



Potential of urban voids as public spaces

A tactical urbanism guide for Torino

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Potential of Urban Voids as public spaces

A Tactical Urbanism guide for Torino



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Abstract

Problem statement and the opportunity

Dealing with unpredictability is one of the most difficult issues in spatial planning especially in urban design. As much as we would like to conceive of cities as the outcome of planned, organized acts, the reality is that many cities are the product of unforeseen developments. Urban planners and the governmental bodies often overlook the micro spaces in the city while looking out for bigger problems. Many studies have recognized the importance and significance of urban leftover spaces, or 'urban voids,' and are working to establish consensus as an alternative adaptation approach that is both economically and environmentally viable by repurposing existing buildings, infrastructures, and urban resources. The main purpose of this research is to find out a few examples of urban voids that are part of the social fabric of Torino and use them to improve community health and engagement, or advocate for more sustainable and human scale cities, for all types of people to come out and improve their mental, physical, and emotional health. These voids provide opportunities for meeting physical activity recommendations for both adults and children, improve quality of life measurements, promote social capital, encourage increased uptake in cycling for transportation, reduce particulate pollution and street noise and increase local business activity. These help to seek new and fun ways to achieve environmental, social, economic, and public health goals. They also allow citizens to see and connect with their community in a new and exciting way.

According to the ECGA Turin 2022, the City proudly hosts an effective green infrastructure system such that 93% of the city's population live within 300 meters of a recreational green public space (does not including green schoolyards, agricultural areas, or green street infrastructure). The objective is to reach 100% by 2030. I take this opportunity to find and use the urban voids or usable potential spaces in Turin's urban

residential areas that fall under the 7% of space that lacks access to a nearby green or recreational area and are in need of immediate remedies. The design of these spaces is not a part of this study. However, the basic principles, benefits and designing guidance for tactical urbanism as an approach for the Torino city is discussed here.

Scope of the research

The research is simple compilation of relevant literature with introduction on urban voids, good design strategies, discussions on urban design interventions that harmonize with the types of voids, some example cities which have done appreciable work on tactical urbanism, and finally some guidelines and suggestions to designing spaces.

The study does not focus on geo-informatics or technical data of the voids and cities. As a way forward, detailed technical studies can be done on studying and analyzing selected sites or adding new sites that are not involved in this report.

Research aim

The primary aim is to educate ourselves on urban voids and how to use them to our advantage. Secondary goal of this report is to find a few voids in Turin that has a potential to be a better space and give a few suggestions of how it could be better.

Method

This study is split into six parts. The “Urban Voids” topic tries to define an issue that is omnipresent in all the cities of the world. Though it almost impossible to completely eradicate this issue, it possesses huge potential in improving the lives of people in the cities starting from a street or neighborhood level. The second part “Urban Voids in Torino” gives an introduction to the city of Torino in Italy, where the study is carried out. The evolution of the city from an industrial grey city to a green city is discussed to make us understand the commitment of the city in making the lives of its residents better. Then we try to focus on finding the opportunities in the metropolitan area, which consists of urban voids. The next topic “How to deal with these voids” discusses the possibilities or interventions that can be made to utilize the urban voids in a better way. We also try to understand the pros and cons of few of these methods in order to find the viable solutions. The Fourth part “People oriented design” is concentrated on learning better ways to design urban areas. Cities are for the people and the design must be made for them. The penultimate focus is on “Case studies and learnings”, which comprises of good examples

of designs from around the world, on the particular type of intervention that we have concluded is the best for our approach. The closing segment “Possible design solutions” states the guidelines for designing and key factors to keep in mind before proceeding with the selected intervention. Very basic potential designs and design ideas for our selected sites are illustrated. The exact site scenario and the implications of designs on site are not tested in this study.

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INTRODUCTION

Despite centuries of experience, cities have remained recognizable as well as exciting issue for urban planners, spanning from the planning of expansions to the remodeling of pre-existing areas. However, as members of planning institutions, planners appear to have difficulty offering acceptable urban design solutions. As a result, new planning paradigms are being sought in the fields of spatial planning and urban design.

Dealing with unpredictability is one of the most difficult issues in spatial planning (Allmendinger and Tewrdwr-Jones, 2000; Faludi, 2000), especially in urban design (Carmona et al., 2010). As much as we would like to conceive of cities as the outcome of planned, organized acts, the reality is that many cities are the product of unforeseen developments. This is attributable not just to a lack of resources to implement radical change in cities, but also to the fact that daily living is far more complex than a hierarchical and functional organization of city activities (Alexander, 1965, Alexander et al., 1977). As a result, adaptation can be viewed as a co-evolutionary process involving both plans and society. The only constant thing in the universe has been “change”. Different elements of life and life in a city have been given importance during each era. Through the industrialization times, utmost priority was given to automobiles and the cities were designed in the best possible way to accommodate them. But in the contemporary world, the significance is being shifted towards sustainability, quality of life and quality of spaces. Tactical and XL (or Extra Large) urbanisms have arisen to address the challenges of the twenty-first century. This match demonstrates that the XS (Extra Small) category is absent in Rem Koolhaas' foresight in defining S, M, L, and XL projects (Mike Lydon and Anthony Garcia, 2015). This means that urban planners and the

governmental bodies often overlook the micro spaces in the city while looking out for bigger problems.

The spatial environment connected with the political, economic, and sociocultural components of global cities is constantly restructured by urban development (Greenberg et al. 2000). Different urban intervention strategies are used in growing and diminishing cities, depending on the current urban conditions. Economic development initiatives are increasingly being used to exploit unoccupied land in diminishing towns (Pagano and Bowman 2000). Growing cities, on the other hand, have issues such as adjusting to rising population density and limiting additional suburban expansion in the face of limited urban space and resources (Eisinger and Seifert 2012; Myers and Wyatt 2004; Pagano and Bowman 2000).

Cities facing economic, environmental, and social issues in the future, on the other hand, will have to progressively abandon the tabula rasa development model and consciously rejuvenate the current urban environment and community through innovative urban redevelopment initiatives (Schilling and Logan 2008). Many studies have recognized the importance and significance of urban leftover spaces, or 'urban voids,' and are working to establish consensus as an alternative adaptation approach that is both economically and environmentally viable by repurposing existing buildings, infrastructures, and urban resources.

Identifying in-between leftover areas or ill-planned plots that can be utilized employing environmentally friendly design approaches and social rehabilitation tactics has taken equal amounts of practical and research effort. However, because these unused areas are distributed throughout a city, controlling or managing the extent of use and sorts of these spaces, depending on how they are defined, may be difficult. Various terminologies for residual spaces are currently in use; typically, these terminologies are only slightly

different from one another due to their inherent nature or the features that they emphasize. The usage of so many different words for essentially the same concept might often make it difficult to synthesize these areas (Soe Won Hwang & Seog Jeong Lee, 2019).

It's difficult to define the objects and scopes of urban voids and other related phrases because there aren't any standard definitions (Pagano and Bowman 2000). Vacant land, brownfield, terrain ambiguous, void, and wasted space have all been used interchangeably to describe urban voids in various discourses. The application of these phrases is frequently uneven and perplexing (Doron 2000; Hudson and Shaw 2011; Pearsall and Lucas 2014). Although the characteristics, scales, qualities, and causality of these concepts are generally similar, the relevant challenges and conditions in each urban context may differ. As a result, as some researchers have argued, critical analysis, appropriate methodologies, and more perceptive systematic analysis of urban voids are urgently needed (Pearsall and Lucas 2014; Eisinger and Seifert 2012).

The masterplan for Torino 2030 focuses on several areas of optimizing well-being and ensuring a good quality of life. Achieving a positive balance between the numerous dimensions of inhabitants' lives and the city itself is crucial in this masterplan. Through participatory approaches, the city seeks to imagine itself as an administration that listens to and responds to citizens' needs. After all, the 11th SDG (Make cities and human settlements inclusive, safe, resilient and sustainable) aims *"by 2030, to enhance inclusive and sustainable urbanization and capacity for participatory, integrated and sustainable human settlement planning and management in all countries"*. So, this thesis attempts in laying out a pathway that the city can integrate in order to achieve these goals from an urban planning perspective.

Contemporary Turin's journey began during a period of profound post-industrial change and economic, social, and environmental crises. The magnitude of change during the last

25 years has been staggering, especially when one considers the starting point: from ten million square meters of unused industrial land to nearly double the amount of natural open space.

Copenhagen, Amsterdam, and New York did not always have the same glamor as they have now! They've been undergoing a gradual transition. The most recent addition to the above list is New York. Changing the streets of New York from yellow cabs to umbrellas and outdoor seats is a story worth telling! The connection between municipal government and users is sometimes overlooked during the complex planning process of creating and executing public spaces in the city, resulting in under-used or dead places. Through a community-led approach, tactical urbanism is one technique for rejuvenating such areas and turning them into people-friendly spaces at a low cost and in a short amount of time.

This thesis tries to focus on a few particular sustainable development goals by the UN, such as climate action, sustainable cities and communities, and good health and wellbeing, by trying to bring more public spaces closer to people by finding the urban voids/ urban residual spaces in the city of Turin and putting them for a better use. It is natural for a city to have dead spaces or misused spaces over time after applying every masterplan. However, from time to time, it is important to research and analyze such spaces and transform them. It may be a very small scale or a bigger space or building that is underutilized. But when put to good use, this small change also brings a bigger impact on the city and its residents. This report however focuses mainly on small scale spaces that are close to the living population in their respective neighborhoods. A person must be able to get out of his/her immediately and find a public space to retreat. That is one of the most impactful ways a city can help its people. Why do we need to have a public space near our houses? The answer is obvious to us as a result of various studies on the importance of mental health on our wellbeing. Needless to say, the public spaces improve bonding between the communities as well.

Recently, the metropolitan of Milan, made an effort in bringing a more pedestrian oriented approach to streets and plazas. They have also made an extensive change on the cycling paths of the city. All of this happened during the first phase of COVID-19 lockdown. Sidewalk extension, signage and emergency device interventions, two-way bicycle lanes, traffic management interventions, pedestrian-only streets, and parklets have all been highlighted during this open streets project of Milan.

The approach of the thesis would be similar to that of Milan, but focusing more on advising the municipality of Torino to promote such interventions as a solution to urban voids. In a way this thesis paper can act as a guide to the city in finding underused spaces and revitalizing them in the future.

CHAPTER 1: URBAN VOIDS

What are Urban Voids?

Urban Voids are unused or underutilized places that have a detrimental impact on the public realm by lowering the quality features of the urban environment and making it a less active place to live. The areas with potential of being better quality spaces within the city are the topic of this report. Urban Voids have a lot of possibilities for enhancing the area and making the city's urban fabric stronger. By intervening to reclaim the empty spaces, we may improve the impression of these areas and so create a better shared space by boosting imageability and comfort. More significantly, our duty is to identify these areas that need to be activated and to provide individuals with memorable and

Various Terms on Urban Voids		Description	Reclassification
1	Vacant building/lot/land	Currently unused building or land	A Vacant
2	Terrain vague Abandoned structure/site Dead zone	Abandoned building, property, or unused or unproductive spaces	B Abandoned
3	Derelict space Wasteland	Abandoned desolate spaces	
4	Terra incognita	Abandoned unknown land	
5	Brownfields Drosscape	Contaminated sites or generally developed sites (contrary to greenfields)	C Brownfields
6	TOADS*	Temporarily obsolete abandoned derelict sites	
7	Urban void Fortuitous voids	Spectrum of spontaneous unused, underused, or misused space or accidentally resulting space	D Urban void (a narrower meaning)
8	Lost space	Disconnected spaces that provide no positive contribution	E Leftover spaces (residual and neglected spaces)
9	Leftover spaces In-between spaces Gap-space	Interstitial space and in-between space among infrastructure	
10	Indeterminate spaces Ambivalent landscapes	Unused, neglected non-mainstream space	
11	SLOAP**	Space left over after planning	
12	Over-planned public space	Underused mainstream space	

*TOADS: Temporarily Obsolete Abandoned Derelict Sites

**SLOAP: Space Left Over After Planning

meaningful experiences.

Table 1 Various terms on urban voids and their reclassification. Source: Soe Won Hwang & Seog Jeong Lee, 2019.

Why are they a problem?

Urban Voids present an opportunity to create public spaces that have the potential to infuse new choices and meanings in urban districts (Bhaskaran 2018). Identification and utilization of urban resources can lead to improvements in the quality of life for several individuals and hence a more sustainable urban fabric. For this study, in its most basic conception, urban voids can be understood as vacant urban spaces, or pieces of land.

The city's voids are places that interrupt the urban tissue, leaving it unfinished and putting the purpose of those spaces into question. They are sometimes referred to as urban ruins, and they exist at the intersection of private and public territory, not belonging to either (Aporee). According to the definition of the term 'void,' it is something that is 'not there,' hence an urban void can be defined as a city that lacks permeability and social realm. Urban voids are unattractive urban regions in need of redesign, anti-space that provide nothing helpful to the environment or people. They are ill-defined, lack quantifiable bounds, and fail to connect pieces in a logical manner (Trancik, 1986).

"Designers of the physical environment have the unique training to address these critical problems of our day, and we can contribute significantly toward restructuring the outdoor spaces of the urban core. Lost spaces, underused and deteriorating, provide exceptional opportunities to reshape an urban center, so that it attracts people back" (Trancik 1986)

Modern urban planning of parks and squares, as well as suburban gardens has only aggravated the inferior status of urban voids. However, the importance of the urban void as an unplanned space that reflects the pre-rational and unspoiled should lead to its restoration into city-form as a space for self-reflection and authenticity (Akkerman 2009). Recognizing the significance of urban voids could lead to a new type of city-form, one that is more purposeful and authentic. The possibility of a "patchwork," or a sewing together of non-homogeneous tissues of parts and pieces, ready to give life to a new urbanity, a new landscape, is opened by the issues of urban empty spaces generated by

urban sprawl. The term "patchwork" refers to the many different functions that these places can serve in the future (Salerno, 2011).

These principles provide a conceptual design framework for the reintegration of abandoned urban landscapes into the city fabric by embracing the value of both human and natural systems, as well as their shape and function (Lokman 2017). In order to establish effective and sustainable solutions for reusing dead space, embedded design approaches that enhance spatial differentiation as well as process-based design methods must be explored.

How do we identify them?

Urban voids can be seen as spaces which disrupt urban fabrics and can be seen as spaces that are out of context and incoherent with their surroundings (Fracasso, 2015). Due to the fact that they were rendered obsolete or were poorly designed during an urban design and implementation phase, these spaces have been classified as unusable. Some definitions of unused urban space emphasize the emptiness of the terrain, compared to the surrounding built environment, the fact that they are occupied by neither people nor infrastructure. Others emphasize the fact that they are abandoned, without urban activity and on some occasions contaminated: Urban Wastelands, Brownfields, Degraded and Deteriorated land or buildings. All of these definitions, however, point out the potential of the terrain or building for future development.

Classification of urban voids:

Planning Voids: Voids created due to inefficient and improper planning processes. These are created due to planning in isolation without understanding the fabric of the city. These are most visible in our cities and they can also be perceived using figure ground theory.

Functional Voids: These are dead vacant spaces in the cities. When a space is not used like it was designed to use, the space becomes defunct. These occupy precious land in the city and make the environment unpleasant.

Geographical Voids: These are existing geographical features in the city. When the city planners and designers do not respond to these geographical features voids are created around them making the space unusable. E.g. river, etc.

How to use them?

Understanding the inherent challenges and promise of urban voids is critical for the voids' strategic exploitation. As previously stated, the lack of a precise definition and the availability of several interchangeable terminology reflects the difficulties encountered in both academics and the profession. Various words apply to specific scopes in related studies, such as considering inner-city urban voids vs voids distributed across urban perimeter areas, targeting of unoccupied houses only, or including or excluding abandoned structures with vacant properties. To a limited extent, efforts have been made to manage urban voids; nevertheless, only a few studies have comprehensively investigated urban voids using evidence-based data and empirical analysis reclassification. (Soe Won Hwang & Seog Jeong Lee, 2019). As a result, according to Pagano and Bowman, the use of urban gaps as potential resources is difficult to comprehend (Pagano and Bowman 2000; Hudson and Shaw 2011).

For cities under densification pressure, the fragmented nature of urban voids can operate as a connector, connecting existing urban tissues, particularly green spaces, to allow for continuing replenishment and degrees of engagement that differ from 'expected consumption spaces' (Rahmann and Jonas 2011; Schwarz 2012). To put it another way, urban voids can be used as noncommercial and innovative temporary venues (Rahmann and Jonas 2011). Urban voids provide an alternate supply of developable open land in growing cities. Urban voids can be carefully used for economic growth, resulting in increased tax income and the return of displaced people (Pagano and Bowman 2000).

Green initiatives are an appealing way to advocate for urban sustainability in depopulating or diminishing communities. Spaces between buildings, for example, can be used for urban farming, biotope enrichment, rainwater retention, or alternative energy generation equipment. Several experiments have looked into the potential of embedding energy-recycling devices into residential areas, suggesting a variety of design ideas. Photovoltaic, solar, and geothermal systems, as well as small-scale wind power systems, such as wind towers/turbines or fuel cell systems, have all been used in urban environments, as have concepts like urban planting, green roofing, and storm-water management green coverages.

Terry Schwarz, an urban planner, recommended using green technologies and green infrastructure to create productive landscapes for food production and alternative energy as ecological applications for infill construction (Schwarz 2012). Furthermore, in Cleveland and Philadelphia, urban voids were employed in conjunction with a storm-water mitigation system to restore the urban ecology (Mallach 2012). Urban greening can take the form of planting an urban tree canopy (Hollander et al. 2009) or improving the human-nature relationship by rediscovering wilderness in the interstitial landscape, both of which contribute to the creation of sustainable cities (Jorgensen and Tylecote 2007).

Within communities, social and ecological assessments are being carried out on urban voids. The use of urban voids as community gardens is a positive move because it provides the community with much-needed green spaces (Kremer, Hamstead, and McPhearson 2013). These urban voids have the potential to serve as an alternative to traditional public areas, allowing for spontaneous and unrestricted activities involving a wide range of social groups (Kim 2016; Hou2010).

These areas of opportunity should include new services, not just a typical response, but one that addresses the needs of the population and is not necessarily covered by traditional planning. Urban gaps have been translated into a proposal for urban planners, architects, and collectives as a resource with immense potential. "In the urban condition, the control of a resource becomes a power source," (singnorelli, 1999). It is also critical to involve citizens in the appreciation of these areas; "it is unequivocally good for empty lots have a social use, even temporarily. It is civic and intelligent that citizens help improve

their neighborhoods —it is valued what you have cared about- what is worse, it is dangerous that municipalities delegate their responsibility to care for and create public spaces to these citizen initiatives” (Zabalbeascoa, 2013)

Why is it important to act on small scale spaces?

Urban spaces are external environments that provide people with a sense of security. They are essential to city life because they allow society to interact, strengthen community identities, and improve the lives of the people. The success of urban spaces is determined by the efficiency and attractiveness of the overall user design (Campbell, 2013).

Urban public spaces are a valuable asset for a city seeking to attract businesses or workers. Cities are becoming more competitive for foreign investment. The city becomes more competitive when its public spaces are well designed and managed (Carmona, 2010). Cities of the future must also manage limited urban space and resources while constantly improving the current urban environment. One method is to repurpose areas that are currently underutilized.

In this sense, cities can be viewed as both a cause and a solution to the current environmental crisis. As the population of major cities grows, so does the need for more development. The abundance of small spaces in a city has a significant impact on the quality of life. If those places are unappealing, people will abandon the city street, possibly even the city itself—to the suburbs and country if they can, to reinforced shelters in cities if they can't. We can keep the streets alive if we learn to take advantage of our little urban areas, if we design new ones wisely and fix up the old ones. We might even persuade more people to use them, and to do so with a pleasure (Whyte, 1980)

CHAPTER 2: URBAN VOIDS

IN TORINO

Introduction to the city

Inferences from ECGA 2022

Indicators		Units	Year of data
Population	879,004	Number of Inhabitants	2018
Area	130	Sq. Km	2018
Population density	6,737	Inh/sq.km	2018

Table 2 Torino city statistics Source: ECGA 2022

For decades, Torino's history and collective imagination have been tied to that of the "one-company town," Fiat's gloomy, chaotic, and unappealing town. Torino is, first and foremost, a baroque city. Torino became a European capital in the seventeenth and eighteenth centuries, and it was during this time that it developed its most consistent urban form, with its streets and arcaded squares, noble palaces, religious buildings, and Savoy court residences, all representing the city's crown and connected by a scenic urban system. Torino has invested heavily in its image as a cultural hub since the 1980s, and is steadily redefining attitudes both at home and abroad. The repair of the Castello di Rivoli and its transformation into the Museum of Contemporary Art, which began in 1984, kicked off a process that combines architectural restoration of baroque Torino's principal monuments with their conversion into cultural amenities.

The years leading to the 2006 Winter Olympics saw a considerable acceleration of this process, and the historical city, with its structures and open spaces, as well as its image and shared values, was shown to its residents and visitors. The original Roman city center, as well as the squares and streets of the baroque city, have been completely rebuilt and revived, with all cars removed and the streets returned to the residents. A network of spectacular spaces connects the city's important landmarks, following a trail through Torino's distinctive past and confirming the city's centrality and artistic, architectural, and historical heritage throughout Europe and the world.

Green Infrastructure

Inferences from ECGA 2022

The past and present condition

Since the approval of the present General Masterplan in the 1990s, there has been a very significant momentum in the expansion of green space in the city, with the policy of recovering former industrial spaces. Over 50 hectares of land were remediated and transformed into public recreational green space during this time period (almost 5 percent of the total). In addition, as part of the Turin City of Rivers project, 73 kilometers of riverbanks were transformed into linear parks with walk/cycle paths. Between 2000 and 2019, 137 new playgrounds (out of a total of 286) were built. Since 2000, around 40 dog runs have been built, as have all 38 fully regulated urban gardens.

93 percent of the city's population lives within 300 meters of a recreational green public space, indicating that the city's green infrastructure system is extremely approachable (this figure does not include green schoolyards, agricultural areas, or green street infrastructure). Universal accessibility, a variety of activity kinds for all ages, the inclusion of public art, adequate visibility and lighting, and a system that is over 90% maintained and usable are the fundamental markers of the system's quality.

The Plan for future

The city is in the process of establishing its first Strategic Plan for Green Infrastructure, which lays out the strategic goals for the city's green infrastructure evolution over the next several decades. These mechanisms establish investment priorities for public green space development.

Green spaces/infrastructures serve inhabitants and visitors by providing ecosystem services such as shade during heat waves, rainwater management during extreme precipitation events, and river expansion areas to decrease river floods.

Green spaces that are socially integrated give leisure possibilities, places to meet, interact, celebrate, and attend cultural activities.

Green spaces may increase property prices, provide much-needed community infrastructure, and create chances for tourism and cultural activities, all of which are economically beneficial.

Green infrastructure will continue to grow in importance in the City, both for its recreational value and, increasingly, for its ability to supply ecosystem services that will become increasingly valuable as climate change and more frequent extreme weather events become more common.

Turin aspires to be not just Italy's greenest city, but also Europe's greenest significant city.

The City's Green Infrastructure system will expand and evolve in accordance with the major aims outlined in the nearly completed Strategic Green Infrastructure Plan (SGIP):

1. Provide for the requirements of a population throughout this period of transition
2. Reduce climate vulnerability through ecosystem services
3. Improve the health of the environment and biodiversity
4. Increase the number of connections between green spaces.

5. Make use of green infrastructure to increase social involvement and participation.
6. Make use of green infrastructure to boost cultural and outdoor tourism.

Why are we talking about green infrastructure?

Until now, our focus in previous chapters have been on urban voids and public spaces. But when it comes to Torino, why did the topic of green infrastructure come up? In practice “Green infrastructure is a strategically planned network of natural and semi-natural areas with other environmental features designed and managed to deliver a wide range of ecosystem services such as water purification, air quality, space for recreation and climate mitigation and adaptation” (Ecosystem Services and Green Infrastructure, European Commission). So the green infrastructure can also be part of the public spaces. The ultimate aim of this study is to focus on communal wellbeing through promoting public spaces. The voids that are developed can also be developed as part of the green infrastructure, if the sufficient amount of open space is available.

But this particular part focused on the green infrastructure of Torino to show the city’s commitment in making the lives of its residents better. From a gray industrial city to finalists of European green capital in 25 years is a marvelous feat achieved by the municipality and thus it needs to receive the appreciation it deserves.

Voids in Torino

Now that we have discussed the green and public infrastructure of the past, present and the plans to make it better in the future, it is crucial to find out the potential issues prevailing in the city. The issue that has a scope of development and is of our interest is to find out the voids in certain areas and discussing probable solutions and guiding the city office to work on those areas. The efforts of betterment of the city in the past 25 years are evidently visible. However, a few urban voids do exist in the city as it does in any city. These voids can be seen as an opportunity for development to build a sustainable city and communities.

In the previous passages you might have come across the fact that 93% of the city's population have access to green recreational spaces within a distance of 300 meters. But what about the rest 7% of the population?

How long would it take for these people to be able to access a public space that is closer to their homes?

What kind of interventions are going to be carried out in this particular situation?

So, in this report we are going to focus on finding out the voids in these neighborhoods which have the potential to be a place of congregation. This would pose the opportunity for the residents in these neighborhoods to have social interaction and as a result a variety of benefits. Access to nature and recreational possibilities in cities are strongly linked to the quality of urban life (Nicholls, 2001). Public space is a melting pot for society's citizens; it is typically where individuals of various socioeconomic classes congregate and share social gatherings. It is a bustling area where people walk, mingle, and socialize with one another. A good public area fosters community and fosters a sense of belonging (Gehl, 2010).

The interventions that are going to be proposed for these neighborhoods should be able to satisfy certain qualities based on the factors of present conditions and future requirements. This Study emphasizes on interventions that are immediate, effective and low cost. Appropriate urban design interventions that satisfy our factors are to be studied before proceeding with design ideas.

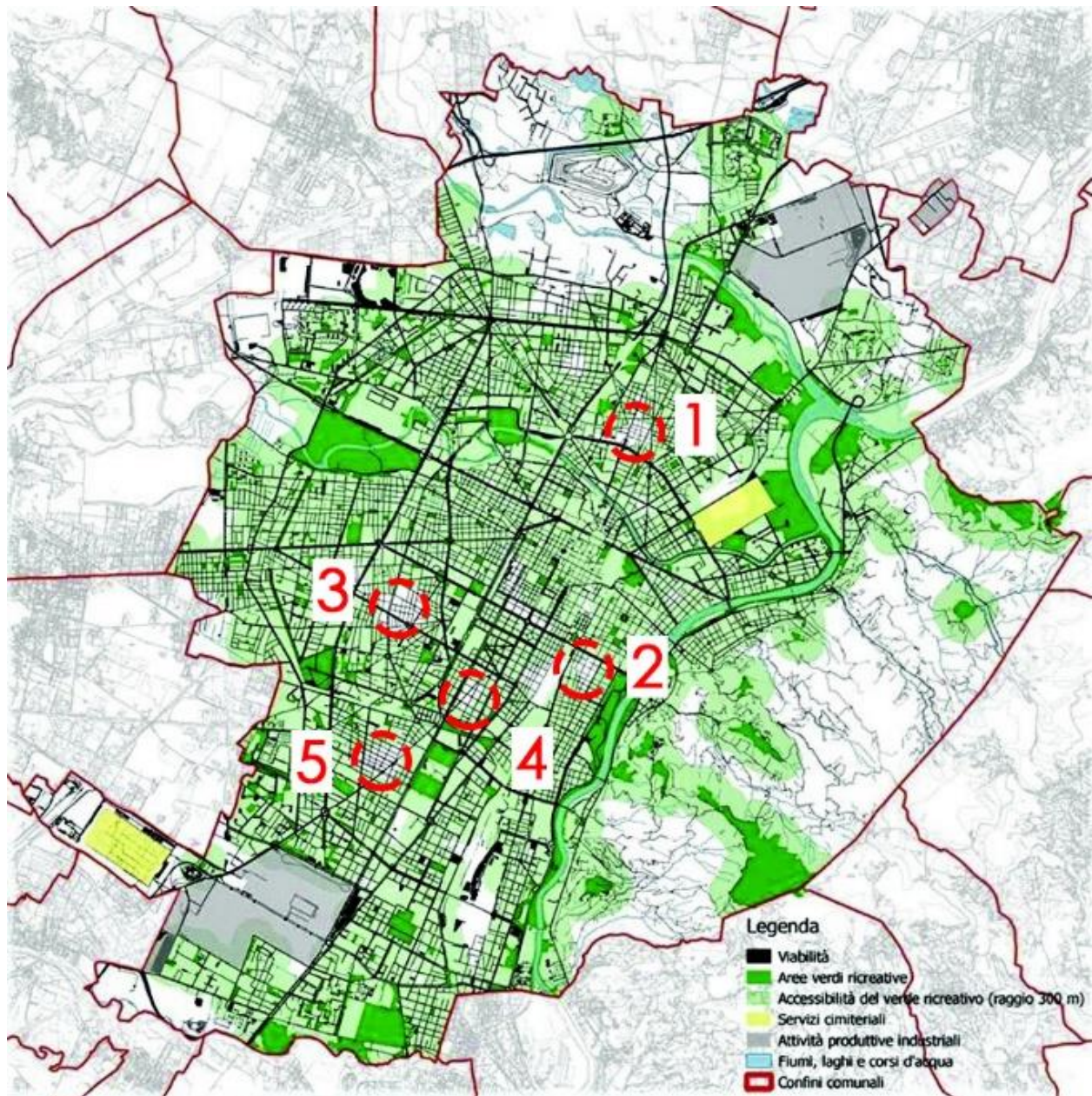


Figure 1 Map showing Accessibility to Public Green Recreational Areas: 93 percent of the population lives within 300 meters of a recreational public green space. The area in white inside the city boundaries are the devoid neighborhoods (Source: ECGA 2022).

Major neighborhoods that are devoid of public spaces in vicinity

The major neighborhoods of Torino city, which falls under the 7% of the population that do not have access to green recreational spaces within a distance of 300 meters are assessed for voids inside them which have the potential to be used as a better space. The locations of the below neighborhoods in the city are marked in the *figure 1* with the respective numbers.

It's not just about the recreational space near the districts, but it is a matter of ease of accessibility to public spaces in the residential neighborhoods. If a person is feeling lonely or stressed he/she must be able to immediately get down from his/her house and find a place to sit and relax or meet with the neighbors. That is the amount of mental and physical wellbeing that is being focused in this paper. Europe in general and Torino in particular is far ahead of the cities from most parts of the world in terms of green and open spaces and various other factors that make a city livable. But since the city has already come so far in the development, it is time to take a step further to make it even better.

These districts/ neighborhoods highlighted in the map are analyzed in terms of its nearby features. The descriptions about them are provided below each map respectively.

1. Barriera di Milano

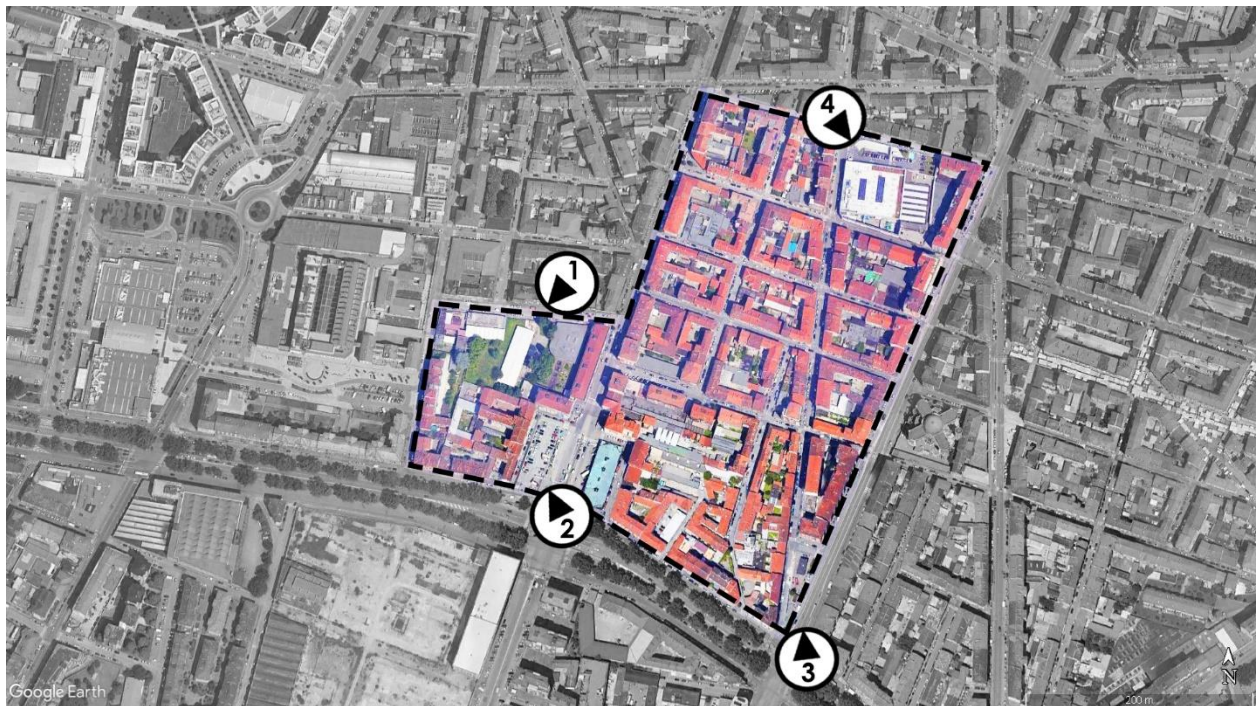


Figure 2 Map of the area in the neighborhood of Barriera di Milano, with the viewing positions of images of voids in the area. Source: Google Earth and Google maps.

The Highlighted area in Barriera di Milano lies on the northern end of Torino sandwiched between Corso vercelli and Corso Giulio Cesare. This district was formerly a peripheral area to the city and it is not very well designed like the other newly developed neighborhoods in the city. Most of the interior streets are really narrow such that most streets can accommodate only a single lane road. So, as one can imagine there is not much area that can host a public space or a recreational area. However, as depicted in the above images the arterial roads adjacent to these neighborhoods contain some spaces which have the potential to accommodate a gathering place (*Image 2 and 3*). In addition there are a few office and small scale industries which presently contain defunct open spaces (*image 1*). Also, any possible available open spaces under a private company can be made a privately owned public plaza or a parklet in cooperation with the municipality. For instance the above image (*image 4*) shows an unused landscaped area on a street corner which belongs to a supermarket. This particular space can be designed to be a parklet which can accommodate a few citizens. These spaces can be utilized and designed to provide a place to relax and to gather for the community living nearby.

2. San Salvario



Figure 3 Map of the area in the neighborhood of San Salvario, with the viewing position of images of potential development in the area. Source: Google Earth and Google maps.

This area is in the neighborhood of San Salvario close to the city center and the famous Valentino park of Torino. Valentino Park is one of the most important attractions of Torino and a significant breathing space for the city. It is situated on the Po River's west

bank. It is Turin's second largest park, with a total area of 500,000m². The Parco del Valentino, Italy's first public garden, was established by the city of Turin in 1856.

One might wonder if it is necessary to have public spaces within a distance of 300m, in a neighborhood close to such a huge garden. But, it is important to note that the park lies two blocks away from the marked neighborhood. The two main roads in between these area, act as an edge like Kevin Lynch stated in his book "*Image of the city*". Because of this, it becomes fairly difficult to reach the park for a temporary relaxation. Also, the park is a property of the whole city and many people come to visit it often. So, it cannot act as a space for community gathering.

Trying to find voids in such a neighborhood is difficult as it is densely packed and has very few open spaces. But the municipality has already made a stretch of Via Principe Tommaso into a pedestrianized street in this area (*image 1*). But this non-vehicular street currently does not have any activity in it. It is just a temporarily closed street. The city body must make an effort in studying the effects of closing this street to vehicles and if feasible, pop-up or interim installations can be set up and examined for usefulness. Activities for all ages can be tried to be implemented here since it is located in a highly populated centralized location. The length of the currently closed street is approximately 200 feet. Possibilities of extending the street closure can also be studied on an experimental basis.

The market of Via Madama Cristina which is popular among the locals is also located at the boundary of this zone (*image 2*). This market like many other markets in Torino is open only during the Morning period from 08.00 to 13.30 during the weekdays. On Saturday it is open until 6 pm in the evening and on Sundays it is completely closed. On the closed timings it's just an unused shelter which attracts negative usage of the place at

nights. However, if properly designed for multi-functioning, the shelter can act as a gathering space for the community.

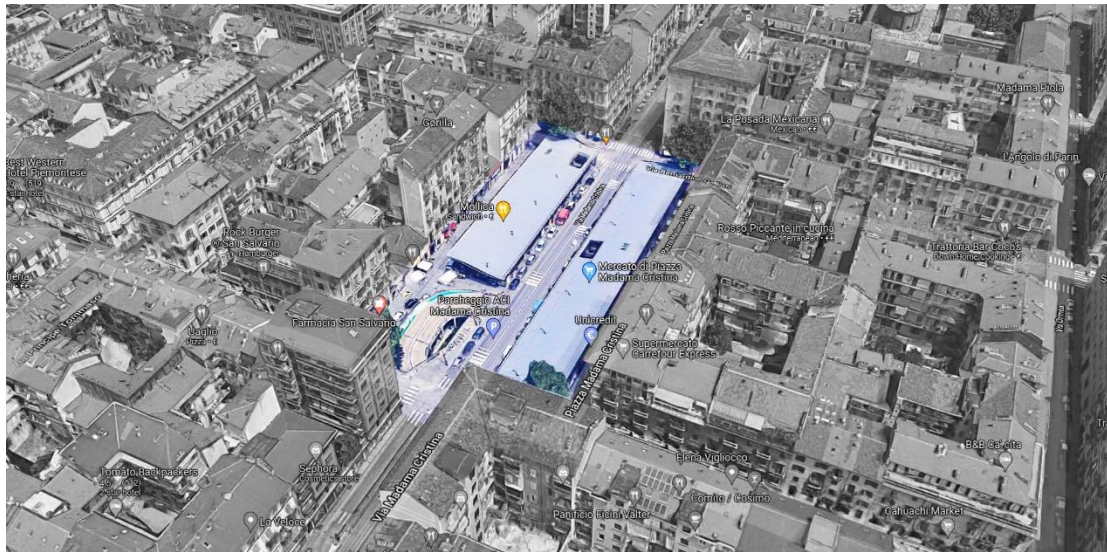


Figure 4 Aerial view highlighting the Madama Cristina Market. Source: Drawn by Author on Google maps base.

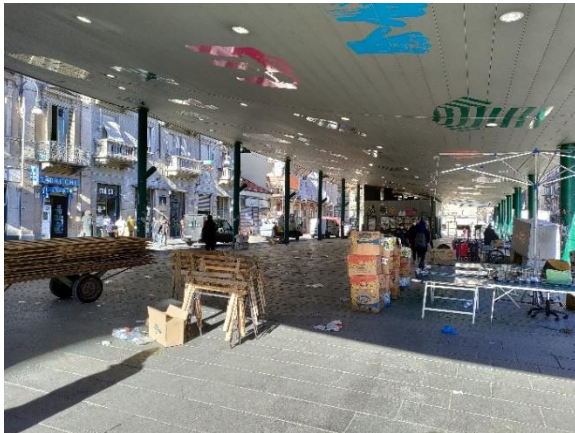


Figure 5 Images of the empty market during after market hours. Source: Taken by Author.

3. Cenisia

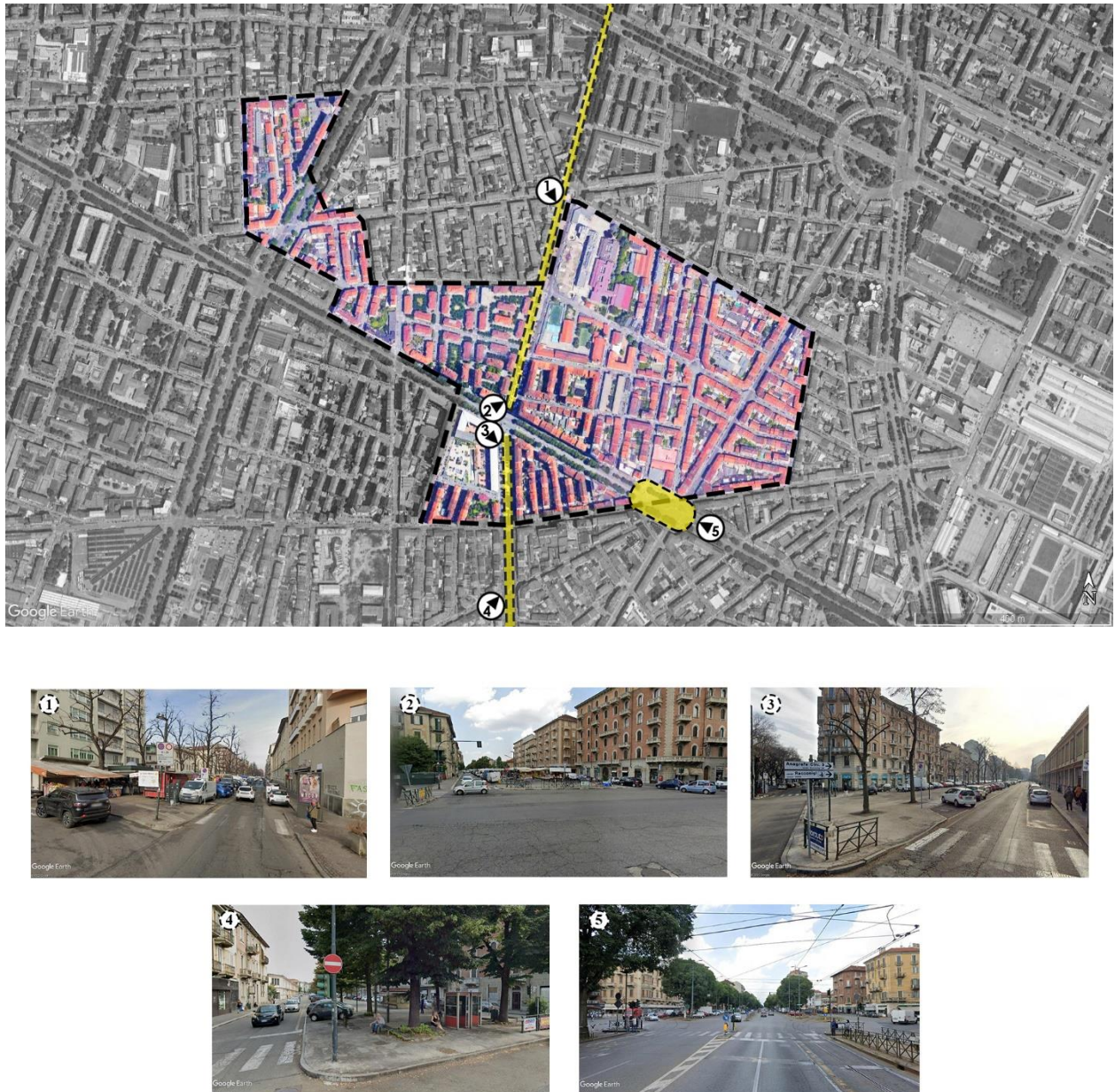


Figure 6 Map emphasizing the parks and recreation devoid area in the neighborhood of Cenisia, with the viewing position of images of potential development in the area. Source: Drawn by Author on Google Earth base map

Cenisia lies west to the university of Politecnico di Torino's central campus, along the important road Corso Peschiera that connects the eastern and western districts of Torino. This road also acts as a route to many public buses and trams. This neighborhood is also

home to different classifications of people, including of students, as it is close to the huge institution. In fact this neighborhood is one of the most populated areas of the city. These facts make it easy to understand why it is important to think about the availability of public spaces in this area. At present, the locality is situated far from most of the public piazza and parks. But it is crucial to plan the addition of public spaces nearby.

In *figure 5*, the long yellow strip highlighted in the map is a discontinuous green belt, which runs through the central part of Corso Racconigi. This belt persists for a long distance continuing across many parts of the city. The strip between Corso Peschiera and Piazza Robilant is currently unused and contains parking at the sides of it, while the northern part of this strip connecting to Racconigi metro is half vacant and half occupied by unorganized market as it can be seen in the images *1 to 4 in figure 5*. As per the plan of Torino municipality, Interventions in public housing in Corso Racconigi, the Corso Racconigi market, the cycling route connecting Piazza Robilant and Corso Peschiera, etc. are approved to be redone along with many other projects under the PinQua Program (Program for the Quality of Living) approved and financed by the Ministry of Infrastructures, Italy.

Even though there are existing proposals to alter this belt, the market is about to be retained in the project as explained by the Torino municipality. This results in interruptions in the proposed cycle path and green belt ultimately posing insufficient reason to have a cycle path over there. The design must carefully handle the continuity of the cycling path and existence of markets in the area.

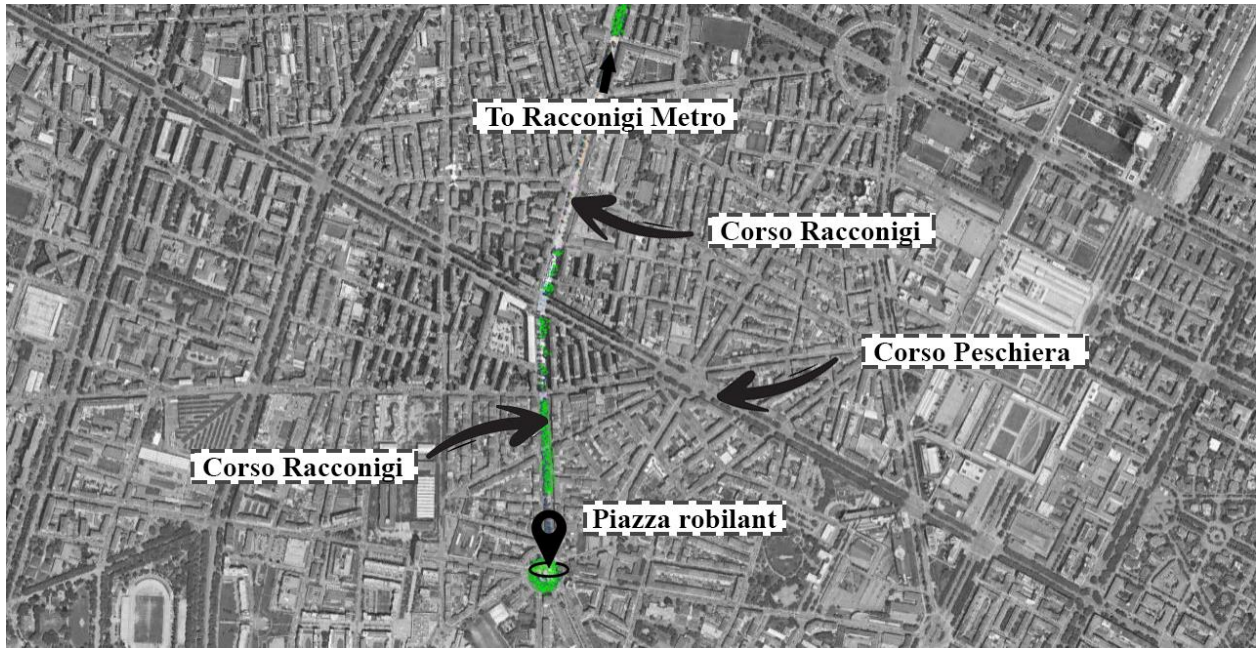


Figure 7 Map showing the locations of various parts included in the PinQua project. Source: Google Earth.



Figure 8 3D view of the presently discontinuous green belt in Corso Racconigi which hosts the Racconigi market. Source: Google maps.

The *image 5 of figure 5* indicates the view of a complex road intersection at Piazza Sabatino. This chaotic junction consists of 8 roads meeting together as shown in *figure 7* and requires utmost attention to redesign it and create an open public plaza.

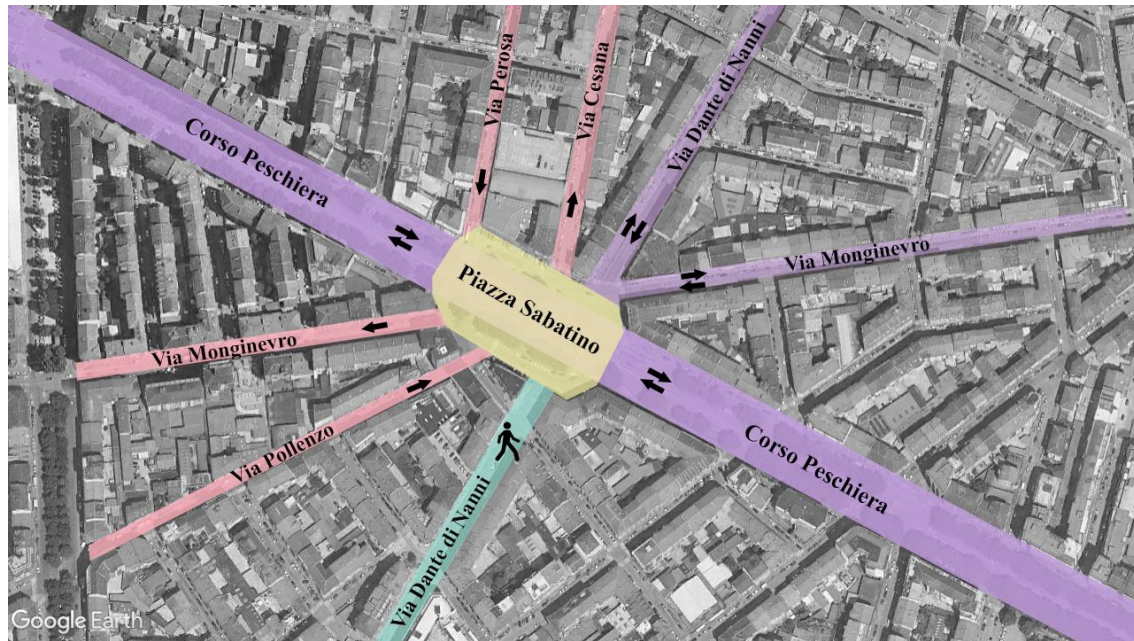


Figure 9 Map representing the number of roads intersecting at Piazza Sabatino. The single arrow indicate one way roads while the double arrows indicates two way roads. The human icon symbolizes the pedestrian road.

A viability study can be done to understand whether an approach similar to Piazza Sicilia square redesign in Milan, can be applied here in Piazza Sabatino. Figure 8 consists of an illustration of Piazza Sicilia Redesign, to show the similarity of road intersection.



Figure 10 Current situation of Piazza Sabatino. Source: Google maps



Figure 11 Open Square designed in Piazza Sicilia. Source: Milan 2020, Adaptation strategy

4. Crocetta

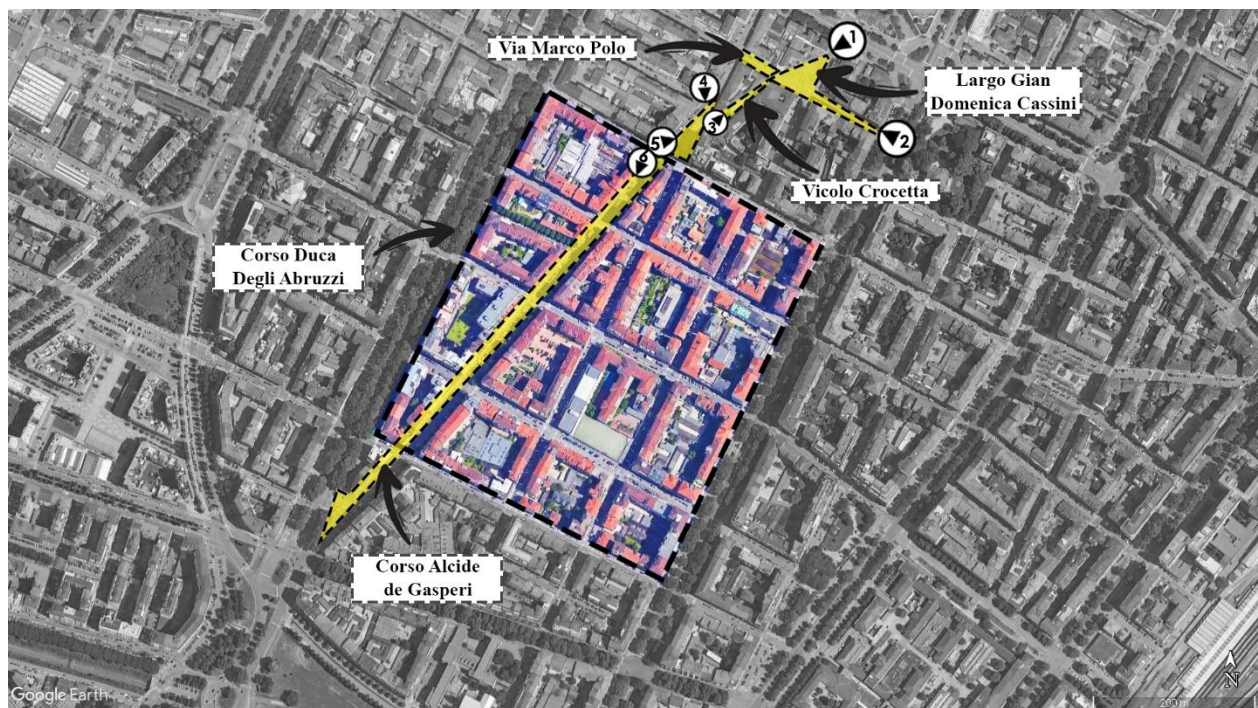


Figure 12 Map of the area in the neighborhood of Crocetta, with the viewing positions of images of voids in the area. Source: Google Earth and Google maps.

Crocetta neighborhood lies to the south of the historical city center district and also to the Central campus of Politecnico di Torino. The residential blocks in the highlighted area consist of the road Corso Alcide De Gasperi, dissecting the grid pattern layout diagonally

as highlighted with long the strip of yellow in *figure 9*. The view of the road can be seen in *image 6 of figure 9*. The road is currently very inconsistent in terms of lane division and allocation of parking. People use lanes of the usable road area for temporary stoppage and only two lanes are used effectively out of four. This also leads to problems while driving through as it can be seen in *figure 10* below. Also, the road is wider than it requires to be for a sub arterial road, because there are alternate roads to reach to the arterial roads above and below. So, the road can be converted to a two lane road and rest of the space can be used for wider pedestrian walkway and cycle paths.



Figure 13 Improper usage of lanes and Wide Street for a sub arterial road in Corso Alcide de Gasperi. Source: Google maps.

The road intersection between Corso Duca degli Abruzzi and Corso Alcide de Gasperi as shown in the *figure 11* is acting as a planning void in the present situation. This intersection can be designed effectively to accommodate a plaza or a parklet to make the neighborhood more livable.



Figure 14 Road intersection between Corso Duca degli Abruzzi and Corso Alcide de Gasperi. Source: Google maps

The *images 1 to 5 of figure 9*, displays pictures of the roads and piazzas currently used for accommodating the market of Crocetta. Like the other markets in Torino this too is temporary and closed in the evenings after 2pm on the weekdays and completely closed on Sunday. Only on Saturday it is open till 7pm in the evening. The street of Vicolo Crocetta is already a pedestrianized street with no attractive features and hence is used only during the market timings. The street Via Marco Polo in-between the plaza of Largo Gian Domenico Cassini and the Vicolo Crocetta is very Wide Street of approximately 40 ft distance, which remains ghosted excluding market timings as seen in the *image 2 of figure 9*. This whole area including the streets and the largo, highlighted in the *figure 12*, can be designed resourcefully, to accommodate the historic market and other recreational activities during the non-functioning period of the market.

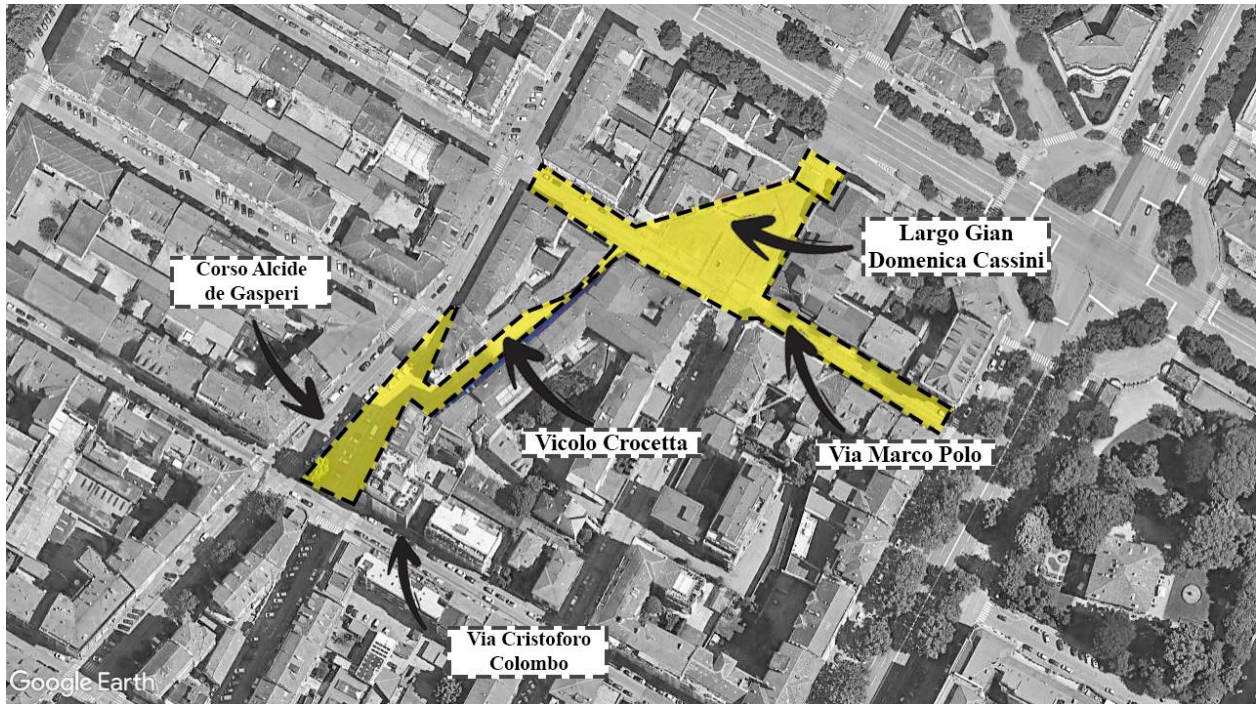


Figure 15 Area currently used for the Crocetta market. Source: Drawn by author on google earth map.



Figure 16 3d view of the area defined in figure 14. Source: Google maps

5. Santa Rita



Figure 17 Map emphasizing the public recreational space devoid area in the neighborhood of Cenisia, with the viewing position of images of potential development in the area. Source: Drawn by Author on Google Earth base map

Santa Rita is a neighborhood, which lies on the southwest part of the city. This district is home to the 2006 Olympic village stadiums, which is situated on the east of the highlighted area on the map.

The *images 1,2 and 3 of figure 13* illustrate the views of Piazza Santa Rita da Cascia, from different angles. This road intersection of 6 roads, is another example of planning void, which has a potential to be a better junction to manage traffic and also host plaza spaces at the corner spaces with greeneries and other activities.

Image 4 of figure 13 shows the view of the street Via Barletta, which is currently a one-way road. This road can be redesigned to use less space for parking and carriageway in order to add more space to the walkway or add a cycle path.

The building on *Image 5 of figure 13* is an abandoned building, which is located on a street corner. This corner spot can be developed to be a beautiful open café, parklet or any other possible design solution based on the needs of the surroundings.

Finally, the road Via Gorizia, marked by the long highlighted yellow strip on the map in figure 13 is a wide road as shown in *image 6 of figure 9*. Viability study to reduce the car lanes and add bike lanes or probable design solutions may be carried out.



Figure 18 3D view of the Piazza Santa Rita da Cascia. Source: Google maps.

Voids in other parts of the city

Other than these neighborhoods, there are also various spaces around the city, which have spaces that have the potential to be designed better. All around Torino there are numerous poorly designed road intersections formed between diagonal roads and straight roads. These acute angled junctions are definitely among the most frequent urban voids in the city. Additionally, an abundant number of streets with on street parking can be redesigned to be a pedestrianized road or one way road with parklets and bicycle lanes. In general, the usage of cars in Torino is one of the highest in Europe. An average of 674 out of 1000 people use cars as their primary mode of transport (CIVITAS Handshake, 2020). The city is already taking up measures to prioritize greener modes of transport. But, people-friendly bottom up measures could help the city in achieving the goal faster. The studies in this approach are discussed in the next chapters.

What to do with these voids?

These neighborhoods have to be studied to find potential voids that can be converted to useful public spaces. These potential spaces can be of any size ranging from street intersection or a parking spot to an abandoned building lot. The various ways to use these spaces depending on their size would be explained in the upcoming chapters.

As discussed in the earlier chapter, the potential of these urban voids are extremely beneficial. Even the smallest of the space in an urban area, when utilized properly, can make the streets livelier. Benefits of making those spaces livelier were also discussed in the previous chapter. But, the city of Torino is already making good progress in developing public and green areas. Which means that the municipality understands that it is crucial to take care of the neighborhood and its residents.

When we talked about the few neighborhoods of the city which do not have a public space in the vicinity, we questioned what initiative the government body is taking to bring a congregation space closer to these people? We have also questioned how long would it take for any change to happen?

Micro-urbanism initiatives to reclaim urban identity

(Gracia, Esmeralda, 2016)

Micro-urbanism refers to architectural actions that are small-scaled yet have a great intensity and impact on the city. Some operations based on micro-urbanism interventions are proposed below:

- Adding, rearranging, and establishing spaces and reference signals are all actions that reinforce relational sense.
- Projects with a strong cultural and social component.
- Actions aimed at improving mobility infrastructure and establishing it as a legal right. Interventions that are backed up by a strategic mindset.
- Proposals that result in habitats that the market does not provide.
- Operations that draw attention to certain locations and periods while also highlighting the local conditions and materials.
- Distancing yourself from functionalism by returning to humanism.
- Empirical study for local solutions, such as squares, street corners, solar, roundabouts, areas between walls, public gardens, and patios, to transform local situations.
- Within public space, there is a high level of comfort and spatial quality. To create high-quality public furnishings.
- Incorporation of art into the public realm.
- Citizens' imaginations are stimulated.
- Encourage heteropia in communities as an unofficial space and business practice, defining a new way of thinking about density based on collaboration and exchange.

"Small-scale interventions in the city, such as urban projects, can tackle larger-scale urban problems." (Sola-Morales et al, 2008)

As a solution comprising of the above points, Tactical Urbanism is suggested for the problem of urban voids in Torino. Introduction to tactical urbanism and the various benefits and challenges it possesses will be explained in the next chapter. But as an overview, the method of tactical urbanism is much cheaper, faster and participatory compared to conventional methods. Participatory programs can be encouraged in the city

to bring its citizens closer. In addition, tactical urbanism projects can be made to be temporary or permanent in nature based on the response and reception of the users.

CHAPTER 3: TACTICAL URBANISM

Tactical Urbanism

City dwellers have long practiced a type of tactical urban planning, which involves repurposing unused spaces with temporary materials and transforming them into more dynamic public spaces. Tactical urban planning, on the other hand, has been a growing trend for several years. Dissatisfied with the slow, expensive, and often exclusive approaches to project execution, city professionals observed that temporary interventions were an effective tactic for determining what worked and implementing projects in the field. By allowing people to see what is possible rather than just the reports, these temporary projects can help foster meaningful public participation and generate support for ongoing projects. The Quick Build Program in Burlington, Vermont, uses low-cost materials to test new design approaches and uses these demonstration projects to update street design standards (El Messeidy, 2019)

Merriam-Webster dictionary defines tactical as *“of or relating to small-scale actions serving a larger purpose”* or *“made or carried out with only a limited or immediate end in view.”*

Tactical urbanism is a strategy for revitalizing and activating neighborhoods that focuses on short-term, low-cost, and scalable interventions and policies. Tactical Urbanism is, in many ways, a learnt response to the slow and compartmentalized traditional city-building process.

It enables for the immediate reclamation, redesign, or reprogramming of public space for citizens. It gives developers and entrepreneurs a way to get design intelligence from the market they want to serve. It's a technique for activist groups to demonstrate what can be done to gain public and political support. It's also a means for the government to implement best practices more quickly.

How is Tactical urbanism different from DIY urbanism?

Interest in small-scale, incremental "do-it-yourself" (DIY) urban renovation has increased significantly in recent years. This type of urban intervention, also called as "tactical," "pop-up," or "guerilla," is resident-led, low-budget, and typically transitory, and has been described as a process in which "community activists take city planning into their own hands." The concept connects urbanism with the physical realm, claiming that small-scale material intervention—including the processes that lead to physical change—can have a substantial impact on urban dwellers' daily lives.

Tactical Urbanism can also be described as DIY Urbanism, which is the expression of a single person or a small group of people. But tactical Urbanism, on the other hand, can be begun by municipal agencies, government, developers, and nonprofit organizations in order to test ideas or implement change quickly. Although Tactical Urbanism initiatives frequently begin as tiny citizen advocacy activities, the benefits of Tactical Urbanism become obvious as they are integrated into the municipal project delivery process and successfully implemented in areas throughout the city.

A few basic elements can turn an unattractive stretch of pavement into a welcoming gathering spot. The most significant features are surface paint and perimeter planters, which clearly define the space, as well as seats, which encourages passers-by to stay a while. This section will go over each component in depth.



Figure 19 before and after tactical urbanism (Source: nacto.org)

Why Tactical Urbanism?

Tactical urbanism is a relatively new concept that frequently relies on low-cost temporary interventions and little effort to improve the viability and aesthetics of local neighborhoods. As this approach is "a thoughtful and incremental approach to change, to present local ideas for local planning challenges, short - term commitment and realistic expectations, low-risks, with potentially high reward," small scale and short - term interventions can lead to long - term changes.

Tactical approaches provide adaptive and cost-effective processes for transforming residual spaces through the use of a variety of ideas. (Lydon, et al., 2012). Thus, it doesn't need a great deal of resources or funding for it to be tested. Also, it can help in identifying the interest of the city dwellers in taking part in the public concerns. Another advantage of it being less time consuming, makes it an appropriate choice for an intervention that can be done in the meanwhile before the municipality comes up with a solution. We have also understood that based on success and reception of the project, the installations can also be made to be permanent.

Mike Lydon and Antony Garcia offer the Tactical Urbanism method in their text "Tactical Urbanism, Short-Term Actions for Long-Term Change," which starts with a variety of intriguing, often paradoxical observations about three primary components.

- The first is the necessity to recognize and accept the ineffectiveness of traditional urban planning legislation, procedures, and tools.
- The second concept is the "toolbox" restrictions that traditional urban planners encounter.
- The third is the inadequacy, inefficiency, and unsustainable nature of both branded and unbranded mega-projects that are costly and time-consuming to complete, as well as long-term transformation scenarios that see the Plans as the only tools and factors for the city's development (not necessarily growth).

Therefore, the authors advocate for acknowledging the critical role of low-cost, short-term micro-projects in ensuring and promoting the quality, accessibility, and usefulness of everyday local city spaces: the city that inhabitants know, use, care for, and own. All these reasons together makes Tactical Urbanism a fitting solution for the case of Torino city.

Where can it be implemented?

These projects have grown in popularity in recent years. Tactical urbanization refers to strategies for improving the urban environment. These strategies have been widely replicated in other cities and, in some cases, have become a global phenomenon. The social and realistic goals of these small interventions distinguish them. (Berg, N, 2012). Vacant lots, empty shops, unreasonably large roads, highway underpasses, surface parking lots, and other underutilized public spaces have become targets for entrepreneurs, artists, forward-thinking government officials, and civic-minded citizens in our towns and cities.

It can be the smallest of an extra space available at a street intersection, a parking lot, an irregular or unnecessary road junctions, or a part of the abandoned building or park. The scale of the place to be modified doesn't matter, even if it serves just one resident nearby.



Figure 20 The types of tactical urbanism that start off unapproved typically become approved over time. (Lydon, et al., 2012).

Who can be involved in doing it?

Tactical Urbanism, as applied to cities, is a method of neighborhood development and activation based on short-term, low-cost, and scalable interventions and policies. A wide range of players, including governments, businesses and nonprofits, citizen groups, and individuals, adopt tactical urbanism. It makes advantage of open and iterative development methods, resource efficiency, and the creative potential of social interaction.

The pursuit of equity is generally a goal for Tactical Urbanism projects, whether they are seeking to obtain additional mobility options, expand access to public space, or provide a more comfortable public realm for all. Of course, equity is context-dependent and subjective, making it difficult to define; what is fair and equitable for one group may not be for another.

Even nevertheless, many well-intentioned and functionally open urban planning processes tend to appeal to a specific demographic of people: those who are educated, interested in civic issues, and, most crucially, have spare time. It's not easy to find

strategies to engage the young, aged, disenfranchised, and uninterested. The strategies to make people involved in the process would be difficult as it would be in any public participation events. However no public planning endeavor will ever achieve 100% involvement, well-executed Tactical Urbanism projects are one approach to get planning suggestions and concepts in front of a larger audience.

Tactical Urbanism can be used by a wide range of actors, with a wide range of aims that interventions can help these players achieve. According to the "street planning collaborative," the following three applications are the most commonly used.

- Citizens started it to get around the traditional project delivery process and cut through municipal red tape by protesting, experimenting, or visually exhibiting the possibility of change. Citizens are exercising their "right to the city" through this activity.
- As a tool for city governments, developers, and nonprofits to involve the public more broadly during project design, delivery, and development.
- As a "phase 0" early implementation tool, cities or developers can use it to evaluate concepts before committing to a long-term commitment.

Benefits of Tactical Urbanism

Studies of tactical urbanism are becoming more widely documented, and the benefits of this method are widely recognised. These advantages are divided into four categories:

Responsiveness

Tactical urbanism, according to Pfeffer (2013), is more adaptable to changing social, physical, and economic situations than strategic planning approaches with long-term implementation horizons. The approach's 'fast, cheap, and light' character allows cities to pursue long-term goals while also incorporating agility into the physical environment and adaptability into the delivery process. Tactical urbanism, in fact, connects urban democratic instruments with the internet age and cultural expectations for fast government-to-citizen responses (Lyndon & Garcia, 2011).

Community Engagement

Tactical interventions are invariably effective community engagement tools, transforming abstract planning concepts into tangible installations for individuals to interact with. This avoids divisive debates based on hypotheticals and allows individuals to participate in the city-building process in a tangible, productive way (Lyndon & Garcia, 2011). This, according to Rieniets (2009), is critical in light of a push to "rethink the legal, institutional, and political framework of urban planning in order to allow for more transparent and inclusive planning procedures."

"While individuals are drifting away from formal political involvement...people are willing to engage in problems that are considered to directly impact them, and are no longer willing to be the passive receivers of government services or decision making," [Bishop & Williams, 2012].

Politics

Tactical urbanism is a politically viable method for overcoming difficult socio-cultural hurdles in the planning of shared public areas. Sadik-Khan (2016) observed that tactical urbanism's low-cost, iterative, and reversible characteristics neutralized passionate defenders of the current system, allowing grass-roots support for change to flourish in her book 'Street Fight,' which documents New York's journey with tactical urbanism. Support can then be used for broader, long-term change with this social and political capital (Lydon & Garcia, 2011).

Resources

Tactical urbanism's global popularity is largely due to its physical and financial resource efficiency. The expense of performing traditional urban improvements can be exorbitant, according to Pfeffer (2013) and Davidson (2013), due to a lack of resources allotted for this work in municipal budgets. According to Sadik-Khan (2016), the flexibility to employ low-cost materials like paint, planting boxes, and chairs reduces risks and expenses for both officials and residents, allowing tacticians to publicly test daring and new ideas for urban change.

Note of caution

Despite these advantages, academics [Lyndon & Garcia, 2011; NZ Transport Agency, 2019; Davidson, 2013] concur that tactical urbanism is not a cure-all for our urban problems or government dysfunction. While the interventions are beneficial in and of themselves, they should not be used to replace formal planning processes or capital-intensive infrastructure projects. Tactical urbanism, on the other hand, should be viewed as a temporary stimulus for these more long-term goals, a step-by-step approach to planning. Tactical urbanism, according to architect Nabeel Hamdi, should merely disrupt the existing order for the sake of change.

Despite the fact that many tactical interventions strive to avoid bureaucracy and formal planning processes, they must eventually return to the government for support in order to formalize their success and accomplish true long-term change. According to Lyndon and Garcia (2011),

"As tactical urbanism is incorporated into the municipal project delivery process and skillfully presented to neighborhoods around the city, the benefits of tactical urbanism become evident."

Multiple studies (Davidson, 2013; Lydon and Garcia, 2011; Pfeiffer, 2013) concur that institutional and legislative frameworks that enable tactical urbanism are becoming increasingly important. However, the characteristics of these enabling frameworks are understudied, with successful case studies mostly informing worldwide best practice.

CHAPTER 4: CASE STUDIES OF TACTICAL URBANISM FROM ITALY

(from the publication “Tactical Urbanism 5 – Italy”, 2017 by Paola Bazzu and Valentina Talu)

A handful instances of short-term, bottom-up, and community-minded behavior are shared in the publication “Tactical Urbanism 5 – Italy” from all around Italy. TaMaLaCà, a planning and design company based in Sassari, Sardinia, Italy, conducted research and wrote the report, confirming the legality of *Urbanismo Tattico* (Tactical Urbanism in Italian). However, it also examines a number of social and political issues in Italy that hinder the complete adoption of Tactical Urbanism's "build-measure-learn" methodology.

A few case studies of different interventions are picked out for this study to understand the context of the practice in the country.



Figure 21 Map of Tactical Urbanism projects carried out in Italy, which are mentioned in the publication by Paola Bazzu and Valentina Talu, 2017

Parcobaleno, L'Aquila

Where?

L'Aquila, Santa Rufina MAP (Moduli Abitativi Provvisori –Temporary Housing Modules)

When?

2012

Who?

VIVIAMOLAq, citizens of Santa Rufina MAP



Figure 22 Parcobaleno project. Source: Tactical Urbanism 5 – Italy, 2017

VIVIAMOLAq, an informal organization of students and past students from the University of L'Aquila, planned and implemented the Parcobaleno project. After the earthquake in 2009, VIVIAMOLAq was founded with the goal of involving citizens of L'Aquila in interactive design processes for the redefinition of abandoned areas, interstitial spaces, and empty locations near the new housing settlements built after the earthquake, as well as the creation of multifunctional public spaces and meeting places.

Parcobaleno is one of the projects included in the larger initiative Un posto al sole per I MAP: it entails designing, planning, and constructing small public spaces in unused areas near 21 MAP (temporary housing modules) created to address the housing crisis following the earthquake, using simple street furniture and mobile and removable structures. The project was carried out on the space in front of the Santa Rufina MAP temporary housing module's multipurpose room, with the goal of bringing fun and recreation activities outside. The plan was to use a "playable ribbon" to define and characterize the space.

The project has allowed the vacant space of Santa Rufina MAP to be transformed into a location recognizable and defined by its own identity, responding to people's desire to use the space not only as a playground, but also as a place to gather and share space with others. For the load-bearing structure, VIVIAMOLAq chose to employ largely waste material from construction sites active for the city's reconstruction: scaffolds given by the municipality and abandoned pallets for the wood coatings (1200 wooden deckboards from about 450 pallets were used).

Restart, L'Aquila

Where?

L'Aquila, historic city centre

When?

2014

Who?

VIVIAMOLAq, citizens



Figure 23 ReStart project. Source: Tactical Urbanism 5 – Italy, 2017

Restart is a revitalization project for a small underutilized space, a public micro-space consisting of an 8x8 meter square lot of land in the ancient city center, in front of the University of L'Aquila's Department of Human Sciences. The makeover occurred over the course of a one-week open self-building workshop that included not only VIVIAMOLAq designers, but also residents of the historic city center and a large number of university students. The project's goal was to turn an underutilized space into a true public space that could be used for relaxing, gathering, and sharing by residents of the old town and Human Sciences Department students.

The project entailed designing and constructing a permanent installation in the micro-space using street furniture items such as seats, tables of varying sizes and heights, fences, and various types of boxes (after the activation of the book-crossing practice, these were used as containers for books). VIVIAMOLAq chose rubble as the primary building material because the project was located in the historic heart of L'Aquila, which had been severely damaged by the earthquake.

Restart is a real illustration of the possibilities of a community, low-cost, and short-term rehabilitation, as well as a strategy to return a modest public space to the residents of L'Aquila's historic center.

Open bricolage , Rome

Where?

Rome, Pigneto district, via Fortebraccio

When?

2011-2012

Who?

Orizzontale, Studio Superfluo, Lab Falegnameria



Figure 24 Open Bricolage project. Source: Tactical Urbanism 5 – Italy, 2017

The second public act of the KIUI project was Open Bricolage, which consisted of an instantaneous transformation (in just one day!) of a leftover space of Via Fortebraccio's Pigneto into a temporary public space. The project was part of a larger initiative called KIUI - Kit di Interazione Urbana Istantanea [Instantaneous Urban Interaction Kit], which was funded by the European Commission under the Youth in Action program and implemented over a six-month period from autumn 2011 to spring 2012.

Orizzontale worked on the project with Studio Superfluo and Lab Falegnameria, three organizations that use strategies based on recycling waste materials generated by the city to conduct micro-urban transformation initiatives. The makeover entails constructing a blank wall facing the space in the style of a home, with the goal of evoking the closeness of a home in the public realm. The development of various seating spaces was crucial in emphasizing the need of social relationships for local vibrancy. The residual space of Via Fortebraccio was revitalized through these quick and low-cost changes, allowing for unrestricted usage, encouraging casual encounters, and honoring the importance of shared leisure time.

Parking day by IZMO, Turin

Where?

Turin, Via Montebello 15

When?

June 5, 2010

Who?

IZMO



Figure 25 Turin Parking day project. Source: Tactical Urbanism 5 - Italy, 2017

Parklets are public micro-spaces that are usually formed in one or more parking spaces and are often ephemeral. Despite the fact that they can be spatially organized and arranged in a variety of ways (with seats, tables, carpets, small turfs, games, bicycle racks, and so on), Parklets must be placed in physical continuity with a sidewalk, with the intention of reclaiming a portion of the roadway and occupying it to allow free public use by pedestrians.

The first Parklet was built in 2005 in San Francisco by a group of artists and urban designers known as Rebar, who transformed a paying parking space in an area of the city with no open public spaces into an instantaneous public park (2 hours) of micro size after paying the required fee to occupy it (2.5x5 meters). This first experience, whose images went viral almost instantly thanks to the internet, prompted Rebar to launch a "open source project," preparing and sharing a "instruction manual" of sorts to allow anyone to build their own micro-park independently, launching the now-famous PARK(ing) Day initiative.

Thanks to IZMO, a collective that deals with local development, participatory processes, urban planning, design, and ICT, a particularly intriguing example of a Parking Day in Italy took place in Turin in June 2010. The activity was part of the Festival Cinemambiente 2010, which took place in connection with WED 2010 - World Environment Day. The IZMO collective was in charge of the temporary parking spot installation, which included a construction site event to pique passers-interest, inspire public participation, and spread the initiative's environmental message more effectively and widely.

Through clever re-use of planks, the parking spot was recovered and transformed into a little park for one day. To show the idea's easy repeatability, the chairs and steps were made by turning and fitting the planks together. The construction was placed in one of the parking space's corners with the goal of resembling a building's perimeter wall. It was built by securing the elements to the ground with long screws, with the goal of demonstrating the benefits of using planks as a proper building material.

Red line District, Catania

Where?

Catania, San Berillo district

When?

2015-2016

Who?

Res Publica Temporanea



Figure 26 Various paintings under Red line district project. Source: Tactical Urbanism 5 – Italy, 2017

Res Publica Temporanea, created in 2012, is a collaboration of four Sicilian street artists who work individually on socially conscious artistic initiatives. Red Line District is a project that Res Publica Temporanea carried out in the historic district of San Berillo in Catania, without the need for formal permits or authorizations, with the help of local residents and organizations. San Berillo, which once contained about 30,000 people and various craft stores, has been Catania's red-light district since the 1970s, following a major demolition that began in 1957 and led in the displacement of residents to a suburb of the city.

This area of the city is largely deserted during the day, apart from a few immigrants, and only comes alive at night due to prostitution. In the year 2000, the Mayor decided to tidy up the neighborhood: the police conducted a huge raid, several young ladies were detained, and the entrances of some of the district's homes were blocked to prevent further unlawful occupation. The welded or walled doors of the residences serve as a canvas for the artistic and social project Red Line District. The images generated by the approximately forty artists who were invited to cooperate were supposed to depict the imagination of those who live and work in San Berillo and who were involved in the process.

The collective Res Publica Temporanea intends the project primarily as an accusation of the danger that the San Beryl neighborhood will be subjected to a rapid and uncontrolled process of gentrification driven by economic and speculation strategies, resulting in a permanent loss of connection with its history and identity.

Milan Piazza Aperte (open squares) Project:

On a mission to reconquer spaces for outdoor sports and recreational activities, the municipality of Milan has initiated a project named Piazza Aperte, using the opportunity of lockdown during the COVID-19 period as the streets were empty at the time. The main focuses of this project for wellbeing in public spaces were:

- Adequately space the walkways in relation to the physical barriers.
- Allow for the installation of outside tables for restaurants and bars on parking spaces.
- Every school should have gyms and open spaces for youngsters to engage in physical activity.
- Encourage the use of public space outside for cultural and sporting events.

In Particular the piazza aperte project is dedicated to develop large-scale tactical urban planning projects in favor of pedestrianization, particularly in close proximity to schools and services and in regions with less green spaces, to encourage physical activity and children's play. It reintroduced public space to the heart of the neighborhood and the lives of its residents using the tactical urbanism concept. It was realized in collaboration with Bloomberg Associates, National Association of City Transportation Officials (NACTO) and Global Designing Cities Initiatives.

15 squares in peripheral areas have already been completed in the last two years; around 10 new places have been picked from 65 requests submitted by citizens and associations to the Administrations, and will be completed in the next months.

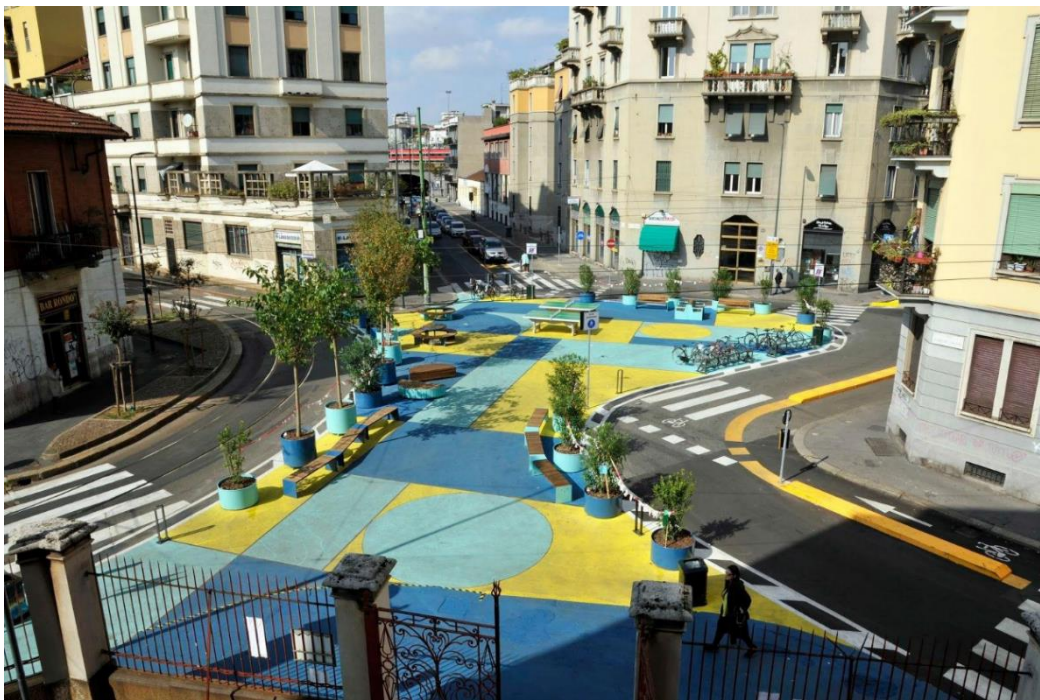
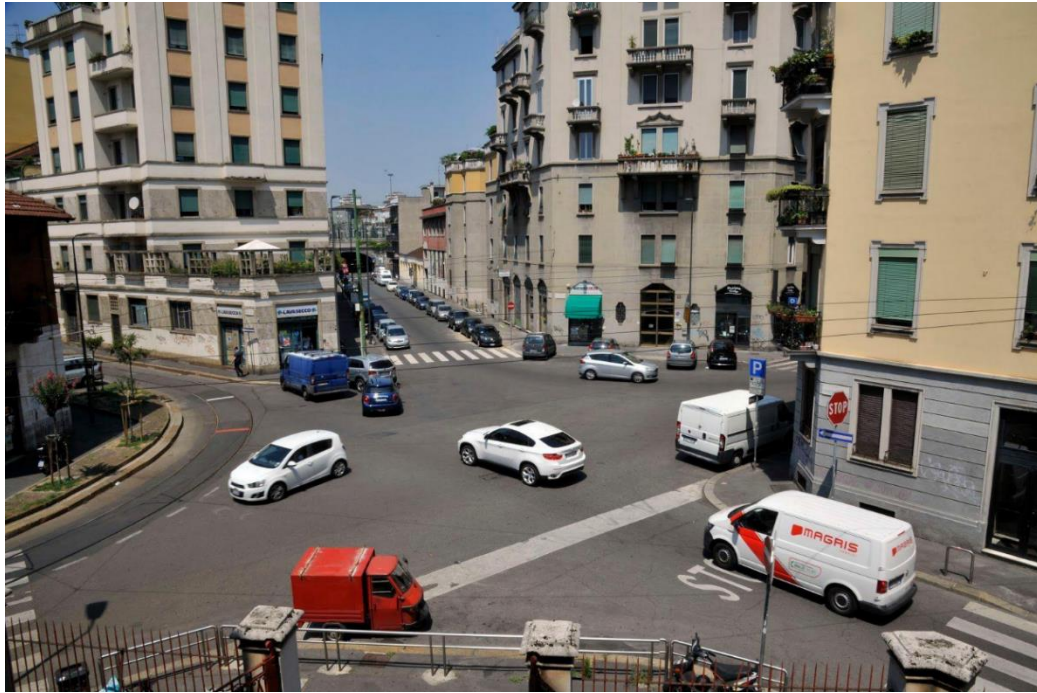


Figure 27 Before and after the tactical urban planning intervention in Nolo (Via Spoleto, Via Venini) Source: Milan 2020. Adaptation strategy

On a neighborhood scale, intervention measures can be conducted in a holistic manner, changing infrastructure, even temporarily, to promote walking and cycling, stimulate a return to social life, and increase access to local services, all while strengthening the neighborhood component.

It's critical to rediscover the neighborhood dimension (the city within 15 minutes of walking distance), ensuring that every citizen has access to nearly all services within that distance. (Adaptation strategy, Milan 2020)

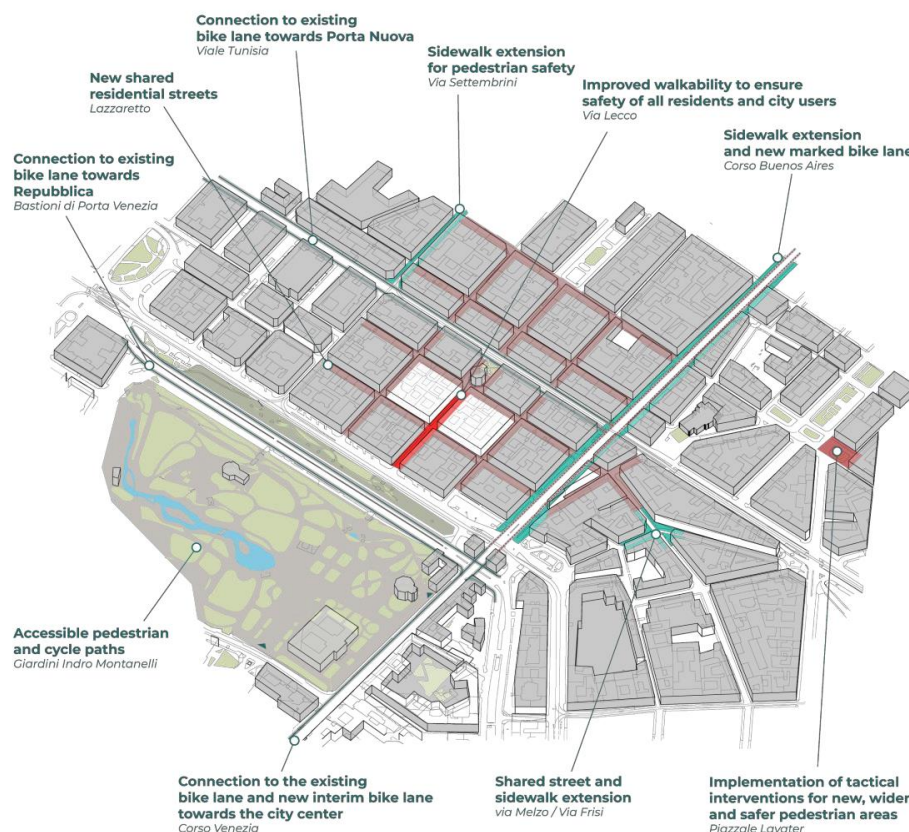


Figure 28 Graphic representing a trial instance for the described interventions, which could serve as a model for future implementations. Source: Milan 2020.

Adaptation strategy

The street as a public space

Given the necessity to regulate and monitor park access patterns, it will be vital to reconsider how we use streets during the "new normal" period, particularly in districts with less green spaces, in order to improve accessible pedestrian space for children to play and exercise (Play Streets).

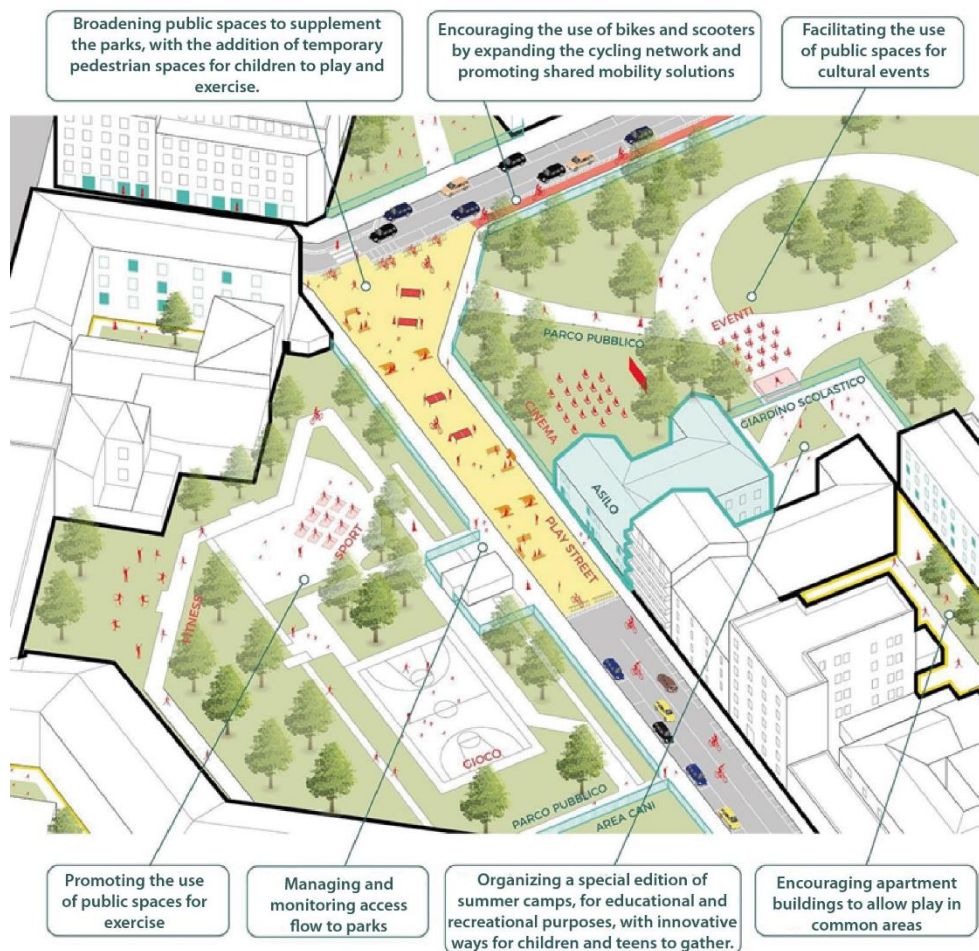


Figure 29 “Open Streets” designed in the Isola district, Via Toce. . Source: Milan 2020. Adaptation strategy

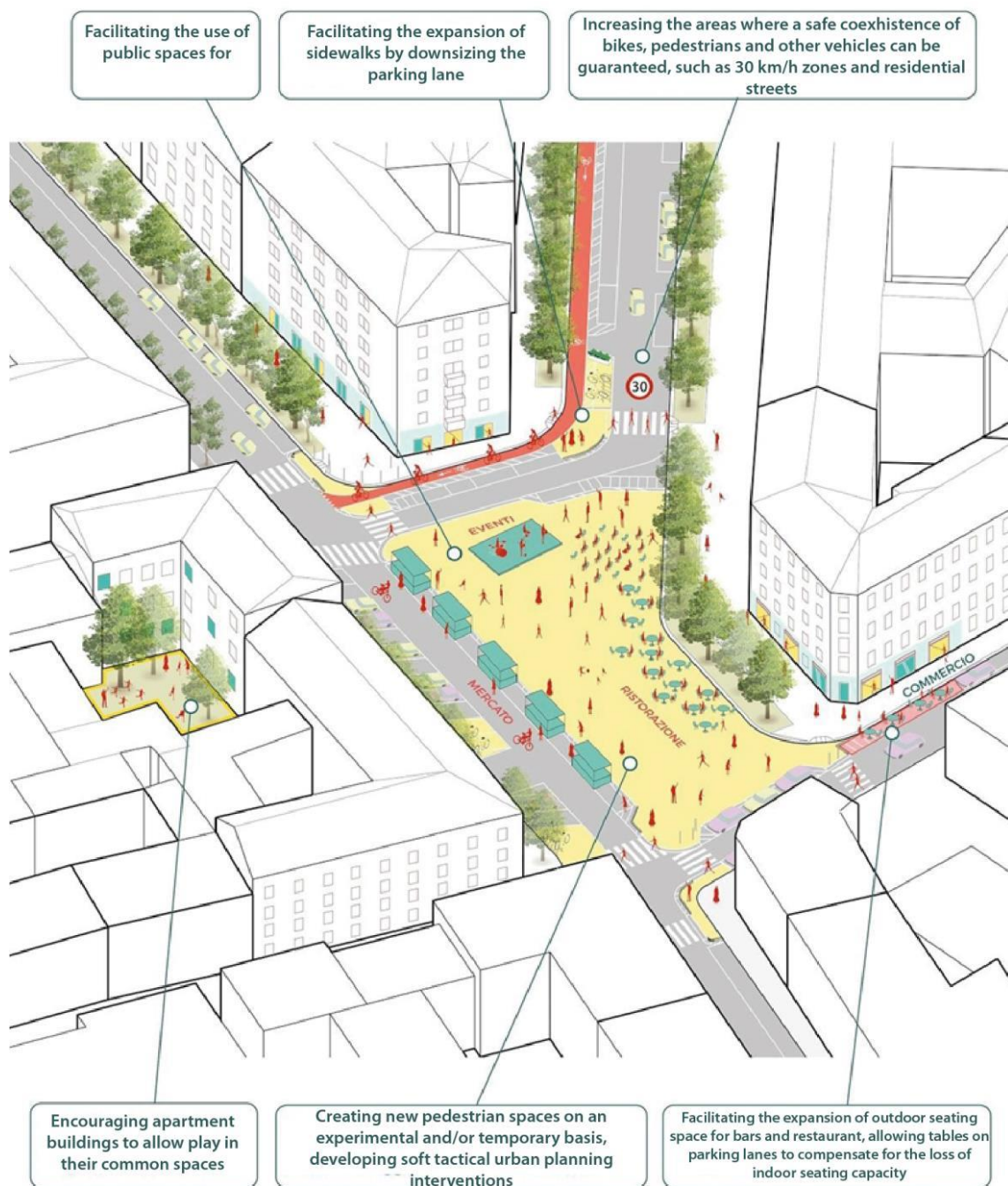


Figure 30 “Open Streets” designed in the Isola district, Via Minniti. Source: Milan 2020. Adaptation strategy

CHAPTER 5:

INTERNATIONAL CASE

STUDIES

Super block project, Barcelona.

Though this project is not entirely tactical urbanism, this development scheme of a huge city like Barcelona contains a lot of tactical urbanism measures to repair roads and intersections. Public participation of the neighborhood residents was an important part of this project.

Barcelona City Council seeks to create a city model that is safer and healthier in terms of public space.

- Friendlier to social interactions.
- Local commerce will benefit.
- Children's and old people's needs are prioritized.

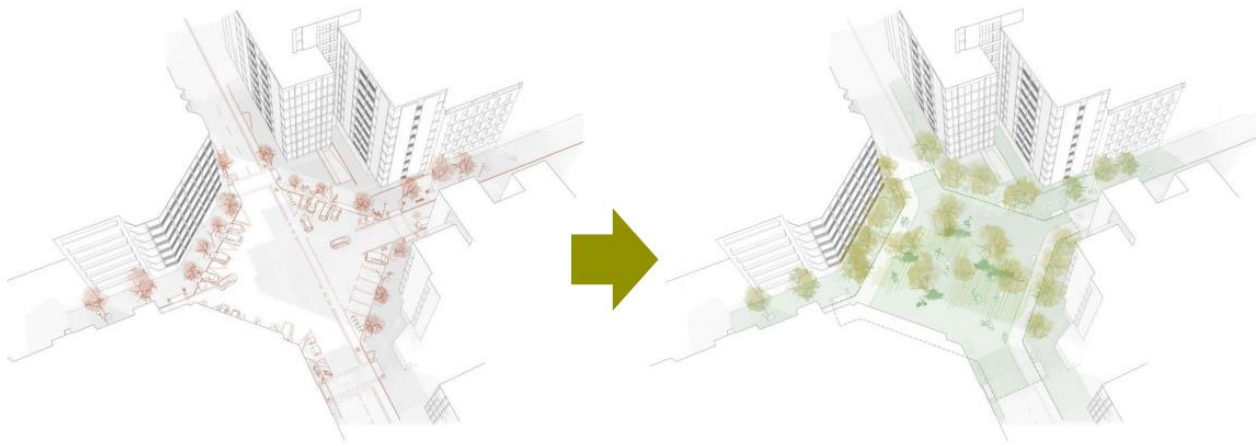


Figure 31 How the Eixample District's intersections could be redesigned to create green plazas. Rendering: Ajuntament de Barcelona

For two major reasons, Barcelona's Superblocks (Superille in Catalan) have become a component of worldwide best practices: a) prioritizing people above cars with a focus on accessibility, and b) adhering to a community engagement standard. Superblocks are 400 × 400 m units that are larger than a block but smaller than an entire neighborhood. The city hopes to recover space for the community, increase biodiversity, move toward sustainable mobility, and encourage social cohesion through the mentioned urban design idea.

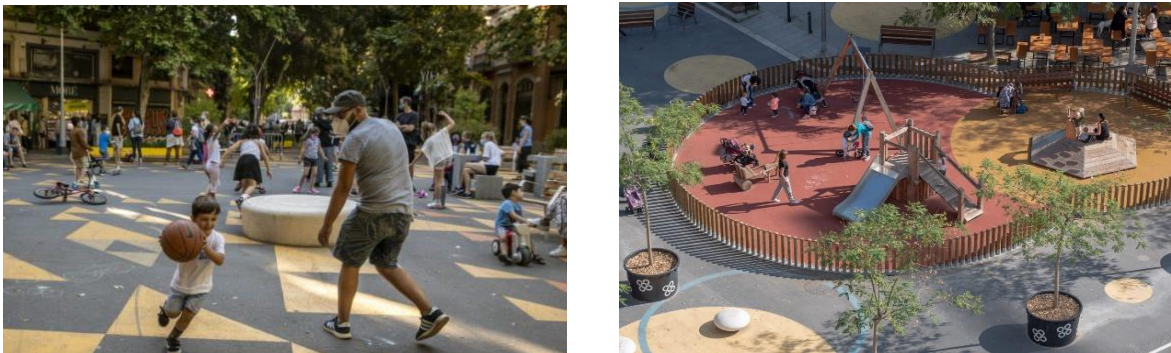


Figure 32 Inclusive public spaces created in the superblock project. Source: Ajuntament de Barcelona

Barcelona's 2013-2018 Urban Mobility Plan included the Superilles, a government-funded project that identified 120 crossings that will be transformed. The goal was to reduce emissions from automobiles and move toward more sustainable mobility. As a

result, the city council is considering altering one out of every three streets in the L'Eixample neighborhood, which was planned by Cerdà. By 2030, the city planners hope to reconstruct 21 roadways, starting in 2022 and moving east to west. The city's aim of building 503 superblocks throughout the city in the future is only fueled by the 2024 Urban Mobility Plan.

Barcelona's Citizen Commitment for Sustainability strategy, which runs from 2012 to 2022, focuses on small-scale actions and citizen participation. The introduction of the superblock concept was based on rethinking and revitalizing city neighborhoods. The council hopes to enhance the green area in the metropolis to 1m² per habitant by 2030, which would entail converting 165 acres of land into tiny parks and public squares.

Bondi Junction Complete Streets Project, Sydney

The Bondi Junction Complete Streets Project aims to achieve a more equitable balance between competing sources of transportation in Sydney's inner east. Different strategies for creating a more habitable landscape were investigated through temporary installations. An 'urban lounge' parklet with public seats, artful bike racks, and mobile and laptop recharge outlets was one of the most popular. The 'urban lounge' highlighted Bondi Junction's ability to transform from a vehicle-oriented to a people-oriented place, and it served as a proof of concept for aggressive efforts with few resources.



Figure 33 Bondi junction Urban lounge. Source: Tactical Urbanism volume 4.

Street plans collaborative.

The installations increased retail sales and earned widespread popular support, prompting the trial to be extended and Council to begin the first long-term, detailed design for Spring Street. While overcoming cars' dominance in our cities is a significant problem, bottom-up projects like this street makeover are a model for incremental change.

Brunswick Better block, Victoria, Australia

Wilson Avenue in Brunswick serves as a vital link between the suburb's main street and the local railway station. With a program of events ranging from skateboarding to massages, food demos, and performances, volunteers transformed it into an inviting public place. With a portrayal of the Kulin Nation's creator spirit Bunjil the Eagle, a new mural honoring the area's Indigenous heritage was unveiled. The project, which was supported by the state government's Community Crime Prevention Program, demonstrated how tactical urbanism approaches may fulfill policy goals while also making cities more welcoming — crime in the area fell by 40% after the event.



Figure 34 Brunswick better block project .Source: betterblock.org

Park Mobile, San Francisco

Parkmobiles, created by CMG Landscape Architecture of San Francisco, were deployed in the summer of 2011. They are a direct reaction to the neighborhood's request for greater green space, as expressed in the Yerba Buena Street Life strategic plan in San Francisco.

Each parkmobile, made from bespoke dumpsters, fits into a single vehicular parking space and adds to "a vision and road map for a next generation of public space in the Yerba Buena District." Other initiatives featured in the plan include widened sidewalks, mid-block crossings, and the tactical conversion of alleys into plazas or shared streets.



Figure 35 Parksmobile project. Source: Tactical Urbanism volume 2. Street plans collaborative.

Urban games

Gap Golf, Canterbury, New Zealand

Gap Filler turned cast-off synthetic turf, wood off-cuts, and empty baked beans tins into an eight-hole mini-golf course in central Christchurch in 2012. This low-cost, straightforward effort recreated a tour in and around the CBD, reacquainting residents with their post-earthquake surroundings.

A photograph of the building that had stood in its place was inserted in each hole, serving as a physical reminder of the land's history.



Figure 36 Gap golf project. Source: Tactical Urbanism volume 4, Street plans collaborative.

Gap Golf provided not only a much-needed feeling of amusement, but it also fostered exploration and acceptance as golfers went from hole to hole by allowing certain community groups to participate in the design and construction of the course.

Chair Bombing, Brooklyn, USA

Increasing the amount of public seating nearly always makes a street, and by implication, a neighborhood, more livable, whether for relaxation, socializing, or simply watching the world go by. Chairbombing is the act of salvaging recoverable materials from the local garbage stream and using them to construct public seating. The entire process of building and placing the chairs necessitates not only careful attention to design and construction, but also a thoughtful consideration of where they will be most needed, and where they will be able to support existing social activity or serve as a catalyst for community gathering.



Figure 37 Chairbombing project. Source: Tactical Urbanism volume 2. Street plans collaborative.

Inferences of Case studies

After having a look at the case studies, we can understand that tactical urbanism can be of any type. There are a plethora of interventions that can happen according to the space and resources available. Some of these interventions have been initiated by the citizens themselves, whereas others have been initiated by NGOs, collectives or the governmental body. Other than the ones illustrated here there are various other types of interventions that can be done too. They just depend on the creativity of the designers. Rather than explaining all these types of interventions, I am just stating the names of them here. For further information, “Tactical Urbanism_ Short-term Action for Long-term Change” by Lydon and Gracia, 2015 can be referred to.

The other types of bottom-up interventions are open streets, play streets, park(ing) day, build a better block, guerrilla gardening, pavement to plazas, pavement to parks, pop-up cafes, chair bombing, food carts, site pre-vitalization, pop-up town hall, intersection repair, ad-busting, park mobile, weed bombing, mobile vendors, micro-mixing, park-making, camps, etc.

All of these interventions have been done to improve a sense of community, to make public spaces fun, or to relax, to increase green infrastructure and ultimately to give the public space back to citizens. The low cost nature and temporary or permanent installations give an extra advantage of flexibility.

With this knowledge in our mind we can move forward to finding the potential voids in the city and initiate people-led urban design projects supported by the municipality and urban planners to make the dull areas into vibrant and livable community neighborhoods. The next chapter is dedicated to establishing certain design guidelines that could be useful during the design and execution stage. But, before proceeding to the design guidelines, a small summary of NYC plaza program is explained here, which can be an important case study for the Torino Municipality to implement a project initiated

by the public participation. The NYC plaza program has an online application system which enables the residents or organizations to identify the potential of an underused space in their neighborhood and propose a plaza to be developed on that space, for which the local government provides funding. This is a very interesting case that teaches us how to enable the citizens to come forward and take action in an easily accessible manner.

NYC Plaza Program

The New York City Council passed a local ordinance in April 2016 empowering the Department of Transportation (DOT) to issue guidelines controlling pedestrian plazas across the city. As a result, the Department of Transportation established guidelines that establish a regulatory framework for the agency's pedestrian plazas. A "pedestrian plaza" is defined as an area designated by the Department of Transportation (DOT) for pedestrian circulation, use, and enjoyment on DOT property, including but not limited to property mapped as a public place or property within the bed of a roadway, and which may include amenities such as tables, seating, trees, plants, lighting, bike racks, or public art (hereinafter referred to as "plaza"). The Plaza Program, as part of OneNYC's goal, intends to collaborate with neighborhoods to improve the public realm and provide quality open space to all New Yorkers.

Every year, the DOT encourages qualified organizations to apply to the Plaza Program and suggest new plaza locations. DOT identifies potential plaza locations after analyzing and evaluating submitted proposals, and works with the selected groups (Partners) to develop an appropriate vision and program for each plaza.

By submitting an application to the Plaza Program, applicants are requesting:

- 1) City funds to be invested in their community in the form of a plaza;
- 2) community support and participation in the design process; and
- 3) management, maintenance, programming, and operation of the proposed plaza once construction is completed and an agreement is signed.

The DOT may assign an applicant to administer one of the following types of plazas:

- One-Day Plaza

A one-day event during which a proposed plaza is put to the test. DOT collaborates with a local partner to define, program, and document a plaza location. One-Day plazas are used to gain local support for an interim or permanent plaza.

- Interim Materials Plaza

DOT will create a plaza on the proposed location using interim materials, and the Partner will manage, operate, and maintain it. This option allows for the development of a plaza prior to a major capital investment.

- Permanent Materials Plaza

The City, in collaboration with the DOT and other agencies, will fund, design, and construct a permanent plaza, which the Partner will manage, run, and maintain, based on community feedback and funding availability.



Figure 38 Types of plaza projects approved by NYC plaza program. Source:
<https://www1.nyc.gov/html/dot/html/pedestrians/nyc-plaza-program.shtml>

Following the selection of a plaza site, DOT and the Partner will engage the community in a public process to produce a design that is appropriate to the neighborhood's scale and character, as well as responsive to the community's needs. Projects do not proceed further without the Community Board's support. Once plazas are established, Partners enter into a contract with DOT and are responsible for the plazas' regular operation,

maintenance, administration, and programming, ensuring that they are not only clean, safe, and attractive, but also successful, active, and well-used public areas. For further details NYC Plaza program application guidelines can be referred from www.nyc.gov

This system in New York where the citizens and organizations can be directly involved in urban revitalization, is one of the best examples of a government which makes public participation easier. A simple application on the internet is all it takes to propose a project. In a typical bureaucratic system, it is generally a painful and slow process to get the attention of departmental officials, which discourages the residents even if they are interested in bringing a change to the community and the city. The governmental bodies around the world can take inspiration from the NYC plaza program and make themselves more accessible to the people and encourage them to participate in the city building process.

Streets for people program by New Zealand government

Waka Kotahi (New Zealand Transport Agency) started the Innovating Streets for People program in 2018 to test a new manner of developing and delivering transportation infrastructure. It was a flagship program for Keeping Cities Moving , the national mode shift action plan, and helps the government achieve its aims of creating livable cities and prospering regions.

The program was the first in New Zealand to focus on developing skills in Tactical Urbanism, the technique they have used for rapidly reallocating street space. With the help of Waka Kotahi, councils have been able to accelerate projects that would otherwise take years to complete.

The initiative intends to make it easier for local governments to provide:

- physical alterations to streets that are temporary or semi-permanent
- upgrades that prototype a street design and test a permanent remedy
- activations to assist communities in reimagining their streets

Approximately 89 kilometers of street alterations were made as a result of the program. Street improvements included curb extensions and speed cushions, as well as parklets, pedestrian crossings, and cycleways. Projects were typically made up of many changes.

While each project had its own set of goals, the project assessments were pooled to provide a comprehensive overview of the program's achievements.

The following are some of the reported outcomes:

- Vehicle speeds and volumes were reduced.
- enhanced visibility of cultural narratives in the streetscape more people riding, walking, or scooting safer and more accessible surroundings for pedestrians and cyclists an increase in the amount of individuals spending time in an area

Positive community engagement and participation in initiatives, social procurement producing local economic advantages, and community acceptance or demand for more street innovation were among the other outcomes recorded.

CHAPTER 6: DESIGN

TOOLKIT

(Inferences and images from Handbook for Tactical Urbanism in Aotearoa, August 2020)

The previous chapters were concentrated on introduction to urban voids and basics of tactical urbanism. But to proceed with tactical urbanism as an intervention, certain knowledge of site appropriate design is required. The Tactical Urbanism Toolbox is a collection of tools that can be used to complete a tactical project. It can be read and followed by the citizens or organizations or if the governmental departments agree on making tactical urbanism a legal part of the system, they can teach this to the citizens who are interested in implementing the design strategies.

These resources are divided into six groups:

1. Tools for Pedestrians
2. Tools for Cyclists
3. Tools to Reduce Traffic Volume
4. Tools to Reduce Traffic Speed
5. Tools for Place Activation
6. Supporting Tools

Each tool emphasizes potential applications and materials for 'tactical pop-ups' and 'interim installations,' as appropriate. Project teams will be able to integrate ideal long-term solutions with short-term pop-ups and pilots by looking at examples of permanent outcomes.

Collins dictionary defines pop-up as “A pop-up shop, restaurant, or gallery opens only for a short time and is intended to be temporary.”

The definition of Interim according to the same dictionary is “Interim is used to describe something that is intended to be used until something permanent is done or established.”

So, the pop-up installations in terms of urban design interventions may be defined as an intervention that is done to exist only for a few days. Whereas the interim installations may be characterized as those designs that are applied to exist for a few months in order to test the working of it.

It's critical to read this Toolbox in conjunction with the technical instructions to ensure that the specifics of your permanent designs are safe, appealing, and compliant.

1. Tools for Pedestrians

Pedestrian tools are designed to make walking through and around local centers and neighborhoods easier, safer, and more comfortable. Extensive footpaths and better crossing facilities are among the tools available to pedestrians. The technologies are intended to increase accessibility for people of all ages and abilities, create more space for people, and aid in reducing traffic congestion.

Technical / legal requirements

Local footpath widths and requirements are to be studied and followed

1.1. Curb Build Out (footpath extension)

When the present footpath is not wide enough to handle the current pedestrian volume, it is extended into the road carriageway or into property boundaries to enhance its width.

- Pop-up installation:

A pop-up event is an excellent way to test an expanded footpath for improved pedestrian capacity and to re-imagine the space for other uses, such as cafe seating.

Potential Materials:

- Spray Chalk
- Reflective Tape
- Road Cone & Bar
- Curb Ramp
- Rubber Pedestrian Crossing
- Barrier Mesh



- Interim Installation

An interim pilot allows pedestrians to acclimate to the new area and build ownership of it, as well as ensure that new activities are appropriate. It can also be used to help with physical separation.

Potential Materials

- Planter Box
- Traffic Delineators
- Stencils
- Road Paint
- Spray Chalk
- Reflective Tape
- Rubber Pedestrian Crossing
- Astroturf
- Speed Hump
- Curb Ramp



Design Considerations

- Footpaths that extend onto the carriageway have the extra benefit of reducing the width of the vehicle lane, reducing traffic speeds to safer levels.
- Investigate how placemaking initiatives can be incorporated into the tool, such as enlisting the help of local artists in the design of any graphic materials.
- Using art, chalk, and signs, for example, it should be made clear that this is a pedestrian-friendly neighborhood. People will be put off from utilizing the pedestrian area if it isn't made distinct and welcoming. They will be discouraged from using it and may even avoid the street if it isn't made distinct and attractive.
- It's a good spot for landscaping. To preserve sight distance, native and low-maintenance plants or trees with large canopies are preferred.
- Curb build-outs that are properly constructed do not interfere with existing stormwater systems and can be done quickly and affordably.
- To avoid conflicts with existing roadways and underground utility access to boxes, vaults, and sewers, carefully place elements.
- Larger vehicles, such as buses and trucks, should be accommodated if the street is often utilized.
- Use curb ramps and enough width to make your new facility accessible to people of all ages and abilities.

1.2. Crossings

A high-quality pedestrian environment is built around safe and frequent crossings. The raised zebra crossing is the gold standard for pedestrian crossings, providing unambiguous legal priority and reducing traffic speeds. Signalized crossings are probably the safer and more acceptable solution in busier, higher-speed environments.

Pedestrians don't have legal right of way at courtesy crossings, but they can indicate a safer and more logical crossing location.

Technical / legal requirements

Zebra pedestrian crossings are considered an official Traffic Control Device and must follow the TCD Manual's guidelines. They are unsuitable for pop-up events.

- Pop-up installation:

The pop-up event can either promote awareness and visibility of a current informal bike and pedestrian crossing place or evaluate a potential crossing location. At a demonstration event, the crossing is usually not raised.

Potential Materials

- Spray Chalk
- Sidewalk Chalk
- Duct Tape
- Reflective Tape
- Stencils
- Road Cone & Bar
- Curb Ramp
- Portable Speed Bump
- Rubber Pedestrian Crossing
- Corflute Board
- Pigtail Ground Spike
- Road Signage
- Street art in the roadway



- Interim installation:

A temporary crossing at a side road intersection can symbolize a shift in the environment from busy, quicker main routes to quieter, local streets. In the meanwhile, this technology can provide temporary safety and walkability benefits while waiting for a permanent update.

Potential Materials

- Resin Bound Aggregate
- Stencils
- Road Paint

- Cold Applied Plastic
- Spray Chalk
- Reflective Tape
- Rubber Pedestrian Crossing
- Speed Bump
- Curb Ramp
- Street art in the roadway



Design Considerations

- In regions where the speed limit exceeds 30 km/h, courtesy crossings are not recommended.
- Avoid conflicts with existing roadways, stormwater infrastructure, and underground utility access to boxes, vaults, and sewers by carefully placing elements.
- Temporary raised tables should be lifted to the height of the nearby curb whenever practicable to make them accessible to all users.
- Examine how place making initiatives, such as including local artists in the design of any graphic content, might be incorporated into the tool.

1.3. Signalized Crossings

Signalized crossings are important instruments for establishing obvious pedestrian priority and reducing vehicle-pedestrian conflict. On quicker and/or busier routes, these provide safe crossing spots.

New signalized crossings are costly, but changing the signal phasing at existing junctions to prioritize pedestrians is one of the simplest and cheapest ways to minimize car traffic and increase people's ability to cross the street.

Technical / legal requirements

- Formal Traffic Control Devices, including temporary set-ups, are used at signalized junctions and must adhere to the TCD Manual.
- A Traffic Management Plan will be required to test signalized crossings.
- You'll need to talk to your traffic operations center, which is in charge of signal phasing on the highway system.

- Pop-up installation

"Stop and Go" signs can be utilized to socialize and test a proposed traffic light as a permanent installation during the pop-up event.



Potential Materials

- Road Signage
- Temporary traffic management equipment

- Interim installation

For an interim event, trailer-mounted portable traffic lights (PTL) can be utilized to control an intersection and measure light time and phasing.

Potential Materials

- Planter Box
- Traffic Delineators
- Road Paint
- Cold Applied Plastic
- Reflective Tape
- Rubber Pedestrian Crossing
- Speed Bump
- Curb Ramp

Design Considerations

- The tool's impact on the larger traffic network should be studied to guarantee that it has no detrimental consequences on nearby towns.
- To ensure that people do not see through one set of lights to the next, consider the location of adjacent signalized intersections.
- It is advised that pedestrians use countdown timers.
- If lights are close together, phasing must be coordinated to avoid delays and to ensure that the surrounding transportation network is not harmed.
- Different phasing regimes can be used to socialize and test a potential traffic light as a permanent installation at different times of the day to respond to different user needs.

1.4. Slip Lane Alterations/Plazas

At an intersection, slip lane modifications entail removing a vehicle turning lane. Removing slip lanes reduces vehicular priority at crossings, shortens pedestrian crossing durations, and opens up space for more public realm or plazas.

Technical / legal requirements

- If a slip lane is part of a signalized intersection, you'll need to talk to the people who handle network operations at your traffic operations center.
- A traffic management plan is required to install a slip lane alteration/plaza.

- Pop-up installation

Slip lanes are eliminated or modified to provide more room for pedestrians, as well as to socialize and test the impact on traffic flow.

Potential Materials

- Spray Chalk
- Sidewalk Chalk
- Duct Tape
- Reflective Tape
- Stencils
- Road Cone & Bar
- Curb Ramp
- Rubber Pedestrian Crossing
- Barrier Mesh
- Upcycled Furniture
- Picnic Table
- Hay Bale
- Road Signage



- Interim installation

The interim installation allows the network's influence to be tested over a longer period of time, allowing any changes in behavior to be monitored.

Potential Materials

- Planter Box
- Traffic Delineators
- Resin Bound Aggregate
- Stencils
- Road Paint



- Cold Applied Plastic
- Spray Chalk
- Reflective Tape
- Rubber Pedestrian Crossing
- Astroturf
- Bench Seat
- Picnic Table
- Speed Bump

Design Considerations

- Investigate how placemaking initiatives can be incorporated into the tool, such as enlisting the help of local artists in the creation of any graphic materials.
- The tool's impact on the larger traffic network should be studied to ensure that it has no negative consequences on neighboring towns, and substitute routes should be explored when possible.

2. Tools for Cyclists

Cycling tools are designed to give people of all ages and abilities greater opportunity to cycle through and around local centers and neighborhoods. Bicyclists can also use tools for persons on bikes to comfortably and properly lock their bikes, allowing them to shop, meet new people, socialize, and rest. Separated cycleways and end-of-trip amenities are useful tools for bikers.

2.1. Separated Cycle path

Segregated cycle path create a separate zone for cyclists that is physically separated from automobiles. A physical barrier or a reasonable degree of horizontal separation by grass or a similar surface could be used to create the separation. Separated cycle paths are

normally built next to the road and are typically used on highways with high traffic volumes and speeds.

Technical / legal requirements

A traffic management strategy will be required to install a segregated cycle path.

- Pop-up installation

A pop-up event allows you to reclaim a section of road to evaluate the feasibility, desirability, and ability of a cycle path to improve connectivity to the larger cycle network. A pop-up can let people re-imagine the street in new ways, and the test's short duration can help alleviate concerns about the change's impact.

Potential Materials

- Road Cone & Bar
- Portable Speed Bump
- Barrier Mesh
- Hay Bale
- Straw Wattle
- Road Signage
- Spray Chalk
- Sidewalk Chalk
- Duct Tape
- Reflective Tape
- Stencils
- Corflute Board
- Pigtail Ground Spike



- Interim installation

An interim trial gives cyclists time to get used to the new facility and begin attracting new customers. It also aids in the identification of design concerns that should be addressed in a long-term plan.



Potential Materials

- Planter Box
- Traffic Delineators
- Resin Bound Aggregate
- Speed Bump
- Resin Bound Aggregate
- Stencils
- Road Paint
- Cold Applied Plastic
- Spray Chalk
- Reflective Tape

Design Considerations

- Two-way separated cycleways can add new risks to a street, so they should be avoided in locations with a lot of driveways and crossroads.
- When approaching a junction, extra caution is advised because providing adequate physical separation for bikers is more challenging.
- If a pedestrian crossing through a cycle way is possible, make sure the separation device is broad enough to allow for a resting place for pedestrians to wait before crossing, if space permits.
- The width of the cycling lane is determined by several criteria, including neighboring parking spaces, parking turnover rates, road slope, vehicle speed, vehicle volume, and the ability to make road space accessible given other road users' needs, as well as physical limits.
- Look at how place-making activities might be incorporated into the pop-up event tool, such as enlisting the help of local artists in the design of any graphic materials.

- The Traffic Control Devices Manual recommends using standard cycle way markers to convey how users should traverse an interim facility.
- Contra-flow lanes should only be used in low-volume, low-speed situations. And where there is a sufficient transition at each end of the street.

3. Tools to Reduce Traffic Volume

Pedestrians and cyclists are less exposed to motor vehicles when using tools to minimize traffic numbers. Constructed barriers that limit automotive traffic access to roadways while allowing pedestrians and cyclists' access are among the tools used to minimize traffic volume. They must fulfill the access requirements of emergency response vehicles where necessary.

3.1. Median Barrier

Barriers in the middle of the street can be used to restrict turning and/or improve crossing conditions. Vehicles with median barriers have fewer options to turn right across approaching traffic lanes. Restricting turning operations, particularly left-turning vehicles, at junctions without traffic lights can improve safety. These are widely utilized in high-traffic areas to allow people to safely halt while crossing the street by providing a two-stage crossing and a resting area in between the traffic lanes.

Technical / legal requirements

- If this tool entails removing right and left hand turns, it will almost certainly necessitate a traffic solution.
- A traffic management plan will be required to install a median barrier.

- Interim installation

A temporary median barrier can be used to test the impact on traffic for a longer period of time.

Potential Materials

- Planter Box
- Traffic Delineators
- Resin Bound Aggregate
- Road Paint
- Cold Applied Plastic
- Spray Chalk
- Reflective Tape
- Speed Bump



Design Considerations

- Median barriers can also be used to prevent right turns on a side street, effectively turning it into a "left in, left out" system.
- Gaps for pedestrian and bicycle access are maintained when it is safe to do so. This allows bikes and pedestrians to cross while concentrating on only one traffic direction at a time (two-stage crossing).
- The projected rise in demand for U turns will need to be factored in.
- Locate carefully to prevent obstructing existing roadways and utility access to boxes, vaults, and sewers.
- The tool's impact on the larger traffic network should be assessed to ensure that it has no negative consequences on nearby areas, and alternate routes should be developed when possible.
- The tool is an excellent tool for low-cost native planting. Plant selection should be appropriate for the environment, and plant maintenance requirements should be carefully examined.
- Think about how you can make your community a better place.

3.2. Modal Filter

By limiting the through access of a street to particular modes of transportation and decreasing undesired rat running, a modal filter helps to create a low-traffic environment. They're mostly utilized to increase pedestrian and cycling permeability. This can be done both in city centers and on local street corners. Modal filters are a low-cost method of making some forms of transportation safer while avoiding the need for new infrastructure.

Technical / legal requirements

- Bollards and other barriers designed to block motor vehicle access can be dangerous to cyclists, so they should be erected according to Access Control Devices best practice guidelines.
- Pop-up installation

A pop-up event allows people to evaluate the viability of restricting through access to specific means of transportation on a street while also allowing them to experience the area in a different way.



Potential Materials

- Spray Chalk
- Sidewalk Chalk
- Duct Tape
- Reflective Tape
- Stencils
- Road Cone & Bar
- Barrier Mesh
- Astroturf

- Upcycled Furniture
- Picnic Table
- Hay Bale
- Road Signage

- Interim installation

The interim installation enables for a longer length of time to assess the network's impact, to monitor any changes in behavior, and to determine whether a permanent modal filter is possible.

Potential Materials

- Planter Box
- Traffic Delineators
- Resin Bound Aggregate
- Stencils
- Road Paint
- Cold Applied Plastic
- Spray Chalk
- Reflective Tape
- Astroturf
- Speed Bump



Design Considerations

- Modal dividers include bollards/gates/planters, opposing one-ways, bus gates, timed/signal enforcement, school streets, and width/height limits.
- A network of roadways with modal filters can assist in the creation of a low-traffic neighborhood.
- Service vehicles should be given special consideration.
- Consider the impact of the diverted traffic on the surrounding network and arrange for alternate routes.

- Signage specifying which kinds of transportation are permitted to enter the street should be included.
- Think about how you can make a difference in your community.

3.3. One Way Street

A one-way street is one that only allows motorized vehicles to go in one direction.

To reduce traffic volume and improve circulation, one-way streets are used. They can be used to increase safety and give pedestrians and cyclists priority.

Technical / legal requirements

One-way streets demands alternate traffic solutions.

- Pop-up installation

The pop-up event is a great way to get the word out about the plan and see how it affects traffic and pedestrian flow. The installation's brief timeline can also assist alleviate concerns about the change's impact.



Potential Materials

- Spray Chalk
- Sidewalk Chalk
- Duct Tape
- Reflective Tape
- Stencils
- Road Cone & Bar
- Barrier Mesh
- Road Signage

- Interim installation

The interim installation allows the network's influence to be tested over a longer period of time, allowing any changes in behavior to be monitored.



Potential Materials

- Planter Box
- Traffic Delineators
- Resin Bound Aggregate
- Stencils
- Road Paint
- Cold Applied Plastic
- Spray Chalk
- Reflective Tape
- Rubber Pedestrian Crossing

Design Considerations

In a one-way street, two-way cycling facilities (contraflow lanes) can be installed to increase rider permeability.

One-way streets are ideal for creating a slow street/shared space.

The tool's impact on the larger traffic network should be studied to guarantee that it has no detrimental consequences on nearby towns. Where possible, alternate routes should be identified.

3.4. Street Closure / Pedestrianizing a street

A street closure restricts car access to a street while allowing pedestrians access. This can be done both in city centers and on residential streets.

Closed streets encourage the public to reimagine streets as public spaces, providing more safe space for strolling, cycling, and playing.

Technical / legal requirements

- Street closures necessitate traffic management plans and the completion of a road closure process; for more information, see the Legislation and Compliance section.
- The process of permanently stopping a street or constructing a pedestrian mall is not described in this guidance.
- Bollards and other barriers designed to block motor vehicle access may be dangerous to cyclists and should be installed according to the Access Control Devices standard.

- Pop-up installation

A one-day street closing, popularly known as a street party or an "open streets" event, allows the public to experience a street in a unique way. The short time span can serve to alleviate concerns about the change, while regularity and effective communication can help to build community support for longer-term reforms.



Potential Materials

- Spray Chalk
- Sidewalk Chalk
- Duct Tape
- Reflective Tape
- Stencils
- Road Cone & Bar
- Barrier Mesh
- Astroturf
- Upcycled Furniture

- Picnic Table
- Hay Bale
- Road Signage

- Interim installation

The temporary installation allows the network's influence to be tested over a longer length of time, allowing for behavioral patterns to be monitored and a permanent closure to be determined.

Potential Materials

- Planter Box
- Traffic Delineators
- Resin Bound Aggregate
- Stencils
- Road Paint
- Cold Applied Plastic
- Spray Chalk
- Reflective Tape
- Astroturf
- Speed Bump



Design Considerations

- Service cars deserve special attention.
- To allow emergency vehicles access, road closures may incorporate ramps with breakaway posts.
- Consider how to gain access to the street network, as well as the effects of traffic redirected.
- Planting can be done during street closures. Plant selection should be appropriate for the environment, and plant maintenance demands should be carefully examined. Plants and trees with high canopies that are native and low-maintenance are encouraged.

4. Tools to Reduce Traffic Speed

By slowing down motorized vehicles and increasing driver awareness of other road users, traffic speed reduction tools aim to improve the safety of pedestrians and cyclists. Painted applications and built interventions are two methods for reducing traffic speeds.

4.1. Mini Roundabouts

A mini-roundabout has all of the design and operating characteristics of a large roundabout (deflection, low-speed operation, and give-way laws), but it does not always have a landscaped middle island. Instead, the center island's edge can be mounted completely. This allows for the usage of mini-roundabouts in congested areas where truck and bus access is required.

Technical / legal requirements

Traffic Control Device Manual-compliant markings are required for roundabouts. If a single-lane roundabout and its approaches have installed safe and adequate engineering measures to slow vehicles, and the measured mean operating speeds on the approaches and through the roundabout are 30 km/h or less, the roundabout may function without the markings.

- Pop-up installation

The pop-up event allows attendees to socialize while also allowing them to evaluate the tool's use and observe the effects of traffic patterns and speeds. It can help develop support for an interim or permanent upgrade when delivered in partnership with a school community.



Potential Materials

- Spray Chalk
- Sidewalk Chalk
- Duct Tape
- Reflective Tape
- Stencils
- Road Cone & Bar
- Rubber Roundabout
- Barrier Mesh
- Hay Bale
- Straw Wattle
- Road Signage
- Street art in the roadway

- Interim installation

The interim installation allows the network's influence to be tested over a longer period of time, allowing for changes in behavior to be monitored and a permanent upgrade to be determined.



Potential Materials

- Planter Box
- Traffic Delineators

- Resin Bound Aggregate
- Stencils
- Road Paint
- Cold Applied Plastic
- Spray Chalk
- Reflective Tape
- Rubber Roundabout
- Speed Bump
- Street art in the roadway

Design Considerations

- Consider putting curb build-outs on each approach to assist slow down approaching vehicles and make pedestrian crossings safer.
- If the middle island is fully mountable, make sure it's high enough to deter vehicles from driving straight through the intersection.
- On the approach to mini-roundabouts, avoid using splitter islands.
- The tool provides a fantastic planting opportunity. Plant selection should be appropriate for the environment, and plant maintenance requirements should be carefully examined.
- Native plants that are low-maintenance are recommended.
- Multiple roundabouts at various intersections along a route are more successful than a single roundabout at reducing motor vehicle speed.
- Investigate how place-making initiatives can be incorporated into the tool, such as enlisting the help of local artists in the design of any graphic materials.

4.2. Speed Humps + Raised Tables

Vehicles are prevented from reaching high speeds by using speed humps or speed cushions at regular intervals.

The speed bump's height can be adjusted to obtain various design speeds / comfortable mounting speeds. Raised tables are elongated speed humps that improve pedestrian safety and can also be utilized as courtesy crossings in the correct circumstances.

Technical / legal requirements

Local street laws must be followed for the positions and sizes of speed breakers.

- Pop-up installation

Slowing traffic using easily adjustable speed humps allows for experimentation with distances to discover the optimal spacing for achieving a desired safe speed.

Potential Materials

- Reflective Tape
- Curb Ramp
- Portable Speed Hump
- Rubber raised platform
- Road Signage (needs an advance warning sign).



- Interim installation

Durable, semi-permanent speed humps or tables provide drivers time to adjust to new conditions and can be changed if necessary.

Potential Materials

- Rubber raised platform
- Speed Hump



Design Considerations

- The most cost-effective method of lowering traffic speed is to use speed humps.
- All vehicles, including buses and emergency vehicles, are slowed by speed humps and high tables.
- Raised tables are more pleasant and acceptable for buses than a speed hump.
- Other traffic calming solutions should be utilized where a bus route has more than 10 speed humps or 5 elevated tables to minimize additional affects on bus service reliability.
- Avoid conflicts with existing roadways, stormwater infrastructure, and underground utility access to boxes, vaults, and sewers by carefully placing elements.

4.3. Pinch Points + Chicanes

Pinch points and chicanes, like extending the curb on the roadway, enhance the 'friction' for vehicles and encourage a lower speed environment. Rather than limiting one direction's entrance, both directions' traffic is allowed but limited to a single lane, requiring opposing automobiles to pass through alternately.

Technical / legal requirements

If the installation of these instruments results in the loss of parking, a traffic solution may be necessary. For further information, see the Legislation and Compliance section.

- Pop-up installation

The pop-up event allows attendees to mingle while also testing the effects of choke points and chicanes on traffic flow.

Potential Materials

- Spray Chalk
- Sidewalk Chalk
- Reflective Tape
- Road Cone & Bar
- Curb Ramp
- Portable Speed Bump
- Hay Bale
- Straw Wattle
- Road Signage
- Street art in the roadway



- Interim installation

The interim installation enables for a longer length of time to assess the impact on the network, observe changes in behavior, and determine whether a permanent upgrade is possible.

Potential Materials

- Planter Box
- Traffic Delineators
- Road Paint
- Cold Applied Plastic
- Spray Chalk
- Speed Bump
- Street art in the roadway



Design Considerations

- On-street parking may be limited as a result of the installation.

- Many fire departments and emergency response agencies prefer this traffic calming strategy to most others.
- This type of traffic calming technology relies on drivers making eye contact. When implementing, take care to ensure that there is enough inter-visibility.
- To make the approach easier to utilize, give-way and appropriate signs must be installed.
- This is an excellent opportunity for planting. Plant selection should be appropriate for the environment, and plant maintenance requirements should be carefully examined.
- Plants and trees with high canopies that are native, low-maintenance, and low-maintenance are preferred.
- Locate boxes, vaults, and sewers carefully to prevent conflict with existing roadways, stormwater infrastructure, and underground utility access.

4.4. Curb Build Out (intersection)

Compact intersections reduce pedestrian-traffic conflict by lowering speeds, shortening crossing distances, and improving visibility for all users. Because of the time it takes to cross and the possibility for disputes, bikers and pedestrians avoid large and complex crossings. Oversized crossings squander valuable real estate and jeopardize street life.

This gadget also has the capability of narrowing driveway widths. It requires automobiles to slow down as they approach and exit driveways and roadways, dramatically boosting pedestrian and cyclist safety.

Technical / legal requirements

Local footpath widths and requirements are to be studied and followed

- Pop-up installation

The junction is narrowed to see how much room a turning vehicle needs, as well as the influence on pedestrian-vehicle conflicts.

Potential Materials

- Spray Chalk
- Sidewalk Chalk
- Duct Tape
- Reflective Tape
- Stencils
- Road Cone & Bar
- Curb Ramp
- Rubber Pedestrian Crossing
- Barrier Mesh
- Upcycled Furniture
- Picnic Table
- Hay Bale
- Road Signage



- Interim installation

Test the revised configuration's impact on pedestrian/vehicle conflicts, as well as pedestrian accessibility and ease of crossing during an interim event.

Potential Materials

- Planter Box
- Traffic Delineators
- Resin Bound Aggregate



- Road Paint
- Cold Applied Plastic
- Spray Chalk
- Rubber Pedestrian Crossing
- Astroturf
- Bench Seat
- Picnic Table
- Speed Bump

Design Considerations

- Driveways and access to properties, as well as the possible loss of on-street parking, should all be considered.
- To avoid conflicts with existing roadways and underground utility access to boxes, vaults, and sewers, carefully place elements.
- The tool provides a fantastic planting opportunity.
- Plant selection should be appropriate for the environment, and plant maintenance requirements should be carefully examined.
- Native plants that are low-maintenance are recommended.
- Curb build-outs that are properly constructed do not interfere with existing stormwater systems and can be done quickly and affordably.
- Larger vehicles, such as buses and trucks, should be accommodated if the street is often utilized.
- Investigate how place-making initiatives can be incorporated into the tool, such as enlisting the help of local artists in the design of any graphic materials.
- The tool's impact on the larger traffic network should be studied to guarantee that it has no detrimental consequences on nearby towns. Where possible, alternate routes should be identified.

5. Tools for Place Activation

Events, installations, and activities designed to engage the community in a fun and engaging way are examples of tools for place activation. Place activation tools generate active social places and are a fantastic way to test a variety of design features, socialize a

project with the community, and assist in the development of community ownership of the project and ultimate outcome.

5.1. Pocket Park

Providing gathering and relaxing areas for pedestrians, as well as changing the street from a moving corridor to a place where people may spend time. A pocket park is a small park that serves as a gathering place for the community in a safe, comfortable, and enjoyable setting. Existing parking spaces are frequently converted into public spaces to create pocket parks.

PARK(ing) Day is an annual global event in which people, artists, and activists work together to turn metered parking spaces into temporary parks. PARK(ing) day serves as a model for testing a pocket park in this context.

Technical / legal requirements

A traffic control plan will almost certainly be necessary for an interim installation. A modest safety strategy is likely to suffice for a short-term pop-up that can be constructed without entering the traffic.

- Pop-up installation

A pocket park can be utilized as a pop-up event to socialize and test the elimination of parking to establish a community area, among other things.

Potential Materials

- Spray Chalk
- Sidewalk Chalk



- Stencils
- Road Cone & Bar
- Barrier Mesh
- Astroturf
- Upcycled Furniture
- Picnic Table
- Games Equipment
- Road Signage

- Interim installation

A temporary pocket park can be used to assess the impact on local businesses and public life, as well as to develop a case for alternative parking options.

Potential Materials

- Planter Box
- Resin Bound Aggregate
- Stencils
- Road Paint
- Cold Applied Plastic
- Spray Chalk
- Reflective Tape
- Astroturf
- Aggregate
- Bench Seat
- Picnic Table
- Play Equipment
- Curb Ramp



Design Considerations

To ensure that spaces to congregate and rest are comfortable for individuals of all ages and abilities, they should be free of motorized vehicles and antisocial behavior. Physical separation from the active traffic lane should be included.

- In high-speed traffic situations, a pocket park is inappropriate.
- A pocket park should not obstruct pedestrians or traffic flow.
- A pocket park should not obstruct pedestrians or traffic flow.
- The park's site should be carefully chosen, avoiding "no-stopping" zones, business loading zones, commuter roads, and any location in front of a fire hydrant.

6. Supporting Tools

The supporting tools in this toolkit should be used in conjunction with the primary tools.

6.1. Wayfinding Signage

Wayfinding signage are often placed at strategic sites leading to and along major routes and paths, as well as at crucial "decision points" where various routes converge. Wayfinding signage that display destinations and distances can dispel frequent misunderstandings while also improving user convenience and network accessibility.

Technical / legal requirements

Local rules on pedestrian and local wayfinding must be taken care of.

- Pop-up installation

Wayfinding signage should be monitored during a pop-up event to see how effective it is at explaining the event's purpose and directions.

Potential Materials

- Duct Tape
- Reflective Tape
- Stencils
- Corflute Board
- Pigtail Ground Spike



- Interim installation

The interim installation allows the network's influence to be tested over a longer period of time, allowing any changes in behavior to be monitored.

Potential Materials

- Stencils
- Timber Post
- Corflute Board
- Aluminium Sheet Signage



Design Considerations

- Provide directions, distances, and/or estimated trip times to destinations such as commercial districts, transit hubs, schools and universities, and other bikeways to persons riding bicycles.
- Install ahead of turns at a sufficient distance to let a cyclist recognize, prepare for, and safely execute a turn.
- Be aware of "sign clutter," which can reduce the overall efficacy of signage.
- Create easily recognizable and consistent indicators that are both visible and meaningful.
- Investigate how placemaking initiatives can be incorporated into the tool, such as enlisting the help of local artists in the creation of any graphic materials.

6.2. Wayfinding Footpaths

Wayfinding pathways, which are often painted, are walkways that have a constant color, texture, or material finish to highlight and demarcate a route to a major destination, as well as to emphasize and grant pedestrian precedence.

- Pop-up installation

Placement and messaging of the demonstration navigation should be tested.

Potential Materials

- Spray Chalk
- Sidewalk Chalk
- Reflective Tape
- Stencils
- Road Cone & Bar
- Curb Ramp
- Rubber Pedestrian Crossing
- Astroturf
- Upcycled Furniture



- Picnic Table
- Corflute Board
- Pigtail Ground Spike

- Interim installation

The interim installation allows the network's influence to be tested over a longer period of time, allowing any changes in behavior to be monitored.

Potential Materials

- Planter Box
- Traffic Delineators
- Resin Bound Aggregate
- Stencils
- Road Paint
- Cold Applied Plastic
- Spray Chalk
- Reflective Tape
- Rubber Pedestrian Crossing
- Astroturf
- Bench Seat
- Picnic Table
- Speed Bump



Design Considerations

Investigate how placemaking initiatives can be incorporated into the tool, such as enlisting the help of local artists to produce any graphic elements.

6.3. Lighting

Outside of daylight hours, lighting improves visibility and the real and perceived safety of public locations.

- Pop-up installation

During a nighttime demonstration, light can be employed to create a festive atmosphere while also boosting safety and security. It also assesses the likelihood of the general public using various areas at night.

Potential Materials

- Reflective Tape
- Portable Spotlights
- Fairy Lights



- Interim installation

The interim installation allows the network's influence to be tested over a longer period of time, allowing any changes in behavior to be monitored.

Potential Materials

- Fairy Lights



Design Considerations

- For motorists and pedestrians to be comfortable and safe, light must be provided at various heights.
- Avoid over-lighting residential areas (where backlight can cast shadows on homes).
- Lighting designs should be homogeneous and consistent throughout a neighborhood or municipality.

6.4. Gaming

Games that may be played in the streets and take into account the built urban environment, spatial arrangement, and sociological aspects of urban locations. Providing games inside the streetscape can expose new uses for the street and establish community gathering spots.

- Pop-up installation

Games can be utilized as part of a pop-up event to bring people together and to see if the public is willing to use certain areas.

Potential Materials

- Spray Chalk
- Sidewalk Chalk
- Stencils
- Easy-Up Gazebo
- Astroturf
- Upcycled Furniture
- Picnic Table
- Hay Bale
- Straw Wattle
- Games Equipment
- Corflute Board
- Pigtail Ground Spike



- High Vis Vest
- Children's Umbrella

- Interim installation

A longer-term exhibit can allow you to try out a new way of using the space.

Potential Materials

- Stencils
- Spray Chalk
- Astroturf
- Bench Seat
- Picnic Table
- Play Equipment
- Curb Ramp



Design Considerations

- To create an interactive and inclusive workplace, consider using a variety of games.
- There are games for people of all ages and skills to enjoy.

6.5. Accessible Curbs

Accessible curbs make a route more accessible by eliminating tripping risks and smoothing the transition between different surfaces and applications for pedestrians, cyclists, and wheelchair users. Curbs that are accessible can be made by 'dropping the curb' to the next surface or by ramping up to the top of the curb.

- Pop-up installation

A pop-up event is a great way to see where accessible curbs are located and how they work.

Potential Materials

- Reflective Tape
- Curb Ramp
- Rubber Pedestrian Crossing



- Interim installation

During the interim installation, accessible curbs are installed along major routes and connections are checked.

Potential Materials

- Curb Ramp

Design Considerations

- Where it is impossible to keep the footpath at an even level, curb ramps should be used as an alternative.
- The ramp angle must be low enough for those using mobility aids such as wheelchairs to easily reach it.
- To draw attention to the accessible curb, use contrasting colors and textures.
- To provide access for all users, consider using Tactile Ground Surface Indicators (TGSIs) and Audible Tactile Traffic Signals (ATTS) as you approach the curb.



6.6. Cycling Facilities

Bicyclists and scooterists have mentioned a lack of infrastructure as a hurdle. Parking, shelter, drinking fountains, showers, tools, and pumps are examples of cycling amenities. Bicycle and scooter parking facilities aim to either add or improve existing facilities for bicycle and scooter storage that are safe, secure, and protected. These facilities should be as close as feasible to the destination's entry/exit points and be readily visible, i.e. not out of sight.

- Pop-up installation

Providing bike infrastructure improves the cyclists' experience and allows them to congregate during the protest.

Potential Materials

- Reflective Tape
- Stencils
- Road Cone & Bar
- Curb Ramp
- Barrier Mesh
- Astroturf
- Hay Bale
- Corflute Board
- Pigtail Ground Spike



- Interim installation

Cycling facilities can encourage people to ride their bikes, and other uses around each facility might be considered to create a feeling of place.

Potential Materials

- Resin Bound Aggregate
- Stencils
- Road Paint
- Cold Applied Plastic
- Spray Chalk
- Curb Ramp



Design Considerations

- Consider putting in place end-of-trip amenities at major locations to encourage and support cycling.
- Consider amenities like rest spaces, restrooms, and drinking fountains that could benefit a larger audience.

CHAPTER 7: TACTICAL URBANISM IN TORINO

Strategic plans for future Torino by the municipality

(Torino 2030 report, municipality of Torino, 2019 and Metropolitan Turin 2025, The third strategic plan of the metropolitan area of Turin by Torino Strategica, 2015)

Revitalization of public spaces

In formerly peripheral or suburban neighborhoods, metropolitan Turin must foster greater physical connectedness and appeal. To that end, the plan recommends fifteen place-making projects to be undertaken throughout the metropolitan region in order to create high-quality public places. The projects will focus on improving the quality of urban design and street furnishings, promoting bicycle and pedestrian friendly environments, and introducing innovative community management and maintenance models, as well as minimizing the impact of poorly integrated infrastructure, improving and activating underutilized green areas, minimizing the impact of poorly integrated infrastructure, improving and activating underutilized green areas, improving and activating underutilized green areas, and introducing innovative community management and maintenance models.

Social inclusion

The City of Turin approved the "Coordination Guidelines to Policies for Inclusiveness and Participation" in 2018 to re-establish a sense of community among citizens and promote cross-cultural dialogue in everyday life by creating a participatory environment that encourages the redefinition of rules, responsibilities, and behaviors for communal life.

Promote an atmosphere of debate and confrontation, manage conflicts, offer all differences a home, and put in place a fabric of rules and conventions that allows everyone to recognize themselves, both in obligations and rights. There are three basic goals: increased engagement in public affairs management, the elimination of racist discrimination, and the creation of a stronger and more inclusive sense of community that leaves no one behind. To achieve these, action on various levels is required, including the establishment of instruments and intervention programs by the municipal government, the network of local associations and institutions, and the city as a whole made up of individuals.

Metropolitan Turin must prioritize the well-being of its residents in order to remain a competitive and attractive metropolitan area. The strategy plan focuses on metropolitan governance and catalytic projects that can help promote economic development, ensuring that all residents have access to jobs and fostering social inclusion through economic opportunity. While supporting economic development and, as a result, job creation, is critical to creating an inclusive city, Metropolitan Turin must also progress and innovate in areas related to social cohesion.

Through more active citizen engagement in the delivery of public services and the management of public goods and spaces, national administrative reform is offering new chances to develop a dynamic interaction between public administration and citizens. In collaboratively planning, implementing, and evaluating policies, initiatives, investments, and partnerships that create shared responsibility among citizens and the public administration, Metropolitan Turin desires to be a leader in new citizen engagement models.

Due to these considerations, the study on this report emphasizes citizen participation and social inclusion in the solution provided to the urban voids. A solution considering these factors will be discussed in the next chapter.

Why is Tactical Urbanism a suitable approach to Torino?

From reading the city's agendas for the future, we can understand that the municipality is determined to make public spaces more accessible to the public as it has always done while rebuilding the city in the past twenty five years. Also, we have come across the city's plan to make the accessibility to public recreation and green areas more efficient to all the neighborhoods by 2030.

But, this plan made by the city should be welcomed by all the residents too. What if the design is not successful in serving its purpose? Then, it would be just a waste of resources and another defunct space added to the city. It's not the twentieth century anymore, where the residents did not get a say in what the city is making. Various successful cities in the world have included their citizens in creating better spaces for themselves. After all, the 11th SDG (Make cities and human settlements inclusive, safe, resilient and sustainable) aims *"by 2030, to enhance inclusive and sustainable urbanization and capacity for participatory, integrated and sustainable human settlement planning and management in all countries"*.

Torino strategica makes it clear that social inclusion and active citizenship are among the most important parts of their agenda. For doing so, from an urban planning perspective, tactical urbanism has proved to be an effective method. The creation of inclusive public spaces promotes a healthy public life in which planned and unplanned social interactions can take place on a variety of platforms, including bus stops, parks, fairs, urban plazas, outdoor concerts, and public utilities. All of the city's public places should strive to bring the entire population together and create and encourage chances for individual well-being, encouraging individuals to be creative and playing a key part in the promotion of equitable, healthy, and committed communities. In this sense, public space planning, design, and development must be a process guided by fundamental principles that ensure residents' participation.

Inclusive cities, according to the United Nations Program for Human Settlements (The Global Campaign for Good Urban Governance, 2000), are "spaces where all people, regardless of their economic situation, gender, age, ethnicity, or religion, can participate productively in all the opportunities that cities offer." In this sense, it's critical to recognize that cities have social, economic, and cultural aspects that are intertwined with citizens' daily lives, and that it's through these aspects, as well as the city's physical space, that urban challenges are addressed in order to achieve inclusion in all dimensions.

Tactical urbanism can help by implementing phase 0 implementation initiatives, as defined by "the street plan collaborative." The use of temporary materials and installations, sometimes known as a placeholder project, keeps the momentum from the official planning process going. The project can provide immediate benefits while also allowing for the collection and integration of qualitative and quantitative data into the project design prior to substantial capital expenditures. If the project does not go as anticipated, the capital budget will not be depleted, and future designs will be calibrated to incorporate the learned lessons. Small-scale and temporary adjustments, if done correctly, can be the first step toward long-term transformation. This iterative process not only results in better projects, but it also keeps the momentum started during the traditional planning phase going.

Torino city council's regulations on governing urban commons

The Turin City Council approved the Regulation on Governing the Urban Commons in the City of Turin on December 2, 2019. According to this regulation, by means of a civic negotiation – whose purpose is to design the governance of Urban Commons, the City of Torino and the civic subjects define and regulate the care, management and regeneration of an Urban Common.

The nearby flowerbed, the neighborhood garden, the square, the school yard, abandoned areas – as well as intangible assets – are all examples of urban commons. They become Urban Commons when citizens and the government identify them and take action to regenerate, co-manage, and care for them. Accessibility, shared management, and involvement in decision-making processes are the foundations of Urban Commons governance.

How does it work?

Any civil subject (formal or informal organization) can submit a project proposal to the City Administration / Urban Commons Office by filling out a pre-determined form available on this website, which describes the identified Urban Common, the planned activities to be carried out, and the composition of the proponents' group. Each project proposal will be evaluated by a technical Board comprised of appropriate City officers, who will determine its compatibility with the Regulation's principles and technical feasibility, as well as the City Director, who will sign the Pact on the City's behalf. Following that, the plans that have been approved can move on to the co-design stage. This stage is the focal point of the participatory process leading to a collaboration Pact, as it is the heart of the Pact's definition: its contents, terms, and duration, as well as its governance model, which includes the parties' duties and responsibilities, are all discussed and agreed upon by the parties (namely, the City and the civil subjects). The duration of this phase varies depending on the project's complexity.

More than 120 project suggestions have been received by the city of Turin so far, involving more than 200 organizations or informal groups of engaged residents. About 20 project proposals are now being co-designed.

Relevance of Urban commons regulation on Tactical urbanism

The urban commons project as defined by the city of Torino is very similar to the concepts of tactical urbanism in terms of community participation and public space revitalization. But this initiative has a stricter framework as compared to enabling tactical urbanism.

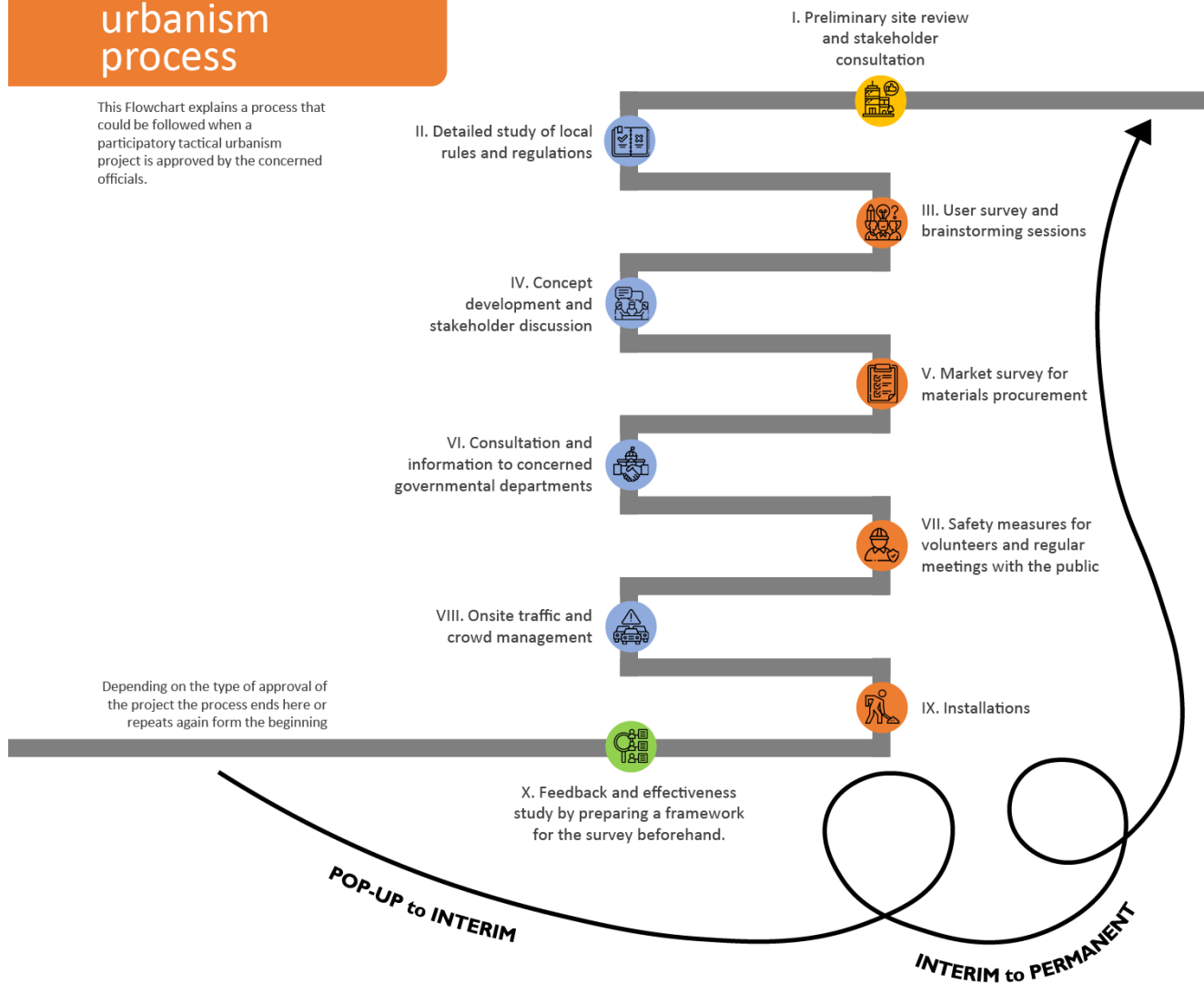
Though the city has passed the regulation of urban commons and started a few projects, it is not popular among the citizens. Most people in the city are not even aware of the existence of such a regulation. As a result of which the public participation is inactive currently. The urban commons initiative is still working like a traditional governmental top down approach. The municipality has to follow a better method as done in the NYC plaza program or the latest initiatives by the government of New Zealand in which the government took forward the initiatives by itself and tried to involve the citizens as well.

Better publicity and a more flexible outlook on tactical urbanism has to be made by the city to attract people towards it. The reason why this has to be done, has been clearly established in the previous chapters where the benefits of tactical urbanism and real-world outcomes from various countries and cities were discussed.

ANNEX: A flowchart for participatory urban planning process for tactical urbanism

Participatory tactical urbanism process

This Flowchart explains a process that could be followed when a participatory tactical urbanism project is approved by the concerned officials.



Source: Created by Author

CONCLUSION

Summary

The purpose of this study was to learn more about urban voids, which are a common problem in today's cities. We quickly think of vacant or abandoned sites when we hear the term "urban voids." While those are examples of urban voids, they are by no means the only ones. As we observed in the first chapter, urban voids are spaces that are underutilized, overused, or inactive and unpleasant. The quantity of urban voids present in any area is expanded by these categories. The overall purpose of this thesis was to locate and understand such spaces in order to put them to good use for the community. As a result, neighborhood quality of life can be improved, leading to happier, more sustainable, and flourishing cities and communities. Urban voids have the potential to create open-space options for temporary use, as well as inventive and active non-commercial activities.

The main advantage of emptiness is its versatility, which is a vital asset in city development. It's a city-management idea that uses bottom-up and spontaneous activities to revitalize neglected areas. The temporary use allows city dwellers to significantly improve the quality of space and encourage it to be used for living purposes.

Because of its flexibility, economic effectiveness, and active public participation, Tactical Urbanism is identified as an acceptable way to use the voids in this study. Mike Lydon and Anthony Gracia's book "Short Term Actions for Long Term Changes" has been a valuable resource throughout this research. The book's practical experiences and case studies make it easier for us to comprehend the value of Tactical Urbanism. The type of intervention to be carried out can be determined after a thorough examination of the neighborhood setting, resident needs, and other local considerations. Tactical Urbanism can be used to improve green infrastructure, community development, recreational

places, urban gardening, economic opportunities, sustainable mobility, or merely traditional public spaces, among other things. In chapter 2, the subtopic "micro urbanism initiatives to reclaim the urban identity" explored factors that could be relevant in determining the sort of designs. Whichever intervention is used, the ultimate goal is to return space to the people and improve their quality of life. Many countries have adopted tactical urbanistic strategies to improve sustainable urban mobility in their cities in recent years, particularly during the COVID-19 lockdown and restrictions.

The case of Torino

The assessment of Torino city and its attempts to construct green and public spaces over the last 25 years demonstrates that the local administration has been working to transform the former industrial metropolis into a livable city for its residents.

In Chapter 2, the study of voids in the city provides an overview of the many types of voids that exist in the city. The majority of streets and public areas are taken up by on-street parking, overly broad streets, and acutely angled road junctions. These lands should be reclaimed and made available to the public for long-term use. According to the CIVITAS handshake project, the city's average car ownership rate is 674 per 1000 residents. The municipality must take necessary precursor and establish aggressive targets to reduce this number quickly in order to ensure the city's long-term health. As the number of people owning a car decreases, the requirement for more parking spaces and broader streets decreases.

The city's recent green infrastructure projects have drawn our attention to the fact that it is attempting to attract investors and citizens to be a part of its future. The government recognizes the importance of public participation in municipal development, according to the new Torino 2030 masterplan. Several sustainable cities throughout the world have incorporated public input into their decision-making in order to create a better city, and Torino is following their footsteps. However, based on the study and my experience as a city resident for the past two years, I believe the government is not making much of an attempt to do so. Even though their plans describe novel ways, the city nevertheless uses traditional planning methods. New Zealand is taking bold steps to innovate its approach

to urban planning issues. They have been actively encouraging and propagating the idea of tactical urbanism to their people, especially to make their mobility sustainable. In recent years, they have also demonstrated rapid and successful outcomes in the creation and testing of walkable and cyclable neighborhoods. The example of the NYC plaza program has also shown us wonderful outcomes in effectively creating several plazas throughout the city. So, as a recommendation of this study, the city of Torino has a lot more to achieve in attempting to involve the citizens in urban planning decisions.

Tactical urbanism is not a brand-new idea. It has been practiced for many years. People have always been proactive in modifying things in their areas to meet their requirements. Many countries, in fact, still refuse to accept such illegitimate conduct. For the past few years, some cities and countries have acknowledged the practice of Tactical urbanism. However, citizens involvement in tactical urbanism has been neglected in some places. For instance in July 2021, the Torino Metropolitan administration attempted to mark a pedestrianized path in Largo Montabello in the old city center with polka dot painting. However, locals objected, alleging that the intervention violated the street furniture and that tactical urban planning was incompatible with the premises' history. As a result, municipal offices were advised to remove the polka dots and make the asphalt color uniform. My supervisors, Prof. Artuso and Prof. Santangelo, correctly pointed out to me that the government must collaborate with citizens to understand their requirements. That's when things fall into place in a harmonious manner.

The final recommendation I want to make to the government through this study is that, in order to make Torino a city that its citizens love, immediate tactical urbanism measures can be implemented in neighborhoods based on the non-availability of public spaces nearby. The initiatives' success should be investigated, and if found to be beneficial, the method of institutionalized tactical urban planning should be integrated in the city's future masterplan.

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