Master planning the adaptive city

The use of master plans to create urban environments

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To the people who made this book possible: Uberto and Marco, Valeria and Alessandra.

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Preface

This book is the first result of a research study still in progress, about the use of master plans in urban planning. Master plans are investigated as *urban design tools*, proposing a specific urban transformation, and as *urban planning tools*, speaking with the general level of planning and referring urban transformations to larger scale planning tools. This book is the first of a series of publications, and it should be considered as an introduction and an overview about the use of master plans. The research study is still in progress, and it works simultaneously at studying the theory behind master plans and investigating, with field studies, practical experiences, testing the use of master plans as intended in real planning processes. This research activity has been developed in coordination and thanks to the funds that specific works conducted by and for the Department of Architecture and Planning at Polytechnic of Milano, Italy, have generated; it has been developed by the author during the last three years of research activity, confronting results with two major contributors, such as the School of Architecture at the University of Miami, and the Department of Geography and Planning at the State University of New York at Albany.

One of the aim of this book is to explain how wide is this field, even if the starting questions are very easy: are master plans really the missing link between urban planning and architecture? Are master plans the best way to propose urban transformations or urban projects to people, citizens, and stakeholders? Are master plans flexible and detailed at the same time, to help urban planning ideas to become urban design projects and, at least, to create livable and sustainable new urban environments? This first book presents a variety of ideas and thoughts, and deeply some case studies that the field studies are still investigating. It is written and presented in an easy way also to help students and practitioners to use it and to take inspiration from its contents. It is focused much more in investigating the real potentialities of master plans rather than offering all the information and the details that every quotation should have; the aim of the research is to understand if master plans are just suggestive drawings or, as suggested, useful flexible tools to put together the variety of variables that urban planning everyday presents.

The book makes a direct comparison between many North American cities and experiences and some new remarks emerging in Italy. Urban design theories and practices, above all in the US, many times quote Italian historic old town centers and some of the most famous urban spaces created centuries ago and still used. Many times, these quotations don't lead to a correct use or a precise repetition of those typologies of spaces: the research study investigates this practices, and it creates many times a direct link between Italian experiences and such American urban design believes; it also creates comparisons between different planning traditions and planning practices, with the deep aim to find out the potentialities of master plans as real flexible action plans. This is just the beginning, but many things have been already studied and presented here.

Introduction

I have been spending a lot of time just wondering why the majority of new urban developments and transformations are directed by a master plan, or at least regulated by the use of a master plan. Often such master plans drawings are taking inspiration from traditional, historic Italian or at least European built up spaces. It is very easy to find out in American books or in manuals about planning good practices, a picture of the Milanese Gallery or of the Uffizi courtyard in Florence or again thousands of pictures of Venice. At the same time, in Italy the use of the master plan, particularly as a tool to regulate urban transformations, is something a little bit controversial, not generally accepted, which very often causes difficult relations with the existing general plan. In the recent history of planning, the use of the master plan not just as part of a project, but as an anticipation of proposed transformations in the process of planning is something that brings discussion immediately back to some years ago, at the beginning of many urban

transformations, when the matter of shape and physical control over rebuilding was quite important[1].

This book is about these questions: how has the use of master plans evolved during the last few years, especially for the building up of the major transformation processes in urban areas? How can the use of master plans help us as planners or citizens to achieve or obtain high quality urban environments? How can it ensure the respect of the rules and regulations laid down in the general plan? How can it be a good tool to visualize in advance urban transformations, also to show the final results expected to people not familiar with urban planning and how urban planning does express it?

These questions will be investigated by the research that is presented in the book.

The use of master plan can be considered as a good way to plan, study, propose and create good urban environments, at least because the master plan size and scale gives the possibility to rule and manage simultaneously the three main parts of a development project: *built up spaces, open areas and green open spaces* and networks. I strongly believe that one of the most important aspect to ensure quality is to create a *good balance between these three aspects*, and above all I strongly believe that a high quality urban environment is a unique combination of these three aspects; the first part of this book will investigate some historical and traditional cases, trying to establish some rules in order to always recreate the perfect balance.

[1] Many Italian cities, during the '80s, produced some new general plans, with a particular attention to urban form and to the effects that urban transformations and urban renewal processes might have produced over existing cities and existing neighborhoods. The debate was not specifically about the need to control the effects of urban transformations, but about a balance between plans and projects, between the importance of the general plan as a tool to describe all the regulatory aspects and the role of projects, as simple interpretations of general plans rules of as something more powerful. The general plan of Bologna and the general plan of Turin of those years included many tentative regulations about the planned shape and the planned asset of all the transformations areas, rising doubts and debates about the right of those general plans to do so.

We might also consider master plans as a tool to test the existing rules of general plans, or, in other cases, to anticipate, always by testing, some rules and regulations which could be included in the general plan. This is a very important aspect, and this will be considered as one of the main thesis to investigate. Our cities, especially European cities, are a mix of monumental, exceptional urban areas and more or less well planned urban environments. Many times, the historical city centers are full of monumental or historical exceptional spaces; very often, particularly, in Northern Europe, the neighborhoods of the rest of the city are not monumental, and they are just well planned, with a good mix of green areas, open and public areas and built up residential spaces, creating a good balance with the monumental city center [2]. It means that many times in the history of the cities, certain specific areas have been transformed, built up or created using extraordinary tools such as "projects", royal or imperial ordinances, or municipal specific and fast projects, while the rest of the city has been developed just respecting a set of shared rules.

It means, again, that it didn't happen every day that a great architect was in charge, and it didn't happen every day that a masterpiece was created to transform a part of a city, or to give so much quality to that part of the city that even the rest of it could enjoy such a quality. As you should know, there is a huge difference between the medieval and renaissance Florence city center and the newest peripheries the city planned and built up recently: we cannot take for granted that the extraordinary quality of some part of the city center reflects nowadays on the outer suburbs. The main idea is that the use of master plan to actively develop every part of the city might create a good way to test the general regulations of the city.

[2] Maybe it is more correct to speak about a different idea of monumentality. City centers are monumental because they are the result of a long process of historical building and rebuilding, and because in many cases new, extraordinary episodes have occurred, in changing the layout of a part of city centers. Castles, imperial buildings or royal squares are just few examples of that extraordinary monumentality that gives shape to city centers. The European outer neighborhoods are in many cases shaped by a different kind of monumentality, with a well planned system of squares, streets, tree lined boulevards, and with a variety of building typologies according to their position, the land uses they host, and their relevance in urban general composition. It is not true, for this reason, to say that European urban town centers are monumental and the outer neighborhoods are not monumental.

It should give the possibility to everybody, exceptional and ordinary architects and planner or city officers to ensure quality to urban environments. The process hidden behind a master plan should include a set of rules, or it should apply a set of rules to a specific place so well managed to create always a sort of recognizable, good level of quality. This book will investigate precisely this aspect, working on the strange relation between fast and slow growth, or reflecting on exceptional rules instead of shared, ordinary rules. The Italian case is just what we need to study these aspects, always attempting the balance between plans and projects, in a never reached balance between ordinary, shared rules and extraordinary episodes.

1_ Stockholm, Sweden

A new idea of monumentality in the outer neighborhoods, made by urban design rules and the composition of a monumental space without using monuments.

A master plan is a perfect way to visualize the idea that someone has on the transformation of a part of the urban environments. It usually comes with a lot of pictures, a lot of three-dimensional visual descriptions of what it is going to happen. In many traditions and in many countries, this visualization helps local actors, citizens or just peoples a good help to understand what is going to happen. Above all, besides the participation process, it gives a great help in understanding what occurs around the transformation site, or what will happen if a specific project is developed. Differences in density, coverage, heights of building, street sections or distribution of uses often create big jumps between the existing city and a proposed project; the use of master plans should help to go over the traditional boundaries of each project; master plans should help in reading and planning for relations, connections, the continuity of certain elements, so as to ensure quality.

The consideration of these points will help us in the creation of a tentative series of guidelines and suggestions on how to deal with the planning of a master plan, considering it as a strategic tool to ensure a sort of shared and respectful urban quality. Many parts and many considerations of this book are structured as a toolkit, with a series of guidelines and rules to see what should be at least included in a master plan and why we strongly believe that a good use of it could enhance urban quality, especially in a period when cities undergo a great number of urban transformations. The guidelines will refer to the existing set of rules and will be aimed affecting certain specific traditions. There are two main focuses in the book, over two specific traditions: the Italian one and the American one. The Italian (and generally speaking the European) way of dealing with these aspects is the main focus of my thoughts, mainly because the Italian cases are the most represented and published historical references about high quality urban environments, or well known urban projects, as I said before from the Galleria in Milano to Venice St Mark Square. Nowadays, a lot of Italian cities are transforming many underdeveloped or abandoned inner areas, in particular Milan with a huge areas under transformation. Furthermore, in the Italian recent urban planning history, the balance between plans and projects has been discussed, talked-about and it is still very controversial,

and this is very interesting for our reasoning. On the other side, the US tradition of master plans should be investigated to understand their specific role and their present use as they are a recognized way to show citizens and actors what is going to happen in a certain place. The use of master plans is central to specific traditions of planning as New Urbanism has been proposing since many years. The book will investigate specifically the balance between plans and projects, considering some specific case studies, and working on the idea that plans have the task of creating the large scale balances and projects while the use of master plans should be intended for building up and visualizing the specific transformations planned and included in the strategic, general plans.

This book takes inspiration mainly from my personal unbounded love for cities and my personal believe that cities are the most relevant expression of human creativity and effort to stay together in the best possible way. It comes also from my belief that urban environments are endless pieces of paper where everything can be planned, proposed, designed if general, and shared rules are taken into account, in order to give quality, respect, and services to all the urban neighborhoods. This book is investigating on the strange risk that master plans may overbalance the quality equilibrium in favor of special projects, forgetting the rest of the city as well as on the challenge of using master plans to ensure a sprawled quality around the city, not focusing the use of master plans only on special projects, but always putting them in a planned, general perspective. If master plans are good, flexible but detailed tools to give a shape to a prevision made by the large scale level (such as a strategic, metropolitan or regional level) they might be considered as the perfect way to build quality on a specific site, keeping it coherent with the urban region or the urban system it belongs to.

PART I

PARADIGMS, DEFINITIONS AND REFERENCES

1. Urban quality

The importance of the master plan is emphasized by the possibility to have a precise tool to control the implementation of change, the way in which transformations and planning processes are activated and managed, and the feeling of sharing that local actors and people should have for things happening around them and in the same urban environment. Using a master plan doesn't mean that there is a precise idea of quality, or a precise shape in mind. It is very important to point out this aspect immediately, taking into account the use that New Urbanism[3] makes of master plans considered as a specific way to propose a specific shape.

[3] New Urbanism is quoted many times in this book. New Urbanism is considered above all for its ability in using master plans to show and to plan a specific development, creating a complete environment made by streets' networks layout, buildings' typologies and uses layout and green and public open lands planning. New Urbanism as a professional and cultural movement is working on the creation of completely planned communities using master plans for all the potentialities that master plans have, and that we are going to investigate. Complete references about New Urbanism should be found at http://www.newurbanism.org/ or on Dutton, J. "New American Urbanism: re-forming the suburban metropolis", Skira 2000. I have always contested the majority of evaluations about New Urbanism: New Urbanism has been correctly studying the way American suburbs have changed, from little havens close and connected to public transportation, to uninterrupted regions of single family homes, totally depending on private cars. New Urbanism has studied the first step of suburbanization, it has studied the traditional shape of European and American villages and towns, and it has proposed a process of planning more organic and more human sized. But, New Urbanism without strategic regional planning

The importance of master plans, as said before, lays in the possibility to work at a particular scale, ready to speak with the urban general planning processes and capable of keeping inside and show how decisions on regional or large scale plans should be considered. So, first of all, there is a matter of **scale**, and the possibility to consider master plans as good tools to speak with the general and the urban local scales of planning and transformations. Beside that, the use of master plans gives the possibility to keep together and simultaneously control at least three important elements: the regulations of built up spaces, the design of open spaces and the way in which networks work. A mix of very local aspects and general scale related decisions are together in the use of master plans: it is important to consider local regulations for the built up spaces, including exceptions and local different rules to create variety or different episodes, but it is strategic that the local design of networks corresponds to their general intentions.

So, from this point of view, master plans have to deal with a matter of **urban quality**. This is one of the most controversial paradigms to face with: what is urban quality about? What gives a specific quality to the urban environment? Or, when an urban environment is of quality and according to which paradigms? We should make some preliminary considerations about this idea, because the way we consider it will influence everything we will discuss in this book.

There are and there have been a lot of definitions of urban quality. Especially in a country like Italy, or in a continent like Europe, urban quality is strictly linked with thousand of years of history: from the ancient Roman Empire and the building up of cities throughout Europe, to the recent urban transformations after the decline of the traditional industrial world, European cities have considered, more or less from

cannot, by itself, change the destiny of suburbanization. It just puts on the market something new, a new neighborhood with a pedestrian and recognizable center, with a mix of uses and buildings perfectly shaped and planned, but it doesn't offer the most important aspect to create a sustainable environment: the presence of public infrastructures. Highways and parking lots surround many New Urbanism developments, and they cannot transform the way suburbs are still growing. For this reason, in this book, New Urbanism is only quoted as a cultural movement, and this book will only quote the episodes of New Urbanism somehow related to sustainable regional or metropolitan processes of planning.

North to South, urban quality as the quintessence of their importance. Varying from North to South, urban quality has spread in the whole urban region in the best planned places of the country, or it has been concentrated, or has survived only in some central, old town centers, getting completely lost in the suburbs or in the metropolitan fringes of many cities. So, urban quality comes from a mix of historical legacy, well-controlled planning policies and actions and a general good feeling with planning, as a human action whose principal aim is to plan in order to create quality.

In the history, investment in urban quality have been done by popes, kings, emperors, even dictators, to show their power and to have adequate representative urban spaces. Once again, the city they created had to be their private theatre to show to people their power or even their generosity.

2_ Rome, St. Peter Square, Italy

The evocative power of architecture created a magnificent urban space, in contrast with the existing, urban patterns.

Italy is a particular point of view to analyze how the idea of quality has evolved: urban quality has historically been linked to the presence of consolidated and historic places; many times, in many urban environments and in the majority of the

big and middle-sized cities, historic old town centers have the highest land values, to show that history still brings a sort of indisputable quality to urban environment.

In the US, something different happened. The recent urban history of the country and the relatively recent urban history of many cities have been completely obscured by the violence and the dimension of growth in the suburbs. The research for quality changed from the beginning of the XX century until at least the 80's, leaving the central part of the cities and moving to the suburbs. But in the suburbs, at least in the majority of American suburbs, the new quality shifted to a suburban quality, made of low density, wide roads, trees and green areas everywhere, leaving in many cases the historical or already established old town center without any perspective of improving their quality. After the '80s something has changed: town centers have started to gain new attention and consideration; many policies and many investments have been finally re oriented towards city centers, claiming the old urban quality. Simultaneously, a lot of suburbs, sprawled for miles and miles, have started looking for some urban, and not suburban quality: new centralities have been planned to aggregate humans settlements too much sprawled. New Urbanism started developing a lot of new centralities, in the middle of suburbs, looking for specific urban quality.

Considering these two aspects, and these two different sides of the same story, we should say that the idea of urban quality might be studied looking at least at such specific aspects.

There is, of course, and before everything, a **physical quality**, and maybe this is the most important, relevant and detectable aspect of quality. There are public or private spaces with a strong physical quality, with beautiful buildings, suggestive patches, amazing urban views. Many times, it is easier to recognize the presence of physical quality to historical spaces or very old urban environments, also because it is well in mind of everybody that people is generally oriented in considering beautiful everything is so old to cross the judgment and the opinion. Old is beautiful, and that's it. But we should also consider that very often the old well recognized

beautiful urban environment was planned just to create that sense of beauty. The building of concordant urban fabrics, the invention of eclectic architectural styles, the studied position of a bell tower, or the raising of an obelisk in a focal point of a square are only few of the thousand of devices that ancient urban composition used to create urban environments. But, most important, and relevant for us, urban physical quality in the past, many times, particularly in those periods when urban planning became central to show power, richness, supremacy or civic peace and harmony, was created by studying a **grammatical variety of urban spaces and shapes perfectly balanced and above all perfectly proportionate and commensurate to the use and role of that specific urban part**. This is central and maybe this is the only aspect about physical quality we should care about: it is not a matter of architectural styles, or a matter of "fashion"; a good, physical qualified urban environment may be shaped in eclectic, modernist, contemporary style or inspired by the old, but should comply with the use, the role, the position and even the significance that part of urban environment has been planned for.

The grammar of urban spaces, urban elements and urban typologies is the quintessence of urban quality, or at least it is the quintessence of what we might consider as physical quality. It is time to write again that grammar, in a world where everything is accepted, where every combination is supposed to give quality: it is not true, or at least it might be true for the creation of some, few, masterpieces that even nowadays are possible, but it is very risky for the ordinary creation of spaces, all those spaces coming from traditional urban development, far from the center of the stages.

3_ Milan, Foro Bonaparte buildings, Italy

Foro Bonaparte in Milano has been one of the first episodes of a master plan based redevelopment of a large part of the city, once upon a time entirely used by the Army. Before the end of the XIX century, the city planned a system of circular boulevards, using a building code, where buildings' heights and floor composition were given to private developers. The result, today, is a large urban system, well recognizable, with a strong feeling of good quality and order: even in the architectural variety of the different facades, the same rule shared by the buildings gives to this neighborhood its elegance.

Physical quality is not enough to create a real sense of urban quality. There are great, urban spaces, with relevant and perceptible architectural quality; but there are many of those spaces completely separated from the continuity of other urban spaces. Monumental urban episodes, inward looking redevelopment projects many times are perfectly shaped and built up; but they show a lack of integration and a lack of relations with the city or the urban development around them.

4_ Florence, Italy. The Uffizi Gallery

The Uffizi Gallery

The Galleria degli Uffizi in Florence is one of the most interesting urban spaces ever done. It is not a huge square: Italy and Europe have different, wider and better planned squares; it is a flow of urban spaces, a sequence of spaces with strong relations but with a continuous change of uses, weights, shapes and meanings. Private and public uses are together, and simultaneously they create private boxes to host private uses, and public "empties" to host people and to distribute access to all the built up uses. Without forgetting beauty and urban décor. Even today, it is one of the most interesting cases of development of a private building, or a private sequence of buildings, able to create a shape simultaneously creating a urban shape and a urban environment, without any form of conflict.

There is a **relational quality** that is an essential part of urban quality. Once again, the Uffizi Gallery in Florence is a masterpiece not only for what we said before, about the shape of the relations between the shape of the buildings and the shape of the urban, public space, but above all because the Uffizi Gallery is a flow of urban spaces, a balance between private and public areas, private and public uses so hard to find elsewhere. Giorgio Vasari, developing those buildings, has considered many things.

5_ Florence, Italy. The Uffizi Gallery

The main courtyard is a private courtyard, open to public, with only the two long sides closed by buildings. The short, south side is a urban gate to the river, and the short, north side is not built and it is open on the civic square.

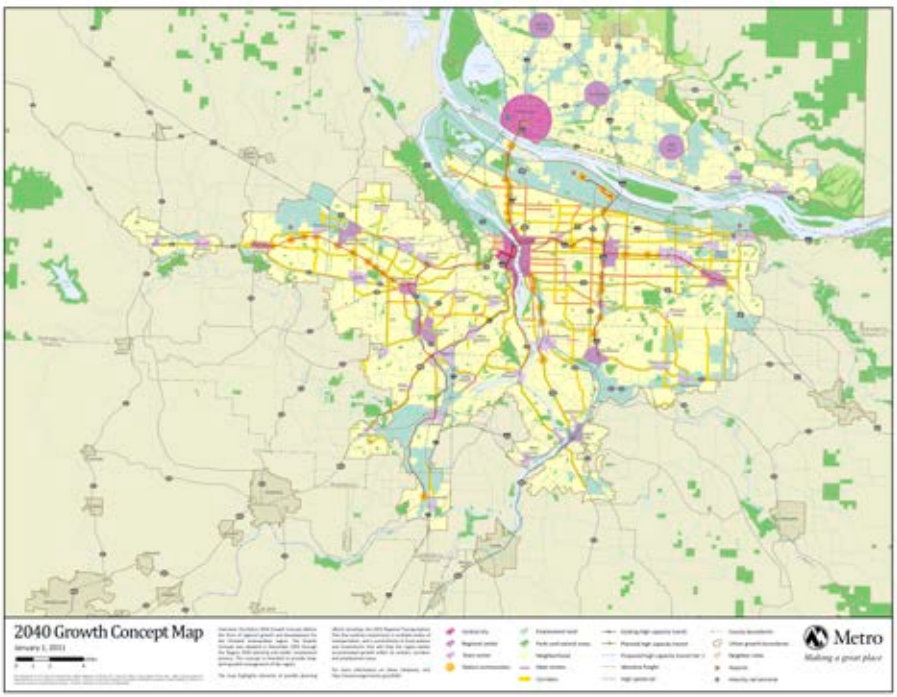
There is a connection trough the buildings between Palazzo Vecchio and Palazzo Pitti, a private, built up, covered and elevated passageway that links the public palace of Palazzo Vecchio and the private outer *demeur* of Palazzo Pitti trough the buildings of the Uffizi. There is a main door, that connects the river to the center of Florence public life, and creating strong relations between the waterway and the

people square facing the Palazzo Vecchio. There is a system of porches that runs on three of the four sides of the long and narrow open courtyard: high porches, deep enough to host people and Florence citizens for their business or their discussions with the civic power; those porches are the logical and natural continuation of the public loggia facing the main square. There is a variety of urban spaces typologies: a main, urban gate, covered but open, connecting the river area to the public square; there is a covered passageway connecting the main gate to the existing bridge with its flow of pedestrian areas and small shops; there is a main square, narrow and long connecting the main gate to the main urban square facing Palazzo Vecchio; and there is a big attention to the existing urban network of streets. In a word, relational quality gave to this masterpiece its correct role and its right position in the flow of urban areas of the city center. Still today, it is a perfect space, where a mix of relations and connections are well represented. Relational quality should be always present in the development of urban transformations; the more a specific project is connected to the rest of the city, the more it might be used and seen as part of the city. One of the more controversial things about the urban development New Urbanism is doing around the US is just about the lack of connections and the impossibility to create great and continuous connections between the New Urbanism project and the rest of the suburbs.

New Urbanism is creating great communities around the US, well designed and many times also correctly inspired by that physical quality grammar we defined as essential to create urban quality; but only few cases show how those communities should be linked; it is maybe possible to say that only when New Urbanism developments and principles applies to a regional perspective or to a metropolitan plan, the relational dimension is part of the project [4]. It is very easy to see how the Transit Oriented Development communities have been planned in many cases just

[4] Many regions have adopted general metropolitan plan, then developed recognizing some specific points of urban developments. Salt lake City metropolitan region or the well-known Portland Metro Plan are some cases showing how the metropolitan plan should recognize and consider development perspective in specific areas, and then leave local master plans to develop the local assets of those areas.

using the public transportation line to create connections, relations and continuity in the redevelopment of the suburbs. Relations are important to avoid that sense of well designed episode surrounded by nothing; relations should be created to avoid that sense of gated community even without gates that many New Urbanism developments fell like (and many times the parking lots that surround the new urban development behave as gates) and relations should be at least created to show that the metropolitan or the regional perspective are the leading reason for that specific development.



6_ Portland, OR, USA. The 2040 Metro Plan

Each development pole has been included in the metropolitan strategy, it has been connected and placed on an existing or planned transportation network and it has been planned with the use of a master plan. The master plan tested the general scheme and transformed into physical shapes the metropolitan strategies

7_ Portland, OR, USA. Orenco Station Master plan

Orenco Station master plan has planned all the strategies included in the regional perspective. The strong connection to the public transportation network, the relations with surrounding neighborhoods, and the green connections to the region are all included in the master plan, that becomes a strong and active tool to plan regional strategies and to see them realized

The third aspect we should investigate about urban quality is a how local actor, people and citizens perceive the development around them, how they use and how they behave while using those spaces. This specific aspect about urban quality has a lot to do with the problem of consensus building around transformations and new project development. We will not discuss about the general considerations behind those aspects, but it is important to recognize that one of the unavoidable aspects of urban quality is the feeling of sharing that citizens and people should experience about it. We could define it **shared quality**, considering that quality is present every time a community recognize a specific urban environment so full of quality to use it and to feel represented by it. Even if we said that the use of some specific physical rules and the presence of a pattern of relations in a specific urban

environment should ensure quality, we believe that only users, actors, citizens and visitors of that spaces act giving and recognizing quality to that urban environment. The sharing of urban quality is one of the most interesting aspect we can consider: starting from the original idea that master plans could work on the creation of a specific image of transformations that can be used to create consensus and agreement around them, we can now say that the feeling of belonging and the consideration of being represented by a specific urban development is a key aspect to find and to promote quality. Many times, urban history shows us that the most celebrated beautiful urban spaces come from a long tradition of human uses: the Piazza del Campo in Siena or the Piazza Navona in Rome are only two examples of squares used during the past for many reasons, but always recognized by people as the core of their urban living and a symbol of their urban environment.

8_ Rome, Italy. Canaletto's view of Piazza Navona

What we call today Piazza Navona in Rome is the result of century of different uses and different transformations. Its shape comes from being a Roman stadium, its buildings have been built during the centuries layer over layer, and the use of the empty space changed many times, since the parking lot that occupied it since the beginning of the '50s has been removed recently. It is very hard to use such a space to replicate it elsewhere

The shared quality has been very well interpreted by the recent, New Urbanism project. Many times, the center part of the proposed development is a square, or a park, or a urban environment with a mix of uses where people can feel comfortable and spend time doing many things. The presence of a fountain, or a sculpture, can represent the creation of a landmark, to help people recognize a specific symbol to share.

9_ City Place, West Palm Beach, FL, USA

The shopping mall and the development planned around it has been organized around a central square, full of stylistic references and quotations, such as fountains, porches, Mediterranean decorations. It helps to recognize this square as a civic place and as the central part of the composition.

Of course, on the other side, the building of consensus around a project is helped by the possibility to have quality elements to share: the more a project is full of quality elements, the more local actors might agree with it. But, of course, one of the reason of success of a specific development project is the sharing of it; sharing a project, considering it as part of people's environment helps even the project to get life and

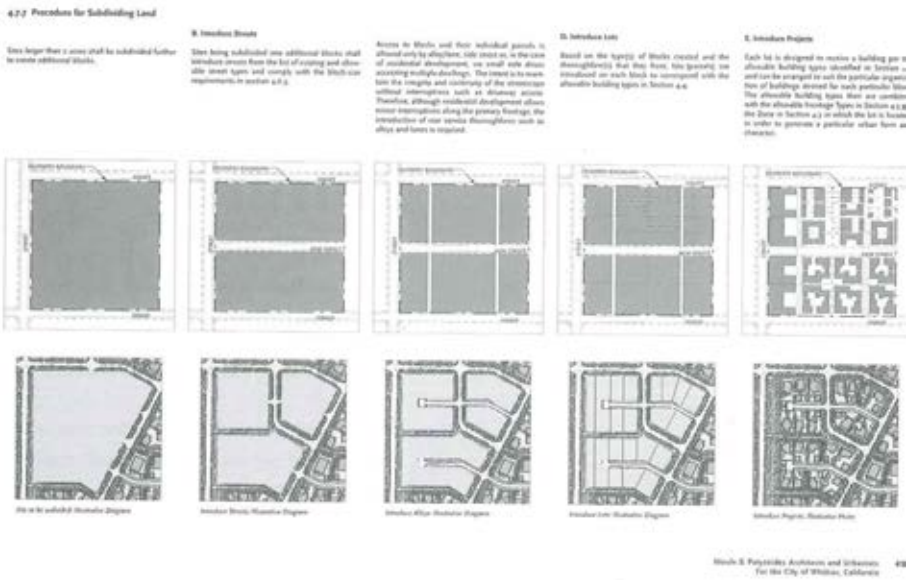
to live as long as possible. Master plans are the perfect tool to show how transformations are planned, how the urban environment will take shape and to visualize in a understandable way planners intentions.

Urban quality comes also from the use of rules. As in all the human activities involved with physical creation of shapes, quality depends on the balance of the elements used for the creation of that specific shape. Once again, we will not discuss about esthetical rules or about the way balancing elements should create some shapes rather then others; we believe that general, ordinary quality for every single space created in urban environments should respect some basic rules. A **regulatory quality** can be defined as the creation of quality, following or requiring in every project the presence of minimal quantities of the elements which promote urban quality. This may be hard to understand for those cultures already familiar with good planning and good planning traditions. But for many other countries, and Italy should be considered among these countries, the presence of a mix of quality elements may not be taken for granted in every project. The research for regulatory quality brings us to discuss about "standards" [5], and about the necessity to share a sort of minimal list of those things that every project should have to ensure quality. Green spaces, urban gardens, sidewalks, bike paths, main streets and service alleys, underground parking lots are only few of the "good" things that every project, nowadays, should have. But this comes only from regulations and rules, and above all this comes only from the idea of sharing some basic rules, as well as some basic elements to have urban quality. In particular, there is a straight and direct connection between this idea and the strategic, regional or metropolitan level of planning: urban development or transformation projects should give life to the general and strategic plan decisions. So, urban or transportation corridors, greenways, public facilities or a balance between centralities and residential neighborhood should be present in every projects, but they should be in agreement with the general, regional or metropolitan level. We will discuss it again, but we

[5] The idea of having specific standards to ensure quality is strictly connected to regulations and codes to drive building developments.

believe that this aspects have a lot to say about the sharing of some untouchable and generally recognized elements that every project should have.

The mix or the presence of these four elements, the physical, the relational, the shared and the regulatory ones gives quality to urban projects, and their presence is essential to describe urban quality.



10_ The Form-based Code. Uptown Whittier Specific Plan

The procedure to subdivide a block is considered according to the position of the block in the urban system. Not every block should be shaped in the same way: it is interesting the list of components that every block should consider. This rule considers simultaneously the shape, the size and the use of the buildings, the correct dimension of the roads each building should face and the amount of trees and green areas that should be planned in each block and as ornament along each road

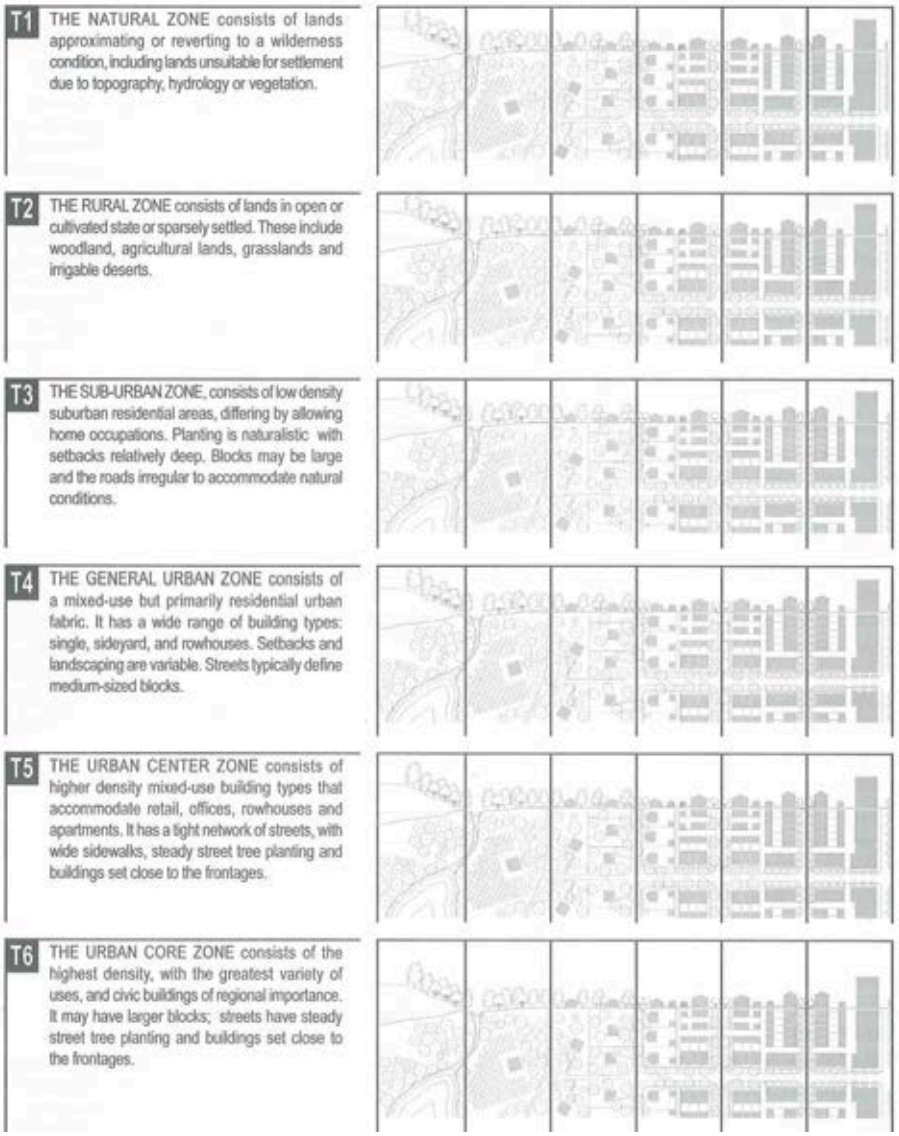
The **Form-based codes** have been developed in the United States as a strong reaction to traditional zoning. A profound departure from the historical land use zoning of the twentieth century, form based codes are completely different and based on the idea that the urban form is the most important aspect that shall be regulated by any code. It is recognized that beginning in the 1980s many conventional code updates across the country focused on simplifying and clarifying zoning regulations, as well as reconsidering the restrictive segregation of uses that had characterized most zoning practice up to that point. More concise tables and matrices were created: instead of identifying generic land use types, those tables invented specific types of buildings for each of the uses listed. Not generic commerce as a land use indications, but shops at the first floor of the buildings. At the same time, less restrictive regulations were introduced, and the mix of uses began to be permitted and fostered.

Following this natural process, and while public agency planners were beginning to streamline conventional zoning codes in the 1980s a group of town planners and architects dedicated to revitalizing and promoting walkable, mixed-use, sustainable communities as described in the principles of Smart Growth and the Charter of the New Urbanism worked individually and collaborative to formulate, test, and refine an alternative to conventional zoning. Variations, diversity and mix began to be the most researched qualities of an urban environment, instead of rigid land use segregations.

The first "on the ground" examples of the new approach were seen in the Southeast, and in the West soon after. The Development code of Seaside, Florida, drafter by Duany Plater-Zyberk in 1981 was maybe the first modern-day application of a form-based code.

A catalog of buildings and a variety of typologies were proposed for specific lots on the master plan of the city. Form that moment on, form based codes sprawled more or less around the US, and many cities decided to adopt a form based code to regulate the zoning of the urban environment. In 2004 Peter Katz, author of The New Urbanism, established the Form Based Code Institute.

The intent of the Form Based Code Institute is to define form based coding, to establish best practice standards, and to advance the practice of these codes as a means of providing a regulatory framework for sustainable development.



11_ Smart Code transect zone description

The Transect is the starting point, at least from a theoretical point of view, for the majority of the form-based codes. The flow of spaces from countryside to the city center shows different zones, from natural to urban

Description

The primary intent of this zone is to enhance the vibrant, pedestrian-oriented character of First Street. The physical form and uses are regulated to reflect the urban character of the historic shopfront buildings.

Use Types

Ground Floor	Service, Retail, Recreation, Education & Public Assembly
Upper Floors	Residential or Service

Building Types

Commercial Block, Ancillary Building

Frontage Types

Gallery, Shopfront, Awning, Forecourt

12_ The Form-based Code. Transect zone vision sheet

Form-based codes have many illustrations, and many are used to visualize the final effect and the final result of the application of the code. The urban environment is shown and illustrated mixing the results of the built up space, networks and green areas. Visualization helps citizens to see the results of the use of the codes

2. Urban environment

What is an urban environment? Is it possible, or at least is it correct to say that a project, a master planned project might create an urban environment? I would like to discuss this aspect from a different point of view; it is evident that if we study the process of urban transformations using master plans, our aim is to see how master plans as specific tools can contribute to the creation of specific urban environments, or at least urban areas geared to become little pieces of the general urban environment. Maybe, it is useful to make this kind of question, also considering the variety of case studies and the many uses that a master plan can have: how many different urban environments master plans are capable of talking to? How many different scales are involved in the use of master plans as tools to drive urban transformations, considering that New Urbanism uses master plans to show how a regional plan can be built in the regions it plans, and in many European cities master plans are used as powerful tools to drive the transformations of inner cities?

In the American literature about urban processes and urban policies, every book considers a sort of list of possibilities, to catalog the recent, most relevant urban

development processes: regional growth and changes, urban revitalization projects downtown and in the main streets, transformation and requalification of older neighborhoods, planning of new neighborhoods, reclamation of waterfronts, creation of public realm and the transformation of every kind of cluster or gated, isolated group of buildings in a community. This classification, that can be found in many books about urban transformations, is just a list of typological possibilities; it is much better, and more useful for our aims, to consider at least four types of urban transformations now involving the use of master plans; four levels of different possibilities and above all four different scales for the use of master plans. It will be interesting to investigate how the same kind of tool can create useful processes of transformation acting in the same way at four different scales; and it will be interesting to see how it happens and the usefulness of such an event.

The use of master plan can be analyzed, first of all, in the major processes of urban transformations in the already existing and established city centers. Many European cities have been transforming, during the last 25 years, most of their inner areas, from pieces of the old town centers to large parts of their central industrial abandoned lands. It is a little bit different from what it is happening in the US cities, where the processes of city centers redevelopment have involved wider areas, in many cases the majority of many existing urban districts, if we think at cities like Houston, or Dallas or even Portland.

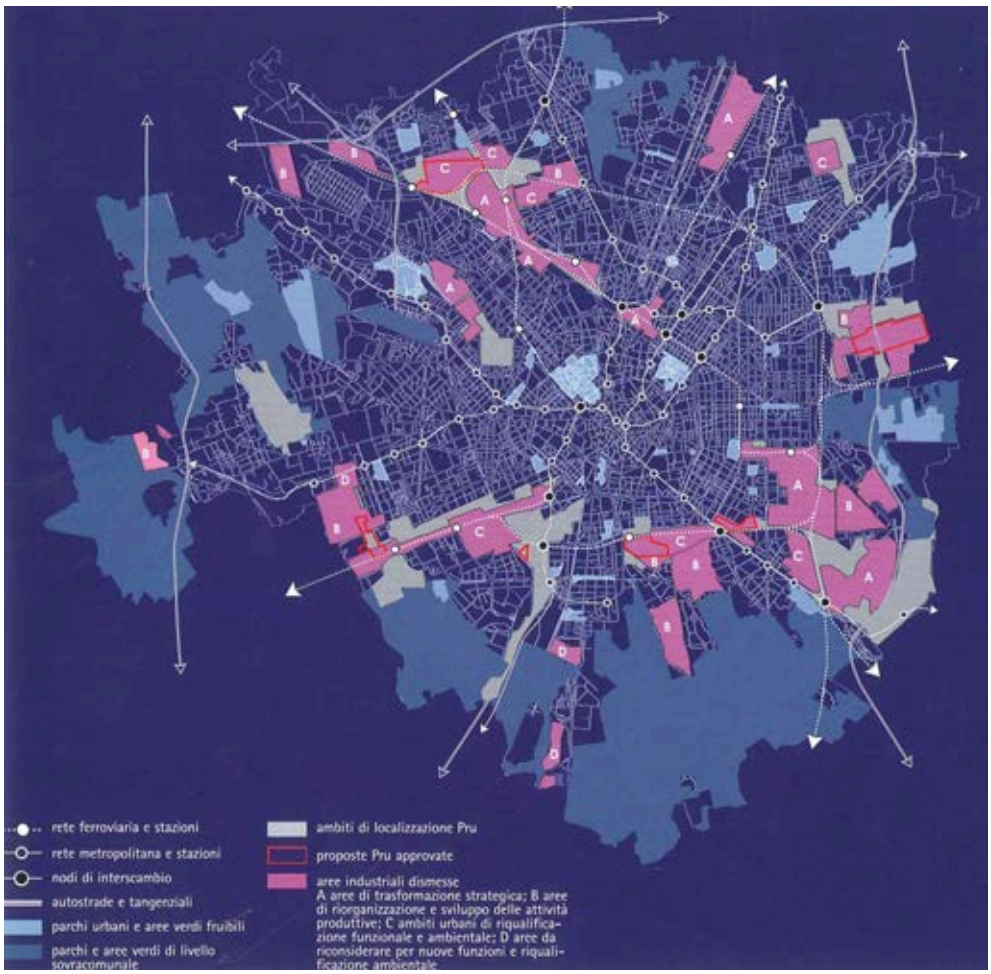
In Europe, and in certain Italian cities such as Milano, the redevelopment process has taken place in some, big brown fields, or vacant lands, generally owned by the municipalities or by some public authority; redevelopment master plans have helped transforming those areas which are very close to the city center, for the historic way in which Italian and European cities have been built and created.

13_ Portland, OR, USA. The Pearl district

The general master plan of the redevelopment is a mix of actions to support the general redevelopment of the area and the renewal of the streets networks of the neighborhoods affected by the plan.

In many cases, a good master plan or a good process of transformation driven by a good master plans has promoted all around a new sense of urban quality;

or in many cases the new redevelopment managed with a master plan has helped widening the boundaries of the well recognizable city centers [6].



14_ Milan, Italy

The Guidance document on abandoned or under –utilized areas (1988) and the urban requalification program shows the amount of transformation areas in the city. The majority of the areas are very close to the city center.

[6] The new Milan General plan (PGT2011) includes some local transformation areas calling them "Epicenters", to give to those areas a specific character: the master plan that will be developed to drive urban renewal over those areas will take into consideration many more aspects, such as urban connectivity, relations between green areas, variety of uses and typologies, considering that the plan asks to those areas to reflect over the existing surroundings the new, enhanced quality that master plan itself is bringing.

There is a specific, and particular mix of uses, mix of typologies and balance of empty and built up spaces in these cases, and we will investigate how these redevelopment projects have been studied and created with the use of master plans. Many times, for the position of these projects, for the importance of the lands involved in the transformation processes and for the big impact that a new development was supposed to have, these projects have been considered more important than others, and these projects have highlighted the coming back of the importance of the urban cores of many cities. Many times, also, the use of master plans for the redevelopment of inner cities more strategic parts have something to deal with land values, or with the strategic, planned increase of central parts land values.

15_ Milan, Italy

The redevelopment of the areas around Garibaldi station has been managed by some master plans, typically developed to support the projects of the 4 areas involved. The city didn't prepare any general comprehensive plan, above all to control the shape and the urban environment that will be the final results of all the transformations. The system of areas now under construction have been considered as brown fields since a lot of time (at least since the '80s general plans and ideas) but without considering the impact that the redevelopment of those areas could have on the metropolitan and urban system. The urban form will be the result of a juxtaposition of different master plans, designed to develop the 4 different parts.

16 and 17_ Milan, Italy. Garibaldi station areas redevelopment

Simultaneously, even if a real master plan to plan the final result of the whole area has not been developed, the use of renderings and visualizations has been considerable. Renderings and three-dimensional views have been used to show the project and to support the marketing processes for the re selling of areas and buildings.

The transformation of the areas around Porta Garibaldi is giving shape to a series of lands with already high values, for many reasons we will discuss later, and it is creating a new, big central area with very high land values and pricey built up typologies.

The use of master plan to transform or reconsider some areas not so central, or not so close to the existing city centers is something more interesting, and less involved with the necessity to use master plans to create, or just to visualize, glamour projects to attract big investor in a process of land values increasing.

The use of master plans for "local transformations", of for the redevelopment of some areas sprawled in the large part of the cities grew up after the Second World War in many European cities shows simultaneously the three dimensions we are looking for: a more or less balanced mix of new ideas about built up spaces, open lands and networks ideas; a strong relation with the strategic general plan and a process of participation and sharing with local actors and local communities. The use of master plans to give new sense to some specific parts of the existing neighborhoods around the city centers has appeared in the last 20 years, when many cities have discovered the importance of their neighborhoods, the differences between city centers and outer areas, and the necessity to plan for a multi polar metropolitan city. The use of master plan shows the process of inventing and creating a series of new centralities, new areas with a mix of uses and a mix of actors to give new life and to re create a new central urban spot in a undifferentiated neighborhood. The use of master plans to lead the densification of many areas in Portland, touched by the new public transportation system and networks, or the use of master plan to create new urban centralities in the Rome general plan or again the use of master plan in many European cities to drive transformations around city centers, in places once upon a time undervalued and under estimated is typical of this kind of processes.

There are many master plans specifically designed for new developments, and this use is very important to our reasoning. The idea of building new neighborhoods in the metropolitan region is still typical of the United States, always looking for a smarter way of growing and building new areas around the urban core or in between the already developed city. The idea of master planning new communities has been developed and sustained first of all by New Urbanism: there is a specific use of master plans to propose new communities and new neighborhood, and there is also a specific way of representing the master plans.

18_ Rome, Italy. General urban plan. The new centralities' projects

Many areas, recognized by the general plan as strategic for their position and their connection to the infrastructural networks, are planned with the use of a regulatory master plan, with zoning and morphological rules. The aim is to stimulate, and simultaneously regulate the development of these areas according to the general scheme.

The idea of new, sustainable villages, far away from congestion or even far away from the typical, sprawled suburbs separated by long distances, is shown by the use of a designed and sketched image, where the sun always shines, and the flowers and trees are always in blossom, while people are always walking on the wide sidewalks. It is a good way to figure out the proposed construction of a new district, by using a series of master plans, where density, foot coverage, heights of the building, relations between open and built up spaces are well represented; it is a forceful way to show how life could be easier, happier and without needs of long distance trips as well as an effective way to show how the development areas proposed in regional or metropolitan strategic plans might be managed thanks to a master plan. The expression "master planned communities" comes typically from this use. Historically, new developments have evolved in tandem with changes in transportation technology; new large scale neighborhoods developed outside the densely urbanized and still compact centers of American and European cities just after the spread of the use of electric streetcars, at the end of the XIX century. We all know that Ebenezer Howard described in his 1898 book "To-morrow: a peaceful path to real reform (then reissued in 1902 as "Garden Cities of tomorrow") these new sub urban communities. It is hard to find around Europe the use of what Howard wrote about; there are some great experiments and some small cities just developed around the existing urban cores, following more or less Howard's ideas. But the way European cities have developed shows a different use of Howard's ideas, in the development of new neighborhood, master planned in many cases in complete regional systems: Frankfurt, in Germany, is the best case study about this practice.

Nowadays, there are a few cases, and certain cases date back to past years, but we can say that the use of master plan for new planned communities is now typical of growing countries and countries still using new lands to develop new urban areas. Master plans are many times used also for specific developments, or for re development of special purposes areas: in the Us, one of the leading

ideas of New Urbanism is the reshaping of existing shopping mall in new compact and livable communities; many business centers or many business district zones are proposed and then developed with the use of master plans.

19_ Frankfurt, Germany. The Nidda Valley social housing program, 1925 - 1930

The development of a complete environment for the social housing program created a perfectly designed suburban compact development, in balance with green private and public areas

The use of master plans shows in this case the position of the proposed development areas and the relations to networks, the ability of reducing the impact of these proposed transformations, and he way they can integrate uses, or live longer during the day. It is interesting to see that once again master plans developed for these special transformation projects have the same set of equipments that urban master plans propose: wide sidewalks, bike paths, green buffers, gardens and a variety of typologies of spaces and buildings. We will investigate this kind of developments; above all we will try to understand if the use of master plans is enough to ensure urban quality.

Tysons Corner comprehensive master plan

From edge city to town center

Tysons Corner is one of the most famous "edge city" developed in the Unites States; a typical product of sprawled suburbanization, Tysons Corner comes from the construction of some office complexes around major highways' junctions.

A comprehensive master plan has been developed to transform Tysons Corner in a real, urban place, investing in its potentialities and focusing on the construction of a real town center. After years of pure suburban development, Tysons Corner is about to change its destiny, considering that 4 subway stops are about to open in Tysons Corner, as the result of the extension of the subway line that will connect Tysons Corner to Washington, D.C. . The aim is to transform Tysons Corner from the saddest Edge City into a vibrant, mixed-uses town center, mixing the residential use and the residential uses connected to residential uses to the office and hotel complexes. In May 2005, the Board of planners from the County of Fairfax, Va, established the so called Tysons Land Use Task Force and described its mission to update the existing general land use plan as follows:

- promote more mixed use;
- better facilitate transit oriented development (TOD)
- enhance pedestrian connections throughout Tysons;
- increase the residential component of the density mix;
- improve the functionality of Tysons;
- provide for amenities and aesthetics in Tysons, such as public spaces, pubic art, parks,

A detailed comprehensive plan has been developed to change the destiny of Tysons Corner, using all the tools that a complete master plan can offer: a comprehensive master plan strictly linked to the metropolitan strategies of implementing the public transportation network, a urban design strategy to improve the conditions of Tysons Corner so deeply to transform it into a new town center and a process of participation to the new decisions, involving citizens and actors locally.

The new vision for Tysons Corner, as the master plan says, is about creating a place in which people

would like to live. Over the long term the vision calls for a real transit oriented development and a compact, high-density new development. 75% of all development will be located within an easy walk (1/2 mile) of subway stations; the new urban center that will be developed will include estimates 200.000 new jobs and 100.000 new residents, in a place where residents have never been willing to live; a sustainability policy will restore streams, open new green network of parks, create open spaces and trails and plan for green buildings; at least, a new system and pattern of roads will be developed instead of the existing one, typically developed following old traffic policies and not developed as a urban town center should be.

The comprehensive master plan is a strong action plan, and organizes around eight districts the redevelopment of the city, each with a mix of land uses. Four districts are transit oriented, and organized around the four new subway stations, and four districts are non transit oriented, and will include lively neighborhoods leading to the edges of Tysons Corners. Closer to the edge, the development will carefully transition down to a scale and use that respects the adjacent communities.

The comprehensive master plan plans the eight different districts, developing smaller and more detailed plans for each district, testing the total amount of building capability, the impact over other districts or over the already existing buildings, the general effect that new development will create. Simultaneously, the plan considers very carefully the implementation strategies and the funding strategies, to check and to keep controlled the feasibility of the entire scheme. More interesting for our considerations, the master plan include a strong regulatory framework, above all to modify and implement the key land use and transportation elements of the vision. The zoning ordinance is the primary tool for implementing the planned mix of uses and intensities; to implement the vision, a new Tysons zoning district, Planned Tysons Corner Urban District is being established. Other additional new regulations are coming from the county level, above all considering larger scales aspects, such as public transportation.

Tysons Corner plan will cover a period of 40 years of expected development; block-by-block redevelopment must be balanced by having requisite infrastructure in place when needed, such as the network of streets, parks and recreation facilities or the four subway stations. As stated in the plan “each step of development in Tysons needs to move in the direction of achieving the vision laid out in the plan”. All the development over the 40 years is phased and controlled by the different steps that the master plan preview.

The comprehensive master plan covers all the aspects that the new development will face, considering:

- land use regulation, establishing the way the mix will work, how density will be distributed above all around the four subway stops, how the distribution of density itself will be phased and regulated according to the growing distance from a transit stop;
- land use guidelines, necessary to create a people-focused urban setting; these guidelines are created as a guide to evaluate the different proposals that developers will do to Tysons Corner board; among these guidelines, the master plan include affordable housing, establishing a minimum ratio for each residential development, the need for green buildings and green building certification following the LEED program, the coordinated development and parcel consolidation (considering the need of coordination between the land owner, to ensure the feasibility of the project. This is one of the most interesting aspect of the plan, taking care of the feasibility of the plan itself), and at least some guidelines for the existing buildings and services.
- Transportation infrastructures and services planning, considering the public transportation, whose main focus is about subway extension, the grid of streets, sidewalks, bicycle paths and connections, a complete control over Transportation Demand Management, a need to keep a balance between development and transportation ensuring a strong coordination in the development of the phases of private development and public transportation facilities construction and opening, and finally considering the need of funding to develop the complete program included in the master plan;
- Environmental stewardship, with a long list of actions to ensure sustainability for the new development and a general green revolution for one of the most traffic polluted area of the country;
- Public facilities planning, fundamentally linked to private and residential development;
- A complete urban design planning, with the creation of new guidelines to address issues such as building materials, street furniture, signage, and provide more specific guidance on built forms, helping define distinct identities and characteristics for the various neighborhoods within Tysons. The detailed urban design guidelines are developed to supplement the Area wide and District Recommendations in the Plan in providing guidance for development. Streets, buildings, parking and green areas are all planned and designed with the use of guidelines, very detailed and ready to be used in the development.

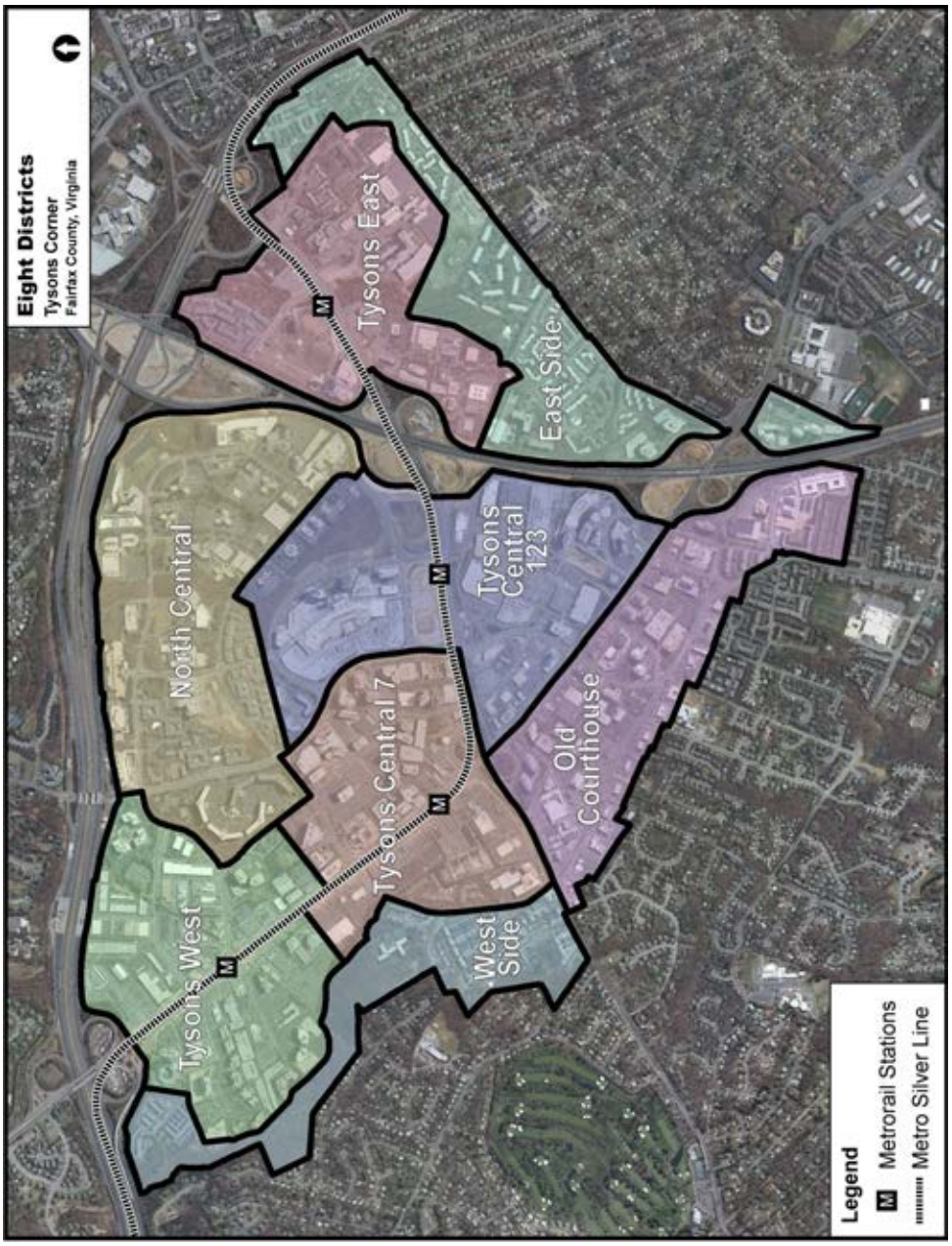
All the eight districts have a specific set of recommendations, and this is the section of the plan that will manage the development for the districts. Each recommendation is given with the use of :

- a land use concept for each district, with the new definition of the mix of uses;
- a base plan, describing the existing land use regulation;
- a redevelopment option, providing recommendations and visions over the proposed developments. In the visions given, the mix of actions is shown and presented to citizens and developers.

Tysons Corner Comprehensive Plan is a complete master plan, showing how master plan as specific planning tool can offer a lot of options and a lot of possibilities concentrating in the proposals of development options and in the definition of precise actions, to ensure that visions are supported by real feasibility. Above all, this master plan shows how this tool swings continuously among the flexibility that a long term perspective plan should have and the details that a guideline plan for development must ensure.

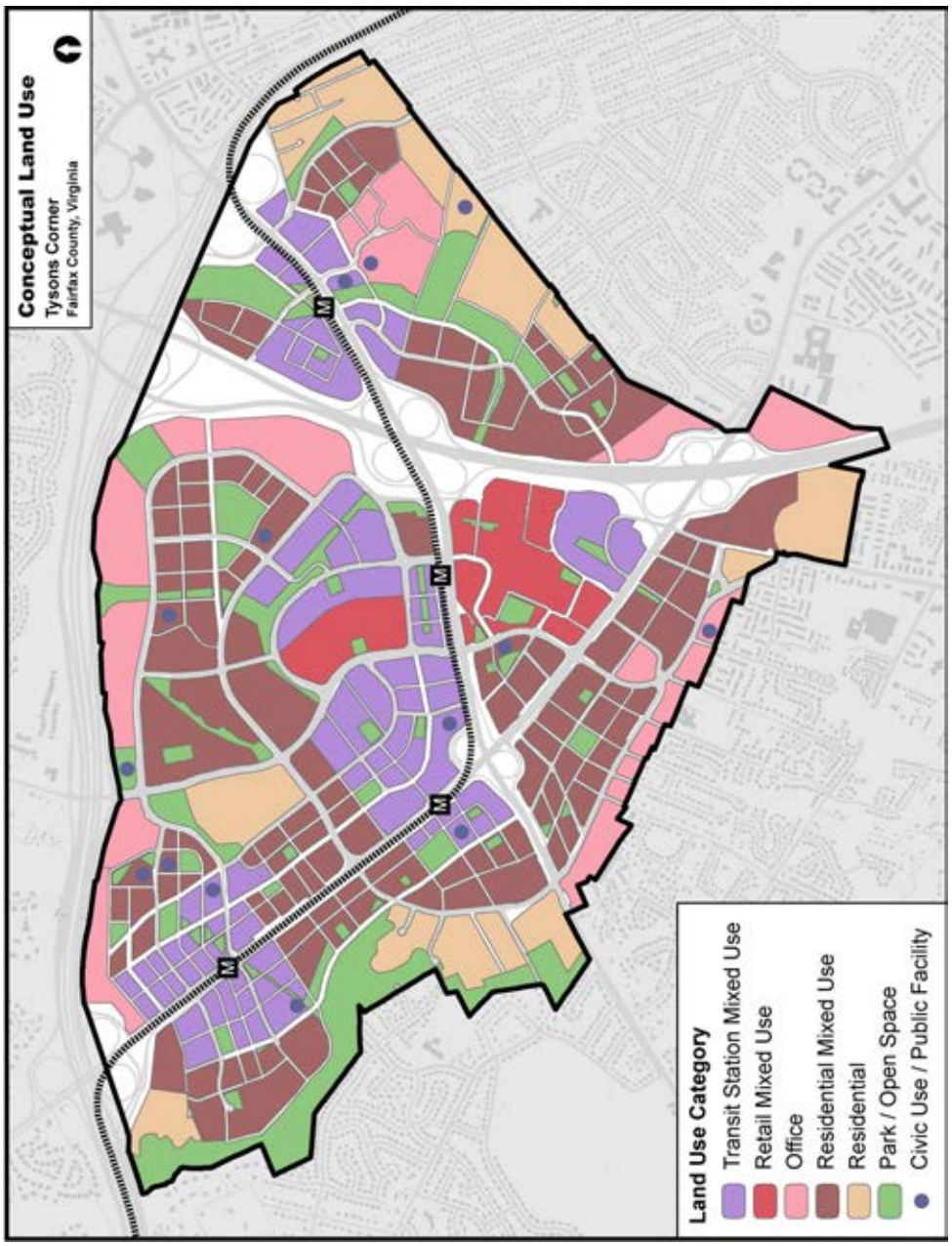
20_ Tysons Corner, VA, USA

An aerial view of the area of Tysons Corner: a huge concentration of office buildings, hotels and highway junctions is the urban landscape of the area today. Tysons Corner is part of the Washington metropolitan area, it host one of the largest amount of commercial square feet concentration and it is home for many offices and headquarters. Joel Garreau's pioneering study of the edge city phenomenon took inspiration by Tysons Corners. In contrast to many, traditional bedroom suburbs, users commute into the district in the morning, leaving it just after office hours. The daytime population is greater than 100.000, decreasing at nighttime to less that 20.000 residents. Now, the new plan is aiming at changing this strange destiny, adding a new public transportation system, extending Washington D. C. subway line, and working on a new mix of uses, increasing the residential development possibilities and planning for a major, mixed use corridor in the center, as a new back bone to support a more compact development.



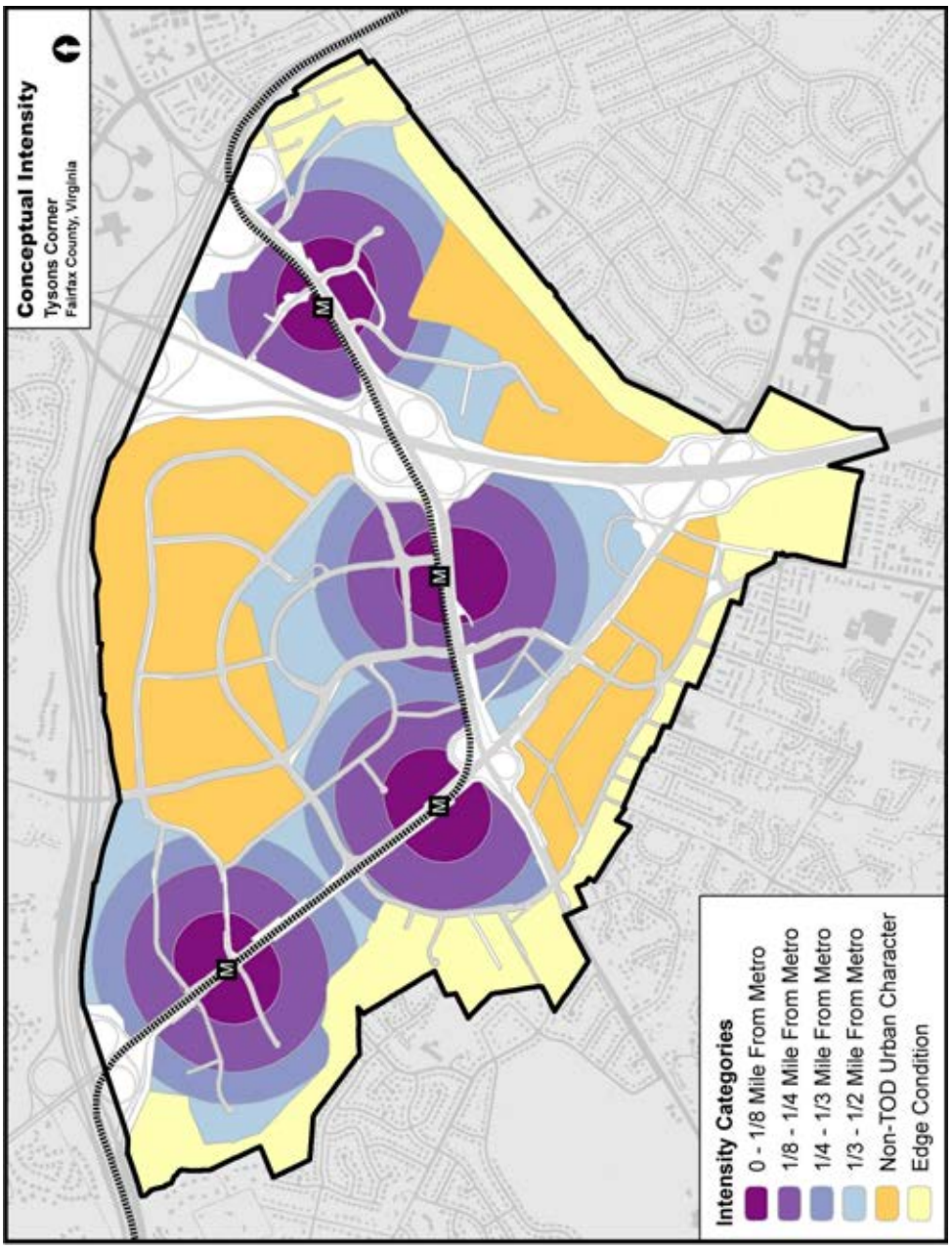
21_ Tysons Corner, VA, USA . The Comprehensive plan for Fairfax County, Virginia, 2007

The eight districts development and the new four subway stations on the extension of the line connecting Tysons to Washington D.C.



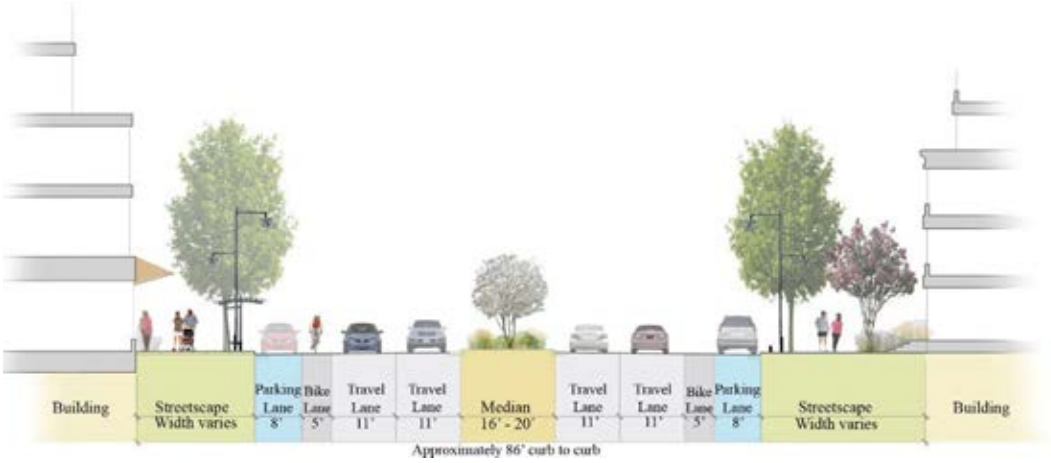
22_ Tysons Corner, VA, USA . The Comprehensive plan for Fairfax County, Virginia, 2007

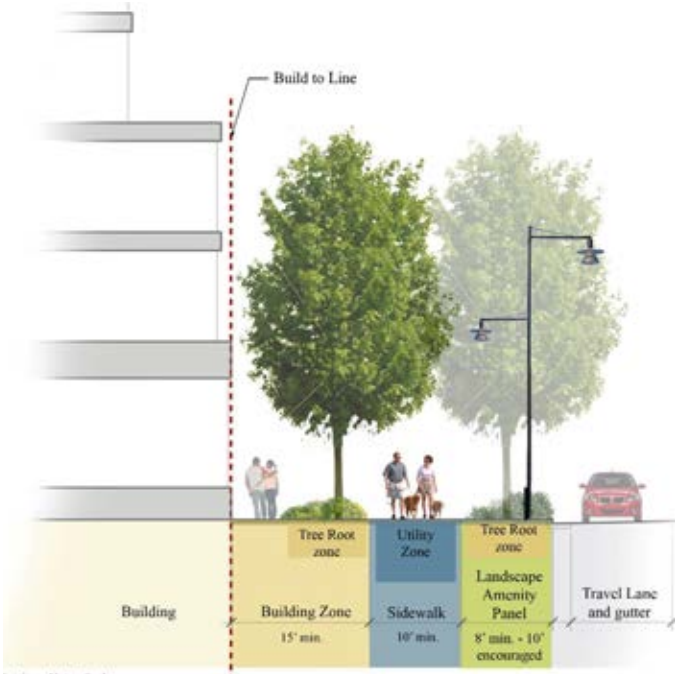
The Concept land Use plan shows the distribution and the mix of uses, with a particular focus on the transportation corridor.



23_ Tysons Corner, VA, USA. The Comprehensive plan for Fairfax County, Virginia, 2007

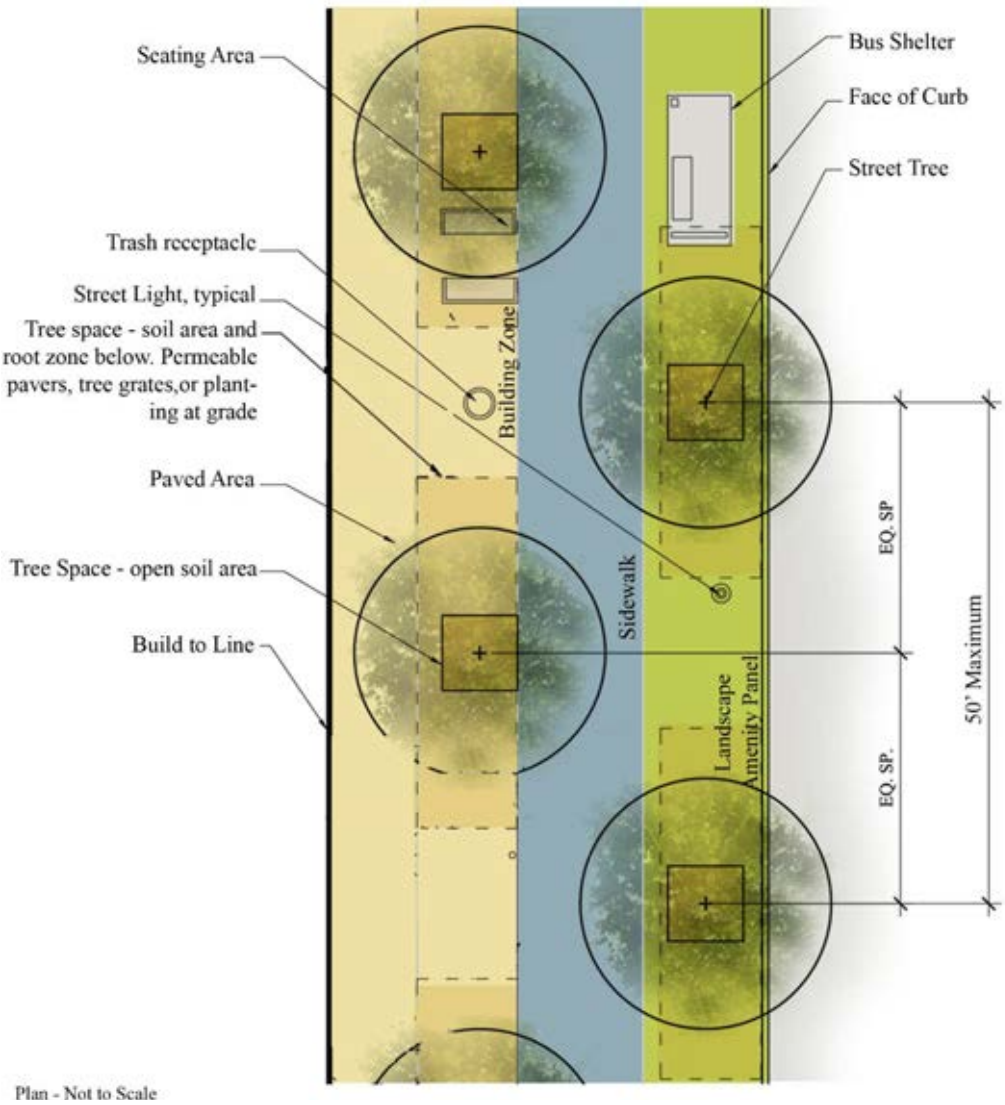
The Conceptual Intensity plan shows the distance from the metro stations, and it gives different development possibilities considering the distance.





24_ Tysons Corner, VA, USA. The Comprehensive plan for Fairfax County, Virginia, 2007

Roads sections and design regulations are developed considering the components for every street and the uses that will be developed at the sides.



25_ Tysons Corner, VA, USA. The Comprehensive plan for Fairfax County, Virginia, 2007

Roads sections and design regulations.

26 and 27_ Tysons Corner, VA, USA. The Comprehensive plan for Fairfax County, Virginia, 2007

Renderings and visualizations have been used by the master plan to show how the plan will transform the urban environment of Tysons Corner

3. The idea of master plan

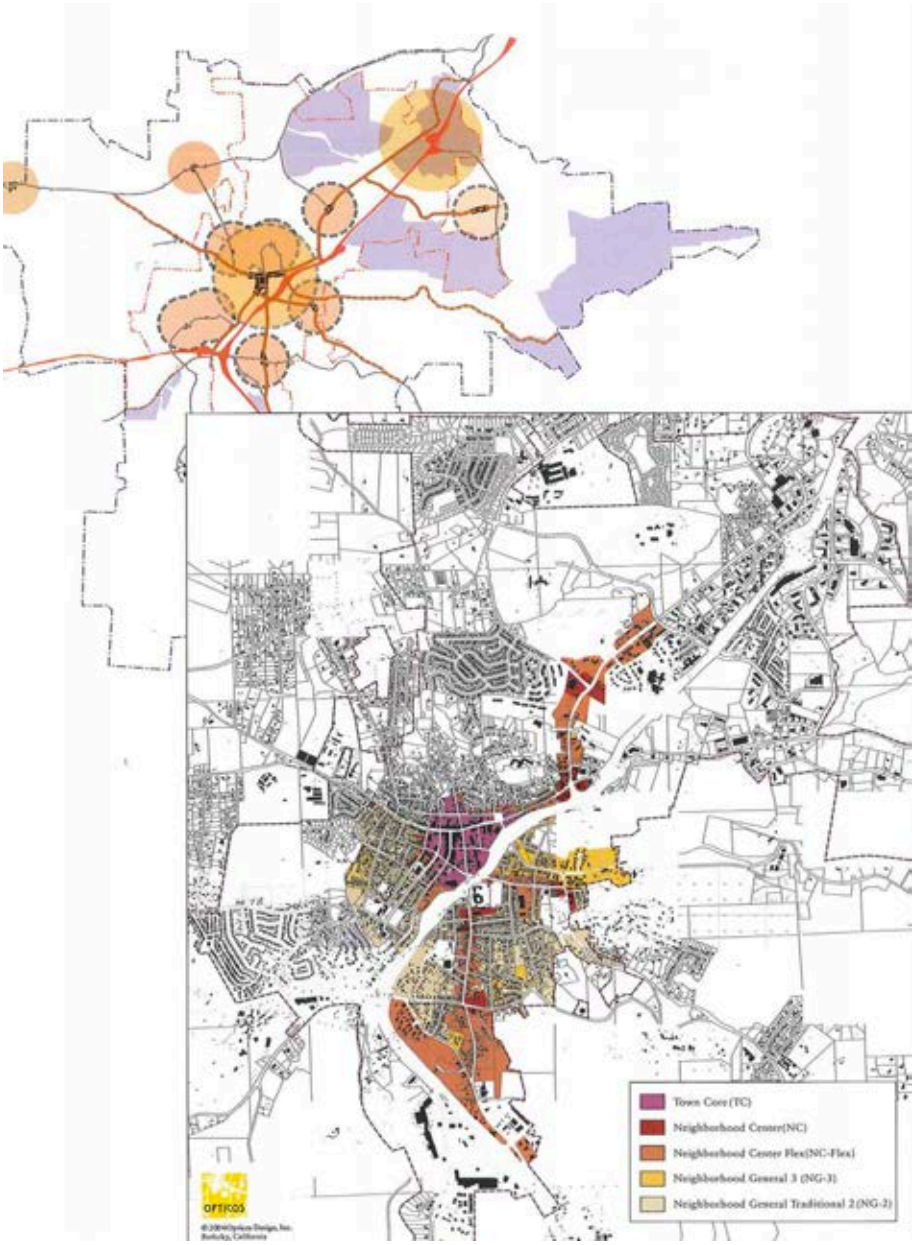
What is a master plan? Or, what is the master plan we are thinking at? As it often happens, especially for many techniques and tools used in urban planning, there are many ways of interpreting the same thing, and there are many ways, according to regional differences or different needs, of using the same tool. Moreover, there are many differences in the way certain tools are used in accordance with the scale of the system being planned.

The focus of our research is mainly oriented towards master plans as tools used to give a specific quality to a specific development or redevelopment site: there are many scales, many possibilities of use, and we will investigate these aspects in the following chapters. But the most relevant thing is that a master plan guarantees a double, important combination:

- A master plan is first of all a **drawing**, where many elements are included, coordinated to create a final, balanced design perspective. At least, three

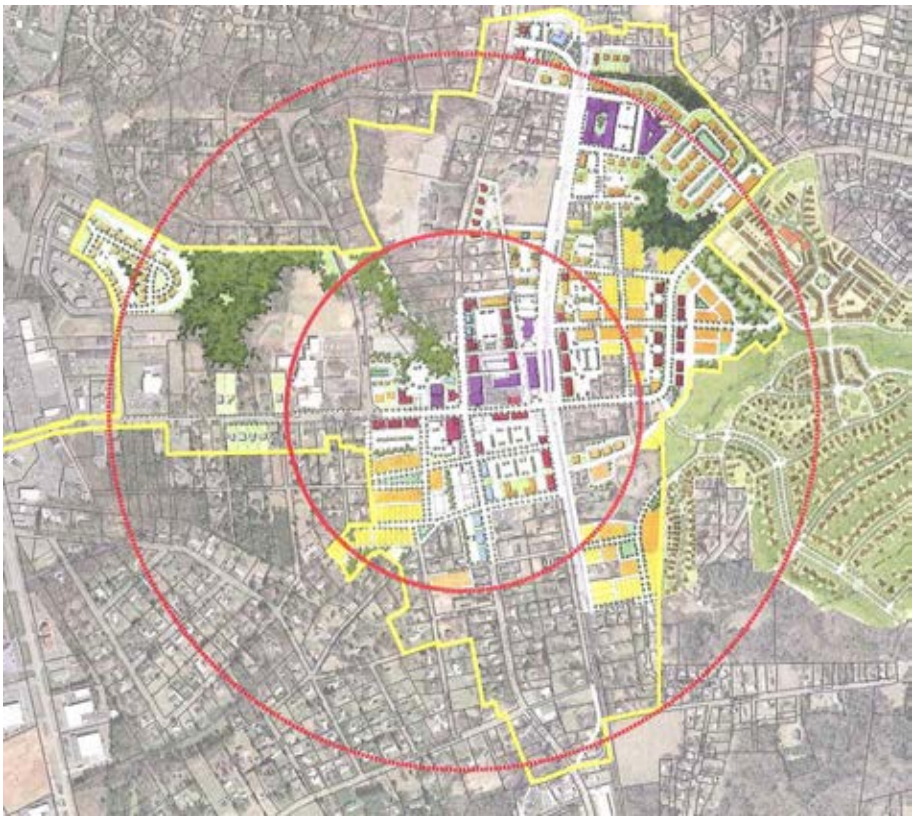
elements should be included in a master plan, the *built up space*, the *open space system* and the *networks system*. These three elements should be present and managed by the master plan; trough the balance of these three elements, a master plan should propose a coordinate projections over the future of the site, trying to take under control the shapes and the physical change of the proposed transformation. Following this idea, a master plan is a specific tool aimed at controlling in advance the physical effects of a specific, proposed transformation. For this reason, a master plan uses all the expression possibilities that a drawing, nowadays, offers: it uses plans and maps, cross sections and three-dimensional rendering; the way in which a master plan is represented shows the ability of the same master plan to show physical relations between all the components of the project, and the way the project decides to balance their presence together;

- A master plan is a specific **tool,** used to put into practice a proposed transformation. It is a tool that links together the large scale, such as the metropolitan or regional scale, and the local scale, and as a balanced tool, it looks for the right solution to keep together the local needs and the strategic decisions of the large, general scale. This is one of the most interesting aspects of the use of master plan: as a precise project over the transformation of a specific site, it should be included in a more general and comprehensive perspective; as an accurate projection of a new balanced shape over a site, at local level, it seems to give an answer to the questions raised by the general and strategic scale; again, as a definite idea for the asset of a local place, it might show the real ability of that contest and background to realize that vision, to achieve that goal and to really build up what a strategic vision, at a more general level, proposed. Lastly, it is a tool to test rules and regulations, and to test the physical effects of rules and regulations, at a precise, local level.



28_ Grass Valley Form based code, regulating plan

Master plans are planning tools, able to work at different scales and at different levels.



29_ Huntersville, North Carolina. Huntersville Downtown master plan 2004

- A master plan is a technical address, a drawn speech, a represented declaration of intentions that helps the proposers to get the required sharing and approval from local actors, people and citizens. Master plans are **visions** and the use of drawings helps in creating a technical elaborate vision with meaningful drawings; all the drawings that a master plan brings with it looks like easy and simplistic bi or tridimensional dreams over the asset of a specific place, but actually they are technically relevant tools showing in a concrete way how a general and more comprehensive vision should be realized.

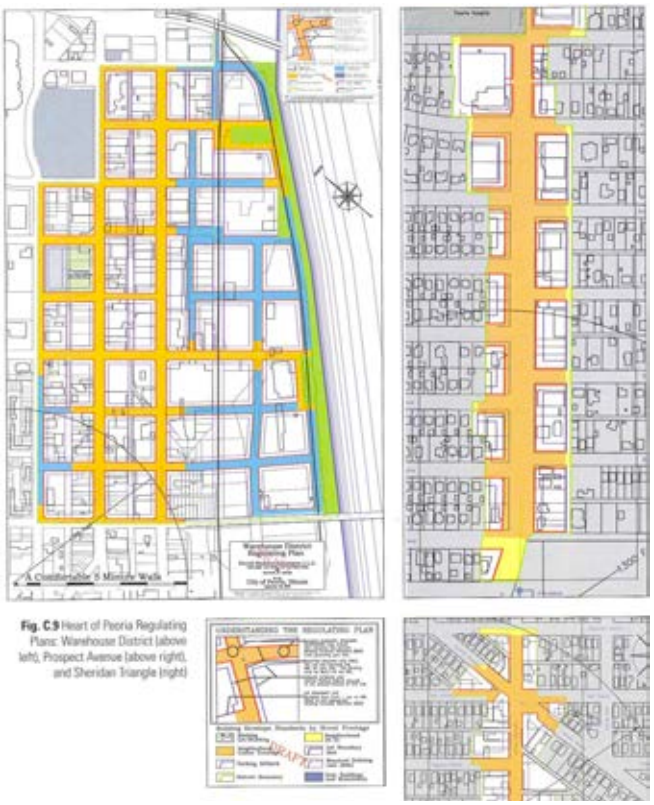


Fig. C.9 Heart of Peoria Regulating Plans: Warehouse District (above left), Prospect Avenue (above right), and Sheridan Triangle (right)

30_ Peoria, IL, USA. Heart of Peoria Land Development Code

These three aspects are the most relevant characteristics that a master plan should have, to ensure that quality we are looking for to the site they study and project. We can argue that a correct structure of planning, and a correct position of master plans should include this asset:

PLAN	**Strategic vision**	**General scale**
	POLICIES	*planning*
MASTER PLAN	**Realistic vision**	**General/local**
	PLANS	*planning/architecture*
PROJECT	**Real vision**	**Local**
	PROJECTS	*architecture*

This proposed layout gives the possibility to put at the right place and at the right level the use of master plans, and above all it shows the specific position of master plans in between the general, comprehensive level (such as regional or metropolitan plans) and the local, detailed level of architectural projects. It shows how unavoidable is its level, and the importance of testing in order to really see the physical effects of the strategic proposals included in the comprehensive plans, interpreted using the existing regulations, the local level rules and requirements. It balances the aim of giving shape to everything with the legitimate freedom of choice that every architectural project should have. A master plan is a tool where physical requirements are proposed and agreed, to create a shared regulatory guideline of what the architectural projects should do to definitely build up the vision. From a strategic balance of policies and choices to the architectural project, trough a intermediate level of coordination and choices. This is the role and the importance of master plans, but above all, these are the requirements that a master plan should meet in order to have an impact on urban quality.

Three requirements should be present to consider a plan a real useful master plan, or at least three are the contents that this research considers fundamentals for a master plan. Master plans should be used to show and to plan urban development or urban transformations included in a larger scale plan. To give sense to the use of a comprehensive master plan approach, rather then speaking more easily of site project, a master plan should develop in its proposals ideas and strategic contents that derive from a large scale plan. Metropolitan plans, regional schemes, strategic vision should use master plans for specific areas development to give reality to their ideas and proposals. From this point of view, master plans should be considered as the way in which strategic vision tests their ability in becoming true. Secondarily, master plans should be in the conditions to test the set of rules and regulations that local plans and codes put in practice. The use of a master plan helps verifying the set of rules that are supposed to be managed by the development of a specific site.

At least, master plans should be used as visioning tools about the proposed transformations and they should be used as tools to present the proposals and to work with citizens, people stakeholders and participants to find the best shared solutions for specific sites. These three requirements are the way master plans are considered in this research. Of course, master plans are used often even for easier situations, or just to "master" plan a specific site, introducing then a series of punctual projects; but in this research, just investigating how powerful a master plan might be, it is important to discover these contents and to study how these three dimensions might work.

Master plans are used to plan a large variety of projects, and it depends on the specific contest that this research is investigating. Considering the size of the developments and the size of the proposals, it is possible to say that there are master plans for new developments or for redevelopment of specific sites in already existing urban areas. In the first case, the master plan seems to cover a larger area, and it looks like an authentic new development plan, facing relations with codes (or creating new codes) but the main aim is to create a livable and sustainable new urban development. In many US cases, this kind of development and this kind of use for master plans tends to be more introversive: only few cases are really strictly connected with the strategies of a regional or metropolitan area plan (such in Portland with the production of master plans following the strategies decided by Metro plan): the majority just plans a development for a new construction site. These kind of master plans look more oriented in the definition for a specific typology of space, as a central distinctive urban space, and around it they create different residential districts, with typical suburban language, even if in a more smart growth way. This first kind of master plan are again originating from suburban and sprawled development, they assume to create a centrality, giving to it a specific shape, but they are just used to master plan a suburban, sprawled community. The second way a master plan is used is for the planning process connected to the redevelopment of a specific site, included in urban areas. Brown fields,

abandoned or underdeveloped areas, renewal sites are usually planned with the use of a master plan. While in the development of new urban areas the “testing” activity of master plans seem to be more concentrated in testing urban design elements and testing the general, final image that the development might get, in this second case the “testing” activity is more interesting, as it works in understanding how the proposed development will affect not only the planned area but also the surroundings, and the impact that a specific proposal might have. It is more frequent that in this second case master plan are used to propose the transformation to public, and it is used as a tool in focus groups, charrettes and forums, as a practical and easy way to work to get the final results. The contents, the scale and the level of details change considering these two different models of master plans.

4. Roots of master plan

There are many books, and many thinks have been written, about urban form and the real roots of urban form. Assuming that a master plan is supposed to give new shape to the general urban form, we should care about the principles of urban form. We don't need to make a review of the key points of the history of human settlements to discover urban design traditions; but we need to say that a master plan is supposed to create a dialog with the existing urban form, coping with it or diverging from it. So, one of the first step that a master plan should do is to understand and to interpret the urban form expressed by the area where a master plan is supposed to be created, considering first of all from our viewpoint that one of the most important output of the master plan itself is a dialog with the urban environment so strong, to determine changes, influences, and sizeable impacts. In the past, many times the urban environments, the cities and their neighborhoods were changed and transformed systematically by the application of plans and rules, but many

times also by the fast transformations brought about by a specific project, ruled by a master plan. It is decidedly misleading to say that every project, in the past, could be seen as a master plan: the creation of San Peter's square in Rome, or every special project built to reinvent a part of a city (and many things happened from this point of view in the Renaissance or later in the Baroque periods) could be interpreted as a forefather of master plans. Maps, views drawings, even scale models (above all in the Baroque's urban renovations and expansions) were prepared to show how the project would have affected the existing environment to transform it completely. But a lot of these projects were proposed, or imposed, by a specific, well recognizable actor: the King, the City, the Emperor, the Pope decided many times, in the past, the complete transformation of a part of a city, to represent his power, to give to people, or to subjects, or to pilgrims a representation of power or mercy. There was no need to build a consensus, or to share anything with anybody. Projects were imposed, even after an official presentation, but created more or less by a single hand; and that remained also in the more recent years, when those powers used such fast transformations even to speculate on the increase in value of their own lands. Beside that, those very historical examples on master planning the city had nothing to do with regional plans and strategic, territorial visions: only in some cases, above all once again in the Baroque period, certain transformations could be seen as the result of a more comprehensive view; the idea to create a trident shaped system of streets in the center of Rome was the rebuilding of the existing old town center, shaping it to connect the urban old neighborhoods with People's square and the territorial connection beyond the walls; also Turin had a urban plan, with a beautiful and interesting grid, with strong relations with the territorial axis connecting Turin to the Royal castles, the buildings and properties around the existing city, in the countryside, but nothing was really similar to what we call today a contemporary strategic view.

A lot of connections might be found just before, during and after the Industrial Revolution, by far the most drawing event never happened for our cities, so

shattering that the structure of the city, its relations and its size changed for ever. Before the Industrial Revolution, how far a person could reasonably walk and the requirements of carts, wagons and herds of animals influenced the layout and dimensions of city streets, and more generally influenced the shape and the role of the city itself. But in the being of the Industrial revolution and industrial cities many new assets were about to come. At the beginning of Industrial Revolution, most Americans lived in farms or in very small towns; but high factory wages and opportunities gradually drained the countryside: the 1920 Census in the US for the first time showed that more people were living in the cities rather than in the countryside; but while cities where attracting people, they were not regulating correctly the way inhabitants and immigrants lived together, and cities appeared smoky, dirty and overcrowded. So, it is easy to say that new industries brought new means of travel; first railroads, then streetcars and subways, radically altering the layout and the organization of streets and cities. A rapid expansion across the US of the grid pattern in cities and annexations, and a significantly fast growth of cities expansion's plans around western Europe began transforming cities, but just using a mix of planning and regulations. Simultaneously, but with significant evidence only in the UK and in the US, railroads and transit lines encouraged the development of new, far – flung suburbs, heralding a new era of decentralization. Many things have been written on this great change: authors have often emphasized that this was the beginning of urban sprawl. This may be true, just because from this moment in history on, cities could grow without limits, or at least thinking that no limits at all where in place.

The most relevant aspect of the beginning of decentralization, at least during the first and intense era of decentralization, while streetcars, railroads and suburban tramways where leading the expansion of the cities, is that a big, important difference began to be created between the traditionally walkable cities and the already growing cities. Italian cities never grew just following the infrastructural lines or new suburban street cars services. All over Europe,

maybe excluding England and the way London grew, the majority of European cities, at the beginning of the XX century, have planned great and important growth plans just adding new urban developable lands around, or close to the existing city center.

31_ Milano, Italy. Growth plan for the city of Milano, 1889

The plan that the city of Milano developed at the end of XX century was planned as a growth plan, just adding organically some new development areas around the city center. A network of streets and blocks planned the growth of the city in continuity with the city center. The small towns around Milano began to growth simultaneously, and at the end of urbanization were included in the boundaries of the city. A different approach to growth rather than planning new towns in the suburbs

By demolishing the ancient defensive system of walls, urban gates, and fortifications, cities like Milano, Frankfurt, Barcelona grew significantly just adding a new pattern of grid, made by streets and blocks, and setting a system of regulations. Very often the main inspiration for such regulations was the

improvement of health conditions, and the upgrade of the engineering systems through the cities. But the urban shape, and the urban development in general didn't change significantly: new streets, new blocks, with more regularity and more order were added to the more confused and organic growth of existing old town centers, but a general continuity and homogeneity was the result of many of those plans

In the US and for some reasons also in the UK, the difference between city centers and suburbs was evident: the pattern of growth assumed a strange "waving" aspect, with new urban, dense and developed small centers just around train stations and lower densities or nothing in between; only later, the lower densities or empty lands will be filled with new development. This difference is significant, from our point of view: it shows a difference in size and scale for the growth of the cities, but above all, it shows a difference of perspective, considering the regional and the metropolitan scale. In the cities where the growth followed an organic continuity from the city centers through expansion and new neighborhood as in Milano, the need of regional and metropolitan planning with a direct connection between infrastructural planning and new developments planning was not perceived as fundamental until the end of the II World war. This difference shows that many times the cities which grew just by adding new grids of blocks and streets simply added new buildings following such a grid, whereas the cities growing following a more regional oriented growth added new small cities, or new suburbs, of course new communities planned as a whole around a train station, or around a focus point. Is this the beginning of master planned communities? Maybe, or for some reasons, we should say that this is the beginning of the use of a particular tool, like the master plan, to "invent" something completely new, a new shape and a new urban or suburban environment to settle some new inhabitants; with the implementation of suburban plans, a new community was created, a new small, tiny village center was planned, usually in the center of the suburbs, a new layout of residential avenues were added and a new system of regulations

was created, taking into account the size of the buildings, the dimension and the hierarchy of streets, the shape of squares and plazas, the zoning between commercial and service building, public buildings, private residence. Once again, many thinks have been written about the growth of suburbs.

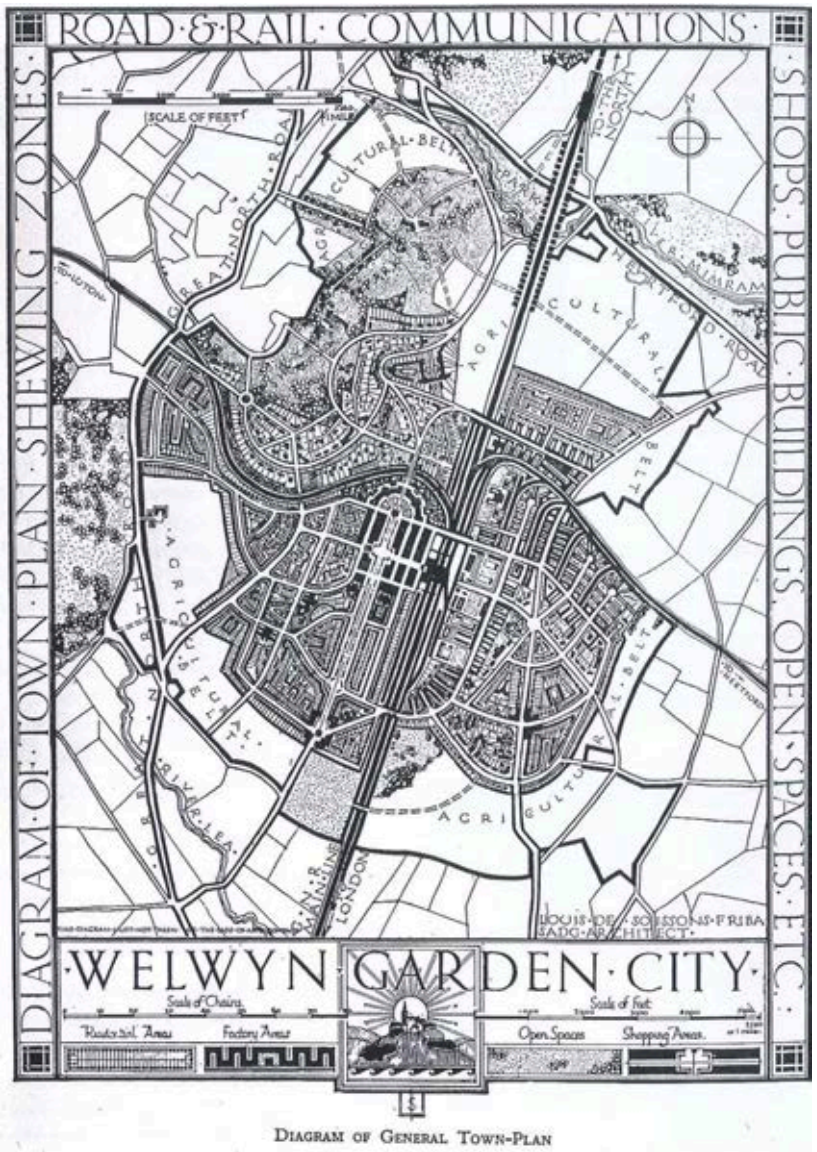
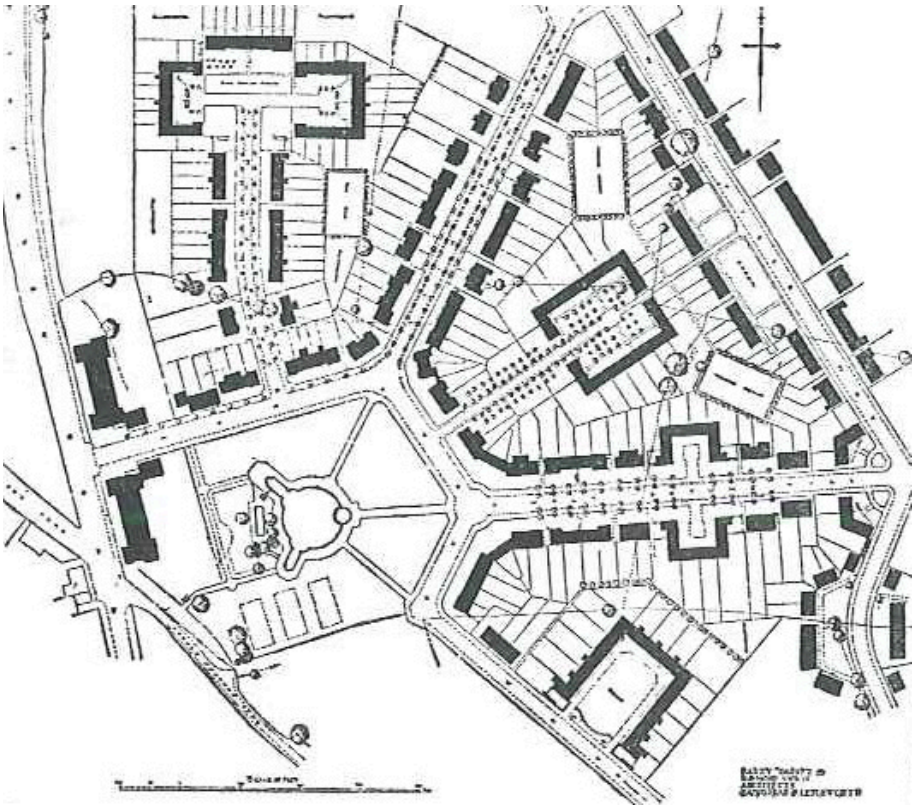


DIAGRAM OF GENERAL TOWN-PLAN

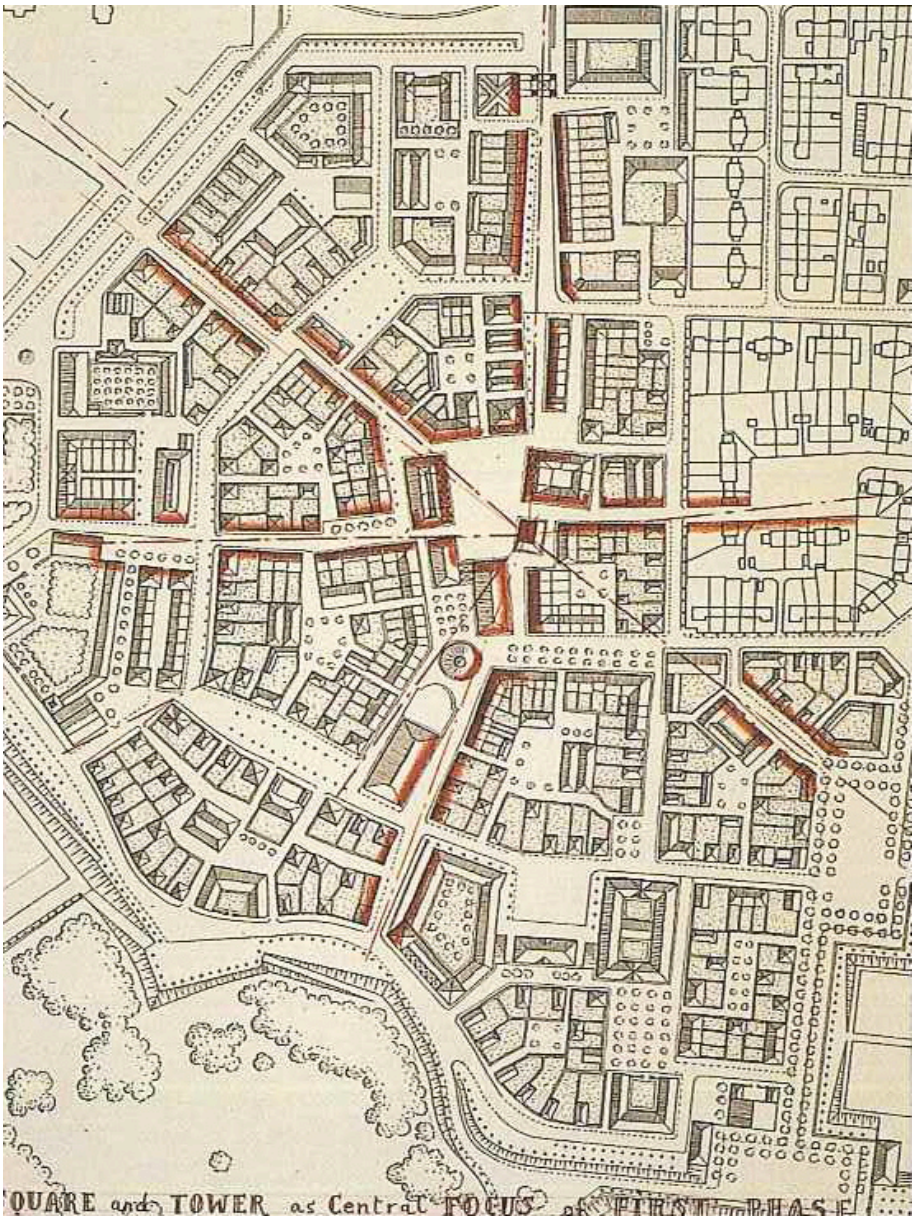
32_ Welwyn Garden City, UK. Welwyn Garden City Masterplan (previous page)

Was it the beginning of everything? A master planned community, linked by public infrastructure to the main urban area, with a variety of urban morphologies, a town center and residential districts has been planned and connected to the green network of the countryside



33_ Hampstead Garden Suburb, London, UK. Parker and Unwin's plan for Hampstead Garden Suburb

Was it the beginning of everything? Looking at the drawing, and comparing it with many new other drawings, it seems that everything was already included and preview. The concentration of the mixed uses along some major urban roads, principles of urban design and a variety of typologies of spaces are some of the elements already studied and presented by the plan. Above all, it is surprising the concise way the plan presents, simultaneously, all the components and supporting actively the development of all them.



34_ Poundbury, UK

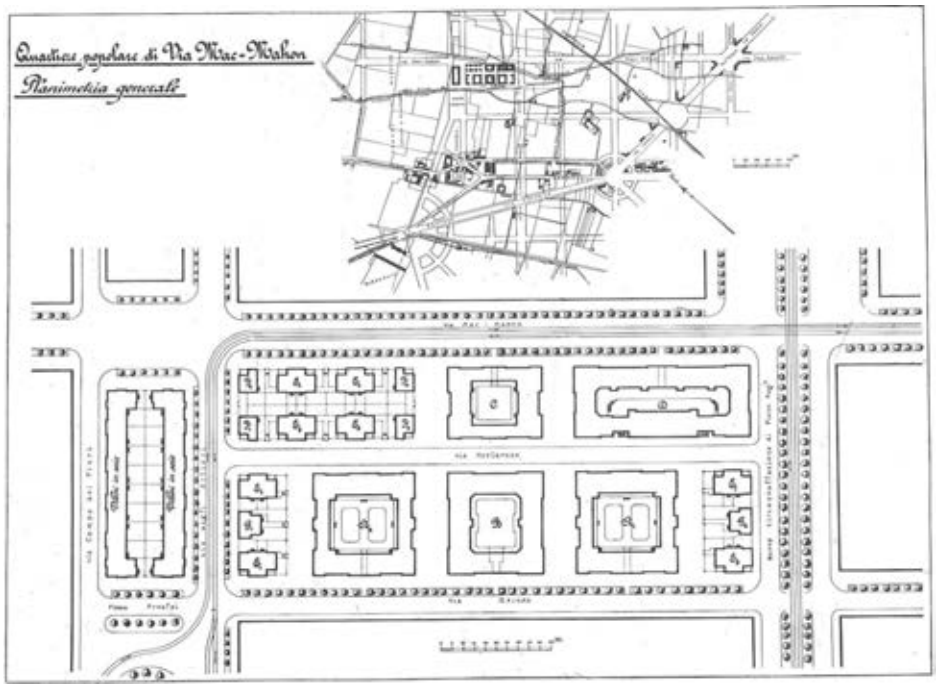
The first draft of the design principles for the town center, developed to support the first stage of the development of Poundbury.

A great literature tells us what is exactly a suburb, and how suburbanization has changed many countries, evidently like US and less clearly many others. The first era of suburbs should be considered the beginning of the use of master plans: planners used master plans to decide the shape and the size of the suburbs (considering a precise idea of the totality of the item they were planning), to create a urban development using different urban patterns and urban typologies, grading and scaling density and heights, zoning the uses not just to separate, as it happened later, but maybe just to create diversity and a difference between urban cores and urban residential development in the same suburbs. From a planning point of view, the use of master plans or the use of master planning communities has been adopted during those years to plan the growth of cities through a new scale, a new regional scale and with the use of infrastructures. Two of the three elements we are looking for in the use of master plans were in place: plans to invent a new urban development, and plans to create a multi polarized or multi polar developed region equipped with the necessary infrastructures.

In places and cities with a more traditional and urban oriented, homogeneous and organic growth ruled by plans through the addition, in a more or less complicated and sophisticated way, of new blocks and streets, the use of master plans to create new part of cities and new ideal communities was adopted in a more significant and even refined way. New estates were added to the growing cities by private developers, following a precise idea of growth and just building new urban neighborhoods. But in many cases, master plans, or something in between a master plan and a project, were adopted to invent and create new part of the cities dedicated to social housing.

In Milano, the use of small master plan helped to create the first social houses project, at the beginning of XX century, with the creation of small blocks in the already planned grid of streets and blocks, dedicated to social housing, but with the research of a more diverse alternation of different urban typologies for built

up spaces and open spaces, in many cases with some connections with others urban open spaces, or just using small master plans to give a different shape to buildings, courtyards, open spaces, services and public utilities. It is a different idea of city: the possibility to control all the block, with only one project, and to manage the simultaneous growth of buildings and open spaces was just an occasion to develop entirely a part of the city, controlling built up spaces, open spaces, and networks, inventing within the same block or within the same development urban diversity and alternation of different typologies.



35_ Milano, Italy. The master plan of the Mac Mahon neighborhood development.

A urban block, already planned by the growth plan, has been divided by a private alley and built with different typologies of residential buildings. The decision to plan a new social housing complex on this block was part of the new plan for the city of Milano: even if with less emphasis than other European plans, a strong relation between urban transportation networks and social housing complex planning was in place. The design of a complete block, with a variety of uses and a variety of typologies is in good balance with the need to follow the city plan and the layout of the grid system.

36_ Milano, Italy. The master plan of the Mac Mahon neighborhood development.

A view of the urban single-family houses today.

Obviously, even before, at the turn of the century, in many cases European cities have re invented many of their central areas: the project that built the magnificent Milan Galleria, or the redevelopment around the city Castle, or the project to create Regent Street in London are great examples of the use of specific projects to transform or to re invent some parts of the cities. But the use of great projects, even coming through competitions or the first attempt to create competitions, was something exceptional, in many cases even out of the rules of the general plan, or before them, as it happened for the redevelopment of urban, residential areas around the castle in Milano.

The use of smaller master plans to invent the public development of the city, to invent new neighborhood for the building of social houses was not something exceptional, or outside the general rules and the shared regulations created by the plans; the use of those master plans was concurring to the same set of rules and regulations, they interpreted the existing rules and simultaneously those small master plans invented a coordinated answer to built up spaces, open areas, connections, networks. Even if, considering what happened in Milano, there is no evidence of a specific, coordinated and organic plan for the construction of those neighborhoods, we could say that a sort of interrupted

belt of small public neighborhoods was created and built up from the beginning of the XX century until Fascism was established, for almost 15 years, not considering the interruption of the First World War; studying them, we could say that a correct, organic and complete interpretation of the existing rules gave the possibility to create a homogeneous and well planned system of buildings with strong relations with open spaces, networks, connections, public facilities and creating a correct alternation of typologies, densities, uses. In many other places, as in German cities, the construction of a more coordinated and daring general project, in many cases shows a perfect system and a perfect integration between plans, projects and neighborhoods. In other cases, such as in Milano, this didn't happen also because the city decided to keep urban social development within the city limits and its grid of blocks and streets. Considering what happened before the Second World War, the use of master plans already shows us the two different sides of urban growth: master plans were already used to re invent or to transform urban areas or urban neighborhood, re inventing something completely new within the city limits, or they were used to create something new, new urban areas and new urban "dreams" in the countryside, or just around the city fringes. Master plans were perfect tools to invent, and to invent a urban development.

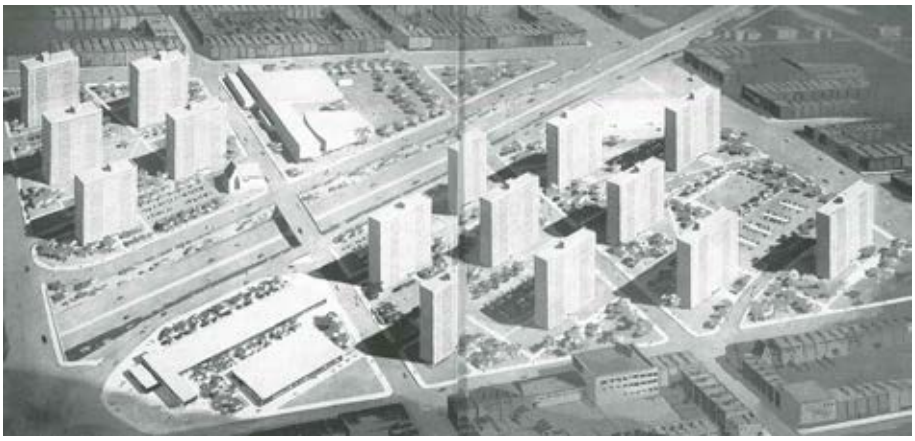
After the Second World War, or even before if we consider what happened with the large use of private cars, many things changed. The use of cars, especially their massive use sprawled the city in every directions and changed the urban destinies of many countries around the western world, first of all in the US. New suburbs grew almost everywhere; cities grew without considering limitations to the use of lands and without considering the huge costs that even today cities are paying. Master plans, in such conditions, lost their main references: urban regions grew rapidly just by adding new communities, not master planned but just built up with new systems of roads, grids and low density neighborhoods, parceling out in every directions. In the city centers, something new was happening. As Giedion said "*The city cannot continue to exist in its present form…*

(it) must be transformed but need not to be destroyed" [7]. Interstate highways abetted this transformation. Construction of the new roadways broke through existing cities sometimes cutting straight through crowded residential and commercial areas. Supporters used civil defense concerns to justify this destruction to some degree but the perceived need to modernize older cities in order to compete with a rapidly emerging suburban economy was even more determinant.

37_ Milano, Italy

The Galleria has been one of the first cases of urban redevelopment in the city. A system of new buildings, private courtyards and public, covered pedestrian gallery has been planned and built transforming the city center and connecting Duomo Square with La Scala square and theatre.

[7] Giedion, S., Space, Time and Architecture, Cambridge, Harvard University Press, 1954



38_ New York, USA

Robert Moses proposed and realized many urban redevelopment and renewal projects, many of them to create residential, intensive neighborhoods, with a new system of wider roads. Scale and dimensions of those developments are completely new and not comparable with existing city geography.

In many parts of the world, this transformation jeopardized the existing city: Robert Moses in New York, and his struggle against opponents such as Jane Jacobs, is just the perfect example to understand what happened and above all the scale and the dimension of those transformations.

The massive use of highways, roadways, and super blocks transformed many parts of the existing city, lowering down overnight old blocks and buildings, and transforming them in super blocks, high density and anonymous building just to host and to zoning out people and inhabitants. After years of debate and now that many things in our cities have changed, a mistake of scale might be one of the explanations for what happened during those years: Robert Moses, or planners like him, maybe didn't do necessarily wrong things and didn't take wrong decisions to modernize the existing cities. But maybe during those years a lack of attention for the small scale, for the design of buildings and their surroundings, and above all a great lack of attention and interest for the design of relations led to some of the biggest mistake ever done. The rigid separation

through the use of zoning, the large, not human scale of highways and superblocks created an hostile and not designed general urban development, not considering the smallest scale and the more human relations that historically made the city centers and above all historically created the conditions for a good urban life.

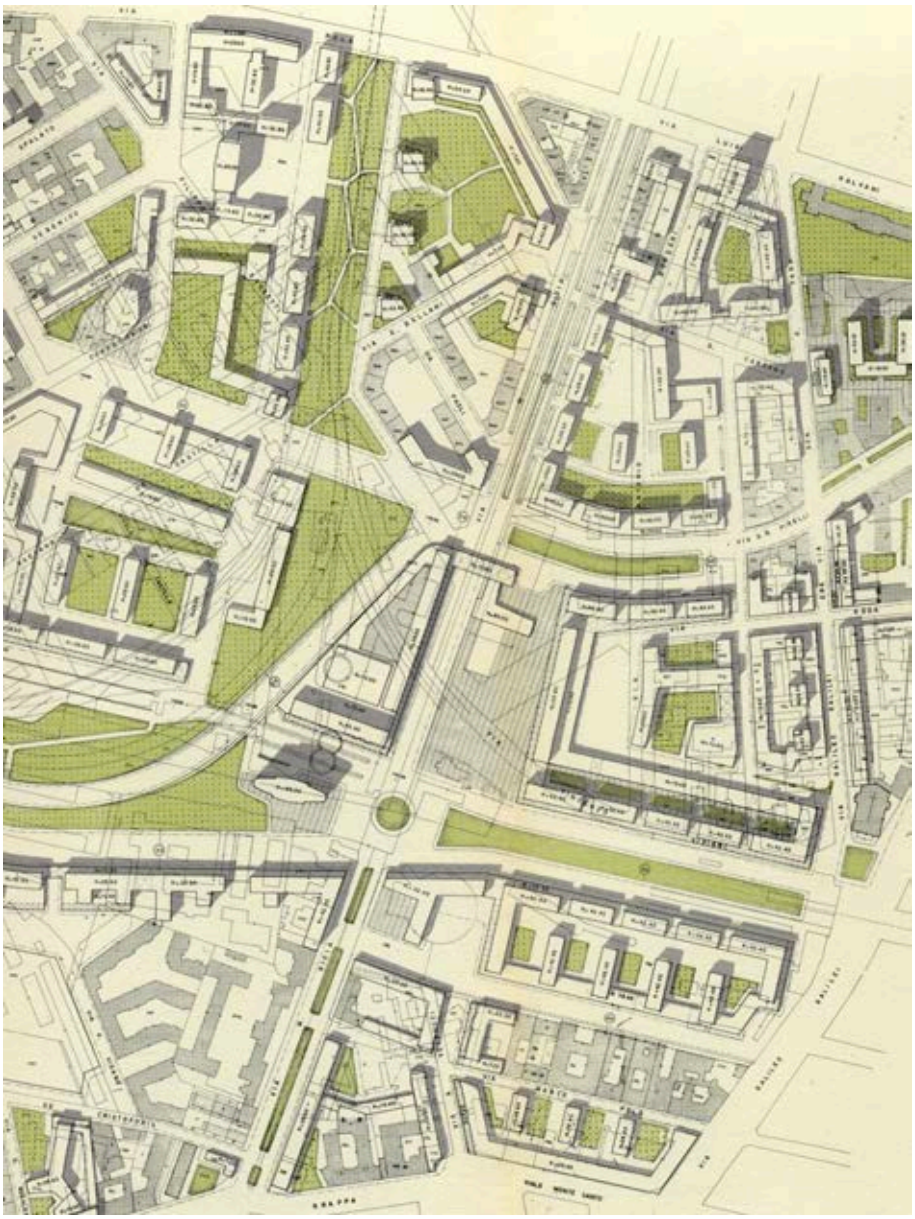
In other places, urban renewal and urban transformations didn't happen so fast and so violently, but the same cultural need to plan with a new approach the existing city affected also historical places and the same places that during the growth of the first suburbs decided to grow more organically. The AR plan for the rebuilding of Milano [8] and the following plans, certain new plans in Paris or in Barcelona, in particular the rebuilding plans in England and in Germany brought about many of these innovations. Highways, or urban high-speed roadways opened up almost everywhere, not considering the already existing city, and above all the existing relations and connections between things. The mistake was to give the way to just one of the components of urban planning, such as mobility and private cars mobility; and this mistake was evident also in the reduction of the size of sidewalks, in the scarce attention for the design of squares and in the loss of the typological diversity and precision featuring the existing cities.

This is a very important point of view: the historical cities and above all the cities with a planned growth just started after the middle of the XIX century to consider the variety of urban typologies very carefully, and used a large catalog of possibilities to plan their expansion. This variety created the neighborhoods with tree lined streets, squares, boulevards, gardens, architecturally varied buildings, infrastructures and public facilities; this variety and the precision in using such catalog of possibilities unites more or less European cities, and it can

[8] The AR proposal plan has been the first proposal for a new contemporary plan for the city of Milano during and just after Second World War. It has been selected among others at the competition that the city held to plan its future after war and bombing. The AR plan expresses the typical, rational culture of those years and it has been only partially considered in the general plan then developed, and approved in 1953.

be seen in small or large cities, according to the size of the growth cities they planned. That language and those combinations of urban typologies represent a very important key point for our research, because they definitely show that a particular combination of built up spaces, open spaces and networks should be looked for to ensure quality to master planned developments. The lack of these combinations is the most relevant problem for the specific development which occurred during the '50s and the '60s. New zoning reinforced in the US federal urban renewal and highway programs in the effort to remake the nation's cities; modernism soon dominated in neighborhoods and commercial districts razed and rebuilt according to principles developed by Le Corbusier and his colleagues many years earlier. It happened in New York City, with the transformation of the previous existing set backs code, with the possibility to build towers with apparently no limits; and the Avenue of the Americas, or Sixth avenue in Manhattan, has been transformed in a parade of tall, huge impenetrable buildings separated from the streets and from the rest of the neighborhoods. It happened in Milano, with the first ideas for the development of the new downtown financial and administrative center, never completely developed until today, with an array of urban highways, tall buildings and skyscrapers but with no evidence of squares, pedestrian spaces or just buildings and connections at human scale.

In such a climate, urban design as a profession was born: in 1953 Sert, president during those years of the CIAM and dean of the Harvard University Graduate School of Design, gave a lecture entitled "Urban Design" at a conference of the American Institute of Architects (AIA) in Washington DC.



39_ Milano, Italy

The generic master plan for the development of Garibaldi station's area, planning for a new business and financial district It took a lot of time to develop the system of areas around the station, but some buildings have been built in a generally unplanned urban environment. The central part, planned as a system of public squares and built up, open to public services, never took place.

This is the first, widely known instance of the use of that term in an architectural forum. Sert advocated "the integration of city planning, architecture and landscape architecture; the building of a **complete environment** in urban core areas". The idea of the complete environment is central for our speculations; the complete environment is the combination of buildings, open lands and open spaces and networks that create the urban mix; from the accuracy of the process of planning, it depends the balance and the level of quality that the urban environment can reach. Sert, in the "Human scale in city planning"[9] argued for countering the American trend toward suburbanization by replanning metropolitan regions based on walkable "neighborhood units" focuses on public facilities. As Mumford said, just adding a comment to what Sert wrote, "(Sert) began to advocate the cultural and political value of urban pedestrian life … right at the moment when many business and Federal government saw the movement of the white middle class to the suburbs as both desirable and inevitable. After this position, Sert considered the possibility to find a compromise with different points of view, and he advocated for urban renewal in the city centers, lowering the existing densities, adding new parking facilities and creating a fast way of connecting the city centers areas with the regional networks of highways. This is a compromise with different positions, above all in a country like the US where in those years other people considered the existence of dense city centers as targets for nuclear weapons attacks. In 1956 Sert hosted at Harvard the first conference dedicated solely to urban design. Members of CIAM, Victor Gruen, Edmund Bacon as head of the Philadelphia City Planning Commission, Lewis Mumford and Jane Jacobs attended the conference, and many writers said that all together those freethinkers gave birth to urban design as a specific discipline, with a specific focus on the renewal of the core cities. Sert, at the conference, said "Urban design is that part of city planning which deals with the physical form of the

[9] Mumford, E., Sarkis, H., *Josep Lluis Sert, The architect of urban design 1953 – 1969*, New Haven, Yale University Press, 2008

city", and the use of the term "urban design" began to be used also interchanging it with the idea of "civic design".

A process of recentralization took places in the same years: the importance of cities as an economic power and the importance of the presence of densely and warmly populated urban areas. The speed of this process was completely different in the US in relation to European cities, just because while US cities kept sprawling around the region and the metropolitan area, European cities followed a different destiny, growing more or less always around or in continuity with the existing urban core. A real process of suburbanization never happened in the European cities as it happened in the US; some cities grew much more than others, like Paris or London, but we can still recognize today a more or less compact shape of the city, with outer neighborhoods rather than real suburbs, and with a more evident relation between the growth of the city and the diffusion of public infrastructures. But, even considering these differences, that are so obvious and already discussed that they can be considered as well-known, both European and US cities saw a strong process of recentralization. In the US this process was necessary to avoid the complete death of the existing cities and in Europe it become a tool to give new values to the existing historical old town centers, thus increasing their land values. In both cases, very often the municipalities used their powers to clear large tracts of inner cities to introduce new projects, developed with specific, particular projects. And in both cases, the use of master plan was considered as the perfect way to develop simultaneously the new redevelopment areas within the existing city centers. Not all of these efforts met the criteria urban design had laid down; many of those projects that did were built around vast civic pedestrian plazas fully separated from streets, but making many more mistakes, separating the new development areas from the rest of the city and segregating them completely.

40 and 41_ Albany, NY, USA

The new Federal Plaza has been considered one of the most evident examples of American renewal projects. The separation between the existing city and the new, monumental district is considerable even today

The redevelopment that took place over those years was not so different from what had happened before: the complete environment that Sert advocated for was never created, just proposing not a balance between all the different aspects of urban design, but preferring one over the others: pedestrian over cars or cars over open spaces. The master plans developed during such years represented something different from what we are looking for: they were developing a new idea of city, bringing new life to existing, declined neighborhoods, but many times introducing new shapes and new relations, inward – looking and with some difficulties in creating relations with the existing neighborhoods: the project for the new financial and administrative downtown of Milano didn't care too much for the fringes of the projects, historically well settled and already heavily populated. That generation of master plans was producing new projects, with new shapes, completely different from the rest of the city. Renewal occurred, but at a high cost.

Few things and few events might have changed the feeling over that kind of urban renewal: the demolition of Pennsylvania Station in New York City to make room for Madison Square Garden or the demolition of Les Halles markets in Paris to create the Forum more or less ten years later are just two examples of the bad limits that urban renewal reached through the use of unbalanced master plans. Starting from a conservationism point of view, many American and European movements began to grow, against the demolition of existing urban areas to create that kind of redevelopment. Those movements expanded as preservationists joined forces with community groups to protect endangered neighborhoods against the opening up of highways and urban renewal projects. The delicate network of lively urban streets and blocks appeared to offer an alternative to urban sprawl and modernist superblock planning ideas; the perfect balance between streets, sidewalks, squares and gardens began to be seen as the lost treasure, and the essentiality of that treasure began to be seen as the missing aspect of the renewal projects.

The rebirth of the real value of historic city began to be hardly proposed and pushed by Jane Jacobs, who advanced the idea that urban renewal and the master plan developed for achieving that specific renewal destroyed the things that made cities great and unique: the intimate scale and the complex social networks. She proposed an opposite vision over the future of cities rather than the one sold by the master of redevelopers, Robert Moses. Small and livable blocks vs. superblocks; pedestrian and vehicular local roads vs. highways; mix of uses vs. segregating zoning: from that moment on, new vision and new theories rediscovered what many places in the world have always had. Venice, Florence, Rome, Paris and even some areas in New York City, in Boston or in San Francisco were built with a mix of monumental and ordinary places, with a balance of spaces for people and spaces for heavy uses such as infrastructures, or with some perfect, delicate relations between different networks; many of the historical images have been re proposed and re used as a perfect idea to create perfect spaces and good new project. Master plans began to look at the historical masterpieces, to re discover that balance and that integration. Above all, many master plans began to create a good mix between existing, refurbished groups of buildings and new buildings, considering an integration of spaces and areas along streets, or avenues, or pedestrian alleys.

42_ Boston, MA, USA

The Walk to the Sea path recognizes in the city center a historic district and a specific urban historic environment.

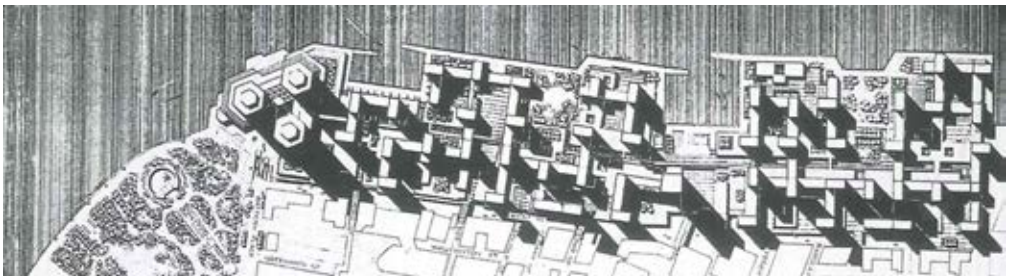
New urban systems appeared, such as in Boston "Walk to the Sea" where an exciting transition from the new areas of the city at the City Hall Plaza to the city's historic waterfront created the right conditions for the redevelopment of wharf buildings and the re use of the waterfront as a public area.

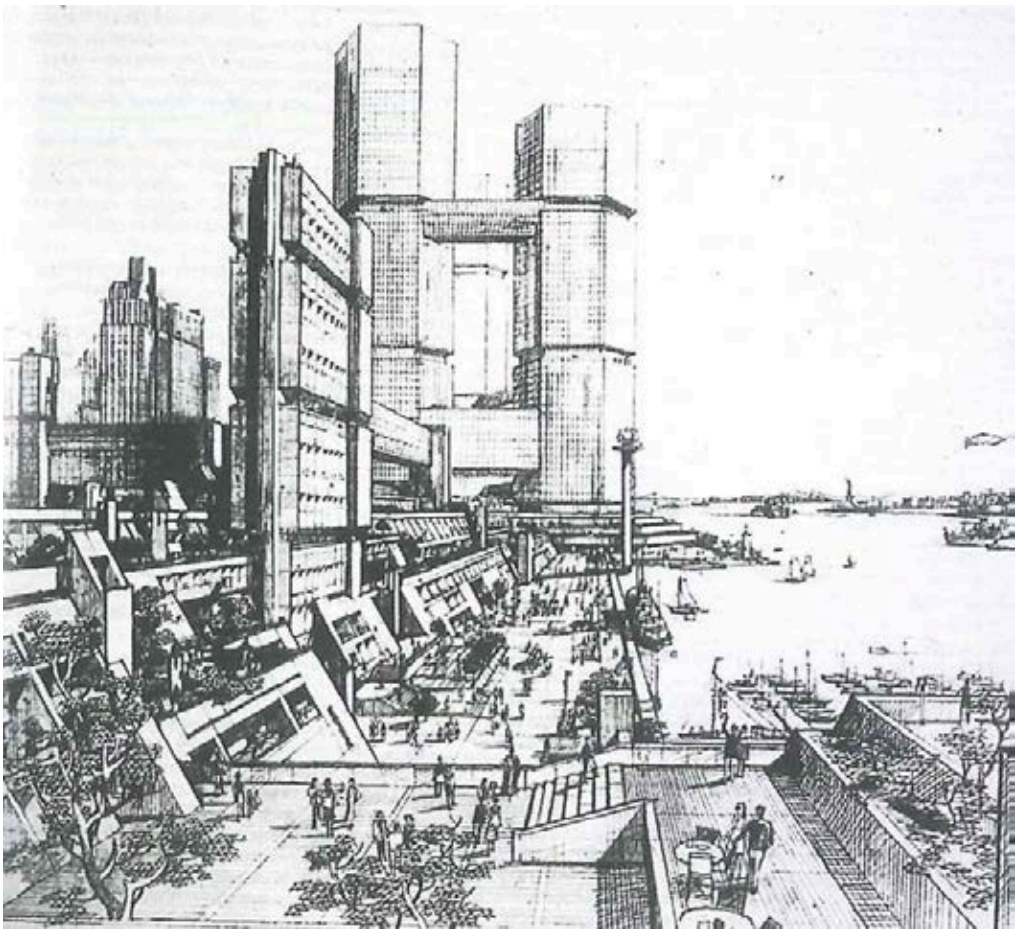
A new generation of master plans appeared just working in a transition zone, in between the refurbishment of existing buildings and the planning of new building districts: this new, more careful approach to urban design should be considered as central in our speculation. This mix of re use and re building invested many urban districts, in EU and US cities; many times, new master plans with these inspirations were used to transform systems of areas, such as waterfronts, or abandoned industrial areas within the city old town centers. A great emphasis was given to the recreation of a system, of a network of places, of open areas, of public spaces surrounded by buildings as well as to the connections and to the different, possible connections that these urban systems could have. Pedestrian alleys, bike paths, greenways and public spaces many times created a continuous flow of renewed spaces in complete coherence with the already existing urban buildings and respectfully in balance with the urban patterns. The master plans which supported and invented this kind of development reached the complexity we are looking for: from visual suggestions to specific regulations, those master plans created new development considering and respecting the existing urban areas around; a complete idea of urban neighborhood developed networks, buildings and open spaces maybe looking for that *complete environment* that Sert suggested many years before.

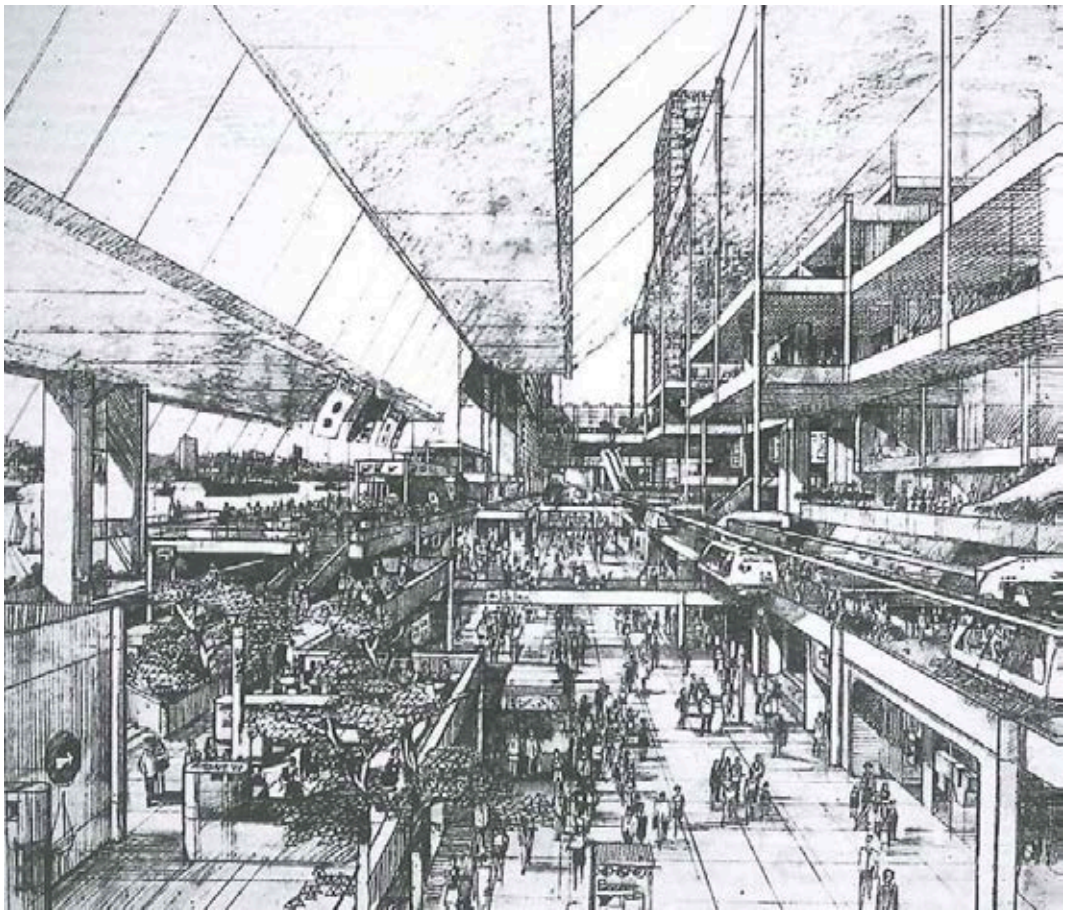
From the experience of Battery Park, master plans were used to plan communities, assuming that the best way to set up a new community is to create a balanced place where its inhabitants may live.

Before the redevelopment of brown fields and derelict or vacant industrial areas began, *Battery Park* plan experimented some new approach to urban

design, and the use of its master plan should be considered for a while. The master plan developed to plan the landfill produced by 1970's excavations for the WTC and Twin Towers construction, extended the adjacent street grid through the site to a waterfront promenade and a park system connected to the proposed and now almost completed redevelopment of Hudson River waterfront. A new residential and mixed – use neighborhood of small, pleasantly scaled city blocks system just added a new urban, residential and commercial neighborhood to the existing city. Battery Park has been a great example of urban redevelopment: many things have been said from the beginning of the project until today: the revitalization actually created a strange addition to Manhattan, well connected by the extension of the existing streets grid, but physically separated by the continuous flow of traffic through West street. It is important to us to keep in mind the creation of a new, complete environment, well connected to the networks of the city and above all created with a wide process of participation, before, during and even after its partial rebuilding after Sept, 11. Battery Park is a city within a city; it might look as a strange green suburb inside and very close to the city; a sort of recreational, green and fresh place where urban people can live, feeling suburban without leaving the city.







43, 44 and 45_ Battery Park, New York, USA

The 1969 plan for Battery Park City shows a complete different idea and a different vision over the development of the area, and it shows the evolution of the idea of urban design. Huge structures rather than human–scale developments were supposed to create a completely different urban environment. It is important to keep in mind that the story of Battery Park dates back to the late 1950's and since it complete development many planning ideas and many vision over the future and the form of urban environments have changed. From the point of view of this research study, Battery Park master plan is the result of a joint effort of many agencies and groups, such as the Mayor Lindsay's Urban Design Group, the Office of Lower Manhattan Development, the Office of Midtown Planning, the City Planning Commission and the Greenwich Street Special Zoning District. A struggle between two different idea of cities became to be evident, and at least the new development plan, prepared by EE&K Architects, established a new paradigm for large scale urban design where buildings were designed to shape public spaces and addresses, moving away from the modernist approach that favored object buildings and automobile-scale convenience over the pedestrian experience.

This project, together with other projects as Mizner Park at Boca Raton, Florida, or the celebrated construction of Celebration, close to Orlando in Florida, broke new ground in the design and planning of suburbs in the US, and they brought attention to the possibilities of large, planned urban redevelopment and renewal. All the projects developed sometimes between the beginning of the '80s and the end of the '90s show a great need of redevelopment of the existing urban areas, sometimes by investing in large scale projects as in Battery Park, in other cases just by adding or rebuilding small but significant part of the cities, as in Mizner Park in Boca Raton, but always looking for the reconstruction of a town center, revisiting main streets, adding new central squares. Above all, such projects began intensively to take inspiration from the historical well-known old town centers, and the European most celebrated, used and popular urban open spaces and urban typologies. Urban planners involved in the planning process of Mizner Park, that is nothing more than a short urban, commercial avenue between sprawled development and the North Federal Highway of Florida, took inspiration from the shape of Piazza Navona in Rome, considering in particular its size and its proportions; of course, it was just a play of copying the same shape, without considering not only the history of the place, but also the fact that the same shape cannot be used to create a completely different space. Piazza Navona in Rome is the final result of centuries of transformations; its proportions come from the Roman Domizianus' Circus, created here and then, during the following centuries, transformed, built up, and re used many times. Even the process of dedicating the square to pedestrians is a recent achievement. Anyway, the process of creation of new town centers and new central places started from this first experiences and began to create in the sprawled nations new communities, many times designed in the new, post modernist mode and code, and in many European cities it began to create a new generation of master plans, many times related to the last , and most impressive generation of urban redevelopment: the re use of vacant or abandoned industrial sites.

46_ The Woodlands, TX, USA

The Woodlands, a new development in the metropolitan area of Houston, TX, is considered among the best master planned communities recently developed. The central part of the community has been planned taking inspiration from the shape of Piazza Navona, in Rome. The differences are evident, and this is a typical example of simple copying of a shape, without considering the morphology it belongs to. Above all, The Woodlands is not connected to any major public mass transportation.

Generally speaking, and always looking for the roots of the use of master plans as a tool to create high quality urban transformations, with strong relations with strategic, regional or metropolitan plans and ideas for plans, the last 20 years have been impressively adding a long list of new cases study, on both sides of the Atlantic Ocean. New Urbanism principles, above all, have been used to create new process of sprawl retrofitting: with the creation of new neighborhoods, with higher density, a new system and a different hierarchy of roads, and with the creation of public, pedestrian open areas and open spaces, New Urbanism started offering a more livable alternative to sprawled, secluded and separated communities. Many things have been written about the real

different offer that these new models can propose. From our point of view, it is important to see that the majority of these developments were planned with the use of a precise master plan, and many of these master plans have a direct connection, or are depending from a strategic, metropolitan vision. The great metropolitan plan for Portland created a significant connection between a strategic vision for the metropolitan level, suggesting to stop new growth and stop new sprawl, investing on the other side in a more compact, coordinated growth, using public transportation lines, creating new transit oriented villages around the transit facilities stops and stations, and designing the new communities with the use of master plans, able to coordinate the process of decisions and the local urban design. This post modernist – contextualized tradition re invented by New Urbanism, as codified by the Congress for the New Urbanism (CNU), influences in the US much of the urban design practices and techniques presented today in the US. The tradition has won wide public acceptance, arguably much more than the acceptance that the modernist urban renewal projects never got. Just starting from the failures of the '60s and '70s, New Urbanism planning stresses the preservation and revival of the existing urban neighborhoods over their demolition and reconstruction using shapes and patterns with nothing to do with the traditional balanced pattern previously used. Where urban expansion or reconstruction takes place, it should take its cue from surrounding streets and block patterns. This philosophy has joined with a raising interest in mixed- use, walkable, and transit friendly urban environments and all of these developments represent reactions to widespread, auto dependent suburbanization. This process of retrofitting urban sprawl has brought and built up many new neighborhoods, many of them perfectly working in their connections with public infrastructures and mass transport, many of them just adding a different kind of development in the vast seas of urban sprawl, but with no connection with public transportations and no connections with strategic master plans to stop urban growth.

Many of these neighborhoods were planned with the use of a well-done master plan.

The master plan was used at least to achieve three different goals. With the use of master plans the new neighborhoods were planned balancing different contents and creating different parts within the same development such as central areas, public facilities, pedestrian avenues, gardens and parks, lake fronts or water amenities in many cases and high, medium and low density residential blocks. Networks of pedestrian connections, bike paths and greenways were controlled and planned by the master plan, the same master plan that helped developers in following form based codes, giving a new, more complex and sophisticated shape to streets and avenues. The form based codes created a new design for sidewalks and streets, but above all, taking inspiration from the New Urbanism Transect idea, master plans created a new road cross section, showing the correct position of building main facades, garages, porches, window shops and so on. In general, we can say that, not considering the connections with the strategic regional or metropolitan level, all the master plan developed to create New Urbanism communities followed these principles, and master plans were transformed in a complex and more complete set of regulations capable of deciding and controlling the construction of a precise urban shape and urban environment. Maybe, even working from a different set of principles, urban designers in the United States, in the UK and in many other places around the world, continue to address many of the same concerns that José Luis Sert tried to theorize. The recentralization of urban areas became the central focus point for many, in the US and around the world. The use of master plans began to be seen as the perfect tool to achieve this strategic idea, a perfect in between plan, something capable of discussing the strategic vision with the regional and metropolitan levels, as well as of including in its directions everything needed to control the shape and the built up quality. With a final, important characteristic: it was considered as something strictly “visual”, so

easy to be understood that people, citizens, inhabitants and actors began to see it as the easiest way to imagine and discuss, the proposed transformations.

If the main focus was on recentralization of cities, while New Urbanism increased the involvement in the construction of new neighborhoods around the metropolitan regions of Us cities, many existing central cities began to invest in the reconstruction of their vacant lands: in the US and above all throughout Europe. The largest part of the recentralization process was allowed by a great social, political and economical change: the transformation of what the industrial revolution had left behind. A new industrial revolution was transforming the world: production processes moved from the historical industrial areas, within or even around the US and European Cities leaving large areas behind. In many cases, the value of those areas was potentially and virtually very high: in Europe and in the US industrial areas often located along rivers, waterfronts, railroads or at least mass infrastructures. In an urban world refocusing its development on infrastructures, those areas began to be seen as a real, authentic urban resource. Maybe, the last possibility of erasing past mistakes and completely rethinking the balance of the existing cities. And just because of their size and their position, brownfields and redeveloping industrial areas were the perfect mix of connections to create with strategic metropolitan or regional plans and relations to highlight with the existing city shapes and patterns. Master plans began to be used as the main tools to plan the redevelopment of such areas, and finally a new generation of projects began to be built up in the city centers, around old town centers, in the urban regions of European and American cities, thus reinventing urban shapes and urban neighborhoods. The reconstruction of industrial waterfronts offers a prime illustration of urban designers' contemporary approach to city recentralization, also taking inspiration from the City Beautiful traditions. Cities across the US transformed vast acres of waterfront brownfields into parks, high density housing, cultural districts, and mixed-use neighborhoods, and this is even today one of the urban process occurring in many cities, such as the transformation

and densification of Mission Bay in San Francisco. Meanwhile, just using and explaining master plans, and as aftershocks, from the urban renewal and highway era have rumbled on, urban designers have become increasingly involved in community outreach, consensus building and public policy choices.

This second category of projects may be described as infill projects: many of them transformed urban vacant lands into new central parts of the cities, and were used as an occasion to recentralize urban regions or to invest in central areas to reduce the pressure and the congestion over old town centers, investing such new areas of a shared central role between central cities and urban regions all around. From Paris to Rome, from London to Berlin, from Milan to Valencia, European cities started large urban transformations of their derelict central lands; many of them were used to host a specific transformation ruled by a particular occasion, like the Olympics, or for specific exhibitions or fairs. Many others just included the reclamation of derelict lands in the strategic actions to be taken following regional or metropolitan plans. Many, again, used the transformation of vacant land just as a process of urban renewal, creating new occasions for giving quality to their urban central districts. There are many differences in these approaches: while we can say that all these approaches are something related to urban infill, or urban density projects, not all these projects can be seen as a model or an example of what this research is looking for. The use of master plans as an implementing practical tool to "keep everything under control" and create a complete environment of pertinence, accuracy and correspondence to larger scale planning scenarios cannot be found in all the urban transformation projects. Many times, a cultural fight between plans, master plans and projects has been nourished by the search for supremacy between urban planners and architects, and this fight showed the diatribe between the relevance of architecture or planning: what is more important to give quality to an urban environment? An architectural masterpiece over an empty pattern or a well designed urban environment with unimpressive but balanced buildings? This is still today a decision which is not

always taken, and many projects are the physical unbalanced choice for just one of the possible aspects of a project, that only a well managed master plan can keep together. The research will show possible solutions, to create a well balanced mix of all the aspects, keeping always at the top of the interest the need to create new urban quality.

5. Principles for an urban, sustainable quality

The definition of sustainability has many interpretations, and mainly refers to the possibility, or the necessity, to achieve new ways of urban developments, with lower impacts over natural or human resources. Energy, water, air and lands are no more considered endless, and sustainability is searching for a new way of balancing the need for urban and human growth with a new way of using, recycling and reproducing natural and human resources. Considering urban quality, and the definition of urban quality as the result of a balanced complete process of urban environment construction, sustainability should be related to a slightly different idea. Assuming that we all consider ecological sustainability as an unavoidable element for every kind of urban development, and assuming that sustainability as a value could change day by day the way buildings are conceived, built up or even used, an urban sustainable quality should be a more elaborate idea, considering few other aspects and involving a greater number of dimensions, starting from several "urban planners'" point of view. There are many other aspects about sustainability, or at least, we should consider really sustainable a development which includes many other things, more than the usual list of environmental components.

Starting from these considerations, and with the aim of creating a new, wider list of components, we should say that sustainability should be advanced at every level. While growing concern over carbon fueled climate change has generated broad support for encouraging green design and materials in planning, these qualities only begin to define the ways in which urban design should promote sustainability. The central issue is about smart growth, or a smarter way of growing. The debate over a smarter way of growing is consolidated and produced in the past many points of view. We believe that smart growth should be about the combination of all these aspects, and the analysis over projects and master plans starts by taking into account these aspects.

Before considering the use of master plans, it is important to consider a short list of things that cannot be missed in the kind of development we are considering; above all, a short list of things that are typically included in the smart growth agendas, but that are also affecting the way master plans should be done.

5.1 Compact development

Compact development requires less land than sprawled development. This might look banal and trite, but it is a central issue, considering how fast many parts of the world are now developing and growing. Many cities in the developing world or in the new economies are growing faster than ever, and their development process are using the largest amount of land ever consumed. One of the key point of sustainable development is the reduction of land consumption at its minimum, reusing already urbanized lands, intensifying already urbanized areas and generally speaking considering every transformation as the last chance and the last decision over every small piece of land. After transforming it, it will be lost for ever. Many things can be said

considering this aspect, and considering how deep might be the belief that urban processes cannot be anymore traditionally intended as land consumers; there is a huge concern about this aspect, even if urban planners, in many cases on both sides of the Atlantic Ocean know that the choice between density or sprawl is a matter of personal choices, or at least it is a matter of personal budget and investment. It is up to each individual's freedom to decide if it is more affordable to live close to the city centers, or far away; it concerns time, money and freedom, and every person is free to decide if one's time is worth saving it, or wasting it driving and commuting. It is up to the freedom of such a person to decide if money can be spent to sustain increasing transportation costs and all the costs that a larger, single house produces, or if it is better to reduce those costs. It is up to each individual's freedom to decide what makes sense for his own personal life. I guess the discussion should not be articulated on this field; if compact development is seen as one of the possible choices that human urban development can create and put on the market, it will never win; if compact development is seen as one of the possible offers on the market, there will be always someone who looks for different options, and different market products. For many reasons New Urbanism still remains on these considerations and puts on the market just some different products, assuming that there are smarter people who want to save money and time and live in a compact urban environment. This is not enough and this is not about compact development as a matter that urban planning and public policies should discuss and solve. Considering that the possibility to transform a piece of land from agricultural to urban uses comes from public authorities and public policies or decisions, compact vs. sprawled is only and always a public decision, and a decision about the way an urban region is planned or not. There are two important aspects that must be considered: from the one side, compact development is real, and effective only of it is included as a choice for regional and metropolitan planning, as a way of transforming urban regions and as a public decision process. From the other side, compact development should ensure to final users better living conditions, so easily perceptible that the total

amount of benefits that citizens can achieve from urban and compact living environments should always be seen as higher than the unquestionable advantages coming from larger houses surrounded by trees and green grass. Both aspects are material to our point of view: strategic metropolitan plans should choose compact development as a way to intensify and increase density in the already existing developed urban areas but simultaneously those strategic plans should create difficult conditions for sprawled growth. It might be a matter of costs: considering that urban compact development costs less public money than sprawled development, it should be fostered without doubts, reducing but not avoiding the possibility to have also some parts of the regional areas devoted to lower density development. Simultaneously, planners and architects should be in charge of creating the best urban compact environment ever created, to show people how better is to live close to other people. Two sides are involved: on the one side urban planning, creating the conditions to plan for the region considering urban compact development as the best thing to do to keep under control growth, costs and ecological impacts, and on the other urban design, as the best way to imagine and create an urban qualified compact environment. Master plans are the key tool to work with both sides: they should figure out how urban compact environment could build up the region in a concerted balance with green connections and infrastructures and simultaneously develop smart solutions and well working projects to create qualified local transformations.

Compact development, in this way, is the way cities and territories should develop, with no other choice. It might be with lower or higher density, based on the distance from infrastructures or considering the infrastructure capacity to move people. But compactness should be the characteristic of every kind of development, and proximity should figure out the physical position of development and its distance towards public infrastructures and public facilities.

From this point of view, density is no more the central issue, considering that being compact could help even in building up low densities, but on a compact development; compact and dense development is, of course, the right solution to save lands and to keep public and private costs under control, considering that cities like New York, and boroughs like Manhattan, have been registering since a lot of time the highest average of miles walked by people every day. But, as some New Urbanists use to say "there are two things Americans dislike: density and sprawl". It looks a little bit different in Europe, or at least in some countries like Italy or Spain, where traditional compact urban conditions are well established and well in mind of citizens. But sprawl, or at least a continuous process of land consumption is still a condition, even in Europe, of urban contemporary development. So density is considered the key aspect of sustainable urbanism and density is always something in between acceptance and public refusal; high density neighborhoods can provide across the board reductions in per capita resources use, and these reductions occur in proportion to increasingly development density. But density could scare people living close or nearby through redevelopment projects with high density building areas planned: high density may change morphologically and typologically the already existing relations and may cause urban and ecological impacts over green networks, open networks, technical systems and so on. And, above all, high density may alter very seriously the traffic conditions. For these reasons, high density cannot be taken as a paradigm, it doesn't work everywhere and in every conditions; it should be balanced with all the other urban planning indexes, parameters and above all there should be a correct balance between the total amount of people settled in a high density neighborhood and the urban environment which can support it and make it work correctly.

47_ Fruitvale, San Francisco Bay Area, USA

5.2 Buildings efficiency

Buildings efficiency is more or less a requirement recognized by every country, changing the intensity of public and private commitment to achieve good results from richer to poorer countries. There are many codes and many rules about this aspect, running from energy classes to LEEDS certificates. From our point of view, we should say that buildings efficiency might change even considering the position of the building in the master plan, according to its exposition to sun and air, its orientation and the amount of hours of light and sun totalized during the day. It is the master plan that decides the position and the disposition of buildings on the ground, and it is the master plan that can influence even the energetic behavior of buildings. It could also depend on the sizes of the roads, the amount of free lands and free space in front of the building, and once again master plan regulations could decide the distribution

of densities, planning for low density and high density blocks in the same high density neighborhood or project, according to the design and the general layout of streets and avenues. It could be even simplistic to say that it would be better to have high density plots or even blocks only facing larger roads, but in many cases this is not so evident: even if high buildings over narrow roads can create a fascinating sense of urban nearness, bringing to minds the sense of proximity that old town centers had once upon a time building efficiency cannot be guaranteed with this kind of development, without at least the heavy use of technical requirements. We believe that urban planning, and the use of master plans should have as a requirement these aspects: every building planned and inserted in a specific master plan should be in the urban conditions to achieve the highest levels of efficiency and energy savings; this is a specific purpose of master planning.

5.3 Continuity of green networks, and ecological impact for green networks

Master plans deal with the layout and the design of green areas. Green areas in the master plans have a lot of uses and meanings: there are large, public areas as public parks and gardens, as a requirement for each new development; there are smaller public gardens, many times as an ornament of public streets networks, or just as elements to break the monotony of streets grids, and to create public realm between buildings; there are even smaller green areas as buffers, or flowers beds just as ornaments of public roads and squares, and there are private green areas. All these areas, and all these different typologies are regulated by different rules; they are used for different uses and reasons and they belong, more or less, to different sets of regulations. Master plans should plan all these parts together, and this is a great occasion, one of those great possibilities that only a master plan has, considering the variety of uses and reasons that every single green area has in every projects. Master plans should ensure, first of all, the continuity of green areas, so connected to

consider them as green networks. This idea helps in considering green areas not only for their specific role as recreational areas or urban decorations in the built up development, but above all as ecological elements, capable of changing significantly the assets of the developed area as well as of connecting, from an ecological point of view, the developed and master planned area to the rest of the urban region. It could happen only if a master plan is really what we are looking for: the local development of a strategic, larger scale decision. If it comes from this perspective of coordination, a master plan consider every green spot as part of a network; if a master plan considers green networks and the continuity of networks as a fundamental aspect of its planning, it could be in the conditions to give specific regulations to the quantity, the variety and the types of trees and bushes that should be planted, the density of trees according to the position of the green area and according to its position in the green network it belongs to. We will say a lot in the second chapter about regulations, but it is important to recognize that urban green areas should always be considered as part of a system, and the more they are compact and connected, the more they can contribute significantly to enhance the ecological value that every green area should have. A system of green areas included in a master plan development, compact and well connected are ecologically powerful if they are the local and small scale making of a larger scale proposed greenway or green corridor. From this point of view, a master plan is just what we are looking for: a local pop up of a large scale strategic vision.

48_ The sustainable corridor

Douglas Farr has proposed the sustainable corridor in its book Sustainable Urbanism. It shows the connections between green areas within the built up spaces.

5.4 Homogeneity and continuity for pedestrian and bicycle networks

As the green areas and parks and gardens should be connected and stay together to enhance their ecological importance within the master plan if linked to other green connections, as part of a larger system, so even pedestrian and bike paths should be equally connected. This is not a simplistic statement, if we consider a different approach to planning pedestrian and bike paths. We believe that pedestrian and bike paths should have the same importance and the same relevance in the development of a master plan than the streets network. Continuity and homogeneity leads to a different approach to design pedestrian networks: sidewalks and bike paths should no longer be considered as elements of a street section. Their size and design should be decided considering the uses and the densities built on the blocks that sidewalks are supposed to surround and connect. It doesn't make any sense to have large sidewalks on a wide boulevard if that road has only a traffic role in the general network of the master plan, but it makes sense to plan wide and tree-lined sidewalks in front of

shops, restaurants and bars open to the public. The form-based codes are now working to create these regulations, also considering the position and the nature of the development. It is important to say that maybe it might be better to work on a different perspective. Assuming that everybody should agree on the connection between the size and the design of sidewalks and the uses that ground floors of buildings host, maybe it is better to think to a continuous flow of pedestrian areas, connecting more organically sidewalks, walkways, squares, pedestrian buffers of boulevards, piazzas and so on. Pedestrian experience on a master planned development should take a different role and should get a different attention rather than street networks. They are two different aspects, and they should be separated, consigning streets networks to networks systems, and reducing the space they take only to what the projected traffic needs; sidewalks and generally speaking pedestrian connections should be the ground level and the connecting "fabric" that keeps buildings and open spaces together. A flow of pedestrian areas, running from doorsteps to sidewalks, piazzas, squares, and public areas should enhance urban variety in the master plan and should integrate as much as possible also bike paths. In many cases, and in many historical squares, such as Alexander Platz in Berlin, pedestrian, bikes and trams share the same undivided paved area, without distinctions and without separations. It helps in creating a more friendly and a more livable environment around buildings and above all it creates that *ground zero* over which every building should be planned, every green connection should be created and every other specificity should be included.

5.5 Public transportation is not an option; it should be the choice and the fundamental requirements for every development

Public transportation is a central issue, in the creation of this first list of fundamental requirements to define an urban development as sustainable. High density and a large number of people living in the same urban development

require an adequate presence of public facilities and public transportation. Infrastructures and sustainable public transportation should be the backbone of every compact, master planned development. For this reason, we believe that many master planned neighborhoods, planned and built following the dictates of New Urbanism or Traditional Neighborhood Development rules are missing everything if they don't lay over a network of public, mass transportation. Places like The Woodlands, on the north side of Houston huge metropolitan area, are perfectly developed, including many of the requirements listed here, but they are missing the connection to mass public transportation, and they become for this reason a simply differently developed suburban neighborhood. Public transportation and sustainable mass public transportation should ensure that master planned neighborhoods are just the local development of a regional strategy; their position should be decided, or verified or proposed later by the metropolitan plans, even with more decision if those private master planned development are supposed to bring in that place a high density compact development. Cities like Denver, or San Francisco have invested in the past many efforts to create this kind of balanced development between transportation networks and high density development. It even comes from the best planned European cities, and even from the past, when suburban development was necessarily connected to public transportation networks, as said before. Cities like Copenhagen, with the famous Five Fingers Plan, planned suburban development only in the five transportation corridors the plan laid out. But even in the urban redevelopment processes, density and compactness should come together with access to infrastructures. High density cannot ever be supported by private cars access; to create a sustainable master planned development, public infrastructures should stay together with urban dense redevelopment. Pear District in Portland can be taken as a good example of a huge redevelopment project, based on the extension of one of the tramways running from downtown and reaching the northern part of the existing city, and the creation of a compact, urban traditional neighborhood supported by public transportation. For many years, even in Italy and especially in Milan, with the

redevelopment and the improvement of the public transportation networks, mainly subways and underground rail links, density and access to public infrastructures have been considered together, to create denser redevelopment opportunities on lands in a walkable proximity to public transportation stations or stops. And for many years the city has discussed on how to create an economical mechanism to get back the increase in land values that the presence of a stop or a station can bring to private properties. It has never been solved, but it remains an important aspect in the decision to give more density and more building possibilities to central areas already reached by public transportation connections.

Even the design and the layout of the master planned development should change considerably taking into consideration the presence of stops or stations of public infrastructures. The catchment area for a station or a stop should be calculated considering the real service that the transportation line stopping there can in fact offer, and considering the walking distance that people can afford. By applying these rules a master planned development can change its final layout, but the use of such rules can ensure, once more, a sustainable development. High density central areas, together with the stops or stations of the transportation networks, should become the central part of the development, as once upon a time the areas around the stations where hosting private and public services, shops, restaurants and bars. They should look as the new centrality of the neighborhood, and conversely sustainable development should create new centralities just by building up and adding density to the areas around the stops and stations of public transportation lines.

5.6 Development of a more general strategic approach, coordination with strategic and larger point of view over development

The coordination with larger scale plans, or with the metropolitan and regional perspective, is one of the three main characteristics we believe every master plan should have. If a master plan is a technical way to develop with a coordinated tool a general idea of urban development, it makes sense only if it really represents the result of coordination efforts. If a master plan can include and comprehend so many things, e.g. it may represent a project of densification or a project of development for undeveloped lands, it should be part of a more strategic, large scale perspective. Considering this aspect and starting from the metropolitan perspective, master plans are the right tools to give sense and create a coordinated level for the implementation of the strategies developed by strategic institutions. The coordination with larger scale plans is a central aspect: master plans, as already said, are something in between the metropolitan and regional perspective and the urban level; while metropolitan and regional levels should plan with a strategic vision, trying to keep together all the municipalities, the institutions, citizens and local actors sharing that vision and that projection over the future, and while local levels should create a set of specific rules to manage the existing city and the development perspectives, master plans should talk to both levels, offering a real occasion to see how the strategic vision could work locally, and how the impact of such a vision is locally developed. Or, on the other side, master plans could show to the strategic vision how that specific area, or that specific location could change, and bring the good effects of changing even at the metropolitan level. From this point of view, a lack of coordination could deprive master plans of an important meaning, and above all master plans risk to become one of the possible projects, not just the right one at the right moment. For the impact, the sizes and the challenges that a master plan always brings about, we believe that coordination with general and local levels is strategic and cannot be missed.

Many cases can be found about this point, and many things have been written about the relations between the strategic level and the idea of developing local scale master plans directly included in the strategic levels or at least directly involved in the metropolitan level. Cities like Portland, with the metropolitan strategic vision and the importance of the development of a system of areas along the transportation networks, or again places like Denver and its master plan for the redevelopment of downtown and the central station district are just a few very well known cases where such an approach has already been applied. Both these cities have already built up some of the proposed developments, and they are implementing that vision and the use of master plans as tools to visualize and test the proposed development, and then to guide the way in which it is carried out.

New York City, with its PLANYC2030 introduced some strategic areas within the city limits, whose transformation was strategic for the city and for the metropolitan region; places like Jamaica, close to the JFK airport or the transformation proposed for Hudson Yards, between Hudson river and 8th street, over the tracks of Pennsylvania station, are two very important cases of coordination for the selection of strategic, redevelopment areas, and the proposed project for Hudson Yards was in particular anticipated with the use of a master plan. A very well detailed set of projects, rules and visions were collected by the master plan, anticipated in PLANYC2030 and used to go forward through all the approval steps and to present it to the city. The proposal was used to coordinate the proposed infrastructural improvements, such as the extension of the subway 7 line and the construction of the new Hudson tunnel. Everything was coordinated with the use of the master plan: all the zoning rules were included with the vision and the projections over the physical transformations that the site would have experienced.

5.7 Quality of life

There is no doubt that one of the aim of New Urbanism proposals is to show that it is better to live in a dense, walkable and sustainable neighborhood, rather than living in a traditional, low density and disconnected suburb. Quality of life is a central issue for that kind of development, and it is expressed by the possibility of saving time and money with a different choice of transportation, with a different living solution (apartment rather than large single family houses), of enjoying a more social intense urban life with an opportunity for recreations and entertainment, as well as of having more opportunities to find a job or to work in a office complex nearby, which only the mix of uses can give. Above all, quality of life is shown by New Urbanism and sustainable urbanism proposals by creating strong connections between density, compact development, availability of large portions of green public areas, waterfront reclaiming and more "green" and open air possibilities. This is a very important aspect: quality of life seems to be granted by a different urban offer, with better opportunities than suburban traditional life, and by a different green offer, with energy efficient buildings, green roofs, green areas and the possibility of enjoying and using directly the green public areas. Pedestrians and bike runners are always welcome in the new developments proposed. The images that master plans seem to offer are many times rendering or 3D visualizations, with people walking freely outside, enjoying and sharing a system of open spaces, piazzas, squares and public facilities.

There is a precise message. It could be a sort of advertisement message if it is pushed by private developers to convince people to buy that home, or a sort of good policies message if promoted by public authorities proposing a new development, but it is a message that create a mental connection between the goodness of the proposed project and the possibility of a better life. And this message is more or less the same, from highly priced houses to social or public housing development: the quality of urban life, or at least the quality of life in

denser, more compact and master planned communities could be better than elsewhere. We should consider this point of view relating it to the enlarged concept of sustainability we are considering: to be sustainable, an urban life should give something more, and should ensure a better quality of life for people living there; master planning a community should always take this aspect into consideration.

5.8 Respect for what came before

The development of urban new neighborhoods many times is strictly related to the transformation of derelict, abandoned or vacant lands, or even with the transformation of abandoned industrial areas. In many cases, the redevelopment should be anticipated by the reclaiming of derelict or even polluted lands, and a very important question is what should be saved and what should be demolished. Many projects have completely cancelled the existing buildings or the layout the areas had before, considering such lands as open land to rebuild anew. Many others have chosen to save historical buildings, especially when the values or the architectural language allowed developers to recognize in those buildings something worth saving. A master plan should be the right tool to organize and collect this kind of information. Historical analysis and studies should understand the real sense of the history of many places, and consider this aspect as one of the most important for reusing such areas.

PART TWO

CASE STUDY

6. New York City 2030 Plan, Hudson Yards and Jamaica plans

Hudson Yards and Jamaica are two of the main redevelopment areas included in the New York City 2030 Plan. For many years, above all Hudson Yards has been considered the last, main redevelopment area of the city. It has been included in the city's general plan as a big resource to improve the metropolitan regional transportation system, to complete the river's park system, to improve the efficiency and the capacity of the city main convention center nearby, and to give a new opportunity to create a new neighborhood within the existing city, increasing density and compactness. On the other side of the city, Jamaica is a completely different project, about some brown fields very close to one of the main station of the outer part of the city for its connections to the regional train network and its proximity to JFK airport; a new centrality has been planned, including it in the New York 2030 plan and considering it as a strategic, new redevelopment, testing its possibilities with the use of a complete master plan.

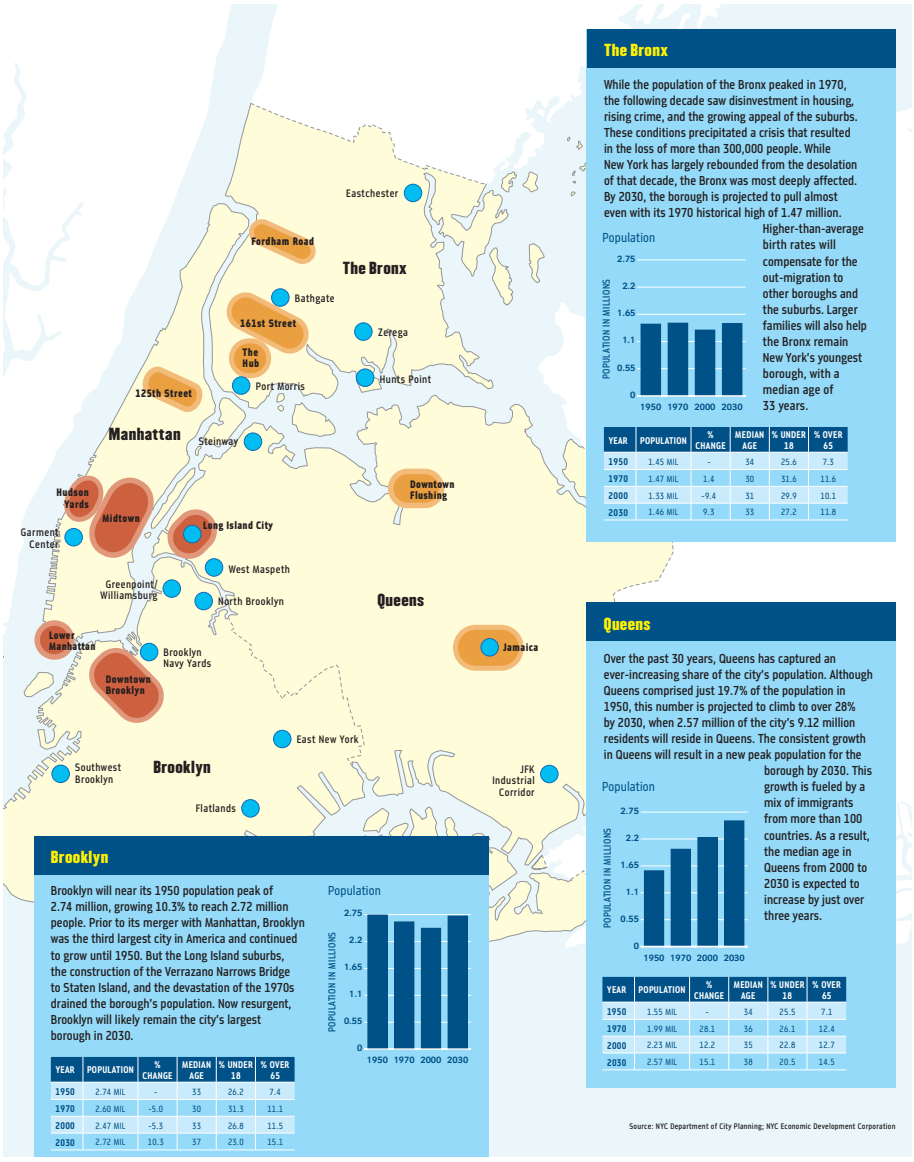
6.1 Master plans in the general strategic vision

New York City 2030 plan has been published and presented by Mayor Bloomberg in 2007. It is a strategic and action plan to prepare the city of New York for an estimated growth of one more million inhabitants. The plan has a major aim, about sustainability, and it plans for upgrading the existing transportation system, enhancing the air, water and soil quality of the city, increasing a good use of the urban available lands reclaiming brown fields and abandoned areas within the already urbanized boundaries of the city. The plan brought together at least 25 city agencies, to create a shared vision over the future of the city. It has been developed by the city of New York, and precisely by the New York City's Office of Long-Term Planning and Sustainability (OLTPS), created as part of the Mayor's Office by local law in 2006. The Office coordinates with all other City agencies to develop, implement, and track the progress of PlaNYC and other issues of infrastructure and the environment, which cut across multiple City departments.

The plan has included in its general proposal the redevelopment of some sites, within the city limits and within the already established neighborhoods, presented as an opportunity to keep the city growing and transforming into a more sustainable urban environment. All these sites are under used, or poorly developed, even if they are well connected by public transportation already operating or close to proposed new infrastructures. The metropolitan plan considers those sites strategic, and for many of them have included in the plan some rules and guidelines, to develop correctly a master plan.

49_ New York, Hudson Yards, USA

Hudson Yards redevelopment project will transform a large section of Manhattan, between Madison Square Garden and Penn Station area and the Hudson River. The area is largely underdeveloped, and it has one of the lowest residential presences in the city. The project will transform the area and it will include it in a new urban perspective.



50_ New York, USA. The New York City 2030 Plan

Hudson Yards is one of the redevelopment, strategic areas included in the city plan.

A strategic blueprint that includes all the strongest decisions and actions included in the 2030 plan presents the plan. Infrastructural investments, environmental protection and improvements and a lot of actions to enhance New York city quality of life are all included in the plan, in strict relation with the metropolitan region New York city belongs to; above all, and very important for the considerations this research works on, the plan and its strategic blueprint lists a number of strategic poles, as new centralities, to be redeveloped and transformed. These projects are included in the plan and tested with the use of master plans, as anticipations of the possibilities that their transformation might have. Master plans are directly included in the strategic blueprint and in the 2030 general plan, to put in action immediately some very detailed transformation rules and see what happens at the general level and above all to keep under control the physical effects of those transformations; quality of urban transformation is one of the key aspects the plan considers, also fostering the quality of built environments and the architectural quality of all the buildings of the city. The approach is a comprehensive planning for some significant sites, to be redeveloped completely, and for other existing and established sites whose quality shall be improved. All those selected sites are included in the plan and presented with the use of a master plan, as a tool to preview the re building possibilities of the sites and to foster their redevelopment and the participation of private developers; once again, master plans are considered as hybrid documents, presenting building possibilities and urban design solutions, and simultaneously as strategic vision over the future of the sites and their legal development rules.

Hudson Yards is presented as the strongest of a short list of Regional Business Districts, together with Lower Manhattan, Downtown Brooklyn [10], Jamaica,

[10] Downtown Brooklyn improvement strategy includes the redevelopment of a huge site, called Atlantic yards, with the creation of a new mixed-use district, already under development, planned with the use of a comprehensive master plan. http://www.atlanticyards.com

Downtown Flushing, Bronx Center, Long Island City and 125th Street corridor. All those Regional Business District are presented in the plan as regional hubs, connected to the regional transportation networks and redeveloped trough the anticipation of a master plan.

Hudson Yards master plan is the strongest and the most detailed master plan presented in the plan, but also downtown Brooklyn with the proposed zoning map and developments opportunities renderings, Long Island City, South Bronx zoning and redevelopment, the new plan for 125th street corridor at Harlem, all the new proposals for the area around Penn Station and Madison square Garden are all included in the plan and presented with their opportunities. The use of master plans and the anticipation of master plans within the strategic plan or within the New York City 2030 plan is not only for the regional business district, but also to present the possibilities of many other sites and actions: to show the planned actions to facilitate the housing production, as a densification policies around places under renovation like Greenpoint and Williamsburg on the east side of the East River, or like the area around the already opened high line at West Chelsea, where the use of a comprehensive master plan preview the process of transfer of development rights from the high line granting site to other receiving sites, or again to show the opportunities that Coney Island might have with a new comprehensive plan.

It is a process of general views and strategies and local detailed anticipations; the use of master plans is central, because it shows how this planning tool can bring together the general, regional and metropolitan vision with the details that a proposed local development requires. The use of master plans shows not only the vision that the strategic plan might anticipate, and everybody knows how many times that vision is about to change, but it shows the details of the general building rules that will be used to manage the proposed development; it is an important anticipation, because immediately those rules are tested, and the physical results they offers are included in the strategic general vision. The

proposed Coney Island land use framework has been developed as a master plan and included in the general strategy; a layout of buildings, open lands and streets' network is proposed and tested within the general plan.

The Jamaica plan, included in the strategic plan and listed as a strategic redevelopment area, is considered as one of the three regional business districts in Queens; the Jamaica plans is part of the City's broader strategy to invest in its regional economic centers, while protecting the characters of neighboring communities. The position of Jamaica center is strategic, as it is the closest business district to JFK airport. A new zoning has been proposed, maintaining the low density residential neighborhoods, creating opportunities for new housing development (according to the high level of infrastructural services), creating a special district to strengthen and revitalize downtown and foster a new gateway at the Air Train [11] area, and supporting the business and industrial opportunities. The strongest part of the project is the creation of a new, higher and denser downtown area in Jamaica, creating a new gateway to JFK, positioning highest density at the transit hubs and enhancing economic opportunities, while maintaining a strong livability of the area, with a wide system of pedestrian areas and connections.

6.2 Hudson Yards

Hudson Yards master plan is the most detailed master plan developed for the renewal process of a big area, on the west side of Manhattan, between Hudson River, 42nd street, 28th street and 7th avenue. The area is currently occupied by a large open air rail depot, serving Penn station and many industrial or under used urban sites; it looks like a peripheral and not used area, but it is very close to Midtown central business district, close to the main city exhibition center

[11] Air Train is the fast rail connection between Jamaica station and the terminals of JFK airport in New York City. It has been developed to support public transportation access to the main airport of the city, and to integrate and serve better the terminals connections.

(the Javits Convention Center) , part of the residential area of Hells' Kitchen, and along the Hudson river park system. It is a typical underdeveloped area, with many potentialities, above all for its position. The New York City 2030 plan and its strategic anticipation recognize to the area a strategic role in the regional, metropolitan system: together with the transformation of the area and its inclusion in the dense city system, there are two major infrastructural projects: the extension of 7Th subway line and the construction of a new rail tunnel to New Jersey, recognizing to Penn Station a strategic role in the transportation system of the metropolitan area. Penn Station area, with the Madison Square Garden district is also included in the strategic blueprint as an important area to be renewed and redesigned. This way, it is anticipated that through decisive public sector actions and planning, such as the expansion of the mass transit, creation of character-defining open space, and reinvention of the area's zoning, these actions would spur the private investment that is required to sustain the renewal process of the area and its inclusion in the city system. Hudson Yards is the only large, underutilized area where Manhattan and Midtown area can expand without encroaching on densely built – up residential communities, bordering the area the communities of Clinton to the north, Chelsea to the south and Midtown to the east. The area is 360 acres of land, fully covered and built up, but at extremely low density: open parking lots, utility storage lots, rail depots and only few houses are the main character of these lands. The absence of any subway service determined in the past little growth and just few investments in the area; in addition, the zoning in the area has remained largely unchanged for the past 40 years, defining low and medium density manufacturing districts. The existing zoning does not reflect the changes that have taken place to the city's economy and this area in the past few decades.

The action plan is mainly focused in the creation of enough value to improve the infrastructural system; while the cost of creating new infrastructures will be substantial, the value of the future economic development will be far greater: the revenues received from private development will pay for new public

infrastructures, putting in place a self-financing structure. The major infrastructural investment is the extension of Number 7 subway line to serve the area, between 34th street and 11th avenue, leaving the exact route to be determined by the environmental Impact Analysis. The City explored also the ability of extending the LIRR and the Metro North into the area, and the construction of the new rail tunnel already begun is part of the infrastructural strategy of the area.

A rezoning strategy has been taken, centered on providing for the area new building opportunities, with a mix of uses considering both office uses and residential uses; the so called "preferred direction", the strategic master plan developed for the area after many proposals, seeks to direct the highest density to the regional streets of 42nd and 34th as well as across from the Javits Convention Center. These areas are the most appropriate from high density and would benefit the most from new subway access in the area. Low density is for the section of the area between 10th and 9th avenue, and medium density closer to the existing corridor of 8th avenue.

A vision of mixed-use commercial and residential area is the proposed master plan included in the "preferred direction" plan; a comprehensive master plan has been developed, considering all the aspects that a master plan should cover: there is a main idea, to foster the development of a mixed-use, livable and vibrant new urban neighborhood, built around a flow of open and green spaces; there is a set of rules, about density, buildings requirements and codes, and there is a vision, shown with the use of three-dimensional proposals, ready to be evaluated by citizens and private developers. The master plan identifies five distinct districts in the development of the neighborhood, around 42nd street corridor, 10th avenue to the Hudson River, 9th avenue area, 34th street corridor and warehouse district; each section and each part of the project is developed according to the main characters of each section, but the whole area is kept

together by a public, green open lands' system that connects the different parts of the area to the Hudson river park system.

There is a strong and evident accent over sustainability: the city's objective is to demonstrate how sustainable design, based on smart growth and high performance master plan and buildings, can minimize environmental impact and improve urban quality of life. The impact of the area will be high, the density is high and it comes closer to one of the densest place of the world, but the proposed master plan proposes initiatives for energy and water conservation, intelligent responses to micro climate, waste minimization and recycling, ecology and public open space within a comprehensive sustainable development framework. The "preferred direction" plan proposes that the cold winter winds will be deflected by the proposed high density commercial buildings along 11th avenue; the creation of a north-south open space network would allow for good solar access and encourage summer breeze movement, as well as feed air to Lincoln Tunnel entrances to alleviate pollution; at least, the plan proposes higher buildings near Lincoln Tunnel to encourage vertical air movement, thereby drawing air over the ramps from the south to dilute noise and pollution. These devices are all included in the master plan, and they will direct the planning of the future development of the area.

The master plan is composed by a complete set of drawings showing all the contents of the proposed vision and the proposed rules and regulations. The master plan is supported by a new land use and density proposal, allowing the creation of a mixed-use neighborhood. The urban design composition proposes the creation of a central green areas' network, with a wide open space that cuts the blocks between 11th and 10th avenues, from 42nd street to 30th street, bringing green and open spaces' system within the blocks, and connecting them to a wider open space at the end of it and to the Hudson river park.

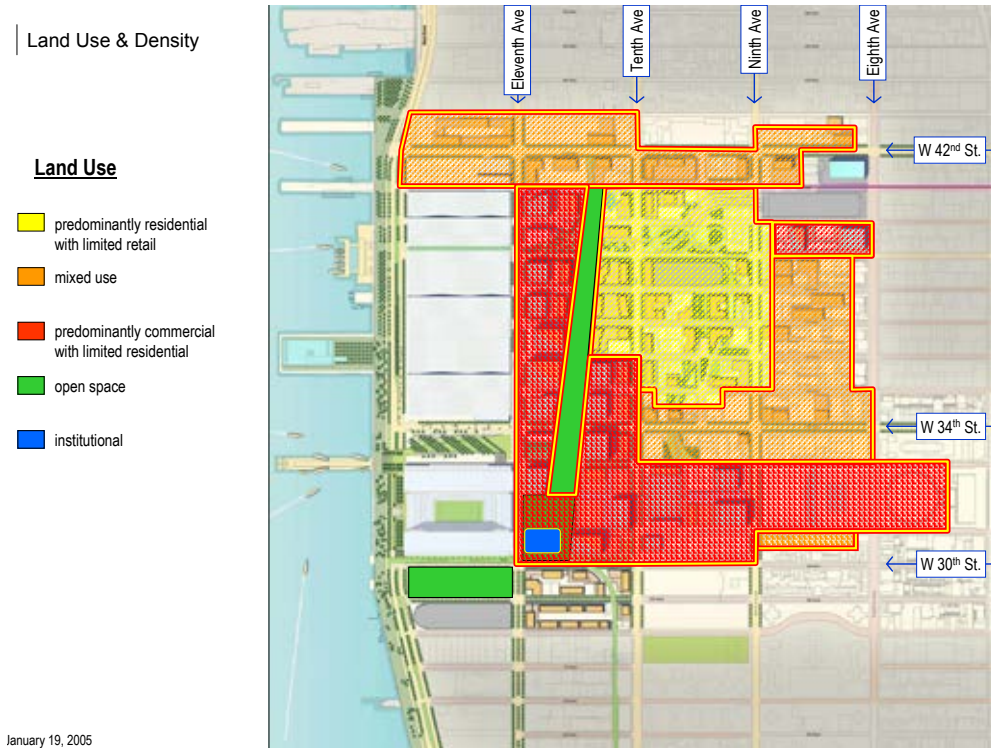
The distribution of density and the mechanisms to increase the building capability of the area are tested in the master plan, figuring out how the

buildings will appear and how they will face the open lands and the streets' system: each block is studied considering how the density distribution will affect the shape of the buildings and proposing some special architectural and construction requirement to study and to plan together the general output. Hudson yards plan is studied to support the future development and the use of the master plan, with its complete set of drawings, and its testing how rules and proposals will affect the development of the area. A committee has been created, the Hudson Yards Community Advisory Committee, to discuss the proposals for the area and the general master plan that has been developed. Once again, master plan is the tool that participation and discussion will use to study the impact of the project over the existing community and the impact of a huge redevelopment process on the existing city. Simultaneously, the Hudson Yard Development Corporation has been established, to foster the development of the area.

51_ New York, Hudson Yards, USA. Hudson Yards general master plan

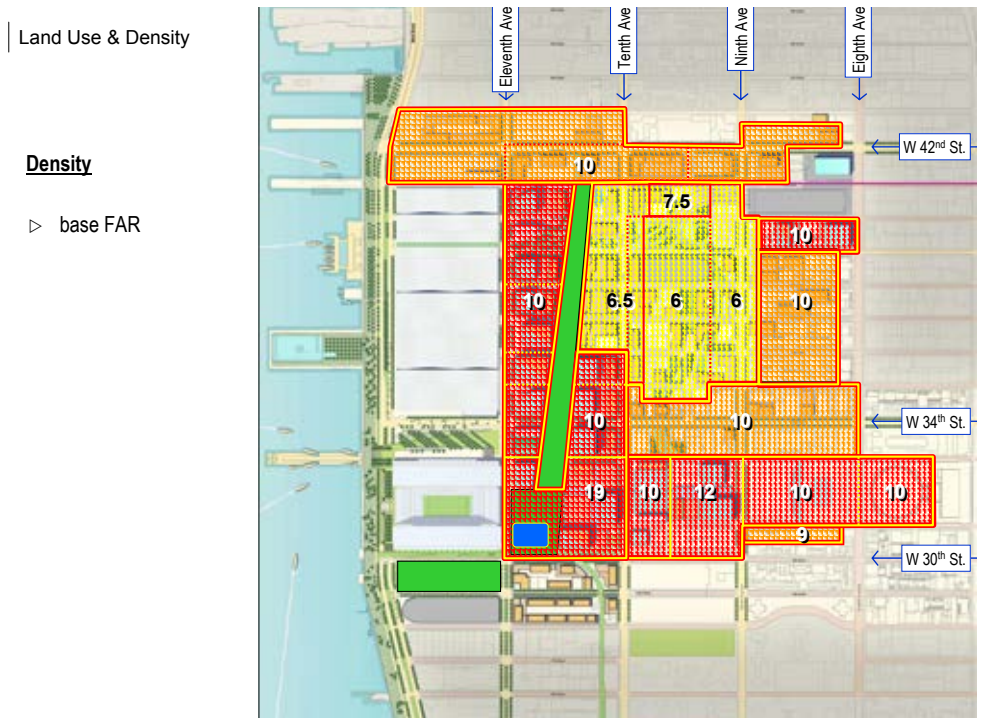
The master plan shows how the area is going to be redeveloped: green areas, built up spaces and networks are precisely presented in the master plan and together they give the overall, general vision on what is about to happen.

The master plan has been presented and discussed with a large group of people, including citizens, residents, inhabitants, users, developers and politicians. The aim was to create a large support base to the development of a huge amount of lands, focusing on the agreement over the urban design ideas included in the plan. A new central green system runs through the blocks, opening to public uses and creating a strong connection among all the green areas: Hudson Park, the new big green park on the south side of the development, the High Line park and the green areas covering tunnel ramps are all connected in the proposal.



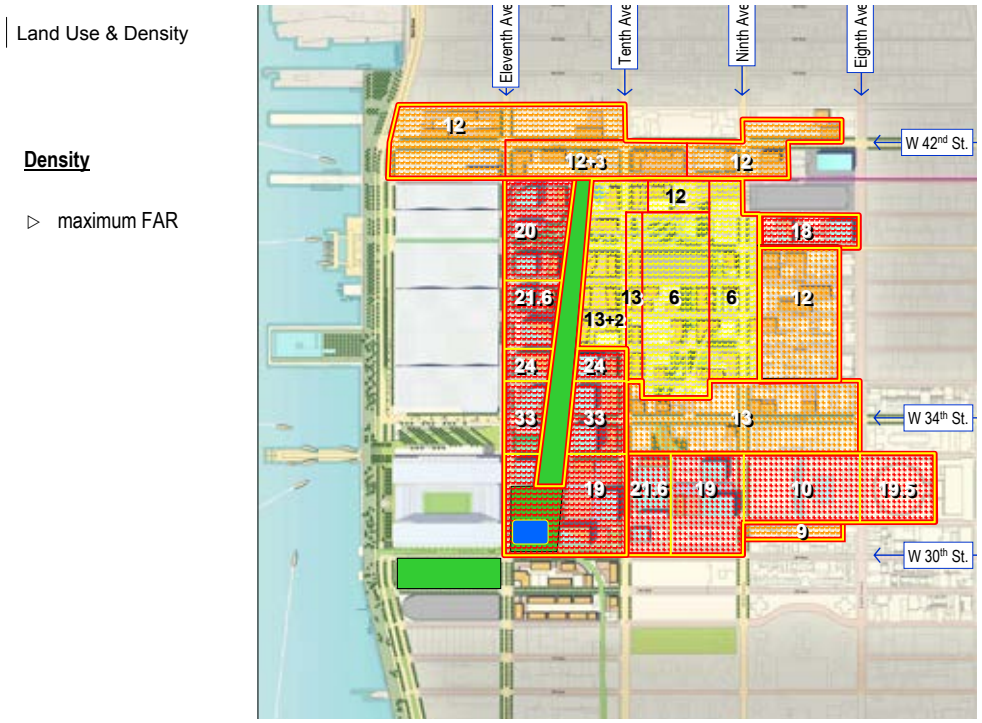
52_ New York, Hudson Yards, USA. Hudson Yards general master plan

Land use and density plans show how the area is planned: two main commercial corridors, two mixed uses corridors, a residential core and a green connector are going to redevelop the site



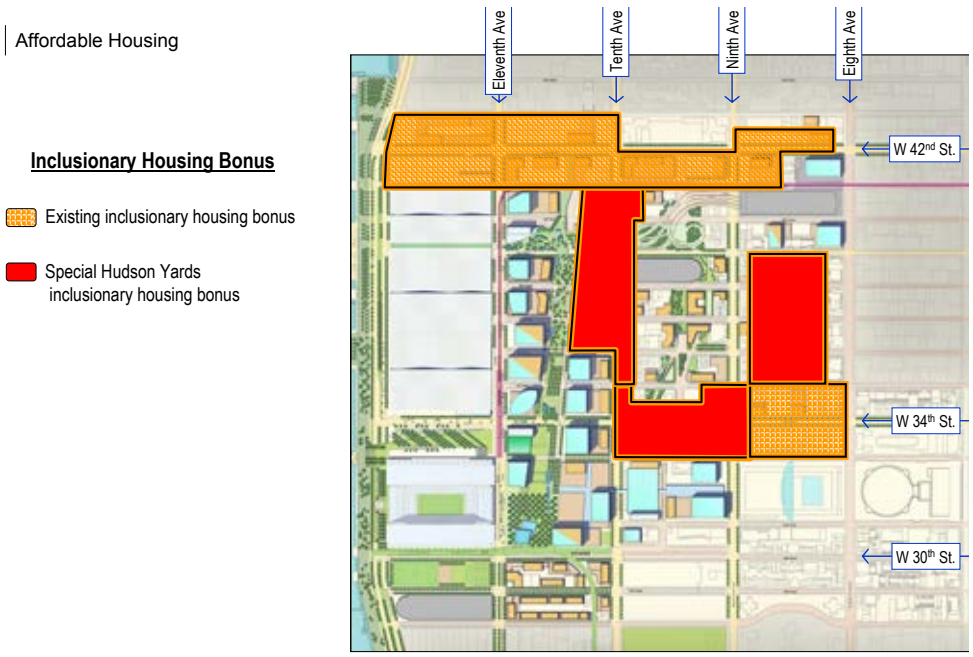
53_ New York, Hudson Yards, USA. Hudson Yards general master plan

Density: base FAR shows the basic possibilities that the master plan offers to the development of the area.



54_ New York, Hudson Yards, USA. Hudson Yards general master plan

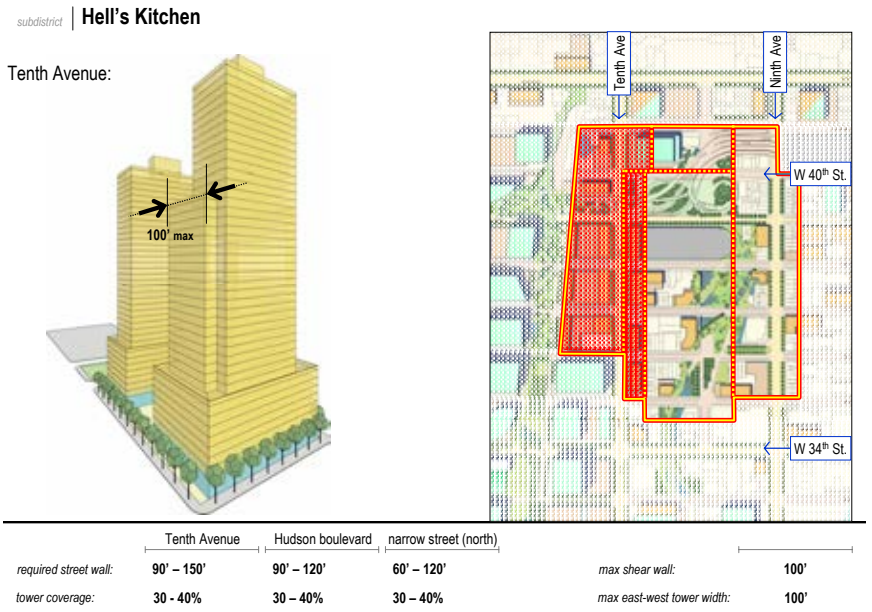
Density: maximum FAR shows the possibilities of the maximum development for the different parts of the master plan. For each block within each district, master plan tests the impact of minimum and maximum development and it shows the mechanism to reach the best development opportunities.

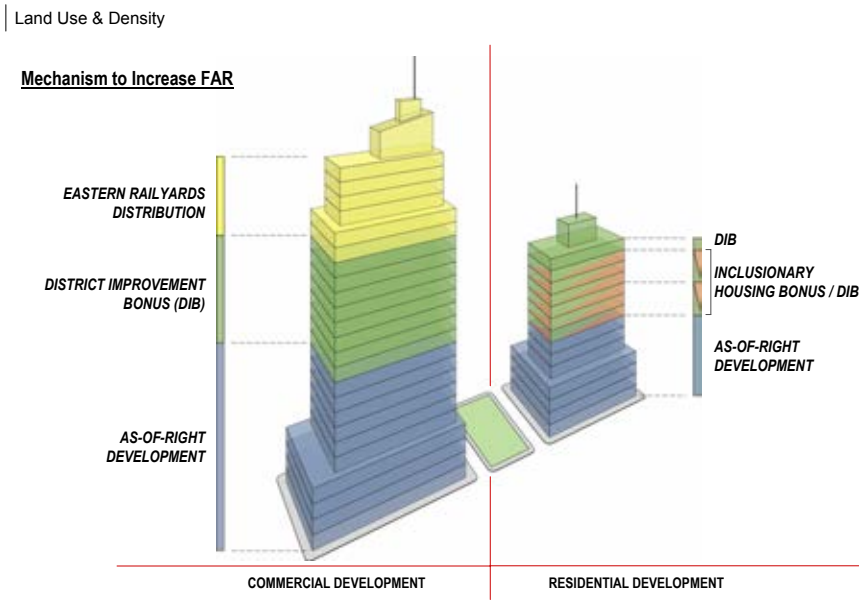


55_ New York, Hudson Yards, USA. Hudson Yards general master plan

Inclusionary housing bonus

The map shows strategically how the distribution of housing bonuses could change the development and the shape of the general project. The map is included in the master plan, and it looks like a strategic, action map

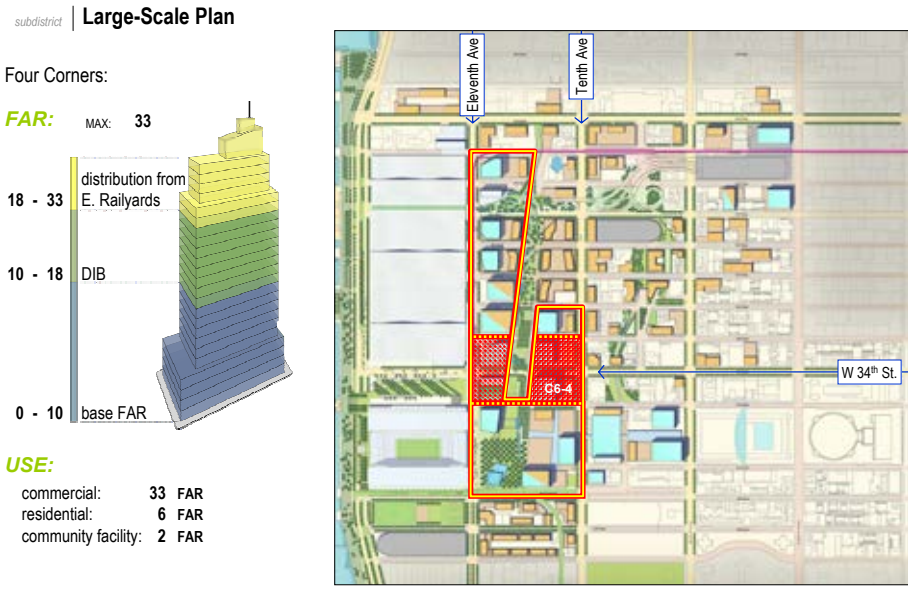




56_ New York, Hudson Yards, USA. Hudson Yards general master plan

Mechanism to increase FAR

Master plan includes, for each section of the plan, some specific maps and detailed descriptions on how density regulations work, considering the as-of-right development possibilities and all the bonus mechanisms



57_ New York, Hudson Yards, USA. Hudson Yards general master plan

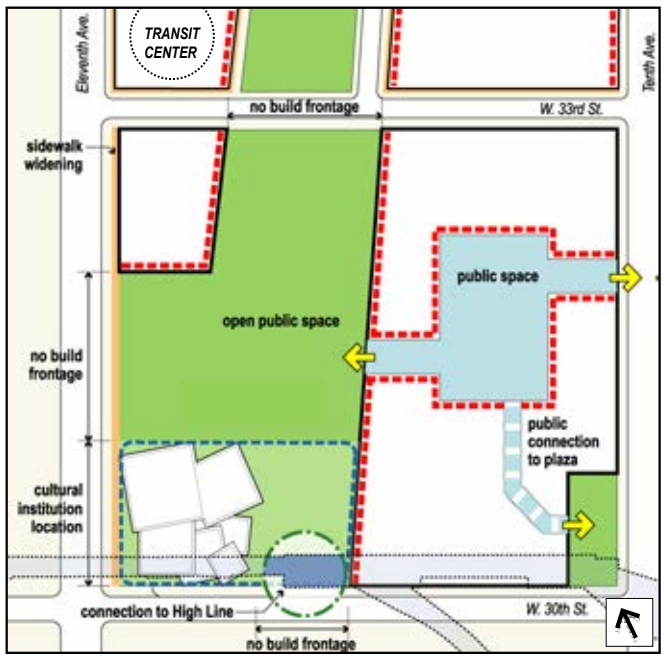
Mechanism to increase FAR

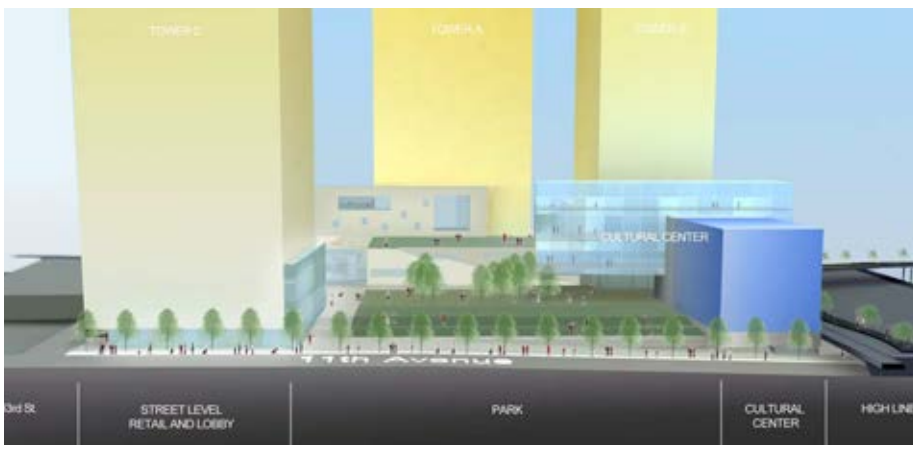
Master plan controls what happens with the mechanism of FAR increasing, testing how the different parts of the redevelopment project could be affected by the increasing or the decreasing of density.

subdistrict | **Large-Scale Plan**

Eastern Railyards

- 55% public space
- Plaza at 10th Ave and 30th Street
- Connection and Bridge east to Farley corridor
- High Line Connection
- Major cultural facility
- Retail requirements along public places

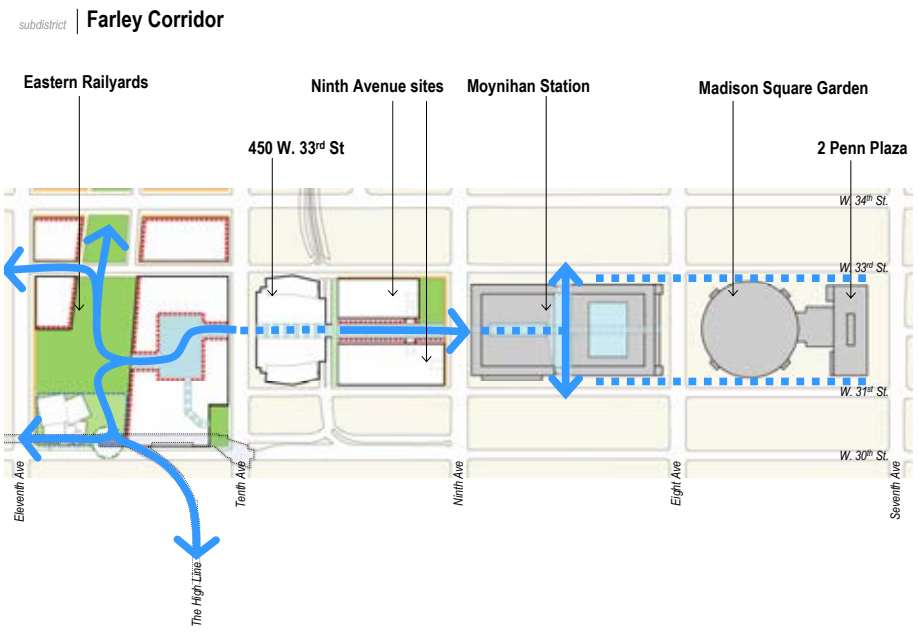




Eastern Railyard - view looking east

58 and 59_ New York, Hudson Yards, USA. Hudson Yards general master plan

Eastern Rail yard project



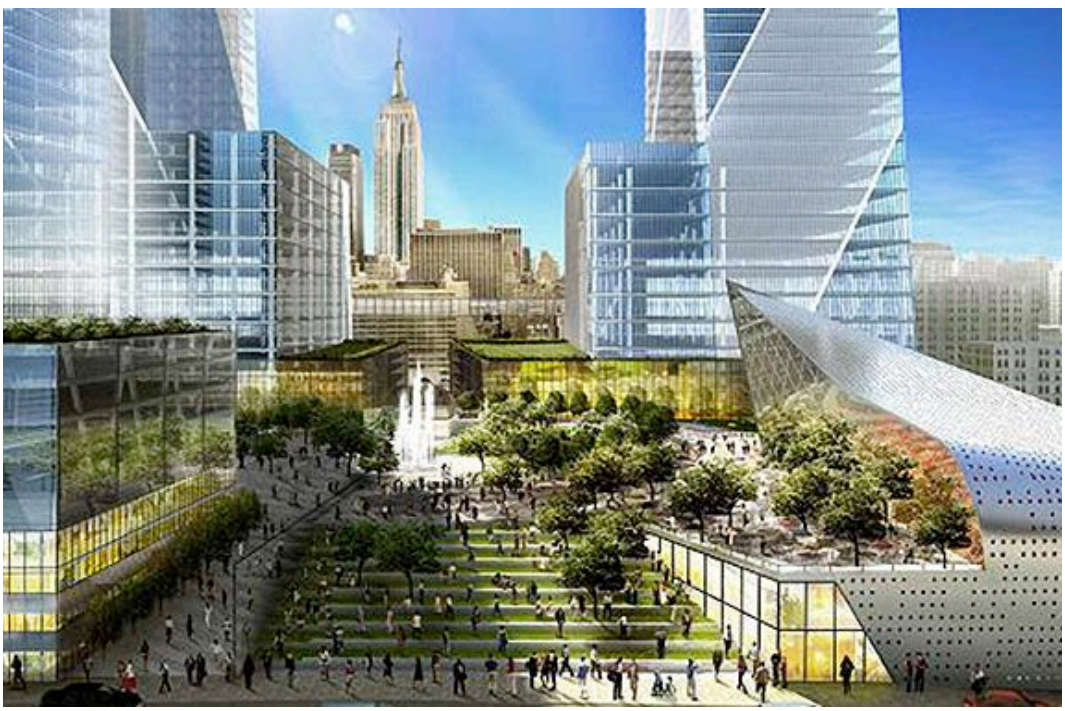
60_ New York, Hudson Yards, USA. Hudson Yards general master plan

Farley Corridor special project

A specific scheme on how to redevelop the connection between Penn Station, Madison Square Garden and the Eastern Rail yard is included in the

61_ New York, Hudson Yards, USA. Hudson Yards general master plan

A vision on the redevelopment of the site



62_ New York, Hudson Yards, USA. Hudson Yards general master plan

Rendering and simulations have been used to show to people and citizens how the redevelopment will change the urban environment of the site


42nd Street Overlook
ADA Ramp
W. 41st Street
Lawn
Sports Bridge
W. 40th Street
Bridge Mast
Lincoln Tunnel Entrance (Westbound)
Lawn
Phase 2b
Phase 2a
W. 39th Street
Park Maintenance (Below)
ADA Ramp
Overlook
Lawn
Chelsea Piers
W. 38th Street
Lawn
ROCKROSE
W. 37th Street
WITKOFF
Playground
Phase 2a
Phase 1
W. 36th Street
MTA Vent
Cafe & Parking Entrance
HAYES HOTEL
Hotel Drop-Off
Empire Hall AMTRAK (Below)
W. 35th Street
Water Play Fountain
Edge of Mid-Block Parking Structure (Below)
MORGAN
W. 34th Street
EXTELL
34th Street Station

63_ New York, Hudson Yards, USA. Hudson Yards general master plan

A detailed and specific project of the central green connection is included in the master plan. A deep description on how the central green area should be redeveloped is one of the key aspects of the plan.

It is interesting to see the different levels of indications and regulations that the master plan gives. While schemes about FAR distributions help developers understanding the real opportunities of the plan, detailed development schemes for the open lands' systems ensure the general quality of the redevelopment project. The master plan shows its opportunities as a regulatory tool and as a general development tool

PART THREE

The use of master plans

7. Urban design perspective

The use of master plans from an urban design perspective is the most evident and traditional use of master plans. Or it may be considered the most evident and immediate way to manage something so complex and difficult as to find out the right solution for the simultaneous planning of buildings, networks and open spaces. From an urban design perspective, the use of master plan as a complete drawing over the future development for an area, or for a specific site, is the best way to create drawings and a project for the *complete environment* that we were discussing before. But discussing about that means to find out the role of **design coding** for new development, or for urban transformations, and what level of details and regulations a code should have to work efficiently. It means, in other words, to write down something codified for a field that historically has been expression of many factors, including creativity, such as the creation of urban spaces. We all know that many beautiful and perfectly balanced historical places are nothing more that the result of a chance, or the final effect of many transformations. We will not discuss about spaces like

those, enjoyed in many European cities have but we will refer to those spectacular spaces created by a specific project. Many books, a lot of literature around the world is full of such examples: the Galleria in Milano, or the Uffizi square or Regent's Street in London are perfectly balanced urban spaces, created by a transformation project, or by the planned redevelopment of a specific site. The development of these projects, in the past, occurred by passing through specific codes and regulations or by the creation of codes to be followed by the building constructions and so on.

64_ Edinburgh, UK. Aerial view of the urban development

The use of crescents, circles, squares has transformed the urban environment of the city, adding a new flow of spaces, with a strong integration between built up spaces, green areas and urban networks.

David Walters [12] gives a brief history of design regulations in various situations and different locations. Considering that design regulations have been an issue in city development for more or less 2000 years, it is easy to say that a history of design regulations is something that we all must have well in mind, above all considering that New Urbanism and the development of contemporary form based codes start their perspectives just from these lessons, taken from the past, and many times used to give shape to new urban development.

It is important to consider the perspective we are investigating: the use of urban shapes or urban typologies taken from the past is no more than a recurrent human inclination in taking inspiration from something which has already been developed, changing it and having the presumption to make it better; it happens in every human creative expression, from architecture to fashion. What is important to say is that many times the use of past typologies or the use of ideas and images taken from the past is made in a complete wrong way, forgetting the size, the dimension, the scale, the reasons for which many times past typologies were invented and used. This is a key point to us: the use of typologies should be referred to their correct role and scale; and the use of those typologies cannot avoid to use them correctly, following the basic rules they are made of. If we are considering the way to create or to reach that perfect balance between the different components of an urban environment, it means that we are looking for those rules which keep things together.

It is not easy and maybe it is not correct to write and decide what rules are better and what are worst; once again, we all know how many things can change a rule, and how many good architects or planners have shown how a rule could be changed, or even not obeyed reaching a better result. But there are some components, whose shapes, sizes, forms change according to the local context they are used for, or according to the ideas of the planner who is using

[12] Walters, D., Designing Community. Charrettes, master plans and form-based codes, Oxford, Elsevier 2007

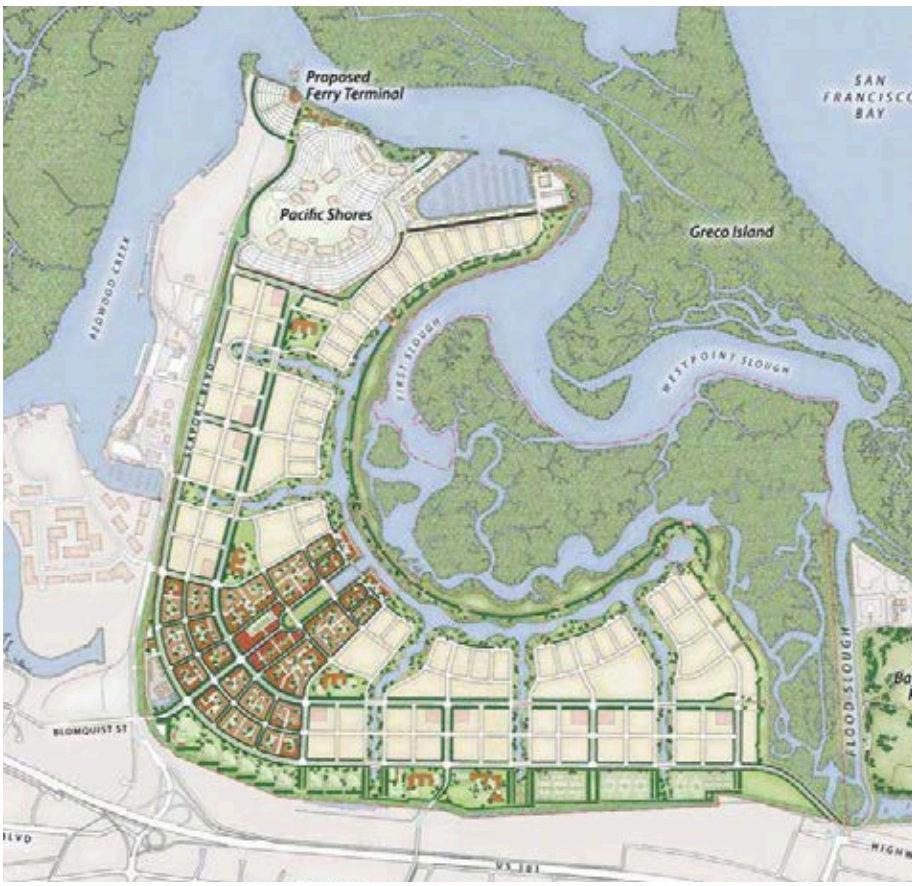
them, that are the quintessence of the typology they are part of. Urban design should work toward this direction, and this is what we are going to show: typologies of urban spaces are made of components; many of these components should be included to call that space with that name; or, on the contrary, the association of some specific components leads to some specific typologies and not to others. The use of certain typologies is good for certain scales and not for others, and the way the scales are kept together gives to a master plan its key to be successful in finding out the balance we are looking for.

7.1 A specific idea of urban space

A master plan should be composed using different elements. As already said, it should be considered the best way to balance at least three different aspects, the built up spaces, the open spaces' system and the entire network of roads and streets. Many times this balance is used for composing the master plan around a specific idea of urban space. Many master plans are shaped just starting from the use of a typology, a specific typology or an interpretation of a typology, to create a core, or a central part, or a compositional and planned reason to move the master plan around.

It is in the use of this specific idea of urban space that the use of master plans has something to do with the use of typologies and it produces so many differences considering the cultural and planning context that generates the master plan: for many reasons, most of all linked to other cultural and historical contexts, and generally speaking, it looks like European cities don't need to replicate already existing extraordinary urban spaces: there are many iconic urban spaces in many European cities, many of them are considered as masterpieces, and contemporary urban planning designs other, different and more sophisticated spaces, looking for innovative compositional rules, or more complex architectural connections. Conversely, many American cities need to

create or to replicate just those typological masterpieces seen in historical places. Many times, a New Urbanism master plan is full of historical or traditional quotations, it looks like a typology book, where certain typologies have been taken and used to compose the urban space.



65_ Saltworks, San Francisco Bay Area, USA

Saltworks master plan

The project for Saltworks, developed by Peter Calthorpe, shows how traditional urban schemes have been used to create a master plan looking for strong connections between urban development and the natural surroundings.

This point of view may explain many things and we may argue that there is still a different approach in the two schools, which is almost evident. It is easier to find around European cities the use of contemporary languages to compose a master plan, and it is more frequent to see the use of traditionally inspired

languages to compose a master plan in the US; New Urbanism, Traditional Neighborhoods Development and Smart Growth are just cultural and professional movements inspiring such a phenomenon.

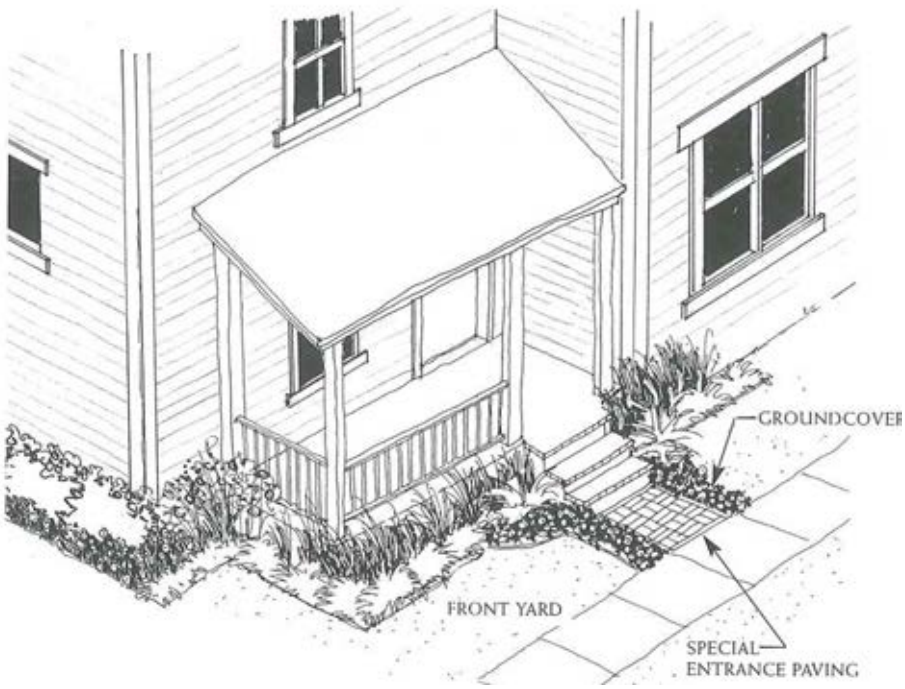
66_ Nya Arstafalte, Stockholm

Master plan

The city of Stockholm launched a competition for the development of the new campus of Arsta, to be included in the metropolitan area redevelopment. The project shows the use of different geometries and non-traditional urban design, but always considering the research for a strong urban development.

Only in few cases even American cities are adopting more contemporary master planned compositions: big transformations or even great redevelopment projects in many cases decided to call for international architects, or to invite tenders to a competition or just to use more contemporary design language to give a different aspect and appeal to the master plan and to the redevelopment of the site. But the vast majority of developments seem to use a more traditionally-oriented language, as well as a more traditional and historical use of design language. The development of form-based codes has oriented and

promoted a sort of shared and recognized use of a traditionally-oriented language in the composition of master plans which allows many minor or just local master plans to be composed by historical typologies or traditionally-oriented urban shaped spaces; there is a variety of squares, small or big piazzas, boulevards, gardens, where many times both the use of traditionally- oriented shapes and the use of historically shaped urban design elements (lamps, benches, fences, ...) helps in recreating that sense of urbanity which in many cases only history is supposed to offer.



67_ Stapleton, Denver, USA

Stapleton Urban design standards book

A traditional language shows the research of a traditionally oriented urban development.

The development of form-based codes has oriented and promoted a sort of shared and recognized use of a traditionally-oriented language in the composition of master plans which allows many minor or just local master

plans to be composed by historical typologies or traditionally-oriented urban shaped spaces; there is a variety of squares, small or big piazzas, boulevards, gardens, where many times both the use of traditionally- oriented shapes and the use of historically shaped urban design elements (lamps, benches, fences, …) helps in recreating that sense of urbanity which in many cases only history is supposed to offer.

In many cases, several central cities didn't have any beautiful public or private space to take inspiration from, and in many cases the creation of a historically-oriented master plan was the occasion for finally giving to the city a public, well designed urban space. But in many cases, especially around the existing bigger cities, the replication of traditionally inspired master plans helped in creating a more integrated and organic development of the city. Even with the great urban snags American cities are affected by, the use of traditionally inspired urban elements and urban compositions is promoting a more continuous and quality standardized redevelopment or development of many places. This should be seen as the most relevant effect of this behavior, and it can be considered as the most important role that the use of this kind of master plans is showing: a sort of composed and designed system of spaces can be identified in the majority of the master plans developed around the US, particularly under the inspiration of New Urbanism or TDN or Smart Growth. The alternation of public and private spaces, the use of different typologies and some structural rules are promoting the utilization of a more or less correct language recognizable in many spaces. It might be considered an easier approach: just take what you see in the guidelines or in the codes and replicate it. It is more difficult, and it takes more time, more culture and more effort to find people's agreement, to change the rules, to interpret them and to see how beautiful a space could be just by decomposing and recomposing traditional schemes. But it takes a good urban designer and much more money in many cases. Everyday life and reality are something different: municipal technicians are not always inspired, and they are not supposed to be all great masters; money is never enough to start a

project and to run it till its end, lack of space and possibilities is always a risk and the pressure to keep public areas and amenities at a low standard that private developers exert is always high.

For this reason, the use and the development of form based codes might be seen as a good way to spread around a good acknowledgement on how urban spaces should be designed, and on how many components of an urban space should be made of. Components, not just elements to be replicated: there are many ways to design a boulevard, but there is only one rule that keep together all the components a boulevard needs to become a real boulevard.

7.2 A specific grammar

Form-based codes are usually referred to recent practices in the United States. A famous article published by Peter Katz in 2004 documents the birth and the development of such a practice. Reading the article, the role of New Urbanism as well as the role of its two cofounders is high and evident, considering that the first code was developed in the same period as the planning and construction of Seaside, one of the first New Urbanism master planned beach side communities in Florida.

> The first Seaside code established a hierarchy of seven (later expanded to eight) "classes" of buildings for use in the new community. Each class was based on a traditional Southern vernacular building type. The code specified the rudimentary physical characteristics of each class, controlling siting on the lot, building height, location of porches and outbuildings, how parking should be handled, etc.
>
> Other urban designers have since used form based codes in a wide variety of projects and locations. In 1999 … a master plan and form based development ordinance for a new downtown for Kendall, an edge

> city just south of Miami. The 240-acre project is adjacent to two commuter rail stations, and a state highway [13] (Katz, 2004: page 20).

Maybe, many other several significant accomplishments by other architect – planners outside the mainstream of big – name national firms are important as well in the process of form-based codes development. One of the most relevant case is the work that three contiguous towns in Mecklenburg County, in North Carolina, called Davidson, Cornelius and Huntersville made between 1994 and 1996, working sequentially with David Walters as planning consultant to craft new town master plans and new form-based zoning ordinances to replace existing conventional documents. The most relevant aspect of these codes is that they comprehensively regulate all manner of private and municipal development in an area covering more that 80 square miles, emphasizing the preservation of rural areas and promote transit supportive development along a planned commuter rail line. A connection with the Smart Growth principles is strong, and many communities with form-based codes are planned following those principles.

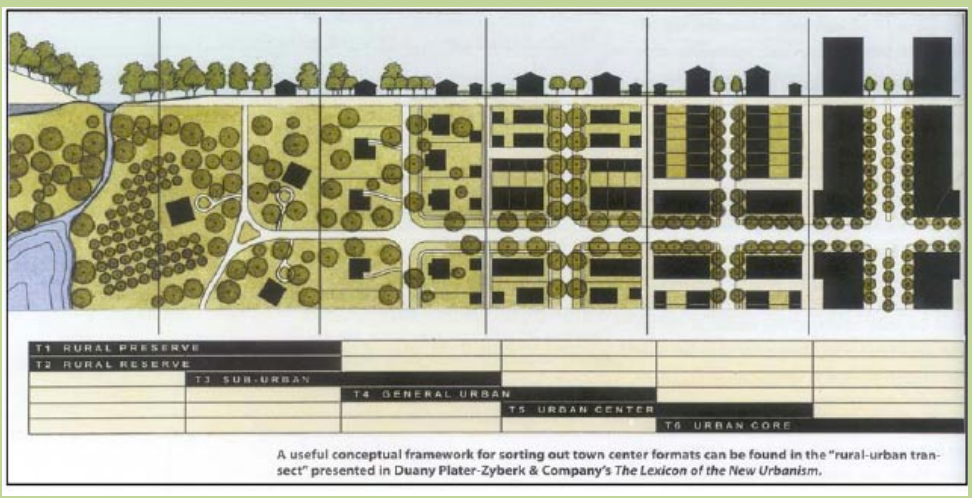
From the New Urbanism experiences, and from the case study of the three cities in North Carolina, it is easy to see how form-based codes show the relationships between urban morphology (the sense of overall grain and character of an area) and building typology (as a lexicon of different types of buildings based on their formal character). It looks like everything comes from the work of M.R.G. Conzen on historical *urban transect* studies at the University of Newcastle – upon – Tyne in the '60s. From those studies, a way of coding based on hierarchical geographic zone of urban or rural character rather than separated uses emerges, and these "character zones" dictated the overall scale and arrangement of building types within their areas. On the same logic forms it comes the basis of the more sophisticated "transect" classification development, studied and proposed by Duany Plater – Zyberk. Within this morphological

[13] Peter Katz, November 2004 in Planning, the APA magazine.

urban categorization new development was regulated by building types, design standards for streets, parking areas and public open spaces, and by provisions covering landscape and signage.

The idea of Transect, re discovered and developed by the founders of New Urbanism, is considered and presented as nothing else than a natural law, that can be observed everywhere, as the transect emerged organically in human settlements preceding its explicit conceptual formulation. Thousand of towns around the world, in the past and nowadays are structured with the Transect law, and its suppression by modernist transportation and zoning has catalyzed the current need that New Urbanism feel to re present it as viable alternative theory and practice. The structuring of a human settlement following the idea of the Transect is something that refers to an organic growth of the settlement. There might be a beginning, a central part and an end of the settlement; the beginning and the end have low density and a sort of "in between" status between countryside and urban development, while the central part is typically urban and with higher densities. (68_The Transect original proposal).

http://www.smartcodecentral.org/



A useful conceptual framework for sorting out town center formats can be found in the "rural-urban transect" presented in Duany Plater-Zyberk & Company's *The Lexicon of the New Urbanism*.

From those early works, elsewhere in the US during the middle of the '90s form-based ordinance began to spread to various communities across the country. As a final result of their studies, Duany Plater – Zyberk developed more recently the Smart Code, a model transect-based planning and zoning document based on environmental analysis. It addresses all scales of planning, from the region to the community to the block and building. The template is intended for local calibration to different towns or neighborhoods. It is a standardized form-based zoning ordinance model, based on the original idea of the Transect principles and formatted for widespread use across the US. It is a set of rules for built up spaces, open spaces and networks. Many regulations establish how buildings should stay on the street, or on the other side, how streets should be designed to host those specific kind of buildings. A section is devoted to the design of urban bigger open spaces, such as gardens, parks, squares and plazas.

In Europe, we might see many examples of design coding in Great Britain and in France, but the perspective is completely different, as we said before.

We should consider that in many cases form-based codes in the United States are a reaction to the use of a mechanical zoning, which planned almost all the cities around the country, especially the new development areas around and outside the city cores, transforming the urban regions in what we see today: a sprawled and wasteful series of conurbations, with no shapes and no way to keep things together. Also many European countries are affected by this typical and contemporary phenomenon, the peripheries of many European cities are with no shape at all, and the application of a smart code could be only a good thing.

But the origin and the shape of the whole city is different from Europe to US: the idea of suburbs is different, a more contiguous growth has occurred in many cities, and in many cases there are no cuts or separations between the old town centers and the urban expansions added in the late XIX century. Only the rebuilding after the II World War has produced some differences between UK

and the rest of the continent, or even between well-planned cities and less planned cities. For these reasons, the use or the creation of form-based codes didn't have in the past 30 years the same results as they got in the US, and the debate about the problem of the urban form has been used not just to transform and improve the existing urban neighborhoods or streets, affected by lack of quality, but to redevelop vacant and derelict lands. The matter of the shape of the city invested the problem of transformations areas, redevelopment zones and reuse of the existing, already urbanized lands, where the utilization of master plans had much higher impacts.

In countries like Italy, where history has shaped all the cities and where urban spaces are more or less a huge series of masterpieces, full of life and rich in the balance between buildings, open area and networks, the development of form-based codes or the use of something codified to rule and to take control over new development has always raised a lot of questions. During the '80s, when the growth of urban areas began to be an important phenomenon and the land consumption began to increase, the cultural debate started asking if a more codified system of rules was better than the continuous and anonymous growth of urban areas. Many plans and projects began to investigate the problem of the drawing of the transformations and the re designing the already existing urban neighborhood, looking for a more harmonized urban shape. Bernardo Secchi's proposal knows as land design (*disegno di suolo*) was a tentative way to give to urban environments a sort of homogeneous development, related to the idea of developing urban systems, so as to keep all the aspects of urban environment together. But all these attempts to create something more binding and more convincing about the urban form have always been considered as something impacting too much on architects' freedom, once again confusing roles and responsibilities.

Nowadays, the process of planning in Italy has changed, giving to Regions the power to pass specific laws about planning: many Regions divided the process

of planning, creating just plans for the existing city and rules to develop transformations or redevelopment areas, different from the strategic general plans. So, nowadays the problem of rules becomes more important, for the dimensions of the transformation process that many cities are experiencing and for the existence of a specific set of plans, just called to give rules and to take care of the already built up areas and of the proposed master plans for the redevelopment projects. . But in all the cases which could be seen around, it is hard to find a specific grammar, or it is hard to find at least the sharing of consolidated rules over the urban environment. Plans are full of detailed rules about buildings, about the shape and the nature of open spaces, since for many years urban planning has been concentrated in adding some new "green" rules, but it is hard or even impossible to find something that gives form-based rules to the transformations, or to the improvement of already developed neighborhoods and suburbs. Rules are the effect of separated different fields, such as construction rules, the building code, sustainability and ecological rules, infrastructure rules, the rules concerning open areas; all these sets of rules are not working on the complete environment which should be always at the center of the reflections about urban development. If we put together this key point, the absence of sectional rules about the urban environment and the previous one we discussed, about the different relationships that many European master plans have with the urban typologies, it is clear that there is a huge difference between two different approaches to master plan, considering the grammar and the codes that should regulate urban developments and redevelopments. The question about codes, their content and their audience is also complicated by the fact that architects tend to think in terms of the design of individual buildings, but urban designers think more broadly about the design of whole communities and of the space where they are settled.

The process of drafting codes around form-based principles opens up many other important questions about what should and what should not be included in a code, or in other words, which level of influence should be allowed to a

code. Should a code include only the creation of the urban infrastructures and the public realm by focusing only on the layout of urban space and building massing? This seems to be the most frequent choice that many municipalities are considering, leaving complete freedom to architects to develop what happens inside the building massing. Or, should architectural aesthetics specific to a place be included in the code, just because the building facades act as the walls or as the boundaries of the public space, as the walls of a big, urban room, made by streets and square? This is a more difficult approach but just this approach seems to consider urban spaces made by relations. Beside that, a easy question could be raised: how can codes control and avoid poor design without restricting appropriate innovations? The fear is always that codes will become too prescriptive, stopping freedom of expression or, on the other side, the fear is that codes are trying to do something different from what history created, a continuous, free process of transformations that helped in creating many of the best urban spaces we are still experiencing. Experience shows that if codes back away from the levels of prescription necessary to achieve urban order and clarity in spatial layout, they run the danger of becoming too flexible and allowing bad design to flourish alongside more creative interpretations. It is not a matter of blocking someone else freedom: it is a matter of granting a general high level even where good architects or good urban designers are scarce or where there aren't the conditions to hire master planners.

Form-based codes inevitably include some basic presumptions about what is good design and what kind of components grant good urban design. We believe that this issue has a lot to do with the creation of a well connected flow of urban spaces, whose size and continuity come from the role that the system has in the general strategic asset, and whose real nature comes from the coherence of balancing the size of the buildings and the composition of their façade with the role and the use of the public streets in front of them. Many of these rules have been changed and dismantled by modernist and post modernist buildings, during the rationalism era, and again now, in the middle of the *archistars*

period; the *coherence of the building with the urban environment* is a challenge that now should be faced.

It is not, once again, a matter of avoiding free standing buildings or buildings with their own style, different from the urban environment that hosts them; it is a matter of regulating it, and creating a complete, homogeneous flow of spaces to give the sense of urban environment.

69_ Bilbao, Spain

The Guggenheim Museum, a freestanding non-conventional building, is the focus point of the redevelopment of the urban riverfront, as an outstanding and continuous flow of spaces. Pedestrian and green areas are the connective tissue that includes existing infrastructures and new architecture independence of the museum.

The creation of a connective tissue of city space and form means seeking continuity with context and history and limits the number or the role of formalist building and compositions based primarily on contrast with their settings. The need for better contextual design is evident, and design codes cannot provide a solution, not the best solution to be adopted by everybody in a specific place, but a sort of architectural discipline indispensable for creating

not only coherent urban areas but also a connective tissue so correct that it can tolerate even different and freely creative buildings. It is the presence of a well working connective space, which allows significant buildings to stand apart as architectural landmarks.

In the recent literature, and in the practice, which could be investigated, there are at least **three different categories** of urban and aesthetic coding that are used in current practice, each with different levels of details, prescriptions and flexibility. These three categories have produced different codes and different grammars, and are used to create different effects on what physically happens in the urban districts where these codes are used. It could be useful to study them, to analyze in particular the effects they have produced.

Of the three models we can investigate two are taken from the American (US) practice, the form-based zoning ordinances and the pattern books, while in the British practice it is easier to find design codes, rather then form-based codes or pattern books. Beside that, a big distinction should be done between the codes and the ordinances used in the private development and those affecting public planning policies. American zoning ordinances and British design codes are usually public documents with some legal mandate behind them and both are embedded in their respective planning systems. Design guidelines can be part of public or private regulatory systems, and pattern books with a great level of details regarding the architectural style, are restricted to the domain of private development, especially in the United States. There are many others attempts and many other documents written in other countries: maybe, many design codes or many shared rules books that can even be found in other European countries might be found are part of the intentions to create a grammar for any urban transformation. There are rules about the way streets and boulevard

should be designed [14], there are guidelines for specific elements of urban design, but in many cases such guides are very specific, or very restricted to sectorial policies and practices. In the UK and US recent tradition of codes that we are investigating now, we can see a wider attempt to create *cross codes*, affecting many aspects of planning, with strong intersections between public and private, between municipal duties and developers' possibilities; above all, in many of such codes there is the possibility to see an attempt to study, design and propose something very close to that *complete environment* theorized by Sert so many years ago.

7.2.1 American Form based zoning ordinance

American form-based zoning ordinances are very interesting for what we are studying and researching in this book, because in the majority of the cases under examination, they seem to have a primary focus on urban and architectural form, putting together regulations for architectural development and rules or grammar for public and private open spaces. A comprehensive approach over urban general shape could be seen in this kind of documents, and what looks interesting is a sort of general, overall look and interest about the regulation of the final effect which could be produced. Many times, it might be said in the literature that there is less emphasis on the definition of uses in this kind of zoning ordinances and regulations; maybe, it is a sort of different focus and different starting point: while traditional regulations start from the definition of uses and the codification of what use should be planned in a specific site, and only after that such regulations may give some indications about forms and shapes, in this kind of form-based ordinance the starting point

[14] In France, CERTU is promoting since many years a new vision and a strong activity about sustainable development. One of the field of activity is the definition of standardized design guidelines for street's network around the country.
http://www.certu.fr/en/Roads_and_public_space-n195-s_thematique_general.html

is the general urban form, but to gain that, specific shapes are proposed to host specific uses. For these considerations, it means that these codes are more oriented in defining categories as types of buildings, types of spaces, such as squares, urban gardens, parks, playgrounds and types of streets, covering more or less the three main aspects of urban design we are looking for. Just because of this emphasis, these codes are often referred to as typological, because their focus is on the definition of lists and categories of different types of buildings, streets, spaces; but considering their classifications as a whole, most of these codes are not so deep in the combination of the three elements, so they can hardly be defined as morphological codes. Their lists, and the way they describe and list different possibilities and different things, are many times just lists of typologies of spaces, and the lack of even a tentative reading of their combination is exactly what is missing in such categories of codes.

Form-based ordinances are differently used: there are many ordinances like those, used to deal with a specific locale, and strictly tied to the development of a master plan. There are more comprehensive codes, capable of covering all the territory and all the aspects of development control in a municipality and there are more generic codes comprising "floating zones" [15], which can be used or applied according to the request of a specific property or a specific development zone. The first type of this kind of codes is more interesting, and we will go back to that aspect; the second type is the more traditional, and many examples or similarities can be found even in other countries and in other cultural contexts: even Italy and other European countries tried in the past years to draw omni comprehensive codes, covering more or less all the aspects of local development, for already existing sites or future ones. The third type of codes are just propositional and suggest some specific developments that may or may not take place. In general terms, the codes applying to restricted areas tend to be more detailed and precise, especially more typological, whereas ordinances

[15] Walters, D. 2008

covering an entire municipality are by necessity coarser grained with less details.

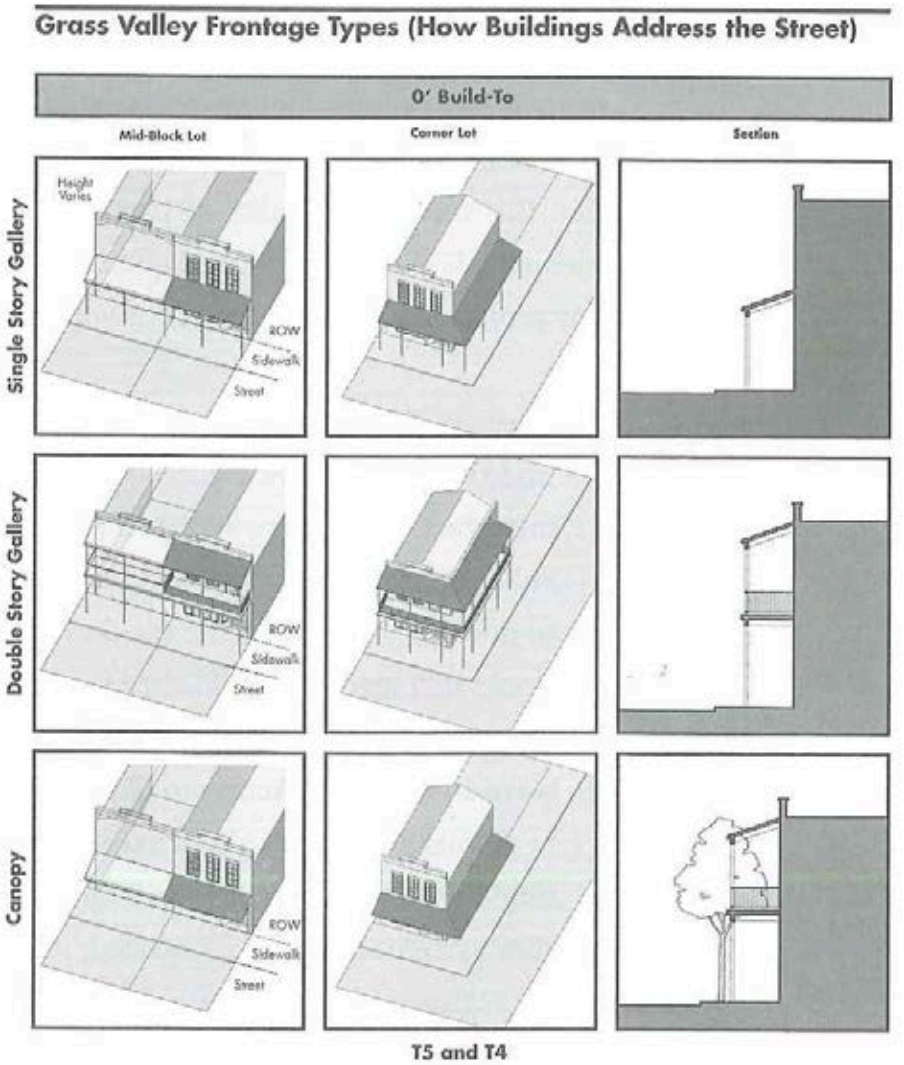
This is very important for the development of the path we are looking for: in Italy, particularly after the latest cycle of regional laws about planning and the tools of planning, many plans have a specific section for local typological rules. In the regional planning scheme of Lombardy, municipalities are required to prepare a local rules plan, a third part of the general comprehensive municipal plan: the plan should include rules for already built up spaces (buildings) and open lands, while nothing about form is required either for networks or for public facilities. Above all, nothing is required for redevelopment or transformation areas; for this aspect, everything is referred to the general strategic plan and its development to urban general rules.

We should say that the particular codes about built up spaces are not coming from a tradition of shape or morphology control and design, but from the old and consolidated tradition of setting typological and hygienic rules, with no evident effects over morphology and the general perspective. The form-based codes in the US are more focused on covering matters of urban layout and typologies of buildings and urban spaces, and are required to say something to a regulatory plan for a specific area or to the municipality's official zoning map. This is a very important aspect, and it should be centrally kept in consideration: the same form-based code is used to cover matters of the existing areas (the built up city) and to regulate the development of new areas, using master plans; it means that master plans, for those areas, are developed following the same rules written or at least inspired by the regulation of existing city. The simultaneous use of a set of form-based rules and the application of that set for the development of a master plan is more or less what we are looking for, considering that we are investigating the process of creation of a master plan, produced following a specific idea of urban shape, produced from a community

charrette and developed through a detailed schedule of actions by various parties.

70_ Verano Brianza, Italy. General urban plan. The master plan guidelines for old neighborhood

The new general urban plan of Verano Brianza, a small town on the north side of Milano metropolitan region, planned by the author in 2011 together with Marco Dellavalle and adopted by the municipality of Verano Brianza, includes some master plan based guidelines to manage the renewal process of some old neighborhoods. A strategic vision over the future development of those neighborhoods is managed by a set of action rules, to help private owners, developers and the municipality to plan for the future asset of the neighborhoods.

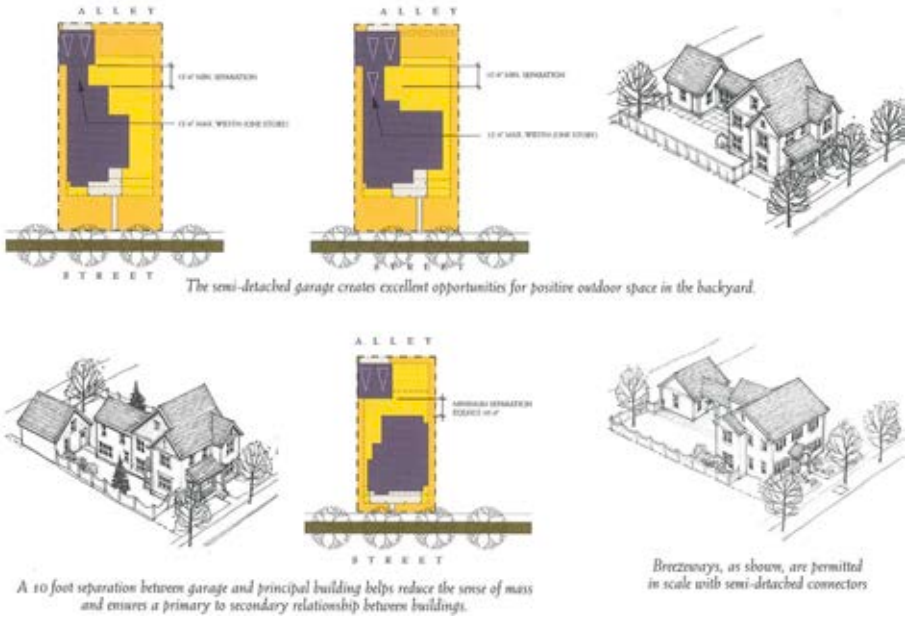


71_ Grass Valley, USA

A form based code ordinance

7.2.2 Pattern books

Pattern books in the US are used almost exclusively by private developers to mandate consistency of architectural style and details across a range of house types and possibilities, constructed by different builders in the same development area.



72_ Stapleton, Denver, USA

A pattern book shows to developers how to build different typologies of houses and how to plan and build all the different elements according to the general plan

They look like guidelines, developed together with the master plan of a specific site, to regulate the development of it and the construction of the different buildings that compose the area; there is no link between this kind of codes and the municipal codes used to regulate the areas surrounding the new development, also because this kind of codes are legal documents binding only private developers and the developer of the master plan. The intent is to create a unique, general style and feeling throughout the master plan; it is not

necessarily an action taken to keep a specific quality seen outside the development area, to bring it within; many times it is a marketing strategy that confers to a new development something more than the other developments. But many times this kind of documents should be considered binding, or at least with some binding elements, such as the alignment of buildings, the position of streets within the master plan, the distribution of commercial parts instead of residential areas. Anyway, pattern books are really specifically oriented towards architectural language and many times they help in the definition of a specific style to be used; it is a matter of architectural definition and rigidity that doesn't have much more to do with what we are looking for, if we consider them as something that could create urban rules. Pattern books are absolutely typologically oriented, and they refer to architectural development of buildings. We should just say that, stylistic preferences apart, it is clear that developments produced under private pattern book regulations administered by a master developer can create higher quality and higher standards of design and construction that developments controlled only by public form based ordinances, but only if pattern books are connected and conceptualized referring to existing form based overall codes and leave freedom to architects to play with styles and decorations. Pattern books may generate the risk to create a perfectly designed neighborhood, but completely far from the existing language and the general urban environment that surround that area.

Even in Italy many master plans have been developed by using this kind of codes, considered as part of the general process of planning, included in the binding drawings that compose master plans. In many cases, master plans with this kind of codes are perfectly designed, and make good projections over the future development of the site; but in many others these regulatory schemes fight with private developers aims and needs, or become outdated just because it takes a lot of time to build even perfectly master planned sites.

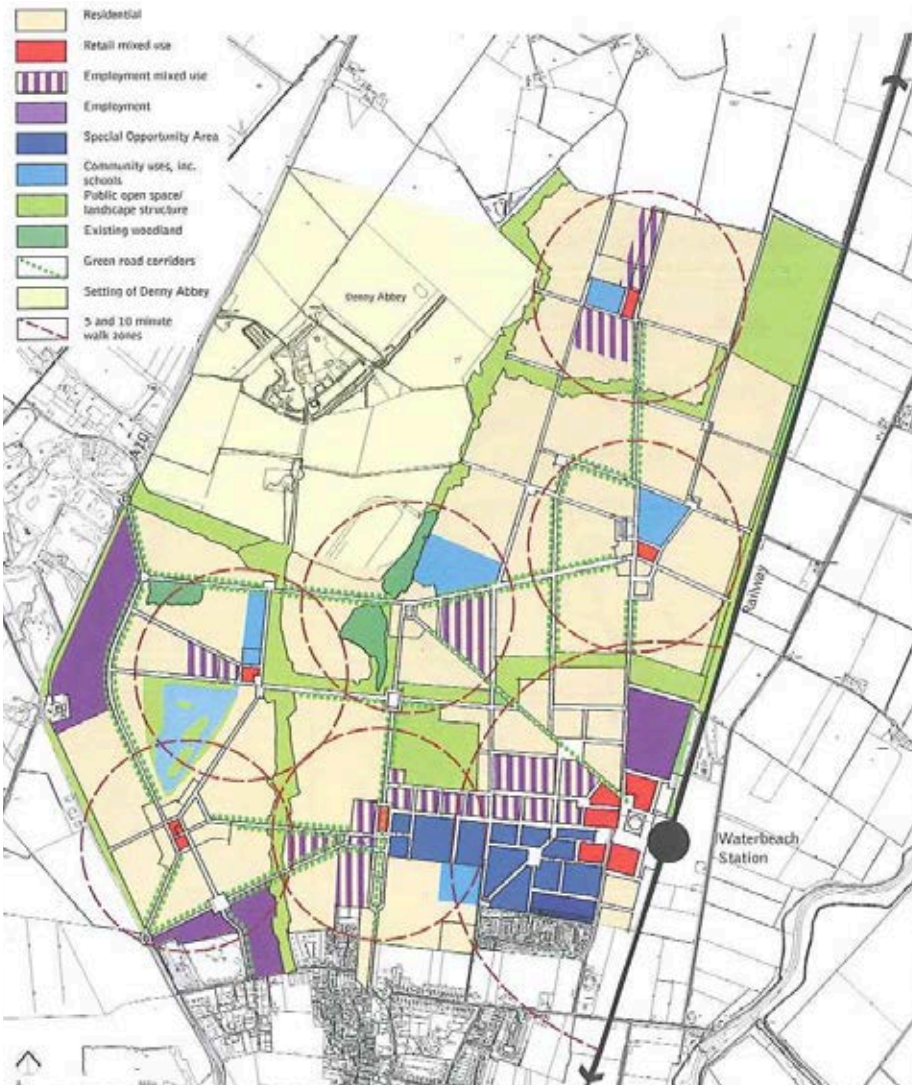
7.2.3 Design codes and the British case study

A particular consideration should be given to some specific policies that certain countries have produced over the past years to control urban design and urban forms. British government policy over cities and urban revitalization became clear and focused around the end of the millennium, placing good urban design at the center of the national effort to improve British cities, using specific tools called "spatial master plans": three dimensional frameworks of buildings and public spaces. We should focus a little bit on these documents, because in the big production of British government and in the big effort to create a framework of general rules so as to improve the quality of urban environments, the codification of the process leading to spatial master plans is of some interests for our considerations. It is interesting to see that the key to deliver good quality urban design, especially in ordinary ambiences and not relying on the presence of highly trained municipal planners or highly motivated private developers and consultants, is identified and recognized in heavily designed guidance, but above all in a *new hierarchy of planning tools all focused on urban quality*, with the sequence of urban design frameworks, development briefs, master plans and design codes. This sequence looks like what we are mostly looking for: a well connected process of urban planning, not specifically intended for driving only new developments or transforming already existing towns and villages, but aiming at determining a new system of planning tools to change the urban form and urban environments, as a combination of new developments and investment over the existing urban places.

The first tool is the *urban design framework*, a two dimensional map that describes how planning and design policies should be implemented in specific areas, where the government feels there is a special need of the coordination of many forces and many actors, public and private. Those maps looks like strategic local maps, something in between a strategic scheme, specifying actions to be taken and local formal specifications; usually, the urban design

frameworks includes future infrastructure requirements or upgrading projects with new roads, public spaces, public facilities and specifications over public areas and streets networks. Less detailed is the information over private areas, where the urban design frameworks use to identify them as parts, or systems, recognizing urban quarters or districts, urban corridors or new centralities, town centers or urban extensions into undeveloped areas. These schemes are very important and above all many other plans took inspirations from these schemes; the strategic role of this kind of illustrative plans has been taken as an example for many other plans, around Europe and in Italy too, as it looks as a good way to balance the representation of strategic policies (giving a shape to policies to take) and designed actions. As a framework, these maps are not necessarily binding, or strictly oriented to take precisely those actions in those ways, but they are supposed to orient and to guide the development of such actions and such policies, pushing them to take into considerations the total effects and the impact every change to the proposed action or policy could have on the designed environment.

The second level of tools are the so called *development briefs*, with the purpose to inform developers and other interested parties or stakeholders of the constraints and opportunities presented by a specific development site and the type of development expected or encouraged by local planning policies. The briefs usually contain some indicative and flexible visions about future development form. The development briefs and the urban design frameworks are both produced by local governments, or by local private / public agencies in charge of the development of a specific site. This kind of documents are something close to operational maps, full of details intended to drive private developers action within the frame of the general public planning process, and maybe this is the most relevant aspect they have: we will discuss about the importance of master plans to drive and to manage correctly the development of a site; the development briefs are documents intended to help, to manage and to control the way a master plan become reality in the building process.



73_ Urban Design framework

A urban design framework is a general scheme on the development of a site, and it includes general regulations and specific site development rules.

The third level is represented by *master plans*, considered as the final step, and the visualization moment for each proposal firstly included in the urban design framework and finally suggested by the briefs. According to regulations and requirements, master plan are intended as the final step in this process, and the

only tools capable of taking into account the relationships between buildings, open spaces and public networks, the movement patterns, the relationship of physical form to the social, economic and cultural context. The integration of the proposed new development in the existing one is part of the general strategy of master plans. Master plans are more or less a three-dimensional representation of suggested transformations; master plans are developed following and considering *codes*, by far the most detailed document that the British process of planning has established, even taking them directly from master plans, as sometimes it happens. Master plans set out the vision and the design codes provide instructions on how to realize that vision, maintaining design standards at the same level master plans have figured out. This process of planning has many good aspects, in particular there is a strong relation between different levels of planning, and there is a strong desire to keep things together: master plans, guidelines, codes look like an integrate approach to control the physical transformation of a place, and they look as tools to help or to drive developers actions avoiding unexpected or unplanned results. This is an important issue, and it raises considerations about the *process of evaluation* of projects; this complex process helps in keeping an eye over the evaluation process, maintaining a strong relationship between the starting process, or the starting proposal, and the consideration of the final results.

7.3 The design component

As we have seen studying different approaches and different traditions, but considering above all the American lesson, the British codified process of planning physical transformations and some attempts to create codes in other traditions, the most relevant aspect seems to be the starting decision about the shape, or the combination of shape that should be proposed. A specific idea of urban development is always on the background of every attempt to propose it and to keep the process of development under control, to ensure that the final

results are what has been planned and proposed. A specific idea of urban environment and urban quality is what we have been studying here, and what is the most relevant and important aspect to be planned, to be sure that the final results are not only what has been proposed, but the right development that could change the urban quality of that specific environment. The American tradition, mainly driven by the analysis and propositions of New Urbanism is strongly connected to a specific idea of urban planning, reclaiming the American tradition of small cities and small villages, or at least the American idea of an old fashioned city, where the poetry of urban design could cancel the problems of the contemporary metropolis. The design indications are for smaller parts, human scale development, where benches under trees and shopping windows on the side of urban boulevards are enough to ensure quality and a different approach to urban design. We strongly believe that this is not enough: urban design indications and guidelines shouldn't waist time in smaller details suggestions, but they should focus on the list of components that should be ensured to look for urban quality, and to create that specific idea of quality we are looking for.

7.3.1. A design idea

In literature there are many good receipts books, about how to use urban design, or how many ingredients should be put in a good project to ensure it works and it brings differences and urban quality to a specific site. The first consideration that should be done, trying to set a list of things that cannot be missed in the composition of a master plan, is the idea that every project, above all if conducted and created with the use of master plan, should create a new place. *Place making* is a central aspect of urban development and urban redevelopment with the use of a master plan; considering what we said about the way a master plan should be composed and regulated, the central aim of the

development of a master plan is the creation of a place. Charles Bohl [16] considers the process of place making as central to many new urban development processes: "… town centers … put communities on the map and establish a strong identity for new residential communities and existing town and suburbs". There are many considerations about that: it belongs to the typical use of master planning in the US the idea that every master plan should create a town center, or at least a combination of uses and shapes different from the surroundings of other urban areas. Many times, master planned communities are used to change the image and the destiny of suburbs without any quality or without any sense of place.

74_ Quarry Village, San Antonio, TX, USA

Even a small development project should include a central part, or a central, easy design element to give sense to the general development project.

We should consider differently this aspect, just referring the use of master plans to only the process of development or redevelopment where such use entails something more interesting, connected to large scale planning scenarios and to the visualization of the transformations proposed.

[16] C. Bohl, "Place making. Developing town centers, main streets and urban villages", Urban Land Institute, 2003

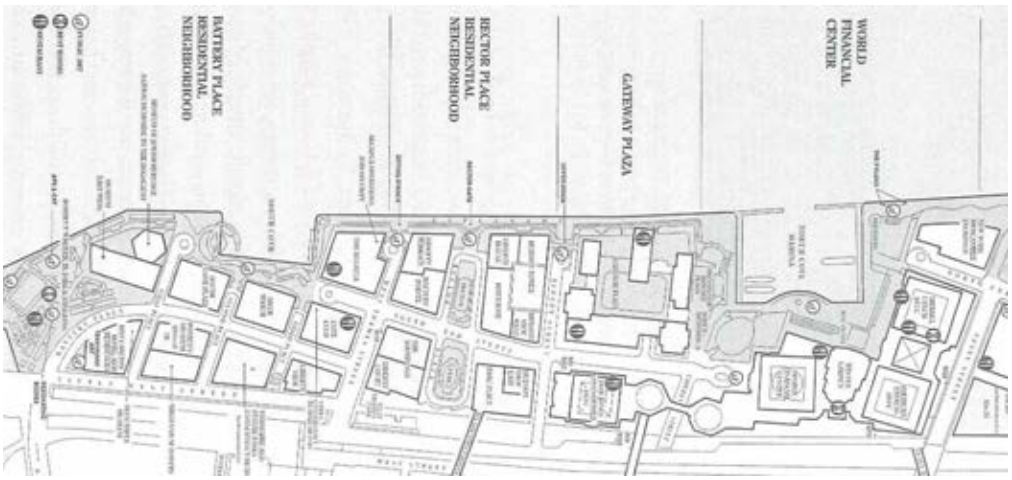
The use of master plans should put at the center of the composition of the new project the idea that a specific place should be created. To do that, a specific urban morphology should be proposed; an urban morphology is a combined design of streets networks, buildings and open spaces combined and planned together to create a new, recognizable place.

75_ Kinkora, VA, USA

A central commercial street leads to a major round square, where pedestrian and open spaces connect the built up development.

The central idea of each master plan should be the design of an urban item, a morphological defined object, capable of becoming the core or the leading aspect of every project, of driving attentions around it and able of coordinating the design of every other element of the master plan. The creation of a

centrality, or the invention of a new, strong image using one combined item is one of the challenges that a master plan development can invent and propose: squares, boulevards, avenues, ramblas, water fronts, shopping areas, public facilities blocks are some of the images used in many master plans to create a strong presence of something, organizing all other parts of the master plan around it. It is evident that in Battery Park city, in New York, there are many different components that contribute in the good urban atmosphere of the area, but it is also evident and easy to read that the presence of the park is the main element of the neighborhood, and around the development of the park all the urban smaller and less important elements seem to find a logical arrangement from smaller green areas to open views trough the blocks.



76_ Battery Park, New York, NY, USA

A system of small centralities creates different urban environment in the general project, with a variety of squares, gardens and urban parks, able to connect the built up development to the green areas

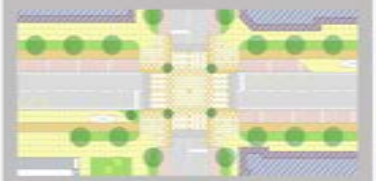
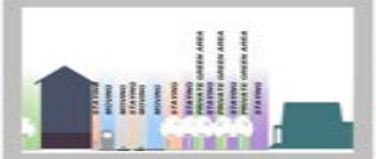
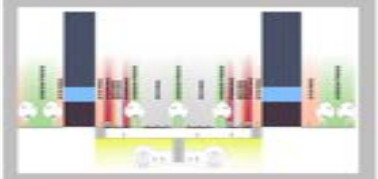
The first thing to decide is the spirit of the development, and the main reason for its creation. It depends on the mix of uses that the master plan and the design idea bring together on a map. The mix of uses and the balance of such mix, together with the role and the position of the master planned area in the

hierarchy of places from local to metropolitan level should give a good solution in the decision of the place to plan; this should avoid out of scale design, or small residential environments with too big places or with wrong typologies just invented to create a sense of place. It is important to keep in mind that a real sense of place is given not by inventing it, but just by interpreting the sense of place that every corner of the heart gives, but above all by reading in the right way the position of that specific place in the hierarchy of places, its urban environment and its position according to the uses that it shows.

It should be possible to suggest this interpretation, trying to read what happens putting together at least two main uses of a master planned area, and considering it for its position in the urban hierarchy of places.

For a residential neighborhood, with a prevalence of residential uses, there is a variation of three possibilities, considering its position at the *local*, *urban* or *regional* level and considering its vital integration with other uses such as commercial and services to people who live in the planned neighborhood. The creation of a well recognizable space should consider this proposed scheme:

According to these very simple scheme, it should be possible to work on the different typologies of spaces which should be linked to the *main street* model, to the *square* model and to the *cross space* model. By reading the proposed tables, it should be possible to understand that it is not correct to use freely every typology of space in every condition, and connecting every kind of use: there are typologies more or less correct according to their role, to their position and to the role that the general system of planning gives to that specific area. The factors that should be considered are the following:

	LOCAL DEVELOPMENT	URBAN DEVELOPMENT	REGIONAL DEVELOPMENT
DENSITY	LOW	MEDIUM	HIGH
TIPOLOGY MORPHOLOGY	 	 	 
TYPOLOGIES	Main street Small boulevard Small rambla	Square Waterfront Open park	Flow of spaces System of spaces Variations
URBAN ENVIRONMENT	"Neighborhood"	"Town center"	"Regional core"
TIPOLOGY OF NETWORK	Main street	Square	Cross
PUBLIC TRANSPORTATION	Bus	Tramway	Subway/Railway

77_ The use of master plans at different scales

A proposal to refer the use of master plan to different scale, realizing that different scales needs different kind of development and the use of different typologies. This first table has been developed by the author, showing a more coordinated and correct use of typologies of spaces, linking them to the uses developed at the sides of the streets.

- The position of the master planned area in the general scheme and sequence of areas in the general metropolitan plan: there are local, urban and regional areas, according to their weight, their importance, their density and their connections within the region;

- The typology of the area considering its position: master planned areas at the local position or at the local level will create neighborhoods, while master planned areas at the urban level will contribute in the creation of new town centers; at the final level, the creation and the planning of bigger areas connected to the strategic regional policies of growth will promote regional cores, or new regional hubs;

- The morphology of spaces: if different positions give different roles to the areas, and even different names, it means that every area should be master planned following different schemes, and creating different morphologies of spaces: local, new neighborhood will invest at least in the creation of a main street, where residential uses mix up with commercial and office/facilities uses. The easiest morphology of space should be the creation of a main street, where a different weight of the street and a different investment in its design should create the difference with the remaining part of the neighborhood. Urban core developments should contribute to the creation of a new system of spaces, recognizable not only at the local level, but even at the urban one. For this reason, urban areas will plan a bigger public space, whose morphology could recall a square or a larger public system of open and public areas. At the final level and step, a regional hub should create an abundance of spaces whose

morphology should recall the importance of that space at the regional level, an entire region should be recognizable or refer to that space as one of its centralities.

From this point of view, morphology should be intended as the way of composing different spaces, calling them with the right name and including the right list of components; we will discuss again about that, above all looking for the right way to compose each design. It is important to say that following these rules, each master planned area should include a specific central or more important space. And this is just enough, considering that in many cases the idea and the need to create a recognizable space are not so evident, and there are many master planned areas without any evidence of such a space, or it is evident only as a requirement of local rules and regulations. But this is not enough: considering that a master plan is a different occasion to create public and high quality spaces, the areas planned in such a way should include these typologies of spaces.

7.3.2. Urban morphology: a set of components

It is evident that if we look for a specific method to have at least one recognizable space each time we analyze a master planned area, there is a vocabulary of components that should be defined and considered, always following the same method that we have followed up to now. It is important to define a shared, general list of components, leaving each level, each region, each country and even each urban designer to design, decide and create by considering at least these components. This specification comes from a need to promote a shared, correct and recognizable language, considering certain choices as wrong and some others as correct. A boulevard should be considered in a specific way, and cannot be considered differently: or at least, a boulevard should have some requirements even not considering the local specifications,

but just considering which components should be included and which shouldn't. This is very important, and it is more or less the most relevant aspect of the method we want at least to outline. It is very hard to decide what should be included and what shouldn't: we have studied that there are different levels, different variations, different ways to use codes, guidelines and regulations schemes, but we believe that there are only a good way of calling correctly the different components of each typology, leaving to codes and regulations, according to their level and their contest the role to regulate precisely the use of them. The process of master planning and the process of planning specific sites should include and should use appropriately this language in order to compose plans with the correct components.

Following the general table that has been proposed, it is possible to study at least these elements, at the neighborhood level, at a urban core level or at a regional hub level: for each level, the central urban space that could be developed should include the elements indicated in these drawings. It is a first attempt to create a general but flexible grammar of elements, and components, that must be always considered in the general design of these three urban, general environments.

This proposal is the first attempt to create, by the research studies, a grammar coordinating the design of the central, urban space, with its position in the geography of urban spaces, the list of components that should be included in the design and the connection with the uses developed at the sides of the central typology of space. On this grammar, every contest and every planner should work, creating variety and different solutions, within a correct and fair typological language [17]

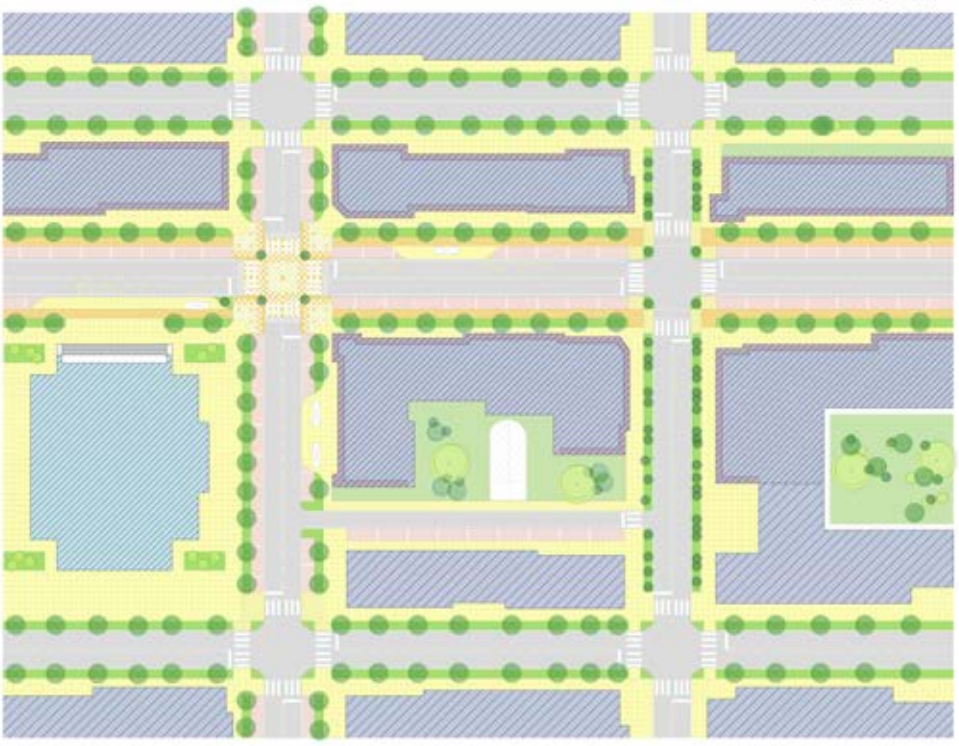
[17] This part of the research study is still in development. It is presented here as an anticipation and it will be presented, with more details, in a general guidelines book that is going to be published by the author when this book has been published.

1. Neighborhood

1.1 Main street design grammar (table I)

NEIGHBORHOOD

1 MAIN STREET

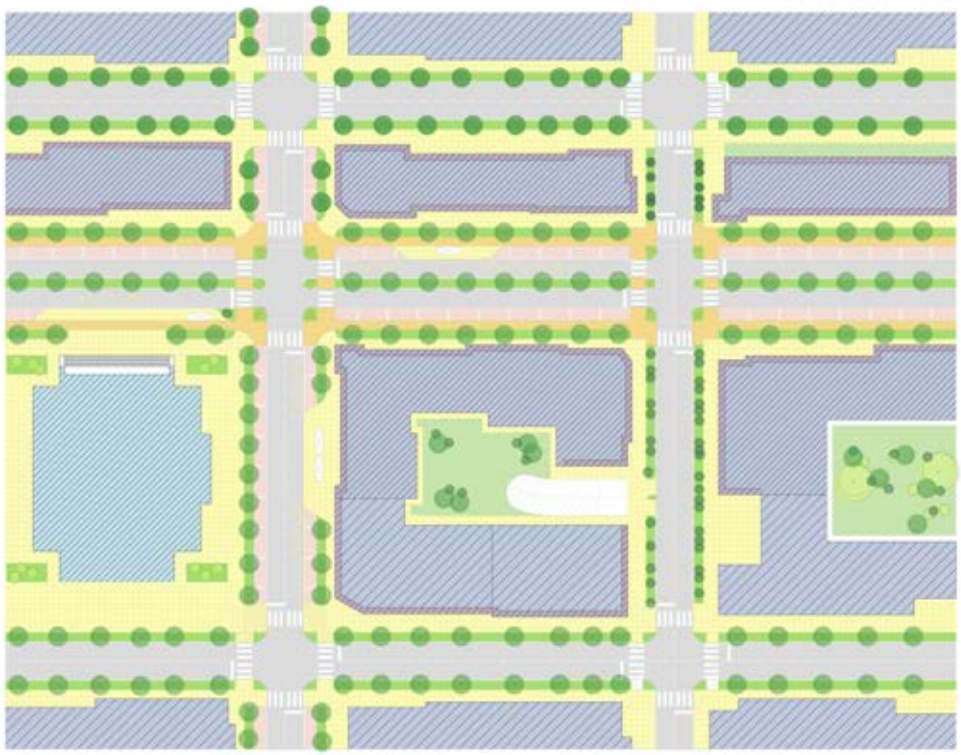


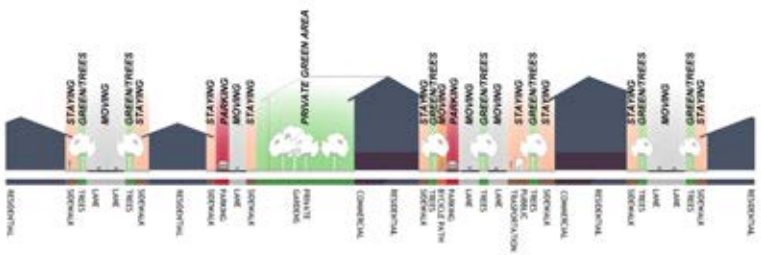
1. Neighborhood

1.2 Small boulevard design grammar (table II)

NEIGHBORHOOD

2 SMALL BOULEVARD



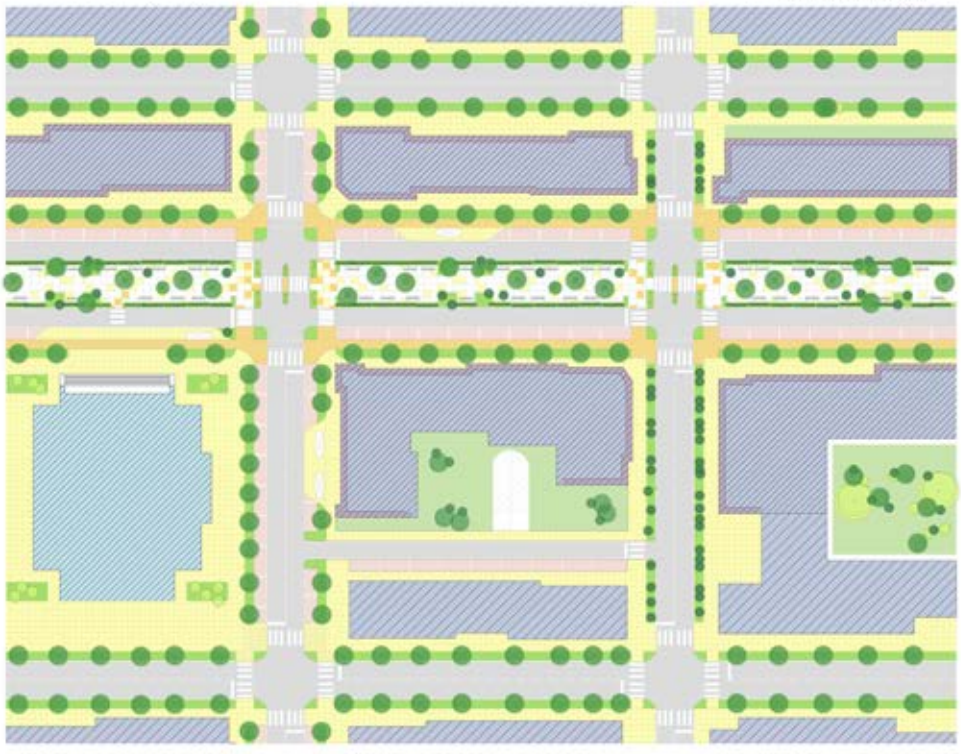


1. Neighborhood

1.3 Small Rambla design grammar (table III)

NEIGHBORHOOD

3 SMALL RAMBLA

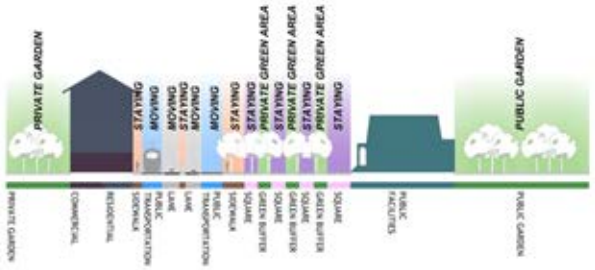


2. Town center

2.1 Square design grammar (table IV)

TOWN CENTER

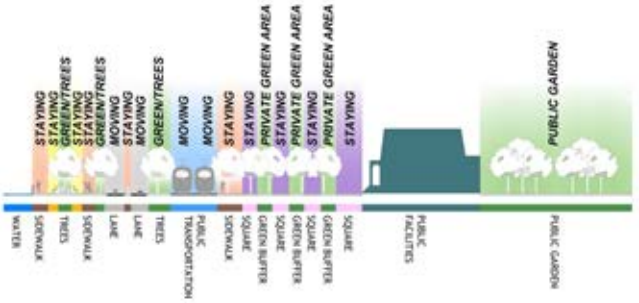
1 SQUARE



2. Town center

2.2 Water front design grammar (table V)

TOWN CENTRE

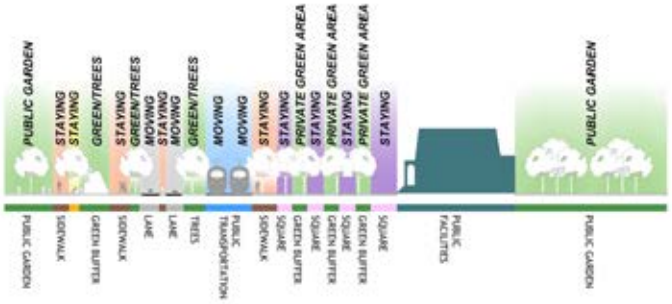


2. Town center

2.3 Open park design grammar (table VI)

TOWN CENTRE

3 OPEN PARK

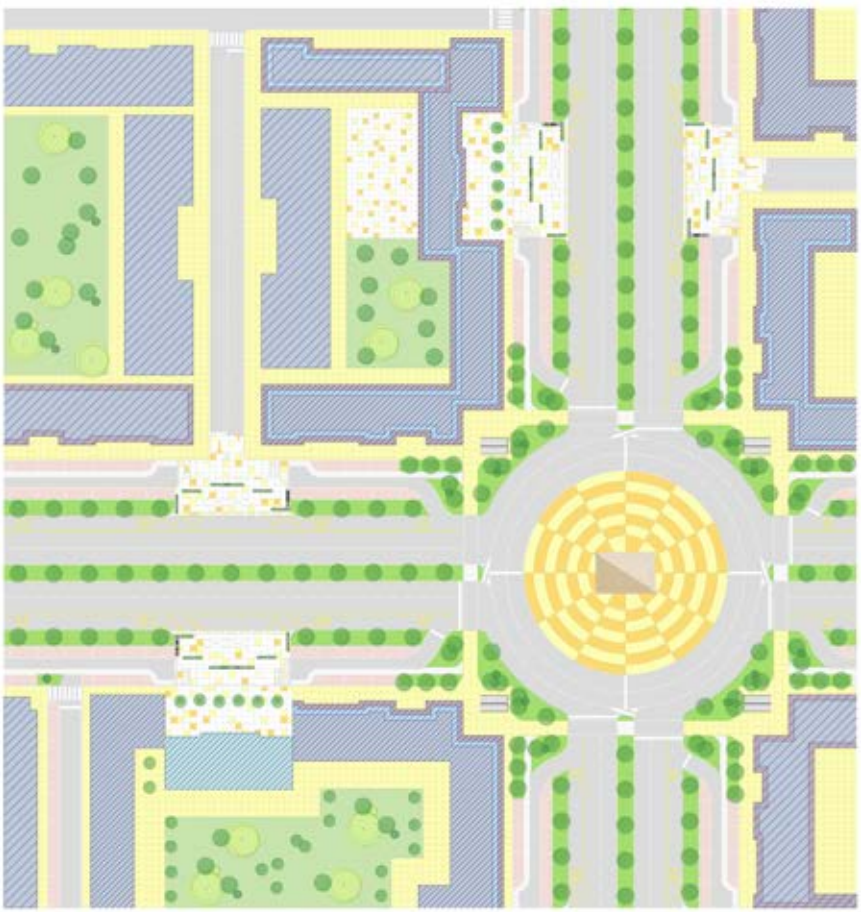


3. Regional Core

3.1 Flow of spaces design grammar (table VII)

REGIONAL CORE

1 FLOW OF SPACES

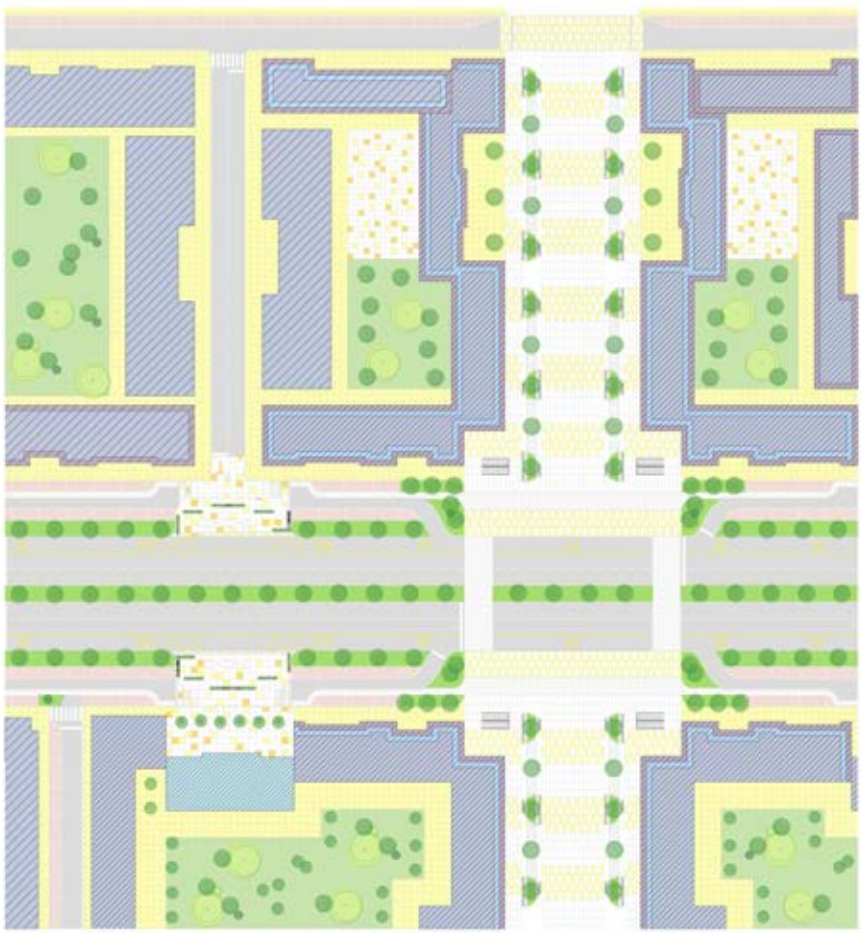


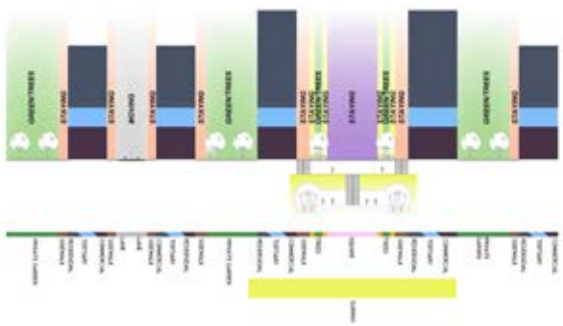
3. Regional Core

3.2 System of spaces design grammar (table VIII)

REGIONAL CORE

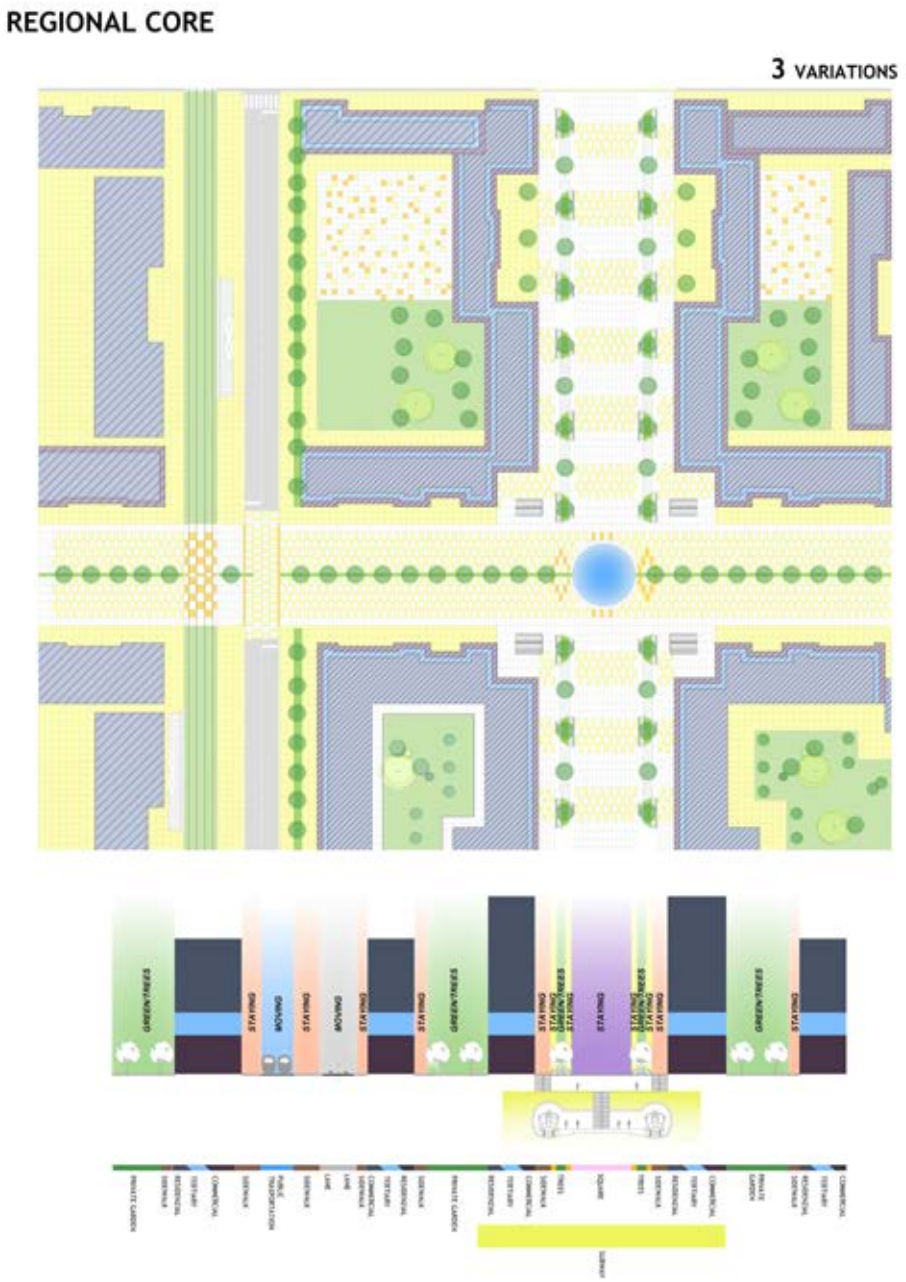
2 SYSTEM OF SPACES





3. Regional Core

3.3 Variations (table IX)



8. Urban planning perspective

One of the most relevant aspects that the use of master plans could pick out is that master plans are considered as very practical tools, above all because they are called to give a specific shape to ideas and propositions. To create a shape, or to suggest a specific physical transformation of plots of lands or areas, or everything that has a master plan over it, it means that master plans are tools where general rules, specific regulations and local or specific restrictions should find a solution, and the solution should be so real to be identified in a specific shape.

The analysis of the master plan for the Hudson Yards project, or of many other master plans that this research analyzed, shows how it was possible to test specifically the impact of the proposed density over the existing city and within the boundaries of the master plan itself. Density and the building capability of the site are tested directly by the master plan, proposing different buildings shapes, sizes and typologies considering the interpretation of the rules as they are proposed in the general or in the local plans. From this point of view, master

plans can be considered as testing tools for applying the given rules, to see if they work and to understand what kinds of physical transformations are allowed, permitted or even suggested.

There are at least three levels of considerations that should be done, assuming that master plans can be seen as useful moments to test rules and to see what happens just by applying them. Master plans can be used as tools to see how general plans are working, and how general plans are in the conditions to suggest physical transformations; from this point of view, master plans are part of the general process of plan, and they can be used as a testing tool for regulations and rules. Master plans might be also something deeper, considering them as tools to help the real development of the project and to manage all the different aspects that a development project usually has; from this point of view, master plans should be seen as *technical route maps*, to drive actively the development of specific sites. At least, master plans are tools to preview what happens, in a specific site, with the use of that specific, proposed density: from this point of view, master plans should be considered as tools to test the physical transformations on a specific region, and as tools to visualize the impact of physical urban transformations. We will discuss the first two specifications in this chapter, and the last one, about visualization, in the following one, because it involves different considerations.

8.1 Master plans as tools to test the general rules of the plans

Master plans develop projects considering and using the rules included in a specific plan, or interpreting and giving shape to a set of rules taken from a specific plan. This is a very important point, because it says many things about the role that a master plan has or should have considering the planning tradition and the planning system it belongs to. Only in the American and in the British tradition this research has seen a codified planning system where

master plans have a specific role and a precise position in the list of planning tools. In other traditions and in other systems, master plans are only used to give shape to a specific architectural project, or to visualize it, or just as a tool to give a visual impression about the transformations included in the development of the project. In other traditions, as the Italian one or in general all the planning traditions that consider two levels of planning, a strategic one and a more operative one, there are some tools which should be considered with this use. If not properly master plans, there are and there have been in the past some similar "morphological" plans where the general rules of the plans were tested, just giving some schemes or general zoning about built up areas, green areas and network of streets. This use has been considered also in the Italian planning tradition, and even today there are many plans using this kind of schemes to drive the development of a proposed transformation. This kind of schemes are not binding, in the majority of cases, and are just proposals on how the development regulated by general rules should be planned in the specific; these schemes are just drawing up a sort of morphological proposal, and are used to propose a development scheme according to the general layout of the surroundings, just trying to give a good sense to the proposed development: new green areas should stay together with other existing green areas, bike paths should connect other existing paths, pedestrian boulevard should serve commercial areas and built up spaces should be close or in proximity to the already built up spaces. But these schemes are only propositional, many times they have been used trying to suggest just something more than the traditional set of rules, but very low has been the impact of these drawings over the organization of urban design development.

More relevant is the use that master plans can have just by trying and testing the set of rules which are included in the general plan, if master plans are considered as test for urban planning and urban design rules. This is something more challenging, and more difficult, but it could be the right way of using and interpreting master plans and their potentialities. As seen considering the

British set of design tools, master plans should be considered as tools to test general rules from an urban design point of view. From this point of view, master plans should:

- The general rules about densities, building capability and physical results of what can be technically built;

- How density can generate built up typologies, considering the general layout of the master plan and considering what the surroundings offer to master plan area;

- How streets networks layout and measurements can accommodate the building typologies and concur in the creation of a complete environment with coherence between buildings and street networks; above all, master plan should test how uses are coherent with buildings and streets' networks;

- How green areas and green connections are proposed in the plan and see if the development of a specific site can contribute in the development of regional or metropolitan green connections and network. The development of the master plan, from this point of view, is very important because it can test how urban design can create better and wider connections or it can detail which elements are part of green networks;

- How standard requirements, such as parking lots, thoroughfares, landscape elements are modifying the original idea or the proposed master plan: many times, master plans are just one of the few moments in which it is possible to see how detailed and technical rules are affecting the overall composition of the project;

- How a completely new set of regulations are affecting the design composition of the project. There are many new rules, considering the cycle of water, the sustainability of the buildings, the increased respect for nature and landscape. There are many regulations that affect the real building possibilities and how a

building can occupy the land at its feet. These new rules, which should always be considered tin order to reach the higher level of sustainability of a building, are affecting the way a building or a group of buildings is planned and designed; the need to open green areas and to keep them connected; the requirements about water and water storage; the new regulations about sun and air exposure to help living rooms and bedrooms being on the warm side of the buildings, all those rules could change the natural or architectural composition of a project. The use of a master plan can help in coordinating and keeping checked all these aspects under control.

Taking into account all these aspects, the use of master plan should be seen as a real help in testing before proposing a urban transformation, or even before getting the architectural project started.

8.2 Master plans as tools to manage the planned transformations

One of the contents of a typical master plan, considering it not only as a drawing, but also as a technical tool to manage transformations, is a map, or a series of maps, about the way in which the master plan and the project should be built. Many projects are proposed with the use of a master plan, and many others are presented to public with the help of all the typical drawings that a master plan include: three dimensional pictures, beautiful renderings, great drawings inspired by the most famous urban views of the world. But many difficulties may rise when a project should be realized and really proposed for building it up. A master plan can help, if it is considered really as a practical management tool.

Every transformation, every plans and every project proposed, as we have seen, is a composition of proposals for built up spaces, solutions for streets' networks and new ideas for green and open areas. In the majority of cases, the developers of private built up spaces are in charge of building up also the public or open to

public spaces and networks, such as streets, green areas, and public facilities. It is more and more evident that private developers can do it easily, in the general economy of the construction zone development, rather than living this duty to municipalities or public authorities. In many countries, such as Italy or other European countries with the same planning culture, such as Spain, private developers are in many cases the only developers at all, in charge of building up their private buildings and simultaneously (in many cases even before) public networks and green areas. To do so, the management of the project should be considered: there must be a complete control over the estimated costs to build up private buildings and private development and over the costs of the public facilities. Above all, there should be double considerations, over costs and time.

A master plan should be considered as a good tool to keep these aspects under control: a master plan, proposing a real and plausible vision over the future of a specific area, should also give an idea on how, and when, the proposed layout will be realized; with the complete and simultaneous control over all the aspects of the project, a master plan can estimate the costs and how heavy a construction of a specific project will be, and it can distribute over the buildings layout those costs and that undertaking. It is a key point, to have a project really realized: a project, presented and managed with the use of a master plan, should be managed by dividing it correctly into action units, or development parcels or plots. Each parcel should receive an affordable quantity of works to do, and a balanced mix of private and public buildings or facilities to build up. Above all, leaving these considerations to the development of each specific master plan, a master plan can strategically coordinate the timing of constructions, deciding what should be built before and what left at the end of the construction. A master plan, if considered as a management action plan, should plan and keep under control the development of the construction, avoiding and preventing buildings without green areas around, or problems on completion of the works.

The management into development parcels is a strategic way for a master plan for being concrete and real and to help a project become reality. Many times, master plans are used just to visualize a transformation that for many reasons will never be realized. One of the problems should be that the proposed transformation cannot be realized, because it costs too much, or because public costs are too high over private costs. The use of a master plan as a management tool for the realization of the project helps in discovering these problems before, and to solve them. Also, it helps in putting at the same table private and public authorities: if the aim is the building up of a specific, agreed project, private and public authorities should seat together, deciding over a strategic management plan ho to build it up, who will be in charge of building it, how and in how much time. A sort of strategic action plan should be always included in the master plan, to use it as a development tool and not only as a drawing.

Many times, just considering master plan as development management tools helps projects to understand how their proposals are correct or not, and many times the use of a management action plan transforms many parts of the original and proposed drawing. Working on the proposed master plan of the redevelopment of the World Trade Center area has been a very hard challenge not only about the way squares, green areas, memorials and buildings had to be conceived with the approval of thousand of associations, action groups, citizens and people, but also, and maybe above all, about the balance between public and private costs, considering that the total amount of public costs is very high and was to be divided into the development so correctly to keep the deal alive. Many changes have occurred between the first and the last proposition and between the first designed idea and the last one. Master plans were used to control this process and to manage the development of the project.

It is a duty of the project itself to create the conditions to show that it is a feasible vision over the future and an achievable dream. Its being concrete is important as its design requirements or the harmony that it can create in the

balance between built up and open areas in the project. To do so, master plan should act as action plans, in strong cooperation with public authorities and municipalities: each time a new requirement is asked, it should be evaluated in the master plan management, considering what changes in the general layout of the project and in the development action plan. It is also a good way to propose to developers a project: developers should know precisely the amount of public and private developments included in each project, they should know how high is the undertaking required and how strong could be the connections with other developers included in the master plan. This is another very important aspect: big master plans involve many developers; important projects and considerable transformations are the results of a joint effort by many developers. A good master plan should coordinate the commitment of each developer, and it should create development units so well done that each developers, proportionally, has his part or his section of the whole development to do, without being involved by occasional delays or failures of other developers.

9. Planning policies perspective

Master plans are technical tools able to visualize in a variety of views the proposed transformation of a specific place. One of the most interesting aspect of master plans is their capability of showing technical contents in an easy and accessible way. Strategic regional plans, or local development plans, or even zoning and local codes, many times, are expressed and represented in a typical technical language; as deep as the regulative aspects go, as difficult becomes for people and local actors to understand the project. It is hard to visualize and figure out the precise shape of a transformation just by reading a zoning map: colors, numbers, signs cannot immediately lead common imagination to the shapes that are going to be built in that specific site, or to the possibilities that a zoning plan open to private developers. Master plans are always something more friendly and open to general interpretation: it is easy to figure out a street with parking lots and green buffers seeing it in a colored master plan map, or in a 3D rendering, and it is easier to see how master plans can explain building density and building developments. For this reason, master plans are more or

less the easy way to share a proposed transformation with public, local actors, citizens. In the US, the process of sharing local transformations is codified and really permeating real participation to private and public development processes. In other countries it is harder, and less frequent, but master plans are always showing the important transformations which are happening and can catch people's attention. Starting from this point, we should investigate the capability of master plans to become feasible yet visionary plans, which motivates community action.

The decision process about a proposed urban transformation, or about a proposal for urban renewal, is something that belongs to different planning traditions and to the general democratic management of public decisions. Generally speaking, it is a matter of deciding how deeply public participation should be involved in private and public development, and how relevant and appropriate is people and citizens' voice in the process of creating a project, proposing it, seeing it approved and then realized. In different cultures and in different planning traditions the depth of people's involvement changes and it changes also taking into consideration how pertinent is considered the public's voice in private development. In Italy and in many European countries, the process of partecipation has become institutionalized since the creation of the post war urban general regulations. It has been since now a sort of "post" participation, just called to evaluate other decisions already taken; people and local actors should express their points of view, local authorities should decide whether to consider them or not, simply justifying their final decisions. Since a few years, in these countries where there is this kind of participation, the influx of other cultures and other traditions has become more evident, and different approaches to urban planning are starting to be used. These new processes are different, because they try to create decisions together, rather than using participation to evaluate an already taken decision. This is a matter that affects usually all the process of planning and its solution changes according to the intensity that a single belief has or hasn't: is urban planning a public process,

considering that it affects every day life and everybody's landscape, or is it a process that should be managed by public elected officials and private economic actors?

If we consider master plans as the main and most relevant tools to drive and to manage private development and public/private processes of renewal or urban new development, we should understand that master plans are just at the center of the considerations over participation. If a master plan proposes a physical transformation of a place, which up to that moment had different uses, shapes and relevance, then master plans are the most evident effect of the decision taken over a specific area. For this reason, master plans are the most relevant products of a lot of different participation techniques and solutions, just because master plans are the best way and the best non technical way to express and to show how a transformation is going to be proposed.

The end product of a charrette [18] is almost always a detailed master plan, as a series of drawings produced trough a process which satisfies criteria for diversity and inclusiveness; master plans are the final products of a process involving people, local actors, stakeholders, local elected officials and planners: after days of discussion over the destiny of a specific site, a master plan is developed. Charrettes and focus groups use master plans to figure out the destiny of a specific site, and the shape that it should take after its construction, according to the willing and point of view of the participant to the charrettes and to the focus groups. It is possible to summarize how a charrette should be done by saying that the best charrette teams consist of individuals who have expertise in urban design, planning, architecture, landscape architecture, transportation planning, market analysis, development economics and form based coding, but above all an illustrator or a team of illustrator is essential, to

[18] Despite the French origins of the term, the direct forerunner of charrettes as participatory design forum comes from the US, above all from the AIA, American Institute of Architects' Regional/Urban Design Assistance Teams (R/UDAT) established in 1967. Today, charrettes format have been established by the National Charrette Institute in the USA and by the "Enquiry by design" process in Britain structured by the Prince's Foundation.

give a shape and to represent immediately what happens every time a shared decision changes the shape or the general layout of the proposed transformation.

The most important aspect of a focus group or a charrette is just the use of drawings to put on a map what people wants (a so called pin-up process, just because during this process experts will put drawings on a wall or on a board using pins): it means that participation can produce detailed drawings and detailed solutions to be included in the master plan. Working in detail has many opportunities, and it includes building types, urban blocks, public spaces layout as well as other more important aspects such as circulation, traffic, public transportation solutions, land use and landscape preservation. Drawings are done to illustrate the general layout that people want: many times, these drawings are at the same level of the proposed master plan, with the use of building typologies, streets and squares networks, green and open lands layout; these drawings use the same languages and the same tools as those traditionally used by a master plan, but in a more communicative and easy way. This means that citizens and participant to charrettes and focus groups understand the importance of urban design and its role in the creation and proposal of master plans. Citizens in many communities, in the US and around Europe, appreciate the significance of preserving open spaces in the landscape of farms and countryside around urban fringes and close to the urban periphery, but far fewer understand the role that urban open spaces, under the form of town green areas, squares, plazas, boulevards, and above all well designed streets, can play in enhancing the quality of life in a community. Clearly explained and illustrated urban design ideas can be an effective key to unlock people's understanding of the potential residing within their communities and within each urban or suburban neighborhood.

Master plans and other drawings of details and three-dimensional views, such as street level perspectives, are the most used tools and the final results of the

majority of charrettes and focus groups. The large, finely rendered master plan is the most relevant product and the one that communicates all the essential points concerning the future vision for the project.

One of the main drivers in public process that can integrate planning analyses with design proposals could be a detailed GIS (geographic information system) landa capacity analysis, which determines the degrees of sustainability for land development within the urban environment. A variety of objective physical factors and conditions, such as soil type, permeability, topography and stream buffers for water quality protection, should be mapped to reveal the hidden factor of a landscape that should influence positively the type and location of the new development. This aspect is very important, because it gives a list of "objective" criteria that can help in driving correctly the decisions over the transformations of one site. These objective data should be combined with more "subjective" elements, coming from visual analysis of existing landscape quality and local heritage features. Master plans and design presented as the final results of charrettes are a perfect balance between visualization of how proposals may be implemented really and precision and details over the components of what is proposed. Once again, the descriptive power of master plans is so strong that these tools are perfect to drive people participation, and to let them see that their points of view have been included in the project layout and considered in the detailed requirement to the project. Generally speaking, master plans as results of a participation process are the best way to convince local actors that their ideas have been taken into account, or on the other side, that master plans themselves show what every element precisely includes: people can realize how the general shape of the proposal is (thanks to the use of rendering and three dimensional drawings) and how it could affect the environment, and people can technically see the components of every element: how many parking lots, how big are the green areas, how the network of streets work and how wide are streets and squares. Master plans are not schemes, where a red line should give the impression of a street. Master plans are

detailed drawings, where a street has its own design and dimension. For this reason master plans match perfectly one of the requirement of charrettes philosophy about details and precision.

The detailed way in which a master plan is done goes perfectly with the details that are included in a form based code and in all the typical drawings included in form-based culture, and this helps in avoiding hard to understand drawings. Some considerations should be done on the drawing styles that a master plan may show. Form-based culture and New Urbanism culture tend to produce detailed drawings, with building types, roof plans, detailed road layouts, parking areas, parks and playgrounds, rendered with such perfection that everybody understands those drawings, and everybody's mind can figure out how the transformation will take place. There is a strong risk behind that way of representing: it is a sort of "comic" style representation, and it leads to a sort of not true and distracting imagination over the proposed transformation. It is typical of New Urbanism culture and related cultural and professional movements (such as Traditional Neighborhoods development) to give this impression, referring to an ideal, sunny and relaxed urban development. In many cases rendering are joyful, with birds flying and children playing. It is true, this is the best way to help people understand how the proposed development will take place, but this way is also very risking, because it keeps people and local actors far away from detailed technical acknowledgement, and far away from a more correct and appropriate way of expression that urban design as technique should always have. Regulations, rules and codes should be always kept together with the visualization on how developments will occur. There are big differences considering how rules can vary: streets layout can change dramatically just by inverting the position of green parterres and street, or by changing how a sidewalk is connected to the building first floor uses. For this reason, we believe that a more correct design technique should always be used, respecting urban design as a precise technique. Typical master plans are perfect if they keep on using the urban planning traditional colors to indicate

uses (red, yellow and orange for residential buildings, purple for industries or services, blue and light blue for public facilities and green for green, of course), and gives exact design rules for streets' networks and for infrastructures.

PART IV

Conclusions and future developments

CONCLUSIONS

The research has been investigating in the use of master plan, as a particular planning tool, able to consider many aspects and to have relations with many scales and contexts urban planning usually has to face. The research has been considering many master plans, both in the American and in the European traditions and practices; it has studied many urban transformations and many new developments to understand the precise use of the master plan, its role and its responsibility, or its credit, in the physical results of the transformations. The main question the research has been considering was about the possibility to see the master plan as a flexible tool, with scales, contents and depth of rules changing, according to its use and its precise aim. This flexibility, so hard to find in many urban planning tools and this ability to be able to speak to so many contests, have been considered as its best characteristic and an ace up its sleeve to keep a continuous control over physical results. The research has investigated many processes of new development, urban renewal or site

transformations managed by the use of a master plan, it has considered different scales and different contests, always finding out the precise role of master plan in leading the process and in controlling the final results and how different it has been from the first planning idea and the first planning proposals.

The **use of master plan** has been seen in a wide spectrum of possibilities. In many cases, master plans are used to propose transformations, as a first, logical map of what is supposed to happen in a specific site, or in many other cases master plans have been used to set up a specific project, to present it and to have it done, through the use of many other smaller tools included in the master plan. At least three are the main fields of use for a master plan: it is used as a tool to plan new urban development, it is used as a planning tool to propose urban renewal and it is the most frequent tool used to take control over urban regeneration and transformation projects. From new development to new already existing urban areas, master plans are the tools used to plan and to manage these different fields of activities. The *use of master plans for new developments* and for the developments of new areas has been seen as a typical way of proposing new development following New Urbanism or Traditional Oriented Development way of planning, and master plans help proposing new urban, compact and human size developments, with a well recognizable size, order and rule. Master plans plan for a central district, many times with a strong mix of uses and a real integration between built up spaces and networks or between private and public spaces; then, all around and with varying degrees of integration with green networks, residential neighborhoods, composing the new development as an organic growth proposal, with a stronger central part and smaller side residential development. In many cases, these master plans have small changes between the proposals and the construction, considering that they are used for private development or for a development proposed and managed by private developers. It is interesting to see that the use of master plans in this particular group of projects is essential, to plan with a drawing all

the zoning of the new development and also to show the correct balance between built up and open spaces. At a glance, these master plans shows how a new development will look like, where the central district will be, what is the amenity that has been planned as a central allure for the whole development, and how many and where are the residential development. The master plan has the power to show with one drawing and one image the future of that specific development and how much it will affect the surrounding environment. It is important to see, and the research has investigated this aspect, that many cases of the use of a master plan to plan new developments are strictly connected to transportation oriented development: the central part of the plan is the station area, and the mix of uses to create the new centrality is the station or the stop area that generates the possibility to have a new development.

A little bit different is the *use of master plans for urban transformations' processes*. In many cases, both in American and in European cities, the size and the impact of urban transformation is considerable: industrial sites, industrial water fronts, derelicts or under used rail depots and rail yards are available for transformations and included in many strategic plans to see new life and new urban opportunities happen in those areas. Master plans have the same use that the research saw for the planning process of a new urban development, but the accent and the specific role that master plans should play is different: the complexity, the amount of difficulties and the vast panorama of actors around a single transformation process, ask to master plan to act as a management tool, and as an action plan to keep everything under control. As the research has seen and studied, in these cases, from the first draft to the real shape of the buildings many things change: the first proposal changes many times, according to technical, economical, environmental, social or financial difficulties and at every changes master plans should be there to test how changes affect the whole idea and how the development process keeps going on to reach the final result. Also in these cases master plans are used to propose a specific architectural design about the transformation: master plans show how the redevelopment site is

going to be transformed, which is its main idea, where the central parts are planned and where private or public facilities are designed. But there is a more deep attention in the way the proposed project will be managed and developed: as the research has seen considering Hudson Yards development project in New York, the master plan investigates all the development possibilities, the FAR ration, the different possibilities to increase it and how the physical aspects will change according to the different development possibilities. There are in many cases a lot of analysis and preview on how the difficulties should be faced and solved, just considering in the master plan different solutions. As the research has seen studying, from a urban planning perspective (see chapter 8), master plans tests the use of local, specific regulations, including them in the set of rules used to plan the new development, and finding a solution in balance between new regulations and existing local rules. Again, master plans have the role to give to private developers, and in many cases due to the size of the proposed master plan there are many private developers, a sort of action plan, or a strategic development map they should use to prepare their investment, to create their own business plan and to start considering the real transformation of their part of the site. There is a deeper accent over how, technically, the proposed project will be realized, and as far as a master plan can go in previewing how a development will take place, it will be less or more successful driving the construction process and dealing with all the difficulties it will face. Above all, master plans have the important role to control how much difficulties will affect the original idea and the physical aspects of the master plan itself: there is a specific idea of city that master plan should take care of, even studying how the area should be divided into smaller units, giving to developers rights and duties to achieve the final result.

The use of master plans as planning tools to drive a *urban renewal process* are even different from the previous two uses we have seen. Urban renewal processes in many cases are part of the strategy that a city or a urban area decides to upgrade the quality of a district or a neighborhood of the existing

city. Master plans, in these conditions, are more oriented in the planning process of the physical design of renewal; for their characteristics, these processes involves private redevelopment sites but much more public areas and networks: new streets' design or new green public areas are frequently part of the renewal process, and master plans are the tools to make drawings about the urban design contents of the renewal process. In these cases, the research shows that master plans have more details about how the renewal process will give a physical, different aspect to streets, parks, and open lands and even to those parts of the buildings facing the public networks. From this point of view, master plans are very related to local guidelines, patterns books or set of rules to help create a unique re design process for the renewal of that part of the city, or to establish a new set of regulations and design requirements to drive the renewal process. The research has investigated the tradition of these guidelines, exclusively related to the idea and to the use of master plans. In these cases, the use of master plans is different, showing once again its flexibility, and it can be defined as sort of visualization of the set of regulations or as a way to test how different regulations should work together, and which is the overall effect. The research has introduced some first ideas about this aspect, trying to show how to build a shared grammar without touching and interfering with local varieties and local regulations, or even without creating any interference with the creativity of architects and designers called to plan specifically a part of the master plan. There are a lot of connections between this aspect of master plans and the planning tools created to work on the existing city: many European cities are facing, historically, a strong need to re-think and re-plan the existing neighborhoods: master plans are introduced also in the general plans to show how renewal process should affect the existing neighborhoods, in many cases also extending the effects of a urban transformation nearby to the existing neighborhoods. It should be also part of new transformations process, asking to private developers to invest in the renewal of the surrounding existing neighborhoods, but generally speaking the use of master plans as a tool to take control over renewal processes of existing parts of the cities in many cases

comes within a general process of re-planning or re-investing in already established neighborhoods. Master plans invest in the shape of the streets, in the upgrading of the network of sidewalks and bike paths or in new design requirements for urban design and urban decorations, to be used to give a new shape to benches, lamps, flowers and trees. The flexibility of master plans is shown in the way they can refer to the general urban plan, that selected that specific neighborhood and decided to renew it, and simultaneously they give the idea on how the redevelopment process will work and will be managed.

The research has investigated on the **different scales** that a master plan should speak with. As one of the three most important aspects that a master plan should show, to be the good tool the research is looking for, master plans should have strong relations with metropolitan or large-scale plans, where the specific site the master plan is planning should be included. For this reason, master plans are tools able to speak to different scales and different levels of planning, and the research has shown that according to the scale the master plans refers to, their contents and their aims are different. But, beside that, master plans, for their being something in between general or large-scale planning processes and local, very specific regulations, are flexible enough to be in the conditions to control that local solutions, and the way locally a project is done, are not different or in contrast with the ideas that a general plan has included; on the other side, a master plan is flexible enough to consider the need and the planning ideas of a general large-scale plan to translate them into a local project, being sure that doing it and developing it the requirement of the large-scale plan are fulfilled. This possibility to talk simultaneously to different scales is a very, strategic aspect that gives to master plan an important possibility: the control over the shape and the physical result of transformation. A master plan map has always-different specifications referred to different parts of the master plan: each part could have a deeper specification, with a more detailed project, and a connection with local regulations and design guidelines. For these reasons, the different scale approach that a master plan

should have helps to keep under control the physical aspect of the planned transformations and helps creating a sort of total environment, that complete urban environment Sert was looking for and that is at the foot of every urban design consideration. Architecture and urban planning are together in the creation of a master plan, and this is one of the most interesting aspects of the use of master plans.

Considering these aspects, the research has focused its studies assuming that master plan should have **three main aspects**, or they should be created following three principles.

Master plans should be strictly connected to large-scale plans: to express all the potentiality that a master plan has, the area it plans for should be selected or included in a large-scale plan, such as metropolitan or regional plans. This level gives to that area its role, its planning conditions and its contents; the large-scale plan level will give to the area its character and nature, selecting it as a strategic, central area or considering it as a residential, expansion area. The role and the weight of the area cannot be established by the local master plan itself: it should come from a different scale, because only at that scale roles and positions could be decided. A large-scale plan plans for infrastructures and green networks: the area where a master plan will be developed has from the large-scale plan all the indications to know the nature of the infrastructural network and the importance of the green connections it belongs to. If the large-scale plan decides for these aspects, master plans shouldn't avoid to consider those aspects and local levels or local developers planning for the master plan of that area will not be free to avoid the right considerations over infrastructures and green connections, just because they come from a large-scale plan, and are mandatory for the development of that area. The local level is free to decide how green connection will be developed, and how to create the physical connection to infrastructure network, but the large-scale plan gives to the area its position and its role. This aspect is very important also to avoid a

degree of freedom that private developers or private consultants could feel considering the planning process of a master plan and to give to the development of the area its right position, role, weight and combination of uses in the metropolitan or regional system it belongs to. In many cases the research has investigated, the use of master plans to show how the selected areas of a large-scale plan will be developed is already included in the creation of the large-scale plans, or on the other side, in many cases master plans are anticipated in the large-scale plan process to show how pragmatically and positively that idea will be developed, how and when, in a strategic jump between local, small scale and general, large scale. This idea and this practice also helps in selecting, and including in the large-scale plans, only those site, existing or new, truly ready to be renewed, transformed or developed. If a large scale plan tests its ideas investigating with the use of a master plan the real conditions of a planned or proposed development area, its proposal will be more precise and it will have many more chances to be really developed.

In the active dialog master plans open with the local level, they start *testing how the set of rules will work*. Master plans are a good tool to see how the use of a set of rules will affect the physical transformation of a site, or how new or existing regulations will change the way a site will be developed, or again how a new regulation could be interpreted and used to give shape to a specific site. This characteristic is specifically related to the role of master plans, in their being a new project, with its own rules, but simultaneously part of a larger perspective, or part of a urban environment, with already existing rules. If a master plan is used as a strategic test to see how a general proposal could work, it could also be used to test how rules will affect the physical way a specific site will be developed, or to propose changes to the existing set of rules, if it shows that the physical transformations are not good or different from expectations. The research has investigated these aspects, because master plans are drawings, or projects, anticipations of a future physical asset of a specific site; for this reason, rules and regulations on how they will be developed are an important aspect,

considering that local regulations always exists and they might be different than the new rules a master plan could propose. Once again, it is important to consider master plans as strategic proposals of the use of rules and regulations: they could be considered as a test to see what happens using a new set of rules (proposed by a general plan) or they could be used to test the effects of a differently proposed set of regulations; or again, they can be used to show what kind of physical transformation guidelines could create. The research has also investigated how master plans developed specifically by private actors and private developers use some regulations, such as pattern books, to keep controlled the physical transformation of each part of the master plan, and to create a general homogeneity of the proposed transformation. From this point of view, regulations are a consequence of the master plan, and they are used only to develop it and to show how its parts should be considered.

Master plans are *visual proposals* for a specific new development and they are used to show how a site will change. The third aspect the research has been investigating is the use of master plans to show to citizens and people how a development area will be transformed and how the plans will affect the surroundings neighborhoods. Many process of renewal or many project for urban transformations have seen the use of master plans as a basis to run focus groups and charrette: the power that a master plan has to show in a easy way how things are going to change is extremely helpful in presenting to people the future of a site and in asking them their opinion. Even if master plans are technical tools used to plan or re plans a specific area, the drawings they use are many times a non technical language, or a non technical way of showing how the site will be affected by transformations. Charrettes and focus groups use master plans to share the proposals with citizens and people.

These three aspects are essential for a master plan, and they are the three most important characteristics that a master plan should have to have the power to be a useful and powerful planning tool. Each of these three characteristics

brings different value and different importance to a master plan; above all, these three characteristics link master plans and the use of a master plan to three different aspects of planning. The connection that a master plan should have with the large-scale planning perspective gives to master plans a *strategic role*: if master plans included in a large-scale plan are the anticipation of a transformation in balance with the large-scale perspective, it means that master plan can play a very strategic important role. If a master plan is used and considered as a test for regulations and rules, testing how the use of those regulations can orient the physical transformation of a place, it means that a master plan should be structured as an *action plan*, and its physical transformation proposals as a way to understand how to reach that final results with the use of rules and guidelines. And at least, the use of master plans as tools to share the ideas and the proposals of transformation gives to master plans a sort of *sharing role* very important in the processes of consensus building.

The research has been studying master plans as planning tools to control the creation of a balanced urban environment, planning simultaneously *built up spaces, networks and green areas.* Master plans, planning these three aspects together and giving a proposal that includes these three elements, can take under control the connections and the interactions that these three elements can produce; for this reason, we have been considering master plans as the most complete way to plan for a urban environment: the mix of uses planned in the proposals gives to the environment a specific role (a role that should be recognized by the large-scale plan) and to the built up space its reason; the design requirements for streets, sidewalks, bike paths, squares and piazzas help the connections among networks and the connection between networks and uses; the layout of green areas and the variations from small private gardens to big, public parks helps the planned transformation be in contact with the existing large-scale green networks. These three elements together should be put under control by master plans and together they should be planned to

create that balanced environment the research has been looking for. It is a matter of urban form: master plans, planning for these three elements, are the good tool to plan for urban form. There have been a lot of studies and there is much in the literature; the research has been investigating few aspects about urban form, above all considering the different traditions of uses of master plans as planning tools to control and to plan urban form. If master plans are looking for a balance between built up spaces, networks and green areas, it means that master plans are the right tool to include urban form in the dimensions that should be planned, or it means that, even not considering which is the inspiring principle for that specific project, only the balanced result of three elements can produce a correct urban form. It is not a matter of contemporary or classic architecture; it is not a matter of traditional versus modern or stylish urban design; if those three elements are considered with the same importance and at the same level by a master plan, a urban form will be generated following a correct grammar. Stylistic and creative interpretations are free to express at their best, but a master plan has established a urban form just following a correct grammar of elements. This is the main idea that this research is still investigating about: a correct grammar helps a correct use of typologies, for built up spaces, open areas and networks; master plans create proposals for the asset of these three components, giving a new morphological interpretation for the site they are planning. Master plan should be seen as tools able to put together architecture and planning, but above all able to connect different levels and scale of planning, playing as active tools to promote a morphologically controlled transformation of a site and to sustain a workable proposal, whose feasibility has been tested and regulated by the application of a specific grammar.

There is much more to say: this book is only the first result of a research activity that is still working on the idea of master plans as strategic, action tools to promote the creation of a specific idea of urban environment for a site (see chapters 1 and 2) to create the conditions to have it realized (see chapters 7 and

8) having shared its contents with local actors, citizens and developers (see chapter 9). The next question will be about how a so specific and powerful tool should be integrated into the planning processes, where it is frequent the traditional development of large-scale plans and local plans: how master plans could be recognized as tools even where they are nothing more than a proposal? How to invest in the creation of a planning tool able to plan simultaneously from a urban planning and from an architectural point of view? The research is still working on these principles, it is studying different rules in different countries, on both sides of the Ocean and also elsewhere, above all considering the different sizes of development master plans are now working on: from the renewal process of a neighborhood to the process of planning for one million inhabitants cities. Are master plans the correct tool to plan urban environment at every scale? Or are they working only at a specific scale? For these questions the research is still working, and it is still working on the definition of the elements and the components that all together should be planned and regulated to ensure the creation of a morphological proper urban environment.

Illustrations credits

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Tab I – Tab IX Picture of the author

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