

THE ROLE OF TACTICAL-ISM AND COMMUNITY ENGAGEMENT IN SHAPING DECENT NEIGHBOURHOODS: CAIRO CASE STUDY

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Abstract. In recent decades, housing has come to be seen as more than just a physical structure, but a setting where residents can build long-term social connections. The problem is particularly persistent in residential blocks that lack integration with the unbuilt environment and intermediate spaces, negatively affecting the quality of life for both individuals and the community. This study seeks to explore the influence of tactical-sim and community involvement in the formation of decent neighborhoods, with a particular emphasis on addressing housing inadequacy and inaccessibility in the case of Cairo, Egypt. A methodology based on architectural, urban and psychological indicators was used to analyze this problem in several typologies across the Greater Cairo Region. The findings of the study highlighted several critical issues with the national housing policies and planning, including social segregation and planning injustice; attributable to inadequate integration of semi-public and open spaces or green areas with housing, insufficient community involvement in the planning process and lastly, the tendency to standardize the spatial layout of residential blocks while restricting opportunities for the private sector only.

Keywords: *Tactical actions, adequate housing, community integration, Egypt.*

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1. Introduction

Rapid urbanization in many parts of the world has resulted in inadequate housing, social segregation and the deterioration of open spaces, all of which have had a negative impact on the quality of life for residents. This paper examines the role of tactical-ism and community participation in the development of decent neighborhoods in Cairo to address these pressing problems.

“With the advent of the third millennium, the population of cities has surpassed the rural, with over 50 percent of the world’s population living in urban areas” (Husain & Nafa, 2020). The life of people does not only take place in buildings, but in the intermediate and open spaces as well. Thus, open spaces between buildings hold great potentials to enhance the standard of living for occupants (Gehl, 2011). These spaces are intended to depict scenes of social activities, gatherings and interactions among residents.

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Several studies have long-established the direct relation between the outdoor in-between spaces design and the level of social interactions among residents (Abu-Ghazze, 1999). In the meantime, urban centers are rapidly growing around the world, which puts inhabitants under intense pressure of stressful spatial and environmental changes. While on the contrary, their neighborhoods are still home to several types of urban voids.

Throughout the city one can find abandoned lands or standing structures that can yet be developed, offering intriguing opportunities to counter gentrification and provide common spaces or public facilities for community use. In residential blocks, open spaces mainly serve as intermediate spaces for better light and ventilation, for trees and vegetation and for outdoor recreational activities (Whitten, 1931). However, in many cases, especially in the developing countries, local municipalities and planners were only interested in the layout of the residential buildings itself, but never the in-between spaces. Over the years, these spaces were often neglected, which gradually significantly impacted the environmental and social qualities. Being aware of these alarming consequences, Mike Lydon and Anthony Garcia raised an initiative “Tactical Urbanism” to promote community participation by small-scale and low-cost actions, for a long-term change in their neighborhoods.

This article stresses the importance of integrating housing with the built and un-built environment through the intermediate and open urban spaces. This study aims to broaden the understanding of housing planning beyond physical structures or political obligation, but rather a transformation by and for people, community and places, with respect to standards and principles of integration at the urban, intermediate and private levels.

Accordingly, the paper is organized into five main parts. The first part introduces the problem and provides rational review on the topic. The second reviews several challenges and strategies of housing in general and tackles the problem of decent housing, focusing on the Cairene context. It further introduces “tactical-ism” and “Tactical Housing” as new concepts to deal with the adequacy challenges. The third part highlights the architectural, urban and psychological indicators-based analysis methodology and demonstrates the results of their application on four selected residential blocks in Greater Cairo. The fourth includes essential reflections on principles of tactical urbanism and placemaking and discusses tactics and strategies based on the objectives of the study. While the fifth part concludes with potential strategies through tactical housing and its potential to address housing challenges and promote inclusivity, which is the main contribution of this paper.

2. Housing is a Human Right

It is evident that Housing has a major influence on the overall quality of living and well-being for individuals and communities. It provides shelter and protection for people, enhances physical and mental health, promotes social stability and supports economic development. Access to safe and affordable housing is a key factor in unlocking the full potential of individuals and families to participate fully in society.

Housing is recognized as a fundamental human right in the Universal Declaration of Human Rights established by the United Nations. The report states that “everyone has the right to a standard of living adequate for the health and well-being of himself and of his family, including food, clothing, housing and medical care and necessary social

services” (United Nations, 1948). The International Covenant on Economic, Social and Cultural Rights (ICESCR) further elaborates on the right to housing, stating that it includes “the right to live somewhere in security, peace and dignity” (United Nations, 1966).

However, the provision of housing remains a significant challenge in several areas around the world. Even though the right to adequate housing is acknowledged, many people around the world face significant challenges in accessing housing that meets their basic needs. Some of the main challenges include poverty and inequality, low-income households, rapid urbanization and lack of land and property rights.

2.1. Adequate and Affordable Housing: Challenges and Strategies

Adequacy is a significant principle of housing which provides a sense of security and stability for individuals and families. Having a safe and secure place to live can improve the physical and mental well-being of individuals and can also provide a stable environment for children to grow and develop. Access to decent housing can help individuals to secure employment and improve their job prospects, which can lead to increased economic growth and development.

Further, adequate housing is important for social cohesion and community development. When individuals and families have access to safe and affordable housing, they are more likely to be engaged in their communities and participate in social activities, which can foster a sense of community and social cohesion.

The problem of adequate housing in the world is that the disparity between the availability and affordability of housing for low- and middle-income individuals is increasing, particularly in urban areas (Figure 1). The World Bank predicts that by 2025, one in every three urban inhabitants (1.6 billion) will be affected by the global housing shortage. Moreover, “an estimated 100 million people worldwide are homeless and one in four people live in harmful conditions that affect their health, safety and prosperity” (World Economic Forum, 2022).

On the other hand, affordable housing is defined as housing that is “affordable” in the sense that it is available to individuals with a low or moderate income. Affordable housing can take different forms, such as social housing, subsidized housing, rental housing or home ownership. Affordability is important for reducing poverty, improving social inclusion and enhancing quality of life. However, affordable housing is often scarce, especially in urban areas where demand exceeds supply and prices are high.

The ICESCR recognizes that the right to affordable housing is not limited to shelter but encompasses a range of other factors, including:

- **Security of tenure:** The right to live without the threat of forced eviction and to have legal protection against arbitrary eviction.
- **Availability of services:** The right to have access to essential utility services including electricity, water and sanitation.
- **Affordability:** The right to access housing that is affordable and does not compromise other basic needs such as food and healthcare.
- **Habitability:** The right to access housing that is safe, structurally sound and provides adequate space and ventilation.
- **Accessibility and Location:** The right to access housing that is located in a convenient location and provides access to employment, healthcare, education and other essential services.

- **Cultural Adequacy:** Culture is a prime principle of every society. Housing planning and design shall reflect the cultural values and provide flexible living dimensions to inhabitants.

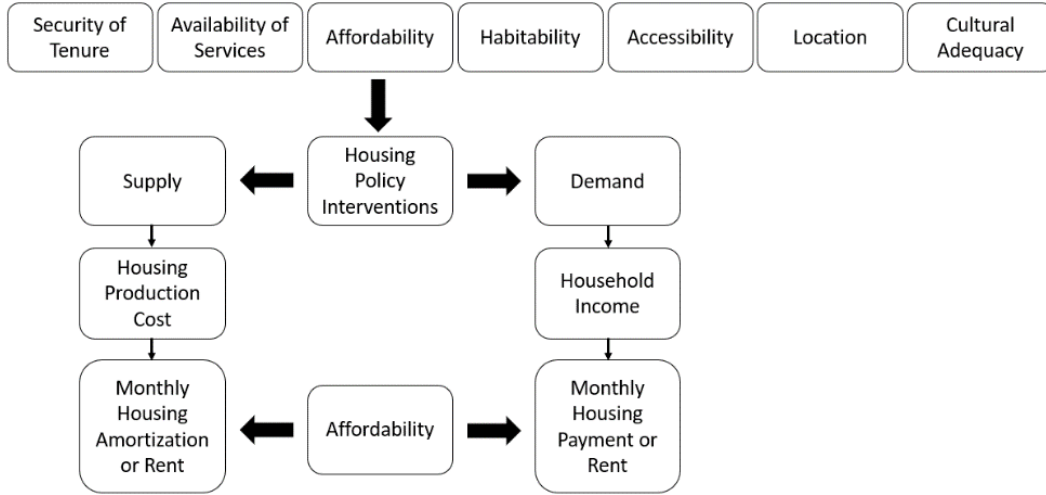


Figure 1. Affordable Housing Factors and the Interventions between the Demand and Supply
Source: Developed by Authors, 2023

There are still many challenges in providing decent housing for everyone. According to statistics, over one billion people lack adequate housing and an estimated 150 million people are homeless. Housing challenges are particularly acute in developing countries, where rapid urbanization and population growth have outpaced the supply of affordable housing (Husain & Nafa, 2020; Thorns, 2016; United Nations, 2016).

One of the challenges of providing affordable housing is defining and measuring it. Different countries and contexts may have different definitions and indicators of affordability. One common indicator is the median multiple, which refers to the ratio between the median house price and the median income of a household. The lower the number, the more affordable the housing. The World Bank and United Nations classify a median multiple of three or less as affordable and a median multiple of five or more as severely unaffordable.

Another challenge of providing affordable housing is finding suitable locations and designs. Affordable housing should be located in areas that are accessible to public transportation, employment opportunities, education, health care and other services. Affordable housing should also be designed to meet user demands and preferences, as well as to be energy-efficient, environmentally friendly and resilient to natural disasters. It should also be integrated with the surrounding community and avoid creating segregated or stigmatized areas. Further, the cost of housing is often too high for low-income families, which can lead to overcrowding and homelessness.

The lack of infrastructure and basic services in many housing communities is another challenging issue. Residents in many low-income housing communities have poor access to essential utility services including electricity, water and sanitation, which can have a detrimental effect on residents' health and well-being. In addition, there is a lack of security of tenure for many individuals and families. This means that they do not

have legal rights to the land or property they are living on, which can make them vulnerable to eviction and displacement.

Accordingly, there are several factors contributing to the problem of affordable housing in the world, including:

- **Rapid urbanization and population growth:** The global urban population is projected to increase from 4.2 billion in 2018 to 6.7 billion by 2050, with the biggest increases happening in developing countries. This puts pressure on the existing housing stock and infrastructure and increases the demand for new housing. Given the critical role of cities as social, political and economic hubs, the re-think of planning is happening at a crucial juncture when urban policies need to be designed for a sustainable future, considering the unique requirements of neighborhoods, people and existing urban systems (Nafa & Husain, 2021; United Nations, 2018).

- **Low-income levels and high inequality:** About 10% of the world's population lives on less than \$1.90 a day and 36% lives on less than \$3.20 a day. This limits their ability to afford formal housing or access housing finance. Moreover, income inequality has risen in many countries, making housing more unaffordable for the lower-income segments of society (World Bank, 2018).

- **Inadequate housing finance system:** The mortgage market in many countries is underdeveloped and serves only a small segment of the population. The main barriers to accessing housing finance are high interest rates, strict eligibility criteria, limited loan tenors and high transaction costs. Moreover, many households lack formal income documentation or credit history, which excludes them from formal financial services (Woetzel *et al.*, 2014).

- **Lack of incentives and regulations for private sector participation:** The private sector plays a crucial role in providing housing in many countries; however, it mainly targets high-income segments that can afford higher profit margins. The government provides subsidies and land allocations for social housing projects, but there are no clear incentives or regulations for private developers to participate in affordable housing provision or to comply with quality standards and environmental norms (European Bank, 2017).

- **Climate change and environmental challenges:** The world is facing challenges arising from climate change including rising sea levels, water scarcity, desertification and extreme weather events. These pose risks to the existing and future housing stock and require adaptation and mitigation measures. Moreover, the world faces environmental challenges such as air pollution, waste management and energy efficiency that affect the quality and sustainability of housing (Forbes, 2021).

The solution to the problem of affordable housing in the world requires coordinated and comprehensive actions from various stakeholders including the private and public sectors, civil society and international organizations. Generally, some of the strategies that can be used to enhance the availability and affordability of housing are:

- The improvement of basic services and infrastructure in low-income housing communities. Governments can invest in the development of basic services such as water, sanitation and electricity to improve the living conditions of residents.

- Providing subsidies or incentives to developers, landlords or homeowners who build or rent affordable housing units.

- Regulating the housing market to limit speculation, rent increases, evictions or discrimination.

- Supporting community-based or cooperative initiatives that involve the participation of residents in planning, managing or owning affordable housing.
- Promoting alternative forms of tenure, such as shared ownership, leasehold or rent-to-own schemes.
- Improving the existing housing stock by upgrading or renovating substandard or vacant units.
- Mobilizing public and private resources and partnerships to finance and deliver affordable housing projects.
- Unlocking land supply: Land is typically the largest real-estate expense, so it is essential to ensure that it is located in suitable locations to minimize costs. In many urban areas, there are areas of land that are either vacant or underutilized. Some of these parcels may be owned by the government and can be released for development or can be sold to purchase land for residential development. Incentives such as density bonuses and tax breaks can be used to bring private land forward for development.
- Reducing construction costs: While manufacturing and other sectors have seen steady increases in productivity over the last few decades, construction has seen flat or declining productivity in many countries. There are opportunities to improve efficiency and innovation in construction by using standardized designs and materials, prefabricated modules, digital technologies, local labor and resources and green building practices.
- Improving operations and maintenance costs: The cost of operating and maintaining a housing unit can be significant over its lifetime. There are ways to reduce these costs by using energy-efficient appliances and systems, renewable energy sources.

Accordingly, civil society organizations and both the private and public sectors, each have a role to play in resolving housing problems and ensuring that everyone can enjoy this fundamental human right. However, while there are many strategies to provide adequate housing for everyone, stakeholders in developing countries cannot cope with the increasing demand.

2.2. Affordability Crisis: Case of Egypt

Housing is a critical issue in Egypt. One of the most significant challenges opposing the housing sector in Egypt is the country's rapidly growing population. With an estimated one hundred million people and counting, demand for housing has far outstripped supply. Many families are forced to live in cramped and overcrowded conditions, with multiple generations sharing small apartments or even single rooms. This can lead to several health problems, from respiratory issues to mental health disorders. Additionally, rising property prices and stagnant wages have made it difficult for many Egyptians to afford a decent place to live.

The issue is further complicated since many of Egypt's urban areas are already densely populated, with little room for new construction. This has been attributed to the proliferation of informal settlements, which house an estimated 40% of the country's population (GOPP, 2012). These settlements are often built on land that is either designated for agricultural use or prone to natural disasters like flooding and landslides. Residents of informal settlements often lack access to basic services such as healthcare, clean water and healthy sanitation and are vulnerable to eviction or displacement by government authorities.

Another factor contributing to Egypt's housing crisis is the rising cost of property. Over the past decade, property prices in many parts of the country have skyrocketed,

making it increasingly difficult for ordinary Egyptians to afford a decent place to live. This is partly due to increased demand from wealthy investors, both local and foreign, who are attracted by the potential for high returns on their investment. In many cases, these investors purchase property as a speculative asset, driving up prices even further. At the same time, wages in Egypt have remained stagnant, meaning that many families simply cannot afford to pay the soaring prices demanded by property developers. This has forced many people to turn to informal settlements or substandard housing as a last resort, perpetuating the cycle of poverty and inequality that afflicts many parts of the country.

Further, a major challenge is the excessive cost of land and construction materials, which hinders the development of affordable housing units. Additionally, there is insufficient funding available for affordable housing projects, which limits the government's ability to build more units.

Establishing polices to regulate local monopolies is crucial for effectively addressing housing challenges. Therefore, the Egyptian government has launched several initiatives which aimed at improving access to affordable housing, yet still there is a significant shortage of affordable housing for low-income families. Some of the programs include:

- The “One Million Housing Units” project. One of the most ambitious programs which aims to build one million affordable homes across the country over the next few years. The project is being funded in part by the government, but also by private investors and international development organizations. While the project has the potential to make a significant dent in Egypt's housing crisis, there are concerns about its long-term sustainability. Some critics argue that the homes being built are too small and of inadequate quality and that they may not meet the needs of families in the long term. Additionally, there are concerns about the environmental impact of such large-scale construction, particularly in areas that are already densely populated and prone to natural disasters (Moneim, 2021).

- Social Housing Program, which aims to provide affordable housing units to low-income families. Under this program, the government provides subsidies to developers to build affordable housing units and offers low-interest loans to eligible families to purchase these units.

- The Inclusive Housing Finance Program, supported by the World Bank, which aims to enhance formal housing affordability for low-income households as well as to strengthen the ability of Egypt's Social Housing and Mortgage Finance Fund to formulate policies and manage social housing programs. It has enabled 287,600 households to benefit from the program since 2015 and is projected to support over one million homes by the end of 2024. Additionally, the program encourages private sector involvement in the development of affordable housing units (World Bank, 2019).

- The Central Bank of Egypt's initiative for low-cost housing finance, which allocates fifty billion Egyptian Pounds for mortgage financing for individuals and families with a maximum monthly income of 40,000 Egyptian Pounds and 8% interest rate. The initiative covers up to 90% of the property value and includes maintenance fees. The initiative targets low and middle-income segments of society and aims to stimulate the demand for affordable housing (Mena, 2021; Ahram, 2021).

- The National Housing Project for Youth (Dar Misr), which targets middle-income households with a monthly income of up to 25,000 Egyptian Pounds and offers them fully finished housing units with areas ranging from 100 to 150 square meters at subsidized

prices. The project also provides mortgage finance with a 10% interest rate and a repayment term of up to 20 years. The project aims to provide decent and modern housing for young people and families (CAMPAS, 2019).

- The New Urban Communities Authority (NUCA) of Egypt's Ministry of Housing, Utilities and Urban Communities, overseeing the planning, development and management of new urban communities in Egypt, has been at the forefront of the implementation of Egypt's social housing program, providing 660,000 units across 21 newly built cities, benefiting more than 3 million people. Additionally, NUCA ensures that housing is provided in a fair and equitable manner, considering factors such as location, accessibility, affordability and the provision of educational, medical and recreational facilities.

However, despite these efforts, there is still a significant shortage of affordable housing in Egypt. Many low-income families are forced to live in informal settlements, which lack infrastructure and basic services and are often at risk of eviction. Overall, while the government is taking steps to resolve the problem of affordable housing in Egypt, there is still a long way to go to provide adequate housing for all Egyptians, particularly those with low incomes. Therefore, this paper introduces short-to-long-term strategic solutions to improve the quality of existing living spaces through the 'Tactical Urbanism' and 'Tactical Housing' initiative.

2.3. “Tactical-ism” as a Potentials Solution

The most effective way to make a change in the urban setting is by encouraging people to act together rather than depending on individual actions, which improves their sense of responsibility towards society. Simultaneously, “tactical urbanism” is a widely known concept as a powerful process to foster a positive large-scale urban transformation by means of small-scale initiatives of low-cost resources, aiming to solve a problem that the society is suffering from, with the support of different actors. However, governments are not included in the bottom-up approach that tactical urbanism relies on, which leaves the actions purely originating from people's needs.

In fact, tactical urbanism is a cycle between a top-down and bottom-up approach, it does not only include community members, developers, or city counsellors but rather all of them working together. In simpler terms, tactical urbanism is targeting community challenges by embracing short-term, low-cost and feasible actions for a long-term urban change (Pfeifer, 2013).

Tactical urbanism is the process of testing ideas in the real world between the stage of planning and the realization of a comprehensive community vision. Emerging public spaces, transforming parking lots into pop-up parks, temporary cycling lanes, colorful pedestrian crossings and traffic calming for a day or a week. These activities have been formalized by tactics and methods of tactical urbanism (Steuteville, 2017).

In our daily routines and in the process of an evolving world, the small actions that have been taken in the past have had a massive impact on our present. Tactical urbanism advocates that these actions are implemented by the society itself, which not only it ensures equitable and inclusive participation of the community but allows practitioners to realize and act upon failing public policies (Lee & Milstead, 2017).

There are several potentials to use this method; the governments, residents, business developers and advocacy organizations will all gain from it in one way or another. Residents, within a neighborhood, will help local governments to rapidly translate their policies into actions. Simultaneously, citizens will not have to wait for the government or

local planners to act to make changes and improvements to their surroundings. While developers will be able to better understand the market and clients' needs through targeted data collection about market trends and areas of focus. Lastly, it will brand the positive outcomes of support offered by advocacy organizations, which in return will generate additional political and financial support to these entities (Planning Tank, 2020).

2.3.1. Characteristics and Principles of Tactical Urbanism

A key element of tactical urbanism is not to design a large-scale project but rather develop something that could even be temporary, which changes how a space functions or is perceived. This presents opportunities to test for ideas, observe results and figure out how it can be repeated or built permanently (Berg, 2012).

The main principle behind tactical urbanism is to initiate a small-scale temporary simple test, with low-cost resources, or a social experiment that affects and serves bigger purposes; in which should be a response to users' current needs. The process will require some time to realize and observe how users react to it. In most cases, it is necessary to engage users or hand them the tools to monitor the process in an efficient way. Only then, time becomes a crucial factor in the design process, which gives ideas the space to evolve and iterate, in sometimes quite various places, to know which idea works where before the long-term implementation process (Marta, 2018).

Ideas could be as simple as just raising awareness about an issue by implementing some social experiments to let people feel and evaluate the impact of their decisions. Ideas are implemented in the form of a prototype that could be easily modified. Then the experiment is strengthened by assessing it to be able to witness the results and to figure out people's attitude towards the proposal prior to any financial or political obligation towards the realization of the project (Lydon, 2012). This method gives users the most relevant solutions depending on their needs. It allows them to participate in shaping and defining the character of the urban public space (Purcell, 2008). Correspondingly, it evokes several senses like the sense of ownership in public space or the sense of belonging in the community, which can increase community attachment when uniting the users over one idea or one concept to create a unique character to their neighborhood (Hou, 2010).

Small actions have always been a tool and step towards a profound change. Tactical urbanism does not aspire to realize major urban transformations, but rather focusing on quick and practical initiatives. The methodology requires little to no modification to the existing infrastructures; its principles depend on reusing the existing open spaces and urban structures. Its goal in this regard is to increase the city's sustainability standards (Ramos, 2022).

2.3.2. Tactical Urbanism, Placemaking and Inclusivity

Steuteville's interview with Mike Lydon and Anthony Garcia (2017) revealed that there are two factors which usually make it more difficult for urbanists to apply tactical methods and actions on buildings than streets; the larger-scale structures are more complex and streets are a lot more accessible by people.

New urbanists have learnt the significant role that buildings' structures play in shaping public spaces, however there are limits to what these structures can accomplish. It has some solutions to offer, but the activities that take place between these structures are equally significant. This is why there are far more projects on the streets because people view there as the front line. There is an ownership level tied to housing structures.

On the streets people can claim ownership as taxpayers or they may be able to eventually get permissions to assess and implement their interventions. On the contrary, lots and buildings are private property. It is quite simple if the property owners are willing to let residents shape their space; in this case the residents will only have to share or unite over an action and the larger the collaboration network is, the more blocks are completed and the more blocks of public right are generated.

Over the years, the planning process led to the creation of residual areas; intermediate spaces that are not providing any significant benefits to the local community. These spaces are usually found between streets and under bridges, but in many cases, they are located between buildings. Researchers also refer to these areas as lost spaces since they are a hindrance on urban planning when disused or gradually transformed into informal activities. While others frame it as an opportunity that provides a source of revenue for unprivileged residents and promotes community participation, which in turn might contribute to the sustainable growth of cities. In fact, by reusing these spaces, their potential can be realized, but only when it is oriented towards serving the community and tackling some of the issues such as unemployment and social isolation (El Messiedy, 2019).

Placemaking is a complementary principle to tactical urbanism. Creating a suitable place is about more than simply clever design or attractive architecture. It is about creating a place that meets the needs of the people who use it and that fosters a sense of community and connection. Placemaking encourages the collaboration process between people and stakeholders to help shape our public realm and maximize its value, it “facilitates creative patterns of use, paying particular attention to the physical, cultural, and social identities that define a place and support its ongoing evolution” (Ellery & Ellery, 2019).

The Project for Public Spaces (PPS) is an organization that has spent decades studying what makes a decent place and their research has identified several key factors. One of the most crucial factors is a sense of “place identity”. A suitable place should have a unique character and personality that reflects the people and culture of the community it serves. It should also be accessible and inclusive, welcoming people of all ages, backgrounds and abilities. Another key factor is a variety of uses and activities. Great places offer something for everyone, whether it is a park for relaxation and recreation, a plaza for socializing and events or a street lined with shops and cafes. Great places also prioritize people over cars. This means designing streets and public spaces that prioritize pedestrians, cyclists and public transit over private vehicles. It also means creating spaces that encourage social interaction and connection, such as benches, seating areas and public art. Finally, great places are designed with sustainability in mind. This means incorporating green spaces, trees and other natural features that help reduce the impact of climate change and promote a healthier environment (PPS, 2022).

The principles of creating a great place, as outlined by the Project for Public Spaces, are closely related to the concepts of inclusive growth and compact city principles. Inclusive growth is about creating economic growth that benefits everyone, regardless of their background or socioeconomic status. Further, the principles are about designing urban areas in a way that maximizes efficiency and reduces environmental impact. Creating great places that are accessible is essential to achieving inclusive growth. By providing public spaces that are welcoming to everyone, cities have the potential to foster a sense of community and belonging for individuals regardless of their income or background. By prioritizing public transit and pedestrian-friendly design, cities can create more equitable access to jobs and services, which in turn can promote economic growth.

Compact city principles are also closely related to creating great places. By designing cities in a way that maximizes efficiency and reduces environmental impact, cities can create more loveable and sustainable urban environments. This means designing compact, walkable neighborhoods with a mix of uses and activities, which can reduce the need for car travel and promote public transit use.

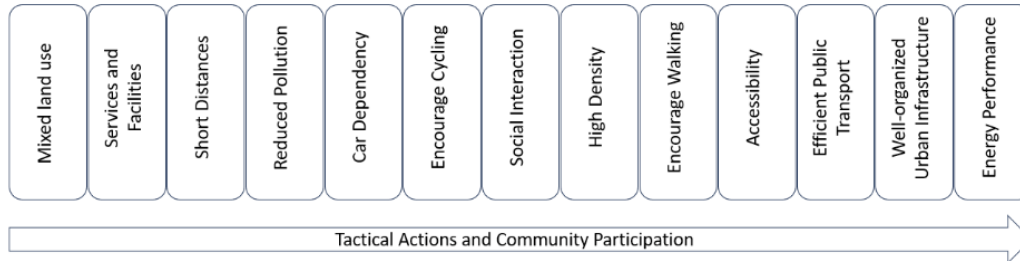


Figure 2. Principles of a Compact City Achieved Through Tactical Urbanism and Community Engagement
Source: Developed by Authors, 2023

Creating great places that are inclusive and sustainable is essential to achieving compact city principles. By prioritizing people over cars, designing with sustainable mind-set and promoting a mix of uses and activities, cities can create more loveable and equitable urban environments for all.

2.3.3. From Tactical Urbanism to Tactical Housing

As the largest city in Egypt, Cairo faces a range of challenges related to the residential sector, including a shortage of affordable housing, informal settlements and inadequate infrastructure. By following the compact and inclusive principles of creating great places, Cairo can create more loveable and equitable housing environments for its residents.



Figure 3. The Five Principles of Adequate Housing
Source: Developed by Authors, 2023

Tactical urbanism can be an effective approach to achieving the five principles of adequate housing. It involves using low-cost, temporary interventions to improve the built environment and address housing challenges. The five principles of adequate housing (The 5 A's) are often mentioned in discussions about housing rights. They include Availability, Accessibility, Acceptability, Affordability and Adaptability.

Availability refers to an adequate supply of housing options, ensuring that everyone has access to housing. Accessibility emphasizes the need for housing to be easily reachable, especially for individuals with disabilities. Acceptability relates to the quality and suitability of housing, considering factors like location, infrastructure and cultural appropriateness. Affordability ensures that housing is affordable for all, regardless of income level. Lastly, Adaptability emphasizes the flexibility of housing to meet changing needs and accommodate diverse households over time. These five A's collectively outline the core dimensions necessary for housing to be considered adequate.

Alonso Ayala Aleman has extensively studied the concept of adequate housing and has emphasized its multidimensional nature. According to Aleman, adequate housing should not only provide physical shelter but also incorporate aspects such as legal security of tenure, access to basic services, affordability, habitability and location with regards to essential facilities and employment opportunities. These principles highlight the need for housing that goes beyond a mere roof over one's head and encompasses the overall well-being and dignity of individuals.

The CESCR, a body of experts responsible for monitoring the implementation of the International Covenant on Economic, Social and Cultural Rights (ICESCR), plays a significant role in defining and promoting adequate housing principles. CESCR's General Comment No. 4 emphasizes that housing should be affordable, safe and accessible, with secure tenure and protection against forced evictions. It further highlights the importance of non-discrimination, particularly in ensuring equitable access to housing for marginalized and vulnerable groups.

These principles emphasize the need for housing that is secure, habitable, affordable and accessible, while also addressing issues of non-discrimination and meaningful participation. By adhering to these principles, governments and societies can work towards ensuring that every individual and community has access to adequate housing, thus promoting dignity, well-being and the realization of human rights for all.

However, on the other hand, the development of housing projects, or the upgrading of existing ones, requires recognition of the fact that neighborhoods have distinct characteristics, due to their population, economic, physical and social attributes. To create sustainable and affordable housing, it's essential to draw lessons from past experiences and focus on incorporating local identity; adopting Western-style housing often leads to cultural clashes and notable environmental challenges (Ebrahimi *et al.*, 2022). Thus, the context in which the residential unit is located plays a crucial role in defining the influential actions to be employed. In residential areas, placemaking must relate directly to the housing characteristics and living conditions. Housing projects should first address the user needs before applying professional expertise. Accordingly, tactics become essential actions to achieve the compact model at the scale of the neighborhood, block, building and even the residential unit. This requires recognizing that housing structures and the spaces between them grow in separate ways and need different strategies to deal with seemingly similar problems and this subsequently requires finding additional principles of adequate housing to deal with different housing requirements through community participation.

3. Methods of Analysis and Case Studies

A mixed method, based on the consolidation of objective and subjective indicators using data gathering and analysis, was used to analyse the impact of the relation between residential buildings and the unbuilt environment on the quality of living. The indicators were framed into two groups, objective and subjective indicators and each discussed several principles and aspects, as shown in (Figure 4) below.

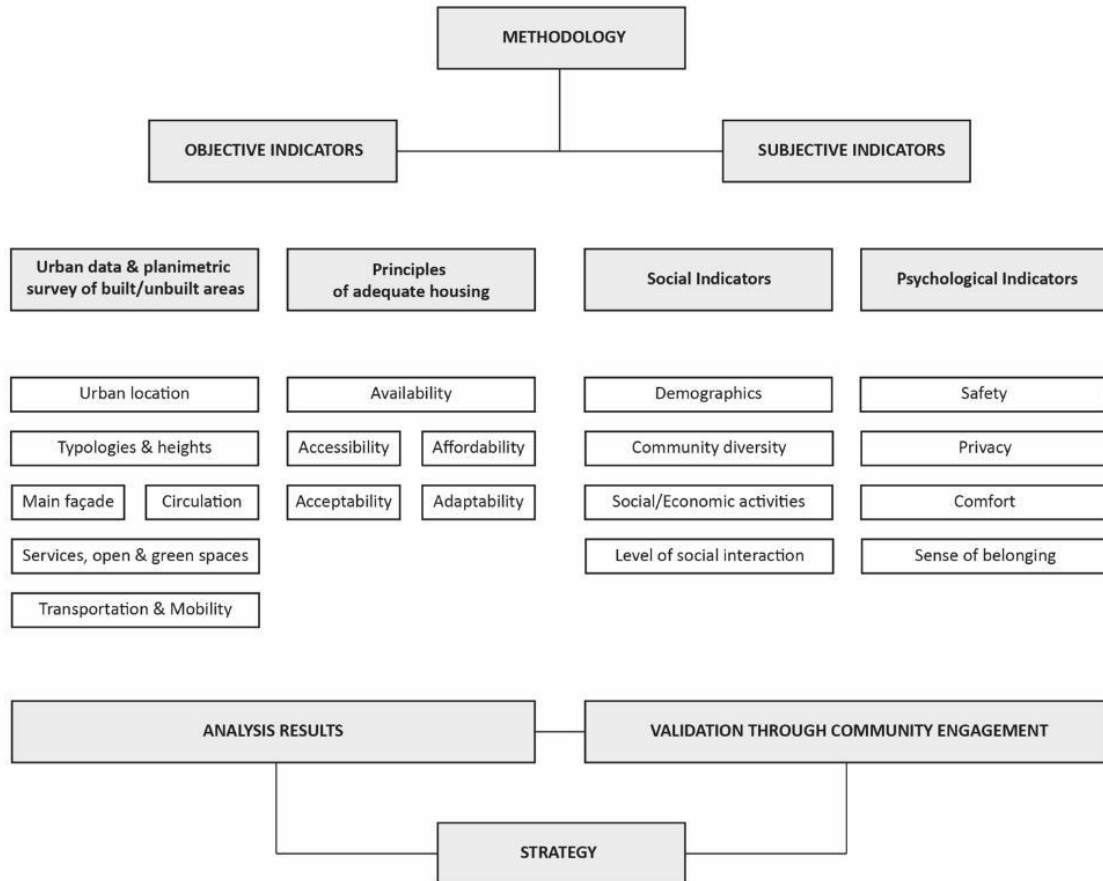


Figure 4. Methodology
Source: Developed by Authors, 2023

During the study, twenty cases in fifteen different locations in Greater Cairo were analyzed. To thoroughly examine these cases, various methods of analysis were employed. Firstly, field analysis on each case was conducted, meticulously examining the indicators and characteristics associated with affordable housing and inclusive types. This involved engaging with the inhabitants and gathering their perspectives and experiences to gain a holistic understanding of the housing situation. Following this, further analysis that aligned with the principles of affordable housing and inclusivity were delved deeper into and factors such as accessibility, affordability and social integration within the housing community were explored.

Upon completing the individual case analyses, comparative analysis between the cases studies was undertaken, which helped in identifying similarities, differences, strengths and weaknesses across the housing projects. Armed with this comprehensive knowledge, the study concluded with formulating strategies for enhancing housing

quality and making improvements based on the findings. These strategies aimed to address any deficiencies or challenges identified, while also promoting affordability, inclusiveness and overall well-being within the housing communities.

However, due to the length of the study, the paper provides a sample of four case studies. The selection of the twenty case studies followed four main criteria (in the following order):

1. Representation of housing development projects in different time periods since the early 20th century to date.
2. The oldest residential development in each area, according to satellite images that indicate the city's development process.
3. Ensure that the study covers all building typologies (with prime reference to form, shape and compactness).
4. Medium to high rise buildings.

The four case studies are multi-family buildings in residential blocks within the borders of Greater Cairo in Egypt. Each of them is an example of a housing typology in a different generation of the city development (Figure 5).

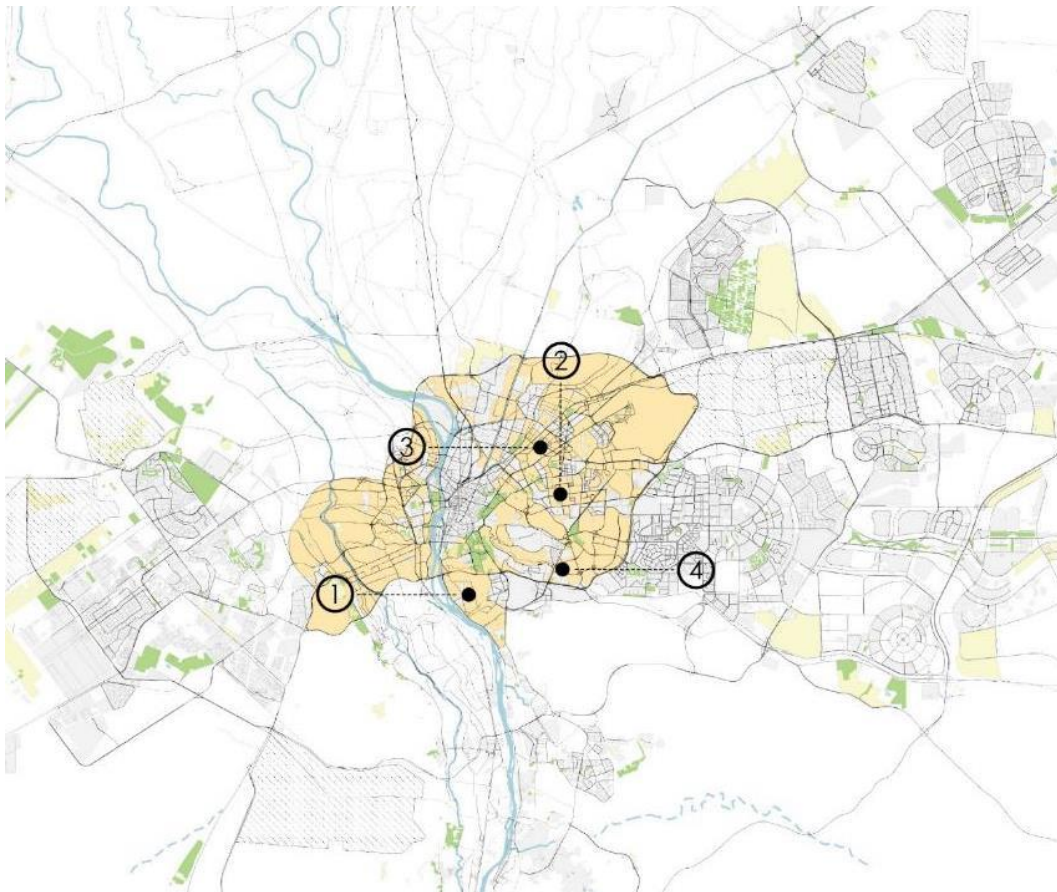


Figure 5. Location of Case Studies

Source: Developed by Pardis Helmy, Housing Course, German University in Cairo, 2023.

1. Case Study (A): Maadi

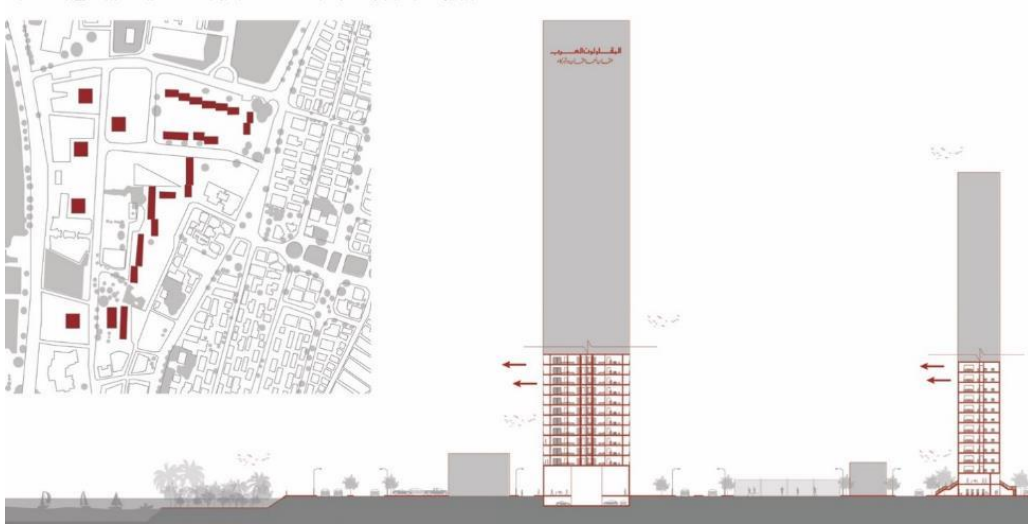


Figure 6. Case A: Abrag Othman, Maadi

Source: Developed by Housing Course Students, German University in Cairo, Edited by Authors, 2023.

2. Case Study (B): Nasr City



Figure 7. Case B: Othman Buildings, Nasr City

Source: Developed by Housing Course Students, German University in Cairo, Edited by Authors, 2023.

3. Case Study (C): Heliopolis

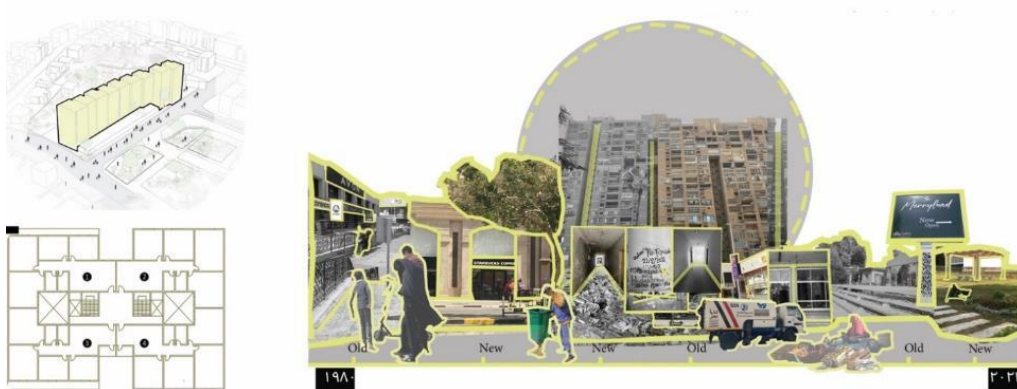


Figure 8. Case C: Othman Ahmed Othman Buildings, Heliopolis

Source: Developed by Housing Course Students, German University in Cairo, Edited by Authors, 2023.

4. Case Study (D): Al-Mokattam



Figure 9. Case D: Al Asmarat, Al Mukattam

Source: Developed by Housing Course Students, German University in Cairo, Edited by Authors, 2023.

4. Results and Discussion

The study aimed at detecting housing problems in each case study through assessing the objective and subjective indicators in concerned residential neighborhood. The results reflected issues on different scales, neighborhood, block, intermediate spaces, building and unit. Residents engaged in the study to validate, give additional reliable perspective to the living conditions and to answer the intangible aspects of the study, which can only be observed by residents and their everyday life experience in the area. Then after, the results of the analyses were re-thought with consideration to residents' reflections, remarks and feedback to finally produce a short-to-long term tactic which can be implemented through community participation to solve major, minor or a single basic problem in the area.




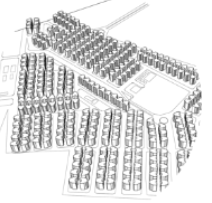
Table 1 presents the findings of the objective aspects on the four case studies. Although the four typologies have been developed in different eras and in different neighborhoods, they still share many similarities: fully occupied, unaffordable and limited to certain social classes (Table 1). The standardization in division of the housing units meant larger families had to compromise their comfort in smaller spaces. Only upper social classes, in cases (A and C) were able to merge with their neighboring unit to adapt to their spatial needs. In housing projects built by the private sector, the ground floor accommodates several services and/or commercial activities, contrary to the (case study D) where the ground floor is used to maximize the residential units and accommodate more users.

Located in a relatively dense area and well connected to public transportation and services, buildings in cases (A, B and C) attracted private business owners to rent residential units and transform it to offer their services for the public, which increased the traffic flow and let some residents move out to other areas. However, for the same reason, this provides users in such cases the access to employment, healthcare and other essential services unlike (Case D) where users are only provided access to public sport facilities and remain dependent on closer neighborhoods for their daily needs.

As regards participation in public life, the lack of appropriately designed open and/or green spaces (cases A, B and D) let the residents limit their social interaction to coincidences in corridors or setbacks and rely on instant messaging applications for

communicating. However, in (case C), if they did have large enough spaces, the users also could not use it as gathering spaces, as it was underutilized and unmaintained.

Table 1. Objective indicators.

Study case	A	B	C	D
				
Building(s)	Abrag Othman	Othman Buildings	Othman Ahmed Othman Buildings	Al Asmarat
Neighborhood Era	Maadi Mubarak Era	Nasr City Sadat Era	Heliopolis Mubarak Era	Al Mokattam Al Sisi Era
Typology	Highrise Detached	Medium-Highrise Semi-detached	Highrise Row Housing	Medium-Highrise Detached
Height	G+23-41	G+10	G+21	G+9
No. of apts. / floor	2-3	6	4	6
Main façade - Ground floor	Parking	Shops / Services	Shops / Services	-
Entrance situation	Direct - Triple height	Side - 3 cores	Front - Elevated	Direct - Elevated
Roof	Unused	Unused	Unused	-
Open spaces	Vehicular use	Onsite - unused	Corridors on the ground floor	Setbacks
Services	<100 meters	Onsite	Onsite	<500 meters
Green areas	-	Onsite	-	-
Transportation	<100 meters	<100 meters	<100 meters	<300 meters
Availability	Few apartments are usually available for rent (usually rented by Arab families in summer)	Apartments are rarely available for rent	Apartments are rarely available for rent	Not available
Accessibility	Location provides users the access to leisure, education, healthcare and other essential services	Location provides users the access to leisure, education, healthcare and other essential services	Location provides users the access to leisure, education, healthcare and other essential services	Location provides users limited access to religious, education, healthcare and governmental services
Affordability	Rent > 750\$ / month	Rent < 350\$ / month	Rent < 500\$ / month	Owned by the government, used by residents displaced from “Maspero triangle”
Acceptability	Several users had to merge two apartments to adapt the space according to their needs	Several users had to merge two apartments to adapt the space according to their needs	Spaces meet user needs in most cases	For most users, spaces do not meet their demands

Adaptability	Several residential units have been transformed into commercial activities and/or services	Few residential units have been transformed into governmental services	Several residential units have been transformed into commercial activities and/or services	No capacity to accommodate substantial changes
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As regards to community engagement, the results (Table 2) indicate a greater need for open spaces and gathering areas for better social interaction, while there was a greater threat for cultural adequacy in (case D), as users used to produce and exhibit their crafts or offer their services in such spaces prior to their displacement. As for the environmental conditions, users expressed their concerns and stressed the necessity of having green areas to enhance the overall living qualities. In (case B), there are spaces large enough to integrate landscape and accommodate social activities; however, as those areas lack maintenance, urban furniture and shading elements, users did not find it very pleasant and it ended up not being used.

Table 2. Subjective indicators

QUESTIONS	A	B	C	D	
Negative characteristics of current home	Indoor	Wind tunnel effect causing a dusty and noisy environment	Outsiders can easily enter the building to access different services	Higher flows of visitors due to the increasing number of units transformed into services.	Small areas: do not meet the needs of residents as a result of standardization of units' division. Privacy.
	Outdoor	Traffic congestion. No landscape integration. Lack of gathering areas.	Underutilized potential spaces	Poor environmental qualities in entrance areas and areas between buildings on the ground floor. Informal economic activities took over the spaces for social integration	Lack of open spaces and commercial services. Absence of production places on the ground floor (similar to Maspero triangle, where they used to live)
Aspects residents would change of their home for a better living environment	Indoor	Add some plants in the terrace to make use of the cornice view	Controlled access and better security measures	-	Flexibility in division of units: increase the area of apartments.
	Outdoor	More parking spaces. Use spaces between buildings as gathering areas with shading and seating elements.	Transform the underutilized spaces into green playing areas for children. Use the roof as gathering areas with shading and seating elements.	Redesign the entrance areas and corridors to enhance the overall environmental conditions by transforming it into active spaces	Dedicate small areas throughout the neighborhood for people to sell their crafts and attract people from outside

Regarding habitability, the standardization of building heights and the relatively narrow setbacks in (case D), left users prone to inadequate ventilation and natural light conditions, especially in the lower floors; moreover, they were vulnerable to neighbors invading their privacy. In the case of High-rise typologies (A and C), the existing parking

spaces are very limited as it is shared between residents and visitors, especially between noon till almost midnight; furthermore, users suffer from noisy environment and lower sense of security due to the increased mobility to access services that replaced residential units.

4.1. Strategies through Community reflections

This part of the study presents reflections from the analysis and potential strategies that residents have found efficient and effective to solve specific problems and raise the level of quality of life for their units or their surroundings. Additional concepts, elements, tools and tactics have been analyzed and incorporated into the strategy by the authors to frame strategies in a rational and scientific manner.

Maadi (Case A)

The strategy aimed for better social inclusion as well as a treatment for the wind tunnel effect in buildings by increasing the green footprint in site. Selected types of locally available trees including Tecoma, Jacaranda, Ponciana and Acacia were selected; all of which are tall enough to reduce wind tunnels and provide an open shaded space for residents. Users would participate in the process of planting and irrigation, which by its role will increase the social interaction and on the long-term, provide safe spaces for community gatherings surrounded by a healthier context, more protected from noise and air pollution.

Nasr City (Case B)

The strategy is developed to transform the underutilized areas into social hotspots and interactive environment for residents, fostering a greater sense of community and well-being (figure 10). One idea is to transform the vacant spaces, created by the typology of the building, into child-friendly areas that can provide a safe and engaging environment for children to play and interact with their neighbors. The other includes the roof of buildings that could be used as a space for fitness activities or accommodate garden terraces providing a relaxing environment for residents. In this case, users would make use of the existing Russian structure on the roof for shading, however, they might still need to repaint it and add several louvres or fabrics where necessary. Users would also move some of their no longer used furniture to the roof to divide the spaces between genders or different age groups as a matter of respect to their cultural norms.

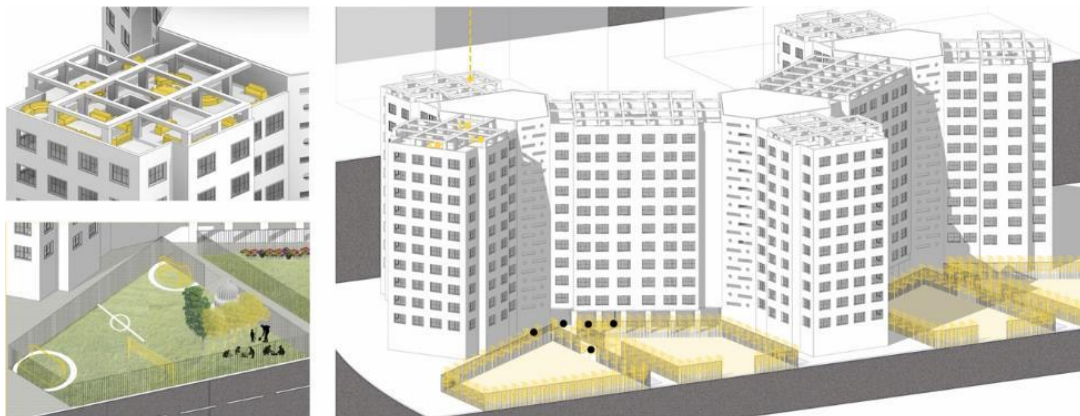


Figure 10. Proposal in Othman Buildings, Nasr City

Source: Developed by Housing Course Students, German University in Cairo, Edited by Authors, 2023.

Heliopolis (Case C)

The strategy aimed at transforming the unclean and wasted public alleyway that lies along the main street, where people used to avoid, into a vibrant entrance situation offering better chances for community engagement in a clean, safe and well provided for environment. The strategy is dependent on two prototypes (Figure 11) that consider different social classes. The first is a bench, for residents to sit and interact, with a designated space for the integration of diverse types of plants. The other is more serving the less privileged in the community by formalizing their informal economic activities, which took over the space in front of the buildings, inside kiosks made by using recycled materials. This will not only ensure that in the long term those spaces remain active and well maintained but it will also strengthen social cohesion.

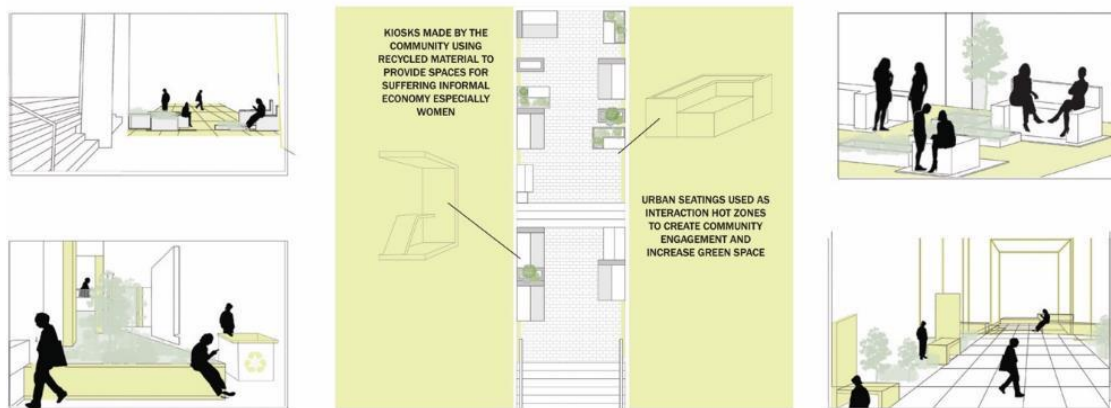


Figure 11. Proposal in Othman Ahmed Othman Buildings, Heliopolis

Source: Developed by Housing Course Students, German University in Cairo, Edited by Authors, 2023.

Al Mokattam (Case D)

The strategy in this case focuses on the culture identity of the inhabitants and the character of the built context in where they used to live. Displaced from “Maspero Triangle” to one of Al Mokattam’s deserted areas and in an entirely new typology, users were not able to adapt either socially or economically to the situation. People could not practice their craftsmanship post displacement and accordingly they were not able to afford using most of the amenities in the newer context. Thus, it was essential in that case to involve NGOs for funding and the public sector for the approvals required to designate an area (Figure 12) for the residents to produce and display their crafts to the public and make profits. While volunteers from the private sectors would support by designing and sharing posters that will help increase pedestrian flow and encourage people to visit the area. Only when the initiative gains momentum, Al Asmarat would gradually transform into a commercially sustainable zone and users would not need to compromise basic needs to adapt.

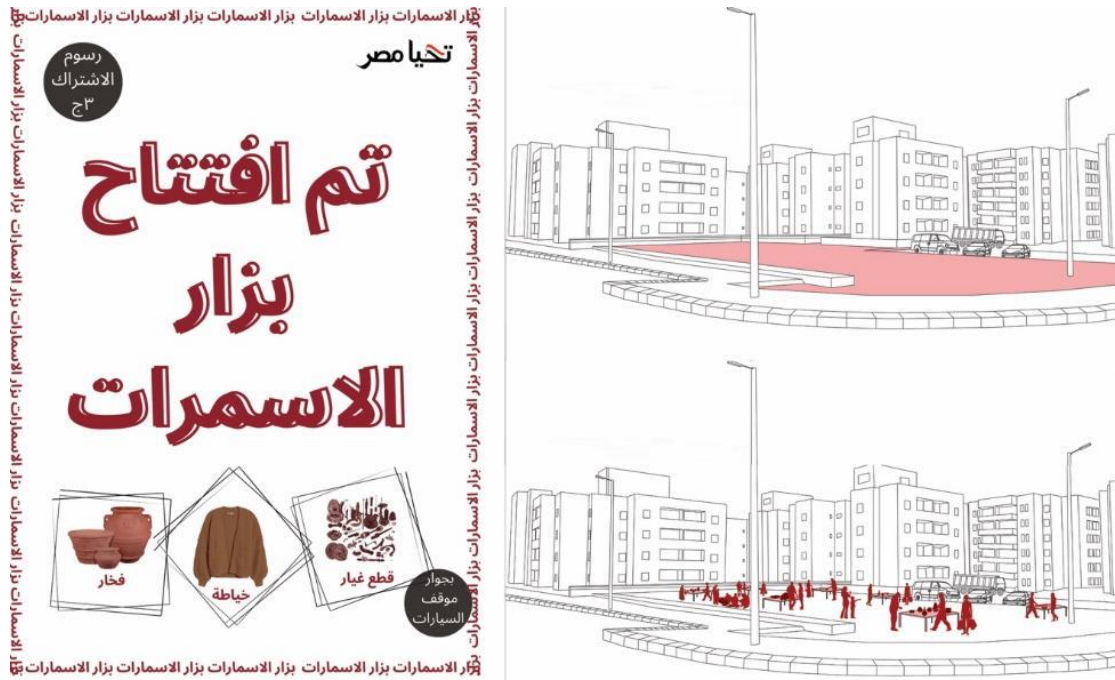


Figure 12. Proposal in Al Asmarat, Al Mukattam

Source: Developed by Housing Course Students, German University in Cairo, Edited by Authors, 2023.

5. Conclusions

The study investigated the role of tactical actions and community engagement in shaping decent neighborhoods in Cairo. It was found that community participation reflected the need to integrate tactical housing principles with the principles of compactness to achieve a sustainable built environment and cover the lack of adequacy in their respective areas of residence.

Several analyses were conducted on selected residential neighborhoods in Cairo. Through the analyses and users' engagement in the study via questionnaires and interviews, it was evident that the five adequate housing principles shall incorporate sub-aspects on different scales (neighborhood, block, building, intermediate and unit) to achieve a comprehensive strategy to solve certain problems or integrate additional elements to upgrade residents' quality of life.

It can be concluded through the four case studies that housing in Cairo represents physical structures that only stand for shelter and protection; its planning and design fail to reflect the cultural values or provide adequate and flexible living dimensions for inhabitants. It becomes evident that the situation requires new strategies that allow people to unlock their full potential and fully participate in society to promote their well-being and quality of life. Although all four case studies share common problems, the results from onsite interviews and community engagement efforts raised other concerns, specific to the social or economic level and the nature of the site. In each case, different strategies and tactical actions were adopted depending on the situation and each had to be locally contextualized and adapted to meet user demands.

It was also evident that in the case studies of this research, the five adequate housing principles lack context awareness and therefore each case study presented additional principles. These principles vary from one case study to another, due to the distinctive characteristics in the built environment and inhabitants' needs. In most cases, the needs

of inhabitants were far beyond the prime five principles, yet incorporated basic elements which on the long run achieves an alternative of one or more of the principles, such as security, social cohesion, privacy, etc. Thus, the study suggests that residents can contribute to the well-being of their built environment through tactical actions, which can partially play the role of “social program” in achieving decent life qualities in the existing residential neighborhood, especially in the areas facing lake of partnerships with stakeholders.

Further, the principles of inclusive and compact growth are closely related to the five principles of adequate housing. Inclusive growth aims to ensure that economic development benefits all segments of society, including access to housing. Availability and affordability of housing are essential components of inclusive growth, as they enable individuals from diverse socio-economic backgrounds to participate and benefit from economic opportunities. Compact growth focuses on creating sustainable and efficient urban environments, which aligns with the principles of accessibility and adaptability. By promoting compact and inclusive growth, urban planning and housing policies can ensure equitable access to adequate housing, foster social integration and support sustainable development. In fact, the results of the study show that in some cases residents unconsciously proposed tactics related to inclusive and compact principles rather than the adequate housing principles and therefore the study suggests a holistic model which integrates all principles together to achieve a decent housing environment through community engagement (Figure 13).

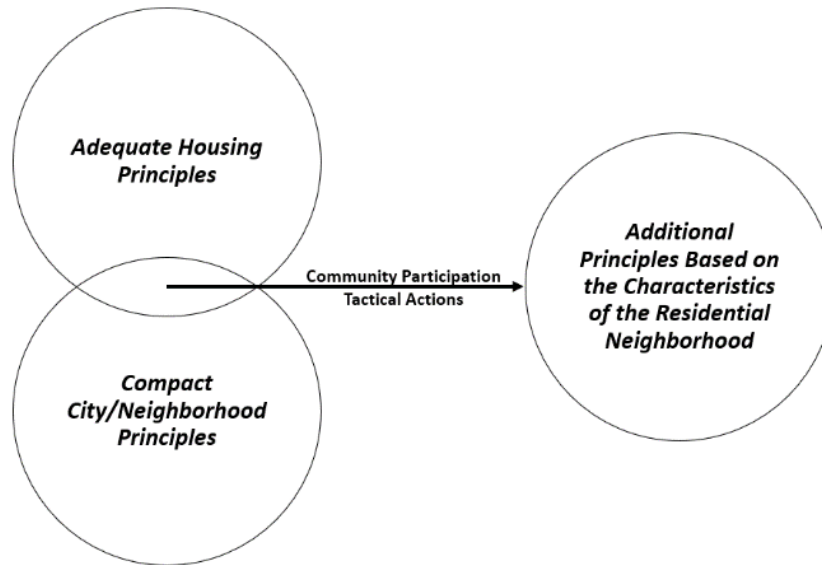


Figure 13. Proposed Model for Decent Housing in Cairo
Source: Developed by Authors, 2023

On the hand, the fact that volunteers need to dedicate some time or financial support to complete these tasks is one of the challenges of this notion. There is undoubtedly a need to have the capacity of an engaged community, however, this is not necessarily the case in every project. Underprivileged and under-resourced communities can rely on tactical methods to achieve quicker results at lower costs, which will progressively create a momentum in underserved parts of the neighborhood (Steuteville, 2017, para.11).

However, with the partnership with stakeholders, the contributions are more likely to find their way through. With partnership with stakeholders, some suggested strategies include:

1. **Availability:** Tactical urbanism can help increase the availability of housing by repurposing underutilized spaces or converting vacant lots into temporary housing units. It encourages creative use of existing infrastructure to provide immediate housing solutions.

2. **Accessibility:** Tactical urbanism interventions often prioritize pedestrian-friendly design, improved sidewalks and bike lanes, enhancing accessibility to housing and essential services. These interventions can also focus on creating accessible and inclusive housing designs for people with disabilities.

3. **Acceptability:** Through community involvement in the design and implementation of tactical urbanism projects, the interventions can reflect local needs and preferences, making housing more acceptable to the community. Community participation ensures that housing interventions are culturally sensitive and appropriate.

4. **Affordability:** Tactical urbanism can explore innovative housing solutions such as micro-housing, co-housing or adaptive reuse of existing buildings, which can be more affordable than traditional housing options. These interventions can also demonstrate the feasibility of alternative financing models for affordable housing.

5. **Adaptability:** Tactical urbanism emphasizes flexible and adaptable designs. It encourages modular construction, adaptable spaces and temporary installations that can be easily modified or scaled up to meet changing housing needs. This approach enables housing to evolve with changing demographics and household requirements.

Finally, access to adequate housing is a primary human right that remains out of reach for far too many people around the world. The lack of affordable housing, particularly in urban areas, exacerbates poverty and inequality and perpetuates cycles of homelessness and displacement. Addressing the housing crisis requires a multi-faceted approach that includes policy interventions, investment in social housing and innovative financing mechanisms. By prioritizing access to safe and affordable housing, we can create more equitable and sustainable communities that benefit everyone. Yet, Residents are the core of any social program and thus engagement is the key tool to growth and prosperity.

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