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Urban Landscape Architecture in the Reshaping of the Contemporary Cityscape

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Abstract. The contemporary urban landscape is the evolving image of dynamic social, economic and ecological changes and heterogeneity. It constitutes the mirror of history, natural and cultural, urban processes, as well as locations of hybrid character, such as degraded and fragmented spaces within the urban fabric or in the city boundaries -*areas in between*, infrastructures, post-industrial and waterfront sites, but also potential grounds for urban development. Along with the awakening of the global ecological awareness and the ongoing discussion on sustainability issues, the cityscape with its new attributes, constitutes a challenging field of research and planning for various disciplines, further more than landscape architecture, such as architecture, planning, ecology, environment and engineering. This paper focuses on the role of urban landscape architecture, via its theory and practice, in the reshaping of the city territory. It aspires to broaden the discussion concerning the upgrading of the contemporary cities, aiming firstly at the determination of a wider vocabulary for the urban landscape and its design, and secondly at the highlighting of landscape architecture's contribution to the sustainable perspective of urban design and planning. The methodology is based on a comparative research implemented both on a theoretical level and on a level of applied work. Urban landscape architecture is described through theory and practice, along with correlative approaches deriving mainly from landscape urbanism and secondarily from the field of architecture. Urban landscape is approached as a socio-ecological and perceptual legible, a territory of culture, process and production; operating as an entity of ecological, infrastructural systems and planning needs, it is also regarded as a precedent for urban development. Furthermore, the research is supported by selected European and International urban landscape projects, presented in a cohesive multiscalar approach, from the node to the region. Theory is reflected upon: a/smaller scale projects-cultural landscapes, b/infrastructural projects, c/extended process territories and d/grand metropolitan projects. The particular case studies constitute representative design approaches dealing with the urban complexity and are hierarchized on qualitative criteria, spatial and functional; they are indicative of the spectrum of project's scale, type of intervention -redesign, reclamation, reuse, planning, but also of the project's operational value -cultural, infrastructural, strategic. They stress the importance of landscape's flexible and open-ended nature and ultimately, they underline the crucial role of urban landscape architecture, within transdisciplinarity and sustainable design strategies, in the regeneration of the contemporary cityscape.

1. Introduction

The contemporary urban landscape is the image of dynamic social, economic and ecological changes. It constitutes the mirror of history, natural and cultural, urban processes, as well as locations of hybrid

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character, such as degraded and fragmented spaces within the urban fabric or in the city boundaries - *areas in between*, infrastructures, post-industrial and waterfront sites, but also potential grounds for urban development. Along with the awakening of the global ecological awareness and the ongoing discussion on sustainability issues, the cityscape with its new attributes, constitutes a challenging field of research and planning for various disciplines, further more than landscape architecture, such as architecture, planning, ecology, environment and engineering.

This paper focuses on the role of urban landscape architecture, via its theory and practice, in the reshaping of the city territory. It aspires to broaden the discussion concerning the upgrading of the contemporary cities, aiming firstly at the determination of a wider vocabulary for the urban landscape and its design, and secondly at the highlighting of landscape architecture's contribution to the sustainable perspective of urban design and planning. The methodology is based on a comparative research implemented both on a theoretical level and on a level of applied work.

2. Theoretical context

2.1. Urban Landscape Architecture; a theory and design field in progress

Urban landscape architecture constitutes an evolving body of theory and practice with a distinctive role in the urban regeneration field the last 50 years. Landscape architecture is by definition the science, art and technique focusing on the study, design and planning of natural or man-made landscapes, or environments as perceived by humans. Within the context of the cityscape dynamic changes, it is constantly updated and called upon the drawing of decisions on further complex matters, such as ecological, infrastructural and planning, but also, on a wide range of scales and territories, apart from its traditional field, of open space design; on projects of large-scale public works, reclaimed post-industrial sites, fields or parts of cities, in-between areas and infrastructure sites [7]; those transitional, heterogeneous landscapes, urban heterotopias of distinctive space capability and potentiality [10]. Thus, urban landscape architecture plays an explicit role in the restoration of the cityscape spatial, ecological and cultural continuities.

The discourse and critics concerning the urban landscape started early in the 1960s reaching its peak in the 1970s, in the era of post-modernity, as a reaction to the one sided design approaches of the modern movement. It was an era of experimentation with historicity issues and change of attitude towards the city environment, along with the rising of the ecological thinking and the introduction of new systematic approaches in landscape design and planning [5]. Mc Harg's - ecologically oriented- methodological system is a paradigm of the last direction [20]. In most countries of Western Europe, however, landscape architects already after the 2nd World War are dealing with large scale landscape design and planning projects, connected to rehabilitation, infrastructure and expansion [23]. Later on, the French School with its pioneers, J. Simon and M. Corajoud, and P. Dauvergne, is closely occupied with the development of spatial solutions in contemporary urban issues associated to housing, environment and the city [17], "the search for new urbanism between the city center and the new city*"* [15]. The urban space is approached as a "living document", while a series of exemplary projects of quality urban spaces [5] on extended scales is being established in the French cityscape.

In the meanwhile, a broadened analysis approach is introduced for the urban landscape design in the Greek school. The urban landscape is comprehended as a social outcome in process and a society's mirror. According to M. Ananiadou-Tzimopoulou, it is approached as a socio-ecological and perceptual legible [4], while constituting "a natural entity in dynamic evolution" and "a space of social activity". Moreover, within this multilayered methodological approach, the landscape study responds to an expanded scale spectrum - urban/peri-urban, and site category. The cultural value of the design project is reflected as well, since urban landscape projects represent "works of art", cultural works for the society, "capable of promoting the pleasure of space" [6], enhancing at the same time, human scale interactions via the experiential reading of the landscape. Additionally, the cultural identity of the project is enhanced within a vast project category -urban landscape redesign, restoration, reclamation,

upgrading, planning, indicating the different type of intervention, as well as the scale range of the project.

The past few decades**,** urban landscape architecture is more intensively playing a significant role in the sustainable perspective of the city on peripheral level, within its advisory support and implemented design and planning projects. The landscape's scale is shifting, from the site to the region; it is in this suburbia of pervasive physiognomy, "of different dimensions, of different scales", where new opportunities, quality potentials can be found [11]. Landscape, as it is supported by Agence Ter, is also regarded as the "vector" of the city-territory and landscape architecture, as an alternative approach to the urban thinking; "a landscape - oriented urbanism" [15]. It is as well, cited as "un préalable" according to M. Desvignes, a datum, precedent for urbanism, that should integrate all the approaches concerning the urban matter. Being comprehended as an environment traversed by flux, landscape is equally arranging issues involving infrastructures -transport, water flows, by reintegrating them in the existing urbanity and preparing the ground for future urban development [19]. Complementarily, the urban landscape is approached as a space and territory in process, being engaged temporarily to the ongoing city transformations. In this case, the design or planning proposal does not address to a definite plan, but rather to a provisionary and enduring one that is possible to change in the future. The landscape is then regarded as the "intermediate nature" [14], that draws the potential development and ultimately, shapes the cityscape.

2.2. Regenerative–isms; expanding the urban landscape discourse

The last decades, a distinctive interest in the widening of the discourse concerning the urban landscape and its design, has emerged from correlative approaches -*isms*, from the field of landscape architecture and architecture as well.

Architecture has been intensively experimenting on hybrid morphologies connected to integral systems of architecture, landscape and infrastructure. Implemented works, such as FOAs' Yokohama Port Terminal, 2002, and South-East Coastal Park in Barcelona, 2004, are underlining the *porous* reading of the artificial landscape; a topography of flux, connectivity and permeability. Allen Stan, in his essay "Mat urbanism-The thick 2D" pinpoints the function of the mat building as an activator of urban life and an open field of possible events, this thick surface that is articulating in-between spaces within a continuous surface of movement. Moving forward to the *extended - landscape* mat, Allen cites the idea of mat urbanism, as an experimentation ground with landscape architecture tendencies; a broadening of the flat horizontal field approach to a more process one. According to Allen, "landscape is emerging as a model for urbanism" [2]. It is argued that, within the material and performative characteristics of the landscape surface, designers can produce spaces that are shifting from the traditional outline. In addition, as landscapes are changing over time, they can be used as "models of process" [2], enhancing indeterminacy on the level of spatial and social evolution and contributing to the next generative *–ism*.

Landscape urbanism constitutes a recent theory for the landscape and city making that has emerged from the vigorous academia discourse. Twenty years have passed, since this hybrid theory term was presented at the Landscape Urbanism Conference and Symposium in Chicago, coined and organized by the architect and urbanist Charles Waldheim [12]. Waldheim defines landscape urbanism, as the emerging critique outcome of the neotraditional urban design and as an alternative for new urbanism [25]. Articulating the theory through design urban works within the terrain of North America and West Europe, Waldheim supports this practice as a recombinant response to the potential of the post-industrial city leftover, *dross* [9] and an "interstitial design discipline operating in spaces in-between, infrastructural systems and natural ecologies" [21]. Landscape is therefore, described by Waldheim as "the lens of urbanism", as "the analogue to contemporary processes of urbanization and as a medium uniquely suited to the open-endedness, indeterminacy, and change demanded by contemporary urban conditions". As its practice is addressed to the intersection of vast scale ecological and infrastructural systems, landscape urbanism is associated with issues of risk and resilience, adaptation and change [24].

Landscape urbanism's hybrid nature relies on the conflation of a range of design disciplines such as architecture, landscape architecture, urban design and planning, that are using *landscape* as the primary medium of city formation. Landscape architect, James Corner, in his essay "Terra Fluxus", stresses the importance of the discipline interplay, when working on the contemporary metropolis. He argues that, issues of urban complexity and growth can only be approached via a shared form of practice that is capable of combining scale and objective, critically and creatively. Corner also, suggests an outline of characteristics for the landscape urbanism context: 1/ *process over time* -prioritizing landscape systems by the use of diagrams and maps instruments, while enhancing the organic and process-driven nature of cityscape, 2/ *staging of surfaces*- promoting surface continuities as urban infrastructures, larger scale flexible territories of network interactions, 3/ *operational method*- usage of creative representational methods within a multidisciplinary framework, 4/ *the imaginary*- enhancement of the collective memory, identity and realm prospects through materiality, representation and imagination [12]. The winning competition entry of James Corner/Field Operations for the Fresh Kills Park Design, 2001, is representative in this regard. The project encapsulates the above design instruments -detailed diagrams of phasing and programming; it responds to the urban question of a large scale industrial landfill reuse, within the "interweaving of natural ecologies with the social, cultural, and infrastructural layers of the contemporary city" [24].

Emerging from the landscape urbanism discourse, the generative *infrastructural urban-ism* addressed in the in-between areas, "designs the structural spaces of infrastructure that guarantee the contemporary city a steady chain of supply and mobility" [16]. Allen describes that infrastructures are flexible and performative systems working like artificial ecologies, managing the energy flows, while anticipating the future activity [1]. Drosscapes, terrain vagues or peripheral public work sites can be turned into infrastructural landscapes. Constructed examples, such as Ronda del Dalt, by Juan Roig and Enric Batlle, 1990-1993, reflect the urban effect of the landscape infrastructure, which is working as a hybrid of interconnected network systems, and as a both dynamic and static space. The project integrates "civil engineering with urban life" [22], the technical work with the ecological performance and recreation.

Concluding, the urban landscape is situated on the development basis of approaches originating from urban landscape architecture, which from the early years shows a notable interest for the quality of the cityscape, within a cohesive, socio-ecologic and perceptual view. Furthermore, landscape becomes an inspiration research field for the other design disciplines, leading in constructive recombinant theories. Within this wider context and regarding to its role, cultural, infrastructural, strategic, landscape is approached by urban landscape architecture as an undivided and consistent image, multiscalar and flexible medium, a process-territory and a starting point for planning, but as well -within the correlative view, a lens for urbanism, a performative territory of flux, hybridity, instrumentality and open-ended organization.

3. Urban landscape design projects

3.1. From the node to the region

A series of urban landscape projects are presented, referent to the theoretical framework described above, within a multiscalar approach from the *node to the region*, from smaller scale sites, cultural landscapes-cultural conjunctions, to infrastructural projects, extended process territories and grand metropolitan projects. These projects are originating from the field of landscape architecture, and also from its collaboration with architecture, urban design and planning.

3.1.1. The historical gardens are redesigned into a park for culture and pleasure. The design intends to create a new symbolism, promote the site's historic character and define its identity, while respecting its social, historical, and ecological characteristics. The monuments of the wild stone pits are highlighted, while the ecology and hydrology system of the site is enhanced. A network of interweaving attractive green pathways and canals, (figure 1a) along with a sequence of open spaces for gathering and

recreation is set upon the hill, directed towards the city and its waterfront view (figure 1b, c). The design is harmoniously integrated in the existing pine wood. Via its central square-inspired by the gardens of paradise, it operates as an inviting space-venue for events and games [3]. The design is fully integrated in the surrounding cityscape. Overall, the park functions as a cultural conjunction, articulating the old town with the new town, the city with the mountain, and the city with suburbia.

a)



b)



c)



Figure 1 a) General plan and **b) - c)** perspective views of Pascha Gardens [8]

Cultuurpark Westergasfabriek in Amsterdam, designed by Gustafson Porter + Bowman and Mecanoo Architects, 1997-2000, is an exemplary of a brownfield reclamation and transformation of a former Gas Factory site into a cultural park, centre for arts and recreation. The design of the 11,5 ha site proposes a variety and gradation of open spaces articulated on a central promenade, such as canals, lake, wetlands, trails, gardens, green field, events and activity spaces (figure 2), working symbiotically and in complete cohesion and with the industrial building heritage. A sustainable earthwork strategy of "cut and fill" soil monitors the distribution of the park program, its hydrology and vegetation [18]. The design, followed up by public consultation, is achieving a multidimensional purpose -social, cultural,

ecological, commercial, defining ultimately the park as an innovative crossroad of culture and urban life; an active meeting place.



Figure 2. General plan (left) of the park and view of the axial promenade (right) [32].

3.1.2. Re-infrastructuring the city. The Olympic Sculpture Park in Seattle, 2007, by Weiss/Manfredi architects constitutes a hybrid landform project, integrating architecture, landscape and infrastructure, on a 3,4 ha industrial site of former oil transfer facility (figure 3-left). The architects along with a team of engineers, landscape architects and environmentalists, are working on symbiotic strategies of urban and ecological systems [26]. A z-shaped green platform, provides a new pedestrian infrastructure over the old one of the highline and train line, connecting the city with the remediated waterfront.

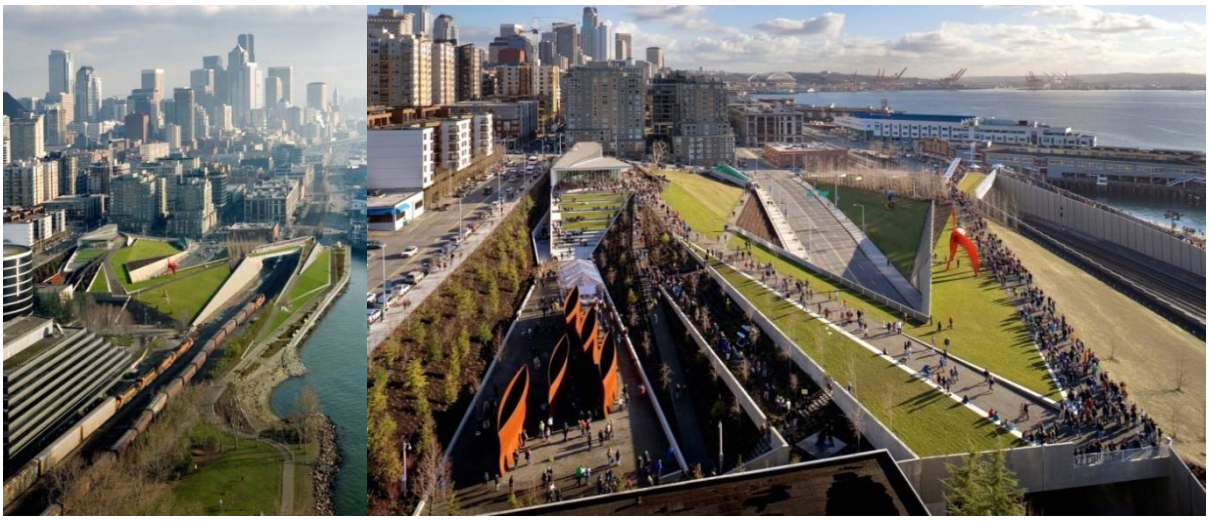

Figure 3. Perspective view (left) of the landform and the z-shaped promenade (right) [18].

An uninterrupted promenade (figure 3-right) with sea and mountain views, of varied forms of art - from the pavilion, external art sculptures to event spaces, and vegetation- from the forest to the shoreline gardens, is unfolding, connecting perceptually and ecologically the new topography with the existing cityscape. Its geometry of tilted surface design and its plantation, promote the water runoff, filtration, cleaning and direction to the bay, while its shoreline wall structure targets on the habitat restoration [20] and recreation. Art and ecology are creatively merged together, infra-structuring culture, urban life, transport-energy flows and habitat complexity.

Towards this direction, and on a larger scale, stands the paradigmatic winning proposal of the Team Camí Comtal - AldayJover, RCR, West 8, for the Sagrera Linear Park competition, in Barcelona, 2011. A green diagonal corridor, stretching from the urban periphery to the heart of the city, bridges the mountain with the sea, the city with the nature [30] (figure 4-left) and the country with France. This

green platform, lying on railway, public and private transport networks, is part of an integral development concept of architecture, landscape, infrastructure and engineering [31]. The Sagrera linear park, an area of over 40 ha and 4 km extent, is operating as a landscape of flux, proposing a more natural and milder version of urban life; a new "slow" and uninterrupted city cross [38], implemented through diverse environments and public spaces for recreation and culture, such as shaded pathways, historic and "mosaic" gardens, fields, water installations and fountain squares (figure 4-right). The design articulates crucial civic, cultural and historical axes and, and within its water "episodes", reflects on the memory of the historic water traces. The park in total, functions as a continuation of the city's green network, emphasizing on its ecology and promoting its civic, cultural and socio-economical potential.



Figure 4. Plan of the new green diagonal and perspective view of the welcome gardens [30]

3.1.3. Territories of process. Moving further to the case of landscape transformations over time, the Lyon Confluence redevelopment project, 2000-2005, studied by landscape architect Michel Desvigne along with the urban planner François Grether, responds uniquely to this context, proposing an innovative approach of an industrial site reuse and city making. Lyon Confluence is addressed to a 150 ha territory, that is situated in between Rhône and Saône rivers, traversed by infrastructure, defined by the wholesale market and warehouses, and destined to accommodate new life - port, neighbourhoods and a park, within a sustainable framework.



Figure 5. Map of planned changes and view of Parc de Saône [14, 34]



Figure 6. Streamlines proposal (left) and view of recreation activities in the riverfront, (right) [37]

Confluence site is envisioned by Desvigne as this "intermediate nature" [14], adjusting to -and providing for- future urban transformations, such as industrial premises disappearance and infrastructural changes. For this purpose, the design suggests a set of scenarios of possible public space configuration (figure 5-left) within time phases, instead of a rigid plan implementation; an "infiltration strategy" which uses wisely the existing territory fragmentation and introduces on those traces, gardens, walkways and canals [13]. This "branch system" is provisionary, evolving along the gradual industrial liberation of the parcels, but durable as well, creating a quality foreground for the upcoming architectural works, the anticipated urbanism and habitats. Prairies, green spaces gardens are being shaped along with a hydrology network of canals and pools, accentuating space concentrations and continuities in the urban fabric, while enhancing a series of diverse public spaces (figure 5-right).

The proposal of Stoss Landscape Urbanism, is one of the finalists of the Minneapolis Riverfront competition, 2010. Along with Michael Maltzan architecture and infrastructure, Utile, Inc. urban design and a wider interdisciplinary team, StossLU studies the regeneration of an 8.85 km partition of the Mississippi river, a 890 ha area, under the concept of "Streamlines" [37]. The design proposes the turning of the site into a landscape of proximate river experience, culture, working ecology, industry and production, within a long city transformation process of a 50-100-year horizon. The re-integration of urban life in the river is accomplished by the gradual broadening of the river's reach with multiple "lines" and strands, introducing a green network infusion in the urban fabric and an expanded territory of districts and neighbourhoods (figure 6-left). Open spaces are growing symbiotically with the industrious element. "Claim the river, seed the park and elaborate new models for city life" [28] is the general design strategy. In this context, the proposal is supported by the use of robotic technology, to define the river's cultural identity -river lighting system, light boats, transformable barges for recreation; by the promotion of operational landscapes, to prepare and "seed" the river park -working fields of remediation and water cleansing, stormwater infrastructures, generative river islands, greenhouses, as well as green corridors, landscapes of social and recreation activities (figure 6-right), industrial cultural complex and bridges. Lastly, the project introduces new urban prototypes of mixed uses and civic life, such as industrious parks, city islands and greenhouse districts [29].

3.1.4. Transcending the boundaries. The last project category is shifting from the scale of one territory to the one of a territorial ensemble. Within this geographical frame, Pôle Metropolitain Nantes Saint-Lazaire, a 12.000 ha area, via the entitled "Eau et paysages" action, 2014, and under a wider eco-ecological and social planning scheme of territorial coherence [35], anticipates new strategies for a hydrology network composed by waterscapes and wetlands of international importance, in Loire estuary region (figure 7-left).

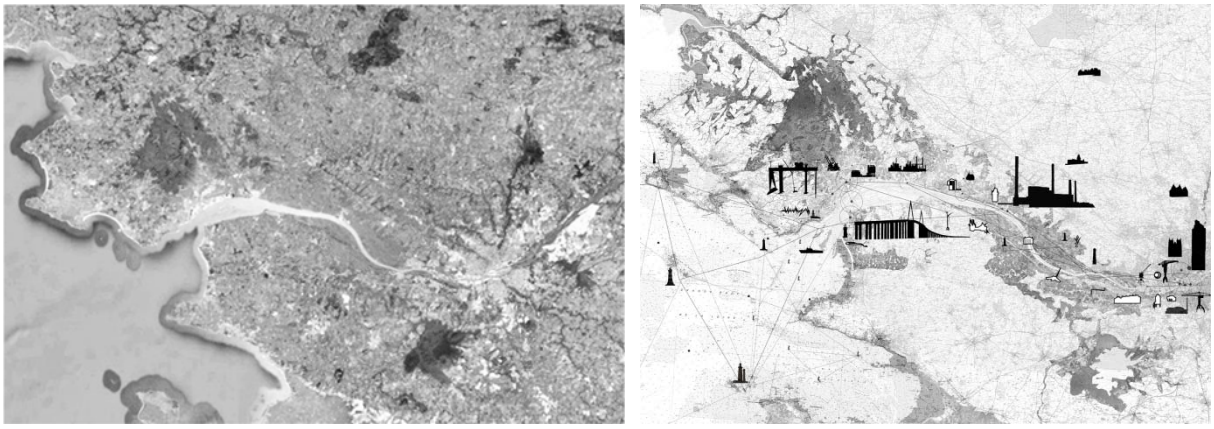

Figure 7. Nantes Saint-Lazaire geographical reference (left) and territorial diagram from the study proposal, (right) [33,27]

Particularly, multidisciplinary teams monitored by landscape architects, were called to answer to questions regarding the articulation of 6 territories of diverse landscape quality- river, port and lake promenades, valley parks, forest and canal walkways from Nantes metropolis to Saint-Lazaire city [36]. The action targets on the promotion of biodiversity, their touristic potential in balance with their ecological and agricultural character, as well as the enhancement of their place making, while taking into consideration their urban development feasibility [35]. Agence Ter, as lead consultant of a wider team and as one of the preselected teams among Coloco, M. Desvignes and Phytolab, proposes a metropolitan strategy conceptualised as "Edges to Edges" (figure 7-right), attached to the region's culture, responding to the expected water level changes; an interconnected green and circulation network, determined by the presence of water and composed by diverse edges of potential configuration. The strategy works both on short and long term, from point-edges activation to an entire metropolitan visualization [27].

4. Discussion - Conclusions

Conclusively, the design works analysed above, constitute projects of culture, infrastructure, networked ecologies, operation, open program, hybridity, development and sustainability addressed to the ecological, social and economic characteristics of each site. From smaller to larger scale, from nodes to regions, the project studies follow respectively a process oriented organization, a top-down and bottom-up design approach. The presented work range - from redesign, reclaim, reuse to planning, notably reflects the necessity of collaborations and transdisciplinarity in the urban field. The new cityscapes are regarded as territories of synergies, while each discipline continues to preserve its autonomy and scientific background. Moreover, via this correlative research, the field of landscape architecture or *urban* landscape architecture is highlighted; along with its distinctive character, in relation to the fields of architecture and urban design and within a creative dialogue, urban landscape architecture emerges as a constructive field of theory and practice, contributing significantly to the cityscape reshaping. Finally, throughout the implemented and ongoing urban projects, it becomes evident that the encouragement of a prompt and accurately programmed cooperative scheme is crucial for a sustainable and resilient city future.

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