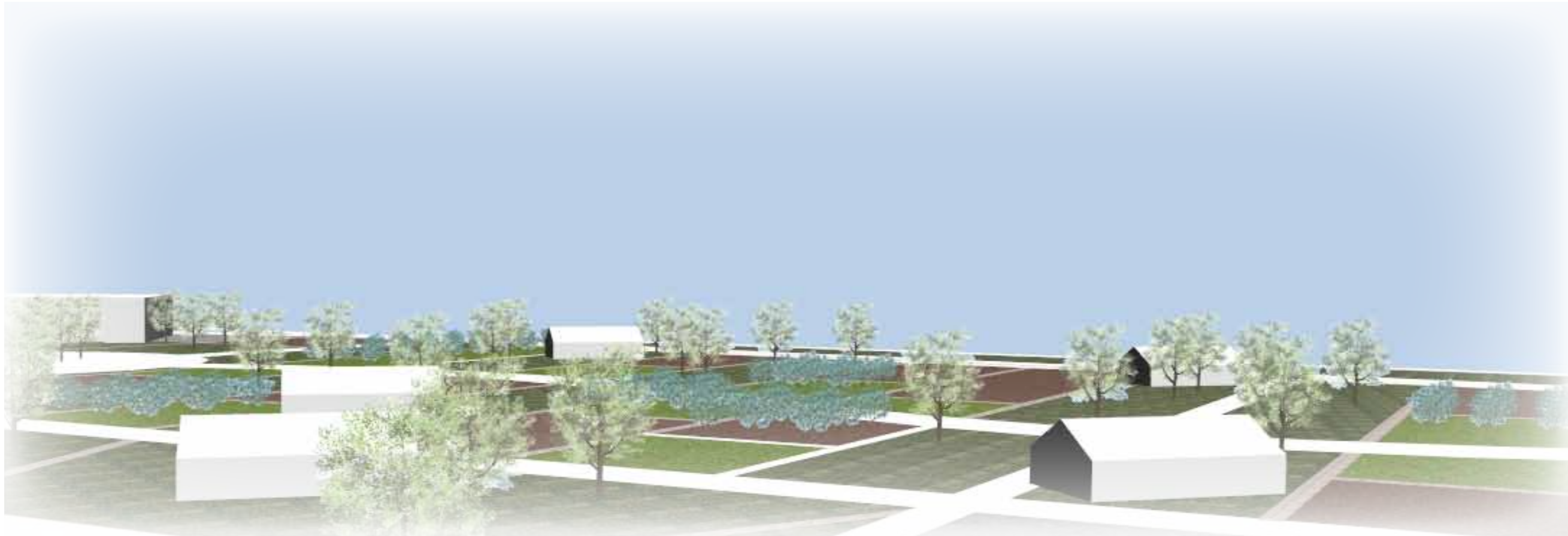
DIFFERENT PATHS BETWEEN BUILDINGS AND URBAN AGRICULTURE LANDSCAPE



VISIONS

2 - THE PROJECT

TYOLOGIES OF BUILDINGS: CONTAINERS AND GREENHOUSES, MODULAR ARCHITECTURE

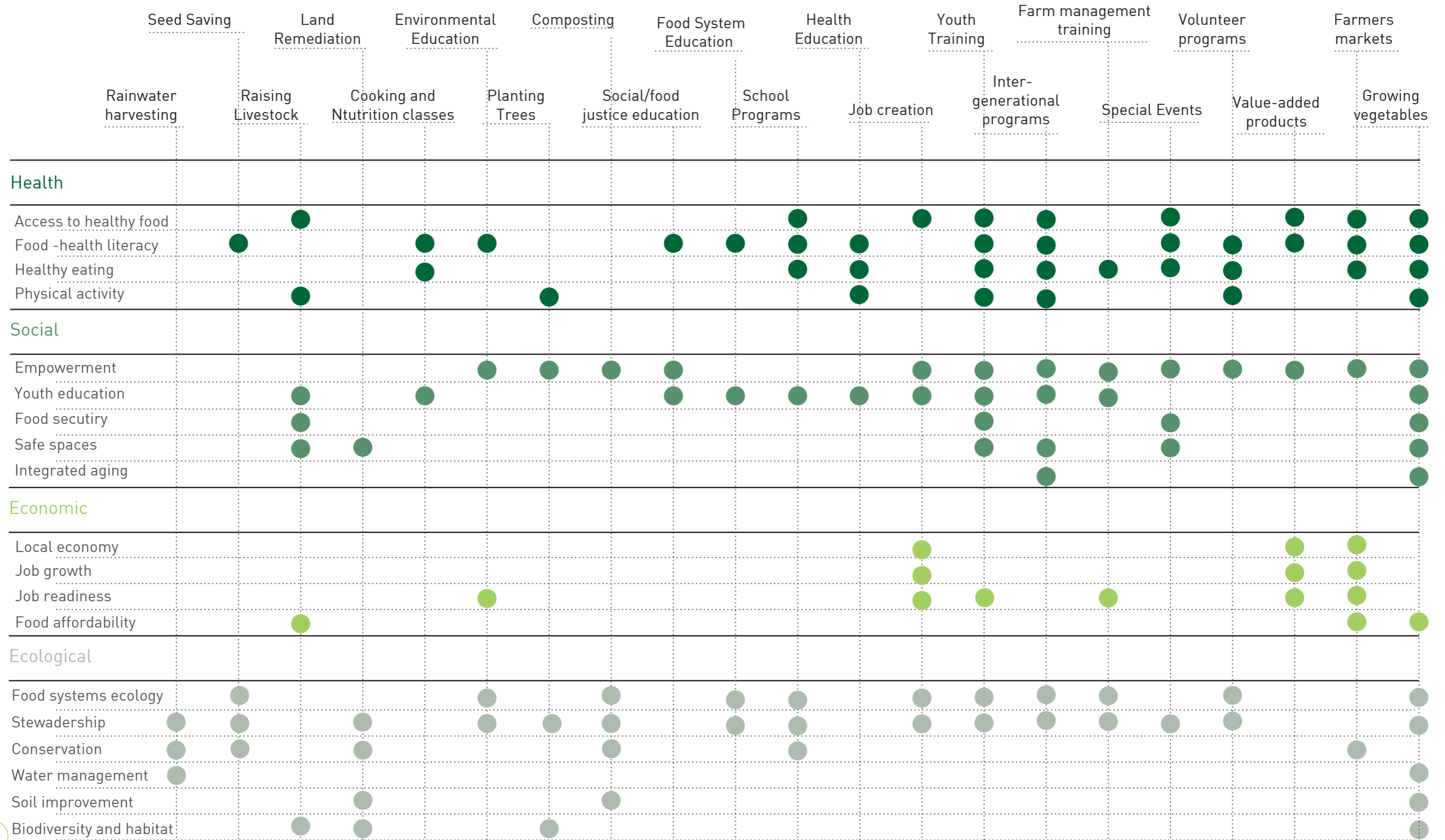


VISIONS

3 - FEASIBILITY

THE IMPACTS

A lot of studies shows that exists a link between urban agriulture activities (as cooking, nutrition classes, rainwater harvesting, farmers markets) and the health, social, economic and ecological sustainability benefits (as eating healthy, social connections)



3 - FEASIBILITY

POLITICAL FEASIBILITY

The political and administrative feasibility of the entire project is proposed on the basis of different levels of actors who have different relationships between them and also based on the different levels of intervention depending on the scale to which it corresponds.

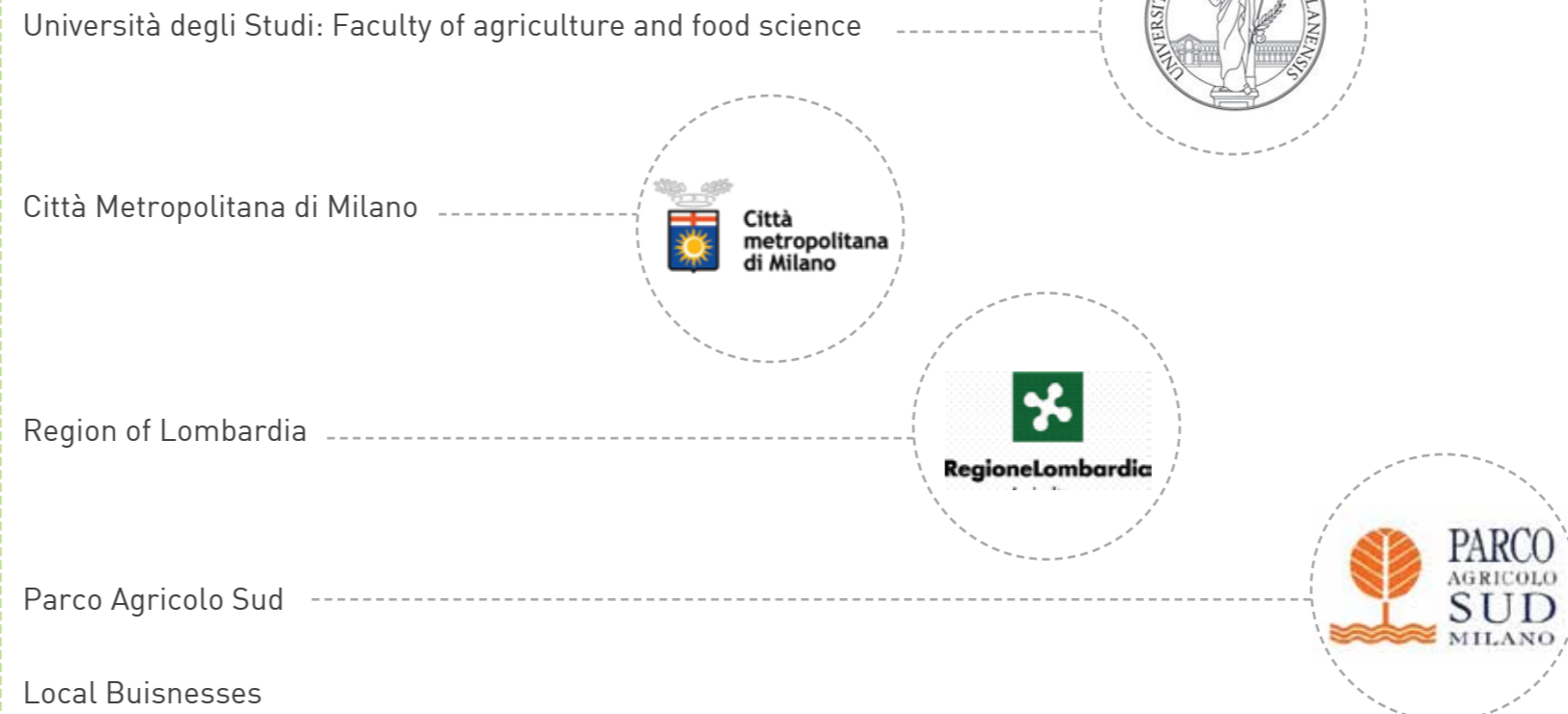
ownership of the wholesale markets is SO.GE.MI., which is included among the principal actors cos'ì as August , The association of fruit and vegetable wholesalers that also housed within markets. Alongside these two entities will be the City of Milan, with regard to discussions relating to the shares at the regional scale that will influence the entire city and the area itself. It will also be required real estate investment funds for new construction and future activities related to it, and also in relation to these actions of private investors connected with the activities of the environment and the cultivation of food (such as Eatly Slow Food or potential post-Expo). The supporting actors (level of influence) will be the Lombardy Region, the Metropolitan City of Milan, the South Park Agricole, the University of Milan and local companies; these actors will be related to both investments and above all the activities that will be grafted No part of this territory, such as activities related to the university, which will require different spaces or the needs of local businesses and their willingness to enter into areas dedicated to refreshment and products of agriculture. Other actors that may be involved in the proposed project related to this portion of land and agriculture and related activities are connected with it such as the FAI (Italian Environmental Fund), the association Ciboprossimo, connected to the creation of events and for sellers farmers, the consortium Cascina Cuccagna, with the activities proposed by the farm that can be re-proposed and built, and finally linked to the territorial scale intervention Wind project, which proposes a coupling path along the river Po. The actors involved have proposed and different ties in these pages will be explained and will go to support the proposed project.

ACTORS' SCHEME

PRIMARY ACTORS



SECONDARY ACTORS



3 - FEASIBILITY

OTHER ACTORS OR ASSOCIATIONS



Effectively promote a culture of respect for nature, art, history and traditions of Italy and protect a heritage that is a fundamental part of our roots and our identity. This is the mission of the FAI - Italian Environmental Fund, National Foundation nonprofit that since 1975 has saved, restored and opened to the public important testimonies of the artistic and natural Italian. It promotes education, love, knowledge and enjoyment to the environment, the landscape and the historical and artistic heritage of the nation. The main activity of the FAI is to heal and to offer the public special places owned by gift or inheritance and / or granted to management. These places are considered and managed as fulcrums of landscape systems, social, cultural and economic rights where they are.



Ciboprossimo is a social project, was created to promote a real community between farmers and consumers and represent it on the network with the features of a social network that allows everyone to participate with a few simple actions to build together the short chain. The offer is built by farmers, the question is formed by the participation of consumers and orients product availability; network Ciboprossimo makes visible subjects and objects, relate them making possible interaction with a direct, simple, transparent and informed. So it can both communicate effectively values that this food is the carrier that consumers listen and deal with their needs.



Cuccagna project recovers public use of citizens the valuable and large spaces of eighteenth-century farmhouse of the same name urban hitherto dilapidated and abandoned, to make it a meeting place and aggregation, an active laboratory of culture, a reference point for seeking common social well-being and quality of life. A business model supported and financed by those who care about the future of the city. In the heart of downtown, hidden among the buildings of Corso Lodi behind Porta Romana, it is one of the oldest farmsteads in Milan: the Cascina Cuccagna, in Milan since 1695.

To tear it from abandonment, a consortium of associations Milan has developed a project that sees its transformation into a new public space: a multipurpose center initiative and territorial participation.



VENTO is the first thread of a necklace that finally puts the pearls located along the Po river: landscapes, monuments, places, towns, farms, cities, other paths, etc. That track is the first sign of a visionary idea, but concrete that, with its 679 km, wants to fly high above particularism with which, until now (but we do not care to argue with the past but the future healthy) each project cycling along the Po has been presented to the public. VENTO caress along the rolling hills of Monferrato west and the wonders of the Po delta in the east. Not to mention the Venice Lagoon, with channels of Turin and Milan, with its canals. The project is also in collaboration with Politecnico di Milano.

3 - FEASIBILITY

CONCEPTUAL SCHEME

