

# City Design and Sustainability, could Italy lead the way?

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## **Abstract**

As city design plays an increasingly fundamental role in making our living, working and urban environments more sustainable, this paper aims to discuss the role of cities in achieving more sustainable development. The first step is to clarify what we define with the word sustainability and how this concept evolved from the 1970s to our days, widening its meaning and extending its range to everything that is related with better quality of life. Furthermore, this paper argues that quality of life is tightly intertwined with quality of spaces. Building on top of this assumption, this paper analyzes the role of cities in the process of achieving sustainability. UN statistic reveals that the future world's population will be more urban than ever. Sustainable development will become increasingly related to cities growth. Cities are actually key assets in order to achieve sustainability in terms of environmental preservation. But what about sustainability in terms of quality of life? This paper compares the US and the Italian context and how sustainability is applied with different approach and why. Finally this article argues that Italy has an incredible know-how and an extraordinary cultural heritage related to city-making. Know-how derived from the 1950s experience of building public funded neighborhoods around historic cities. Still today some of these neighborhoods stand out for the quality of the architecture and urban design. Italy, strong of its extraordinary heritage has the chance to lead the way, showing how to achieve sustainability in terms of quality of life you must achieve quality of space.

**Key words:** sustainability, quality of life, heritage

## **1. Sustainability – evolving meaning**

Since the 1970s oil shock, that underlined how instable can be the energy market and how much dependent we are from this source of energy, concerns about the development model we were pursuing at the time increased. In the same years, the global warming theory came out and today is largely accepted by all the main institutions and policy makers of the planet. It is within this dramatic scenario that the urge of a more sustainable development model became a priority. The demonstrated relationship between global warming and Co2 emissions brought industries and policy makers to concentrate their effort on cutting emissions and researching alternative energy sources. At the beginning, the approach towards major sustainable development was all but straight forward and limited to the pollution/emission issue. In the following years this approach enlarged to a broader conception of sustainability that now includes along with environmental thematic, also economics, social and cultural aspects of development. Furthermore, there is one last aspect related to sustainability that I would like to focus in particular, and that often is undermined. Sustainability is ultimately related to a wholesome quality of life for people within the frame of a balanced relationship between human necessities and surrounding environments. If we accept this broader meaning, and we certainly do, there is one last concept we would like to introduce in order to understand sustainability in urban terms. The quality of life of humans is deeply intertwined with the notion of quality of spaces. The same spaces where people reside work and live. Improvements in the so-called built environment, made of streets, blocks, public spaces and residential neighborhoods is key to achieve sustainability in its wider and deeper meaning of better quality of life for people. Moreover, because people will increasingly live in cities, sustainability it will become more and more dependent on cities future developments and their capacity to experiment alternatives growth patterns.

## **2. Cities as possible solution? – The Urban Age**

### **2.1 Environmentally sustainable cities**

What is the role of cities in this game of balancing the current unsustainable growth patterns that are leading to consuming limited resources and create disparity of development throughout the world? A vast majority of academics, professionals and policy makers acknowledge that cities can actually be key assets to solve environmental issues such as car pollution, land consumption and energy efficiency. (Newman, Kenworthy, 1999) Many recognize that dense, mixed-use settlements present evident benefits in terms of environmental sustainability. Walkable distances unite to efficient public transportation

discourage the use of private vehicles, proximity of buildings helps to minimize the quantity of energy needed to heat or cool down housing, a large number of passive interventions can maximize energy efficiency. In addition, compact cities consume lower amounts of land and the different blocs share common infrastructure and public services cutting costs for local governments.

If sustainability from an environmental perspective, finds a possible ally in certain kind of cities what happens if we expand the meaning of sustainability to the broader and deeper level of quality of life? How sustainability/better quality of life does apply to nowadays cities?

### 2.3. The Urban Age

In order to better understand the field we are talking about, i.e. modern cities and sustainability, here we would like to discuss two main issues that help us comprehend what is happening in the urban environment: the birth of metro regions areas and the exponential increase of urban population. These two aspects do not follow a chronological order, indeed they happen at the same time.

The first aspect is the result of a global world economy where connections are faster than ever and in order to compete on a global scale certain cities, usually the ones where the economic or political power is located, tend to become mega-cities competing with each other at a global scale. These megacities, that host millions of inhabitant and that produce GDPs comparable to the one of small nations, tend to organize spatially throughout entire regions. The so-called metro-regions, is where urban planners have to face the toughest challenges, trying to organize spatially square miles of sprawl and shapeless built environment. It is within these stretched non-spaces that the big game for future sustainability will take place and where it is more difficulty to apply successfully sustainability principles.

With regard to the increase of urban dwellers, according to UN, in 2050 almost the 80% of the world population will live in urban areas and large part of this population will concentrate in cities with more than a million inhabitants. There are different reasons to explain this trend. Keeping in mind the basic fact that people tend to concentrate in cities because there are more chances to find job opportunities, escape poverty and move up the social ladder, there is also a cultural factor that pushes people to locate in urban settlements, especially in the western world.

Sprawl is the exact word to describe in urban terms what happen to western cities after World War 2. Today this uncontrolled growth is considered utterly unsustainable and many cities are switching back to neo urban developments, i.e. denser, walkable and mixed use. However, this tendency is not justified only by the environmental unsustainability of sprawl, but also and perhaps mainly, by a cultural shift. Marketing research demonstrates that unlike the baby boomers generation, which moved to the suburbs moving out from the dense city, generation Y is actually demanding for urban likewise housing and pursuing urban lifestyle. Youngster born in the late 80s and early 90s aim to ground their lives in high end, high quality and dense urban environments whereas the former generation escaped from rundown downtowns to “greener” and safer suburbs.

## 3. Urban design and sustainability

After analysing the recent trends of the urban field, this paper aims to navigate the idea of sustainability/better quality of life/better quality spaces, into the built environment. It is interesting to understand how sustainability in its broader meaning, finds practical application in the urban ground. How can one actually build sustainable mega cities or metro regions and match the market demands? How do you design these spaces? Lastly, how can you re-organize spatially entire metro-regions introducing elements of spatial quality?

### 3.1. America vs Italy

I, as urban designer and practitioner working both in the United States and Europe, have the privilege to see what is happening in both side of the Atlantic and push the research forward. If America, in order to achieve sustainability in its wider meaning of quality of life, is investing many resources in tackling suburban sprawl that here has an enormous impact on people lives, Italy is striving to find its own way to sustainable development. The United States have an ideological freedom that allows them to experiment different strategies, they rely on a newly booming economy, and a more flexible planning discipline. Italy on the other hand, although presents a less compromised sprawled landscape, is deeply immerse in a complex regulation context and focuses more on preserving and modernize (but with increasing difficulties and mental obstacles) its historical heritage rather than experiment new solutions. Furthermore, Italy pursue of sustainability insists more on an environmental approach. Italian codes and regulations

strongly regulate the energy efficiency aspects of new buildings and renovation interventions. Urban masterplans have to be examined by landscape commissions and have to obtain environmental certification before being approved. Less space is given to spatial quality assessments or to form based codes that instead are extremely successful in the US. Form based codes in Italy have been proposed and used sometimes at the end of the '80s, many urban plans included form-based operating programs or masterplans: these experiments have been ridiculed and reduced to an attempt by architects to invade urban planners' fields. Maybe, a more deep analysis would have brought to a better understanding of the necessity to give a contemporary shape to cities and built spaces in Italy since thousands of years.

### 3.2. American market approach

Uncontrolled sprawl reflects spatially America's unsustainable growth patterns. US are becoming every day more aware that suburbia is unsustainable because of its managing costs and even more important, because suburbia is no more appealing for younger generation: youngsters will not buy houses in suburbs anymore and elderly needs to move in more urban places to gain access to public services. In a capitalist driven society like the American one, the market's demand dictates how and where developments take form. If the market asks for more quality, urban spaces, then developments will implicitly become more sustainable. Cities throughout the country are investing resources in retrofitting projects in order to fix sprawl. Shopping malls are torn down to be replaced by mixed-use blocs spread along urban likewise grids, highways corridors are re-organized as high streets, and residential neighborhoods are given a center. If one hand the country is pursuing sustainability and better quality of life on the other is also realizing that the market is going in that direction.

### 3.3 Italy's cultural heritage

Italy has an extraordinary advantage compared to many other countries, that is to say cultural heritage. If America has the energy and the dynamism of market forces to revolutionize and discuss its growth patterns, Italy owns the knowledge of city design and place making. The country's architectural and planning tradition is one of a kind. America relies on form building codes in order to achieve urban places and mocks architectural styles because does not owns one. Italy masters place-making. Its tradition is grounded in integrated planning, in creating quality public spaces and enhancing all those elements that make a space truly urban. In particular, this paper aims to spot the light on a specific architectural and planning venture that took place throughout the 1950s; it involved the entire country and still today presents elements that could be used to improve urban sustainability, quality of life, and quality of spaces of contemporary cities.

## 4. The Italian experience – INA Casa Plan 1949 – 1963

Once World War 2 was over, Italy had to face one of its toughest moments in history. The bombings during the war destroyed many cities, infrastructures and public facilities. The economy was at its lowest but nevertheless with the help of international aid, reconstruction started few years after the war ended. It is within this framework that an extended campaign of public housing was initiated by the national government. The goal was to provide housing and jobs to the hundreds of thousand that lived in poor conditions, unemployed and without a shelter. At the same time, efforts and resources were spent to rebuild the historic cities of the country, severely damaged by the war.

The INA Casa plan begins in the 1949 and last for more than a decade, until 1963. It was nationwide and provided overall almost 355.000 public housing, employed 40.000 workers a year and opened almost 20.000 construction sites. Of the 17.000 architects and engineers operating at the time, one third of them worked within the plan. (Di Biagi - 2010) Also it gave the chance to many young architects to put in practice what they learned from modernism and give a physical shape to modernist principles of city design. The spatial outcomes, in some cases are amazing.

### 4.1. Architecture as a tool to improve quality of life

Despite the low budgets with which the new houses had to be built, the projects and the design are first class. Architects such as Albini, Gardella, Quaroni, just to cite a few (today considered the fathers of Italian modern architecture) delivered high quality projects believing that architecture is an incredible tool to enhance quality of people lives designing quality spaces.

One of the most interesting aspects of the INA Casa plan is that the new housing projects were always thought as organic neighborhoods, and these neighborhoods were part of a reconstruction plan that

involved also the dense historic Italian city. Behind each project, one can recognize a form based method to build places that are integrated and connected with the main city they refer to. Moreover, within the neighborhood itself, one can acknowledge a network of public spaces that creates diversity of environments and gives a coherent and clear structure to the space distribution. The fact that these neighborhoods were thought as part of a wider urban system and organized spatially is key to understand why they feel more like real urban places than analogue examples from North America, where new developments are isolated, with no central public space and surrounded by parking lots.

The Italians architects and planners of the time combined the principles of the English garden cities with a Mediterranean version of modernism. They researched the minimum standard for one to live, focusing also on the aesthetic quality of design and urban spaces because they believed that each human being should aspire to a better quality of life. From a stylistic point of view, the INA Casa neighborhoods are quite diverse, from the most loyal to modern architecture principles to others that rely more on traditional architectural typologies. In all of them, there is a straightforward connection between inside and outside environment, a link to local and regional scale and distances are walkable. The fact is that the INA Casa venture gave the opportunity to the country to manage cities expansion, experiment on the field how you shape new developments and manage city growth pursuing better quality of life, ultimately from our perspective, delivering sustainability.

Below we selected few images and examples of INA Casa projects that to give a photographic documentation of these neighborhoods. The images are extracted from the web.



Fig. 1 | Cesate, quartiere Mangiagalli, Albini, Gardella 1950/52



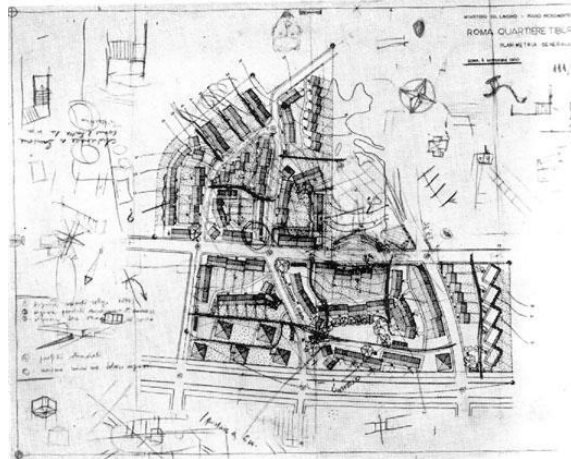
Fig. 2 | tags INA Casa



*Fig. 3* | Cesate, BBPR 1951/54



*Fig. 4* | Rosta, Albini, Helg, Manfredini, 1956/61



*Fig. 5* | Tiburtino, Quaroni, 1947/55

## **5. Lesson to be learned – conclusion**

In today urbanizing world where sustainability has become a key aspect of economic growth, the Italian experience could be the heritage on which Italy can build upon and stand out leading the way towards more sustainable development. We are seeing how dynamic America is reacting to sprawl by tackling the issue from a market and costs/benefits perspective. American planners, with a pragmatic problem solving approach, are investing huge resources in fixing sprawl by retrofitting suburbia using form based codes. This paper argues that although some results maybe encouraging this kind of approach still misses to deliver truly urban spaces because it doesn't take into account a number of key aspect of urban environments such as: the value of public spaces, the organic relationship between new and pre-existing, the different architectural scale and the importance of networks.

### **5.1 Conclusion**

Italy's experience, if thoroughly understood, can be a strategic asset to manage metro-regions growth. In a world where urban agglomerations are consuming spaces without producing quality and therefore billions of people are going to live in no quality spaces, experience like the Italian one, are extremely valuable. The future trend for cities is to expand seamlessly throughout entire regions, alternating denser downtowns where all the advantages and qualities of urban environments are concentrated, with anonymous suburbs. The goal for planners is to stop this unsustainable pattern and introduce elements of urban quality in the metro-regions areas, pursue sustainability in its broader meaning of better quality of life therefore better spaces.

Italy, no doubts, strong of its extraordinary heritage, has the chance to lead the way.

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*Images source*

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Fig. 2 [http://www.comune.cinisello-balsamo.mi.it/pietre/IMG/jpg/ina\\_casa\\_600.jpg](http://www.comune.cinisello-balsamo.mi.it/pietre/IMG/jpg/ina_casa_600.jpg)

Fig. 3 <http://www.artribune.com/2011/06/decreto-sviluppo-e-l%E2%80%99architettura-e-in-pericolo/>

Fig. 4 <http://viawybicki.files.wordpress.com/2012/05/bar.jpg>

Fig.5

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