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How 15-min City, Tactical Urbanism, and Superblock Concepts Are Affecting Major Cities in the Post-Covid-19 Era?

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Abstract

This chapter analyses three strategies proposed to redefine current urban policies to deal with issues inherited from the contemporary city evolution. The case study analysis focuses on applying the concepts of 15-min City, Tactical Urbanism, and Superblock in global cities such as Barcelona, Shanghai, and Milan. Have these cities changed the urban environment and mobility patterns dealing with health, social, and economic inequities? Which have been the impacts of urban regeneration, governance, and inclusion towards achieving the Sustainable Development Goal 11, emphasizing the need for inclusivity and equitability in urban areas? These questions find the answer in three main aspects. First, the regeneration of the existing built environment; second, short-, medium-, and long-term governance issues; third, the concerns about the possible risk of gentrification. An introductory part explains the adopted methodology, follows an analysis of the three case studies, and, eventually, remarks on what we learned. Two are the primary outcomes: a comparison between different global cities and diverse ways to deal with the impacts of people-centered solutions for urban environments and an evaluation of 15-min City, Tactical Urbanism, and Superblocks feasible solutions for sustainable urban transition.

Keywords

Global cities
Urban regeneration
Sustainable development
Healthy city
Resilience

1. Introduction

In the last decade, numerous urban models have been emerging in response to worldwide environmental and socio-economic urgencies envisioned in need to provide people-centered urban environments [16][27]. These models, in turn, have been based on a raft of global agreements such as the UN's New Urban Agenda [68] and the 2016 Paris Climate Agreement [36] to foster accessible, healthier, inclusive, safer aimed to prevent climate change effects from becoming worse.

Within the current 'urban era' [34], the main targets are large cities, especially 'global' ones, because they are vigor places that can enable and accelerate flows of capital, goods, and knowledge. Among the solutions to reduce socio-economic and ecological inequalities, the notions of 'Tactical Urbanism,' 'Superblock,' and '15-min City' have gained support to provide a more 'human-needed city' [17]. Tactical Urbanism [43], also known as DIY Urbanism, Planning-by-Doing, Urban Acupuncture, or Urban Prototyping, is a recent US-based urban planning movement that envisages short-term and community-based projects to carry out quick, often low-cost, and creative actions [44, 45]. Starting in the 2010s from American grassroots, Tactical Urbanism has diffused globally thanks to its easy way of producing temporary changes for human-centered public spaces at the street level [67]. Superblocks and 15-min cities are iterations of the original idea of 'neighborhood units,' i.e., residential design models comprising several blocks usually closed to through traffic for a population of about 5,000–9,000 residents, with school, worships, and recreational areas at their center. In 1916 William Drummond [25] introduced what was successively developed by Clarence [56], who, in turn, took inspiration from Ebenezer Howard's 'Garden Cities of Tomorrow.' The idea of neighborhood units has evolved over more than a century according to locally oriented debates [14]. It has recently been implemented as 'Superblocks,' such as in the cases of Barcelona [58], 'Megaplots' in expanding Chinese metropolis [41], and a '15-min City' in Paris [12].

These solutions have quickly gained popularity during the global lockdowns prompted by the Covid-19 pandemic for delivering urban sustainability transition and converting cities into healthier, safer, and more inclusive places [26][51]. In such a context, it is relevant to understand better this change, its impact on the urban environment, and its implementation limits.

The chapter analyses three strategies proposed to redefine current urban policies, especially urban mobility, to deal with issues inherited from the capitalist city evolution. The research questions are: May these global cities' experiences have changed urban environments and mobility patterns and dealt with health, social, and economic inequities? What impact have urban regeneration, governance, and inclusion on achieving Sustainable Development Goal 11, emphasizing the need for inclusivity and equitability in urban areas?

These questions find answers through a desk research activity, and specific fieldwork carried out between 2017 and 2022 in the cities under analysis. These activities have helped the Authors understand how Barcelona, Shanghai, and Milan have implemented these concepts, dealing with three main aspects of each city. First, the regeneration of the existing built environment; second, short-, medium-, and long-term governance issues; third, the concerns on the possible risk of gentrification as the improvement in the quality of citizens' life may lead to the rise of real estate values. The research's structure is the following: an introductory part with the explanation of the methodology adopted, an analysis of the three case studies, and, eventually, the conclusions remarking on what we learned. In particular, the analysis results in two primary outcomes: first, a comparison between different global cities and diverse ways to deal with the impacts of people-centered solutions for urban environments; second, an evaluation of how 15-min City, Tactical Urbanism, and Superblocks feasible solutions for sustainable urban transition, although with limits, could be applied in other contexts through a correct assessment of these three variables.

2. Barcelona: Extending the Neighborhood Unit's Principles to the Whole City

2.1. Built Environment Transformation

The implementation of Superblocks in Barcelona developed in the frame of the so-called 'Ecological Urbanism' movement fostered by the local entity BCNEcologia [59]. The idea is to divide the city into 503 neighborhood units to adapt according to the urban morphology, such as the standardized blocks of Cerda's Extension that would form 400-x-400-m urban cells, including interior and exterior streets. This model is expected to be fully applied in 2030 and would strongly impact the citizens' lives by diminishing private motorized transport by 19.2% and speed limit to 10 or 20 km/h in the interior streets, and expanding green surfaces from 2.7 m²/inhabitant to 6.3 m²/inhabitant in the Extension district. These changes at the street level would, in turn, lower NO₂ pollution by 24% and heat waves by 35.9% [53]. Doing so is expected to prevent 667 premature deaths annually and increase life expectancy by almost 200 days.

The launch of the local government document "Let's fill the streets with life" [6] was the ground zero for two pilot projects in Poblenou and Sant Antoni neighborhoods in the pre-pandemic period (2016–2019). Poblenou's Superblocks (September 2016–January 2017) is a small-scaled project located on the border between "El Parc i la Llacuna del Poblenou" and "El Poblenou" neighborhoods, covering 1.6 ha in which are living 5,800 inhabitants for a total density of 348 inhab/ha,¹ while Sant Antoni urban cell covers the entire neighborhood (80.10 ha, 38,182 residents, and a total density of 479 inhab/ha).²

Despite showing different intervention scales, the two interventions radically transformed the public spaces by cutting vehicular traffic to create human-scale communities [7: 104, 126]. Poblenou neighborhood involved the conversion of 13,350 m² of streets for pedestrians and cutting car-parking spaces from 575 to 316 for creating human-centered facilities and equipment. They were the planting of 212 trees and 349 benches, the increase of green areas and tree-lined streets from 9,722 to 18,632 m², the creation of 1,000 m² of cycle path, a new 2,483-m² playground and interactive games area for both elderly and young (Fig. 1) that included an athletics track (Fig. 2), 37 new premises for activities at street level; and an electric vehicle charging point. The implementation of Sant Antoni Superblock occurred in two phases. The first one regarded rehabilitating the 53,388-m² Sant Antoni market (Fig. 3) and its immediate surroundings' open spaces. The works ended in May 2018 for a total cost of 80 million euros and provided a new public square (1,800 m²) plus 3,200 m² of green areas. The second phase regarded the redevelopment of 38,328 m² of streets that resulted in the pedestrianization of 23,709 m² of public spaces, the realization of three tactical urbanism actions (Fig. 4) for a total of 17,947 m², the improvements of 1,272 m² of tree pits, and the cut of 838 parking lots.

Fig. 1

A playground area for children.

Source F. Camerin (April 2022)



Fig. 2

The Poblenou's athletics track.

Source F. Camerin (April 2022)



Fig. 3

The Sant Antoni market's surroundings.

Source F. Camerin (April 2022)



Fig. 4

A Tactical Urbanism intervention at a crossroad in Sant Antoni neighborhood.

Source F. Camerin (April 2022)



These initiatives have demonstrated the capacity to reduce environmental factors that affect human health [2]. Vehicular

traffic decreased by 58% within the Poblenou unit, with a consequent fall in daytime noise levels of five decibels. Although no data on the changes in air quality has been available, Sant Antoni registered a decrease in concentrations of air pollutants NO₂ (25%, -14,6 g/m³) and PM10 (17%, -4,1 µg/m³) since the implementation of the Superblocks system. The success of these experiments leveraged the implementation of Superblock-related measures in the whole Extension district with the slogan “green axes” (*eixos verds* in Catalan). The completion launched by the City Council in late 2020 aimed to convert the area with the most daily vehicle traffic flow (350,000 cars/day) and high levels of pollution (50 µg/m³ on average in 2019, 10 µg/m³ more than the WHO recommended 40 µg/m³) into a healthier place. The aim is to turn 21 streets into green hubs and create 21 new squares at the crossroads, devoting 33.4 hectares to pedestrians and 6.6 hectares to urban green space filled with 4,000 new trees [9].

2.2. Urban Governance

Two are the main aspects related to governance. The first one regards the high cost and time of implementation. While Salvador Rueda urgently claimed to convert Barcelona into a great Superblock by 2030 for a total expenditure of approximately 300 million euros [47], the City Council still does not offer any information. Poblenou's and Sant Antoni's Superblocks cost 3.8 and 10.5 million euros, respectively, while the expenditure for the green axis project in Eixample, finished by 2030, rises to 37.8 million euros. Up to date, the City Council financed all Superblocks-related interventions, but the latter has still not provided an official plan or scenario for completing the task.

The second is the need for a shared vision with residents. Poblenou's Superblock was a tactical urbanism experiment that introduced removable items to show how the urban cell may work but was not the result of previous public consultation with the local population. The loss of driving privileges benefitted slow mobility: for instance, no underground parking replaced the removed parking lots in Poblenou and Sant Antoni neighborhoods, apart from the Sant Antoni market's 390 underground parking. In addition, the unclear potential of the Superblock caused citizens to set up the “Association of People Affected by the Poblenou Superblock” (*Plataforma d'Afectats per la Superilla del Poblenou*). The association lobbied the administration to reverse the intervention, drawing intense media attention [54]. However, a closer consultation with residents resulted in more structural changes and resolved conflicts. The lessons learned for successfully implementing Superblocks have been mutual for both public authorities and citizens. This first experience showed that the move from tactical to structural cannot be too quickly or slow, but this action needs the community to figure out what it wants. Poblenou Superblock was unconsciously conceived as a low-level shock therapy to kick-start the process. Residents could not express whether they needed or wanted people-centered public space; they were instead faced with it and successively asked what they like to make of it. As a result, the following Superblock in Sant Antoni was solidly developed through open debates with citizens and monitoring activities.

Third, the pandemic acted as an accelerator of an already more comprehensive policy committed to providing an accessible, resilient, safer, and sustainable environment in the last ten years. A pivotal document enabling this challenge was the “Citizen Commitment to Sustainability 2013–2022” [3], followed by ad hoc tools such as the “green infrastructure and biodiversity plan towards 2020” [4] and the “2013–2018 urban mobility plan” [5], along with scientific research provided by Salvador Rueda's team [60]. This forward-thinking policy demonstrated the capacity to elaborate short- and medium-term strategies resulting in the gradual reorganization of Barcelona's urban grid towards a greener and more human-centered environment with less pollution and noise [8].

2.3. Risk of Gentrification

Since the celebration of the 1992 Olympics, Barcelona has been experiencing a relevant growth in the cost of living, tourist gentrification flows, and socio-economic inequalities [63]. Superblocks demonstrated to improve community green and social infrastructure and provide a healthier environment so that they can be at risk of rising rents with a consequent displacement of long-term residents. Flourishing literature demonstrates how human-centered programs like Superblocks are catalysts for the so-called ‘environmental gentrification’ and how the resilient and sustainability framework enables this process [13]. Housing displacement and gentrification are currently concerns in both Poblenou [55: 780] and Sant Antoni [15]. However, real estate market value trends have appeared in line with the average prices, not suffering from the Superblock-related intervention. The housing and rental costs data prove this claim [10]. El Parc i la Llacuna del Poblenou and El Poblenou neighborhoods' price €/m² of second-hand houses for sale increased respectively from 3,761 and 4,223 €/m² in 2016 to 4,268 and 4,469 €/m² in 2021, thus exceeding the average price of Sant Martí district (from 3,382 €/m² in 2016 to 3,563 €/m² in 2021). Sant Antoni neighborhood's price €/m² of second-hand houses for sale deflected from 4,591 €/m² in 2017 to 4,170 €/m² in 2021, is in line with the slight decrease of the average price of Eixample district (from 5,005

€/m² in 2017 to 4,538 €/m² in 2021).

In addition, recent government measures demonstrated policymakers' awareness of limiting the social risks related to eviction, displacement, and inequitable urban development at the regional and local levels. On the one hand, in September 2020, the Catalan Parliament passed a law regulating rent prices on new housing contracts (approved in December 2020) to guarantee accessibility in sixty Catalan municipalities, including Barcelona [24]. On the other hand, the City Council's Barcelona Superblocks Government Measure [11: 8] declared that Superblock-related urban regeneration strategies are eager to avoid gentrification.

3. Superblocks and the 15-min City in China: Insights from Shanghai

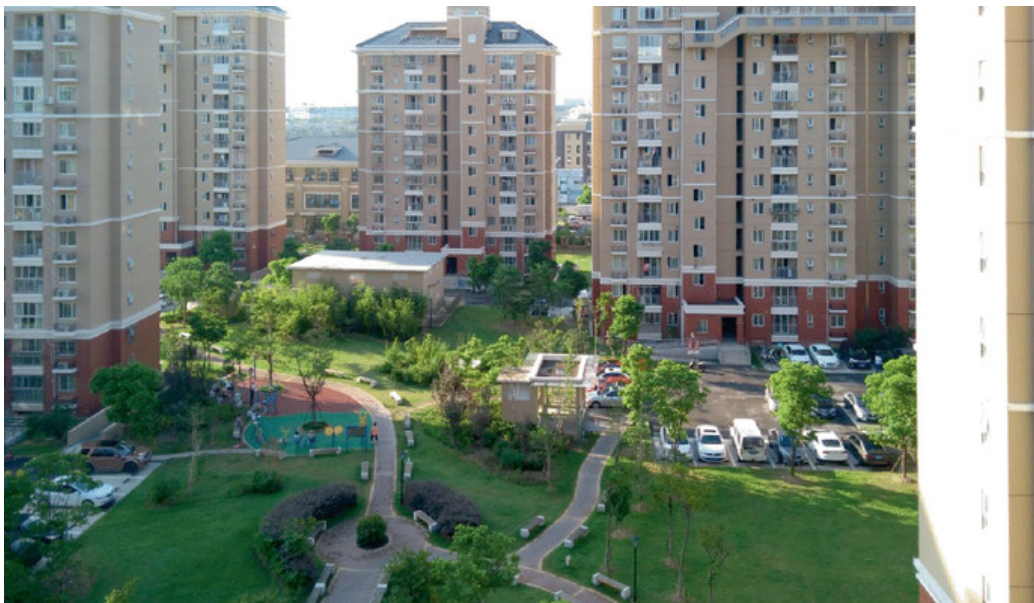
3.1. Built Environment Transformation

Superblocks, or 'Megaplots,' constitute the central spatial units of contemporary Chinese developmental cities [41: 10]. These fenced compounds usually lay on parcels of land measuring between 300 and 500 m in length and width. They physically separate the housing communities enclosed in semiprivate neighborhoods from the external urban reality, often consisting of fast circulation roads. Repeated standard condominiums dot the area inside the gates indifferently, leaving space at the ground level for greeneries, car parks, and various amenities for children and elderly (Fig. 5). The Superblock model, whose density and covered area ratio vary according to planners' or developers' desires, represents an efficient mechanism for optimizing land values and creates a point of encounter between state and entrepreneurial interests [29]. As a result of *tabula rasa* land clearings, Superblocks usually follow so-called rationale planning and scientific method based on generic zoning plans, which leave little space for the definition of cohesive, diversified, and inclusive urban environments [19].

Fig. 5

Typical Chinese Superblock as seen from inside a housing unit. Shanghai, Minhang District.

Source G. Semprebon, September 2017



The Megaplots' size requires the developers to provide «large capital reserves and high political standing and must also possess the operational and financial capacity to produce a megaproject» [50: 47]. Consequently, the bureaucratic process is fastened by the reduced number of transactions that put the top choices in the developers' hands. The market forces are then predominant in shaping expanding Chinese cities, which are territories often lacking a sense of urbanity, spatially and socially segregated from the serendipitous vitality of mixed used-and-shaped urban fabrics (Fig. 6).

Fig. 6

Typical Chinese Superblock as seen from the outside. Shanghai, Minhang District.

Source G. Semperebon (September 2018)



Whether the Superblock is the result of a contamination history with exogenous models or is the evolution of a distinctive one, the Chinese version has been widely debated. For instance, Miao [49] saw in Shanghai's new gated communities a copy of the US suburban model based on social and spatial segregation and questioned whether Chinese cities would have «indiscriminately model themselves» after foreign settlement patterns. Successively, Xu and Yang (2009 Reference Added) AQ1 argued that the idea of gating dwelling spaces belongs to a rooted local tradition that has been able to adapt to historical and socio-political situations.

Criticalities on the Superblocks model have also emerged recently. Cheshmehzangi and Butters [18] identified housing density applied to urban morphology as a key to pragmatically unpack possible alternative settlement principles more sensitive to social and ecological dynamics, such as climate change and neighborhood gentrification. At the same time, recent research by design [40, 50] suggested how redeveloping gated communities could have reshaped public-private relationships by maintaining high densities. These issues appear today emphasized by the sequence of unexpected shocks that have perturbed geopolitical equilibriums in the last years. One of these was the slump in China's housing market, epitomized by the Evergrande debt crisis [31]. Observers are following how the story will unfold and whether the situation will be absorbed by the system or will reverberate globally. What is sure is that the episode has thrown shadows on the current real estate machine, substantially based on urbanization via Superblock development.

3.2. Urban Governance

Since the formulation of the Shanghai Master Plan 2017–2035, “Striving for the Excellent Global City” [64], some key concepts and implementation formulas have been enucleated to move forward with new eco-oriented forms of urban living. Under the aegis of strengthening its domestic and international attractivity, Shanghai has been the first megalopolis in China to have identified the 15-min City concept, also named ‘Community life circle,’ as a core developmental strategy [66]. In 2016, the urban planning and land resources Administration Bureau released a guidelines manual. The book contains the first comprehensive research on the 15-min City concept applied to Shanghai and collects data from interviews, questionnaires, and practical implementations. The most critical aspects emerging from this document were two.

On the one hand, the attempt to define a benchmark for the 15-min life circle construction as part of a broader urban renewal action. On the other hand, the government will engage communities from below, promoting grassroots participation [65]. Both factors entwine inextricably with Chinese Superblocks' strategic approach to city-making, questioning, for instance, the relations materializing between neighborhoods supersizing and communities' accommodation.

The Shanghai Urban Space Art Season 2021 can be framed as a cultural response to the issues that materialized in the last decades by enforcing the Superblock model. The exhibition has opened a reflection on the possible implications of the 15-

min City, sharing practices of local neighborhoods to create community life circles and calling for exemplary cases of urban renewal, such as Chaoyang and Xinhua Communities.³ The critical exhibition site itself, the Columbia Circle, is the result of a process of urban renewal focused on the community's reactivation which saw the participation of renowned architectural offices like OMA and West8 (Fig. 7).⁴ In parallel, the government is fostering the life circle community concept also in the suburbs [30] as part of a broader plan to use fifteen pilot projects to monitor the 15-min city impacts on residential communities [66].

Fig. 7

The Columbia Circle has hosted the Shanghai Urban Space Art Season 2021, focusing on the 15-min city.

Source Gerardo Semperebon (April 2019)



The 15-min City strategy is still in its experimental phase, and some criticalities have already emerged. For instance, in Guangzhou, Zhou found that the implementation is imposed with excessive uniformity regardless of local differences (2019). The principal reason resides in the spatial characteristic of housing compounds that substantially repeat ubiquitously and generate homogeneous urban environments. According to Hou and Liu, the 15-min City concept describes an urban portion that should cover between 3 and 5 km² hosting 50–100 thousand people [37] (2017). Apprehensions of social inequalities have already been pinpointed as well. For instance, in some cases, the concept of “walkable neighborhoods” targeted groups differing in socioeconomic status or age, reducing urban inclusivity [69]. Moreover, Wu et al. [71] denounced that the 15-min concept was not adherent enough to a supply and demand analysis.

3.3. Risk of Gentrification

Alongside the mass housing bubble, residential segregation and gentrification issues have emerged. For instance, the impressive numbers of the real estate industry [20, 70] coupled with housing problems for a large slice of the population, mainly the migrant workers. Shanghai has a relatively low degree of segregation compared to Beijing or Guangzhou [42]. Nevertheless, such issues remain unsolved and generate striking frictions, i.e., unfair compensation, people relocations, and even homelessness [45, 72].

Gentrification and speculation are the two reasons why the Shanghai Master Plan 2017–2035 set the goal of realizing at least 8–10% of housing dedicated to low-rent housing, public rental housing, common-property rights housing, and resettlement housing [64]. The Master Plan for 2035 portrays a scenario in which Shanghai will drastically increase the presence of public space across the city: providing parks and squares covering over 400 m² within five minutes walking distance, furnishing inhabitants with at least 4 m² of community public space per capita; distributing 99% of public facilities

within fifteen minutes walking distance in communities; and reducing to 2,5 km the average travel distance for the daily life needs [64]. Today, Shanghai's developmental agenda sets urban renewal as a necessary and complementary strategy to current estate-driven development to improve living quality by moving toward a human-scale built environment.

Unfortunately, the COVID-19 outbreak and the subsequent *zero-COVID policy* have delayed the roadmap. The harsh restrictions imposed to prevent contagion have exerted tremendous socio-political pressures on Superblocks. They became de facto large-scale trial samples unveiling communities' reactions in concomitance to unexpected and extraordinary situations. In Spring 2022, the images of locked Shanghai showcased the effects of a megalopolis sealed for the second time, with high-rise buildings and gated communities assuming more of the characteristics of reclusion structures rather than family places (Fig. 8). On one side, Superblocks proved the capacity to contain the population, and consequently, the virus spread, but, on the other side, their inhabitants paid a steep price in terms of human experience. Even after the lockdown, reports warned about the side effects of such a prolonged measure on people's mental health, encapsulating an unprecedented condition of fragility in urban residents. Among the impacts on local communities, the dismantling of close social ties and the rebuilding of new ones have taken place, not only dictated by the need to access primary goods but also being subject to authority's control, reshaping neighborhood relationships (Wang 2022Reference Added). Even after the relief from Spring 2022's restriction, the detection of new positive cases has determined new local confinements, creating frustration among many residents who fear new enclosures.

Fig. 8

Distribution of primary goods inside a Shanghaiese Superblock in Minhang District.

Source Sergei Khasikov (April 2022)



These recent experiences prove that the fate of mass housing hosted in the Superblocks still represents a crucial challenge to reshape the pact between citizens and places, especially in an economic system fueled by the real estate industry like the Chinese one.

4. Milan and the Attempts for a 15-min City and Tactical Urbanism Experiments

4.1. Built Environment Transformation

Covid-19 has extensively highlighted Milan's issues regarding poor connections, demanding access to local services, and public open areas. However, the city leveraged this situation to give a fast programmatic response based on the 15-min City strategic document 'Milan 2020. Adaptation strategy' that fostered an innovative urban and mobility plan named *Strade Aperte* (Open Streets) [21, 22] to answer the pre- and post-pandemic problems [1]. Tactical Urbanism tools and examples were a consistent part of this document.

This rapid response based its *raison d'être* on an ongoing renewal process that started with the 2012 PGT *Piano di Governo del Territorio* (the new city Master Plan). The PGT identified the so-called NIL *Nuclei di Identità Local* (Local Identity Cores), a scientific mapping of 88 neighborhoods characterized by geographical, social, and morphological affinities, much smaller than the administrative division of Milan into nine sub-municipalities. Their goal was to underline local problems, identify specific needs, and discover the eventual scarcity of life-quality improving elements, such as public services, green areas, safety, and schools, in a very capillary way.

A second key element in the urban renewal process of Milan appeared in 2018. The City Council launched the *Piano Quartieri* (Neighborhoods Plan), an annual program that defines and finances urban interventions to solve some of the issues underlined by the NIL mapping. This plan included an essential strategy for the future development of the post-pandemic Milan: the *Piazze Aperte* (Open Squares) program. It was an urban project [35] that sought to recover and create new public spaces. The primary tool to implement it was Tactical Urbanism, which allows fast implementation and low-budget interventions that modify public spaces by re-organizing vehicular traffic and parking spaces using temporary and movable urban furniture and ground paintings.

After the first two interventions in two peripheral areas (*Piazza Dergano and Piazzale Corvetto*), 14 more followed in 2019 (Fig. 9). In late 2019, the second edition of *Piazze Aperte* was open to ideas from citizens and associations, but the pandemic outbreak caused the open call to stop temporarily.

Fig. 9

Image of Piazza Spoleto, one of Milan's first Tactical Urbanism interventions.

Photo Riccardo M. Balzarotti (2021)



The Milanese administration converted the pandemic into an occasion to experiment even more with the Tactical Urbanism strategies. The programmatic document *Strade Aperte* introduced the 15-min City objective for Milan to be gradually achieved through two actions. The first was the creation of cycling paths and public open spaces for pedestrians using

Tactical Urbanism tools, i.e., ground painting, temporary separations and urban furniture, and new road sections that accommodate cycling paths just by reshuffling the vehicular and parking lanes order. The second was the possibility for bars and restaurant owners to occupy public surfaces free of charge, even subtracting parking and part of the road, following a specific rule called *Delibera Tavolini* (Dehors Tables Act), issued in May 2020 (Fig. 10).

Fig. 10

Via Borsieri parking occupied by bars and restaurants dehors.

Photo Riccardo M. Balzarotti (2021)



In late 2021, *Piazze Aperte* and *Strade Aperte* spread across Milan with 67 km of new cycling paths [48], and, since 2018, 38 new public squares have been created by subtracting redundant vehicular space. These 38 local interventions, displaced mainly in peripheral areas, led to the re-organization of 22,000 m² of pedestrian open space and the installation of 250 benches, 310 vases with plants, 380 bike stalls, and 35 public tables, and 32 table-tennis units. Despite the quantitative data, it seems too early to have a significant scientific output of indicators, such as traffic and air pollution. Still, it is possible to assess from the on-field surveys that the new squares enormously improve the perception of public space quality. Also, these programs are not the only urban strategy used by Milan to increase life quality standards. Alongside Tactical Urbanism, more traditional urban and strategic planning is making progress in creating bigger-scale interventions, such as public parks and soft mobility infrastructures, as planned in the updated version of the PGT [23].

4.2. Governance

Tactical Urbanism interventions may insignificantly increase services, availability of public open spaces, and cycling paths. The City Council reported a 22.000 m² growth of pedestrian space, which, compared to the size of the sole Piazza Duomo—39.000 m²—tends to mislead the assessment of the value of the Tactical Urbanism program.

Compared to the total number, size, and the many different typologies of public spaces in the metropolitan area [57], the *Piazze Aperte* and *Strade Aperte* initiatives cover a minimal surface. Nevertheless, Tactical Urbanism interventions may have a relevant impact in the following way. First, there is the possibility of constructing high-speed and very low-budget solutions, according to the so-called LQC approach: Lighter, Quicker, and Cheaper [46]. The flexibility of light and not-expensive interventions allows more radical choices that can be adjusted after a period of observation and accordingly be more responsive to the variations of social needs and public perception of the public space [62]. By working on modifying

existing situations, Tactical Urbanism provides the addition of public space while reclaiming it from other previous use, mainly vehicular. Second, the small scale and fast activation allow the capillary diffusion in different areas of the city, which is an excellent strategy to fulfill the 15-min City goal. The City Council mapped the 38 built interventions marking around an 800 m radius, considered the 15-min influence area. According to this map, they could state that 1 out of 2 citizens benefited from the availability of a new public open space.

However, negative outputs occurred. First, using low-budget solutions made Tactical Urbanism interventions subject to fast aging and decaying, vanishing the improvement in terms of quality perception of the public space. The short-term modifications risk becoming ineffective when they lose their original appearance. For long-term results, they must become permanent solutions. The mistake was to consider Tactical Urbanism as the end of a process when it should be the first step due to the ease and rapidity of its implementation. At the end of 2021, three Tactical Urbanism squares became permanent (*Piazza Dergano, Piazza Angilberto II, and Piazza San Luigi*) (Fig. 11), realizing a conversion project able to preserve the original concept while using more traditional and durable materials.

Fig. 11

Piazza Dergano, one of the first two Tactical Urbanism interventions in Milan, become soon after a permanent solution.

Photo Riccardo M. Balzarotti (2022)

Another element that recently showed the necessity of transmutation to permanent solutions is using plants in standalone vases. The current and exceptional drought hitting Northern Italy during spring–summer 2022 led to the death of many plants in vases because they lacked irrigation and a consistent amount of soil (Fig. 12). This situation vanished the effect of using plants as a quality-increase element in terms of aesthetics, air pollution, and ground heat mitigation [28]. Areas reclaimed from traffic with Tactical Urbanism may become new squares with permanent green spaces and plants. This solution can fulfill the goal of other extensive strategic plans for greenery, such as *ForestaMI* [32], launched in 2018, which aims to urban reforestation by planting 3,000,000 new trees in Greater Milan Metropolitan area by 2030.

Fig. 12

Via Sardegna, the plants in vases suffer extreme drought.

Photo Riccardo M. Balzarotti (2022)



A second issue is related to *Delibera Tavolini*. From the public order point of view, the space occupied by the 2,500 new outdoor areas sometimes led to congestion of the sidewalks, noise during the nighttime, and sudden scarcity of parking, generating complaints among the residents. The temporary outdoor facilities, whose realization was the responsibility of the single owners, also had poor quality and aesthetic standards. Other criticisms emerged about the rule's balance between a public utility and private benefits, considering the free-of-charge of the space occupancy a form of relief no longer necessary in the pandemic "normalization." The local administration began charging the occupation fee again from April 2022 with a 20% discount and plans to maintain approximately 80% of the temporary outdoor areas created from 2020, asking for an onerous permanent occupation permit ([Senesi-2022 Reference Added](#)).

Critics raised the safety and utility of paths built by just using paint and reducing the space for car lanes, especially the first and most significant intervention of the *Strade Aperte* program, the cycling path in Corso Buenos Aires the main northern access point to the city center.

Despite the accident increase, which rose from 36 in 2019 to 182 in 2021, the cycling traffic experienced a significant increase. The share of bikes, cars, and motorbikes used in 2019 was 5%, 75%, and 20%, respectively, while it became 27%, 50%, and 23% in 2022. Today the Tactical Urbanism bike lane of Corso Buenos Aires has been adapted in its most dangerous intersection and will become permanent, with safer and stronger concrete separation from the car lanes [\[38\]](#).

4.3. Risk of Gentrification

The pre-and post-pandemic planning strategies are experimental and fast adapting systems that are an innovative part of urban renewal; they are just a tiny part of it. Other large-scale masterplans and guidelines, mainly developed through public-private cooperation processes, generated vast recent urban transformations, which include, alongside private buildings, "public" green areas and facilities, such as real estate (*CityLife Area*, *Garibaldi-Porta Nuova Area*) and cultural-led operations (*Prada Foundation Area*) [\[52\]](#).

The cooperation between the public and the private in creating public spaces will become even stronger in the future with the updated Milan 2030 PGT Master Plan. The most significant challenge is the upcoming development of large urban voids [\[39\]](#) left by the abandoned commercial railway yards.

The benefits of public infrastructures provided by private investors may have benefits in the short term, but in the long term, they may provoke threats of gentrification on the local cores of the NIL. In this idea of maximum diffusion of services and public spaces over the territory, even though market prices usually follow the improvements in citizens' life quality, Tactical Urbanism actions may not significantly influence the real estate market values. The average cost for m^2 in the *Corvetto* area, where one of the first two Tactical squares appeared, shows a minimal variation between 2014 and 2020, passing from a range of 2,700–3,900 €/m² for a second-hand house in excellent conditions to a range of 2,800–3,600 €/m². In the same period, the average price of the *Farini-Isola* district raised from 3,500–4,400 to 4,300–5,600 €/m². This semi-central residential area surrounds the new luxury district of *Garibaldi-Porta Nuova* (whose average prices were almost constant in a range of 7,000–9,500 €/m²), suggesting a correlation with the proximity of the new public (and fancy) infrastructure built and maintained by private developers.

5. Conclusion

This research is a first approximation to monitor, assess, and compare the implementation modalities of urban strategies such as 15-min City, Tactical Urbanism, and Superblocks in three first-tier global cities. We questioned whether such experiences had changed urban environments and mobility patterns when dealing with health, social, and economic inequities.

The case of Barcelona shows how the Superblocks and 15-min City strategies have coped to reorganize the urban environment more sustainably and efficiently. The gradual implementation of Superblock-related measures has been strictly related to several tools launched by the City Council over the last decade. While evidence of improvements has been detected, governance issues and risks of gentrification have risen. The path towards the conversion of the whole city into a great Superblock is still at the beginning, but the local administration has challenged the way of organizing the city, influencing a new way of living. In Shanghai, the 'Community Life Circle' concept—the Chinese version of the 15-min City—has been proposed pioneeringly to strengthen neighborhood relationships in an archipelago-like environment, in which urban expansion follows the unquestioned formula of Superblocks construction. Superblocks proved to work as micro-communities regulated by both endogenous and exogenous forces according to the political will, but also as coercive compounds where

authoritarian rules have been relentlessly exerted. Allegedly, Tactical Urbanism found little application mainly because of the confined possibilities of ground rent.

Conversely, it has been vigorously implemented in Milan, giving a significant impulse to the capacity of turning pandemic-related difficulties into opportunities. Tactical Urbanism's extensive use contributed to the redesign of some peripheral areas, increasing the availability of public space, sometimes becoming the natural starting point of episodes of urban regeneration. At the same time, Tactical Urbanism interventions had a low impact on housing market prices, mainly because of their small-scale, often requested by local communities, their attractiveness limited to the neighborhood scale, and unable to generate competition between districts. However, their fast and cheap implementation allowed the development of many projects simultaneously, reducing polarization effects.

We identified strengths and weaknesses entangled with the 15-min City, Tactical Urbanism, and Superblocks strategies by framing how:

- they transformed the urban environment;
- they were stewarded during the implementation phases;
- they interacted with gentrification issues.

Each cultural, economic, environmental, and political dimension has profoundly influenced urban development, coagulating distinctive forms and implementation modalities that contribute to understanding ongoing urban transitions.

This research has also been an occasion to reflect upon the possible transferability of actions undertaken under the umbrella of the concepts of 15-min City, Tactical Urbanism, and Superblocks as feasible approaches and strategies for governing urban transitions across geographical contexts.

Interventions related to the 15-min City [AQ2](#), Tactical Urbanism, and Superblocks were planned in the pre-pandemic period to sort out inequalities, climate change, and pollution. After the COVID-19 outbreak, air pollution, social vulnerability, and extreme weather conditions were vectors and multipliers of the transmission rate of the virus [\[74\]](#). The pandemic performed as an accelerator, inducing several administrations to invigorate implementing these actions. Many strategies were implemented as temporary solutions, successfully converting into permanent changes for their public health or social benefits.

Our current era imposes to build more resilient cities, adapt, and respond to present and future challenges [\[33\]](#). In front of us are no more only scenarios of risk reasonably determined by past and present experiences. We will face uncertain scenarios whose connotations cannot always be identified by current forecasts. More efforts must be made to imagine, design, and shape our environment toward more sustainable urban transitions.

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