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Evaluating
TACTICAL URBANISM
initiatives through the prism of
PLACEMAKING
A Case study on Milan's "Piazze Aperte"

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“Cities have the capability of providing something for everybody, only because, and only when, they are created by everybody.”

Jane Jacobs,
The Death and Life of Great American Cities

Abstract

In an era of rapidly growing urbanization, with the majority of the global population residing in cities, the significance of public spaces as vital components of urban life has never been more pronounced. Tactical urbanism is an approach to urban planning and design that employs temporary, low-cost, and usually bottom-up initiatives to make fast, incremental enhancements to the public spaces and streets of a city or community. This study examines whether tactical urbanism is capable of producing successful places by evaluating such initiatives based on key placemaking principles and other prominent qualities of public spaces. Placemaking is a multidisciplinary approach to the planning, design, and management of public spaces that prioritizes the needs and desires of the community, aiming to create vibrant, inclusive, and sustainable places that foster a sense of belonging and collaboration among residents.

To achieve this objective, this study recognized the inherent flexibility of placemaking, which seamlessly adjusts to the specific local context. In response to this adaptability, a new comprehensive evaluation model was developed to account for the multifaceted nature of placemaking, drawing from widely recognized evaluation models. The proposed model utilizes a mixed-method approach, including qualitative and quantitative analysis methods. Analytical data is collected through spatial analysis using Geographic Information Systems (GIS), in-depth interviews with key informants offer qualitative findings, and visual observations contribute to both the qualitative and quantitative aspects of the evaluation.

Subsequently, this model was applied to a case study on one of Europe's most renowned tactical urbanism initiatives, the "Piazze Aperte" program of the City of Milan. Piazza Spoleto and Piazzale Bacone, two of its 38 completed tactical urbanism interventions, were selected for the case study, allowing for a comprehensive analysis of their effectiveness in providing an inclusive and functional place for the community. The findings include the identification of best practices for the success of tactical urbanism as well as the challenges, limitations, and areas for potential improvement.

Keywords:

Tactical Urbanism, Placemaking, Public Space, Piazze Aperte, Participatory design

Περίληψη

Σε μια εποχή ραγδαίως αυξανόμενης αστικοποίησης, με την πλειονότητα του παγκόσμιου πληθυσμού να κατοικεί σε πόλεις, η σημασία των δημόσιων χώρων ως ζωτικά στοιχεία του αστικού ιστού δεν ήταν ποτέ άλλοτε πιο κρίσιμη. Η τακτική πολεοδόμηση είναι μια προσέγγιση αστικού και πολεοδομικού σχεδιασμού που χρησιμοποιεί προσωρινές, χαμηλού κόστους και συνήθως "από κάτω προς τα πάνω" πρωτοβουλίες για γρήγορες και σταδιακά αυξανόμενες βελτιώσεις στους δημόσιους χώρους και δρόμους μιας πόλης.

Η παρούσα μελέτη εξετάζει κατά πόσον η τακτική πολεοδόμηση είναι ικανή να παράγει επιτυχημένους τόπους, αξιολογώντας ανάλογες πρωτοβουλίες υπό το πρίσμα θεμελιωδών αρχών του Placemaking σε συνδυασμό με άλλες σημαίνουσες ποιότητες των δημόσιων χώρων.

Το placemaking αποτελεί μία διεπιστημονική μέθοδο σχεδιασμού και διαχείρισης δημόσιων χώρων που δίνει προτεραιότητα στις ανάγκες και τις επιθυμίες της κοινότητας. Στόχος του είναι η δημιουργία ζωντανών, συμπεριληπτικών και βιώσιμων τόπων, προωθώντας το αίσθημα του ανήκειν και της συνεργασίας ανάμεσα στους κατοίκους.

Για την επίτευξη του ερευνητικού στόχου, η παρούσα μελέτη έλαβε υπόψιν την εγγενή ευελιξία του placemaking, το οποίο προσαρμόζεται απρόσκοπτα στο εκάστοτε τοπικό πλαίσιο. Συνεπώς, αναπτύχθηκε ένα νέο λεπτομερές μοντέλο αξιολόγησης που ταιριάζει στον πολύπλευρο χαρακτήρα του placemaking, έχοντας ως γνώμονα ευρέως αναγνωρισμένα και διαχρονικά μοντέλα αξιολόγησης δημόσιων χώρων. Το προτεινόμενο μοντέλο χρησιμοποιεί μια μεικτή μεθοδολογική προσέγγιση, που περιλαμβάνει μεθόδους ποιοτικής και ποσοτικής ανάλυσης. Συγκεκριμένα, αξιοποιεί τη χωρική ανάλυση μέσω της χρήσης γεωγραφικών συστημάτων πληροφοριών (GIS) για την παραγωγή και λήψη αναλυτικών δεδομένων, συνεντεύξεις βάθους με ειδικούς για την παροχή κρίσιμων ποιοτικών πληροφοριών, ενώ παράλληλα οπτικές καταγραφές που συμβάλλουν στη λήψη και ποιοτικών και ποσοτικών στοιχείων.

Στη συνέχεια, το μοντέλο αυτό εφαρμόστηκε σε μια μελέτη περίπτωσης για μια από τις πιο γνωστές πρωτοβουλίες τακτικής πολεοδόμησης στην Ευρώπη, το πρόγραμμα "Piazze Aperte" της πόλης του Μιλάνου. Η Piazza Spoleto και η Piazzale Bacone, δύο από τα 38 ολοκληρωμένα έργα τακτικής πολεοδόμησης του έργου, επιλέχθηκαν για τη μελέτη περίπτωσης, επιτρέποντας μια ολοκληρωμένη ανάλυση της αποτελεσματικότητάς τους όσον αφορά την παροχή ενός συμπεριληπτικού και λειτουργικού χώρου για την κοινότητα. Τα ευρήματα της έρευνας περιλαμβάνουν την αναγνώριση βέλτιστων πρακτικών για την επιτυχία της τακτικής πολεοδόμησης, καθώς επίσης προκλήσεις, περιορισμούς και τομείς για πιθανή βελτίωση.

Λέξεις-κλειδιά:

Τακτική Πολεοδόμηση, Placemaking, Δημόσιος Χώρος, Piazze Aperte, Συμμετοχικός Σχεδιασμός

Preface

The motive for this thesis stems from my personal perspective regarding the way urban regeneration projects are usually implemented in Greece. Top-down approaches do not only constitute the norm but are also considered the only practical option. More specifically, participatory design and tactical urbanism are not commonly followed methods in Greece and often end up being limited to pilot projects.

My exposure to and interest in the principles and practices of participatory design began through the "Urban Sociology" course during the extended periods of quarantine imposed by the Covid-19 pandemic. It was a time when the significance of multi-functional, comfortable, inclusive, and accessible public spaces became more apparent than ever. People were confined to their residences and were allowed limited access to outdoor areas only within the boundaries of their municipality. As a result, the inequalities of urban fabrics came forth as residents of densely built-up areas struggled to find appropriate spaces for physical activity, relaxation, and social interaction. Conversely, those living in more spacious and well-designed neighborhoods had greater access to such amenities.

This issue highlighted the necessity for the availability of useful public spaces within close proximity to each neighborhood, or at least within a reasonable walking distance. However, not many cities around the globe possess the financial resources to rejuvenate their public realm through large-scale, definitive, and infrastructural projects. In such cases, tactical urbanism may serve as an expedient solution for a holistic enhancement of public spaces, not only by creating new open living hubs but also by improving the walkability and overall quality of existing public spaces.

By going abroad to examine alternative approaches in person, I aspired to gain and offer new perspectives on what is feasible in urban design and community development. This cross-cultural exchange provided an opportunity to learn from successful initiatives implemented in another country in order to potentially adapt them to a local context in the future.

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1. Introduction

The extraordinary worldwide repercussions and disruption caused by the COVID-19 pandemic, particularly in urban areas, forced nations worldwide to rethink the future of cities and reflect on the types of cities necessary to maintain societies in an ever-growing urban world (UN, 2022). Therefore, the United Nations has established a vision of creating "cities for all", which, among others, are participative, foster civic involvement, and instill a sense of belonging and ownership in all of their people. A key priority is to provide safe, inclusive, accessible, green, and high-quality public places that are welcoming to families, to improve social and intergenerational interactions, cultural expressions, and political engagement, as well as to build social cohesion, inclusiveness, and safety. Ensuring the needs of all people in diverse societies and recognizing the unique needs of vulnerable minorities are crucial aspects of creating inclusive public spaces (UN, 2022).

Alternative urban design methods that involve participatory approaches and community engagement become essential in creating inclusive and functional public spaces (Vietrova et al. 2023). One such method is tactical urbanism, which involves low-cost, temporary interventions that can be quickly implemented and easily adjusted based on community feedback (Bordin, 2023; Lydon & Garcia, 2015).

By engaging local residents and stakeholders in the process, tactical urbanism allows for a more inclusive and participatory approach to revitalizing public spaces, not only addressing immediate needs but also serving as a catalyst for long-term equitable development in cities (Lydon & Garcia, 2015).

1.1. Research Objective

To effectively promote tactical urbanism as an innovative urban design process, it is essential to provide evidence that clearly showcases its success and positive impact on creating quality places. Therefore, a thorough evaluation of implemented initiatives is vital in order to provide valuable insights into their effectiveness and additionally help identify areas for improvement.

In essence, this research aims to:

Examine the effectiveness of tactical urbanism initiatives in creating successful public places using fast, low-cost, and temporary methods based on key placemaking principles and other prominent qualities of public spaces.

2. Literature Review

2.1. Public Space

In Ancient Greece the term “public” referred to all entities that could be seen and heard by everyone in the community, and thus ascribed them profound political significance due to their deep social identities (Tzortzi, 2010). Ancient Agora, the primary form of public space, was not just an urban center but the manifestation and essence of the free city, the symbol of democracy, where citizens participated in the public sphere through their voices and actions (Stanilov, 2007; Tzortzi, 2010). In Europe, the following forms of classic conceptions of public space were the Roman Forum, the medieval market squares, the piazzas of the Renaissance, and the streets and coffeehouses of the modern city (Stanilov, 2007; Koch & Latham, 2012, Mahmoud, 2022).

However, it was not until the research of Jane Jacobs (1961) and William Whyte (1980) that a comprehensive understanding of public spaces’ role in the new urban way of living was established (Mahmoud, 2022). Through their findings, it was established that their cultural openness and tolerance made them necessary for people’s quality of life. Later, Gehl (1987) defined the fundamental characteristics of approaching them as “responsive, democratic, meaningful, open, and accessible to everyone for gathering and socializing”. This concept has been the basis for various definitions of public space that are distinguished by issues of ownership, control, access, and use (Mahmoud, 2022).

Public space is an essential component of the public sphere, and it is gaining popularity in a variety of social science and humanities areas. Each academic field sees the world through a distinct lens, with specific interests and concerns at the forefront. For example, political scientists often concentrate on democracy and rights; geographers on sense-of-place and 'placelessness'; anthropologists and sociologists on the historical creation and subjective value of place; and legal academics on access and control in public areas (Carmona, 2021).

The Charter for Public Space (2013) has outlined the three qualities that approach the relative “publicness” of space in terms of:

Ownership: whether the space is publicly or privately owned, and whether and in what sense it constitutes “neutral” ground.

Access: whether the public has access to the space. This poses the question of whether a place becomes private when an admission fee is charged: consider, for example, the difference between museums for which an entry fee is charged and for which no entry fee is charged: is one public and the other not, or are neither public. While, in urban design terms, “accessibility” is the capacity to enter and use a space, not all public spaces are “open” and accessible to everyone.

Use: whether the space is actively used and shared by different individuals and groups.

For this research public spaces are considered to be all urban areas that are not private, are open to the public without any form of payment or restriction and are actively used and shared by different individuals and groups. These spaces include

parks, plazas, sidewalks, streets, playgrounds, parks, gardens, and other communal areas within cities.

2.2. Why Public Space

Due to the exponential growth and increasing social and cultural complexity of contemporary cities, public spaces are often expressed through issues such as segregation, rampant construction, and deficiencies in guaranteeing housing and city rights (Mehta, 2020).

Public space is not only a public good, or a collective resource, it is a medium for social exchange and common understanding (Santiago-Pineda, 2022). Countries in not only the Global South but also developed nations are grappling with the challenge of revitalizing their urban areas and creating spaces that foster social interaction and cultural exchange (Hernández-García et al., 2018).

Consequently, the UN-Habitat (2016) has brought public spaces to the forefront of academia and the new urban agenda, focusing on their role as quality-of-life indicators in urbanization. In 2011, member states mandated UN-Habitat to consolidate agency-wide work on public space, develop and promote policies, coordinate knowledge dissemination, and directly assist cities in public space initiatives.

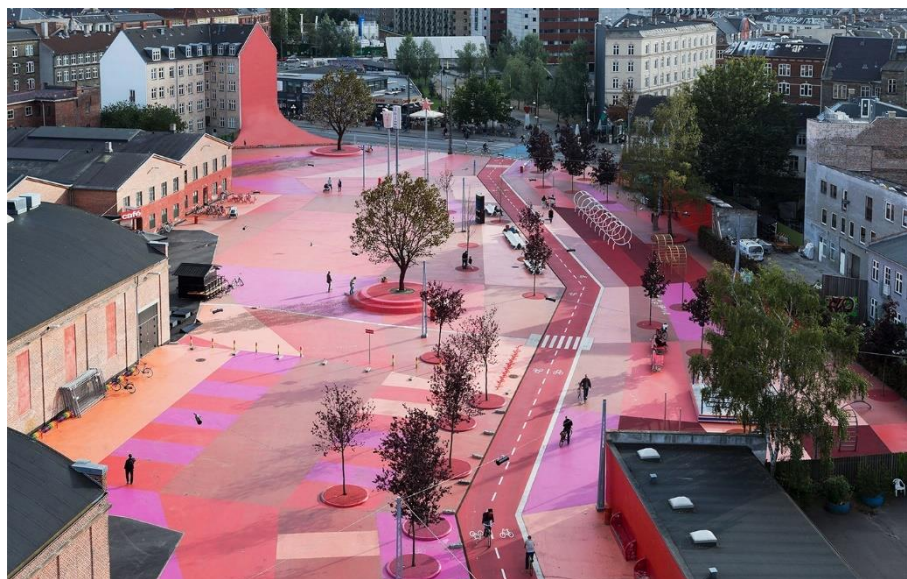


Fig. 1. Superkilen, a contemporary public space in Copenhagen, designed to bring immigrants and locals together. Source: archdaily.com

2.3. Placemaking

The concept of placemaking stems from Jane Jacobs' and William H. Whyte's research in the United States. The implementation of their ideas was first carried out by Fred Kent and Kathy Madden, founding members of the Project for Public Spaces, who made this approach famous with the case of Bryant Park in New York (Placemaking Plus, 2019).

The definition put forth by PPS (2010) states that Placemaking serves as a catalyst for individuals to collectively envision and revitalize public places, positioning them as the central hub of each community. Placemaking is a collaborative process aimed at enhancing the bond between individuals and the spaces they collectively inhabit. It involves shaping the public realm in a manner that optimizes the creation of shared value. Placemaking not only serves to enhance urban design, but also fosters innovative utilization patterns, with a specific focus on the physical, cultural, and social characteristics that delineate a place and contribute to its continuous development (PPS, 2022).



Figure 1. Bryant Park, New York (formandplace.com)

Wyckoff (2014) explored the origins of the main principles of placemaking and the adoption of the term by architects, urban planners, and urban designers during the 1970s. In this publication, the author presented a typology consisting of four main distinct types of placemaking. Meanwhile, a simple definition of what is referred to as "standard" placemaking was given as "the process of creating quality places that people want to live, work, play, and learn in."

The other 3 specialized variations of placemaking are categorized as strategic, creative, and tactical placemaking differentiated by the means, goals, and outcomes they aim to achieve (Wyckoff, 2014). Strategic placemaking focuses on long-term planning and development, aiming to create sustainable and inclusive communities. Creative placemaking emphasizes the integration of arts and culture into the built environment, fostering creativity and community engagement, while tactical placemaking involves temporary interventions and quick solutions to transform vacant spaces into vibrant places, often driven by community-led initiatives. Each type of placemaking offers unique approaches and strategies to enhance the quality of urban spaces, with each one focusing on specific aspects such as physical form, land uses and functions, and social opportunities.

A table that briefly defines and differentiates the four types of placemaking is presented below illustrating the relationship of the four specialized types of placemaking (Wyckoff, 2014).

Table 1. Comparison of the four types of placemaking (Wyckoff, 2014).

The problem	The solution	The playoffs
Standard Placemaking		
Communities are not utilizing public spaces efficiently to build vital, energetic, and livable communities where people want to live, work, play, and learn.	Broad public and stakeholder participation in rejuvenating, reusing, and developing public spaces through short and long term strategies based on social engagement and new urbanist design concepts.	More quality places with quality activities and a strong sense of place. More vital, vibrant and livable public spaces, communities and regions that residents, businesses and visitors care deeply about.
Strategic placemaking		
Communities are not competitive in attracting and retaining talented workers.	Revitalization that increases housing and transportation choices, and urban amenities to attract talented workers.	Faster gains in livability, population, diversity, jobs, income and educational attainment, than by standard placemaking.
Creative placemaking		
American cities, suburbs and small towns confront structural changes and residential uprooting.	Revitalization by creative initiatives that animate places and spark economic development.	Gains in livability, diversity, jobs, and income. Innovative products and services for the cultural industries.
Tactical Placemaking		
Many physical improvements are expensive and policy-makers are understandably reluctant to commit resources due to uncertain risks.	Test various solutions using low-cost proxies to gauge effectiveness and public support	The public and policy-makers can actually see the result and degree of support for various options before committing permanent resources.

Tactical placemaking refers to a temporary or low-cost approach to creating public spaces. It involves using temporary materials or structures to transform underutilized or neglected spaces into vibrant, community-oriented areas. Examples of tactical placemaking initiatives include pop-up parks, guerrilla gardening, and street art installations. The goal of tactical placemaking is to quickly and inexpensively create public spaces that are responsive to the needs and desires of the local community (Wyckoff, 2014). Standard placemaking, on the other hand, is a more permanent and traditional approach to creating public spaces. It typically involves a more

structured and planned approach, with a focus on designing and building public spaces that will be functional, attractive, and sustainable over the long term. Examples of standard placemaking initiatives include the development of new parks, public plazas, and streetscapes. The goal of standard placemaking is to create high-quality public spaces that will enhance the social, economic, and cultural vitality of the surrounding area. The goal of tactical placemaking is to quickly and inexpensively create public spaces that are responsive to the needs and desires of the local community (Wyckoff, 2014).

Standard placemaking, on the other hand, is a more permanent and traditional approach to creating public spaces. It typically involves a more structured and planned approach, with a focus on designing and building public spaces that will be functional, attractive, and sustainable over the long-term. Examples of standard placemaking initiatives include the development of new parks, public plazas, and streetscapes. The goal of standard placemaking is to create high-quality public spaces that will enhance the social, economic, and cultural vitality of the surrounding area (Wyckoff, 2014).

In summary, tactical placemaking is a temporary and low-cost approach to creating public spaces that is focused on quick and responsive solutions. Standard placemaking, on the other hand, is a more permanent and traditional approach to creating public spaces that is focused on long-term sustainability and community impact.

However, in all cases, the conceptualization of placemaking can be challenging due to its intricate and interconnected nature. The methods and implementation of placemaking inherently involve multiple facets and complexities. These approaches can be categorized as either top-down, initiated by governmental agencies, or bottom-up, originating from grassroots or citizen movements (Mahmoud, 2022).

2.4. Tactical Urbanism

The term "tactic" was initially introduced to the field of urban planning by the renowned French scholar Michel de Certeau (1984), who examined the use of public space and the tactical ways by which individuals navigate and function in their everyday life.

"Tactical" relates to small-scale actions serving a larger purpose and specifically, **tactical urbanism** is defined as an approach to neighborhood building and activation using short-term, low-cost, and scalable interventions and policies (Lydon & Garcia, 2015). It is a strategy employed by various organizations, such as governmental bodies, commercial enterprises, non-profit organizations, civic associations, and individual actors (Lydon & Garcia, 2015). Actions can be categorized as tactical when they include a clear vision, are grounded in a specific local context, demonstrate a short-term commitment, entail a low level of risk but offer great potential rewards, and are backed by a supportive community. Ideally, social innovation is fostered through the facilitation of community cohesion, wherein neighbors are brought together. Over the course of an extended duration, pop-up interventions are designed with the objective of obtaining official approval or instigating transformative modifications (Puttkamer, 2020). The approach incorporates open and iterative development methodologies, optimal resource utilization, and the innovative possibilities facilitated by social interaction (Lydon & Garcia, 2015).

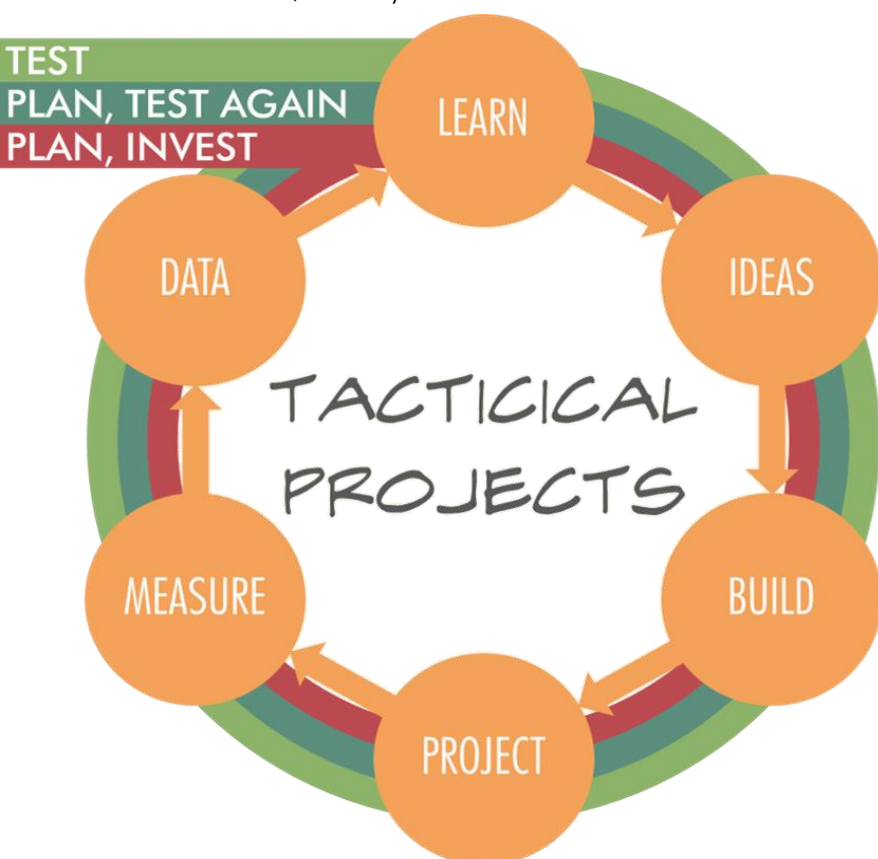


Fig. 2 The tactical project iterative processes.
Source: Author, inspired by Street Plans

Numerous terms have been ascribed to similar approaches, like guerilla urbanism, DIY urbanism, insurgent urbanism, etc. All these methods are often merged into a broader spectrum of "tactical urbanism", since they all share a common base, e.g., they all initially function as unofficial and sometimes illegal interventions into the public space by people who take matters into their own hands. However, in recent years, public administrations have adopted the term to describe temporary or experimental interventions that deviate from traditional planning practices (Nello - Deakin, 2023). However, as expressed in Lydon's and Garcia's book, tactical

urbanism’s low-cost and temporary interventions’ long-term goal is to become acknowledged by public or private agencies and bring permanent solutions to the city’s challenges.

Therefore, Tactical Urbanism could be described as a learned response to the traditional way of city building process. For residents, it gives them the opportunity to promptly reclaim, modify, or reconfigure the public spaces they live in, but also for developers to gather design intelligence, advocacy organizations to demonstrate potential, and the government to implement best practices quickly (Lydon & Garcia, 2015). As a result, and despite its informality, this approach has gained disciplinary attention as a main paradigm in the contemporary city debate (Rossiti et al., 2023).

2.4.1. Tactical Spectrum

The "Tactical Spectrum" chart illustrates a range of intervention types based on their level of officiality. The interventions on the left refer to non-sanctioned activities, which are projects that can be realized by all people interested in changing the urban space they inhabit without the requirement of support or approval from authorities, allowing for complete independence. At the other end of the spectrum are listed the interventions in need of assistance or approval from the local city government. Failure to get such support or approval may lead to traffic violations due to the intricate and unique nature of these initiatives. When strategizing a tactical urbanism intervention, it is necessary to take into consideration various factors including financial allocation, permit acquisition, logistical aspects, and the extent of cooperation the local government is willing to provide. This approach ensures the avoidance of potential technical and legal difficulties (Lydon & Garcia, 2015).

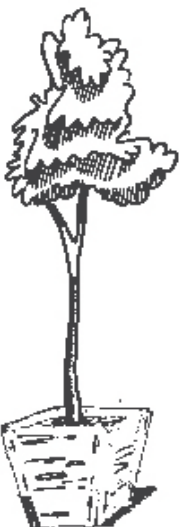
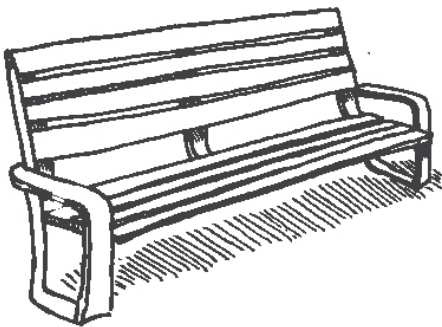
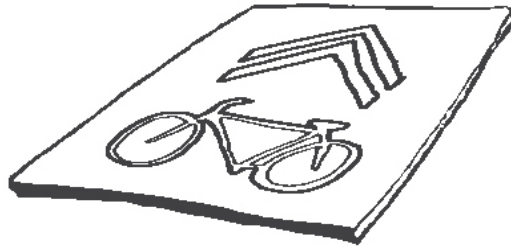
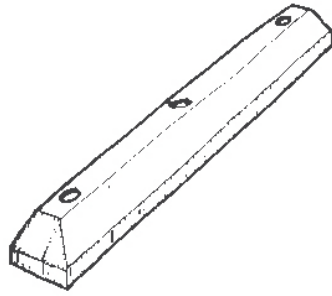
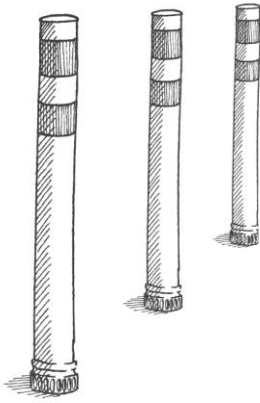


Fig. 3. The tactical spectrum. Source: Author, inspired by Street Plans

2.4.2. Advantages of Tactical Urbanism

One of the primary benefits associated with tactical urbanism interventions is their inherent reversibility, enabling the urban landscape to be restored to its original state in case of failure or rejection from the public. The flexibility of such innovative interventions both in their design and execution phases often makes them more effective than traditional masterplanning in tackling modern urban challenges. The implementation of long-term plans sometimes requires a significant amount of time, spanning several years. However, the use of tactical urbanism can quicken this process by adopting a phased and iterative approach to project implementation (Lydon & Garcia, 2015). Additionally, Tactical urbanism, especially bottom-up examples, has also been promoted for its capacity to generate social capital within a community, offer possibilities for local creativity and art, avoid the lengthy bureaucratic process of effecting change, and establish more democratic methods of city-building.

EXAMPLES OF TOOLS & MATERIALS



DELINEATOR POSTS

Create physical or visual barriers between motor vehicles and pedestrians.

PARKING STOPS

Low, mountable plastic rubber, or concrete curbs that can be bolted to pavement and used as barrier element.

SPRAY CHALK/PAINT

Temporary spray marking chalk that can be used for creating crosswalks and bike lanes.

HOMEMADE / GOVERNMENT STENCILS

Cardboard or official stencils to guide the application of various bikeway/pavement markings.

CITY BENCH

Provides needed seating in parks plazas and along streets. May be borrowed for demonstration projects or installed semi-permanently for pilot and interim design projects.

SIGNS

After consulting with the local guidelines for traffic control signs requirements, signs will enhance safety and will help people understand how to use a new public space type they never may have never seen before.

POTTED GREENERY

Small trees can be a great option for short-term aesthetic upgrade and shade protection. Small / medium plants can be borrowed or purchased and used as a temporary greening or barrier element.

EXAMPLES OF INTERVENTIONS

CREATION OF NEW SQUARES

Through changes to the roadway network and street design, including limiting vehicular access to certain areas to create new public space.



Source: ajuntament.barcelona.cat

ACTIVATION OF UNDERUSED AND UNEQUIPPED PUBLIC SPACES

Through furnishing, improving, and adding new functions with the aim of encouraging community spirit, as well as promoting cultural and group activities that can add value and life to that space.



Source: nacto.org

CREATION OF CYCLE LANES

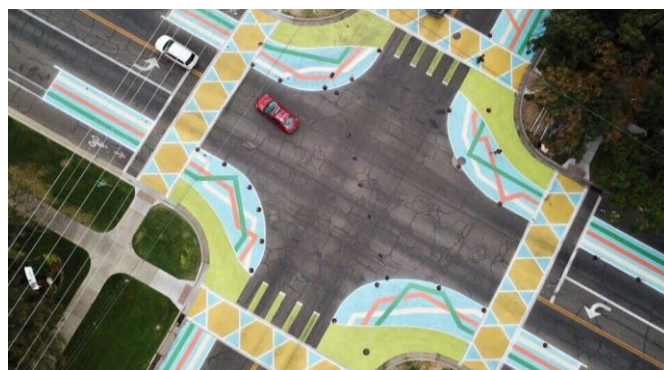
By using prefabricated materials, signs, and markings, to facilitate cycling in particular in 30km/h zones, one-way streets, and areas identified by the Sustainable Urban Mobility Plan (SUMP).



Source: vermont.org

EXTENSION AND ENHANCEMENT OF PEDESTRIAN AREAS

Through measures, such as narrowing roadbeds, removing underused parking spaces, adopting traffic calming measures, creating more 30km/h zones, and redefining intersections to improve soft, pedestrian and bike mobility, in particular around schools and nurseries.



Source: bikeutah.org

POP-UP PARKS

Microparks occupying parking spaces that provide landscaped and small communal spaces.



Source: civildesigncenter.org

2.5. International Case studies

To best describe a concept or a practice, case studies are one of the most effective methods to do so. Since the thesis focuses on public spaces created through the tactical urbanism approach that do not only function as passages but as places to linger, the case studies chosen are essentially tactical squares and parks. Therefore, all of the international initiatives presented are of similar scale, have similar functions, and are sanctioned.

2.5.1. Superilles, Barcelona

The Eixample district in Barcelona has served as the reference case for introducing the “superblock” model of traffic calming, which has received considerable attention in international media and urban planning circles (Bausells, 2018; O’Sullivan, 2020).

The first official superblock in Barcelona was implemented in 2017 in the neighbourhood of Poblenou followed by the more recent interventions in the Sant Antoni area of the Eixample district. During the Covid-19 pandemic, a major opportunity arose for the extensive implementation of tactical interventions aimed at promoting active modes of transportation as well as the creation of new open public spaces in urban areas across the globe (King & Krizek, 2021; Nello-Deakin, 2022).



Fig. 4. Tactical urbanism in the Poblenou Superblock, Barcelona.

Source: ajuntament.barcelona.cat



Fig. 5. View of the San Antoni superblock, Barcelona. Source: IFLA EU

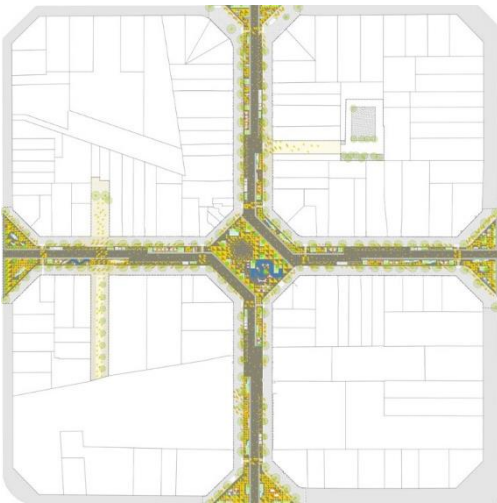


Fig. 6. Intervention plan of the San Antoni superblock, Barcelona. Source: IFLA EU

These measures sought to facilitate social distancing by increasing the amount of public space and providing active travel alternatives to public transport, as well as to try and prevent a potential surge in private motorised vehicle use in the wake of the pandemic. The city administration's urban mobility vision strived to decrease the presence of motorized vehicles in the city center by introducing "superblocks" and "green corridors". The majority of these interventions were executed quickly in accordance with the concepts and aspects of tactical urbanism, which include the use of materials such as paint and cement blocks, as opposed to the more time-consuming process of traditional street redesigning (Nello-Deakin, 2022). The fundamental concept behind this initiative is the complete reversibility, flexibility, and capacity to recycle urban materials. In order to achieve this objective, a comprehensive plan was developed that included the integration of a diverse range of adaptable urban furniture items, a visual style guide including patterns, signs, and communication, and a systematic installation technique (IFLA Europe, 2020)

According to a recently released technical analysis by the Municipality of Barcelona, average daily traffic (ADT) in the Sant Antoni superblock decreased by 15% between 2017 and 2019, and by 21% between 2017 and 2022 (Nello-Deakin, 2022).

Moreover, the lively street culture has resulted in a positive and beneficial atmosphere within the local community, prompting both residents and businesses to assume responsibility for the use and upkeep of the streets. The combination of several factors, including a notable decrease in pollution, the growth of urban green spaces, and the promotion of pedestrian and bicycle activities, contributes to the emergence of a transformed urban environment characterized by civic axes and plazas inside the Eixample district. Overall, this new landscape fosters a more compassionate, environmentally friendly, and health-conscious urban setting (IFLA Europe, 2020).

2.5.2. Pavement to Plaza, Vancouver

Drawing inspiration from the New York City Plaza Program and the City of San Francisco's Pavement to Parks Program, the City of Vancouver has initiated the "Pavement-to-Plaza" program for the conversion of various street intersection transformations into places for people. This is another municipal project that follows the worldwide tactical urbanism movement, which aims to investigate faster and cost-effective methods of generating places for social interactions and fostering community building (Sitelines, 2019).

In 2012 the City Council approved Vancouver's Transportation 2040 Plan, which introduced the Pavement-to-Plaza Program as a project that aims to deliver public places with significant effect at a relatively cheap cost by repurposing underutilized roadway rights-of-way (Sitelines, 2019). In the next year, the City's West End Community Plan further supported the prospect of transforming pavements into plazas, granting the program its final Council approval (Reardon, 2019).



Fig. 7. Bute-Robson Plaza entrance, Vancouver.
Source: Daily Hive

Construction of Jim Deva Plaza on Bute Street just south of Davie Street, Vancouver's first pavement-to-plaza project, was completed in 2016 following public engagement by Kathleen Corey EIT BCSLA Intern and William Dunn MCIP RPP and a pilot installation. Vancouver's second pavement-to-plaza, Bute-Robson Plaza was installed in 2017, and its third, 14th-Main Plaza was installed in the following year (Sitelines, 2019).



Fig. 8. Bute-Robson Plaza, Vancouver.
Source: happycities.com

In order to evaluate the well-being effects of the City's tactical urbanism initiative, the municipality launched a survey study in 2019 on users' perceptions. The objective was to examine the influence of individuals' presence in these plazas on their perceptions of sociability, safety, trust, inclusion, and place attachment (Sitelines, 2019). To have a better understanding of the success of the

initiative a comparative analysis was conducted, comparing the results with surveys conducted in three proximate control locations featuring conventional street designs (Reardon, 2019).

The findings of the study indicate that the implementation of the Pavement to Plaza initiative has a notable and favorable impact on social welfare. Approximately 90%

of participants in the plazas expressed agreement or strong agreement with the statement "This is the type of location I would opt for when meeting friends," in contrast to 60% of participants at the control locations (Reardon, 2019).

The plazas were seen as locations that fostered a sense of inclusiveness and openness. The findings indicate that a much higher proportion of individuals, specifically 82%, expressed agreement with the statement "this place reflects my community" in the plazas, in contrast to just 65% at the control site. This finding suggests that plazas have a favorable influence on the feeling of belonging experienced by people. In the meantime, a notable majority of 83% of those engaging in the plaza activities expressed agreement or strong agreement with the sentiment of feeling welcomed in this particular location, in comparison to the somewhat lower percentage of 81% seen at the control locations (Reardon, 2019). Collectively, these findings indicate that the plaza areas had a significant influence on the perception of being welcoming and inclusive (Sitelines, 2019; Reardon, 2019).



Fig. 9. The 14th-Main Plaza, Vancouver. Source: shapeyourcity.ca

The use of basic tools such as paint, plants, and movable seats in the process of reclaiming underutilized road space played a significant part in the Pavement-to-Plaza Wellbeing Assessment. These interventions not only fostered trust, safety, and a sense of welcoming but also enhanced social interactions (Reardon, 2019).

2.5.3. Green Virus, Medellin

The city of Medellín has been confronted with significant levels of pollution and an ongoing pattern of replacing green spaces with gray infrastructure. The objective of the Green Virus initiative was to enhance the presence of green spaces within the urban landscape of Medellín. This was set to be achieved through the creation of a number of "green parks" that include a combination of abundant biodiversity, furniture constructed from recycled materials, and artistic elements. This project aims to improve the environmental conditions of the city and the quality of life of its inhabitants, guarantee spaces for recreation, and strengthen community ties (pepinieres-urbaines, 2021).



Fig. 10. Intervention in San Antonio, Medellín. Source: Ciudad Creativa

The project started in 2016 and is still in progress, with more green parks being planned and developed and the ongoing maintenance of the existing ones. Each of the green parks involves different collaborations, including local private and public stakeholders, international stakeholders and civil society. The underlying concept behind these interventions is that they are made by the community for the community, with some projects being designed with a particular focus on certain groups of people, such as the children's playground, located in the Niquito district (pepinieres-urbaines, 2021).

All interventions are temporary and reversible and implemented through participative processes following an experimental and innovative strategy. This project was initiated by citizen's collective creativity and aims to empower local residents to take ownership of their public spaces. By involving the community in the design and implementation of these interventions, it fosters a sense of pride and responsibility among the residents, ultimately leading to a stronger and more cohesive neighborhood (Equipo Plataforma Urbana, 2016).

When there is a reported lack of green spaces in a particular street or area, Ciudad Creativa, the urban design studio supporting the project, actively seeks for a community that is eager to engage in a collaborative effort to enhance their neighborhood via a "co-creation project." Green parks are collaboratively generated through the assistance of several community members and volunteers (Equipo Plataforma Urbana, 2016).

The tools used are recycled materials for the creation of urban furniture, art, and painting, as well as various kinds of potted vegetation. The interventions serve as both an environmentally sustainable solution for the city and a platform for many activities, including social meetings, children's playgrounds, and painting workshops for flowerpots, walls, and streets. By the first year of the project's launch, the organization had already successfully planted over 15 trees and introduced 230 types of plants, demonstrating a genuine commitment to integrating nature-based solutions within the framework of tactical urbanism (Ciudad Creativa).



Fig. 11 Intervention next to the Pabellón del Agua tram station, Medellin. Source: Ciudad Creativa



Fig. 12. Different view of the intervention next to the Pabellón del Agua tram station, Medellin. Source: Ciudad Creativa

The original concept of expanding green spaces throughout the urban landscape was successfully realized, with many expressing optimism for its further implementation in other regions of the city, therefore fostering a more environmentally conscious and compassionate urban environment. The Green Virus initiative is regarded as exceptionally effective as a result of its widespread adoption by the local community. Both commercial and governmental organisations consider it to be a cost-effective and smart approach to rejuvenating the degraded public spaces in Medellin (Ciudad Creativa).

3. Methodology

3. Methodology

In order to answer the research question, it was essential to establish a well-structured methodology that would be able to be replicated in different case studies in similar contexts. To successfully formulate the framework that fits best for evaluating tactical urbanism initiatives, it was crucial to examine different Public Space evaluation methodologies from existing literature.

The existing assessment frameworks that were chosen as the foundation of the methodology developed later will be presented in the first chapter. This chapter contains a matrix that shows which elements of each methodology were chosen to be incorporated in the finalized one, as well as an explanation of what each indicator means for the framework structure. The next chapter contains a matrix that presents which qualities of each methodology were chosen to be incorporated in the final one, as well as an explanation of what each indicator refers to and why it was chosen based on existing literature and the author's personal interpretation. The tools used to evaluate each index are outlined in the third chapter, along with a collective matrix.

3.1. Public Space Evaluation Methodologies

3.1.1. The Place Diagram

The Project for Public Spaces (2010) utilized various methodologies, including observation, surveys, and interviews, to investigate and enhance public spaces, drawing upon the research of Whyte (1980) and Jacobs (1961). The aim of these efforts was to foster dynamic outdoor environments that are appealing to pedestrians (PPS 2000), with their work being regarded as instrumental in laying the foundation for transforming the design and development of public spaces. According to the PPS (2003), their placemaking process is grounded in the notion that the mere development of design ideas and elements for enhancing or establishing a public space is insufficient. Instead, they emphasize the importance of ensuring that any improvements made should align with the values and requirements of the community. Since its establishment in 1975, the PPS has recognized the significant role of societal necessities in shaping the perception of urban spaces that are integral to pedestrians' daily lives. Consequently, in an effort to address the challenges encountered by urban communities, the organization posed the controversial query: "What makes a Great Place?"

In order to address this question, the PPS conducted an extensive assessment of numerous public spaces across the globe. As a result, they developed a diagram that encompasses four key urban attributes: (1) Sociability; (2) Uses and Activities; (3) Access and Linkages; and finally, (4) Comfort and Image (PPS 2003b). This is visually represented in their "Place Diagram".

The diagram deviates from four essential characteristics that can be examined through both qualitative (referred to as intangible) and quantitative (referred to as

measurable) criteria. It is important to acknowledge that the "Place Diagram" is a comprehensive method for evaluating the characteristics of a public space. The primary objective of the diagram is not to provide definitive solutions, but rather to assist local designers and decision-makers in evaluating the key elements that contribute to the success of a public space (Santos-Nouri & Costa, 2017).

WHAT MAKES A GREAT PLACE?

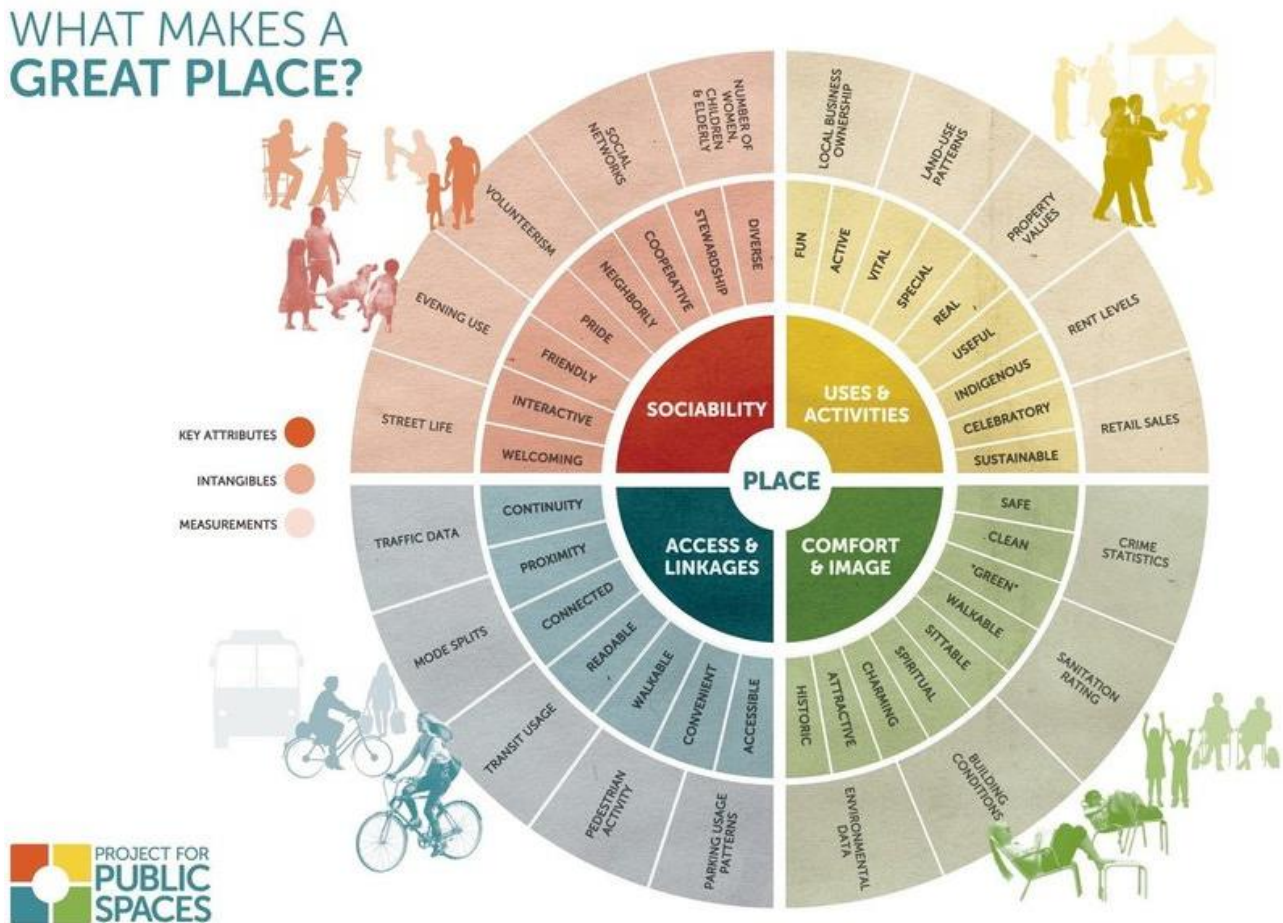


Fig. 13. The place diagram. Source: Project for Public Spaces.

3.1.2. Public Space Index

The Public Space Index is an evaluation model developed by Vikas Mehta (2014) who combined the framework that Gehl (1987) proposed to understand the use and sociability of public space, together with the definition of what an ideal public space should be, put forth by Carr et al (1992). Mehta's theoretical framework argues that "good public space is accessible and open, meaningful in its design and the activities it supports, provides a sense of safety, physical and environmental comfort and convenience, a sense of control, and sensory pleasure". The model consists of five qualities that a public space should have: inclusiveness, meaningful activities, comfort, safety, and pleasurable.

Mehta endorsed Mitchell's (2012) suggestion that the utilization and embrace of space by a cluster of individuals to fulfill their needs is what makes the space public and added that true inclusiveness of a space is established only when it is engaged in some form of activity. Even though public spaces have never been fully inclusive and may never be able to support all activities and behaviors and be welcome to all kinds of people, the concept of an inclusive and accessible public space is a vital ideal. The PSI is used to evaluate the inclusiveness of public space by assessing the level of its accessibility to various social groups and individuals in relation to its ability to support their diverse activities and behaviours. However, the author emphasizes the importance of having not just any kind of activities in a space but meaningful ones, which he defines as activities that are symbolically and culturally meaningful to individuals or groups.

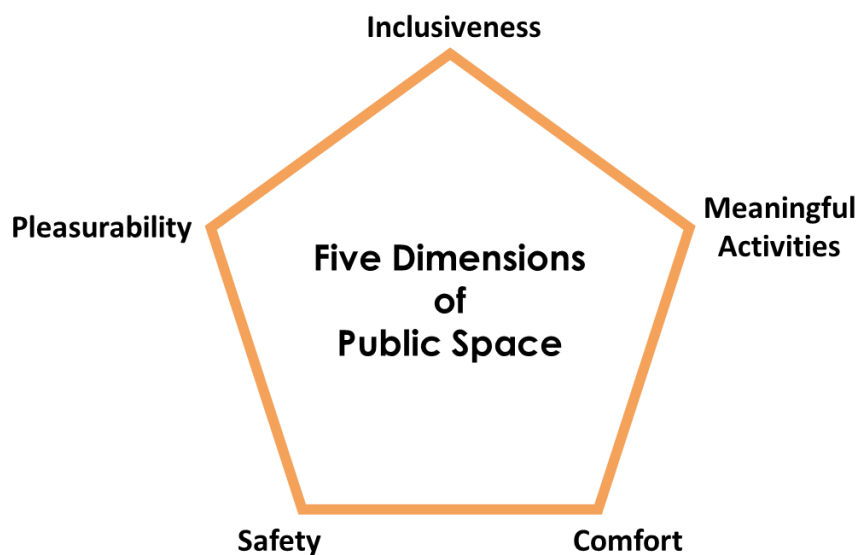


Fig. 14. The 5 dimensions of Public Space according to Mehta (2014).
Source: Author

Meaningful activities of public spaces are evaluated based on the ability of space to support community-gathering third places, the suitability of the layout and design of the space to support activities and behaviour, the number of businesses that offer food and drinks, and the variety of businesses.

Safety is measured by rating the perceived safety of public space users throughout the day, the appropriateness of physical condition and maintenance of space, and whether surveillance measures have a positive impact on the users' feeling of safety or not.

PSI considers both environmental and physical comfort and convenience, by measuring the potential physiological level of comfort the public space can provide to its users. Lastly, the index evaluates what is defined as pleasurability of public space by assessing its imageability, spatial quality, sensory complexity and attractiveness.

Mehta thoroughly studied public spaces across the US using structured and semi-structured observations throughout the time of day, week, and year. The data collected from the observations and the users of public spaces brought insight into the importance of numerous of their characteristics, making it possible for the researcher to weigh them accordingly.

There are 45 variables in total that are used in order to measure not only observed behavior but also perceptions of public space. Particularly, the index is shaped by different variables each time depending on the category of public space e.g. streets, attached or detached plazas, squares, and parks.

3.1.3. Revised Place Diagram

The conception of what makes a public space "successful" requires a continuous adjustment given the unrolling of obstacles presented before contemporary cities (Santos-Nouri & Costa, 2017).

The temperature escalations due to possible climate pose a substantial challenge that public spaces face now and will continue to do so in the future. It is believed that adaptation to heatwaves and other extreme environmental phenomena will significantly improve the experience and comfort of pedestrians in outdoor urban environments. For this reason, placemaking approaches such as the revision of the Place Diagram is required and need new considerations that aid local decision-making and design.

Consequently, Santos-Nouri and Costa (2017) presented a reformed version of the Place Diagram created by the Project for Public Spaces integrating new intangible and measurements. The objective of restructuring is not to compete with other factors established by the Place Diagram, but to complete a generic approach in identifying the wholesome "success" of a public space in a century that is already facing and will continue facing more and more climatic challenges.

Their proposal was to differentiate the qualities of image and comfort from the homonymous pillar of the Place Diagram by adding 6 new indexes to the comfort

quality. Their proposal was based on the research of Nikolopoulou and Steemers (2003) that suggested that naturalness, expectations, past experience, time of exposure, perceived control, and environmental stimulation are the key psychological factors that influence thermal comfort of public space users.

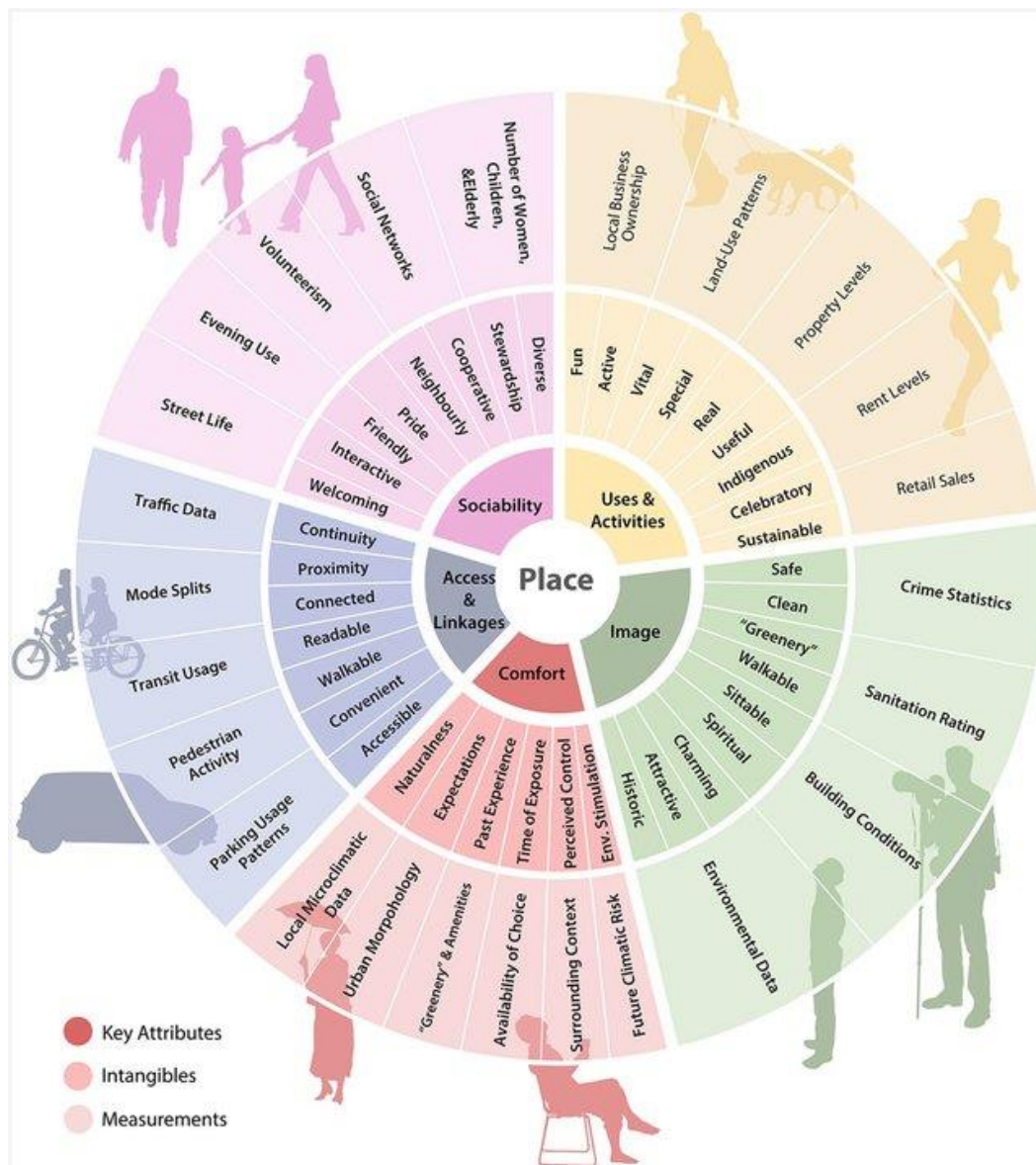


Fig. 15. Revised Place Diagram. Source: Santos-Nouri and Costa, 2017.

3.1.4. Public Space Quality Index

The Public Space Quality Index (PSQI) (Praliya & Garg, 2019) was developed to evaluate the performance of public spaces by analyzing user needs, expectations, maintenance, and management aspects, such as operational hours, authorities responsible for management, personnel, and expenditure. The 49 parameters identified were categorized into eight dimensions: Accessibility and Linkage, Maintenance, Attractiveness and Appeal, Comfort, Inclusiveness, Activities and Uses, Purposefulness, and Safety and Security (Praliya & Garg, 2019).

Accessibility and linkage refers to the means of physical access and visual approaches, while maintenance involves preserving the state of parks for their intended functions. Attractiveness and appeal involve the senses' appeal, comfort is the state of being at ease due to certain features, elements, and climatic conditions, inclusiveness is defined as the characteristics of a space that make it usable by all, regardless of physical, social, and economic parameters or external influences, activities and uses refer to different activities taking place in a space, purposefulness accommodates the needs of different users, and safety and security is the feeling of being protected from threats.

1. Accessible & Linked	2. Maintenance	3. Attractiveness and appeal	4. Comfort	5. Inclusiveness	6. Activity and uses	7. Purposefulness	8. Safety and security
Visibility of space from a distance	Management of litter and filth	Aesthetic appeal	Comfortable sitting areas	Used by all, irrespective of age, race, class, gender and physical abilities	Walking	Suitability of layout and design	Presence of adequate lighting, illumination
Visibility of space from immediate surroundings	Presence and condition of waste bins	Visual pleasure in the overall space	Presence and condition of public facilities and amenities	Control of entrance to the space according to specified timings	Socialising	Ambience	Surveillance measures
Accessibility walking	Condition of green areas	Uncluttered view of the space	Presence and condition of shelter spaces	Control of entrance by entrance fee	Physical fitness-related activity		Security arrangements
Accessibility via private transport	Condition of park infrastructure	Presence, quality and condition of public art	Presence of Signage's		Children's play		Check on entry of animals
Accessibility via public transport	Conditions for walking, jogging, cycling tracks	Arrangement of park furniture	Provision of parking spaces		Sports and games		Check on criminal activities
Ease of movement in and around	Management of graffiti, vandalism	Landscape	Provision of buffer from traffic nuisance		Family outings		Check on antisocial elements
		Condition of grass/verges			Contact with flora and fauna		Availability of information/ complaint center
		Presence and condition of flowered areas			Educational visits		
		Presence of themed play area			Events and gatherings		
					Relaxing		

Fig. 16. Public space quality index highlighting dimensions of quality and their attributes. Source: Praliya and Garg, 2019.

The PSQI uses an average rating for each of the quality attributes (Rd), assigning weights to quality attributes (Wd), calculating the Attribute Score (Sd), Dimension Score (Di), and the overall Performance Score of a public space (Pp). In this case, assigning weights plays a crucial role in evaluating the quality of public spaces and depends on the way a public space is expected to perform in any particular dimension from the users' perspectives.

3.1.5. Sociability and Placemaking Methodological Framework Approach

Mahmoud (2022) conducted research on the sociability phenomenon of public spaces and their impact on social aggregation and segregation in order to generate cultural capital in public spaces in contemporary city morphologies, as well as the specific importance of public spaces in urban regeneration processes. To do so, the researcher investigated the application of Gehl's (2016) theoretical framework for evaluating and examining various aspects of public spaces, public life, and public space metrics. The methodology used in was adapted from the "Mehta" approach in order to correspond with the research objectives and effectively assess the key attributes.

The four qualities identified and evaluated in this public space case study were inclusiveness, meaningful activities, accessibility, and linkages, with sociability and liveability being the new addition to the Mehta methodology. A mixed-method approach was established for collecting qualitative and quantitative data related to people's usage of public spaces, e.g., user intercept surveys, observational analysis, and smart planning tools analysis. These tools are used to measure a numerical Public Space Index that considers the quantification of the sociability of public space attributes and evaluation criteria in correlation with placemaking implementation strategies in urban regeneration projects.

The PSI is a metric that uses a scale of 100 points, where each attribute is assigned a score of 25 points. The score is determined by a combination of methods, including on-site visual observation, pedestrian counts, stationary activity assessments, socio-demographic data analysis, interviews with key informants, and the utilization of smart planning tools. While the PSI does not encompass all activities that occur within the public sphere, it does serve as a valuable tool for evaluating a significant aspect of the public realm that facilitates social interactions. In order to establish precise quantitative measures, it is imperative to clearly define and consistently uphold these attributes, hence ensuring their integrity and enabling their quantification.

Table 2. Public Space Index (PSI). Source: Mahmoud, 2022.

Quality measured	Variables Observed	Weighting	Measurement tool	Scoring Criteria
Inclusiveness	Variety in Age Range	5	Users Surveys Statistical analysis	1 = none 2 = very limited 3 = low 4 = medium 5 = high
	Variety in Gender	5		
	Safety and Security	5	Visual Observation	
	Publicness and opening hours	5	Visual Observation + signs availability	
	Community Engagement in Planning	5	Key Informants interviews + Micro smart planning tools	
<i>Subtotal</i>		<i>25</i>		

A Case study on Milan's "Piazze Aperte"

Quality measured	Variables Observed	Weighting	Measurement tool	Scoring Criteria
Meaningful activities	Surrounding Services	5	Users Survey rating	1 = none 2 = very limited 3 = low 4 = medium 5 = high
	Physical design flexibility	5	Visual Observation	
	Range of activities and behaviors	5	Stationary Activities measurement	
	Diversity of cultural programming activities	5	Key Informants interviews and stationary activities measurement	
	Availability of food within or at the edges of space	5	Visual Observation	
Subtotal		25		
Accessibility and Linkages	Walkability	5	Users survey rating	1 = none 2 = very limited 3 = low 4 = medium 5 = high
	Accessibility	5	Smart planning	
	Transit usage	5	Pedestrian counts	
	Transportation modes diversity	5	Visual Observation and users survey	
	Maintenance and perceived safety	5	Visual Observation + Users surveys	
Subtotal		25		
Sociability and Livability	Groups of people	5	Users Surveys and Visual observation	1 = none 2 = very limited 3 = low 4 = medium 5 = high
	Interactive space	5		
	Stickiness of places	5	Users' surveys	
	Mixture of uses and variety of activities	5	Key informants Interviews	
	Space Attractiveness	5	Users' surveys	
Subtotal		25		
Total		100		

3.2. Limitations

After studying the aforementioned evaluation models for public spaces, it was essential to identify the variables that correspond to the nature of tactical urbanism and the research objective. However, a defining factor in the selective process was the existing limitations that would not allow for a comprehensive evaluation of some variables. Therefore, in this section, the limitations imposed by the conditions under which the study was carried out were identified in order to find alternatives for the evaluation of these variables.

Perhaps the most significant obstacle encountered was the language barrier, which played a definitive role in the choice of tools for the assessment of place qualities. It was the primary factor in choosing to only conduct interviews with key informants and not add intercept surveys to the index evaluation toolkit. As a result, indexes such as diversity in ethnicities and classes were not integrated into the model since they could not be evaluated with any other tool. However, the model is adapted in such a way that it can be used in circumstances where there is a language barrier between researchers and the users of a public space. Thus, this methodology opens opportunities for more comprehensive case studies and facilitates cross-border research by allowing researchers to gather data directly from the users themselves.

Additionally, the short time frame during which the on-site data had to be collected did not allow for long-term observation of the research sites. Hence, the depth of understanding of the user's behaviors and preferences may be restricted. This limitation stems from the study's budget constraints; with more resources, a more thorough data-gathering process and an extended observation period could have been achieved. A larger budget would have also facilitated the incorporation of advanced technology or the hiring of additional staff to collect and analyze data, thereby enhancing the overall comprehensiveness of the case studies. In essence, these limitations not only hindered but also fundamentally shaped the tactical urbanism evaluation model for this study.



3.3. Evaluation Model

Criteria and Variables explanation

After examining the indicators that approach the qualities of Public Spaces from the literature presented, it was essential to sort out those that match best the criteria set by the tactical urbanism principles and overall potential. Based on the adaptability concept of placemaking that suggests the adjustment of the diagram based on context, some of the variables' definitions represent the author's personal interpretation for this study.

3.3.1. Inclusiveness

As urban centres will continue to become increasingly socially diverse (UN, 2022), it has been deemed important to consider inclusivity as one of the fundamental principles. Public spaces are of utmost importance in fostering inclusive societies, particularly in cultivating a public culture and enhancing cultural diversity (Santiago-Pineda, 2022). An inclusive public space is often seen as a "public place that caters to the needs and interests of all individuals." It implies that while in a public space individuals should have a sense of acceptance, inclusivity, and freedom from discrimination based on their gender, age, sexual orientation, race, ethnicity, religion, cultural heritage, social standing, and/or personal beliefs (Zhou, 2019). Therefore, for a place to be considered truly successful, it must be inclusive of all individuals from the public sphere's social spectrum.

Taking into account the existing literature that incorporates inclusiveness into public space evaluation models, like Mehta (2014), Praliya & Garg (2019), and Mahmoud (2022), the use of certain tangible and intangible indexes that help assess inclusiveness is suggested.

However, the existing limitations did not allow for the evaluation of certain inclusivity indexes, such as diversity in ethnicities and diversity in classes. Although both indexes are deemed essential for a holistic review of inclusiveness in a public space, the tools available for conducting this thesis were not sufficient to evaluate them. Therefore, it is strongly recommended that they be included in a model that uses intercept surveys instead of or in addition to key informant interviews, although they were omitted from this study.

Diversity in ages

The use of space by diverse age groups comprises a fundamental attribute of a lively, successful, and inclusive place (Loukaitou-Sideris, 1995; Gehl, 2010; Levy-Storms et al, 2018; Mehta, 2020). However, Mehta (2020) argues that most urban public spaces cater mainly to adults, leaving out children's and seniors' needs and preferences from the design principles framework. Especially, older adults remain a highly underserved group regarding open space and physical activity in and near

parks (Levy-Storms et al, 2018). Intergenerational public space has been proven to offer a wide range of benefits directly to individuals such as pro-social behavior, positive attitudes, life satisfaction, and healthy and active lifestyles, and indirectly to the community collective empowerment, as well as increased volunteerism. (Nelischer and Loukaitou-Sideris, 2022).

Diversity in genders

Contrary to the private and domestic spaces which have frequently represented the world of female passivity, what has been conceived of as public space has long been associated with masculine dominance (Milanovic, 2017). Ample research evidence has shown that women perceive urban spaces differently, come across different issues, and anticipate different outcomes from men, which all stem from biological differences, social roles, and norms. (UN Women/Safe Cities Global Programme/2009; Adebajo et al, 2012; Phuoc, 2021). Gender-based data collection allows the understanding of the issues women face in cities, most of which are often overlooked in gender-neutral investigations, consequently perpetuating their invisibility (Adebajo et al, 2012). Hence, feminine presence or absence in the study areas is of essential importance when evaluating the inclusiveness of a place, since it can provide insight into the dynamics, needs, and experiences within a given environment that could lead to more effective and equitable urban planning and design.

Diversity in physical abilities

For years, the needs of disabled people have been ignored in the design and development of urban landscapes (Imrie, 2000). Accessible to people with disabilities public spaces e.g., well-designed public spaces, generate a sense of pride in a place, enable all persons to use them with ease, may discourage crime, and promote healthy living (Santiago-Pineda, 2022). In this model, diversity in physical abilities does not refer only to people in wheelchairs but also with mobility impairments temporary or permanent, based on the notion of universal design (Mace, 1991; Afacan et al, 2011).

3.3.2. Access and Linkages

The notion of 'accessible' does not just mean the location is physically accessible but involves everyone, despite their disability, being able to use the product or service provided (Bindu & Devi, 2016). Accessibility is not only a concern for people with disabilities as its implementation also impacts the convenience of non-disabled people (Buj, 2010). Additionally, the climate crisis further emphasizes the necessity of establishing comprehensive strategies that prioritize walking and cycling within the framework of sustainable mobility systems and the creation of environmentally friendly and liveable cities (Ravazzoli, Torricelli, 2017; Santiago-Pineda, 2022).

Connectivity

The term connectivity has a variety of meanings in different disciplines and contexts. For urban landscapes in a planning context, it can be defined as the ease or directness of getting from one place to another, which is strongly related to the features of street design (Moore, 2020). In this case, it encompasses the extent of integration between a public space and its adjacent regions, as well as the convenience with which individuals can navigate between them. It gauges the accessibility and openness of a location, encompassing physical and social aspects (Allahdad, 2022).

Walkability is defined as the degree to which the built environment is friendly and attractive for the presence and pedestrian movement of the people who live in, shop, visit, enjoy or pass time in an area (Abley, 2008). According to Speck (2012) the user of a network chooses walking over other means of transportation when the following criteria are met: it is 1) safe 2) interesting 3) comfortable 4) useful. These criteria can also be found in various evaluation models for successful public spaces in general, which leads to the conclusion that they are deeply intertwined and that the fulfillment of one criterion positively affects the fulfillment of others.

Convenience

Public transport and soft mobility facilities should be distributed evenly across the communities to ensure the convenience of access to them for all groups of society. On the other hand, streets, sidewalks, plazas, and other public spaces should be free of barriers and obstacles to provide a safe environment for walking and cycling. Additionally, the path that individuals have to follow to reach the desired destination is a significant indicator of its convenience. This is based on the research of Hillier and Vaughan (2007) who argue that people traverse through space by reading the angular geometry of the network and not just metric distances.

Continuity refers to the seamless and uninterrupted flow and connection of road, pavement and micro-mobility networks that lead to each public space studied. The main purpose of this criteria is to investigate the existence of gaps, disruptions, or barriers in the network, that may hinder the smooth and continuous movement of users to the public space with each means of transportation. The achievement of continuity enables efficient and safe transportation to public spaces making them more appealing as a destination for the members of the public sphere.

3.3.3. Sociability

The most appropriate description of sociability, according to Project for Public Spaces (2010), is "a place where people would meet each other and take people when they come to visit." However, it is regarded as one of the most difficult characteristics to accomplish, but once achieved, it becomes an identifiable feature of the space, having people arrange to meet friends, and neighbors, as well as feel comfortable

engaging with strangers. It promotes a better feeling of location, community connection, and a variety of social activities (Mahmoud, 2022).

Range of behaviors

This variable exhibits a positive correlation with the level of ownership experienced and the ability to familiarize oneself by those using the public space, hence resulting in the manifestation of a wider spectrum of behaviors compared to typical circumstances.

Cooperative in the context of public space can refer to a quality or feature that encourages cooperation, shared accountability, and group participation among the space's users. It places a strong emphasis on the notion that individuals should cooperate, respect one another's demands and rights, and actively take part in the upkeep, administration, and usage of the public realm. Cooperation in public spaces also relates to the collaborative activities and events that may take place in them, such as political gatherings, collective sports, community markets, outdoor movie screenings, etc.

Neighbourly

A public space could be characterized as neighborly when fostering a sense of community and neighborly interaction within it. It is a quality that indicates the level of connectedness, familiarity, and closeness between the users of a public space that creates a sense of belonging. As an intangible quality, it may be harder to evaluate than others, however, a common sign of neighborly environments is small social interactions of individuals who did not attend the space together, such as greetings and small talk. Additionally, the presence of local businesses adjacent to the public space where customers seem to have formed a closer relationship with the owners also indicates a stronger sense of neighborhood.

Groups of People

When evaluating the level of sociability in a public space it is essential to investigate the presence of groups of people, since they provide insights into the social dynamics and the extent of social interaction within that space. When individuals form groups in public it is demonstrated that the space offers a sense of comfort that lets them engage socially within it. People tend to congregate in groups when an environment is friendly to social interaction and promotes a sense of community (Mahmoud, 2022).

3.3.4. Uses and Activities

An essential element in establishing a vibrant and frequently used public space is the deliberate arrangement of diverse land uses and activities (Carmona, 2021). Jacobs (1961) for example, argued that the vibrancy of city neighbourhoods depends on the overlapping and interweaving of activities and that understanding cities requires dealing with combinations or mixtures of uses as the 'essential phenomena'. This

place quality is highly dependent on the observation of how many different kinds of activities are taking place simultaneously, such as people sitting, eating, playing sports, chess, relaxing, reading, etc. (PPS, 2022).

Mixture of uses

The integration of diverse functions, programs, and recreational options within the same space constitutes a significant quality for public spaces as it denotes the concept that a well-designed public space ought to accommodate a variety of demands, preferences, and interests, as well as support various user groups. Also, a mixture of uses and activities ensures that the public space is accessible and appealing to a broad spectrum of people. By offering a diverse range of options, it becomes more inclusive, attracting individuals of different ages, backgrounds, and interests.

Variety of activities

Public places that provide a diverse range of activities are adaptable to the shifting demands of their users (Mehta, 2014). A variety of activities serve as core components of a successful place. The presence of activities provides individuals with an incentive to visit a certain location, hence increasing the likelihood of their return. In instances where no engaging activities are available, a vacant spot will remain unoccupied. The strategic selection of a diverse array of activities may enhance the appeal of a place, enabling it to attract individuals from all demographics throughout the day (PPS, 2022).

Active

Active uses and activities assume a pivotal role in community building and social interaction, the health and well-being of users, and the overall liveliness of a place. Such activities include sports and recreation, play areas for children, outdoor workshops, events, and festivals. These activities encourage social interaction and provide individuals the chance to interact and engage with one another. They promote a sense of belonging, community, and shared experiences, which strengthens social cohesion.

Vital

Active uses are frequently closely tied to vital uses and activities in public spaces, however, the latter ones encompass a broader connotation. While active uses mainly focus on physical activities such as exercise, sports, and recreation, vital uses encompass a wider range of activities that contribute to the overall liveliness and vibrancy of public spaces. These may include social gatherings, cultural events, performances, and community engagement initiatives.

3.3.5. Comfort

A comfortable and inviting space is more likely to be successful. The notion of comfort encompasses individuals' opinions of factors such as personal safety, cleanliness, and the presence of suitable seating options (PPS, 2022). The absence

of adequate seating is a typical issue that limits the potential of otherwise great places. People are drawn to places that give them a choice of places to sit, so they can be either in or out of the sun at various times of day or year (PPS, 2022). Moreover, climatic adaptation in the context of public space evaluation translates to the modification of primary approaches regarding comfort levels (Santos Nouri & Costa, 2017).

Safe

Safety is often cited as the first concern in public spaces. As a term, it is often divided between real and perceived safety with several environmental characteristics affecting both notions (Mehta, 2014). Empirical research shows that the sense of perceived safety from crime is affected by the physical condition and maintenance, the configuration of spaces, the types of land uses, the alterations and modifications made to the environment, and the presence or absence of, as well as the type of people (Mehta, 2014).

Sittable

Sitting space is an important attribute of good public space that makes it comfortable and convivial (Mehta, 2014). Seating options in a public space can be either public or private with the former offering an opportunity for anyone to enjoy the public space without being obligated to support any business (Mehta, 2014). Therefore, public seating plays a vital role in the inclusiveness of a public space as it welcomes people into the public sphere irrespective of financial status.

Time of exposure

This attribute composes a strong indicator of the thermal perception of the environment as it greatly influences people's decisions on how long to spend in an area (Nikolopoulou et al, 2003). It's a variable that depends on the climatic, built, and human environment with the former being a continuous variable itself (Santos Nouri & Costa, 2017). The duration of stay in a space may be a reflector of its attractiveness, comfort, and amenities it hosts, which motivate people to spend more time there equating to a higher level of comfort and engagement.

Naturalness

This term describes the absence of artificiality from physical environments such as public spaces (Nikolopoulou et al, 2003). It is a significant attribute of the character of a place and is deeply related to the built environment and to where measures of thermal attenuation are needed (Santos Nouri & Costa, 2017). Naturalness in public spaces can refer to a wide range of elements that offer a connection to the natural world such as greenery and vegetation, water features, organic design and layout, or even sensory experiences.

3.3.6. Image

Contemporary urban design approaches public space both from an aesthetic perspective and as a social, political and cultural field of expression and interaction

(Carmona,2021). The incorporation of specific elements around and within a public space, such as paving, benches, seating, plantings, etc., enhances the comfort of its users, promoting social interaction within it. (Harb, 2016). Furthermore, it has been argued that physical characteristics possess a prominent role in shaping an individual's perception of their surroundings (Hu & Chen, 2018). They have a significant impact on several aspects, such as enhancing the functionality of other visual dimensions, contributing to the sense of place, and influencing social dynamics (Ali & Baper, 2023). Including distinct colors, materials, or diverse species of plants, together with the incorporation of exposed pavements and the provision of resting places, may effectively establish patterns of activity and foster an enjoyable environment (Del Aguila et al., 2019).

Readable / Legible

As Taylor (2009) states, Kevin Lynch applied the concept of legibility to approach the level of difficulty or ease to read – orient oneself within – an urban network. Legible public spaces have the ability to enhance users' understanding, engagement, and enjoyment of the place whilst promoting greater utilization of the available amenities and features. A legible public space on the scale of tactical urbanism should have well-defined pathways and elements that users can identify easily to engage with them. Contrasting colors, materials, or architectural features that strengthen the visual distinction between the elements of the built environment are vital to gain the users' interest, encouraging them to preserve them.

Attractive

Public places should be inviting in order to attract people and encourage them to spend time there. People are more likely to visit, linger, and interact with the environment and other users when a place is aesthetically appealing, resulting in stronger social interactions and community involvement. The visual attractiveness of a public space may generate a sense of pride and ownership in members of the community, encouraging them to care of and maintain the components they find appealing in it. Moreover, public art installations and innovative design features in open spaces may act as platforms for artistic expression and cultural enrichment, enhancing a community's cultural vibrancy.

Well-Maintained

Maintenance conveys the upkeep of public open spaces after being delivered to the public for use (Praliya & Garg, 2019). Carmona and De Magalhaes (2006) argue that lack of proper maintenance is one of the main barriers that lead to the deterioration in the quality of public spaces. Additionally, maintenance is crucial for the conservation of the physical conditions that make a space inclusive, as it should meet the daily needs of the users (Praliya & Garg, 2019). It also plays a vital role in preserving the visual appeal and attractiveness of public spaces. By maintaining a

pleasing aesthetic, public spaces can enhance the overall experience for visitors and foster a sense of pride and ownership in the community.

By analyzing the spatial layout and design of public spaces, researchers may measure how effectively they support diverse activities and user needs. This approach also helps in understanding the social dynamics and patterns of human behavior within these spaces, allowing for future targeted interventions that enhance overall usability and user satisfaction.



Fig. 17. Developed model for the evaluation of tactical urbanism initiatives. Source: Author.

Table 3. Evaluation model's literature sources. Source: Author.

Quality	Variable		Literature				
			Project for Public Spaces, 2010	Mehta, 2014	Santos Nouri & Costa, 2017	Praliya & Garg, 2019	Mahmoud, 2022
Inclusiveness	Diversity in	Ages					
		Genders					
		Physical abilities					
Access & Linkages	Continuity						
	Connected						
	Walkable						
	Convenient						
Sociability	Range of behaviours						
	Cooperative						
	Neighbourly						
	Groups of People						
Uses & Activities	Mixture of uses						
	Variety of activities						
	Active						
	Vital						
Comfort	Safe						
	Sittable						
	Time of exposure						
	Naturalness						
Image	Readable						
	Attractive						
	Well-Maintained						

3.4. Tools for analysing public space criteria

Visual Observation

Observations according to Overton and Diermen (2003) as cited by Alnaim and Noaime (2023) are an essential tool for researchers since they allow for subjective evaluation of what is taking place in real-time. Additionally, observing people's behaviors and interactions with their environment may reveal clues as to why public space users follow certain patterns revealing flaws and best practices in the design. This approach increases the comprehensiveness of data through its validity and depth, beyond the level of information captured by written and verbal methods.

In this research, visual observations were conducted on 7 days, 5 weekdays and 1 weekend, per each site during the months of May and June 2023. The months were chosen because they have relatively comfortable weather conditions that prompt people to linger in public spaces longer, allowing for a better assessment of user behavior. In order to have a comprehensive picture of what is actually happening in each site, it was decided that three 2-hour intervals had to be defined for the on-site data collection. The intervals that were selected for observational data collection were 10:00 a.m.–12:00 p.m., 13:00 p.m.-15:00 p.m. and 18:00 p.m. -20:00 p.m.

Key Informant Interviews

Key informant interviews are a valuable and insightful evaluation method when assessing public spaces, as they offer a qualitative approach that thoroughly explores the perspectives and expertise of individuals who possess a close and significant connection with these spaces. In-depth interviews provide extensive qualitative data that cannot be obtained through quantitative methods alone since public spaces are dynamic and multifaceted, serving various purposes and accommodating diverse user groups. This will allow for a comprehensive understanding of the significance that these spaces have in the lives of individuals and communities, how they were designed and what were the hinders faced when initiating tactical urbanism in collaboration with the community.

The inclusion of key informants in the assessment process enhances stakeholder engagement and cooperation, ensuring their continued involvement as participants in the wider collaborative process of tactical urbanism initiatives. This approach also encourages a feeling of ownership and accountability among stakeholders. Moreover, this involvement serves as a medium for informants to express concerns, draw attention to important issues and suggest potential improvements.

Spatial Analysis

Spatial analysis encompasses a wide range of quantitative methods that study spatial patterns and underlying processes using their topological, geometric, or geographic features (Photis, 2009). It is a kind of geographical analysis that explains patterns of personal characteristics and spatial appearance in terms of geostatistics and geometrics, which are known as location analysis (Allahdad, 2022).

Essentially, spatial analysis is a collection of methodologies that produces improved results using geographic data. When evaluating public spaces it's a tool of outmost importance, as it offers a methodical and evidence-based way to comprehend the functionality and interaction of such places with their immediate environment. The process facilitates the identification of strengths, weaknesses, and potential for improvement, giving the opportunity to design efficient and inclusive public spaces that effectively cater to the requirements and objectives of communities.

Table 4. Evaluation model’s assessment tools. Source: Author.

Quality	Variable		Visual observation	In-depth Interview	Spatial Analysis
Inclusiveness	Diversity in	Ages			
		Genders			
		Physical abilities			
Access & Linkages	Continuity				
	Connected				
	Walkable				
	Convenient				
Sociability	Range of behaviours				
	Cooperative				
	Neighborhoodly				
	Groups of People				
Uses & Activities	Mixture of uses				
	Variety of activities				
	Active				
	Vital				
Comfort	Safe				
	Sittable				
	Time of exposure				
	Naturalness				
Image	Readable				
	Attractive				
	Well-Maintained				



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4. CASE STUDY

4.1. Why a case study?

Since the research objective seeks to answer whether Tactical Urbanism is an approach capable of creating quality places, it was essential to examine a real-life example of Tactical Urbanism in action. Meanwhile, applying the developed evaluation model in a practical setting allows the assessment of its usefulness and efficacy, as well.

Conducting a case study allows for the gathering of in-depth and detailed information about the specific context, implementation process, and outcomes of Tactical Urbanism projects. By analyzing a case study, valuable insights can be gained into the effectiveness, challenges, and potential benefits of this approach, which can contribute to future urban planning and design strategies. The empirical data of a case study makes the research findings credible and helps triangulate findings from the other international tactical urbanism examples presented.

The case study chosen is the "Piazze Aperte" project of the Municipality of Milan, Italy, as it is one of the most prominent examples of Tactical Urbanism in Europe. The project has received widespread recognition and praise from international media and researchers for its success in rejuvenating public spaces. By examining this initiative, not only can valuable knowledge about the effectiveness of tactical urbanism in general be gained, but one can also understand the specific strategies and approaches that contributed to its success in Milan. This case study serves as a valuable reference for other cities looking to implement similar projects and provides a comprehensive understanding of the potential impact of tactical urbanism on urban development and community engagement.



Fig. 18. Collage of Jane Jacobs over the city of Milan.
Source: Author.

4.2. Piazze Aperte

Piazze Aperte, as defined in its report (2022), is an initiative launched by the City of Milan, that was collaboratively created by Agenzia Mobilità Ambiente Territorio (AMAT), Bloomberg Associates, and the Global Designing Cities Initiative. The program focuses on urban regeneration and sustainable mobility, which are important objectives outlined in the Territory Governance Plan for Milan 2030 (PGT Milano 2030) and the Sustainable Urban Mobility Plan, within the framework of the "Piano Quartieri" (Neighborhood Plan).

The primary objective of Piazze Aperte is to enhance the use of public spaces by transforming them into communal hubs while expanding pedestrian zones. Additionally, the initiative seeks to advocate for sustainable means of transportation, in order to benefit the environment and improve the overall urban living experience. Piazze Aperte employs the concept of tactical urbanism as a means to reestablish public spaces as focal points of community engagement, thus promoting the use of public spaces beyond their conventional functions of parking or thoroughfares. The aspiration of the program is that by giving people back their community spaces, public squares will regain their full status as local meeting places through activities, gatherings, and even just "living" in these areas.

The City of Milan and its residents are able to actively work together in the design, development, and implementation of public spaces, as well as their promotion and preservation, thanks to this program and the signing of collaboration agreements.

The Municipality issued a request for proposals titled "Piazze Aperte in ogni quartiere" ("Open Squares in Every Neighborhood") in 2019, with the goal of finding new places to be converted and received over 60 submissions. Till now, the Municipality of Milan has successfully executed over 35 tactical interventions and is actively engaged in planning more.

The aims of the Piazze Aperte program focus on redesigning neighborhood streets and squares as places of social interaction, vitality and gathering, bringing urban spaces back into public life, as well as on improving the safety of residents, pedestrians, and cyclists through pedestrianization of streets and traffic calming measures, with a particular focus on children, the elderly, and people with disabilities. It aspires to do so, by transforming existing public spaces thanks to low-cost, high-impact street transformations, before addressing long-term interventions through the effective collaboration between residents and the local government, promoting community engagement through the shared management of community assets.

So far, the program has managed to create 22.000 m² of pedestrian space through the implementation of 38 tactical urbanism interventions. These involve the installation of 250 benches, 310 potted plants, 380 bike racks, 35 tables, and 32 ping-pong tables.

PIAZZE



Fig. 19. Via Val Lagarina



Fig. 20. Piazzeta Santi Patroni d'Italia



Fig. 21. Piazza Sicilia

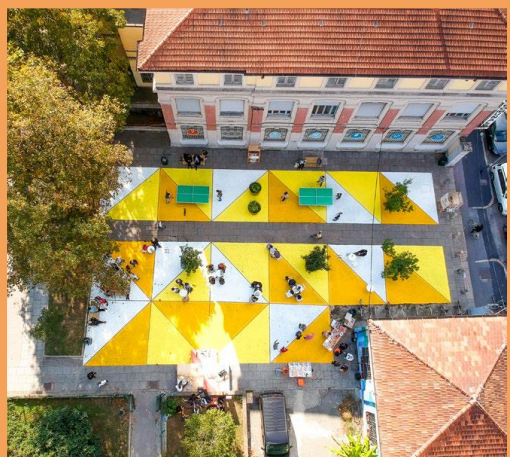


Fig. 20. Via Val Lagarina



APERTE



Map source: Author
Figures' source: Comune di Milano

ANO



Fig. 21. Piazza Dergano



Fig. 22. Via Guido Reni



Fig. 23. Piazza Angilberto II



Fig. 24. Piazzale Ferrara

4.2.1. Intervention choice

Out of the 38 completed interventions, two of the most famous ones were selected for the case study: Piazza Spoleto and Piazzale Bacone, located in the north-eastern part of Milan. The reason behind their selection lies in the fact that they are both in the temporary intervention phase and share similar characteristics. First of all, it is crucial that both squares are located in front of schools, as it ensures the presence of children and stronger pedestrian traffic during certain times of the day. In addition, both interventions have utilized similar materials and urban equipment, which are part of the suggested tactical urbanism toolkit. Consequently, both squares have not employed any structural changes or permanent alterations to the existing infrastructure. Instead, they have focused on implementing temporary measures such as street furniture, planters, and painted pavement to rejuvenate the spaces, allowing flexibility and adaptability and enabling adjustments based on feedback and evaluation before considering any long-term changes.



Fig. 25. Selection of the 2 case-studies. Source: Author.

4.2.2. Piazza Spoleto (Arcobalena)

The transformation of the Spoleto/Venini/Martiri Oscuri crossroads may be attributed, in significant measure, to its distinctive configuration. Even though its dimensions exceeded those of a conventional intersection, it lacked the necessary attributes to qualify as a designated pedestrian square.

The redesigned space at the front of Ciresola Elementary School is said to now offer a genuine public area that facilitates the formation of community relationships among the school, parents, and students. The primary objective of the newly

implemented street system is to relocate the intersecting traffic away from the residential hub, enhancing the convenience and enjoyment of pedestrian transit. Furthermore, in order to facilitate the development of cycling as a mode of



Fig. 26. The transformation of the intersection into Piazza Spoleto. Source: Piazze Aperte Report.

transportation, the implemented initiatives in Spoleto are integrated into the existing bike path that stretches from Parco Trotter to the tunnel on Via Spoleto leading to Via Gioia. A recently constructed parking-protected cycle track has been implemented along Via Venini as part of the ongoing efforts to enhance the existing bike network (Piazze Aperte report, 2022).

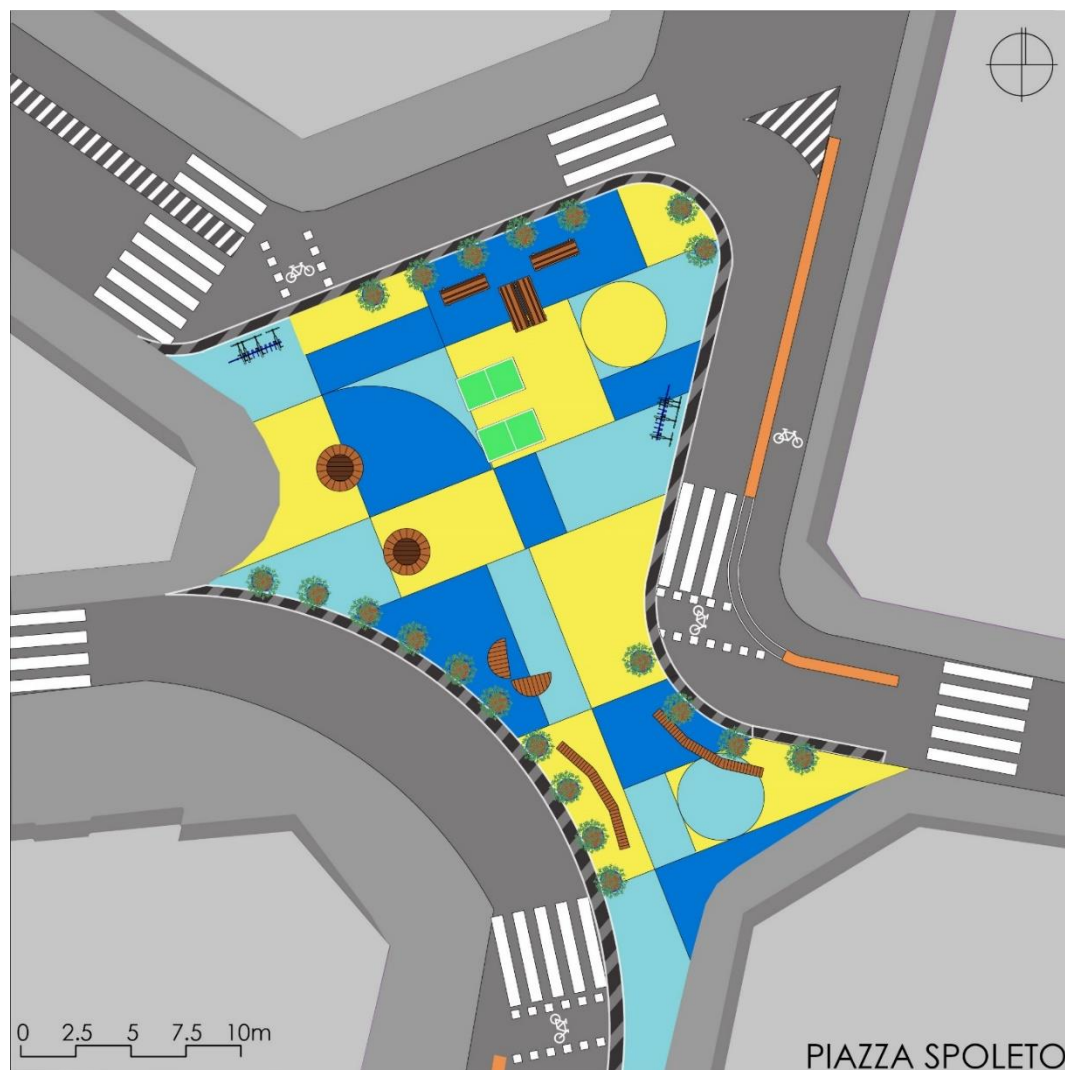


Fig. 27. Piazza Spoleto layout. Source: Author.

4.2.3. Piazzale Bacone

The tactical intervention at Piazzale Bacone was initiated after a proposal put up by a major group of local associations, which gained support from multiple local business owners. This intervention aims to provide more areas for social interaction and enhance safety measures for both kids leaving the school premises and parents waiting in the vicinity. From a street design standpoint, Via Spontini has been converted into a one-way road in the eastbound direction, while the highways in Piazzale Bacone have been intentionally constricted in order to provide a novel pedestrian area next to the school. The intervention includes the addition of a bike path on Via Morgagni-Matteucci, and the implementation of pedestrian widenings at the corners of the plaza to enhance accessibility to commercial areas. The installation of street furniture serves the purpose of demarcating the boundaries of the recently created pedestrian zone, while also providing individuals with the chance to stop and appreciate the newly developed communal area.



Fig. 28. The transformation of the intersection into Piazzale Bacone. Source: Piazze Aperte Report.



Fig. 29. Piazzale Bacone layout. Source: Author.

PIAZZALE BACONE



Fig. 30. Potted Plants.



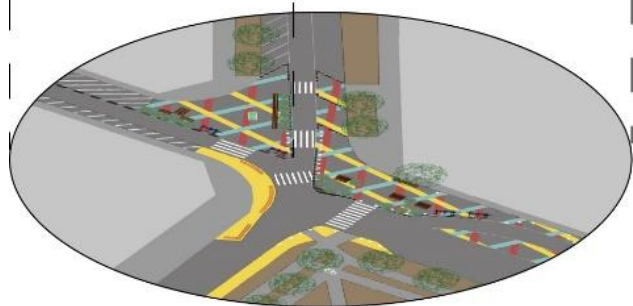
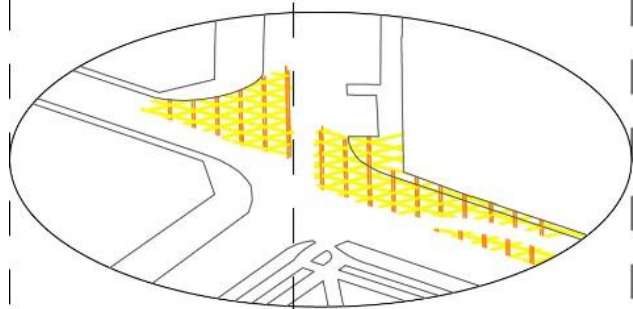
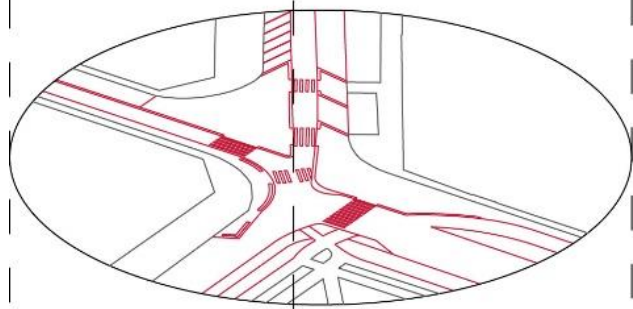
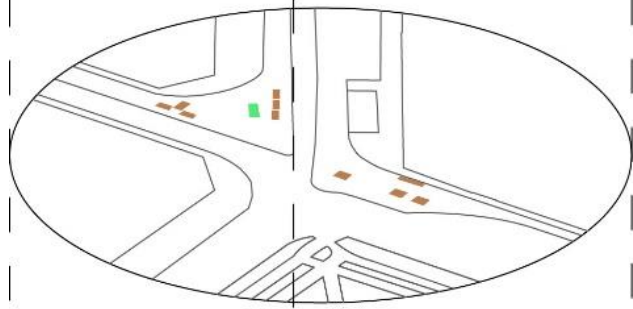
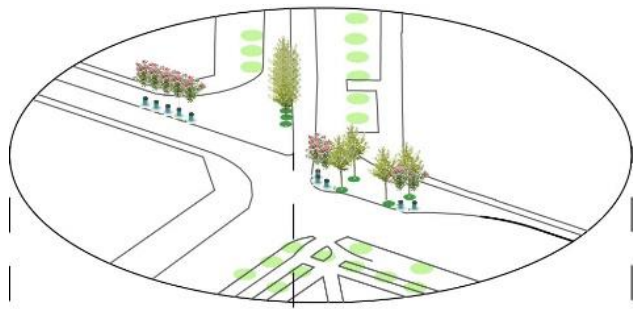
Fig. 33. Urban Furniture.



Fig. 34. Traffic calming measures.



Fig. 35. Asphalt paint.



PIAZZA SPOLETO

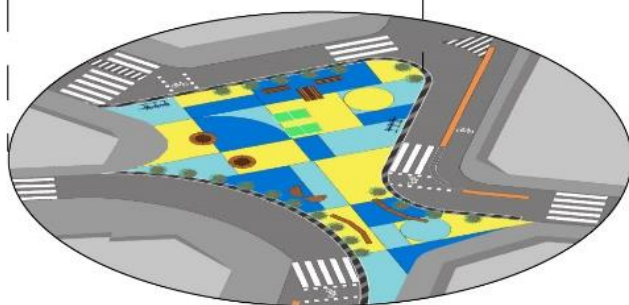
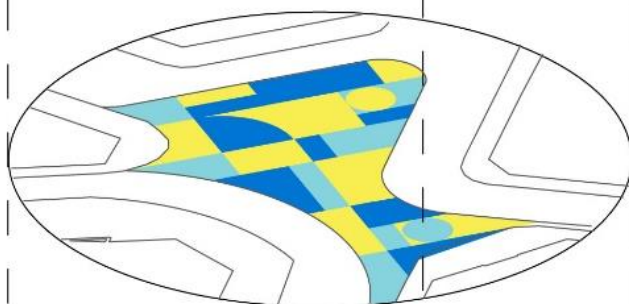
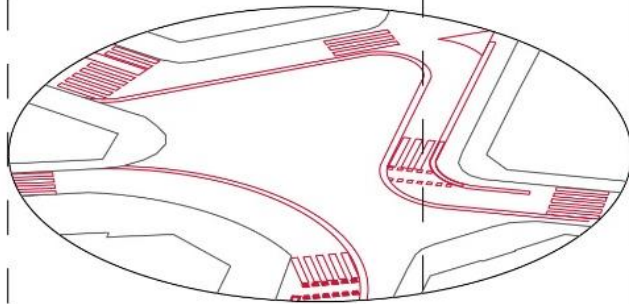
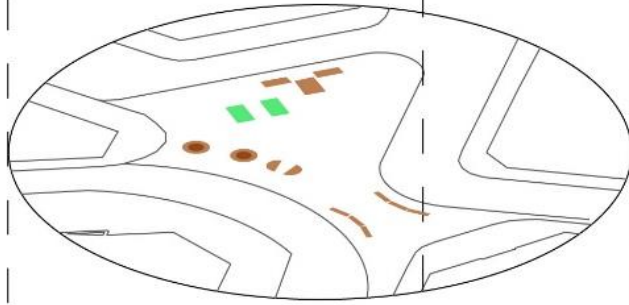
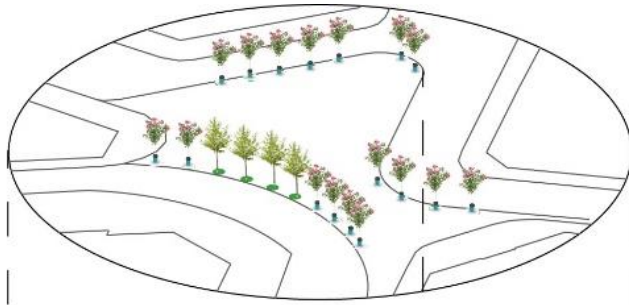


Fig. 31. Potted Plants.



Fig. 37. Urban Furniture.



Fig. 38 Traffic calming measures.



Fig. 39. Asphalt Paint.

4.3. Introduction of the key Informants

In the result section, certain variables were assessed primarily using the insights provided by key informants. To ensure a diverse range of perspectives on the qualities of the evaluated tactical urbanism interventions, it was considered imperative to include informants from varied backgrounds. There was a total of five interviews conducted, with six informants involved, as one of the interviews included two informants. The present section introduces the informants, along with a brief summary of their backgrounds, in order to provide context for their perspectives prior to presenting their insights in the result section.

Prof. **Carolina Pacchi** is an Associate Professor at Politecnico di Milano, where she teaches Urban Design, Planning Theory and Practice, and Local Conflict Resolution in Urban Planning and Architecture Masters Programs. She is engaged in research on the impact of active citizenship in fostering urban innovation and on the interconnections between grassroots projects and planning frameworks, policies, and tools. In addition to her active involvement in grassroots and participatory initiatives around Europe, she also serves as a valuable key informant due to being a resident of the Piazza Spoleto neighborhood herself.

Dr. **Francesco Vergani** is a research fellow in the Polimi Desis lab of the Department of Design at Politecnico di Milano and a member of Polisocial, a social engagement and responsibility program of the university. Together with the Polimi Desis Lab, he has been an active member of the Off-Campus living lab in the NoLo District, very close to Piazza Spoleto, since 2020. In this role, they have been coordinating activities and projects of social innovation in collaboration with local residents and stakeholders to improve the quality of life in the neighborhood.

Prof. **M. Antonella Bruzzese** is currently an Associate Professor in Urban Planning and Urban Design at PoliMi. She has extensive professional experience with public spaces, having approached the subject from various perspectives as an urban designer and planner, as well as through involvement in public administration positions. Specifically, she has been appointed town councilor (assessore municipale) at district level in the Municipio 3 of Milan for urban planning, greenery, public spaces, and mobility. She has fostered, together with the president of the district, a tactical urbanism intervention in Via Guido Reni that was afterward integrated into the Piazze Aperte program. Apart from her professional experience, the insights she offers as a resident of the Piazzale Bacone neighborhood are also of essential value for the evaluation process.

Alexa Avitabile Leva is part of the parents' association "I Baconiani" of the Francesco Bacone Elementary School and has previously been president for 4 years. She is an active stakeholder who, with the rest of the parents, answered the open call of the municipality for proposals "Open Squares in every neighborhood" requesting the intervention of Piazzale Bacone. Together with the other stakeholders, she actively participated in the codesign sessions aiming at enhancing the safety of the intersection and fostering a sense of community by providing a space for social interaction.

Luigi Costamagna is an architect and a former resident of the Piazzale Bacone neighborhood. He was very passionate about the intervention, and together with his partner, he runs WinWin Architecture and Urban Design Office, one of the main technical stakeholders. Winwin Office collaborated with the Parents Association group in order to facilitate the bottom-up intervention and ensure that the community's needs and concerns were addressed. They conducted extensive research and engaged in multiple consultations with the residents and the municipality to develop a feasible and widely accepted intervention design.

Giulia Sicignano is an architect and urban planner who works as a consultant for AMAT, the Agency for Mobility and Environmental Territory, under the Municipality of Milan. She has been a pivotal member of the "Piazze Aperte" Program, serving in the Officina Urbana division of AMAT, a primary technical partner since the two initial pilot projects. Her office is actively engaged in multiple stages of the program. This includes strategic planning, area programming, community engagement for proposal solicitation, open call drafting, collaboration with municipal departments, and materials procurement. Her significant professional experience and perspective offer key insights in the evaluation of the program.

The author would like to express his gratitude to all the key informants who generously dedicated their time and shared their valuable insights as interviewees in this study. Their willingness to participate was instrumental in the successful completion of this thesis, and their contributions are highly appreciated.

4.4. Results

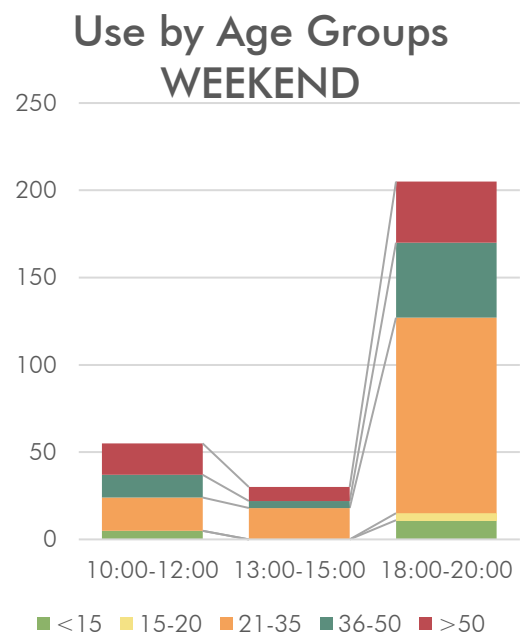
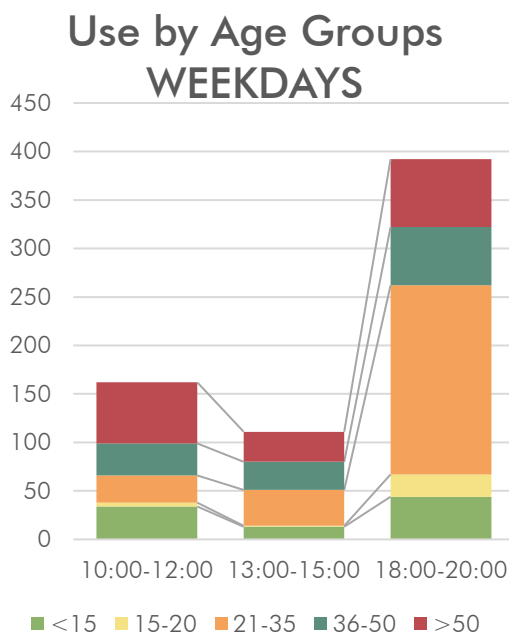
INCLUSIVENESS

Diversity in ages: The first variable that is used to measure the level of inclusivity that the study areas exhibit is the use by all age groups. This variable was measured by counting the people who used the space throughout the intervals of observation and categorizing them into age groups that were defined beforehand.

One crucial factor taken into account throughout the process of age group selection was the requirement that persons be categorized only based on visual observation. Consequently, it was necessary to choose groups that could be easily distinguished by the researcher while also ensuring the highest level of specificity. Therefore, the age groups chosen for the visual observations were 15 < (kids), 15-20 (teenagers and adolescents), 21-35 (young adults), 35-50 (middle-age adults) and >50 (older adults).

Spoletto

For Piazza Spoleto, the results indicate that during weekdays, up until the afternoon, there is equal use of the space by all age groups, whereas in the evening there is a significantly stronger presence of younger adults compared to other ages. The age group that is mostly absent from the public space is teenagers whose presence is only noticeable during the evening interval of the weekdays.



During the morning interval from 10:00 am to 12:00 p.m., the majority of users were older adults with middle-aged and younger adults noting around the same

percentage. The second most present age group during these hours was children whose numbers decreased considerably during the afternoon interval.

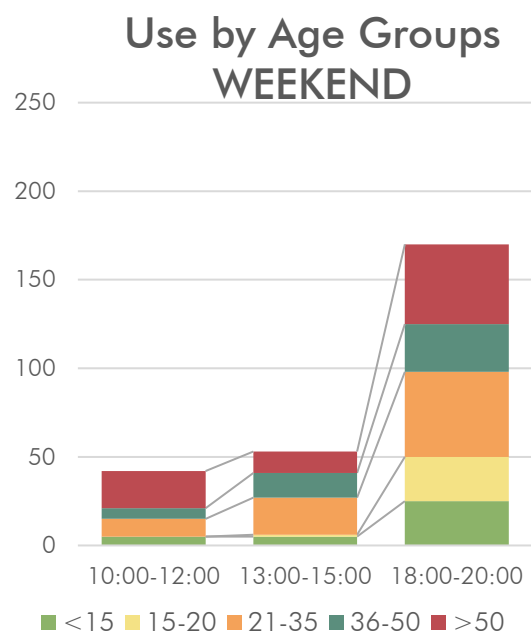
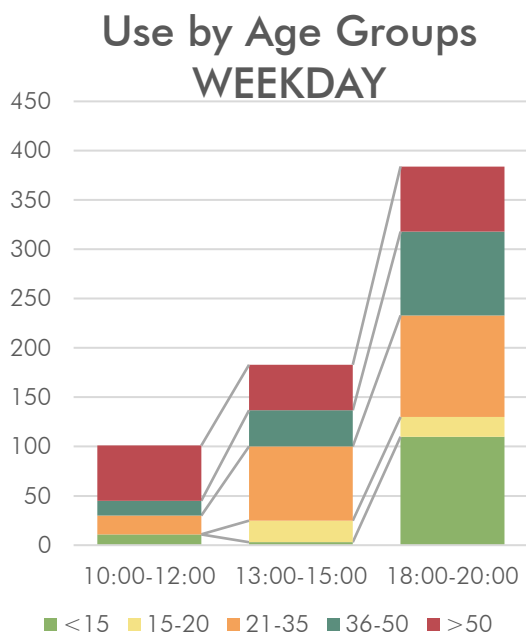
Across this interval from 13:00 p.m. to 15:00 p.m., there was a small but noticeable change in the age profile of users. Initially, the age group with the most users was now young adults, while older adults come second with a slightly higher percentage than middle-aged ones.

During the weekend, the age group that occupied the public space is young adults, since they are the ones who used the space most during all the intervals. Noteworthy is also the fact that children's presence decreased significantly, something that could be attributed to the closure of the school during the weekend. This could also indicate that not many children live in the neighborhood, or that they choose different -more attractive- destinations for leisure when not limited to the perimeter of their school.

The age group that could be considered dominant is younger adults, but not for the entire day. During the morning interval between 10:00 and 12:00 a.m., older adults over the age of 50 are the most prominent demographic in the space.

The results of the observations give a clear picture of how different age groups use the space depending on the hour of the day. The graph demonstrates a significant peak at the evening interval, with young adults being the main occupiers of the space. However, all age groups show an increase in their numbers during this interval, meaning that the space is more desirable in the evening.

Bacone



The distribution, both of age groups and of the number of public space users, clearly differs between Piazza Bacone and Piazza Spoleto. One notable distinction is that a greater number of individuals frequented the square during the afternoon interval in comparison to the morning interval, with the evening interval maintaining its status as the most heavily visited period. On weekdays, the demographic composition of public space users during the morning hours is characterized by a majority representation of older adults, accounting for over 50% of the total. Conversely, other age groups exhibit relatively smaller, yet nearly equivalent, proportions. Notably, teenagers are entirely absent from this demographic distribution, attributing the reason for this absence to the fact that schools are open during this time. During the afternoon interval, it is evident that there is a shift in the composition of public space users. The presence of teenagers becomes more noticeable as they are now out of school, with the most prevalent age group being young adults. Middle-aged and older adults exhibit a comparable proportion, whereas the presence of children is nearly negligible. One notable distinction in Piazzale Bacone is the observation that during the evening, there exists a more balanced distribution among age groups, with no single group exerting a dominant presence. During this period, the level of activity among children is observed to be the highest, whereas young and middle-aged adults exhibit nearly equivalent levels of participation, with individuals aged 50 and above following behind. Teenagers' presence, however, is still considerably low compared to the rest of the age groups.

During the weekend, there is a slight shift in the distribution of age groups. In the absence of any significant variations in other cases, teenagers constituted a prominent part of public space users during the evening. This particular interval exhibited the most relatively equitable distribution of age group among all times of observation both of Piazzale Bacone and Piazza Spoleto.

Diversity in Genders

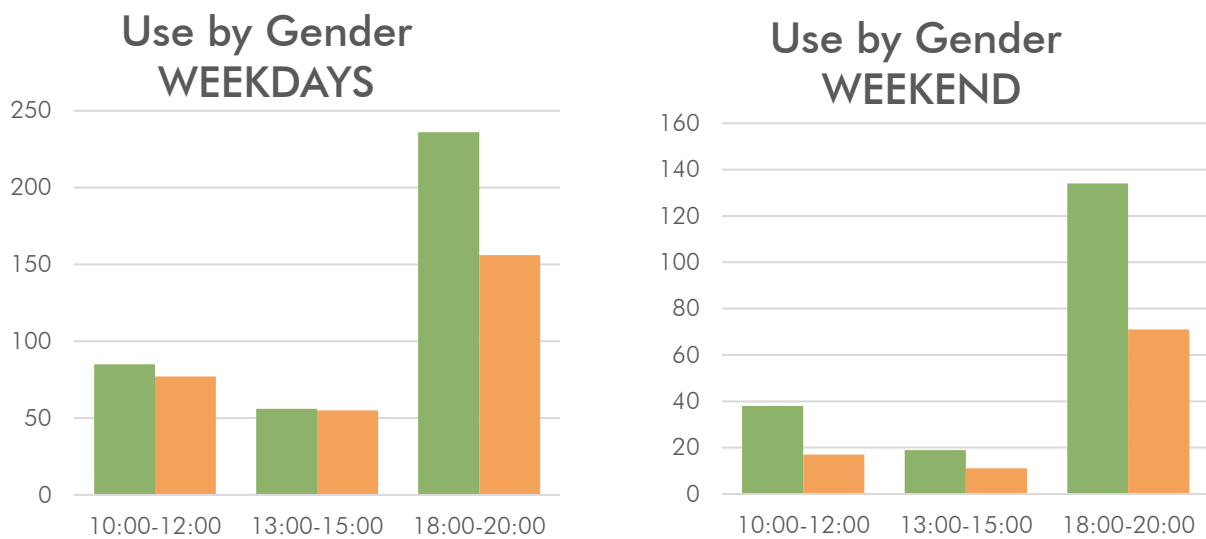
Given that this study relies on visual observation to document gender presence in public spaces, people had to be classified as either male or female. However, a survey by the Ipsos polling institute revealed that in 2023, 4% of the Italian adult population does not identify with any of the two binary genders. This suggests that the study's reliance on visual observation may not fully capture the gender diversity present in public spaces, nevertheless, visual observation can still provide valuable insights into the gender presence and dynamics of the public spaces studied.

Spoleto

On weekdays, the gender distribution of users at Piazza Spoleto is seen to be roughly equal between males and females throughout both the morning and afternoon intervals, with the balance being notably disrupted during the evening

interval. Between the hours of 18:00 and 20:00, not only has the number of users increased substantially, but so has the proportion of male users relative to their female counterparts.

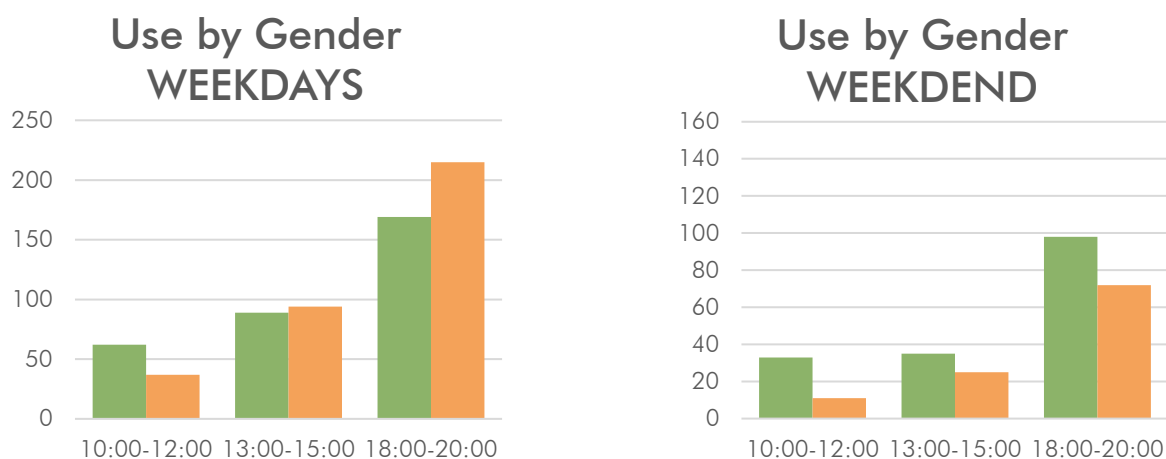
Over the weekend, there is a noticeable difference in the number of male and female users in public spaces, with men clearly outnumbering females among all intervals. This disparity becomes especially evident during the evening period when males constitute 65% of the entire user population.



Bacone

Piazzale Bacone demonstrates a slightly different pattern in its users' presence. Even though, both during the weekdays and weekends, male users comprise a substantial proportion of 63% and a significant 78% during the morning period, in the afternoon and evening intervals of weekdays, female users become the majority. For a public space to have a majority of female users may serve as evidence of a safe, welcoming and inclusive environment. This shift in gender representation throughout the day suggests that Piazzale Bacone attracts a diverse range of individuals, fostering a sense of community and encouraging social interaction.

However, it is evident that there is a noticeable gender imbalance in the public space during the weekend, with a significant overrepresentation of males. This phenomenon might perhaps be attributed to the cultural dynamics of Italy, whereby societal circumstances may suggest that women are more likely to engage in domestic activities and responsibilities during this time period.



Diversity in Physical Abilities

The tool for the documentation of public space users with movement impairments was observations using counts. The very low number of people with physical disabilities present in the squares resulted in the merging of the count of passersby with the count of those who remained in the space.

However even with this overlook the percentage of people with mobility impairments compared to the percentage of able-bodied users is less than 1% in both cases. In Piazza Spoleto, only 9 out of the total 958 users counted between the 7 days of observations had mobility issues, whereas in Piazzale Bacone only 11 out of the 914 people counted. According to information obtained from the data-sharing platform BDEX, it appears that by the end of August 2023, around 9.9% of the overall population residing in Milan experiences a form of disability.

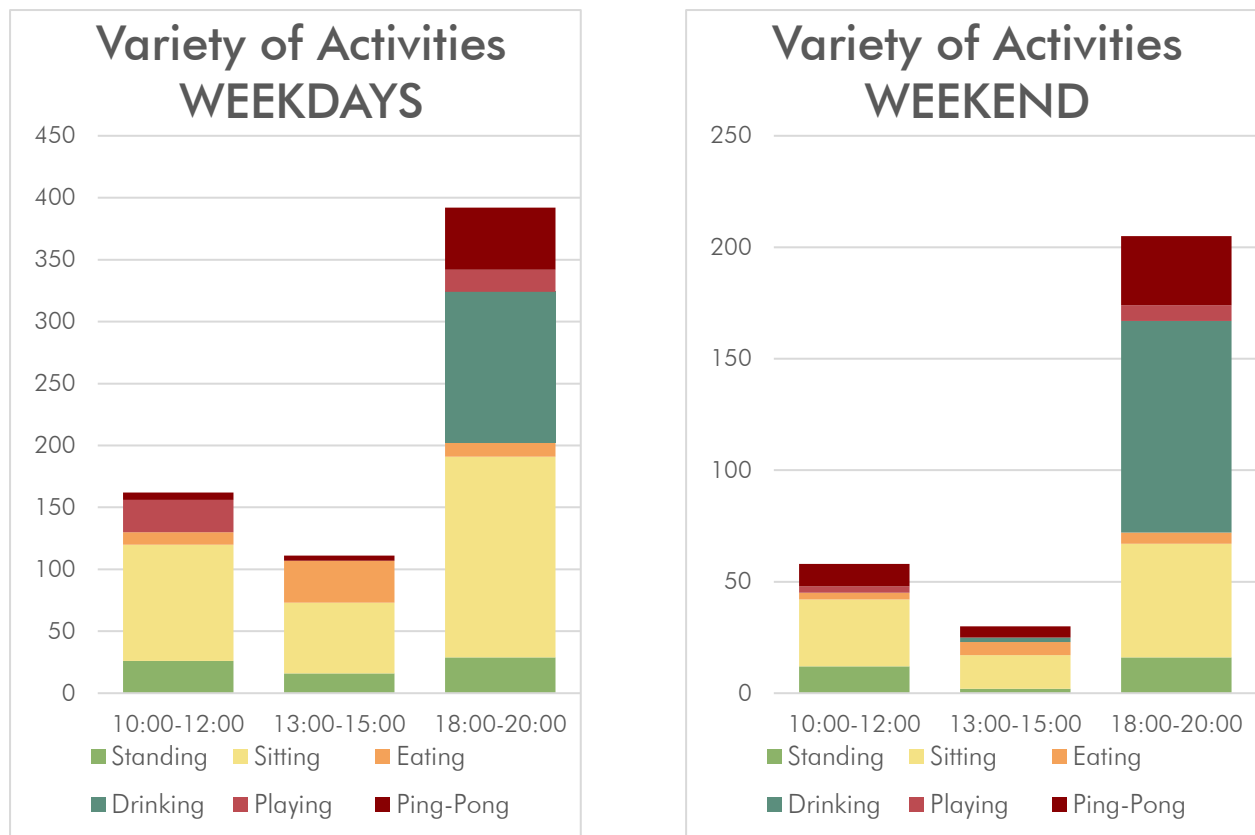
The pavements of the city have been designed to cater to those with mobility impairments since a significant majority of them have well-maintained ramps. However, they still lack technical elements for the total inclusiveness of the whole spectrum of disabilities, such as tactile ground surface indicators and accessible pedestrian signals (APS).

The low results of diversity in physical abilities within the squares may suggest that even if the tactical urbanism design is physically accessible it might not be a welcoming or comfortable environment for these people to navigate and engage with. However, the evaluation of the squares focuses on the presence or absence of diverse individuals within them. To get a more comprehensive understanding of the reasons behind people with mobility impairments' decision not to regularly visit these spaces, perception analysis using surveys is suggested.

USES & ACTIVITIES

Variety of Activities: To begin with, the categorization of the activities into six classes was conducted after the completion of the observations. This implies that some actions documented inside the tactical squares were consolidated with others as a result of their small number of users. An example of this is the practice of reading when about five or fewer individuals whose primary activity was reading were merged into the activity of sitting. During the observations, it was noted that some users engaged in more than one activity during the duration of their stay, however, they were not counted multiple times, but only their primary activity was recorded.

Spoleto

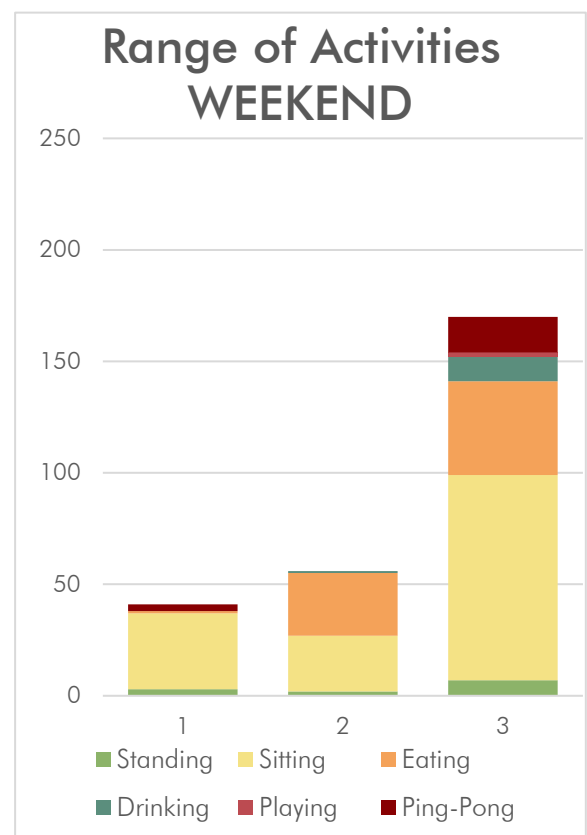
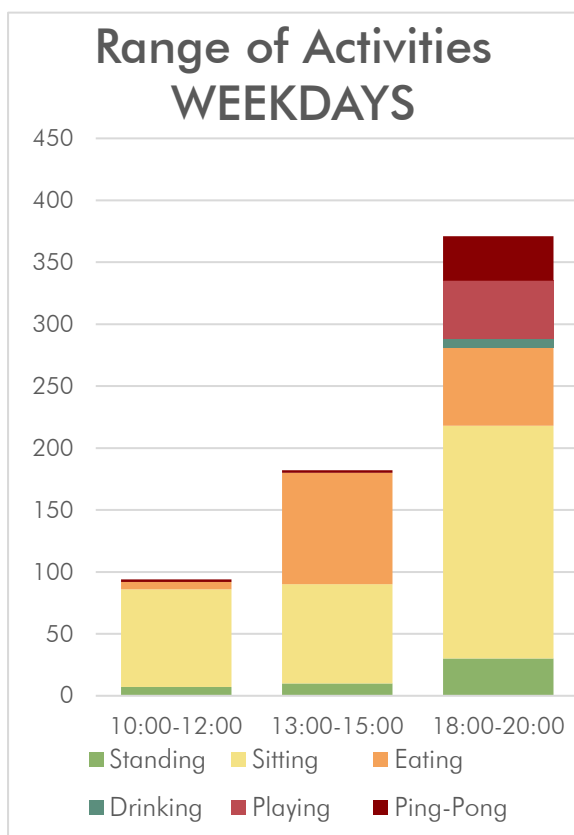


By observing the two diagrams it becomes evident that the main activity of the space is sitting. Specifically, on weekdays, stationary activities such as sitting and standing are the most common activities among users during the morning interval, with a number of children playing in the space. In the afternoon, there was a notable increase in eating, while no children playing were recorded. The number of users playing ping-pong remained low up until the evening interval, during which a total of 50 people were observed engaging in the activity over the course of 5 days. The prerecorded stationary activities remained high during the evening, with sitting being clearly dominant and drinking alcohol becoming a prevalent activity in the public space.

The observations made throughout the course of the weekend revealed two main differences compared to the weekdays: a notable rise in the percentage of individuals engaging in ping-pong during all intervals and the apparent prevalence of drinking as the predominant evening activity.

These findings suggest that the time of day and the day of the week have an impact on the variety of activities in Piazza Spoleto. Especially during the weekend, the tactical intervention offers a popular alternative to private spaces for social interaction and recreational activities.

Bacone



By examining the two diagrams, it becomes evident that the predominant activity in Piazzale Bacone is sitting, with eating being the second most popular activity, followed by children playing and ping-pong. The reason behind these percentages may lie in the layout of the square and the neighboring land uses. While there are ample options for the purchase of alcohol in the very close vicinity of Piazza Spoleto, in Piazzale Bacone there are various options for the purchase of food. Consequently, this difference in the uses is a definitive factor in the replacement of the high percentages of drinking with eating in Piazzale Bacone.

On the eastern part of the square, there are 3 picnic tables that can host up to 6 people each. This, together with the shade that the potted plants provide to two of them during the afternoon interval (13:00–15:00), makes the square welcoming to those who want to have their lunch break outside of their workspace. Additionally, as mentioned above, the ice cream shop at the front of the square is a frequent destination for passersby who afterward visit the square to enjoy their ice cream, leading to the increased percentage of eating.

Another noteworthy shift in the percentages of activities is the increase in "children playing" during the afternoon interval on weekdays. However, in any other case, "playing" is either completely absent or significantly lower in percentage. This suggests that children primarily use the square as a recreational area after school and prefer other places during the weekend. Alcohol use inside the plaza is mostly seen during afternoon periods, particularly on weekends, when it becomes a more prevalent activity among visitors. Lastly, ping-pong is proven to be an activity that is well-embraced by users of the tactical squares, as it holds notable percentages during the afternoon intervals.

Active

The creation of active spaces for social activities is a catalytical factor in the promotion of social diversity and community engagement (Hes and Hernandez-Santin 2019). In the tactical urbanism interventions studied, the primary active activity that was selected for the space during the design process was table tennis. However, the presence of kids in both public spaces consequently defined the activity of children playing as an additional active engagement of the community.

When examining the variable of "variety in activities", it was noted that both spaces had a considerable number of public space users who engaged in playing ping pong as well as children playing with or without the urban furniture. This suggests that the availability of urban furniture in tactical squares encourages diverse activities and attracts people of different ages and interests. Additionally, the presence of children playing in these public spaces not only enhances community engagement but also fosters a sense of inclusivity and promotes a family-friendly environment.

In conclusion, the range of active activities available in both spaces is limited. However, given the nature of the tactical urbanism intervention and its constraints on urban furniture options, the inclusion of ping-pong tables appears as a feasible and useful solution for fostering active engagement among individuals within the space.



Fig. 32. Active activities in Piazzale Bacone (top right & bottom left) and Piazza Spoleto (top left & bottom right). Source: Author.

Mixture of uses

Mixed-land uses encourage social interaction and a sense of community as people from different backgrounds and with different needs come together in shared spaces. Additionally, mixed land uses can create a visually interesting and dynamic environment, attracting passersby and residents alike.

To determine if the neighborhoods of the squares feature mixed land uses, corresponding maps were created depicting both the ground-floor and the higher-level land uses. The visual patterns depicted allow for a direct understanding of the distribution of different types of land uses within the neighborhoods. By analyzing these maps, it becomes evident whether there is a mixture of residential, commercial, and other uses in close proximity to each other. This information is crucial in assessing the level of diversity and vibrancy in the neighborhoods' land use composition.

To begin with, Piazza Spoleto was initiated to serve as an extension of the Tommaso Ciresola State Middle School, which plays a defining role in the land use pattern of the Piazza's neighborhood. On the facades of the square, aside from the school, there is a coffee bar, a laundromat, a minimarket, and a completely residential building, with the higher-level land uses in all of these cases being residential. This situation alone makes the square a crossroads for people from different backgrounds and daily routines, attracting both residents and visitors to interact and engage with the various amenities available. Additionally, the presence of the school ensures a constant flow of students and families, further enhancing the sense of community within the neighborhood. Moreover, along Via Venini (street), there is a collection of cafés, bars, restaurants, a supermarket, and a hotel. The major commercial street of the neighborhood, however, is Viale Monza, which functions as a hyper-local avenue, attracting visitors from many parts of the city. Even though only half of Viale Monza lies within a 5-minute radius of Piazza Spoleto, this section nonetheless contains a wide range of commercial uses, from simple cafes and restaurants to tailor and carpenter shops. Additionally, the venues vertical to Viale Monza, such as Via Varanini, Via Crespi and Via Martiri Oscuri, which also leads to P. Spoleto display a fair amount of both commercial and residential uses, further contributing to the lively urban landscape of the area.

By observing the higher-level land use map it is evident that the land use typology within the neighborhood mostly consists of commercial businesses on the ground floor, with the remaining levels being predominantly residential. This configuration facilitates the direct integration of various land uses, even at the individual building level.

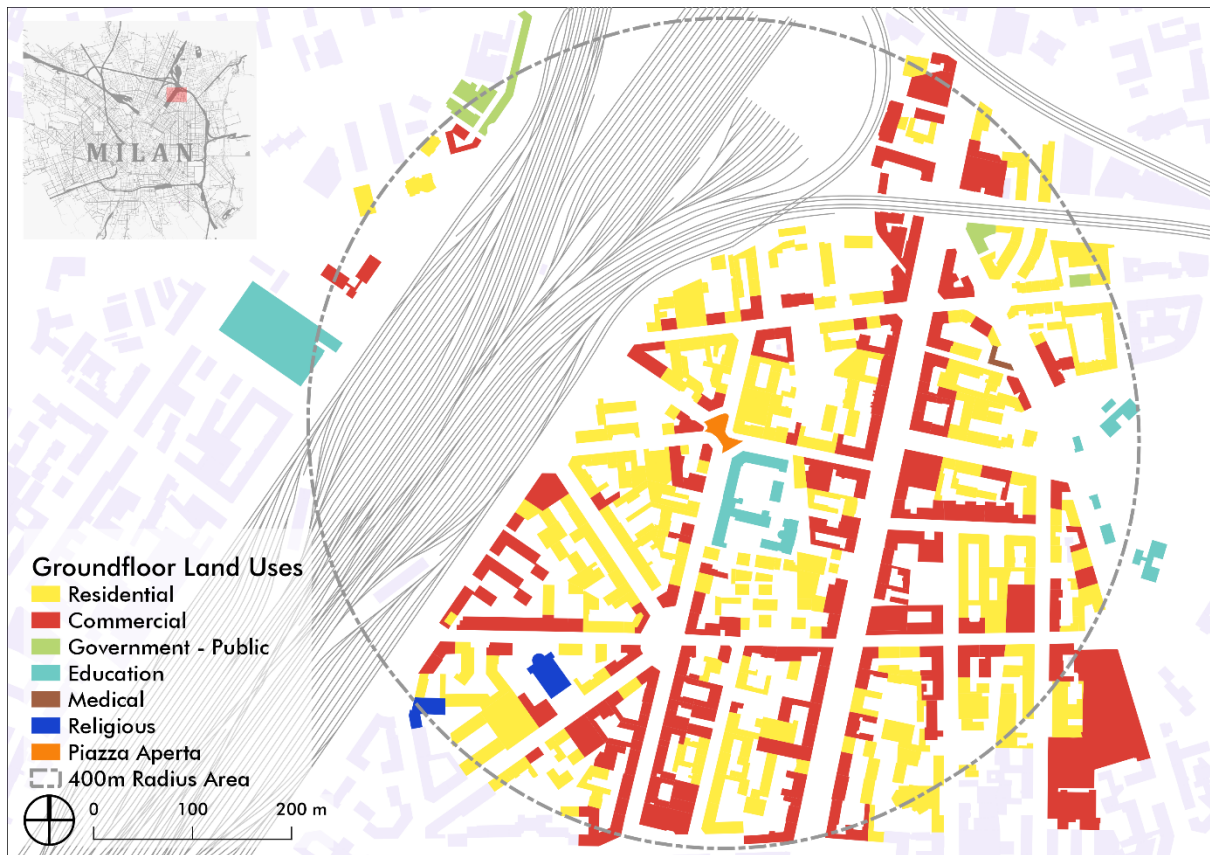


Fig. 33. Groundfloor land uses in the Piazza Spoleto Neighborhood. Source: Author

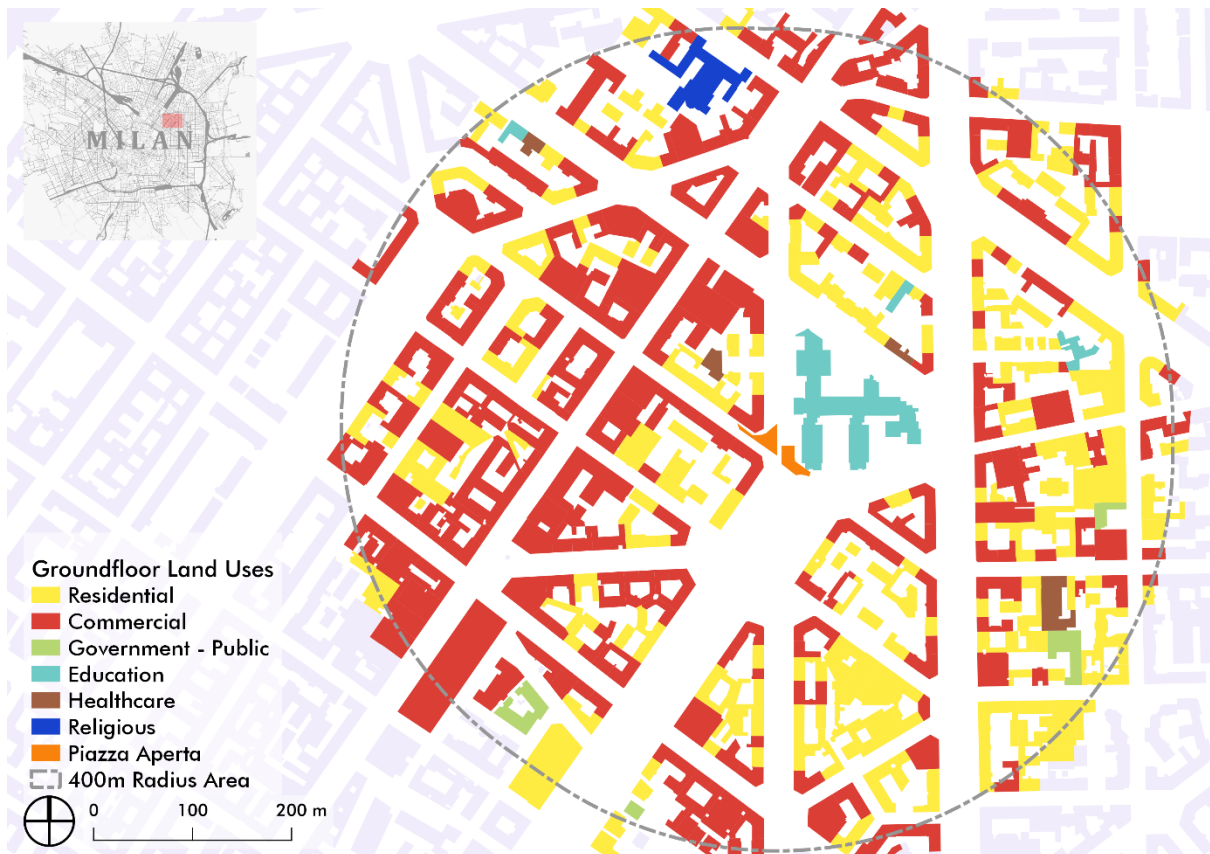


Fig. 34. Groundfloor land uses in the Piazzale Bacone Neighborhood. Source: Author

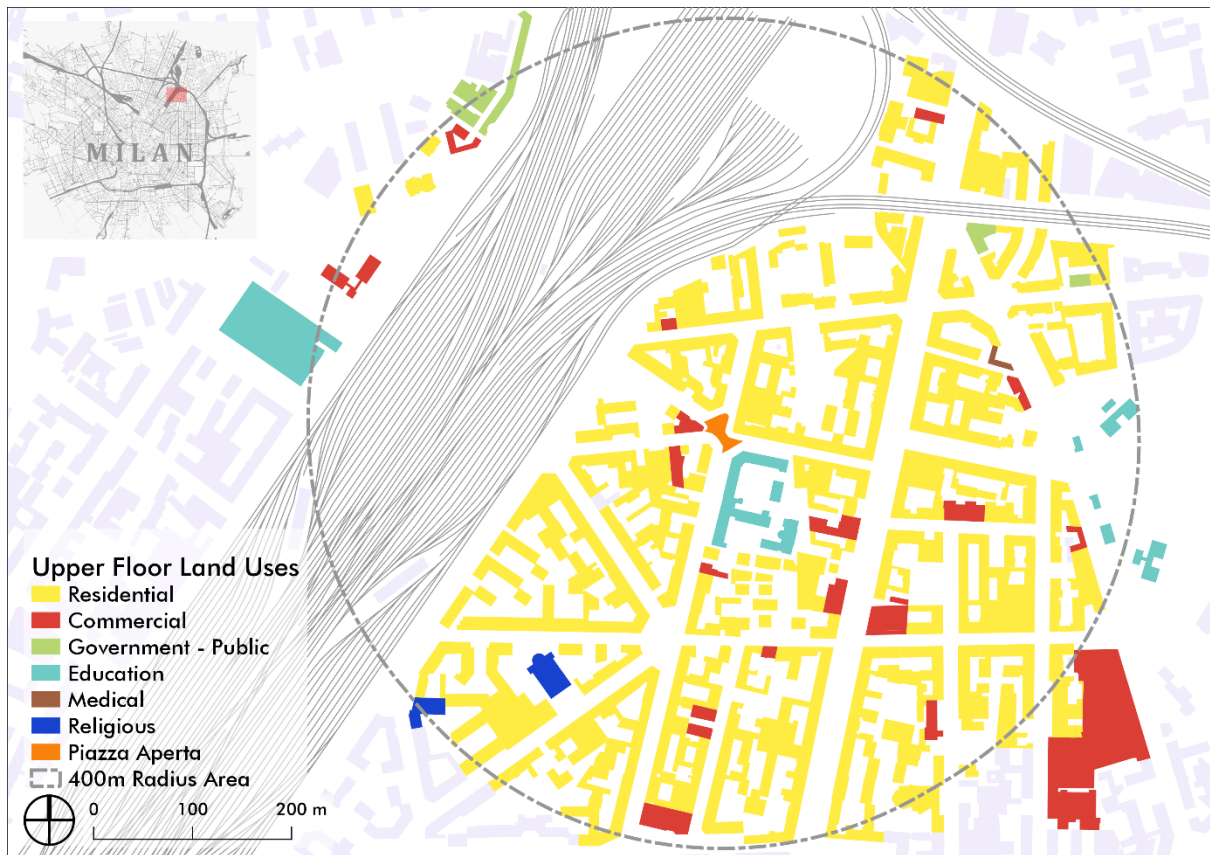


Fig. 36. Upper floor land uses in the Piazza Spoleto Neighborhood. Source: Author.

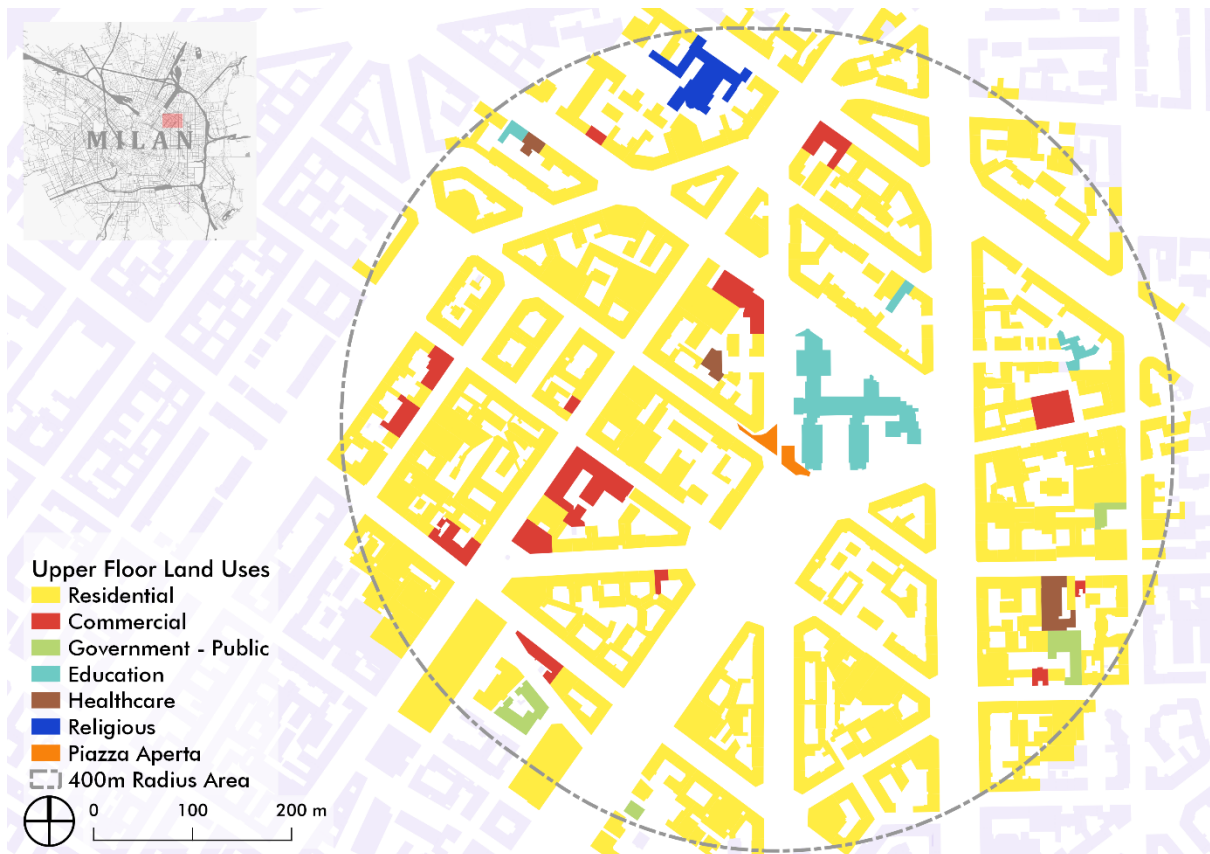


Fig. 35. Upper floor land uses in the Piazzale Bacone Neighborhood. Source: Author.

Piazzale Bacone was also initiated to enhance the built environment in front of the Elementary school "Bacone", which has significant importance as a land use within the vicinity. On the facades of the Piazzale, aside from the school, there is an ice cream store, a stationery shop, a bar, a retail shop, and a coffeeshop, creating a vibrant and diverse community hub. Also in this case, the upper-level land uses consist entirely of residential apartments, thus enhancing the overall liveliness of Piazzale Bacone but also promoting a sense of community and convenience for both students and local residents. The street that overlooks the intervention, Via Morgani, is mostly commercial but with some completely residential buildings present. Via Spontini, which leads to the Piazzale from the west, has a number of restaurants, cafes, beauty salons, and retail stores. The main commercial street of the neighborhood is Corso Buenos Aires, one of the major shopping streets in Milan, featuring one of the highest concentrations of clothing stores in Europe along with all kinds of businesses, such as banks, cafes, bars, supermarkets, etc., attracting locals and tourists alike. Another street that contains a significant number of businesses is Viale Abruzzi, such as pharmacies, cafes, restaurants, etc. In general, the neighborhood around Piazzale Bacone is certainly more commercial than Piazza Spoleto due to its closer proximity to the center of Milan, with international businesses that draw in a diverse range of customers.

However, the land use typology is mostly the same, with businesses at ground level and residences on the upper ones, despite the difference in commercial activity. Additionally, the mixed-use nature of both neighborhoods fosters a sense of liveliness and convenience for residents, with amenities and services readily accessible within walking distance.

Vital

Vital uses and activities were approached as a binary variable, wherein the interventions were assessed as either essential or non-essential for the community. Interventions that may not be vital could involve just aesthetic enhancements or minor improvements to public spaces, whereas essential interventions would include addressing safety concerns or providing necessary amenities for the community.

Based on visual observation and the insights that the interviews with the key informants provided, it was determined that both squares were of vital importance to the community. Providing safe and welcoming spaces for kids before and after school, as well as creating opportunities for social interaction among community members were identified as essential benefits of these interventions. Additionally, these tactical urbanism initiatives were found to contribute to social cohesion and to promote a sense of belonging within the community.

In order to support this claim, the essential information obtained from interviews conducted with stakeholders is presented as follows:

Spoletto

Dr. Vergani: *"It has helped enormously the issue of kids coming out of school without a place to hang out or wait for their parents"*

Prof. Pacchi: *"The piazza works as an extension of the school, as the community wanted to have a welcoming space where kids would engage socially after school, because there was no other option."*

Bacone

Alexa: *"Before the intervention, it was very dangerous for people to cross the intersection because the road was very wide. Now, Piazzale Bacone is not only a recreational space but a much-needed safety measure against traffic."*

Prof. Bruzzese: *"There was pressure for Municipio 3 to select this case because the crosswalk was very long, the sidewalks too narrow and there were a lot of problems regarding the accessibility of the school."*

ACCESS & LINKAGES

Continuity

Defined micromobility networks are of utmost importance in promoting and enhancing sustainable means of transport within cities (Vlastos & Bakoyannis, 2019). However, in many instances, due to the limited street space, bike lanes are fragmented, making cyclists share the road lanes with motorized vehicles. Such is the case for the majority of the broader area around the case studies, whereby both shared and dedicated bike lanes appear discontinuous.

The micromobility network inside the research area may be classified into two distinct categories: shared and dedicated (Autelitano & Giuliani, 2021). The shared network is demarcated from the road network by painted signs, while the dedicated network is physically segregated from vehicular traffic by physical barriers. The most representative examples of shared lanes are Viale Monza, near Piazza Spoleto, and Corso Buenos Aires, near Piazzale Bacone. For these high-traffic streets, even though they provide designated space for cyclists, the lack of physical barriers may serve as a deterrent due to the reduced level of safety.

In the neighborhood of Piazza Spoleto, the presence of exclusive cycling lanes is limited to the streets that converge into the square, namely Via Martiri Oscuri, Via Venini, and Via Spoleto. Nevertheless, it is worth noting that even in these areas, the extent of these designated lanes is confined to the immediate vicinity of the respective intervention. In the vicinity of Piazzale Bacone, there are designated bike lanes inside Bacone Park, as well as a segment of Via Metteucci that ends abruptly. Consequently, the continuity of the micromobility network around both squares is currently limited. This fragmented infrastructure poses challenges and dangers for cyclists and other micromobility users who wish to commute in sustainable means of transport. Efforts should be made to expand and connect the existing designated lanes to create a more cohesive and accessible network for micromobility users in both areas.



Fig. 37. The dedicated bike lane on the left abruptly ends, while the shared bike lanes on the right are obstructed by parked vehicles, Piazza Spoleto neighborhood. Source: Author.



Fig. 38. Micromobility network of the Piazza Spoleto Neighborhood. Source: Author.

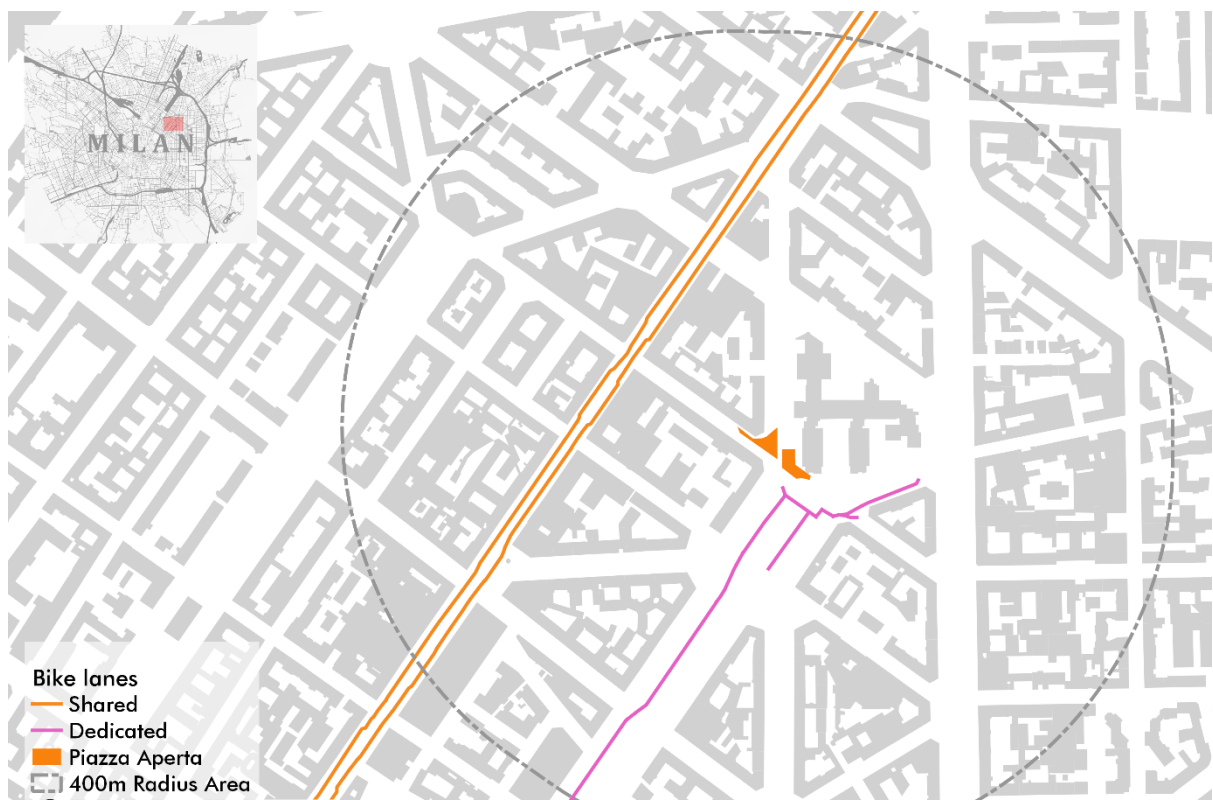


Fig. 39. Micromobility network of the Piazzale Bacone Neighborhood. Source: Author.

Convenience

Piazza Spoleto is reachable through multiple means of public transport such as tram, bus, and metro. The nearest metro station is Rovereto, which connects the area to the center of Milan, while buses provide access to the central train station and the northern part of the city. The mode of transport that provides immediate access to the square is the tram, whose terminal station is at Via Spoleto itself. However, despite the presence of several public transportation stops in close proximity to the square, accessibility remains limited to people residing in the southern and eastern regions of NoLo, the broader district.

The advantageous location of Piazzale Bacone, situated between two very lively districts of Milan, Porta Venezia, and Citta Studi, provides the privilege of great connectivity to different areas of the city through a variety of public transportation options. As illustrated in the accompanying map, a Metro station is accessible within a walking distance of less than five minutes. Simultaneously, multiple bus stations are within a 500-meter radius, facilitating a convenient commute to the square.

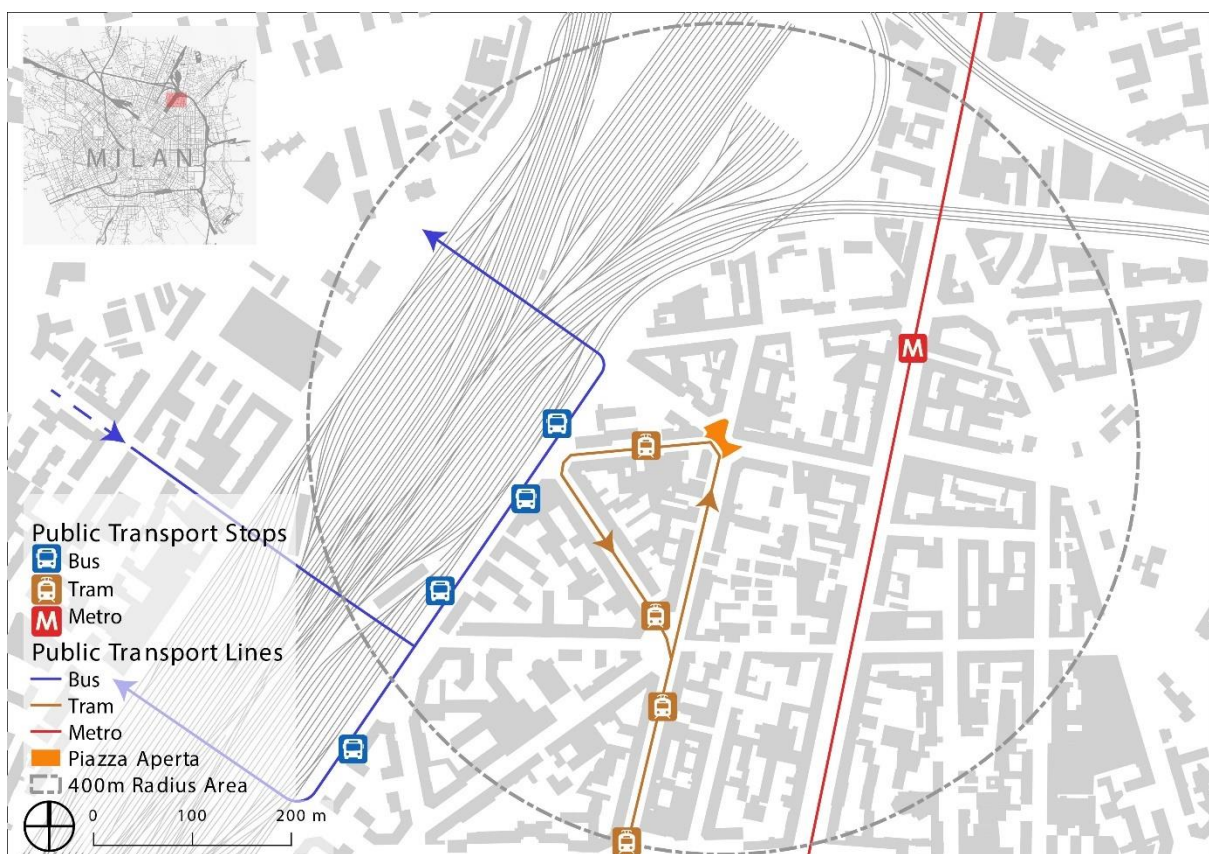


Fig. 40. Public transit network in the Piazza Spoleto neighborhood. Source: Author.

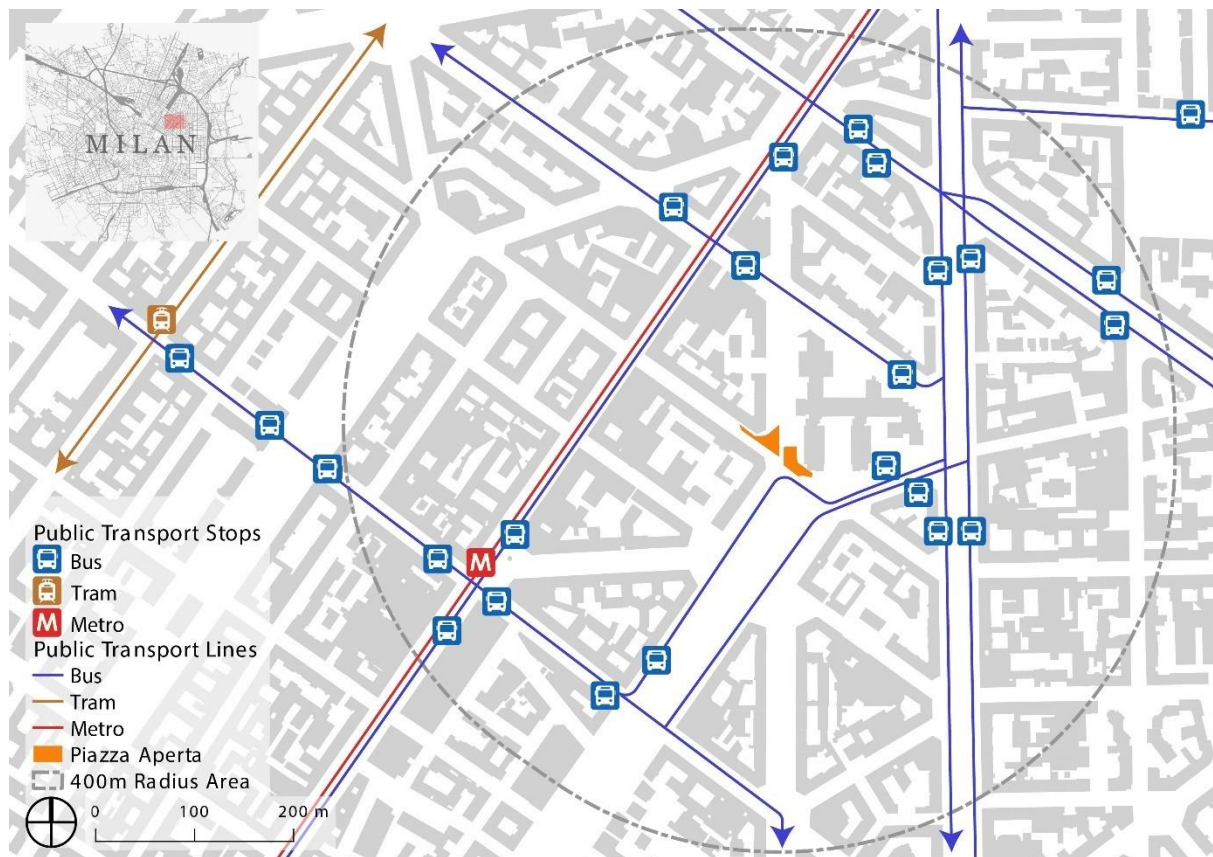


Fig. 41. Public transit network in the Piazzale Bacone neighborhood. Source: Author.

Walkability

As mentioned in the methodology overview, the evaluation of walkability for the open squares is based on Speck's (2012) theory that it is affected by the degree of safety, comfort, and interest they create among people. These variables are intertwined with factors from other place qualities, such as comfort, uses, and activities. Therefore, in order to have a comprehensive understanding of the elements influencing walkability, it is necessary to compare the data from evaluations of complementary variables.

For this section, walkability was assessed based on the physical comfort of the urban network around the interventions. The evaluation focused on pavement width since other aspects such as land uses, safety, readability, etc. will be examined in subsequent phases of the analysis.

The width and condition of a neighborhood's pedestrian pathways have a significant impact on its walkability. An area that features wide and properly maintained pavements offers a more pedestrian-friendly environment, hence fostering increased pedestrian activity and interaction with the surrounding environment. Adequate pavement width facilitates convenient and secure movement for walkers across all age groups and physical capabilities, including those using strollers, wheelchairs, or other mobility aids. On the other hand, sidewalks that are small or inadequately maintained might hinder pedestrian mobility, prompting the sharing of space with motor vehicles, hence posing potential risks. Therefore, the dimensions of sidewalks play a crucial role in enhancing walkability of a neighborhood in order to create a

healthier and more vibrant community wherein inhabitants are more inclined to partake in active and sustainable means of transportation.

In the neighborhood of Piazza Spoleto, the predominant range of pavement widths falls between 1.5 and 2.6 meters. In order to ensure accessibility for all individuals, the minimum width of the pavement should be 1.5 meters, therefore, the research area adequately meets the necessary requirements. However, the east segment of Via Martiri Oscuri that leads to Piazza Spoleto features a width of less than 1.5 m, the same as other parts of the area such as Via Turro and Via Scagna, east of Viale Monza. Viale Monza itself, being a primary road artery, has a sufficiently ample width, with certain sections measuring up to 4 meters. Overall, the research area meets the necessary requirements for minimum pavement width, with the exception of the narrower segments mentioned. These narrower sections may pose challenges for pedestrian and vehicular traffic, especially during peak hours. Therefore, it is important to consider potential measures to improve the width and accessibility of these specific areas to ensure uninterrupted flow and safety for all users.

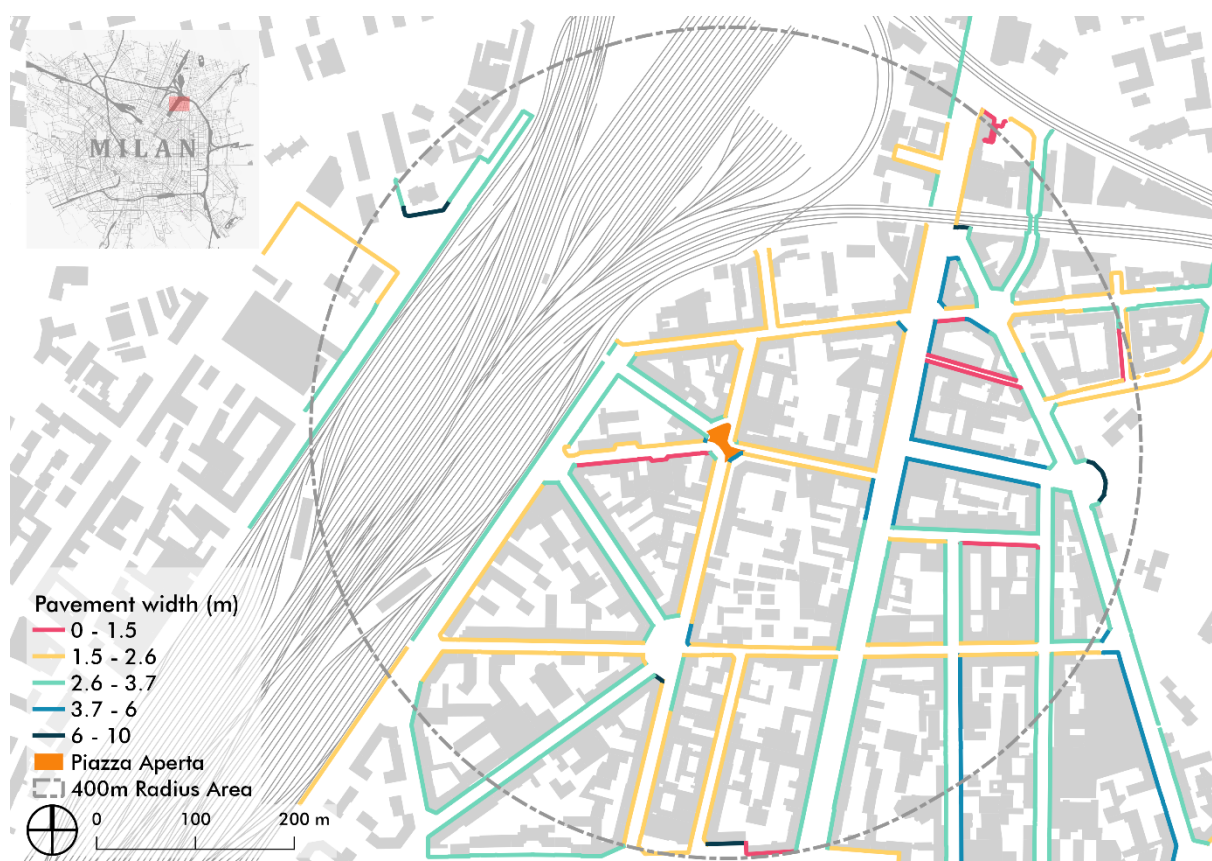


Fig. 42. Pavement width around the Piazza Spoleto neighborhood. Source: Author.

Dr. Vergani

"The initiative has pushed cars away not by banning them completely, but by making it much more difficult to pass around the square, due to changes in the mobility network. That alone increased a lot the numbers of pedestrians."

In the neighborhood of Piazzale Bacone, it is evident that the width of the pavements is considerably broader, with nearly all of them meeting the 1.5-meter requirement. Around the perimeter of Bacone Park, there is ample pavement width at all sides, enhancing its pedestrian-friendly character along with the strong presence of green infrastructure. However, it is very important to note that prior to the implementation of the tactical urbanism intervention, the pavement at the side of the school on Piazzale Bacone Street was less than 1.5 m, being at a significant dissonance with the 20-meter road. Currently, the pavement that leads to the Piazzale is more than 3.5 meters wide, ensuring safety and comfort for pedestrians. In Corso Buenos Aires, pavements are at least 3.5 meters along its entire length, with several extensions reaching 5 and more than 10 meters at certain points, e.g., in Piazza Argentina. However, even the streets perpendicular and intersectoral to Piazzale Bacone Street are equipped with adequate pavements with widths reaching up to 6 meters, like in Via Piccini and Monteverdi. In essence, based solely on this specific factor, the walkability in this area is highly favorable, as pedestrians have ample space to move around comfortably and safely.



Fig. 43. Pavement width around the Piazzale Bacone neighborhood. Source: Author.

Prof. Bruzese

"A lot more pedestrians pass through the intervention, as it is much more interesting to go through people playing ping pong for example than between cars. "

Connectivity

Hiller (2007) argued that the primary factor concerning pedestrian use of public spaces is their "connectedness," which Hiller referred to as integration (Carmona, 2021). He claimed that when a design is excessively localized without proper integration, it results in a disruption of the natural movement pattern and a tendency for the space to be underutilized. Therefore, together with his colleagues at UCL, they developed Space Syntax, a theoretical framework that focuses on the analysis of spatial networks to investigate various aspects of the built environment (Koutsolampros & Sailer, 2021).

It primarily examines the impact of spatial configurations on local phenomena, such as co-visibility and co-presence, as well as broader building-wide effects, including overall depth and distance to the entrance and other amenities (Koutsolampros & Sailer, 2021). It encompasses a range of methodologies that utilize topological, geometric, and metric distances to quantitatively assess the functionality of urban environments. These techniques are employed to analyze and predict patterns of human movement within urban areas (Paraskevopoulos et al, 2022).

In order to gauge the connectivity of the tactical squares, the space syntax tool used was segment angular integration. This method quantifies the proximity of each segment to all others by calculating the cumulative total of angular changes along each path. The reciprocal of the normalized angular total depth is used as a metric, enabling cross-system comparisons (Vaughan, 2015). The implementation of space syntax analysis was conducted on the local scale of 400m since the tactical urbanism interventions studied primarily focused on neighborhood enhancement.

The local angular integration identifies the areas with high accessibility to the system, i.e., areas likely to generate pedestrian traffic as destinations. In the neighborhood of Piazzale Bacone, the pathways with the highest angular integration values are Via Piccini, Corso Buenos Aires, Via Vitruvio, and Via Abruzzi. The roads that lead directly to the tactical square, however, demonstrate lower values of integration, such as Via Spontini and Via Matteucci, while Via Monteverdi and Via Paracelso are integrated the most. This suggests that the pedestrian traffic of the neighborhood concentrates on the main roads adjacent to Piazzale Bacone rather than the streets leading to it.

In the neighborhood of Piazza Spoleto, the road network is characterised by lower rates of angular integration for the 400m scale. This is most likely caused by the main barrier of the area, the railnetwork that delineates the NoLo district, which cuts through a considerable number of streets and disrupts the flow of pedestrian and vehicular traffic. Viale Monza is the best integrated road being a main artery that is well connected with the rest of the network.

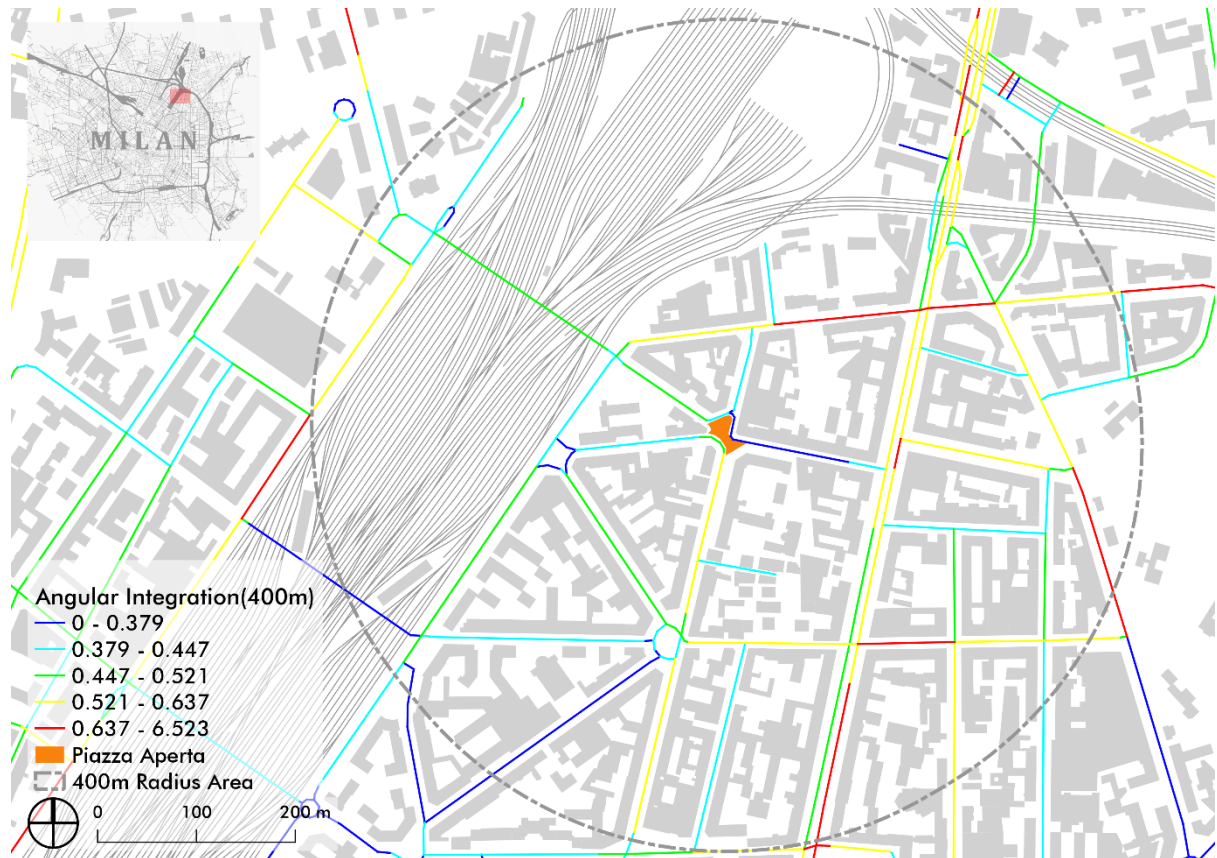


Fig. 44. Space syntax analysis in the Piazza Spoleto Neighborhood. Source: Author.

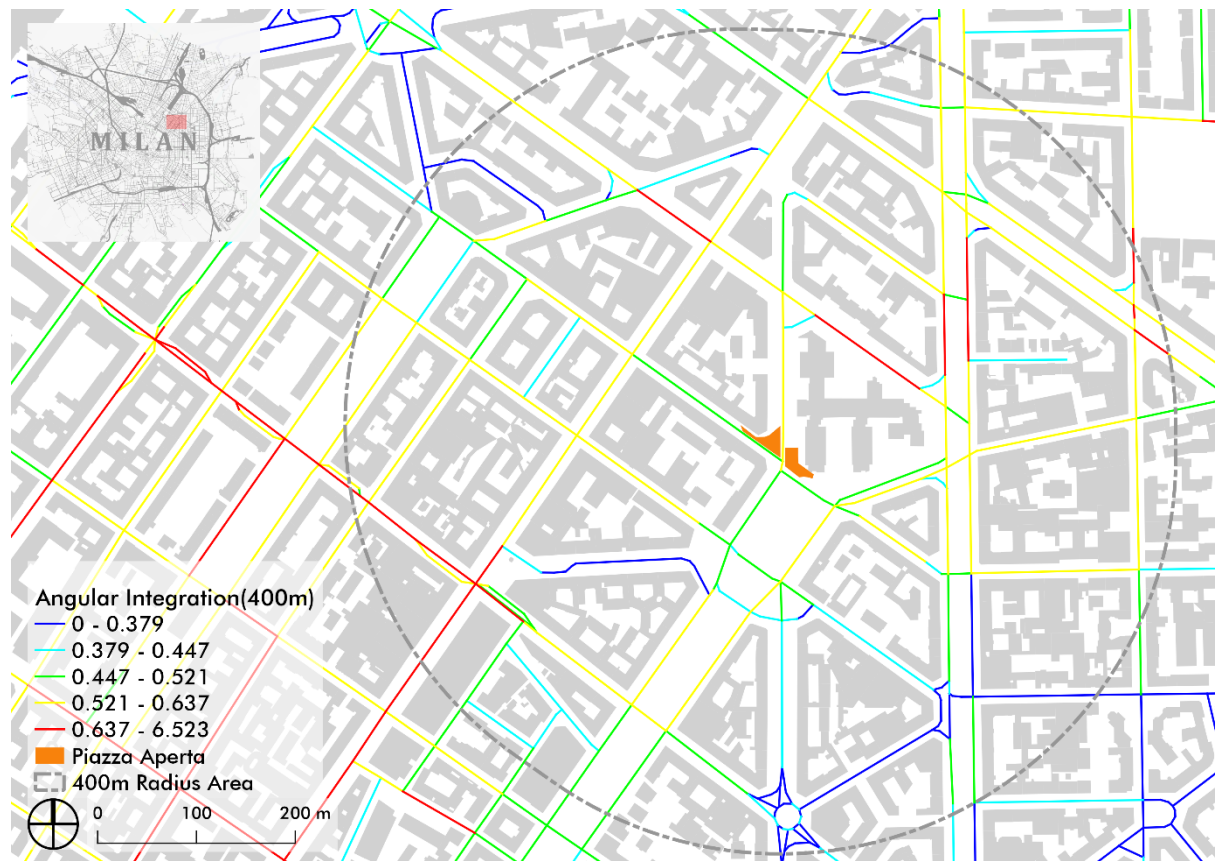


Fig. 45. Space syntax analysis in the Piazzale Bacone neighborhood. Source: Author.

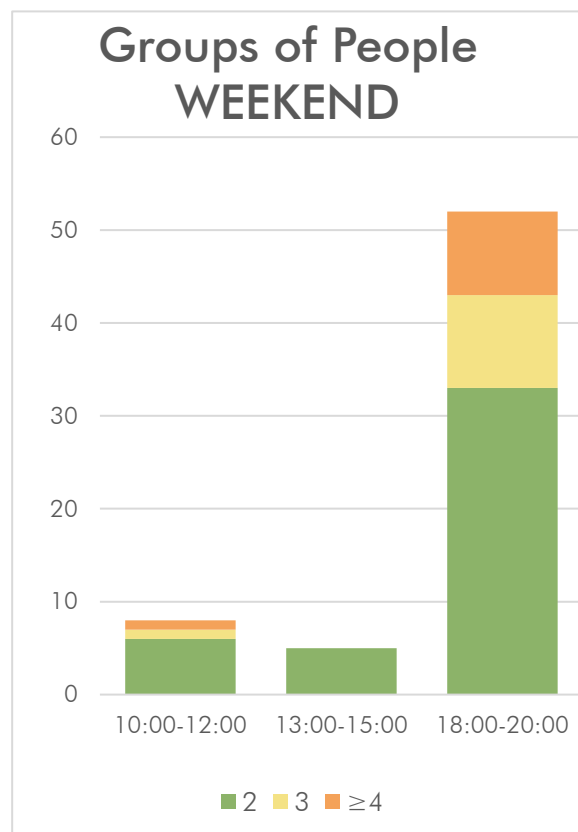
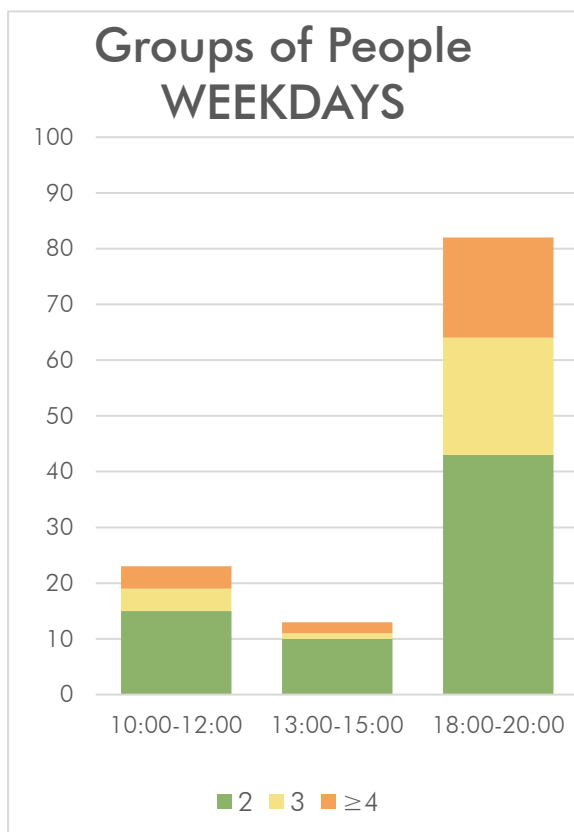
Sociability

Groups of People

The presence of groups of people in a public space serves as a positive indicator of its sociability and its appeal (Mahmoud, 2022). The presence of multiple groups partaking in diverse activities, such as engaging in animated conversations, enjoying leisurely picnics, or participating in cultural performances, serves as an indication that the square functions as a vibrant center for social interactions. Therefore, groups based on 2,3 and 4 or more people were counted as individual units in order to capture the overall level of social activity in the square.

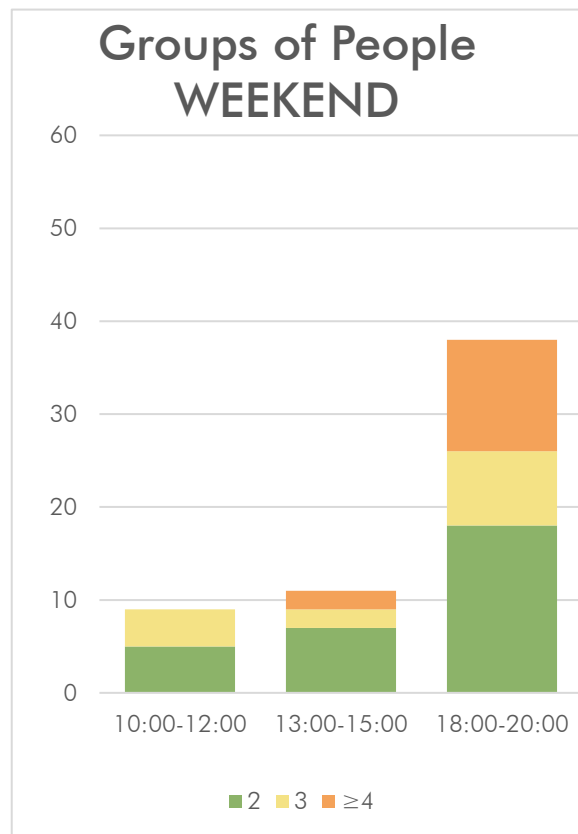
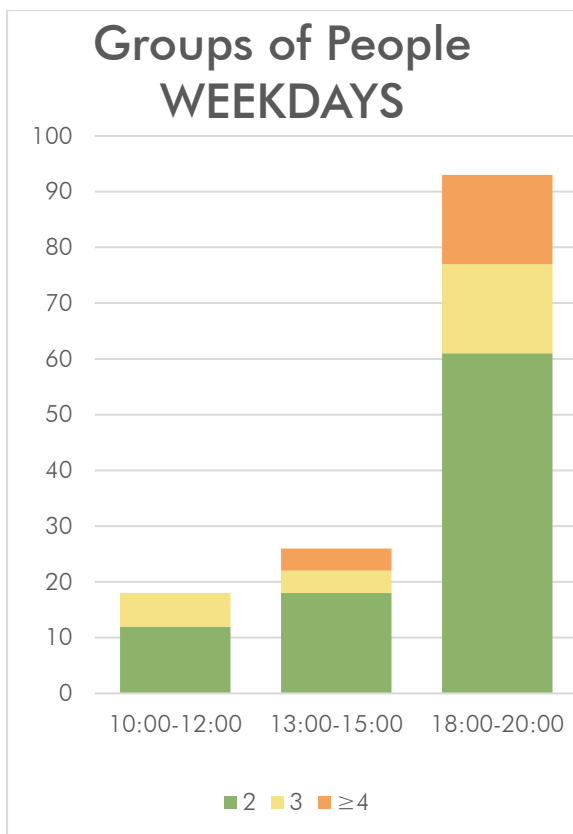
Spoletto

By observing the diagrams, it becomes evident that during the evening, the space becomes a lively hub of social interaction, attracting large numbers of groups. The same is true on both the weekend and weekdays, with the same pattern occurring in both instances, e.g., groups of 2 people being actively present throughout the day, while groups of 3 or more than 4 people being more prevalent in the evening. This suggests that the square not only serves as a social gathering spot but also accommodates different types of social interactions depending on the time of the day. The surge of groups in the evening hours strongly denotes the need for open public spaces after working hours where people can unwind and socialize with friends or family. A few of the public space users conveyed to the author that prior to the tactical urbanism intervention, they would go to Porta Venezia, around 2 km away, in order to socialize, depriving their neighborhood of a lively social environment.



Piazzale Bacone

The diagrams depicting the number of groups during the intervals in Piazzale Bacone reveal that there is a shift in the social dynamic regarding the sociability of the place. Specifically, it is clear that during the morning hours, the space does not function as a social gathering hub but rather as a transitory area for people on their way to work or school. During the afternoon, there is an increase in the number of groups as people join in to have their lunch on the picnic tables or benches during their work breaks. During the evening hours, a significant spike in the presence of various groups occurs within the tactical square, thereby rendering it a crucial and central space within the public domain. However, during the weekend, the number of different groups is not as high as in Piazza Spoleto, a fact that may suggest that near the vicinity of Piazzale Bacone, there are other, more attractive, places for residents to socialize and gather.



Range of Behaviours

Different behaviors in the public spaces studied that could indicate a sign of ownership, familiarity, and belonging include individuals confidently interacting with others, engaging in casual conversations, leaving personal belongings unattended for short periods of time, and displaying relaxed body language. Additionally, people may exhibit behaviors such as taking pride in maintaining the cleanliness of the area, actively participating in community events, or readily offering assistance to fellow residents. These actions suggest a sense of connection and investment in the community, highlighting a feeling of ownership and belonging.

Firstly, in Piazza Spoleto the following noteworthy behaviours were recorded:

- People taking naps in the public space, indicating that they feel comfortable and safe enough to relax in the square.
- Individuals engaging in conversations with strangers, showing a willingness to connect and interact with their community members.
- Strangers assisting each other with bicycle repairs.
- People going alone in the piazza in order to find ping-pong partners.



Fig. 46. Person sleeping in Piazza Spoleto. (Author)

While in Piazzale Bacone:

- Also, people falling asleep on the benches, indicating the same feeling of comfort and safety.
- Elementary students studying at the picnic tables, demonstrating a preference for conducting schoolwork in outdoor environments that offer social engagement opportunities.
- Again, people going alone in the public space to engage with strangers in order to play ping-pong



Fig. 47. Person sleeping in Piazzale Bacone. (Author)

Cooperative

Community cooperation is inherent to the nature of tactical urbanism (Lydon & Garcia, 2015). The Piazze Aperte program, even if it is not completely a bottom-up initiative, has incorporated effective participatory methods to involve the community in decision-making processes. A main tool that the program uses for facilitating and ensuring community involvement is the "Collaboration Agreement" (Patto di Collaborazione). It serves as a written pact among the stakeholders and the municipality that delineates the goals, objectives, and anticipated outcomes of each intervention, as well as the arrangements for the maintenance, collective administration, and revitalization of public spaces.

These kinds of collaborative agreements aim to provide cooperation opportunities and regulated active involvement to informal collectives, associations, educational institutions committees, foundations and corporations advocating for "corporate maintenance" in governance, upkeep, enhancement, and activation of urban commons.

For Piazza Spoleto, the collaboration agreement was signed among the Municipality, the Parents Association of the Ciresola Elementary School, the non-profit association Retake Milano, the social promotion association (APS) Radio No.LO, and the urban furniture manufacturer Vestre. Through this pact, these entities ensure their free and disinterested participation in the redevelopment of the public area.

More specifically, the Municipality of Milan was responsible for buying and installing the planned road painting, the traffic calming measures (delineator posts, parking stops, etc.), preparing the space for the installation of the street furniture, monitoring the process, coordinating, and disseminating the activities for the shared care of common goods.

Vestre offered to donate the urban furniture for the intervention and assured to replace them in case of deterioration. Retake Milano and the parents' association were supposed to organize and carry out the coloring of the road; however, the key informants revealed that the municipality took charge of this task.

Finally, Radio No.LO and the parents' association agreed to take care of the programming of recreational activities and events, as well as the co-optation of new actors.

This way, the municipality ensured the active engagement of the community in the intervention through the efforts and encouragement of the collaborating stakeholders.

For Piazzale Bacone, the collaboration agreement was signed among the Municipality, the Parents Association "Non Riservato", the Parents Association "I Baconiani", the Parents Committee "Santa Caterina", the architecture and urban design studio WinWin Office and the architecture design studio Hypnos. Through this pact, these parties agreed on the collaborative redevelopment, revitalization, and subsequent care of the Piazzale Bacone intervention.

The PA Non Riservato, a bottom-up participatory policy project, would aim to promote the new public space as an "arena of creativity" for the local community. The APS "I Baconiani" would collaborate with the teachers on various projects to make the surrounding area of the school a vibrant hub for recreational and educational activities. The Santa Caterina Parents Committee would promote aggregation, solidarity, and support for the completion of training and interpersonal experiences for the students, as well as support for families in need. Additionally, the agreement approved the implementation of the codesign intervention proposed by WinWin Office and Hypnos Studio in collaboration with the aforementioned stakeholders.

The municipality would carry out the horizontal and vertical signage works, deal with the creation and extension of the pedestrian area, change the traffic conditions in accordance with the proposal, and repair cycle paths. The Municipality would be additionally responsible for the installation of the street furniture and the supply of the necessary paints and materials. The respective stakeholders would contribute to the co-implementation of the asphalt paint patterns together with students of the adjacent schools.

According to the key informants, this agreement is crucial for promoting community engagement and developing a sense of ownership among residents. It not only encourages active participation from the community but also fosters a sense of pride and responsibility for the upkeep and maintenance of the space. Involving students also provides an opportunity for them to learn about civic engagement and take pride in their contributions to the community.

Also, aside from the collaborative design of the interventions, the author observed certain behaviours that indicate an existing sense of solidarity and

Alexa:

"Before initiating the project, the associations reached out to the shop in front of the intervention to get them to know the project and got a very positive response. Now, if people want to play ping-pong but do not have rackets, they can borrow them from the shops for free"

Dr. Vergani:

"During summertime, when the municipality suggests not using public water for the potted plants in order to preserve its reserves, people take care of the plants when

the temperature is too hot. A lot of citizens take the initiative to use water from their own private properties."

Giullia:

The locations are chosen through the proposal of people through the open call and it's one of the biggest strengths of the program

Neighborly

During the 7 days of observations, along with additional days of visits, the author could identify the majority of people present by sight, as they were using the space daily or even more than once per day. This suggests that neighborhood residents were the main users of the square. Moreover, it was observed that individuals frequently greeted each other and engaged in casual conversations, even when they had not come together to the square or while hanging out with different friend groups.

During the visual observations, the same phenomenon was not as strong in Piazzale Bacone, as the individuals and groups frequenting the square exhibited a lower level of interaction and familiarity with one another. Additionally, it was noted that a considerable number of tourists were passing by or taking a break in the square as they were wandering around Corso Buenos Aires.

Alexa, an active resident of the neighborhood, begged to differ with this statement, as she claimed "that the square has become a meeting point for all of the neighbors who visit it daily with their kids, with friends, or even by themselves to relax and socialize". Consequently, it becomes evident that, with tactical urbanism inherently entailing neighborhood building, the two interventions have managed to transform car-occupied spaces into vibrant community places.



Fig. 48. The neighborly character of Piazza Spoleto. Source: Author.

Comfort

Naturalness

Nature's role in the establishment and maintenance of a specific place can be viewed as twofold: as a passive component and as an active contributor to the formation of that space (Hes & Hernandez-Santin, 2019). In tactical urbanism, nature usually comes in the form of potted greenery that works both as a physical barrier that protects the space from traffic and also as a source of visual and sensory stimulation for the people occupying the place.

Since the only natural feature within the tactical squares is the potted plants, in order to evaluate the level of naturalness in the space, the ratio of their land cover over the rest of the intervention area was calculated. This way, the proportion of the space that is occupied by natural elements can be quantified. This method is relevant because it provides a numerical measure of the level of naturalness in the tactical square that is both tangible and easily comparable.

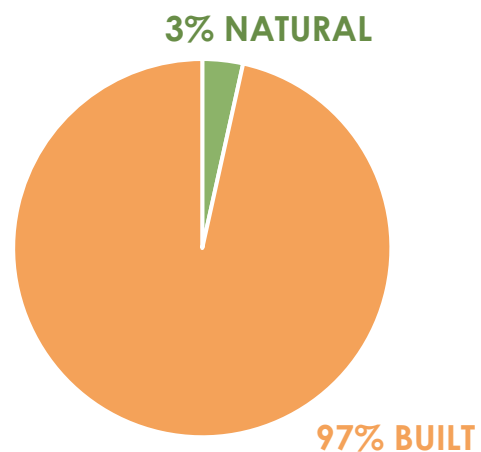
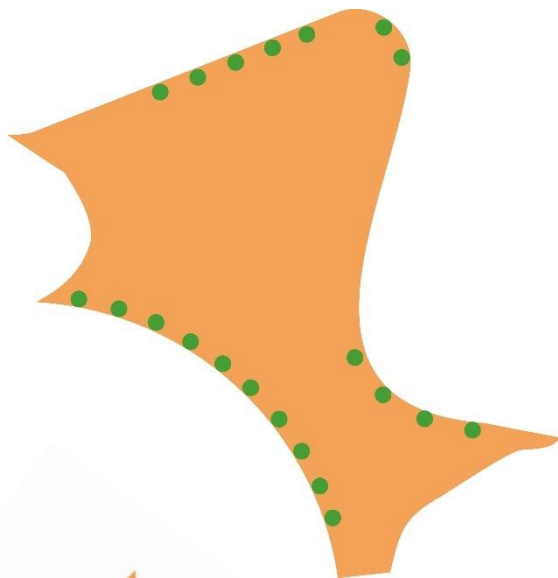


Fig. 49. Percentage of natural land cover over built. Piazza Spoleto.

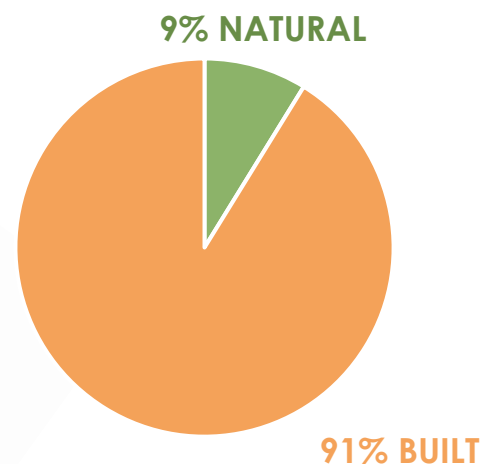
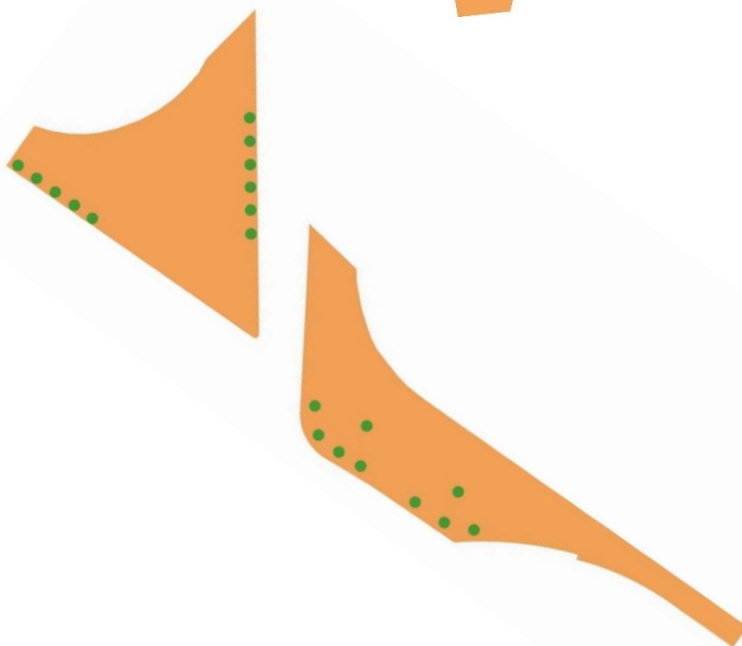


Fig. 50. Percentage of natural land cover over built. Piazzale Bacone.

As the diagrams display, Piazza Spoleto's natural land coverage is only 3%, which indicates a low level of naturalness in the space. Piazzale Bacone displays a higher but still very low level of naturalness, with the natural land coverage being 9%. These low percentages suggest that there is a need for interventions to increase the presence of natural elements in the square, such as planting more potted plants, depaving the asphalt, and incorporating green infrastructure. Moreover, the incorporation of nature-based solutions in urban areas is crucial for aligning the intended results of urban revitalization efforts with the unique social and community issues they address (Frantzeskaki et al, 2022).

Safe

The elements that contribute to the creation of a pleasant sanctuary, like trees, greenery, water features, and separation from traffic, can, conversely, hinder visual access, resulting in safety concerns and reduced utilization (Carmona, 2021). It is stated that Jane Jacobs (1961) was the first to introduce the concept of "eyes on the street" as a means to reduce crime rates, arguing that the urban configuration is pivotal for ensuring safety in the public realm (Stamou, 2022). The inclusion of views into buildings serves as a source of interest for individuals passing by, whereas views out of buildings enhance the notion of "eyes on the street" and contribute to the overall safety of the surrounding area (Carmona, 2021). Moreover, Gehl (2011) claims the most important safety parameters in public spaces are protection from vehicular traffic and crime.

For a successful place, the evaluation of the different types of safety is a crucial factor; however, the perception of safety by its users might hold greater significance (Kyriakidis & Siolas, 2014). Due to limitations caused by the language barrier between the author and public space users, the perception of safety was primarily approached from the perspectives of the key informants.

The summary of key informant interviews for Piazza Spoleto reveals that tactical urbanism has greatly reduced the danger from vehicular traffic, while the space's location, as an intersection within a compact neighborhood, enhances the perception of safety on the square. The following key points from the interviews are provided to support this claim:

Dr. Vergani:

"The plant pots and the delineators posts placed all around the square are key elements that make the space resilient and safe from traffic. [...] Overall there haven't been recorded any significant criminal cases."

Prof. Pacchi:

"It is a safe space and definitely safer than how it was before, as the square is a meeting point of converging streets that allow long-distance visibility of the space. The bar and the buildings that face the square put "a lot of eyes on the street" which enhances the actual and the perception of safety."

The implementation of tactical urbanism in Piazzale Bacone has significantly enhanced pedestrian safety in relation to vehicular traffic as well. Prior to the intervention, the neighborhood already had low crime rates, which have remained stable or possibly even decreased further. The author claims that the public's perception of safety is in agreement with the views of the key informants who consider the space to be secure and safe, based on the relaxed behaviors noted during the extensive periods of visual observations. Some of the key points from the interviews are provided to support this argument:

Alexa:

"Regarding traffic, it has become pretty safe. You can see that cars now respect the 30 km/h rule more. Also, the zebra crossings are way smaller, and we are not afraid for the safety of our kids."

Luigi:

"In general, it is a quiet neighborhood with very low criminal rates; that's why you can see children staying in the square alone."

Sittable

Various factors contribute to the creation of comfortable seating in public spaces. These elements include accessibility, comfort, the relationship to surrounding views, provision of sun and shade, movability, and ability to accommodate both individual and group places to sit (Francis, 2010). According to Whyte (1980), it is argued that ideal sitting conditions involve physical comfort, such as the availability of benches with backrests and well-contoured chairs. However, it is of higher importance that it ensures social comfort. This involves a variety of options for seating arrangements, including sitting at the front, at the rear, to the side, in areas exposed to sunlight, in shaded areas, in groups, or alone.

Spoletto

Piazza Spoleto offers a wide range of seating options. To begin with, it accommodates both benches with a backrest and without. When designing the space, it is evident that deliberate efforts were made to create small enclaves of social interaction. This is due to the presence of two pairs of benches in the northern part of the square, which create a comfortable seating area which directly communicates with the ping pong tables.

Furthermore, the incorporation of distinctive urban furniture, such as circular benches with integrated tables, serves as a versatile component. These elements do not only offer a functional use for activities such as studying, eating, or playing card games but also provide a private seating option when people position themselves with their backs turned towards the table.

The two linear benches with no back support offer versatility as well, as people are able to position themselves freely without restraints imposed by the design, allowing for better social interaction. However, one can argue that they are not as comfortable as benches with backrests and may not be as supportive of sitting for long periods of time. Overall though, the seating options in Piazza Spoleto offer a range of choices to accommodate different preferences.

Bacone

In Piazzale Bacone, there is also a considerable number of available seats, with 12 conventional benches and 3 picnic tables installed in the square. There are two sets of benches in the eastern part of the divided square. One set is arranged in order to create two more private corners, similar to the layout observed at Piazza Spoleto, while the other one is placed linearly. The linear layout offers direct contact with the ping pong table as well as the benches on the opposite side, enhancing visibility among users. Prof. Pacchi claimed that this feature enables people to get to know with whom they are sharing the neighborhood even if they do not interact with them directly.

Evaluating Tactical Urbanism Initiatives through the prism of Placemaking

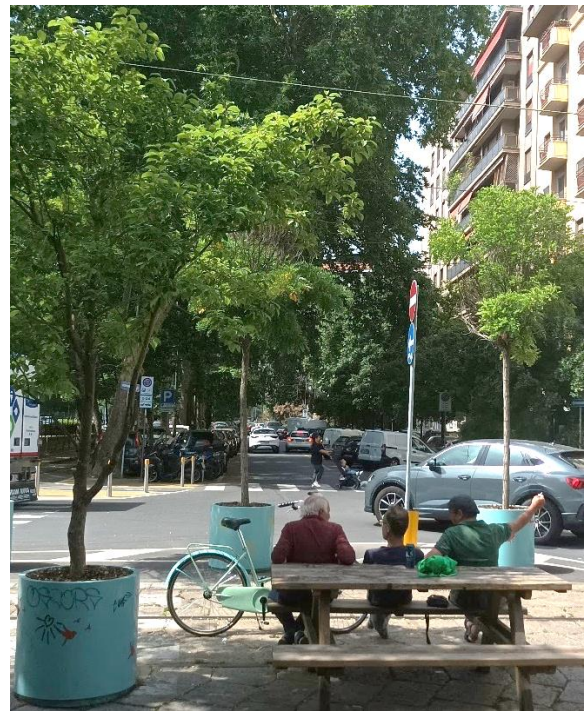


Fig. 51. Sitting options in Piazza Spoletto (top), and Piazzale Bacone (Bottom). Source: Author.

Apart from the physical comfort aspect, such as the availability of seating options, the variable of how sitable a public space is is also approached through the thermal comfort aspect. A number of design choices can help make conditions more comfortable regarding temperature and airflow, including the configuring of space and the utilization of existing buildings, walls, trees, and canopies for shade and shelter.

Consequently, the temperature of independent points throughout the square's area was mapped using a thermal field scanner to investigate the thermal comfort provided by the greenery and other elements of the built environment that provide shade. However, the geolocation accuracy of the thermal scanner was not appropriate for the intended scale, resulting in the need for significant refinements. The idea behind the thermal evaluation was to map the geospatial distribution of a random sample of 150 people per square and correlate their choice of seating with the temperature each point exhibited. Due to the aforementioned limitations, the evaluation was not able to be completed.

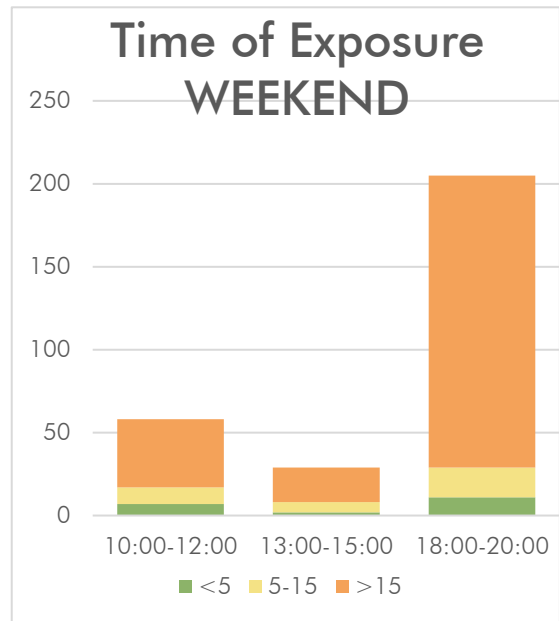
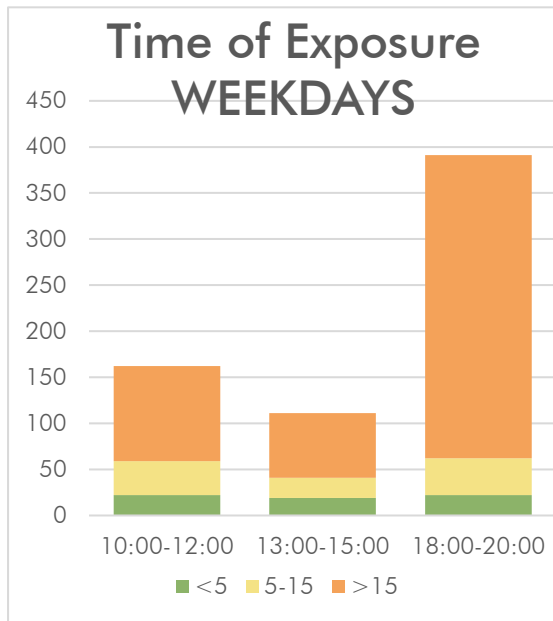
Time of exposure

The physical and psychological comfort of users serves a crucial role in determining the social and optional activities that take place in open public spaces, closely linking the length of time individuals spend in these areas (Vukmirovic et al., 2019). Hence, the duration of individuals' presence in a public space can be regarded as both a determinant and a measure of its level of comfort (Carmona, 2021).

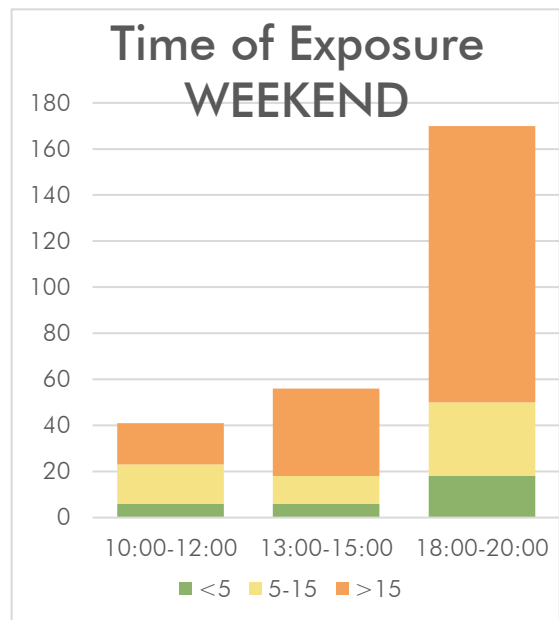
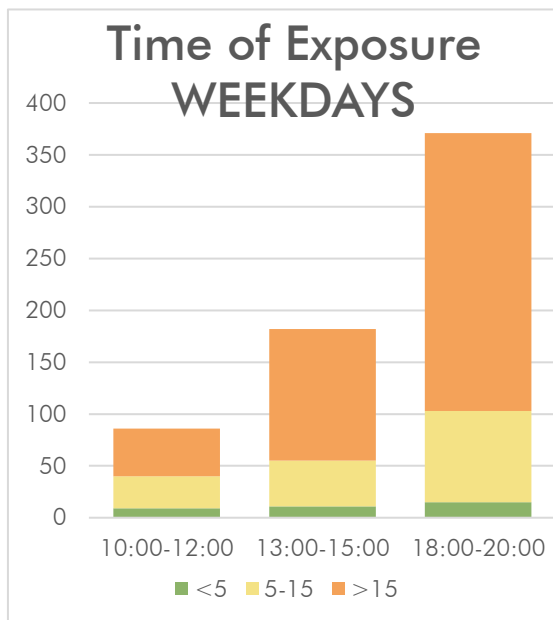
The variable of the time people spending in the public space was chosen to be time of exposure instead of duration of time, not only because it aligns with the refined framework of placemaking adopted to climate change, but also because of the observed users' behaviour regarding their comfort towards thermal conditions.

It is evident that the substantial percentage of users stayed more than 15 minutes in the public space, being exposed to its thermal conditions. This indicates that even if there are no specific thermal mitigation measures, the conditions of the squares can still attract and accommodate people for extended periods of time.

Piazza Spoleto



Piazzale Bacone



Image

Readable

The configuration of space, particularly its effect on visual permeability, is important in determining movement densities and encounter rates (Hillier, 1993; Carmona 2021). For Hillier (2007), the main fault in many contemporary public spaces is the prioritizing of a sense of enclosure over visual permeability into them.

As Kevin Lynch (1960) claimed, distinctive and identifiable elements help people orient themselves through cities. In the scale of public spaces it can be argued that identifiable elements help people understand the space better and therefore enhance their sense of ownership.

In Piazza Spoleto, there are clear pathways communicating directly with each entrance of the square, which offer direct visual access to the surrounding buildings and activities. This allows visitors to easily navigate the space, engage with their surroundings, and create clear mental images. On the other hand, the segmentation of Piazzale Bacone hinders the flow of movement and makes it difficult for visitors to grasp the overall layout of the space. However, if the two parts are to be examined separately, their layout can be considered cohesive and legible. The key attribute for their legibility is their surrounding edges enhanced with greenery and seating areas, which is valid for Piazza Spoleto as well.

Attractive

The quality of attractiveness, when assessing a place, is regarded as an intangible variable (Carmona, 2021). In order for public spaces to effectively serve as areas for social interaction, it is imperative that they possess elements that are aesthetically pleasing, emotionally engaging, and capable of captivating individuals' attention and interest (Project for Public Spaces, 2022; Carmona, 2021). Lai et al. (2020) further note that urban open spaces that offer convenient outdoor thermal comfort conditions have the ability to attract residents and enhance the liveliness of the urban network.

Two of the primary factors that significantly influence the aesthetic appeal of a public space are the presence of public art and the incorporation of green elements (Wang et al, 2019; Matthews and Gadaloff, 2022). As already discussed in greater detail in relation to the Naturalness variable, the presence of the green element within the square is notably low. The primary element of public art in both squares consists of painted patterns on the asphalt, which also serve as a visual demarcation of the interventions. Despite the fact that the color palettes used are bright and vibrant, the installations have now partially faded, making the paint patterns appear washed out. This issue is evident in both squares, indicating that art preservation is a factor to be taken into account if the stakeholders intend to keep the intervention attractive for an extensive period of time.

Some of the comments about the square arfrom the inteviews are presented below to support thois claim:

Pacchi: *"There is not enough shade. The difference between how it was before and now is gigantic but as a space it is not great. It is just painted cement. Not very comfortable."*

Well-Maintained

Inadequate maintenance practices have been recognized as a significant obstacle that may lead to the deterioration of the quality of public open spaces (Praliya & Garg, 2019; Carmona, 2021). Furthermore, poorly managed public spaces do not only contribute to the overall degradation of the public realm, but also decrease the overall appeal of a city's image (Mashary Alnaim, 2023).

During the visual observation period, the author noted that the municipality conducted maintenance activities in the square every two days, which involved the watering of the plants and the collection of garbage. Both spaces were overall clean, with the exception of two benches in Piazzale Bacone, where the berries that fell from the adjacent trees were not removed, making the furniture unfit for sitting. Furthermore, garbage left by teenagers and children under these two benches was not cleaned frequently by municipality workers, as their main job was to change the trash bins. This led to an unpleasant and uninviting setting for visitors, who evidently avoided this part of the square, even though it offered the most shade and thermal comfort among all intervals.

In Piazza Spoleto, one of the major maintenance problems that was observed is the preservation of plants, as two of the potted trees were already dried out when the visual observations started and were replaced in about a month. With the green element already limited, it is essential to implement a proper watering and maintenance schedule for the preservation of potted plants used in tactical urbanism interventions.

Alexa

"The municipality offers irrigation services twice a week. Citizens are not actively involved in the maintenance because it is the government's responsibility to take care of it, however, sometimes we coordinate with the community to ensure the cleanliness of the area."

Prof. Bruzzese

"It is critical to provide comfort elements such as shade and climate control, as well as options for maintenance. Maintenance is a critical aspect that should be prioritized, as having Nature Based Solutions is useless if they are not cared for."

5. Conclusions

According to the United Nations (2022), the world is becoming increasingly urbanized, with two-thirds of the global population expected to be living in urban areas by 2050. The work of Jane Jacobs in 1962 and all of its derivative research until today have firmly established the significance of having public spaces that are accessible, comfortable, diverse, inclusive, functional, vibrant, and lively.

Consequently, urban design today has to answer the growing demand for well-designed public spaces that cater to the needs and preferences of a diverse urban population. However, with the budget dedicated to urban development often being limited, it becomes crucial to adopt alternative approaches in order to create and maintain these essential public spaces.

One such approach is tactical urbanism, which involves low-cost, temporary interventions that aim to transform underutilized spaces into vibrant community areas. By utilizing this strategy, cities can quickly and affordably test out new ideas and gather feedback from residents before committing to larger, permanent changes if necessary or requested.

The results of the evaluation of the two tactical urbanism projects, Piazza Spoleto and Piazzale Bacone, of the Piazze Aperte program in Milan have revealed significant insights about the successful implementation of this method.

Starting with the physical aspect of the initiatives, it became evident that the restricted toolkit of tactical urbanism comes with limited potential for creating highly aesthetic spaces. However, one of the key findings pertains to the ability of less refined interventions to draw individuals into open spaces, serving as a practical means of rejuvenating the public realm.

It was proven that these tactical initiatives are capable of hosting a wide spectrum of the social fabric, provided that their needs are taken into consideration during the planning and implementation process. Since the groups of urban designers and planners that may conduct tactical urbanism interventions cannot possibly be part of the whole diverse range of people in modern communities, it is pivotal that they are part of the collaborative decision-making process. This ensures that the initiatives align with the specific needs and aspirations of the community members, fostering a sense of ownership and inclusivity. By involving various stakeholders, such as residents, local businesses, and community organizations, in the planning and implementation stages, tactical urbanism can truly serve as a catalyst for positive change in neighborhoods and the public realm as a whole.

Cooperative approaches among neighborhood residents and stakeholders can also lead to more effective and long-lasting results. Collaborative decision-making processes can help build trust and foster stronger relationships among community members, creating a stronger sense of unity and cohesion within the neighborhood.

However, the government agencies behind these initiatives have to provide adequate urban furniture and materials to help communities implement their ideas and maintain the improvements over time. Offering a variety of activity options to engage

in is crucial for the liveliness of these spaces and ensures the continuous participation of community members.

Additionally, having a well designed public space is not sufficient for it to become animated and a place for people. Its location in the urban landscape is of vital importance for its success. The selection of well integrated streets which are likely to display high levels of traffic just from the configuration of the road network, might have a huge impact on the profile, number and interest of daily users. Additionally, if the place is located in close proximity to public transit stops, it is likely to attract more people. This is not due to individuals specifically traveling to reach it, but rather because local residents will come across it more frequently during their daily routines, thereby enhancing the likelihood of engagement with it. The pre-existing infrastructure of the neighborhood, such as the condition and width of pavements and the existence of continuous bike lanes, may also greatly affect the number of people visiting the place. However, tactical urbanism can also be employed to set up bike lanes quickly and inexpensively in areas without micro-mobility infrastructure, simultaneously with the main public space intervention, as shown in the case of Piazza Spoleto. Consequently, the overall accessibility and ease of navigation within the area are of substantial significance in attracting people and activating the neighborhood.

Nonetheless, even if these particular case studies may be considered successful and well-received by residents, it is important to highlight areas with ample room for improvement upon future implementation of tactical urbanism projects.

As nature-based solutions become an increasing need for cities due to climate change, their incorporation into tactical urbanism projects may be crucial for long-term sustainability and resilience. The case study from Medellin, Green Virus, represents a valuable example of the reemergence of local biodiversity through tactical methods. The key component in maintaining such interventions is the people and their commitment to the ongoing success of these projects. In order to ensure that the community is interested in engaging with the maintenance of NBS, it is best to be involved in the co-design and implementation of the project. Collaboration agreements among public institutions and community associations are crucial in fostering a sense of ownership and responsibility among the local population. As mentioned, involving the community in decision-making processes ensures that their diverse and distinct needs and perspectives are taken into account, leading to a more sustainable and long-lasting impact. According to scholars such as Dr. Vergani, it is argued that the use of NBS may be ineffective because tactical interventions are temporary by definition, while plants and green infrastructure require time to develop and thrive. Without community involvement and support, the impact of nature-based solutions in tactical urbanism may be limited.

The effectiveness of tactical urbanism may vary depending on the specific context and needs of each city. Therefore, it is crucial for cities to carefully assess their own

conditions and engage with their communities to ensure the best outcomes when implementing similar projects.

Governments have to decide between developing a few permanent and well-structured public spaces and embracing alternative urban design methods such as tactical urbanism as a way to maximize the number of interventions and address multiple needs with the same budget.

Additionally, while permanent public spaces offer stability and lasting benefits, tactical urbanism allows for experimentation and adaptability in response to changing needs. In essence, tactical urbanism represents a more dynamic and responsive approach, acknowledging that urban environments are never static. It recognizes the importance of adapting to the evolving demands of the community and the challenges posed by issues like climate change and social dynamics.

6. References

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7. Appendix

7.1. Extended Greek Abstract

ΕΚΤΕΤΑΜΕΝΗ ΕΛΛΗΝΙΚΗ ΠΕΡΙΛΗΨΗ

Εισαγωγή

Οι πρωτοφανείς παγκόσμιες επιπτώσεις και οι μεταλλαγές που προκάλεσε η πανδημία COVID-19, ιδίως στις αστικές περιοχές, ανάγκασαν τη διεθνή κοινότητα να επανεξετάσει το μέλλον των πόλεων και να προβληματιστεί σχετικά με τις πολεοδομικές τυπολογίες που είναι ικανές να ανταπεξέλθουν στις μεταβαλλόμενες προκλήσεις ενός συνεχώς αναπτυσσόμενου αστικού κόσμου (ΟΗΕ, 2022). Ως εκ τούτου, τα Ηνωμένα Έθνη καθιέρωσαν το όραμα της δημιουργίας "πόλεων για όλους", οι οποίες, μεταξύ άλλων, είναι συμμετοχικές, προωθούν τη συμβολή των πολιτών και προάγουν την αίσθηση του ανήκειν σε όλους τους κατοίκους τους. Βασική προτεραιότητα είναι η παροχή ασφαλών, χωρίς αποκλεισμούς, προσβάσιμων, πράσινων και υψηλής ποιότητας δημόσιων χώρων που ικανοποιούν τις ανάγκες της δημόσιας σφαίρας. Συγκεκριμένα οφείλουν να είναι φιλόξενοι προς οικογένειες, να προωθούν τις κοινωνικές αλληλεπιδράσεις, να προάγουν την πολιτιστική και πολιτική έκφραση, καθώς και την ενίσχυση της κοινωνικής συνοχής, της συμπερίληψης και της ασφάλειας. Η διασφάλιση των αναγκών όλων των ανθρώπων κάθε ποικιλόμορφης κοινωνίας και η αναγνώριση των αναγκών των ευάλωτων μειονοτήτων αποτελούν καθοριστικούς παράγοντες για τη δημιουργία δημόσιων χώρων χωρίς αποκλεισμούς (ΟΗΕ, 2022).

Οι εναλλακτικές μέθοδοι αστικού σχεδιασμού που περιλαμβάνουν συμμετοχικές προσεγγίσεις με την εμπλοκή της κοινότητας καθίστανται απαραίτητες για τη δημιουργία λειτουργικών και χωρίς αποκλεισμούς δημόσιων χώρων (Viéto et al. 2023). Μια τέτοια μέθοδος είναι η τακτική πολεοδόμηση, η οποία περιλαμβάνει χαμηλού κόστους προσωρινές παρεμβάσεις που μπορούν να εφαρμοστούν γρήγορα και να προσαρμοστούν εύκολα ανάλογα τα σχόλια και τη κριτική της κοινότητας (Bordín, 2023- Lydon & Garcia, 2015).

Με τη συμμετοχή των κατοίκων και των τοπικών φορέων στη διαδικασία, η τακτική πολεοδόμηση επιτρέπει μια πιο ομαλή και συμπεριληπτική προσέγγιση για την αναζωογόνηση των δημόσιων χώρων, όχι μόνο για την αντιμετώπιση άμεσων αναγκών αλλά και ως καταλύτης για μακροπρόθεσμη ανάπτυξη των πόλεων (Lydon & Garcia, 2015).

Σκοπός της έρευνας

Για την αποτελεσματική προώθηση της τακτικής πολεοδόμησης ως καινοτόμου διαδικασίας αστικού σχεδιασμού, είναι απαραίτητο να παρασχεθούν στοιχεία που να αναδεικνύουν με σαφήνεια την επιτυχία και τον θετικό αντίκτυπό της στη δημιουργία ποιοτικών τόπων. Ως εκ τούτου, μια ενδελεχής αξιολόγηση ολοκληρωμένων πρωτοβουλιών αποτελεί κρίσιμης σημασίας προκειμένου να προσφερθούν πολύτιμες πληροφορίες σχετικά με την αποτελεσματικότητά τους και στον εντοπισμό τομέων προς βελτίωση.

Ουσιαστικά, η παρούσα έρευνα στοχεύει:

Να εξετάσει την αποτελεσματικότητα πρωτοβουλιών τακτικής πολεοδόμησης στη δημιουργία επιτυχημένων δημόσιων χώρων με τη χρήση γρήγορων, χαμηλού κόστους και προσωρινών μεθόδων με γνώμονα τις θεμελιώδεις αρχές του placemaking και άλλων σημειοσυνών ποιοτήτων των δημόσιων χώρων.

Placemaking

Ως έννοια, το placemaking έχει τις ρίζες της στις έρευνες της Jane Jacobs και του William Whyte στις ΗΠΑ την δεκαετία του '70. Στα ελληνικά, ως όρος θα μπορούσε να προσδιορισθεί ως η διαδικασία κατά την οποία δύνανται να μπουν οι βάσεις για την δημιουργία τόπων – τοποσήμων στο αστικό δίκτυο έχοντας στον πυρήνα της την συμμετοχή της κοινότητας (Μαστοράκη, 2022). Η εφαρμογή των ιδεών των Jacobs και Whyte πραγματοποιήθηκε από τον Fred Kent και την Kathy Madden, ιδρυτικά μέλη της διεπιστημονικής ΜΚΟ Project for Public Spaces, η οποία έκανε τη συγκεκριμένη μέθοδο διάσημη μέσω της περίπτωσης του Bryant Park στην Νέα Υόρκη (Placemaking Plus, 2019).

Ο ορισμός που διατυπώνεται από την PPS αναφέρει πως το placemaking χρησιμεύει ως καταλύτης για το συλλογικό οραματισμό και αναζωογόνηση των δημόσιων χώρων, μετατρέποντας τους σε κεντρικό κόμβο κάθε κοινότητας. Συνεπώς, το placemaking είναι μια συνεργατική διαδικασία που αποσκοπεί στην ενίσχυση του δεσμού μεταξύ των ατόμων και των χώρων στους οποίους κατοικούν συλλογικά, με τρόπο που βελτιστοποιεί τη δημιουργία κοινής αξίας. Το placemaking δεν χρησιμεύει μόνο για την ενίσχυση του αστικού σχεδιασμού, αλλά και για την προώθηση καινοτόμων προτύπων χρήσης, με ιδιαίτερη έμφαση στα φυσικά, πολιτιστικά και κοινωνικά χαρακτηριστικά που καθορίζουν κάθε αστικό ιστό και συμβάλλουν στη συνεχή ανάπτυξή του (PPS, 2022).

Τακτική Πολεοδόμηση

Ο όρος «τακτική» δεν αναφέρεται ακριβώς στην έννοια της στρατηγικής αλλά, προερχόμενος από τον αγγλικό ορισμό του "tactical", αφορά δράσεις μικρής κλίμακας που εξυπηρετούν έναν ευρύτερο σκοπό. Συγκεκριμένα, η τακτική πολεοδόμηση ορίζεται ως μια προσέγγιση για την ανάπτυξη και την ενεργοποίηση των γειτονιών με τη χρήση βραχυπρόθεσμων, χαμηλού κόστους και επεκτάσιμων παρεμβάσεων και πολιτικών (Lydon & Garcia, 2015).

Είναι μια στρατηγική που χρησιμοποιείται από διάφορους οργανισμούς, όπως κυβερνητικούς φορείς, εμπορικές επιχειρήσεις, μη κερδοσκοπικούς οργανισμούς, συλλογικότητες και μεμονωμένους φορείς (Lydon & Garcia, 2015). Οι δράσεις μπορούν να κατηγοριοποιηθούν ως τακτικές όταν περιλαμβάνουν ένα σαφές όραμα, εδράζονται σε ένα συγκεκριμένο τοπικό πλαίσιο, επιδεικνύουν βραχυπρόθεσμα δέσμευση, συνεπάγονται με ήπιες οικονομικές επιπτώσεις σε περίπτωση μη αποδοχής, ενώ προσφέρουν μεγάλες δυνητικές ανταμοιβές και υποστηρίζονται από μια ενεργή κοινότητα. Ιδανικά, η κοινωνική καινοτομία προωθείται μέσω της ενίσχυσης της κοινωνικής συνοχής, όπου γείτονες και τοπικοί φορείς έρχονται σε ουσιαστική επαφή και συνεργασία. Ωστόσο, οι προσωρινές (pop-up) παρεμβάσεις σχεδιάζονται με τελικό στόχο την απόκτηση επίσημης έγκρισης και τη μονιμοποίησή τους (Puttkamer, 2020). Η προσέγγιση ενσωματώνει ανοικτές και επαναληπτικές μεθοδολογίες ανάπτυξης, βέλτιστη αξιοποίηση των πόρων και τις πρωτότυπες δυνατότητες που διευκολύνει η κοινωνική αλληλεπίδραση (Lydon & Garcia, 2015).

Διάφοροι όροι έχουν χρησιμοποιηθεί για την περιγραφή παρόμοιων δράσεων, όπως αντάρτικη, επαναστατική, DIY πολεοδόμηση, κλπ. Όλες αυτές οι μέθοδοι συγχωνεύονται συχνά σε ένα ευρύτερο φάσμα "τακτικής πολεοδομίας", καθώς όλες μοιράζονται μια κοινή βάση, δηλαδή όλες λειτουργούν αρχικά ως ανεπίσημες και ενίοτε παράνομες παρεμβάσεις στο δημόσιο χώρο από ανθρώπους που παίρνουν την κατάσταση στα χέρια τους. Ωστόσο, τα τελευταία χρόνια, οι δημόσιες διοικήσεις έχουν υιοθετήσει τον όρο για να περιγράψουν προσωρινές ή πειραματικές παρεμβάσεις που αποκλίνουν από τις παραδοσιακές πρακτικές σχεδιασμού (Nello - Deakin, 2023).

Μεθοδολογία

Για να απαντηθεί το ερευνητικό ερώτημα ήταν αναγκαίο να ορισθεί ένα καλά δομημένο μοντέλο αξιολόγησης παρεμβάσεων τακτικής πολεοδόμησης, το οποίο θα μπορούσε να χρησιμοποιηθεί σε διαφορετικά αλλά παρόμοια πλαίσια. Για να διαμορφωθεί με επιτυχία το μοντέλο αξιολόγησης που ταιριάζει καλύτερα στη συγκεκριμένη μέθοδο σχεδιασμού, ήταν καίριο να εξεταστούν διαφορετικές μεθοδολογίες αξιολόγησης δημοσίων χώρων από την υπάρχουσα βιβλιογραφία. Συνεπώς, μελετώντας και συγκρίνοντας 5 διαφορετικά μοντέλα επιλέχθηκαν οι μεταβλητές που συνάδουν περισσότερο με τη φύση της τακτικής πολεοδόμησης δημιουργώντας ένα νέο μοντέλο 6 ποιοτήτων που προσεγγίζονται μέσω 22 μεταβλητών-δεικτών. Το μοντέλο αναπτύχθηκε έχοντας ως βάση το Διάγραμμα Τόπου της PPS (2010) λαμβάνοντας υπόψη τις προσαρμογές που προτείνουν οι Santos-Nouří και Costa (2017), καθώς επίσης και τις 5 διαστάσεις των δημοσίων χώρων, όπως παρουσιάζονται στην έρευνα του Mehta (2014), στην οποία στηρίχτηκαν και ανέπτυξαν περαιτέρω οι Praliya & Garg (2019) και η Mahmoud (2022). Οι 6 ποιότητες του μοντέλου παρουσιάζονται ως εξής:

Συμπεριληπτικότητα

Δεδομένου ότι τα αστικά κέντρα θα συνεχίσουν να γίνονται ολοένα και πιο ποικιλόμορφα κοινωνικά, θεωρήθηκε κρίσιμο η συμπεριληπτικότητα να ορισθεί ως ένας από τους θεμελιώδεις πυλώνες του μοντέλου αξιολόγησης. Οι δημόσιοι χώροι αποτελούν καίριας σημασίας για την προώθηση κοινωνιών χωρίς αποκλεισμούς, ιδίως για την καλλιέργεια μιας πολιτισμικής και πολιτικής δημόσιας κουλτούρας και την ενίσχυση της πολιτιστικής ποικιλομορφίας (Santiago-Pineda, 2022). Ένας δημόσιος χώρος χωρίς αποκλεισμούς ορίζεται συχνά ως ένας "δημόσιος χώρος που εξυπηρετεί τις ανάγκες και τα συμφέροντα όλων των ατόμων". Αυτό σημαίνει ότι ενώ βρίσκονται σε έναν δημόσιο χώρο, τα άτομα θα πρέπει να έχουν την αίσθηση της αποδοχής, της συμπερίληψης και της ελευθερίας από διακρίσεις με βάση το φύλο, την ηλικία, τον σεξουαλικό προσανατολισμό, τη φυλή, την εθνικότητα, τη θρησκεία, την πολιτιστική κληρονομιά, την κοινωνική θέση ή/και τις προσωπικές πεποιθήσεις τους (Zhou, 2019). Επομένως, ένα βασικό κριτήριο για να θεωρηθεί ένας χώρος πραγματικά επιτυχημένος είναι να φιλοξενεί άτομα που συγκροτούν ολόκληρο το κοινωνικό φάσμα της δημόσιας σφαίρας.

Λαμβάνοντας υπόψη την υπάρχουσα βιβλιογραφία που ενσωματώνει τη συμπεριληπτικότητα σε μοντέλα αξιολόγησης του δημόσιου χώρου, όπως οι Mehta (2014), Praliya & Garg (2019) και Mahmoud (2022), προτείνεται η χρήση ορισμένων μετρητικών δεικτών που βοηθούν στην αντικειμενική αξιολόγηση της.

Προσβασιμότητα και διασυνδέσεις

Η έννοια της "προσβασιμότητας" δεν αναφέρεται απλώς στο αν ένας χώρος είναι φυσικά προσβάσιμος, αλλά επίσης στο αν όλα τα άτομα, ανεξαρτήτως αναπηρίας, μπορούν να τον χρησιμοποιήσουν (Bindu & Devi, 2016). Ωστόσο, η προσβασιμότητα και η προσπελασιμότητα δεν αφορούν μόνο τα άτομα με αναπηρία, καθώς ως ποιότητα επηρεάζει επίσης την ευκολία μετακίνησης και χρήσης όλων των ατόμων (Buj, 2010). Επιπλέον, η κλιματική κρίση υπογραμμίζει περαιτέρω την ανάγκη θέσπισης ολοκληρωμένων στρατηγικών που δίνουν προτεραιότητα στο περπάτημα και στο ποδήλατο στο πλαίσιο των σχεδίων βιώσιμης κινητικότητας και της δημιουργίας βιώσιμων και φιλικών προς το περιβάλλον πόλεων (Ravazzoli, Torricelli, 2017-Santiago-Pineda, 2022).

Κοινωνικότητα

Σύμφωνα με την Project for Public Spaces (2010), η περιγραφική έννοια της κοινωνικότητας ως ποιότητας ενός τόπου εκφράζεται μέσα από αυτόν ως "ένα μέρος όπου οι άνθρωποι θα συναντιούνται μεταξύ τους και θα φέρνουν άλλα άτομα όταν έρχονται για επίσκεψη". Ωστόσο, η επίτευξη της θεωρείται ως ένας από τους πιο δύσκολους στόχους, αλλά μόλις επιτευχθεί, γίνεται ένα αναγνωρίσιμο χαρακτηριστικό του χώρου, έχοντας τους ανθρώπους να κανονίζουν να συναντούν φίλους και γείτονες, καθώς επίσης να αισθάνονται άνετα να αλληλεπιδρούν με αγνώστους. Αναπτύσσεται η καλύτερη αίσθηση οικειοποίησης του τόπου, η σύνδεση με την κοινότητα και η ποικιλία των κοινωνικών δραστηριοτήτων (Mahmoud, 2022).

Χρήσεις και δραστηριότητες

Βασικό στοιχείο για τη δημιουργία ενός ζωντανού και συχνά χρησιμοποιούμενου δημόσιου χώρου είναι η σκόπιμη χωροθέτηση του ανάμεσα σε διαφορετικές χρήσεις γης και δραστηριότητες (Carmona, 2021). Η Jacobs (1961) υποστήριξε ότι ο δυναμισμός των γειτονιών των πόλεων εξαρτάται από την αλληλοεπικάλυψη και τον συνδυασμό δραστηριοτήτων. Ακόμη, επισήμανε πως η κατανόηση των πόλεων απαιτεί την αντιμετώπιση των μίξεων χρήσεων και δραστηριοτήτων ως "ουσιωδών φαινομένων" του αστικού χώρου. Η αξιολόγηση της συγκεκριμένης ποιότητας εξαρτάται σε μεγάλο βαθμό από την παρατήρηση των διαφορετικών ειδών δραστηριοτήτων που λαμβάνουν χώρα ταυτόχρονα, όπως άνθρωποι που κάθονται, τρώνε, αθλούνται, παίζουν σκάκι, χαλαρώνουν, διαβάζουν κ.λπ. (PPS, 2022).

Άνεση

Ένας άνετος και φιλόξενος δημόσιος χώρος έχει μεγαλύτερες πιθανότητες να αξιοποιηθεί και να κριθεί επιτυχημένος. Η έννοια της άνεσης περιλαμβάνει την αντίληψη των ατόμων όσον αφορά παράγοντες όπως η προσωπική ασφάλεια, η καθαριότητα και η παροχή κατάλληλων επιλογών καθισμάτων (PPS, 2022). Η απουσία κατάλληλων καθισμάτων είναι ένα συχνό ζήτημα που περιορίζει τις δυνατότητες δυνητικά ποιοτικών δημόσιων χώρων. Επιπροσθέτως, τα μέρη που παρέχουν τη δυνατότητα επιλογής καθιστικών θέσεων προφυλαγμένων ή εκτεθειμένων στον ήλιο ελκύουν περισσότερα άτομα, καθόλη τη διάρκεια της ημέρας ή και του έτους (PPS, 2022). Επιπλέον, η ανάγκη προσαρμογής στα νέα κλιματικά δεδομένα απαιτεί την τροποποίηση των πρωταρχικών μοντέλων αξιολόγησης, δίνοντας έμφαση στην θερμική άνεση (Santos Nouri & Costa, 2017).

Εικόνα

Ο σύγχρονος αστικός σχεδιασμός προσεγγίζει τον δημόσιο χώρο ταυτόχρονα από μία αισθητική οπτική αλλά και ως ένα κοινωνικό, πολιτικό και πολιτιστικό πεδίο έκφρασης και συναναστροφής (Carmona, 2021). Η ενσωμάτωση συγκεκριμένων στοιχείων γύρω και μέσα από αυτόν, όπως πλακοστρώσεις, παγκάκια, καθίσματα, φυτεύσεων κ.α., ενισχύουν την άνεση των χρηστών του δημόσιου χώρου, προωθώντας την κοινωνική αλληλεπίδραση εντός του (Harb, 2016). Επιπλέον, έχει υποστηριχθεί ότι τα φυσικά χαρακτηριστικά αποτελούν καταλυτικό στη διαμόρφωση της χωρικής αντίληψης και προσωπικής σχέσης του ατόμου με το περιβάλλον του (Hu & Chen, 2018). Έχουν σημαντικό αντίκτυπο σε διάφορες πτυχές της αστικής καθημερινότητας, όπως στην ενίσχυση των οπτικών ερεθισμάτων, την ενδυνάμωση της αίσθησης του τόπου και την διαμόρφωση της κοινωνικής δυναμικής (Ali & Barber, 2023). Η χρήση ιδιαίτερων χρωμάτων, υλικών και ποικίλων ειδών φυτών σε συνδυασμό με την παροχή καθισμάτων, την ενσωμάτωση γυμνού εδάφους και άλλων φυσικών στοιχείων μπορεί να δημιουργήσει μοτίβα δραστηριοτήτων και την ανάπτυξη ενός ευχάριστου αστικού περιβάλλοντος (Del Aguila et al., 2019).

		ΒΙΒΛΙΟΓΡΑΦΙΑ				
Ποιότητα	Μεταβλητή	Project for Public Spaces, 2010	Mehta, 2014	Santos Nouri & Costa, 2017	Praliya & Garg, 2019	Mahmoud, 2022
ΣΥΜΠΕΡΙΛΗΠΤΙΚΟΤΗΤΑ	Ποικιλιομορφία σε	Ηλικίες				
		Φύλα				
		Σωματικές ικανότητες				
ΠΡΟΣΒΑΣΙΜΟΤΗΤΑ & ΔΙΑΣΥΝΔΕΣΕΙΣ	Συνέχεια					
	Συνδεσιμότητα					
	Περπατησιμότητα					
	Ευκολία πρόσβασης					
ΚΟΙΝΩΝΙΚΟΤΗΤΑ	Εύρος συμπεριφορών					
	Συνεργατικότητα					
	Χαρακτήρας γειτονιάς					
	Ομάδες ατόμων					
ΧΡΗΣΕΙΣ & ΔΡΑΣΤΗΡΙΟΤΗΤΕΣ	Μίξη χρήσεων					
	Ποικιλία σε δραστηριότητες					
	Ενεργητικότητα					
	Ζωτικότητα					
ΑΝΕΣΗ	Ασφάλεια					
	Διαθεσιμότητα θέσεων					
	Χρόνος έκθεσης					
	Φυσικότητα					
ΕΙΚΟΝΑ	Αναγνωσιμότητα					
	Ελκυστικότητα					
	Συντήρηση					



Το προτεινόμενο μοντέλο αξιολόγησης χρησιμοποιεί μια μεικτή μεθοδολογική προσέγγιση, που περιλαμβάνει ποιοτικές και ποσοτικές μεθόδους ανάλυσης. Τα εργαλεία που χρησιμοποιούνται για κάθε μεταβλητή είναι τρία: (1) Οπτικές παρατηρήσεις, (2) Συνεντεύξεις με ειδικούς, (3) Χωρική ανάλυση. Τα απαιτούμενα μετρητικά - αναλυτικά δεδομένα συλλέγονται μέσω χωρικής ανάλυσης με την αξιοποίηση γεωγραφικών συστημάτων πληροφοριών (GIS), οι συνεντεύξεις σε βάθος με ειδικούς και εμπλεκόμενους προσφέρουν ποιοτικές πληροφορίες, ενώ οι οπτικές παρατηρήσεις συμβάλλουν τόσο στις ποιοτικές όσο και στις ποσοτικές συνιστώσες της αξιολόγησης.

Στο μοντέλο, οι περισσότερες μεταβλητές αξιολογούνται με συνδυασμό 2 τουλάχιστον εργαλείων για την επαλήθευση ή ενίσχυση της εγκυρότητας των αποτελεσμάτων. Επιπλέον, κατά τη διάρκεια των συνεντεύξεων, έγιναν ερωτήσεις που αφορούσαν και τις 6 ποιότητες, ασχέτως αν χρησιμοποιούνταν κάποιο άλλο εργαλείο ως κύριο για την εκάστοτε μεταβλητή με σκοπό την απόκτηση μίας πιο ολοκληρωμένης εικόνας. Ο πίνακας που ακολουθεί παρουσιάζει συγκεντρωτικά ποια εργαλεία αξιοποιεί το μοντέλο για την αξιολόγηση των 22 μεταβλητών.

Ποιότητα	Μεταβλητή	Οπτικές παρατηρήσεις	Συνεντεύξεις με ειδικούς	Χωρική ανάλυση
ΣΥΜΠΕΡΙΛΗΠΤΙΚΟΤΗΤΑ	Ποικιλομορφία σε	Ηλικίες		
		Φύλα		
		Σωματικές ικανότητες		
ΠΡΟΣΒΑΣΙΜΟΤΗΤΑ & ΔΙΑΣΥΝΔΕΣΕΙΣ	Συνέχεια			
	Συνδεσιμότητα			
	Περπατησιμότητα			
	Ευκολία πρόσβασης			
ΚΟΙΝΩΝΙΚΟΤΗΤΑ	Εύρος συμπεριφορών			
	Συνεργατικότητα			
	Χαρακτήρας γειτονιάς			
	Ομάδες ατόμων			
ΧΡΗΣΕΙΣ & ΔΡΑΣΤΗΡΙΟΤΗΤΕΣ	Μίξη χρήσεων			
	Ποικιλία σε δραστηριότητες			
	Ενεργητικότητα			
	Ζωτικότητα			
ΑΝΕΣΗ	Ασφάλεια			
	Διαθεσιμότητα θέσεων			
	Χρόνος έκθεσης			
	Φυσικότητα			
ΕΙΚΟΝΑ	Αναγνωσιμότητα			
	Ελκυστικότητα			
	Συντήρηση			

Μελέτη-περίπτωση: _Piazze Aperte _Μιλάνο _Ιταλία

Το Piazze Aperte είναι μια συμμετοχική πρωτοβουλία που ξεκίνησε από τον Δήμο του Μιλάνο, η οποία δημιουργήθηκε σε συνεργασία με την Agenzia Mobilità Ambiente Territorio (AMAT), την Bloomberg Associates και την Global Designing Cities Initiative (Comune di Milano, 2022). Το συγκεκριμένο πρόγραμμα επικεντρώνεται στην αστική αναζωογόνηση και τη βιώσιμη κινητικότητα, οι οποίες αποτελούν σημαντικούς στόχους που περιγράφονται στο Σχέδιο διακυβέρνησης της περιοχής του Μιλάνο 2030 (PGT Milano 2030) και στο Σχέδιο βιώσιμης αστικής κινητικότητας, στο πλαίσιο του "Piano Quartieri" (Σχέδιο γειτονιάς).

Ο πρωταρχικός στόχος του Piazze Aperte είναι η ενίσχυση της χρήσης των δημόσιων χώρων με τη μετατροπή τους σε κοινόχρηστους κόμβους, με παράλληλη επέκταση των πεζοδρομίων και ελεύθερων ζωνών από τα αυτοκίνητα. Επιπλέον, η πρωτοβουλία επιδιώκει να υποστηρίξει τη χρήση μέσων βιώσιμης κινητικότητας, στοχεύοντας στην περιβαλλοντική αναβάθμιση του αστικού δικτύου και τη βελτίωση της συνολικής εμπειρίας της αστικής διαβίωσης. Το Piazze Aperte χρησιμοποιεί την μέθοδο της τακτικής πολεοδόμησης ως κύρια μέθοδο για την αποκατάσταση των δημόσιων χώρων ως κεντρικά σημεία κοινωνικής αλληλεπίδρασης, προωθώντας έτσι τη χρήση τους πέρα από τις συμβατικές λειτουργίες τους ως χώροι στάθμευσης ή οδικό άξονες. Η φιλοδοξία του προγράμματος είναι ότι, δίνοντας πίσω στους ανθρώπους τους κοινοτικούς τους χώρους, οι δημόσιες πλατείες θα ανακτήσουν το πλήρες καθεστώς τους ως χώροι τοπικών συναντήσεων μέσω δραστηριοτήτων, συγκεντρώσεων, ακόμη και απλώς "διαβίωσης" σε αυτές τις περιοχές.

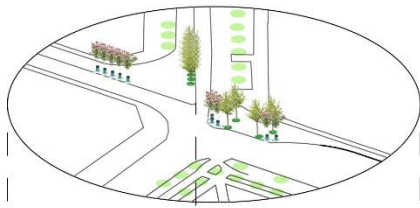
Ο Δήμος του Μιλάνου και οι κάτοικοί του μπορούν να συνεργαστούν ενεργά για τον σχεδιασμό, την ανάπτυξη και την υλοποίηση των δημόσιων χώρων, καθώς και για την προώθηση και τη διατήρησή τους, χάρη σε αυτό το πρόγραμμα και την υπογραφή συμφωνιών συνεργασίας. Αρχικά, ο Δήμος εξέδωσε αίτημα υποβολής προτάσεων με τίτλο "Piazze Aperte in ogni quartiere" ("Ανοιχτές πλατείες σε κάθε γειτονιά") το 2019, με στόχο τον εντοπισμό νέων χώρων προς αναζωογόνηση λαμβάνοντας τελικώς πάνω από 60 αιτήσεις. Μέχρι σήμερα, ο Δήμος του Μιλάνου έχει ολοκληρώσει με επιτυχία πάνω από 35 τακτικές παρεμβάσεις και ασχολείται ενεργά με τον σχεδιασμό περισσότερων.

Οι στόχοι του προγράμματος Piazze Aperte συνεχίζουν να επικεντρώνονται στον επανασχεδιασμό των δρόμων και των πλατειών κάθε γειτονιάς ως χώροι κοινωνικής αλληλεπίδρασης, ζωικότητας και συνάθροισης, επαναφέροντας τους αστικούς χώρους στη δημόσια ζωή. Επίσης, επιδιώκει τη βελτίωση της ασφάλειας των κατοίκων, των πεζών και των ποδηλατών μέσω της πεζοδρόμησης δρόμων και της εφαρμογής μέτρων ήπιας κυκλοφορίας, με ιδιαίτερη έμφαση στα παιδιά, τους ηλικιωμένους και τα άτομα με αναπηρία. Φιλοδοξεί να το επιτύχει αυτό, αρχικά, μεταμορφώνοντας τους υφιστάμενους δημόσιους χώρους αρχικά μέσω οδικών παρεμβάσεων χαμηλού κόστους αλλά υψηλού βιοτικού θετικού αντίκτυπου. Σε δεύτερο στάδιο αποσκοπεί στην εφαρμογή μόνιμων παρεμβάσεων με την αποτελεσματική συνεργασία μεταξύ των κατοίκων και της τοπικής αυτοδιοίκησης, προωθώντας την άμεση εμπλοκή της κοινότητας στην κοινή διαμόρφωσή και διαχείριση των δημόσιων χώρων.

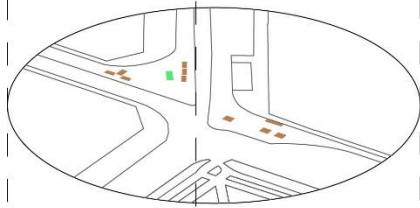
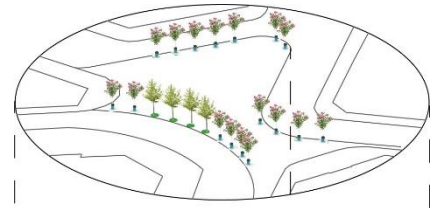
Μέχρι στιγμής, το πρόγραμμα έχει καταφέρει να δημιουργήσει 22.000 τ.μ. πεζοδρομημένων τμημάτων μέσω της εφαρμογής 38 παρεμβάσεων τακτικής πολεοδομίας. Αυτές περιλαμβάνουν την εγκατάσταση 250 καθιστικών (κυρίως παγκάκια), 310 φυτεύσεων σε γλάστρες, 380 θέσεων στάθμευσης ποδηλατών, 35 κανονικών τραπεζιών και 32 τραπεζιών πινγκ-πονγκ.

Από τις 38 παρεμβάσεις επιλέχθηκαν 2 από τις πιο γνωστές, η Piazza Spoleto και η Piazzale Basone, οι οποίες εντοπίζονται στο βορειοανατολικό τμήμα του Μιλάνου. Ο λόγος που επιλέχθηκαν οι συγκεκριμένες πλατείες έγκειται στο γεγονός πως και οι δύο βρίσκονται στην προσωρινή φάση παρέμβασης και στα υπόλοιπα παρόμοια χαρακτηριστικά που διαθέτουν. Καταρχάς, κομβικής σημασίας αποτελεί το ότι και οι δύο πλατείες βρίσκονται μπροστά από σχολεία, καθώς εξασφαλίζεται η παρουσία παιδιών και γενικότερα αυξημένη κίνηση πεζών

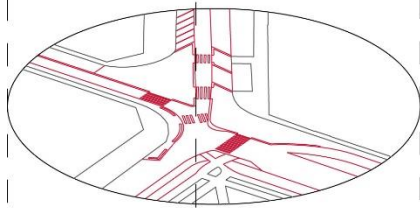
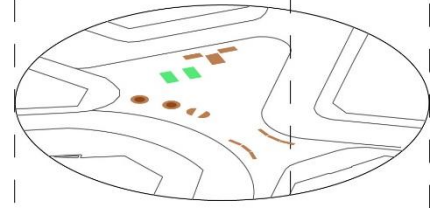
συγκεκριμένες ώρες της ημέρας. Επιπλέον, και στις 2 παρεμβάσεις έχουν χρησιμοποιηθεί παρόμοια υλικά και αστικός εξοπλισμός, όπου συνάδουν με το εύρος εργαλείων που ανήκουν στην τακτική πολεοδόμηση, δηλαδή μη κατασκευαστικές επεμβάσεις.



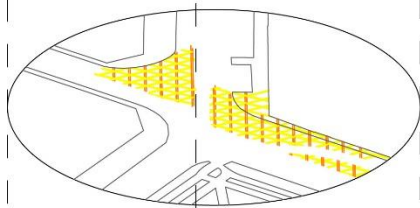
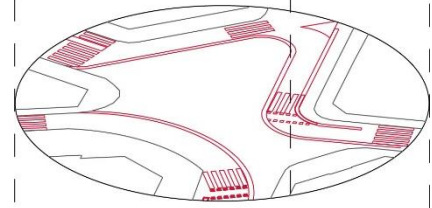
Φυτεύσεις σε γλάστρες



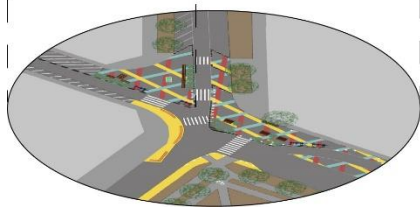
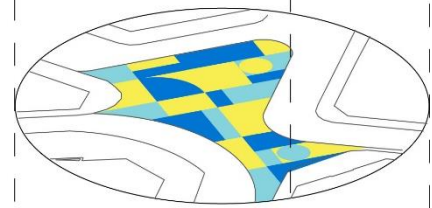
Αστικός εξοπλισμός



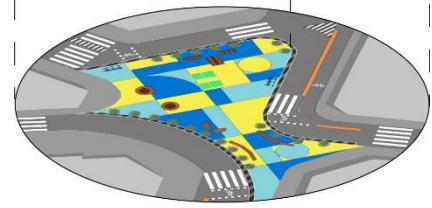
Μέτρα ήπιας κυκλοφορίας



Χρωματισμός ασφάλτου



Ανάλυση παρεμβάσεων



Piazzale Bacone

Piazza Spoleto

Οι οπτικές καταγραφές πραγματοποιήθηκαν επί 7 ημέρες ανά τρία δίωρα διαστήματα κάθε ημέρα για την κάθε περιοχή μελέτης. Επιπλέον, διεξήχθησαν συνολικά 5 συνεντεύξεις με 6 ειδικούς και συγκεκριμένα με κατοίκους, ακαδημαϊκούς, ερευνητές, αρχιτέκτονες και συντονιστές του προγράμματος. Για την χωρική ανάλυση χρησιμοποιήθηκαν ανοιχτά δεδομένα καθώς και γεωχωρικές πληροφορίες που συλλέχθηκαν από το πεδίο. Η συνολική ανάλυση των ευρημάτων αποτελείται από στατιστικά δεδομένα, χάρτες, διαγράμματα, περιγραφικών κείμενα και φωτογραφικού υλικού.

Συμπεράσματα

Σύμφωνα με τα Ηνωμένα Έθνη (2022), το φαινόμενο της αστικοποίησης αυξάνεται ραγδαία σε παγκόσμιο επίπεδο, με τα δύο τρίτα του πληθυσμού της γης να αναμένεται να ζει σε αστικά κέντρα μέχρι το 2050. Το έργο της Jane Jacobs το 1962 και όλες οι παράγωγες έρευνές του μέχρι σήμερα έχουν εδραιώσει τη σημασία της ύπαρξης δημόσιων χώρων στο αστικό περιβάλλον, οι οποίοι είναι προσβάσιμοι, άνετοι, χωρίς αποκλεισμούς, λειτουργικοί και ζωντανοί.

Συνεπώς σήμερα, ο αστικός σχεδιασμός καλείται να ανταπεξέλθει στην αυξανόμενη ζήτηση για καλά σχεδιασμένους δημόσιους χώρους που ανταποκρίνονται στις ανάγκες και τις προτιμήσεις ποικιλόμορφων αστικών πληθυσμών. Ωστόσο, καθώς ο προϋπολογισμός που διατίθεται για την αστική ανάπτυξη είναι συχνά περιορισμένος, η υιοθέτηση εναλλακτικών προσεγγίσεων καθίσταται κρίσιμη προκειμένου να δημιουργηθούν και να διατηρηθούν οι απαραίτητοι αυτοί δημόσιοι χώροι.

Μια τέτοια προσέγγιση είναι η τακτική πολεοδόμηση, η οποία περιλαμβάνει χαμηλού κόστους, προσωρινές παρεμβάσεις που αποσκοπούν στη μετατροπή ανεκμετάλλευτων χώρων σε ζωντανούς κοινοτικούς τόπους. Με την αξιοποίηση της συγκεκριμένης στρατηγικής, παρέχεται η δυνατότητα στις πόλεις να δοκιμάσουν γρήγορα και οικονομικά νέες ιδέες, συγκεντρώνοντας σχόλια και κριτικές από τους κατοίκους, προτού υλοποιήσουν μόνιμες και μεγαλύτερης κλίμακας αλλαγές.

Τα αποτελέσματα της αξιολόγησης των δύο έργων τακτικής πολεοδόμησης στο Μιλάνο, της Piazza Spoleto και της Piazzale Bacone, του προγράμματος Piazze Aperte παρείχαν σημαντικά ευρήματα σχετικά με την επιτυχή εφαρμογή αυτής της μεθόδου. Ξεκινώντας, όμως, από τη φυσική υπόσταση των παρεμβάσεων, διαπιστώθηκε πως το περιορισμένο εύρος εργαλείων της τακτικής πολεοδομίας συνεπάγεται με περιορισμένες δυνατότητες για τη δημιουργία χώρων υψηλής αισθητικής. Ωστόσο, ένα από τα βασικά ευρήματα αφορά την ικανότητα των λιγότερο αισθητικά άρτιων παρεμβάσεων να προσελκύουν ικανό αριθμό ατόμων στους ανοιχτούς χώρους, λειτουργώντας ως πρακτικό και χρήσιμο μέσο αναζωογόνησης του δημόσιου χώρου.

Ακόμη, αποδείχθηκε ότι αυτές οι τακτικές παρεμβάσεις είναι ικανές να φιλοξενήσουν ένα ευρύ φάσμα του κοινωνικού ιστού, υπό την προϋπόθεση ότι οι ανάγκες του λαμβάνονται υπόψη κατά τη διαδικασία σχεδιασμού και υλοποίησης. Είναι δεδομένο πως οι ομάδες των μηχανικών και μελετητών που καλούνται να πραγματοποιήσουν παρεμβάσεις τακτικής πολεοδόμησης δεν είναι δυνατόν να αποτελούν μέλη όλων των κοινωνικών ομάδων που συγκροτούν τις σύγχρονες κοινότητες. Συνεπώς, η συμμετοχή και συνεργασία αντιπροσώπων όλων των κοινωνικών συνόλων στις διαδικασίες λήψης αποφάσεων συνιστά κομβικής σημασίας για τη δημιουργία συμπεριληπτικών χώρων. Επιπλέον, με τη συμμετοχή διαφόρων ενδιαφερομένων, όπως κάτοικοι, τοπικές επιχειρήσεις και κοινοτικές οργανώσεις στα στάδια σχεδιασμού και υλοποίησης, η τακτική πολεοδόμηση μπορεί να λειτουργήσει ως ουσιαστικός καταλύτης για την προώθηση θετικών αλλαγών στις γειτονιές και στο δημόσιο χώρο στο σύνολό του.

Ωστόσο, οι κυβερνητικές υπηρεσίες που βρίσκονται πίσω από αυτές τις πρωτοβουλίες πρέπει να παρέχουν επαρκή αστικό εξοπλισμό και υλικά για να βοηθήσουν τις κοινότητες να υλοποιήσουν τις ιδέες τους και να τις διατηρήσουν με την πάροδο του χρόνου. Συμπληρωματικά, η προσφορά ποικίλων δραστηριοτήτων εντός των νέων χώρων είναι ζωτικής σημασίας για τη ζωντάνια αυτών των χώρων και την εξασφάλιση της συνεχούς αλληλεπίδρασης των μελών της κοινότητας μαζί τους.

Εντούτοις, η δημιουργία μίας καλά σχεδιασμένης πλατείας ή πάρκου δεν αρκεί για την μετατροπή ενός χώρου σε ένα ανοιχτό δοχείο ζωής και κοινωνικής αλληλεπίδρασης. Η θέση του στον αστικό ιστό αποτελεί καίριας σημασίας για την επιτυχία του. Η επιλογή καλά ενταγμένων δρόμων οι οποίοι αναμένεται να εμφανίζουν υψηλά επίπεδα κυκλοφορίας λόγω της διάταξης

του οδικού δικτύου, μπορεί να έχει τεράστιο αντίκτυπο στο προφίλ, τον αριθμό και το ενδιαφέρον των καθημερινών επισκεπτών. Η προϋπάρχουσα υποδομή της γειτονιάς, όπως η κατάσταση και το πλάτος των πεζοδρομίων και η ύπαρξη μη-διακοπτόμενων ποδηλατοδρόμων, μπορεί επίσης να επηρεάσει σε μεγάλο βαθμό τον αριθμό των ατόμων που επισκέπτονται την περιοχή παρέμβασης. Παρ'όλ'αυτά, η τακτική πολεοδομία μπορεί επίσης να χρησιμοποιηθεί για τη δημιουργία ποδηλατοδρόμων γρήγορα και με φτηνά υλικά σε περιοχές χωρίς υποδομές μικροκινητικότητας, ταυτόχρονα με την κύρια παρέμβαση αναζωογόνησης του δημόσιου χώρου, όπως έγινε στην περίπτωση της Piazza Spoleto. Συνεπώς, η συνολική προσβασιμότητα και η ευκολία πλοήγησης στην περιοχή έχουν ουσιαστική σημασία για την προσέλκυση ανθρώπων και την ενεργοποίηση της γειτονιάς.

Όμως, ακόμη και αν οι συγκεκριμένες μελέτες περίπτωσης μπορούν να θεωρηθούν επιτυχημένες και να τύχουν καλής αποδοχής από τους κατοίκους, είναι σημαντικό να επισημανθούν πεδία με περιθώρια βελτίωσης κατά τη μελλοντική υλοποίηση έργων τακτικής πολεοδομίας.

Καθώς η εφαρμογή των nature-based solutions (λύσεων που βασίζονται στη φύση) μετατρέπεται σε επιτακτική ανάγκη για τις πόλεις λόγω της κλιματικής αλλαγής, η ενσωμάτωσή τους στα έργα τακτικής πολεοδομίας μπορεί να είναι καθοριστικής σημασίας για τη μακροπρόθεσμη βιωσιμότητα και ανθεκτικότητα. Χαρακτηριστικό παράδειγμα από τη διεθνή βιβλιογραφία αποτελεί το Green Virus στο Μεντεγίν, όπου κατάφερε την επανεμφάνιση και ένταξη της τοπικής βιοποικιλότητας στον αστικό ιστό μέσω τακτικών μεθόδων. Η έρευνα που έγινε στο παράδειγμα του Μιλάνου κατέληξε πως καταλυτικός παράγοντας για τη διατήρηση τέτοιων παρεμβάσεων αποτελεί η κοινότητα και η δέσμευσή της για τη συνεχή επιτυχία τους.

Η αποτελεσματικότητα της τακτικής πολεοδομίας μπορεί να ποικίλλει ανάλογα με το εκάστοτε πλαίσιο εφαρμογής και τις ανάγκες κάθε αστικού κέντρου. Ως εκ τούτου, είναι καίριο για τις πόλεις να αξιολογήσουν προσεκτικά τις δικές τους συνθήκες και να συνεργαστούν με τοπικούς φορείς και ενδιαφερόμενους ώστε να εξασφαλίσουν τα καλύτερα αποτελέσματα κατά την υλοποίηση τέτοιων εγχειρημάτων.

Οι κυβερνήσεις πρέπει να αποφασίσουν μεταξύ της ανάπτυξης λίγων μόνιμων και μεγάλης κλίμακας δημόσιων χώρων ή περισσότερων μικρότερων, προσωρινών αλλά περισσότερων παρεμβάσεων. Η υιοθέτηση εναλλακτικών μεθόδων αστικού σχεδιασμού όπως η τακτική πολεοδομία αποτελεί τρόπο μεγιστοποίησης του αριθμού των παρεμβάσεων και αντιμετώπισης πολλαπλών αναγκών χρησιμοποιώντας τους ίδιους πόρους που θα χρειαζόταν ένα μεγαλύτερο έργο.

Ακόμη, ενώ οι μόνιμοι δημόσιοι χώροι χαρακτηρίζονται από ανθεκτικότητα και μακροπρόθεσμα οφέλη, η τακτική πολεοδομία προσφέρει τη δυνατότητα πειραματισμού και προσαρμοστικότητας ως απάντηση στις μεταβαλλόμενες ανάγκες του σήμερα. Στην ουσία, η τακτική πολεοδομία αντιπροσωπεύει μια πιο δυναμική και ευέλικτη προσέγγιση, αναγνωρίζοντας ότι τα αστικά περιβάλλοντα δεν είναι ποτέ στατικά. Αναγνωρίζει τη σημασία της προσαρμογής στις εξελισσόμενες απαιτήσεις της κοινότητας και στις προκλήσεις που θέτουν ζητήματα όπως η κλιματική αλλαγή και οι κοινωνικές μεταλλαγές.

