



### **Compact city as sustainable city**    **Компактне місто як стале місто**

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#### **Abstract**

**The purpose of the article** is to explore the continually changing and developing universe of urban planning practices, to study approaches, methods, and theoretical and design tools that is changing the European city. **The methodology of the research** is to apply the empirical method, to analyze and compare the results of the developed projects. **Scientific novelty.** On the basis of practical design and theoretical generalization, we have defined such principles of the urban design: hybridize multiple uses, hybridize city and landscape, hybridize city, rural and infrastructure, hybridize city «low rise», as the existing city, with forms of «high rise» city. **Conclusions.** In modern urban and landscape design emerges is a pluralistic horizon, with piecemeal and eclectic approaches, through which a common European profile of urban transformation shines, respectful of the essence, values, and customs of the existing city, aware of operating within the conflicts induced by the processes of innovation and adaptation of the city itself, processes necessary for its protection and survival.

#### **Анотація**

**Метою статті** є вивчення практик містобудування, які постійно змінюються та розвиваються; вивчення підходів, методів, теоретичних та проектних інструментів, які змінюють європейське місто. **Методологія дослідження** полягає у застосуванні емпіричного методу, аналізі та порівнянні результатів розроблених автором проектів. **Наукова новизна.** На основі практичного проектування і теоретичного узагальнення нами визначено такі принципи міського дизайну: гібридизація багаторазового використання, гібридизація міста та ландшафту, гібридизація міста, сільської зони та інфраструктури, гібридизація місто «низького підйому» з формами міста «високого росту». **Висновки.** У сучасному міському та ландшафтному дизайні виникає плюралістичний горизонт з послідовним і еkleктичним підходом. Це характеризує загальний європейський профіль трансформації міст. Такий підхід базується на шануванні сутності, цінностей та звичаїв існуючого міста, усвідомленні, що його застосування відбувається в умовах і конфлікту між інноваціями та адаптації до них самого міста, і це є необхідним для захисту та виживання міста.

**Key words:** urban design, landscape design, hybridization, urban planning strategy, project innovation  
**Ключові слова:** міський дизайн, ландшафтний дизайн, гібридизація, міська стратегія, проектні інновації.

## Introduction **1**

Unlike the 1960s, which were oriented towards deriving urban and territorial architectures from the policies of economic programming, and unlike the 1970s, which were interested in devising general theories relating to «the critical reconstruction» of the city, design disciplines since the mid-1980s formulate methods of urban renewal during operations and confront, as they occur, the conflicts generated by the incessant pressures of changing contemporary economic, social, and technical needs.

The building of large and complex city sections is the main concern of «urban and landscape strategies». And although it is a constantly evolving tool, «urban and landscape strategies» one of the few practicable ways to operate within an ongoing process and within a separateness of times, means, disciplines, and skills, while aiming to contribute to an increase in the quality of urban life.

In the sharing of the values expressed by the «compact city», the new urban strategies explored in this article express a concentration of functions and themes, a morphological and social pluralism, a co-existence of building, landscape, and infrastructure features, an adherence to the principles of environmental sustainability, and an urban structure stability in housing dynamics. And they distance themselves from both the imitative and conservative mindsets of the historic city and the enthusiastic visions still glimpsed in the urban sprawl, the settlement model most suited to the present day.

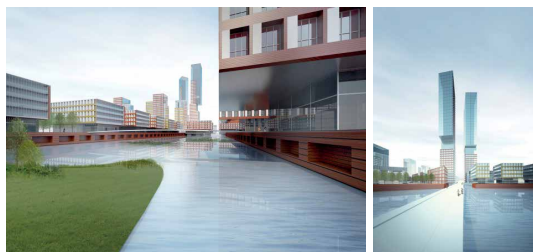
## The methodology and analysis of sources **2**

The theoretical positions of our research are disclosed in scientific works of M. Berman, N. Ellin, E. Goffman, M. Mostafavi, G. Doherty, as well as in the books of the author of this article (Marinoni, 2005), (Marinoni, 2006). However, mainly methodology of the research is to apply the empirical method, to analyze and compare the results of the developed projects. The source of the research consists of projects developed by the author of the article in megacities. Each of the above projects has its own description and generalized results from the implementation of these projects in metropolis.

### 1. *Hafen am Main, Frankfurt am Main, Germany, 2004 (Fig. 2.1).*

The project relating to the area of the disused shipyards to the south of the railway station, going along with the aspirations to the Manhattanization of Frankfurt, proposes a grid and a structure of blocks. A system of regular layouts forming a grid of 30x60 metres generates six-storey-high blocks of 20x40 metres. The blocks present a homogeneous character, precisely in order to create a unitary urban structure, but are articulated with respect to the different con-

ditions in which they are located: on the street front, facing onto the gardens, onto the water. A work of thinning out and densification of the rigorous model proposed that raises the blocks above the axes of the city's layout generates a regular but varied urban structure, defining open spaces, gardens and avenues.

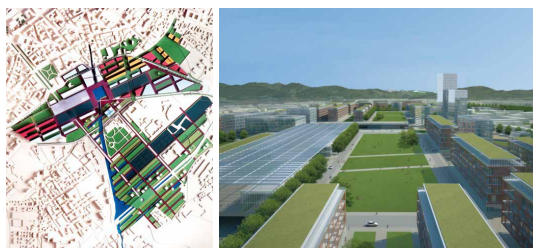


*Fig. 2.1. Project «Hafen am Main». Frankfurt am Main. Germany. 2004.*

*Рис. 2.1. Проект «Хафен-ам-Майн». Франкфурт-на-Майні. Німеччина. 2004.*

### *2. New Centre, Bergamo, Italy, 2006 (Fig. 2.2).*

The theme of shaping an intermodal rail, tram and road transport hub and the link with the nearby and rapidly expanding Milan Orio al Serio airport have suggested looking at this area from the perspective of the region and no longer solely from that of the city. Reformulating a new centre that enjoys conditions of high accessibility makes it possible to think about new forms of habitability and new uses complementary to and synergic with the existing city. A «new ground», laid on top of the belt of tracks in operation, permits the continuation of the city to the south and allows it to be reunited with the country and the regional parks. The project is divided into two complementary parts linked by the new piece of ground: Compact City and Campus.



*Fig. 2.2. Project «New Centre». Bergamo. Italy. Plan and view from the new ground. 2006.*

*Рис. 2.2. Проект «Новий Центр». Бергамо. Італія. План та вид з новим плануванням. 2006.*

### *3. Addiction, Al Qurna, Iraq, 2012 (Fig. 2.3).*

Al Qurna is located within what was one of the most unique marshes in the world. The town is positioned on the confluence of the Tigris and Euphrates Rivers in south-east Iraq. The shape of the existing city is deeply conditioned by the geographical configuration and topographic features.

### *4. Porta Nuova, Milan, Italy, 1999 ongoing (Fig. 2.4).*

Porta Nuova can be considered as the hybridisation of the principles of construction of the «European compact city» according



*Fig. 2.3. Project Addiction. Al Qurna. Iraq. Plan and view on new gateway. 2012.*

*Рис. 2.3. Проект. Аль Курна. Ірак. План та вид на нову в'їзну браму. 2012.*

to the will to configure the urban spaces, with the model of the «global metropolis» represented by symbol buildings standing out from the skyline of the existing city. A process started in 1999 with the urban project elaborated by Pierluigi Nicolini and Giuseppe Marinoni for the Municipality of Milano, identifying the morphology of urban reconstructions of the surfacing quarters, able to define a central garden. Nowadays Porta Nuova is a piece of vital mixed city that combines polymorphism, owing to the contribution of more architecture studies in the realisation of the single buildings and the open spaces, with multifunctionality, with the presence of public institutions like Palazzo Regione Lombardia, directional buildings like the Unicredit or the Diamante, seat of BNP Paribas, residences like the Solaria or the Bosco verticale (Vertical Wood), facilities like the Riccardo Catella Foundation or the Incubatore per l'arte. In the center of this new urban district is a large park Biblioteca degli alberi by Petra Blaisse.



*Fig. 2.4. Project Porta Nuova. Milan. Italy. 1999 ongoing.*

*Рис. 2.4. Проект Порта Нуова. Мілан. Італія. Вид зі сходу. 1999 – донині.*

These projects were born in complex urban and landscape contexts. Summarizing the experience of planning in similar situations gives grounds to highlight a number of problems that arise in urban design, namely:

- settlement of residual parts of the city and territory left in marginalised conditions of settlement and use, after having been mangled by processes for the development of infrastructure as intensive as they are short-sighted
- development of areas made available by the abandonment of production activities that have compromised their patterns of

settlement and environmental equilibria (the Häfen of Frankfurt am Main in Germany).

- completion the interrupted designs of excessively autonomous parts of the city: morphological enclaves that have neglected the problem of the relationship with their urban and landscape environs (Porta Nuova in Milan, Italy and the Addition of Al Qurna, Iraq).
- arrangement of infrastructural fringes that have found themselves, over the course of urban development, in privileged locations, so that they have ended up close to the city centre and yet extensively degraded from the perspective of their morphology, environment and use (the railway yards of Bergamo in Italy).

### Results of the research

**3** Starting out from specific situations and hemmed in by the concrete nature of the case, these projects imply questions of a more general nature, such as the fragile condition of the contemporary city and the difficulties inherent in plans to transform or renew existing cities, towns and urban landscapes.

The reckless character of infrastructures in urbanised territories and cities, the emergence of the phenomenon of the abandonment of manufacturing areas and infrastructural fringes in the vicinity of urban centres and the advent of a new environmental awareness connected to the conservation of land and non-renewable resources are resulting in a shift in perspective and new ways of looking at the cities and landscapes we have inherited. The urgent need to reorganise and introduce innovations into the networks and hubs of public and private transport, the economic benefits expected from processes of urban and landscape renewal and the aspiration to shape new kinds of settlement suited to contemporary rituals of habitation – where the urban component and the dimension of landscape often coexist and overlap – create the conditions for a continual evolution in the approaches, methods and theoretical and planning instruments used to intervene in the city.

The projects illustrated here exemplify the way contemporary urban planning is moving in practice, and how it is precisely in the effective transformation of cities and landscapes that it is finding the theoretical and practical forms of its action. An urban planning that, as has recently been pointed out, having emancipated itself from the typo-morphological tradition focused on the built, is now coming to embrace the open spaces of the city within the horizon of the landscape, allowing it to incorporate infrastructures and other complex systems once considered incompatible with the urban character. From this is emerging a set of attitudes and fragmentary reflections that in a process of trial and error is defining lateral approaches, routes that cut across the habits of design and planning. A research that does not set itself poetic and stylistic goals, but manipulates building, landscape, geographical and infrastructural materials as an inevitable condition of operation.

By the term «coordinated urban strategy» we are referring to the mutable set of practices that, in contrast to the long time – the centuries – that it takes to construct the city, promote the building of large parts of the urban fabric in a relatively short span of time. Coordinated by a planner, building, infrastructural and landscape components are gathered together in a wide-ranging strategy of settlement that attempts to identify flexible principles for management of the processes of qualitative transformation of the city and its landscape, instead of fixing rules and forms in advance in arrangements of planes and masses whose realization is left for the future.

With its strategic values, the coordinated urban project on the one hand works as an agent of regeneration, a specific qualitative transformation in particularly reactive and complicated places, and on the other brings into play new energies of urban and landscape renewal, less and less represented within the traditional confines of governance. A refining of modes and practices, a building up of skills and expertise in order to be able to go along, in an action of planning with multiple offshoots, with the process of transformation of the settlement.

A specific knowledge of the city is accompanied by the ability to coordinate a complex set of levels related to questions of different kinds:

- *strategic*: on an intermediate scale between the overall urban form and the specific intervention of transformation;
- *morphological*: meaning and form of the spaces of the city, in its landscaping, building and infrastructural aspects, seen in relation to the traces of the existing city and its possible innovative implications;
- *financial*: the economic underpinning of the operation, the mobilization of investments, the rules governing public and private involvement, the control of profitability and redistribution;
- *communicative*: building of consensus around the project to bring about a sharing of intentions and objectives;
- *managerial*: continual management of the process in the change in its structures of form and use in view of plural interests and sectional contributions and the necessity to specify programmes and uses at the planning stage for a realization of the intervention in stages and by complete parts.

The incompatibility of the short timescale of decision-making with respect the long one of the city's construction is reflected in the urgency of the media to anticipate the final scenarios of the configurations of the area, so that the mode of representation is always twofold: maps of the principles of settlement and views of the possible outcomes. These last are provisional visions, and liable to modification, but useful in orienting subsequent projects and in anticipating themes like the typology of the open spaces, the landscape, the forms of urban density, elements of *ordonnance* of the buildings and a relationship between fabric and outstanding elements. Views at eye-level borrowed from the *veduta* rather than

the bird's-eye views of a modernist *plan-masse*. In fact there is no need to illustrate the final stage of a plan showing the disposition of masses to be pursued. Instead it is the anticipation with images of city and landscapes that constitutes the indispensable conceptual backdrop to subsequent further steps in planning.

The values of the «compact city as a sustainable city» expressed in density of uses, stability of the urban structure, morphological pluralism and the simultaneous presence of built, landscaping and infrastructural elements, coexist here with today's principles of environmental sustainability and land conservation. And distance themselves from both the mimetic and conservative attitudes of the historic city and the enthusiastic visions that still see urban sprawl as a model suited to the contemporary world.

With the dichotomy of city and landscape overcome, two distinct disciplinary heritages, maintaining their principal differences and affinities, are now coming together to produce fragments of hybridization and fusion with unstable boundaries: a movable physical and conceptual threshold that is continually being redefined.

The frame of reference of the projects is the form known as the «intensity city» which, without indulging in a nostalgic re-proposal of the historical European city, or vice versa in a euphoric anti-urban escapism, is able to incorporate questions and themes that have emerged in the metropolitan dimension – intensity of flows, exchanges, experiences – into the city that is already there, in a 'pact', an accord between existing form and new contents.

**Scientific  
novelty and  
practical  
significance  
of the  
research**

**4**

On the basis of practical design and theoretical generalization, we have defined such principles of the urban design:

- hybridize multiple uses to generate a mixed and vital city (residential, commercial, hotels, manufacturing, offices, services, institutions);
- hybridize city and landscape to accommodate contemporary forms of habitability, which can benefit from the opportunities offered by the use of open spaces.
- hybridize city, rural and infrastructure to enable the construction of an urban model functionally efficient, while preserving the peculiarities of the agricultural landscape and forms of the compact city as the traditional one.
- hybridize city «low rise», as the existing city, with forms of «high rise» city, to allow a smaller land consumption for the same functions and the inhabitants settled.

**Conclusions**

**5**

Urban and landscape strategies represent a probing into the reality of the evolving European city and produces multiple and perfectible methods for revitalization, formulated concretely and specifically in terms of cases, circumstances, and emergencies. What emerges is a pluralistic horizon, with piecemeal and eclectic approaches, through which a common European profile of urban transformation shines, respectful of the essence, values, and

customs of the existing city, aware of operating within the conflicts induced by the processes of innovation and adaptation of the city itself, processes necessary for its protection and survival.

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