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MSc04 URB
May 2023

Post-conflict reconstruction

Re_ Building Mykolaiv

ABSTRACT

This thesis explores the intersection of urban design, theories of post-conflict reconstruction, the principles of building back better and livability. With a specific focus on new neighbourhood and street typologies, the research investigates innovative approaches to enhance the urban fabric and the quality of life in post-conflict cities.
Drawing upon theoretical frameworks and case studies, the study delves into the multifaceted aspects of post-conflict urban reconstruction. It examines the challenges and opportunities that arise in rebuilding cities after periods of conflict, considering socio-cultural, economic, and environmental factors.
The thesis emphasizes the concept of post-conflict reconstruction as a guiding principle for sustainable and resilient urban development. By integrating best practices and lessons learned from successful reconstruction efforts, the aim is to create more inclusive, equitable, and livable communities.
Central to the research is the exploration of new neighbourhood and street typologies. These typologies prioritize pedestrian-friendly infrastructure, efficient transportation systems, and the integration of green spaces and open areas. The thesis investigates how these elements contribute to the creation of vibrant, safe, and sustainable urban environments.
The methodology encompasses a comprehensive literature review, case study analysis, and design proposals. By examining renowned theories and successful post-conflict reconstruction projects, the research aims to extract valuable insights and design principles applicable to the specific context of new neighbourhood and street typologies.
The findings of this thesis contribute to the discourse on post-conflict reconstruction and urban design, offering practical recommendations and innovative solutions for architects, urban planners, and policymakers involved in shaping the built environment of post-conflict cities. Ultimately, the research aims to promote the well-being and livability of these communities by fostering inclusive, sustainable, and resilient urban development.

Post-conflict reconstruction

Re_Building Mykolaiv

Urban Architecture
Master's Thesis

Number of pages: 98
Appedix: 6
Supervisor: Nicolai Stainø
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The following report is the result of the master's thesis, which was written as part of the master's degree program in Urban Architecture at Aalborg University. The project lasted from February 1st to 25th of May, 2023, with a final oral presentation and defence taking place on 12th of June, 2023. I would like to thank my professor Nicolai Steinø for the supervisions, the professors and my colleagues who participated in the two pin-up presentations and a midterm seminar for providing me with helpful feedback and guidance.

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Aalborg 25th of May, 2023

READING GUIDE

The thesis is structured into six distinct chapters, each serving a specific purpose and contributing to the overall narrative.

-The prologue sets the stage by providing an introduction to the context of post-conflict reconstruction and the significance of urban design in this process. It establishes the research objectives and outlines the scope of the study.
- In the second chapter, analysis forms the core of the thesis, delving into a comprehensive examination of relevant theories and concepts related to post-conflict reconstruction and urban design. It critically evaluates the successes and challenges of previous projects, extracting valuable lessons and insights.
- In the third chapter, the design framework is presented, a conceptual framework is developed, synthesizing the findings from the analysis chapter. This framework serves as a guide for the subsequent design proposals and interventions.
-In the fourth chapter, the new city presents the heart of the thesis, where innovative ideas and design solutions for new neighbourhood and street typologies are explored. It examines the integration of pedestrian-friendly spaces, sustainable transportation systems, and the incorporation of green areas and open spaces to enhance livability.
-The epilogue, the fifth chapter, concludes the thesis by reflecting on the key findings, discussing the implications of the research, and proposing recommendations for future post-conflict reconstruction endeavours.
-Finally, the appendix provides supplementary materials such as detailed design plans, illustrations, and additional references for further exploration.

This reading guide allows readers to navigate through the thesis, providing a clear roadmap to comprehend the logical progression of ideas and the significance of each chapter. It ensures a comprehensive understanding of the research, its contributions to the field of urban design and post-conflict reconstruction, and the practical implications for designing resilient and livable cities.

References

Texts and other outside sources are cited using Harvard style referencing. A label marking “own” indicates that the illustration belongs to the author. References will be compiled at the end of the project in a collected list. There is an indication of scale on each map, as well as an arrow pointing north.

VOCABULARY

Throughout the course of the project, a deliberate utilization of distinct and relevant terminology will be employed to describe various elements. Additionally, a dedicated vocabulary section will be included to elucidate key terms:

-T(1/2..) will represent typology
-PCR will signify Post-conflict reconstruction
-BBB will denote building back better, while
-L, M, and S will respectively represent large, medium, and small sizes.

This approach ensures effective communication by employing language that is contextually appropriate and aligned with the project’s objectives. By embracing terminology and providing comprehensive explanations, a shared understanding among project participants will be fostered, facilitating seamless collaboration and promoting clear and concise communication throughout the entirety of the project.

TABLE OF CONTENTS

“Peace is not absence of conflict, it is the ability to handle conflict by peaceful means”

Ronald Reagan

01 PROLOGUE

During the first chapter, a baseline will be established to allow the readers to immerse themselves more easily in the project theme and subject. A brief overview of the project context and existing future plans is provided first, followed by a discussion of methodology and process.

Designing a post-conflict city

Designing a city that has experienced conflict, necessitates a distinct approach that takes into consideration the intricate social, economic, and political dynamics that have arisen as a consequence of the conflict. Urban design interventions must be based on a profound understanding of the local context, which entails engaging with local communities and stakeholders to grasp their needs, preferences, and priorities, as well as the challenges they confront. The design process should be inclusive and participatory, involving a diverse range of stakeholders in the decision-making process.

A theoretical framework for urban design in post-conflict cities can be formulated as follows: firstly, the design should prioritize the reconstruction of fundamental infrastructure and services that were destroyed or damaged during the conflict. This may entail the repair of roads, bridges, and other transportation infrastructure, as well as the provision of basic services such as water, electricity, and sanitation.

The design should also prioritize the establishment of public spaces that foster social interaction, cultural expression, and civic engagement. Public spaces can serve as catalysts for social cohesion, community building, and economic development. They can additionally serve as venues for the expression of cultural identity and the celebration of diversity.

Furthermore, the design should be oriented towards promoting economic development and generating employment opportunities. This may involve the establishment of commercial spaces, the fostering of entrepreneurship, and the implementation of training and education programs to enhance local capacity.

Additionally, design interventions must demonstrate sensitivity towards the cultural and historical context of the city. This may entail the preservation of historic buildings and cultural heritage sites, as well as the integration of traditional building practices and materials into the design.

Moreover, the design should emphasize the promotion of environmental sustainability and resilience. This may include incorporating green infrastructure, encouraging sustainable transportation modes, and implementing strategies to mitigate the impact of climate change.

In general, the theory of urban design for post-conflict cities recognizes the importance of designing with a profound understanding of the local context and giving priority to actions that not only address the immediate needs of the population, but also foster long-term economic, social, and environmental sustainability. Urban designers have a critical role to play in the reconstruction of post-conflict cities by involving local communities and stakeholders, fostering social cohesion and economic growth, and prioritizing environmental durability. They have the ability to create a city that not only meets the immediate needs of the population, but also advances long-term sustainability and resilience.

Towards a new city

The reconstruction of Ukraine, particularly the city of Mykolaiv, necessitates a comprehensive approach that addresses various aspects of urban development. After a period of conflict, the focus shifts towards meeting immediate needs while promoting long-term sustainability and resilience. Notably, the Danish government and organizations have played a focal role in providing substantial support and assistance for the reconstruction efforts.

Working in tandem with the Danish government, the restoration of essential infrastructure and services takes precedence in Mykolaiv's rebuilding process. The collaboration accelerates the repair and rehabilitation of roads, bridges, and transportation infrastructure, reestablishing vital connectivity within the city promptly.

Simultaneously, the Danish government's involvement fosters the creation of public spaces that encourage social interaction, cultural expression, and civic engagement. By leveraging their expertise in urban design and planning, Danish organizations contribute to the development of public spaces that act as focal points for community cohesion, cultural celebration, and economic revitalization. Their engagement ensures the integration of best practices and innovative design principles into the reconstruction efforts.

Moreover, the Danish government's commitment to promoting economic development and employment opportunities significantly impacts Mykolaiv. Through investments in local businesses, support for entrepreneurship, and facilitation of vocational training programs, they empower the local workforce, stimulate job creation, and enhance the residents' capacity to contribute to the city's revitalization.

Additionally, the Danish government's recognition of Mykolaiv's cultural and historical significance influences the reconstruction process. Collaborative efforts focus on preserving and restoring historic buildings and cultural heritage sites, safeguarding the city's unique identity. Drawing upon their expertise in architectural conservation and heritage management, Danish organizations facilitate the integration of traditional building practices and materials, ensuring the preservation of cultural heritage alongside contemporary functionality.

The Danish government's commitment to environmental sustainability also shapes Mykolaiv's rebuilding. Through initiatives promoting green infrastructure, sustainable transportation systems, and climate change mitigation strategies, they assist in transforming Mykolaiv into an environmentally resilient city. Their support empowers the city to address environmental challenges and pave the way for a sustainable future.

In conclusion, the Danish government's substantial support and involvement in the reconstruction of Mykolaiv have been instrumental in driving the city's revitalization. Collaborating closely, they contribute expertise in infrastructure development, urban design, economic empowerment, cultural preservation, and environmental sustainability. The partnership between Ukraine and Denmark exemplifies the positive impact of international collaboration in post-conflict reconstruction, fostering a prosperous, resilient, and vibrant future for Mykolaiv and its residents.

REBUILD UKRAINE

The situation today

Ill. 1 Top down view of the site (Own)

Ill. 2 Top down view of the city (Own)

Ill. 3 Top down view of the site (Own)

Mykolaiv currently faces the challenges posed by disorganized neighbourhood and street typologies resulting from the aftermath of the conflict. It is being attempted to address the disorder and restore a coherent urban fabric, emphasizing the importance of collaborative neighbourhood planning and improved street typologies in order to enhance the city's functionality and aesthetics.

LITERATURE REVIEW

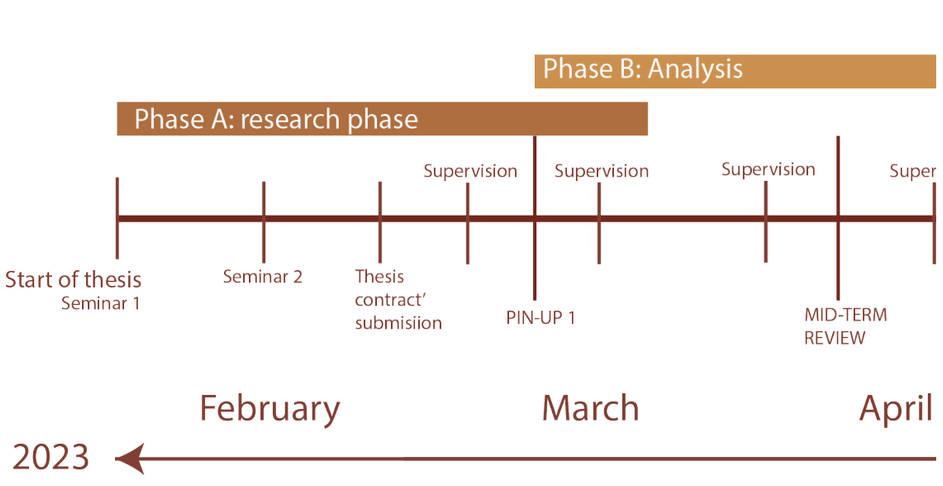
A literature review was conducted on the thesis topic to organize and investigate the field. During this process, rich information, ideas, and evidence have been collected that can be used in the project to support standing points concerned with the project's design. During the review, questions were raised related to major issues within the topic, the origins of theories, and key concepts and methodologies that were used to assess the project's outcome (Hart, 2018). As an iterative process, the literature review was conducted in a phased approach with the main objective of gathering as many pieces of literature as possible on the topic, sorting them according to themes and relevance. As needed, this was used to read up on the organized literature when information on the relevant topic was required. Ultimately, the literature review was trimmed down to a group of sources which provided references, ideas, or guidelines for the project. The number of collaborative articles and web pages has grown parallel to the project's progress, as they have provided the necessary information in support articles and web pages.

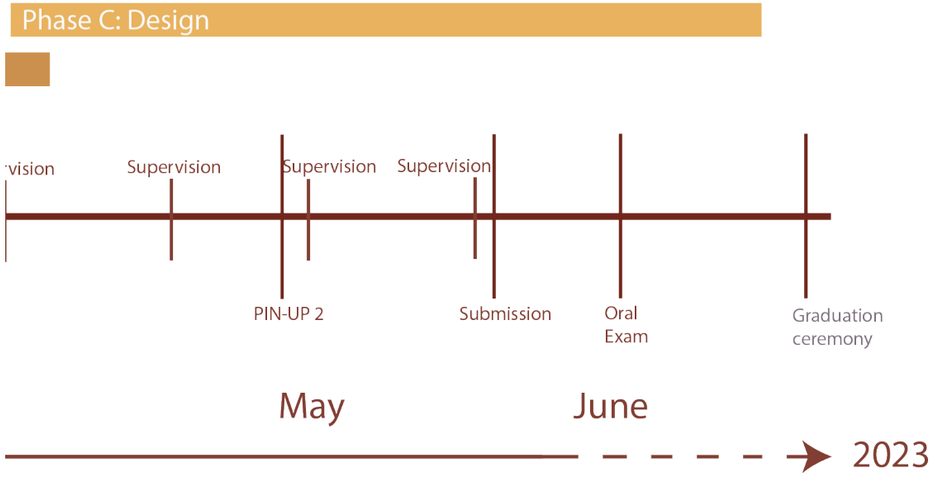
Ill. 4 Design process (Own)

The key searching words for the review:

Post-conflict reconstruction, building back better, livability, neighbourhood typology, street typology, sustainability, quality of life, placemaking, accessibility.

TIMELINE OF THESIS





METHODOLOGY

Introducing the methodology:

The following pages provide an overview of the methodology used to answer the research question posed in this thesis. There are three phases to the methodology, which will guide the reader through the thesis project. The following pages describe the three phases and explain the methods and ideas that have contributed to them. In the following table, each of the three phases is related to one of the research objectives of this thesis.

Phases	Research objectives	Applied methods
Phase A Research	Research on Post-Conflict reconstruction,the impact of Livability of a good city and the benefits of Builing Back Better	Literature review Case studies Desktop research
Phase B Analysis	Investigating the city of Mykolaiv by analysing in relation to the good urban space (Gehl,2020)	Site investigation Desktop research Mapping
Phase C Design	Develop a design framework based on the collected findings, to attract locals and citizens to the chosen study area	Synthesizing phases A & B Design principles Sketching & modeling Graphic visualizations

Project approach:

In the early stages of the project research, an interesting, under-utilized site was identified, and as the cultural heritage of the site became apparent, the research aim began to take shape. The design principles were formulated and applied to the final design proposal based on research, analysis and investigation of the theme and the site. An empirical and theoretical framework have provided the basis for the final design proposal.
Even though each phase is explained as an independent process, it is important to emphasize that they are each integrated and interdependent and should be viewed as three parallel processes which influence one another. This thesis project was developed as an integrated design process, which means that the phases jumped back and forth between them as they interacted (Knudstrup & Hansen, 2005). During the iterative development of the thesis, new findings are collected and investigated, new questions and new opportunities arise, which influence earlier phases of the project.

Phase A: Research

The objective of this phase of the project is to gain academic knowledge within the chosen themes by conducting preliminary research. This phase was instrumental in steering this thesis' focus.

Literature review

To establish a direction for the research and to select the most appropriate methods for the second phase, key themes within the literature were identified along with the base knowledge of Mykolaiv and the surrounding area.
To establish the key theories for the chosen themes within the research aim and associated objectives, relevant peer-reviewed articles and scholars were continuously assessed.
The literature focuses on the importance of the site and its heritage. In addition to the reading materials, there are a few articles discussing "Post-conflict reconstruction" and the livability of a city, which have been thoroughly studied to gain a better understanding of the city and its history.

Site Research

To gain a better understanding of the study area, research was conducted on the site and its surrounding area during the first phase of the project. To develop a place rooted in an existing - or forgotten - identity, it is necessary to get an understanding of the history to gain access to the site's "soul" and prior history.

Phase B: Analysis

In Phase B, phenomenological approaches and empirical methods were used to understand the specific site. As a result of Phase A findings, the outcome of this phase will be used to guide the choice of methods to explore the research question and to expand the knowledge of the site, as well as that of the project. To illustrate the different aspects of the city of Mykolaiv itself and its surroundings, a variety of urban design analysis methodologies are employed.

Mapping

A cartographic analysis method is used to obtain an overview of the findings. As said in “The Agency of Mapping”, James Corner (1999) describes this quantitative method as well as the notion of “Tracing” which is a method by which maps show the urban context and relationships. The purpose of this method is to map mobilities, microclimates, functions, etc., which is useful in the process of designing.

Phase C: Design

Based on the previous two phases, this one is concerned with the process of developing the final design.
Synthesis is the first step in the process. To ensure that all requirements are met, a conclusion should be drawn based on theories, research, background knowledge, and analyses. Various sketching and modeling techniques are used in this phase, varying in scale and detail level. The design process involves a variety of processes including non-scale drawings, tracing paper on scale maps, graphics visualizations, physical models, and 3D modeling. A significant part of the development of the design was determined by the design principles and the research aim.

The following chapter analyses the project area from a past and present perspective. The past reveals the perspective of a close knit, old neighbourhood. As a result of this, the present perspective highlights how the current situation as well as the culture in Mykolaiv have deep roots, and both require respect and careful consideration in order to ensure a better future. At the end of the chapter, the analytic findings and the problem statement are presented.

ANALYSIS 02

Ill. 5 Location of the site (Own)

Exploring Mykolaiv

Ill. 6 Location of the site (Own)

Mykolaiv Oblast is a region located in the southern part of Ukraine, bordering the Black Sea to the south. The region covers an area of approximately 24,600 square kilometers and has a population of around 1.1 million people.

The city has a rich history and is known for its beautiful architecture, including many well-preserved examples of 19th-century architecture. The Mykolaiv Regional Museum of Local Lore is a great place to learn about the region's history and culture.

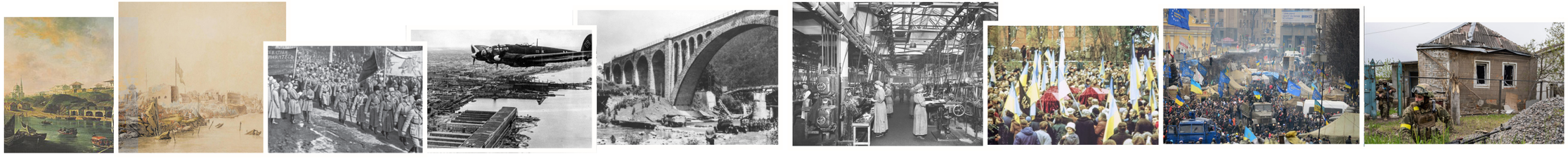
In addition to its historic and cultural attractions, Mykolaiv Oblast is also known for its natural beauty. The region is home to several national parks, including the Kinburn Spit National Nature Reserve, which is a protected area of sand dunes, salt marshes, and forests that are home to a variety of rare plant and animal species.

Where it all began

History

Mykolaiv Oblast in southern Ukraine is home to a rich historical heritage that dates back many centuries. Over time, this region has been influenced by numerous civilizations and cultures, which have helped shape its identity. As a result of ancient settlements of Scythian tribes, as well as the Mongol rule and subsequent Cossack era, Mykolaiv has witnessed shifts in power and culture on a dynamic scale.

Due to its strategic location along the Black Sea, the region provided an ideal venue for maritime trade and promoted interactions with neighbouring countries. Furthermore, the 19th and 20th centuries were notable for industrialization and the development of shipbuilding and agricultural industries, which contributed to the economic growth and development of Mykolaiv Oblast.



1789

Mykolaiv was founded in 1789 by the Russian Empress Catherine II as a shipbuilding centre for the Black Sea Fleet.

1790

During the Russo-Turkish War of 1787-1792, Mykolaiv played an important role as a naval base for the Russian Navy.

Soviet era

During the Soviet era, in 1922 Mykolaiv was a major centre of shipbuilding and other heavy industry, and was closed to foreigners due to its strategic importance.

1941

During World War II, Mykolaiv was occupied by German forces from 1941 to 1944. The city suffered significant damage during the war.

Post war

After the war, Mykolaiv was rebuilt and expanded, with new residential areas and industrial zones.

19th century

In the 19th century, Mykolaiv became an important centre of heavy industry, with factories producing steam engines, locomotives, and other machinery.

1991

After the collapse of the Soviet Union in 1991, Mykolaiv became part of independent Ukraine.

2014

Mykolaiv was going through a period of political upheaval and instability due to the Euromaidan protests.

2023

Mykolaiv was going through a period of political upheaval and instability due to the Euromaidan protests.

Ill. 7 Historical timeline of Mykolaiv

The situation today

Ill. 8 The situation during the war

Mykolaiv Region has recently liberated some settlements that have lost all power and water supplies, as well as the availability of network access. Over the course of the long months of Russian rule, power supplies were disrupted, infrastructure facilities were destroyed beyond repair, and landmines were planted throughout the area. Nonetheless, local residents are attempting to return home and prepare for the winter season, despite the adverse weather conditions. There are numerous missile craters, shell piles, and torn wires along the road to Novohryhorivka. Several cluster munitions can still be found near the school on the soccer field.

Streets in the village are littered with the ruins of burnt and destroyed houses. During the period of Russian rule, fierce fighting took place in the vicinity of the village. Therefore, most local civilians had no alternative but to flee. It is still a slow process, but now they are gradually returning home. Due to the fact that most of the houses have been destroyed, many people are preparing to live in their barns until they can repair the houses. It is noteworthy that even the local church was not spared by the invaders. In addition to what was not stolen by the Russian troops, the damaged roof was inundated with water. It is here that volunteers deliver food rations and assist the locals in need.

1 **Hope Is Powerful, So Plan for Ukraine's Reconstruction and Economic Recovery Now.**

2 **Build Strong and Enduring Bipartisan Public and Congressional Support.**

3 **Ukraine Must Lead Its Reconstruction and Recovery, but Donors Must Agree to and Monitor the Plan.**

4 **Ensure a Transparent Reform Continuum, from Humanitarian Relief to Macroeconomic Support to Reconstruction and Long-term Modernization**

THE POWER OF HOPE AND CONFIDENCE IS THE MOST IMPORTANT LESSON

5 **The Marshall Plan Was Driven by the Goal of European Economic Integration.**

6 **Develop a Time-limited National and International Donor Coordination Mechanism with Notable Talents.**

7 **This Time, Do Not Neglect Engaging Civil Society and Cities.**

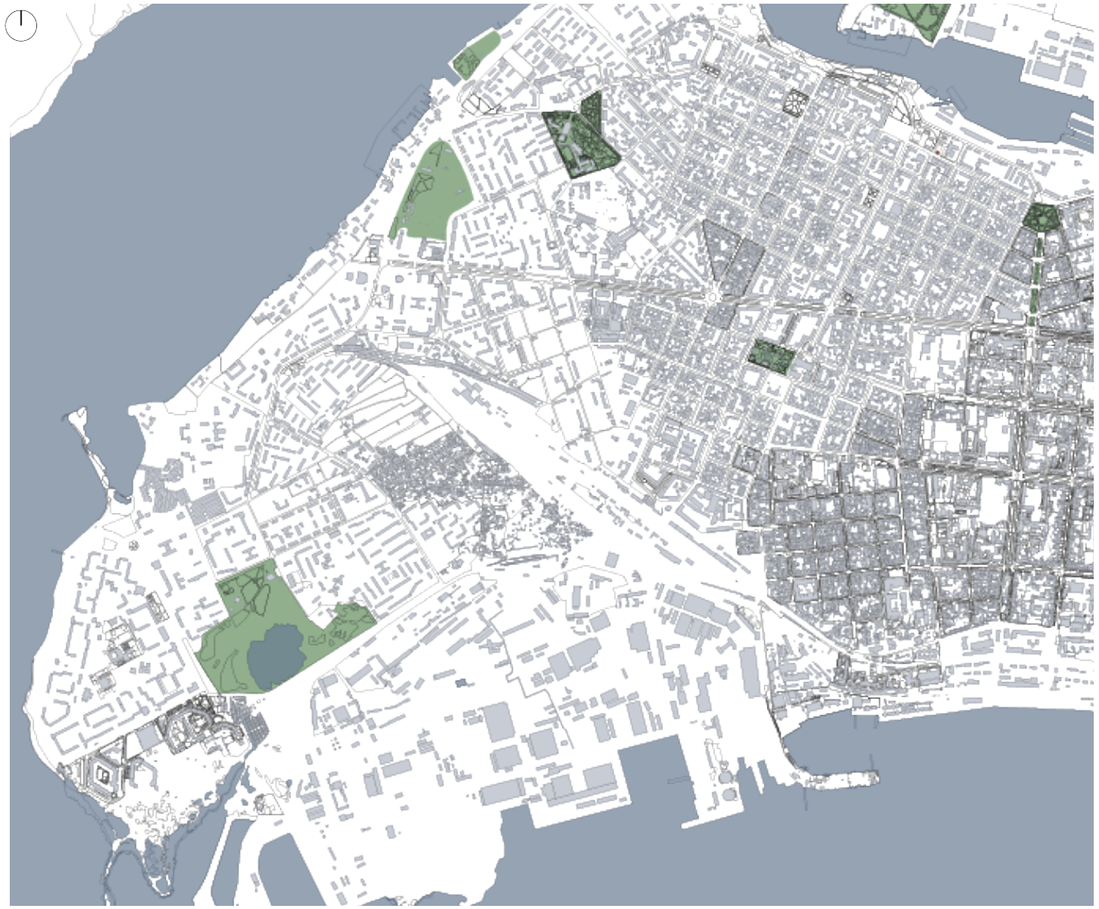
A modern Marshall Plan for Ukraine

A "Modern Marshall Plan" for Ukraine is a proposed economic recovery program for Ukraine that is modeled after the Marshall Plan which helped rebuild Europe following World War II. This proposal aims to provide the international community with significant financial and economic assistance to Ukraine in order to help it overcome its ongoing economic and political challenges.

Various groups and organizations are still discussing the details of this plan, but the general idea is to provide Ukraine with substantial financial support, such as loans, grants, and other means of assistance. Rebuilding infrastructure, generating jobs, and modernizing key industries such as energy, agriculture, and manufacturing would benefit from the funds. "Modern Marshall Plan" advocates claim that a program like this could have a positive impact on stabilizing Ukraine and preventing further economic decline, as well as promoting political stability and security in the region.

Unfolding Mykolaiv

green & blue infrastructure



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Ill. 9 Green & Blue infrastructure (Own)

The city of Mykolaiv is faced with limitations in both the development of green infrastructure and blue infrastructure. Green spaces have been incorporated into the urban landscape, but the overall quantity remains relatively low. In the city, there is a limited number of parks, gardens, and natural areas, which hinders the full realization of the ecological and social benefits of these areas. There are many challenges associated with this scarcity, including the conservation of biodiversity, mitigation of urban heat islands, increased air quality, and health and well-being of residents.

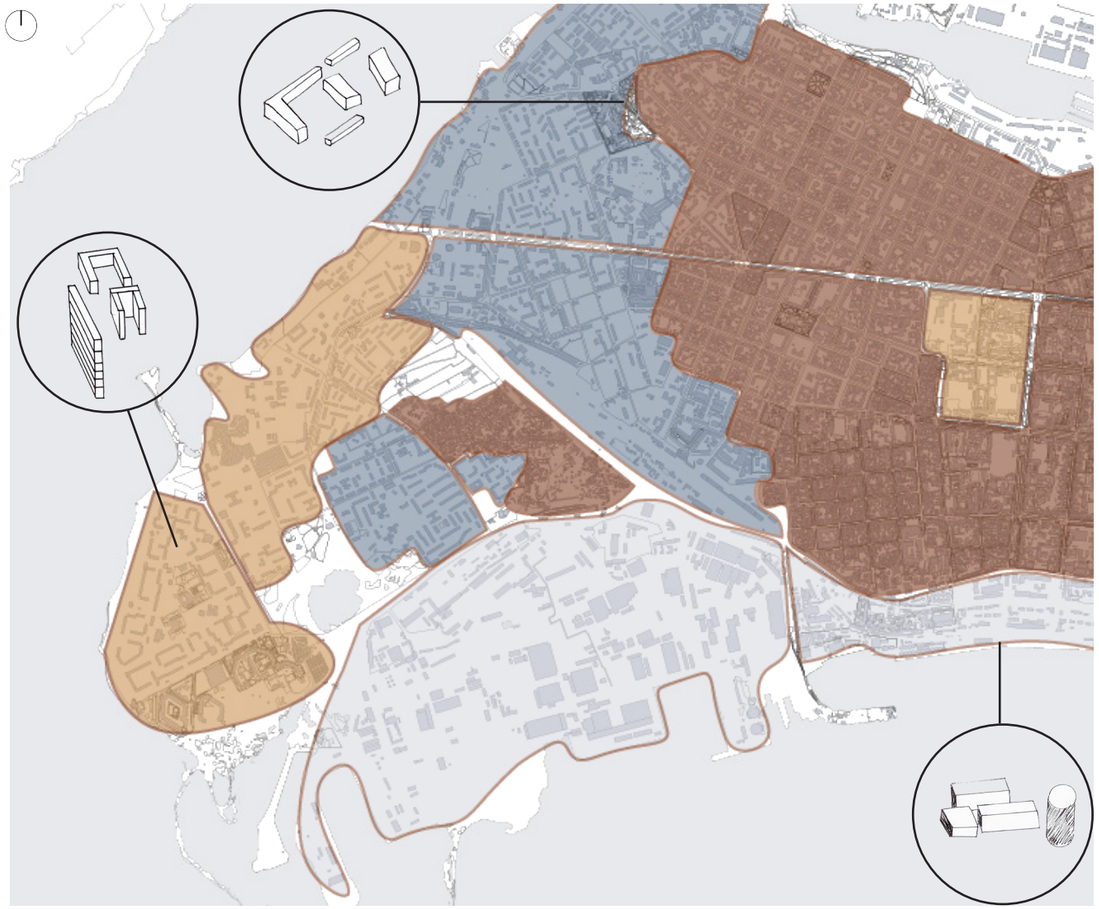
Blue infrastructure, including sustainable water management systems, also faces constraints during development. There is lack of integration between wetlands, lakes, and rivers in order to achieve efficient stormwater management, water purification, and flood control. It is clear that the lack of proper implementation of blue infrastructure hinders the sustainability of water resources, the resilience of the environment to climate change, and the overall health of the ecosystem. It is important for Mykolaiv Oblast to prioritize the expansion and integration of both blue and green infrastructure in order to achieve a sustainable urban environment. It is important that the region invests in the creation and preservation of green spaces and water management infrastructure as a means of improving biodiversity, mitigating climate-related risks, improving water quality, and contributing to a more sustainable future.

Blue infrastructure

Green infrastructure

Unfolding Mykolaiv

neighbourhood typologies



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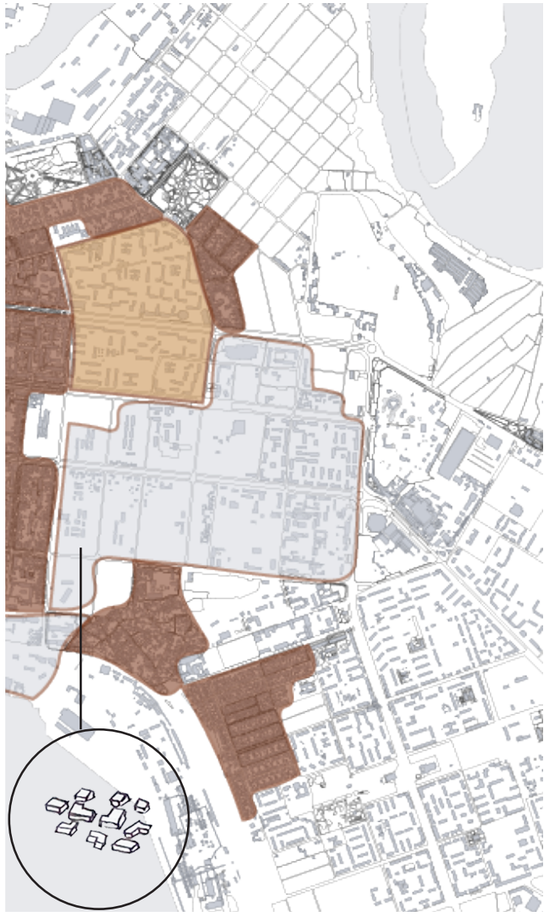


Ill. 10 Neighbourhood typologies (Own)

The typologies of neighbourhoods within Mykolaiv indicate the need for significant improvement and a more coherent planning approach. As an urban design strategy, the region's neighbourhoods exhibit a haphazard mix of styles and layouts. Thus, the urban fabric becomes disjointed and fragmented, lacking a sense of community and place. The majority of neighbourhoods face cramped and overcrowded conditions, with inadequate open spaces for recreational activities and social interaction. Moreover, residents encounter additional challenges due to a lack of proper connectivity and walkability. There is an urgent need for intervention and improvement in the neighbourhood typologies of the Mykolaiv region due to lack of thoughtful urban development. A comprehensive planning approach, inclusive community engagement, and sustainable design principles can be implemented in order to ensure that Mykolaiv creates well-designed neighbourhoods that prioritize the residents' needs, foster a sense of community, and enhance the quality of life of its residents. In order to achieve a more livable and thriving urban environment, better neighbourhoods would facilitate improved connectivity, enhanced public spaces, and a greater sense of community cohesion.

T1 2 storey buildings

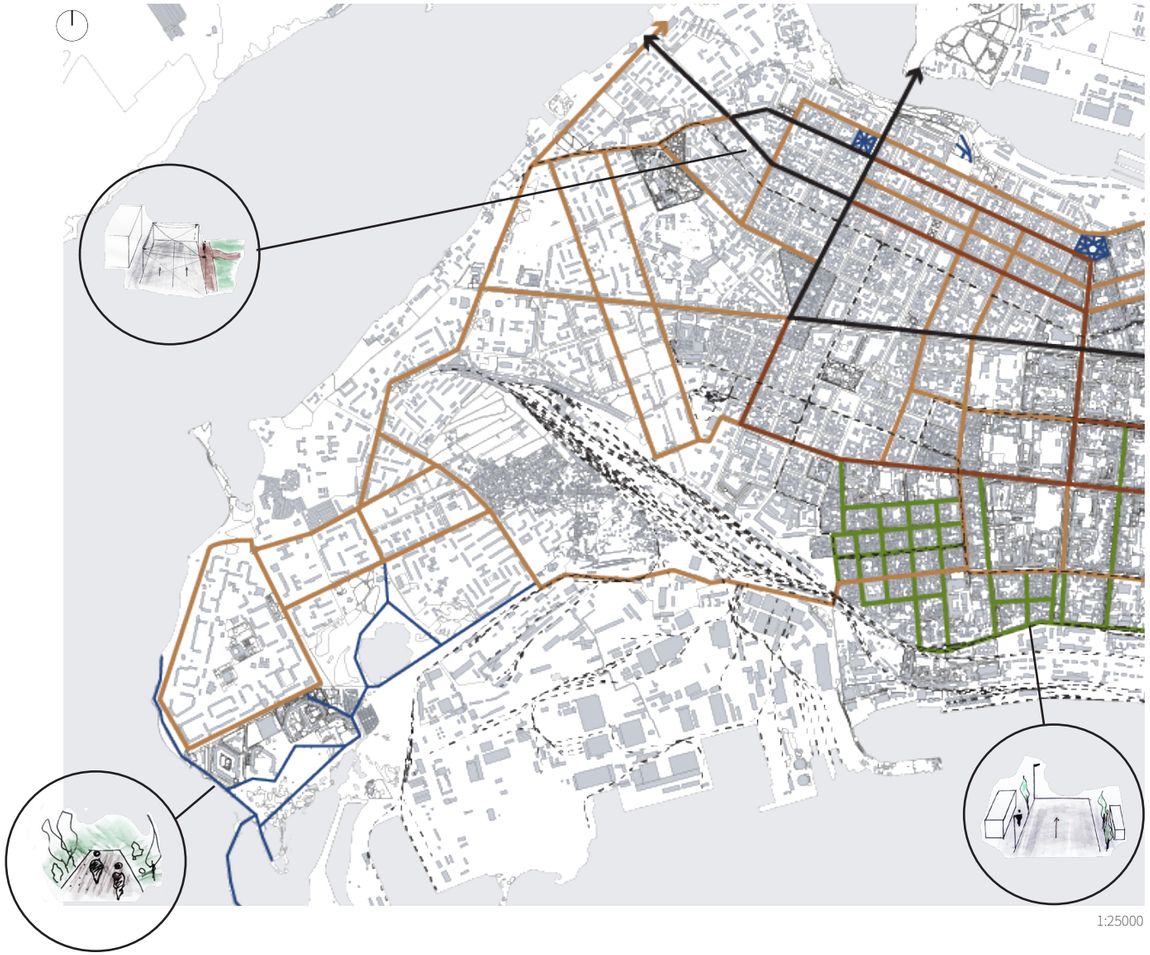
T2 3 storey buildings

T3 4 storey buildings

T4 9 storey buildings

Unfolding Mykolaiv

street typologies



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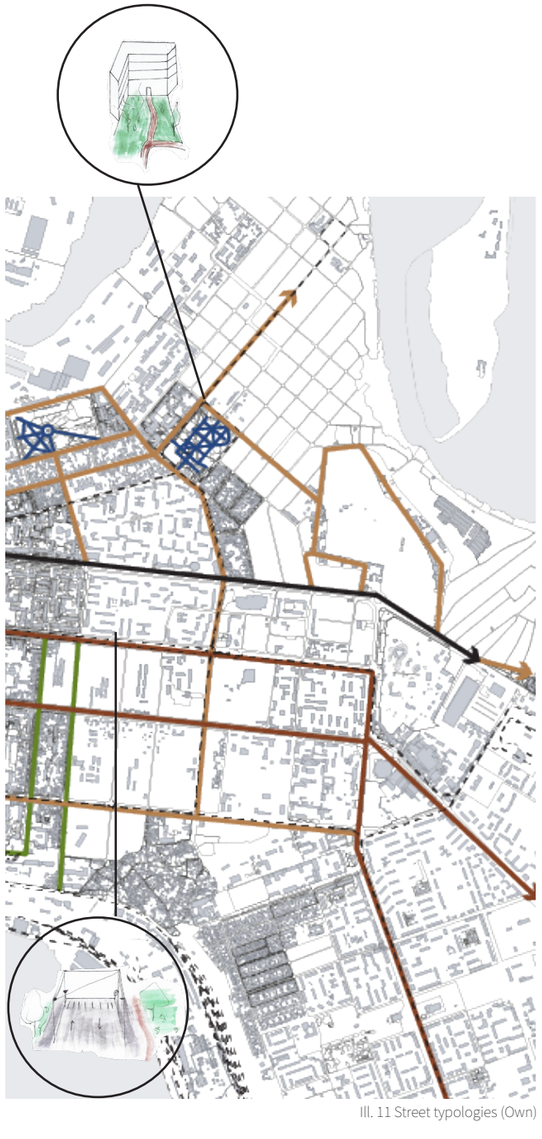


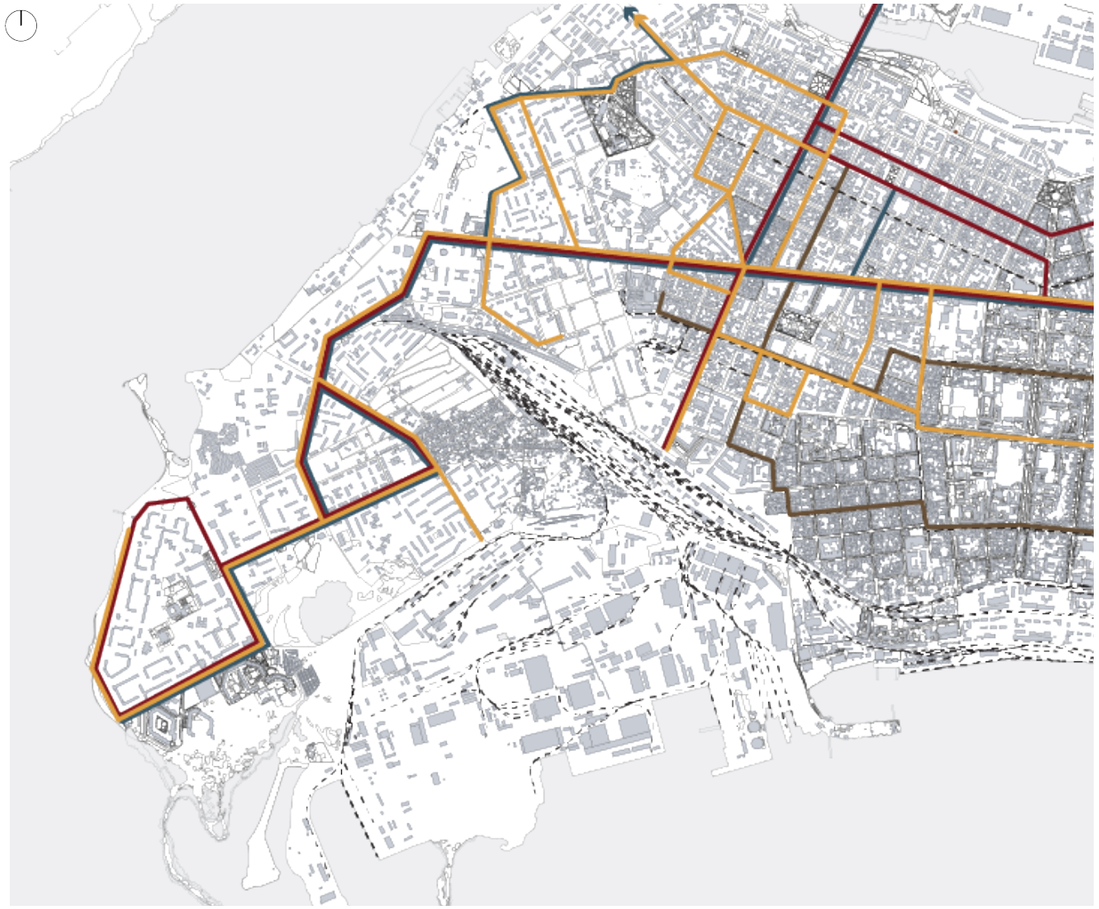
Ill. 11 Street typologies (Own)

Street typologies within Mykolaiv indicate a need for improvement and thoughtful planning. Street networks in the region, such as the E58 and M14 highways, neighbourhood streets, pedestrian streets, residential streets, and railroad tracks, present various challenges that interfere with efficient and safe urban transportation. There are several highways, including the E58 and M14, that suffer from congestion and poor infrastructure, which affects traffic flow and creates safety hazards. As a result of this lack of proper design considerations, neighbourhood streets often pose a limited accessibility and navigational challenge. Even though pedestrian streets are intended to prioritize pedestrian movement, they often lack sufficient amenities and do not provide an environment that is truly pedestrian-friendly. Streets in residential areas are subject to poor maintenance and inadequate traffic management measures, affecting the residents' quality of life. Furthermore, the presence of railway tracks without proper integration into the street network creates a safety concern and disrupts traffic flow. Providing efficient, accessible, and harmonious urban environments requires improving street typologies in Mykolaiv through comprehensive planning, improved infrastructure, and enhanced safety measures.

T1 European route E 58
T2 Highway M14
T3 Neighbourhood street
T4 Pedestrian street
T5 Residential street
T6 Rails

Unfolding Mykolaiv

mobility



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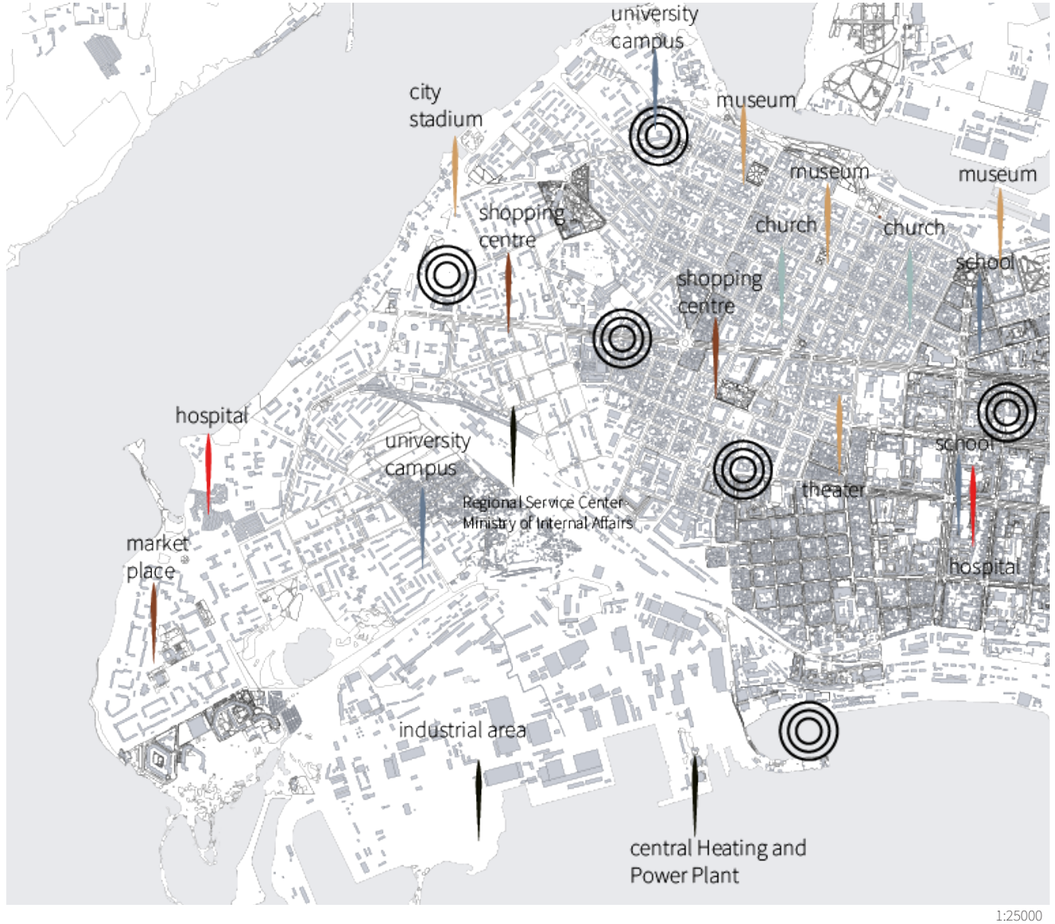
Ill. 12 Mobility infrastructure (Own)

The mobility infrastructure of the Mykolaiv requires drastic improvements in order to meet the growing needs of the region in terms of transportation. A number of current transportation systems, including marshrutkas (minibuses), trolleybuses, buses, trams, and railways, have significant shortcomings that lead to a lack of efficient and reliable travel. Marshrutkas are a popular mode of transportation; however, they are often not properly scheduled and do not provide a reliable service, leading to irregularities and inconveniences for passengers. It is common for trolleybuses and buses to have outdated fleets, inadequate routes, and limited coverage, resulting in overcrowding and inefficient service. The tram system is present in some areas, however, its reach is limited and is insufficiently modernized. In addition, there is a need for improvements to the rail network in order to improve connectivity and efficiency. Investing in modernizing and expanding transportation infrastructure, updating fleets, optimizing routes, and enhancing service reliability are crucial in addressing these issues in Mykolaiv. Consequently, the region can provide its residents with safer, more convenient, and more sustainable transportation options, improving mobility overall and enhancing quality of life.

- Marshrutka
- Trolleybus
- Bus
- Tram
- Rails

Unfolding Mykolaiv

points of interest & bombed places



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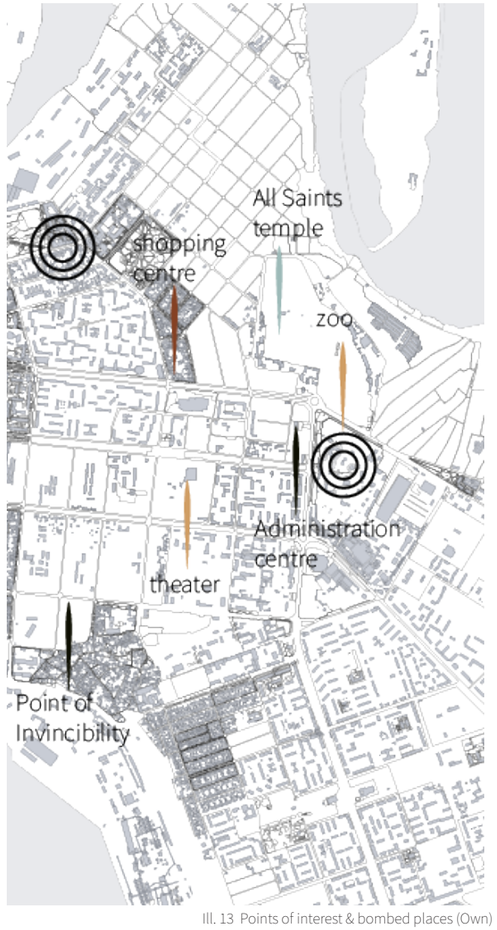


Ill. 13 Points of interest & bombed places (Own)

In a tragic turn of events, Mykolaiv has been affected by bombing attacks at a number of significant locations within the city. There were a number of key areas that were affected by the bombings in Mykolaiv, including the zoo, 6th Slobidske street, central avenue, the central city stadium, the Mykolaiv National University, the port and many more. As a result of these attacks, these important landmarks have been damaged to the extent that they have disrupted the lives of residents and caused immense damage to the infrastructure of the city. Despite these unfortunate events, it is important to recognize the diversity of points of interest that Mykolaiv has to offer. There are a number of schools, universities, churches, parks, and museums in the city, reflecting its rich cultural and educational heritage. In addition to contributing to the city's vibrant atmosphere, these points of interest also function as gathering places for community engagement, intellectual pursuits, and the preservation of the city's heritage. As efforts to rebuild and restore the affected areas continue, Mykolaiv's resilience remains evident. Its determination to maintain its cultural heritage and thrive despite the unfortunate bombings is demonstrated in the city's determination to thrive and preserve it for future generations.

Points of interest

Bombed places

PROBLEM STATEMENT

“What strategies and physical interventions can be applied in order to achieve better spatial qualities in a post conflict city?”

THE DESIGN FRAMEWORK 03

Theoretical framework

This chapter aims to provide the design process with associated design principles which are sensitive and contextually relevant to the city in question. In addition to the theory that has been used to develop the framework, the multi-scalar analysis has been instrumental in bringing a site- specific perspective to the principles. It is important to note that the design principles are simplified and general. They can be implemented in a variety of ways, as well as overlapping in the design process. The following pages will provide an overview of the Design Framework's key design principles.

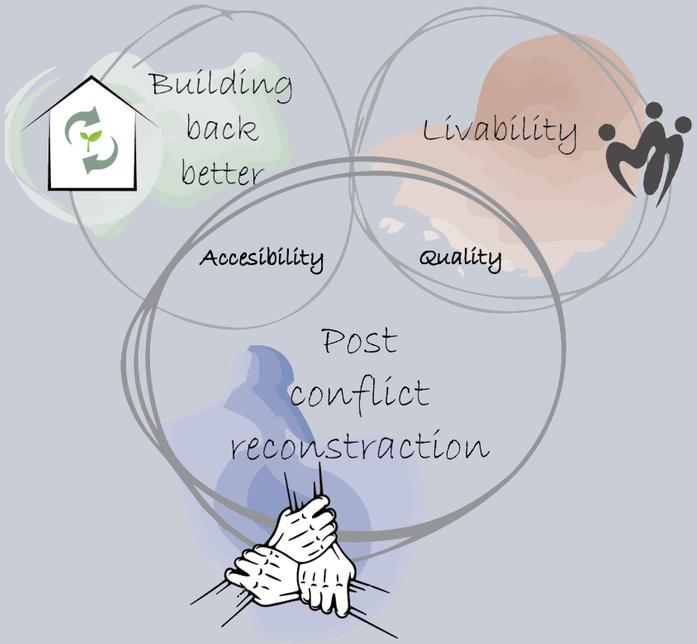
In designing the physical environment of a neighbourhood and streets of a ruined city, theories of post-conflict reconstruction can be useful. It is argued that there is more than one theory on post-conflict reconstruction, but rather numerous theories and sub-topics that are supporting the aims of the theory (Grant, 2006). In the context of post-conflict reconstruction, there are many roots found in studies conducted by urban scientists, such as Dr. Kamal Kishore, who has a wealth of experience in disaster management, post-conflict reconstruction, and urban planning. It is important to note that post-conflict reconstruction has mainly focused its theory development around a few themes and principles that can be used to create livable cities, neighbourhoods, and streets in accordance with the theory. The purpose of this study is to create vibrant and comfortable environments that emphasize community, sustainability, and built form (Grant, 2006).

In urban design, livability is an essential concept as it serves as the goal of designing interventions. In order to maximize livability, the city must provide its residents with a healthy, comfortable, and enjoyable living environment. Consequently, the quality of life is influenced by a number of factors. These factors include the availability of basic services like clean water, transportation, and healthcare. Aside from that, it provides opportunities for social and cultural activities.

It is important to note that the concept of livability encompasses several elements of urban design, such as walkability, access to green spaces, mixed-use development, sustainable design, and cultural diversity.

Such a vision may seem idealistic for the streets of a city or a neighborhood. A livability approach, however, is claimed to contribute to an overall improvement in the quality of life in a city by applying livability principles to the development process.

By comparing the post-conflict reconstruction visions to literature on livability, one is able to identify the requirements for an urban structure based on walkable streets, mixed-use neighbourhoods with local employment and facilities.
Thus, it could be argued that when designers intend to create good neighbourhoods and quality streets of a war-torn city, with a high level of livability and a strong community, this can also be achieved using the theory of Building Back Better (BBB). As part of the theory, reconstruction efforts following conflict are used to create more sustainable, resilient and equitable cities. It is important to recognize that the BBB approach goes beyond simply repairing damaged infrastructure and structures. In addition, it emphasizes the need to take advantage of the opportunity to create more livable and inclusive communities.



Ill. 14 Venn diagram illustrating the applicable theory (Own)

Post-conflict reconstruction (PCR)

Post-conflict reconstruction in urban design is a multifaceted and demanding process that aims to rebuild and revitalize cities and communities devastated by armed conflicts. It involves comprehensive planning and implementation strategies to restore physical infrastructure, social systems, and economic activities, while also addressing the root causes of the conflict and promoting peace and reconciliation. This complex endeavour requires the collaboration of diverse stakeholders, including urban planners, architects, engineers, policymakers, and community members.

The primary objective of post-conflict reconstruction in urban design is to create a safe, inclusive, and sustainable built environment that fosters social cohesion and promotes economic development. This entails the rehabilitation and reconstruction of housing, public spaces, transportation networks, healthcare facilities, educational institutions, and other vital infrastructure. It is crucial to actively involve the affected communities in the decision-making process, ensuring that their needs, aspirations, and cultural heritage are considered.

Additionally, post-conflict reconstruction efforts must address the underlying social and economic inequalities that may have contributed to the conflict. The design and planning process should prioritize social justice, equal access to resources, and opportunities for all

segments of society. Inclusive urban planning strategies that address the needs of marginalized groups, promote affordable housing, and provide job opportunities can help restore a sense of equity and social cohesion.

Integrating environmental considerations into the post-conflict reconstruction process is vital for long-term sustainability and resilience. Sustainable practices, such as incorporating green spaces, promoting energy efficiency, and adopting resilient infrastructure, contribute to the overall well-being and resilience of rebuilt communities. Furthermore, preserving cultural heritage and promoting cultural diversity play a significant role in healing and rebuilding a sense of identity for the affected communities.

The success of post-conflict reconstruction in urban design hinges on careful planning, coordination, and collaboration among all stakeholders involved. Prioritizing the needs and aspirations of the affected communities, promoting social inclusivity, economic opportunities, and sustainable practices are paramount. By embracing these principles, post-conflict reconstruction in urban design can not only rebuild physical structures but also restore hope, stability, and a sense of belonging for those affected by the devastating impacts of armed conflict. It is a transformative process that has the potential to create vibrant and resilient cities, fostering a brighter future for the affected communities and generations to come.

Building Back Better (BBB)

“Build Back Better”(BBB) is an ideal reconstruction and recovery process that provides communities affected by disasters with resilient, sustainable, and efficient recovery solutions. A major goal of the Build Back Better concept is to make communities stronger and more resilient in the event of a disaster.

The assessment of disaster recovery is essential to improving the understanding of difficulties and insufficiencies encountered during the reconstruction process, and to enable policymakers and investors to make more informed decisions regarding disaster risk reduction. Due to the focus on optimizing the economic and physical environment, the preferences of citizens remain unexplored in existing literature.

Through the integrated use of disaster risk reduction measures during the recovery, rehabilitation, and reconstruction phases after a disaster, nations and communities can become more resilient to disasters in the future. This involves the rehabilitation of physical infrastructure and societal systems as well as the revitalization of livelihoods, economies, and the environment.

To prepare for possible disasters in the future, recovery, rehabilitation, and reconstruction should have the primary objective of “building disaster-resilient cities and communities with long term vision”. The goal of “Building Back Better” is for cities and communities to take the necessary steps during this process after a disaster to increase their resilience to similar events in the future.

For societies to become resilient, cities and communities must continue to improve and renovate themselves. Disasters should not be considered as the sole determinant of these efforts. As a result of a catastrophe, however, recovery, rehabilitation, and reconstruction should also be conducted with the same objective. Cities and communities should prepare prior to disasters, make plans for disaster recovery, rehabilitation, and reconstruction processes, as well as legislation and procedures, so as to gain an advantage over the disaster. The successful implementation of post-disaster actions can be facilitated by obtaining public consensus on those actions. As a result, scientific scenarios about disaster damage are only one aspect of the science that should be considered. There is also the science-based foresight on livelihood after a disaster that should be considered.

Using the Building Back Better concept as a more exploratory and informal approach, or as a more formal framework, communities are able to facilitate community planning, precise regulations, organization of street typologies, building types, open spaces, and other aspects of the physical environment intended (Bohl & Plater-Zyberk, 2006).
It is notable that the concept of BBB will serve as a communicative tool in this project to give an overview of the zoned areas and provide an understanding of their intended characteristics.
In addition, it will provide a framework for how to design a truly environmentally diverse neighbourhood and how the typologies of the built environment should contribute to the development of a more sustainable community.

Livability

The concept of livability has gained significant importance in urban design and contemporary society. It refers to the overall quality of living within a community, considering various factors that contribute to a desirable and pleasant community life. In order to assess livability, it is crucial to consider physical, social, and economic factors.

Factors such as housing availability and quality, transportation options, healthcare facilities, educational opportunities, and access to public services play a key role in determining a community’s livability. The interplay of these factors influences the overall livability of a community. By providing affordable and accessible housing, efficient transportation systems, quality healthcare and education and reliable public services, a community can enhance its livability.

In addition to physical factors, social and cultural aspects also contribute to the livability of a community. Fostering a sense of belonging, promoting social interaction and embracing cultural diversity are important for creating a livable community. Social cohesion, diversity, and inclusivity are essential elements of a livable community.

Livability is not a fixed concept but evolves over time. Communities’ needs and preferences change, and the concept of livability must adapt accordingly. Effective planning and design are crucial in enhancing it. By addressing the specific needs and priorities of a community and shaping the physical environment accordingly, planning and design can significantly improve livability.

The concept of livability encompasses a wide range of factors related to the physical, social, and economic aspects of a community. By considering these factors and striving to enhance them, urban designers and planners can create vibrant and sustainable communities that prioritize the well-being and quality of life of their residents.

A livable city is...

- *pedestrian oriented*
- *accessible to people of all ages and abilities*
- *safe city*
- *accessible for the disabled*
- *a city that prioritizes the needs of people over cars*
- *welcoming*
- *sustainable*
- *accessible to all members of the community*
- *a mix of residential, commercial, and institutional uses*
- *human scaled*
- *flexible*
- *inviting*
- *comfortable*
- *where people wants to go and stay longer*
- *offering a good micro climate*
- *much more...*

Conclusion

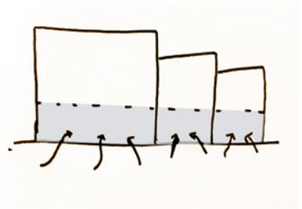
The theories of post-conflict reconstruction, livability, and Building Back Better provide valuable insights into the process of rebuilding communities in the aftermath of conflict or disasters. Post-conflict reconstruction emphasizes the need for a comprehensive approach that takes into account the complex social, economic, and political dynamics that emerge after a conflict. Livability focuses on creating sustainable, equitable, and healthy cities that enhance the well-being of residents. Building Back Better seeks to create more resilient communities that can better withstand future shocks and stressors.

While these theories each have their unique perspectives, they share common themes and goals, such as prioritizing community engagement, promoting social cohesion, and enhancing environmental sustainability. By applying these theories in practice, urban designers and planners can play a crucial role in rebuilding communities and creating more livable and sustainable cities.

It should be noted that the theory of memory is also relevant to post-conflict reconstruction, as it involves preserving and commemorating the historical and cultural heritage of a community. However, for the purposes of this thesis, the focus will be on the theories of post-conflict reconstruction, livability, and Building Back Better.

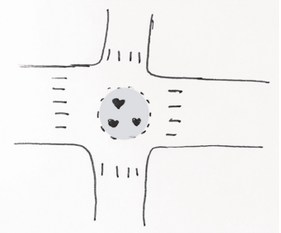
Design principles

Land use



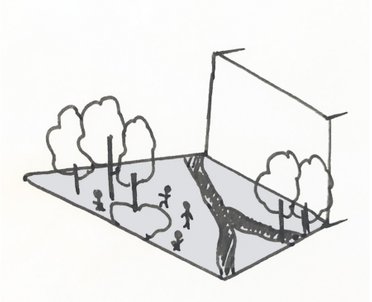
with active facades

Infrastructure



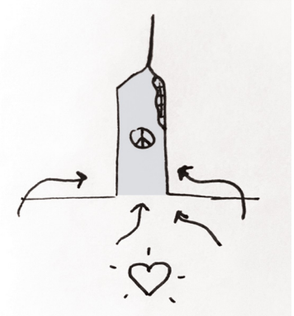
with meeting points

Green spaces



with pocket parks

Morphology



with memory points

Ill. 15 Diagrams showing the design principles (Own)

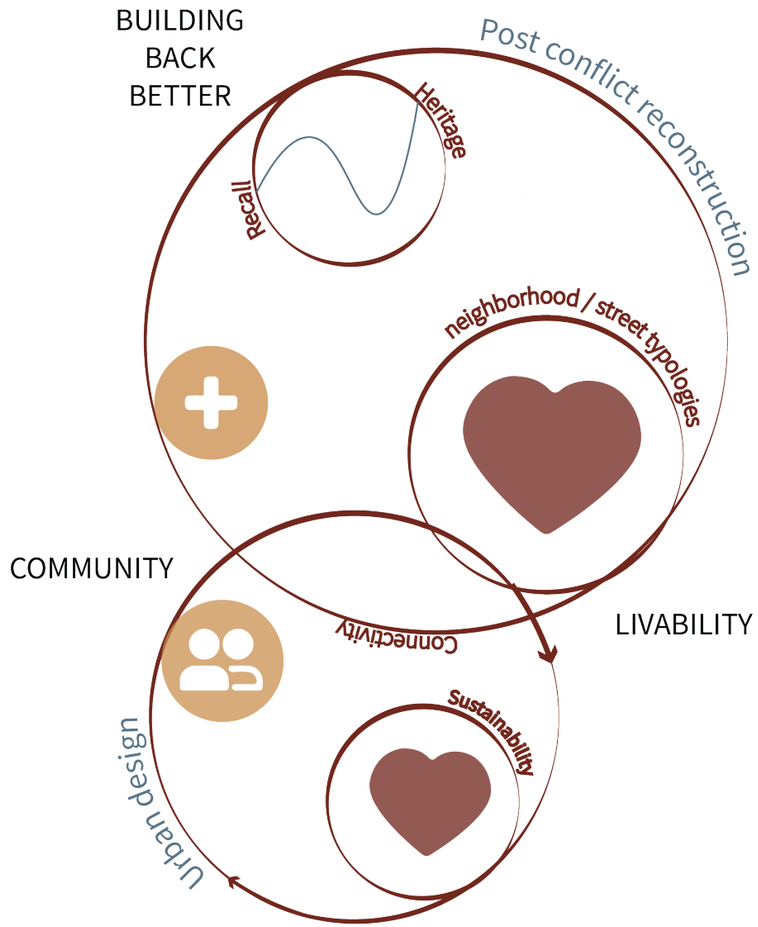
The city of Mykolaiv in Ukraine, as a post-conflict urban centre, presents a distinctive opportunity to employ design principles that address the revitalization and transformation of its neighbourhoods and street typologies. A number of key design principles are essential to this undertaking, including a strategic management of land use through active façade activation, a meticulous development of infrastructure with designated meeting points, thoughtfully integrating green spaces with pocket parks, and incorporating morphology with memory points in an intentional manner. By focusing on the activation of active facades, the city can foster vibrant and dynamic streetscapes that stimulate economic activity and facilitate social interaction. Furthermore, the establishment of infrastructure that provides designated meeting places, such as purposeful public squares or carefully designed gathering spaces, will enhance connectivity, cultivate a sense of community and allow residents to converge and participate in a variety of activities while enhancing connectivity. Moreover, the integration of green spaces with pocket parks will add much-needed recreational areas to the urban environment, enhancing its overall quality and providing opportunities for physical and psychological well-being. Moreover, as morphology is incorporated with memory points, they will serve as poignant reminders of the city's rich history and cultural heritage, ensuring that revitalization efforts remain grounded in the local context. By embracing these meticulous design principles, Mykolaiv can chart a course toward a resilient and inclusive post-conflict city, where land use, infrastructure development, and green spaces are prioritized, as well as historic preservation is emphasized.

This chapter examines the new design of the neighbourhood and street typologies on three different scales: large, medium, and small. With this approach, comprehensive insights are gained into the complex details of the proposed interventions, as well as the overall impact of the proposed interventions at different levels of urban planning and development.

THE NEW CITY 04

Concept

In the realm of urban design, the concept of new neighbourhood and street typologies in Mykolaiv emerges as a key focus, particularly in the context of post-conflict reconstruction. The aim is to create neighborhoods that prioritize livability, promoting a high quality of life for residents. Building back better is a guiding principle, ensuring that the rebuilt neighbourhoods address underlying issues and incorporate innovative solutions for enhanced resilience. Connectivity plays a crucial role, with well-designed street typologies and networks that facilitate efficient movement and promote pedestrian-friendly spaces. The concept also emphasizes the recall and integration of heritage, incorporating historical landmarks and cultural identities into the fabric of the new neighbourhoods. Additionally, sustainability takes centre stage, with an emphasis on environmentally friendly design practices, resource efficiency, and resilience in the face of future challenges. By integrating these elements, the new neighbourhood and street typologies in Mykolaiv seek to create a harmonious, inclusive, and sustainable urban environment.



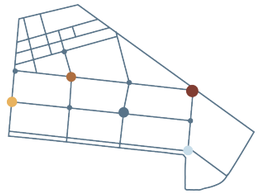
Ill. 16 Diagrams showing the design concept (Own)

Actions

Diversity

Create different neighbourhoods

Encourage the development of diverse neighbourhoods with a variety of housing, amenities, and services for diverse populations.



Nodes with different public programs

Establish multiple nodes with a variety of public programs designed to promote inclusion and respond to the needs of different communities.

Different character & typologies

Promote diverse character types and housing typologies to cater for varied residential preferences.

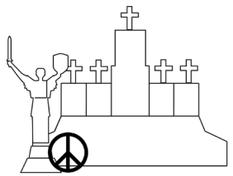
Identity

Create unique neighbourhoods

Creating unique neighbourhoods to enhance the city's identity and foster a distinctive sense of community.

Create a sense of community

Develop a strong sense of community to enhance the city's identity and promote social cohesion.



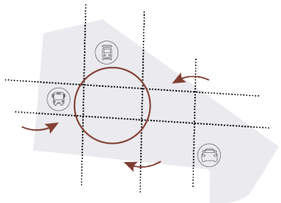
Maintain & create new iconic elements to recall

Identify and introduce iconic elements that will evoke the identity of the city and maintain its unique character.

Accessibility

Well accessible to city network

Provide residents with an easy-to-use and accessible city network.



Well accessible from transport nodes

Increase accessibility to transport nodes to facilitate smooth movement within the city and to enhance connectivity

Well connected to surrounding program

Facilitate easy access to essential services and amenities by enhancing connectivity with surrounding programs.

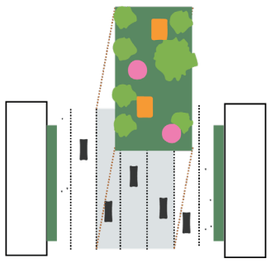
Quality

Maximize green areas

Increase the amount of green spaces in order to enhance the quality of the city, promote environmental sustainability, and improve the well-being of residents.

Minimize pollution and noise

Reduce pollution and noise to improve city quality, improve environmental health, and ensure peaceful living conditions.



Street as valuable public space

Creating welcoming, safe, and vibrant street environments is essential for improving the quality of the city.

Ill. 17 Illustrations showing the design actions (Own)

Strategy solution

The next pages will feature two distinct scenarios that explore the urban fabric of a city. New neighbourhood and street typologies will be examined during these scenarios, as well as innovative urban elements and new green spaces. For purposes of providing a comprehensive analysis of these scenarios, they will be presented in three different scales: large, medium, and small. A large scale will permit an overview of the entire city, highlighting the interaction between the new developments and the broader urban environment. The medium scale will focus on the functional and aesthetic characteristics of new neighbourhoods and street typologies. Furthermore, the small scale provides a more detailed analysis of the urban elements and design elements that contribute to the overall quality of the urban environment. These scenarios are presented in multiple scales to allow readers to gain a comprehensive understanding of the complexities and nuances of urban design and planning.

L	M	S
overview of the new city	detailing of the new typologies	elements of the new typologies

Scenario 1

The first scenario examines the need of new typologies in the neighbourhoods of the city, focusing on the diversity of forms and functions that are emerging. This will provide insight into how each neighbourhood has changed over time as well as how those changes have influenced the urban landscape.

Scenario 2

This scenario looks into the development of new street typologies in the city, examining the various street configurations and designs being introduced. According to the previous analysis, which presented the evolving street network and how it functions, insights can be gained into how people move throughout the city and interact with their surroundings.

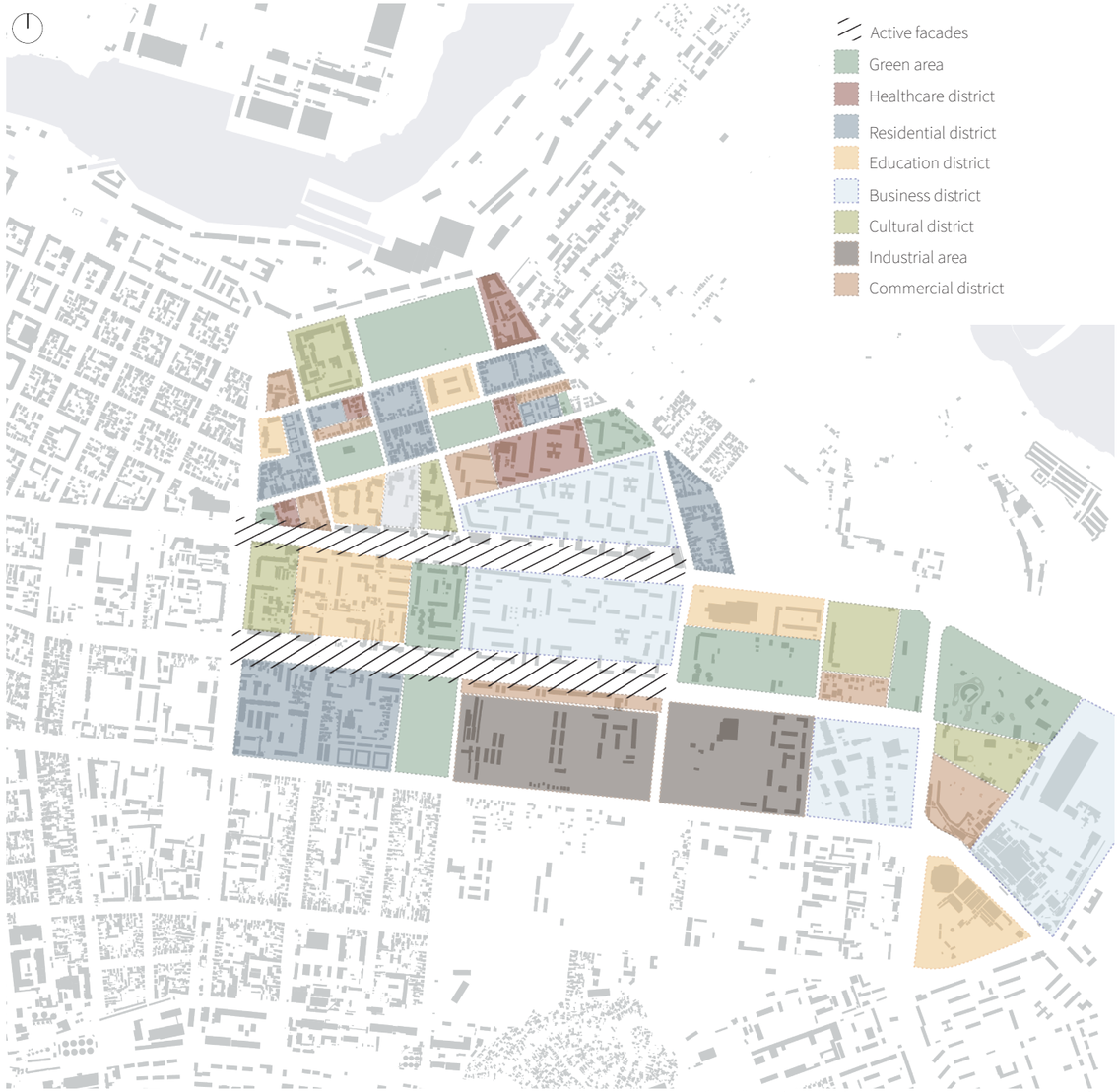
Both of these scenarios provide a comprehensive understanding of how the urban fabric of the city is changing in parallel with the lives of the residents of the city.

Scenario 1

Neighbourhoud typologies

On this scale, the development of new neighbourhoods in the city is examined. The scale is 1:20000, allowing the reader to understand the relationship between the new neighbourhoods and the broader urban fabric. The development of new building typologies, such as high-rise buildings, townhouses, and mixed-use buildings, has transformed the urban landscape creating vibrant and dynamic communities. Additionally, the city has placed a significant emphasis on creating more green spaces, including parks, public gardens, and other green areas. As a result, the city is now more livable, with improved air quality, an increased biodiversity, and more recreational opportunities. By examining this scale, one can gain insight into how urban planners and designers can use innovative building typologies and green infrastructure in order to create more sustainable and attractive urban environments.

Scale 1:20000



Ill. 18 Illustrations showing the new neighbourhood typologies (Own)

M

A wide variety of new building typologies is now present in the area, including mixed-use buildings and townhouses, which have enhanced the urban fabric of the neighbourhood. Besides the new buildings, a new public element has been introduced, which includes community centres and parks. Adding to the green space of the neighbourhood, the park offers users a place to relax and enjoy nature. This scale allows to examine the details of the new building typologies and green areas in a more detailed manner. With this scale, one can gain an understanding of how the introduction of new typologies and elements can enhance the quality of life of a neighbourhood and shape the character of its users.

Scale 1:1000

Ill. 19 Illustrations showing a neighbourhood in detail (Own)

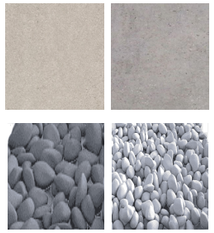
Ill. 20 The detailed area (Own)

S

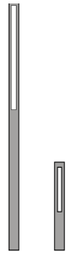
Using new design elements to enhance the typologies of neighbourhood typologies in a city is examined. A number of these elements involves the installation of new pavement, lighting, plants, urban furniture, and water features. Pavements have been redesigned to improve the visual appeal of the neighbourhood and provide better walking and cycling conditions for pedestrians and cyclists. A safer and more welcoming environment is created by the lighting installations, which makes the neighbourhood more accessible at night. Introducing more greenery to the urban landscape improves air quality. Moreover, benches, wooden playgrounds and trash cans provide both functional and aesthetic benefits to a community. The addition of water features, such as fountains or ponds, brings a relaxing and refreshing feel to the neighbourhood, making it more pleasant and enjoyable for residents and visitors alike.

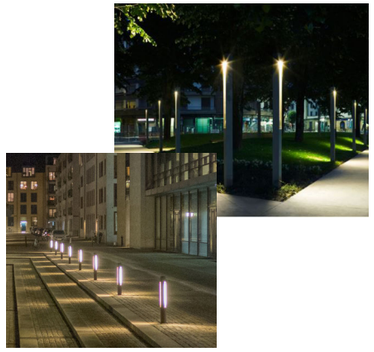
Design elements

Pavement



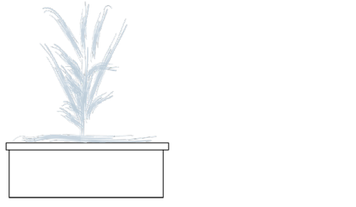
Lighting



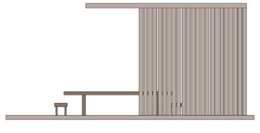


Planting

Water element



Furniture



Ill. 21 A rendering of the city block courtyards (Own)

Scenario 1

The first scenario examines the emergence of new typologies in the neighborhoods of the city, focusing on the diversity of forms and functions that are emerging. This will provide insight into how each neighborhood has changed over time as well as how those changes have influenced the urban landscape.

Scenario 2

This scenario looks into the development of new street typologies in the city, examining the various street configurations and designs being introduced. According to the previous analysis, which presented the evolving street network and how it functions, insights can be gained into how people move throughout the city and interact with their surroundings.

Street typologies

Scenario 2

On this scale, the development of new street typologies which introduce innovative designs and make the urban network more functional will be examined. In this map, the scale is 1:20000, which provides a comprehensive view of the city, allowing for the understanding of how the new streets have been incorporated into the broader urban fabric. By introducing new street typologies, such as pedestrian-friendly streets, bike lanes, green corridors, and active facades, the urban landscape has been transformed, creating a more sustainable and livable environment. New street typologies have been introduced as a response to the increasing need to reduce highway congestion, improve air quality, and provide opportunities for active transportation. Green corridors have been established throughout the city, providing vital connections for pedestrians and cyclists, as well as adding to the biodiversity of the city. Furthermore, the inclusion of active facades along main roads, such as retail and commercial space, has enhanced their vibrancy and vitality. In addition, the introduction of bike lanes will encourage more people to choose active transportation, resulting in less traffic congestion and a healthier lifestyle.

Scale 1:20000

Ill. 22 Illustration showing the new developement of the street typologies (Own)

M

This scale will examine in greater detail the development of new street typologies within the city that have introduced innovative designs and improved the functionality of the urban network. A scale of 1:1000 allows a detailed view of the streets and their relationship with the surrounding urban fabric. As new street typologies have been introduced, including shared streets for buses and soft users, bike lanes, and green areas, the urban landscape has been transformed, making the city more livable and sustainable. In addition to promoting a more equitable urban environment through the use of shared streets, bike lanes also encourage active transportation and reduce traffic congestion, contributing to the sustainability of cities. Moreover, creating new green spaces, like parks and public gardens, makes the urban environment more biologically diverse and provides opportunities for relaxation and recreation. This new street typology demonstrates a commitment to creating a more sustainable and attractive urban environment that promotes a healthier lifestyle for the community.

Scale 1:500

Ill. 23 Illustration showing a street in detail (Own)

Ill. 24 The detailed area (Own)

Design elements

In order to enhance the functionality and aesthetics of the new street typologies, the city has implemented a number of new urban elements. New pavements, lighting, plantings, urban furniture, bike parking, and public art that commemorates the area's history are among the elements that contribute to the aesthetic enhancement of the area. As a result of the new pavements, pedestrians and cyclists will have a durable and visually appealing surface and at the same time the new lighting will improve overall security and safety on the streets at night. Planting new vegetation, such as trees and shrubs, enhances urban biodiversity and creates a more pleasant environment for residents. With the addition of new urban furniture, such as seating, benches and shelters, the streetscape will become more enjoyable and functional, and bike parking facilities will support and encourage the use of active transportation. As a final point, the inclusion of public art that commemorates the history of the area enhances the residents' feelings of identity and belonging, as well as adding to the city's cultural vibrancy. By incorporating these new urban elements, a commitment is demonstrated to create streetscapes that are functional, sustainable, and aesthetically pleasing while prioritizing the needs and aspirations of local residents.

Pavement

Lighting

Planting

Art

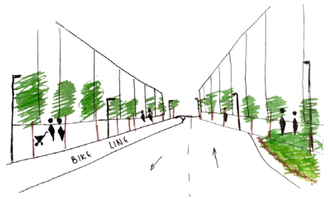
Bike elements

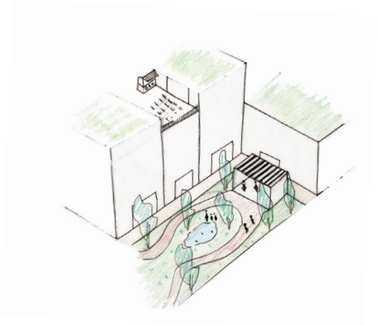
Street furniture

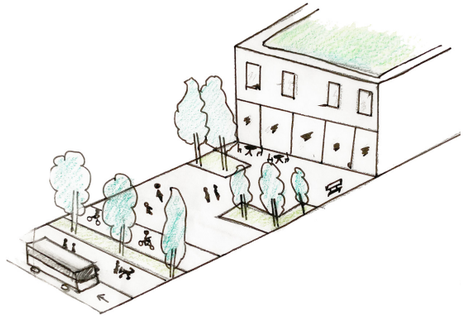
Ill. 25 A rendering of the city street (Own)

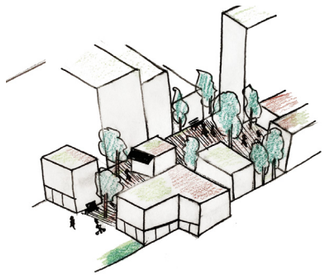
Visions

I envision my thesis project in post-conflict reconstruction of Mykolaiv to address the pressing need for new neighbourhood and street typologies, incorporating innovative approaches to green areas, open spaces, functions, transportation, and mitigating car congestion. My primary objective is to create a sustainable and harmonious urban environment that fosters community well-being, economic growth, and environmental resilience. By designing new neighbourhood typologies, we can provide a diverse range of housing options, taking into account the social and cultural fabric of the community. Introducing new street typologies will prioritize pedestrian and cyclist-friendly infrastructure, promoting active modes of transportation and reducing reliance on private vehicles. Emphasizing green areas and open spaces will contribute to improved air quality, increased biodiversity, and enhanced quality of life. Additionally, integrating multi-functional spaces will accommodate various activities and encourage social interaction. Moreover, I intend to propose efficient transportation systems that will alleviate car congestion, enhance accessibility, and promote sustainable mobility. Through comprehensive planning and design, my thesis aims to contribute to the revitalization and transformation of Mykolaiv into a resilient and vibrant city, while ensuring the long-term well-being of its residents.









Ill. 26 Early sketches of vison typologies (Own)

Case studies

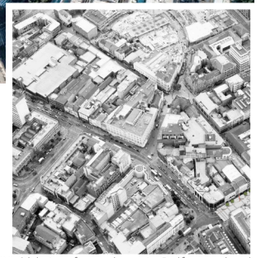
Neighbourhoud Typologies

Ill. 27 Old square in Beirut, Lebanon

Ill. 28 Old view from above in Belin, Germany

Street Typologies

Ill. 29 Square in Tel Aviv, "White city", Israel



Ill. 30 Old view from above in Belfast, Ireland

Beirut, Lebanon

This case study investigates the post-conflict reconstruction of Beirut, with a specific focus on the development of new neighbourhood typologies. To foster sustainable and vibrant communities in the city, it examines innovative urban design strategies such as mixed-use developments, green spaces, and pedestrian-friendly streets.

Berlin, Germany

This case study thoroughly examines the process of post-conflict reconstruction in Berlin, with specific emphasis on the development of novel neighbourhood typologies. It scrutinizes the implementation of progressive urban design strategies, including mixed-use zoning, inclusive public spaces, and sustainable transportation solutions, aimed at fostering resilient and vibrant communities in the aftermath of conflict.

Tel Aviv, Israel

The case study of Tel Aviv's White City exemplifies a successful integration of street typology and node design for people-centric urban spaces. With its carefully planned grid system, pedestrian-friendly boulevards, and strategically placed nodes, Tel Aviv fosters walkability, social interaction, and a vibrant urban experience for its residents and visitors.

Belfast, Northen Ireland

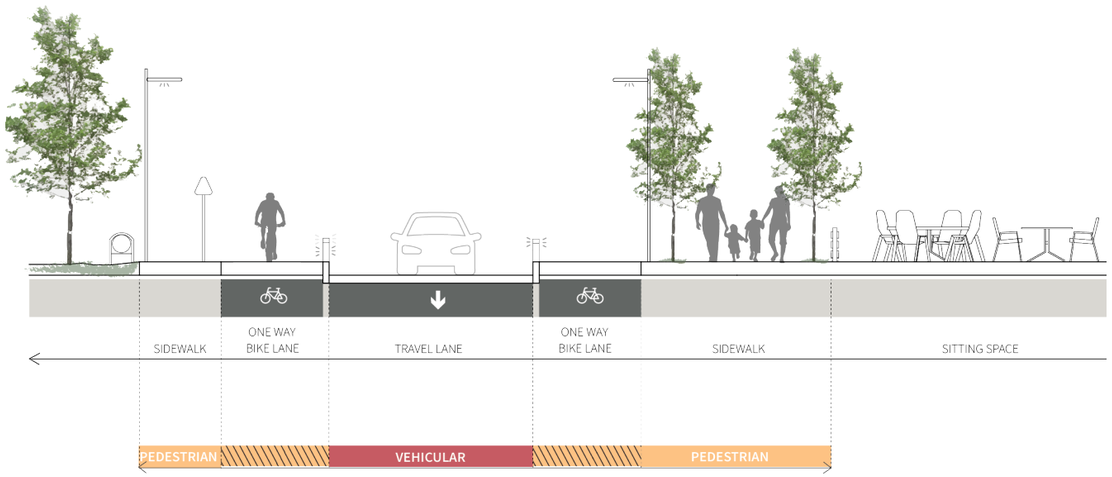
The case study of Belfast showcases a remarkable transformation of street typology following the aftermath of war. Through thoughtful design and urban planning, Belfast has reimagined its streets to promote reconciliation, connectivity, and community integration. By incorporating shared spaces, pedestrian-friendly zones, and improved infrastructure, Belfast has successfully revitalized its urban fabric and fostered a renewed sense of unity and resilience.

Conceptual Sections

Ill. 31 Conceptual section showing the city block courtyards (Own)

neighbourhood section

A section within the new neighbourhood project exemplifies a visionary approach to urban planning, where a pocket park takes centre stage as a serene gathering place for residents to unwind and partake in recreational activities. By incorporating a water element into the design, not only are aesthetic qualities enhanced, but calmness is also fostered. Green spaces are strategically distributed throughout the city to facilitate social interaction, physical activity, and nature appreciation. The presence of specially designed play areas for children contributes to the creation of a family-friendly site by providing a stimulating and safe environment for their development. As a result of balancing these elements, the new neighbourhood achieves a harmonious fusion of built and natural environments, leading to a community that is vibrant and livable.



Ill. 32 Conceptual section showing the new street design (Own)

street section

The new street section represents an innovative approach to urban design, redefining the use of space to prioritize pedestrian and bicycle mobility while accommodating vehicular traffic. A safe and inviting environment for active commuters is created by promoting sustainable transportation, establishing pedestrian zones and bike lanes. Additionally, the integration of green areas along the street corridor contributes not only to aesthetic enhancement but also to improved air quality and biodiversity in the city. A vibrant street life can be fostered by the introduction of active facades, including storefronts and outdoor seating. Featuring sustainable transportation, green infrastructure, and vibrant urban experiences for the community, this revitalized street typology reflects a forward-thinking vision of urban living.

This chapter concludes the thesis, offering reflections on the findings. It also includes a comprehensive list of literature, illustrations and references, enhancing the overall understanding and scholarly basis of the research.

EPILOGUE 05

Conclusion

This thesis has examined urban design within the context of post-conflict reconstruction, incorporating the principles of building back better and livability. This project aims to create sustainable and resilient urban environments that improve the well-being of communities by investigating new neighbourhood and street typologies in a post- conflict city in Ukraine, Mykolaiv. Based on the analysis of theories and case studies, valuable insights have been gained regarding the challenges and opportunities associated with post-conflict reconstruction. As a result of the thesis, the importance of inclusive and equitable urban development has been emphasized, as well as the significance of fostering social cohesion and addressing the diverse needs of community members. Through the development of a design framework, this research has provided a guide for the development and implementation of innovative interventions. As part of the thesis, pedestrian-friendly infrastructure, efficient transportation systems, green spaces, and active facades should all be prioritized in order to create vibrant, livable communities. Presented in three scales - Large, Medium, and Small, the interventions offer a holistic approach to urban planning that incorporates the interconnectedness and interdependence of the built environment. By utilizing this comprehensive understanding, urban spaces can be designed to be harmonious and functional. In addition to contributing to the discourse on post-conflict reconstruction and urban design, this thesis offers practical recommendations to architects, urban planners, and policymakers involved in shaping the built environment. Cities can be revitalized and transformed into resilient and vibrant urban centres by incorporating sustainable practices, promoting social inclusion, and fostering community engagement. As a conclusion, this thesis emphasizes the transformative power of urban design in post-conflict areas. With the principles of building back better and the priority of livability, it will be possible to create cities that are not only physically and aesthetically appealing, but are also socially inclusive, environmentally sustainable, and resilient to future challenges.

Reflections

The journey of this thesis has not only involved delving into the intricacies of post-conflict reconstruction and urban design but also navigating the challenging timeline of the research process. It has been an endeavour guided by problem-based learning principles, drawing inspiration from the University of Aalborg's approach to education. This methodology has encouraged a deep understanding of the subject matter through active engagement, critical thinking, and collaboration.

Throughout this thesis, valuable lessons have been learned. The interdisciplinary nature of the research has highlighted the importance of collaboration between various stakeholders, including architects, urban planners, policymakers, and community members. It has reinforced the significance of engaging with diverse perspectives and ensuring the inclusion of marginalized voices in the decision-making process.

The lessons derived from this research hold significant potential for application in future endeavours. The principles of building back better and prioritizing livability can guide urban development projects not only in post-conflict settings but also in contexts of urban renewal, sustainable city planning, and community-driven initiatives. The innovative neighbourhood and street typologies explored in this thesis offer valuable insights for architects and urban planners seeking to create inclusive, sustainable, and vibrant urban environments. Moreover, the problem-based learning approach adopted throughout this thesis has provided a solid foundation for lifelong learning and professional growth. It has cultivated critical thinking skills, the ability to identify and address complex challenges, and a deep understanding of the interconnectedness of social, environmental, and economic factors in urban design.

As we move forward, the knowledge gained from this research can inform urban planning and development practices, contributing to the creation of cities that are not only visually appealing but also socially inclusive, environmentally sustainable, and resilient to future challenges. The principles of building back better and prioritizing livability can guide efforts to create equitable and thriving urban communities, fostering a sense of belonging, well-being, and collective ownership among residents.

In conclusion, the timeline of this thesis, enriched by problem-based learning principles, has been a challenging yet rewarding experience. The insights gained from the research hold great potential for application in future urban development endeavours, transcending post-conflict contexts. By embracing the lessons learned, we can work towards building cities that are sustainable, inclusive, and resilient, improving the quality of life for current and future generations.

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List of Illustrations

Ill. 7 Historical timeline of Mykolaiv. Available at:
- https://en.wikipedia.org/wiki/Mykolaiv
-https://www.alamy.de/russische-armee-mykolaiv-festung-gefangen-image186161558.html
-http://www.encyclopediaofukraine.com/picturedisplay.asp?linkpath=pic%5CR%5CE%5CRed%20Army%20in%20Kyiv%201919.jpg&page=pages%5CU%5CK%5CUkrainian6SovietWar1917hD721.htm&id=20656&pid=7235&tyt=Ukrainian-Soviet%20War,%201917–21&key=Ukrainian-Soviet+War%2C+1917–21
-https://zaborona.com/en/world-war-ii-in-ukraine-beginning/
-https://zaborona.com/en/world-war-ii-in-ukraine-beginning/
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-https://www.rferl.org/a/31994070.html
-https://www.dw.com/en/opinion-revolution-of-dignity-in-ukraine/a-18077223
-https://www.cbc.ca/news/world/ukraine-russia-war-may14-1.6453497

Ill. 8 The situation during the war. Available at:
-https://war.ukraine.ua/articles/fighting-for-water-their-city-and-the-country-residents-of-mykolaiv-press-on/
-https://www.epc.eu/en/Publications/Helping-Ukraine-survive-the-winter-is-a-life-or-death-imperative~4d1c3c
-https://war.ukraine.ua/articles/fighting-for-water-their-city-and-the-country-residents-of-mykolaiv-press-on/

Ill 27 Old square in Beirut, Lebanon. Available at: https://timep.org/2020/09/16/demolishing-human-rights-in-the-name-of-reconstruction-lessons-learned-from-beiruts-solidere-for-syria/

Ill. 28 Old view from above in Belin, Germany. Available at: https://www.rferl.org/a/berlin-a-city-of-rubble-after-the-war-and-before-the-wall/30733579.html

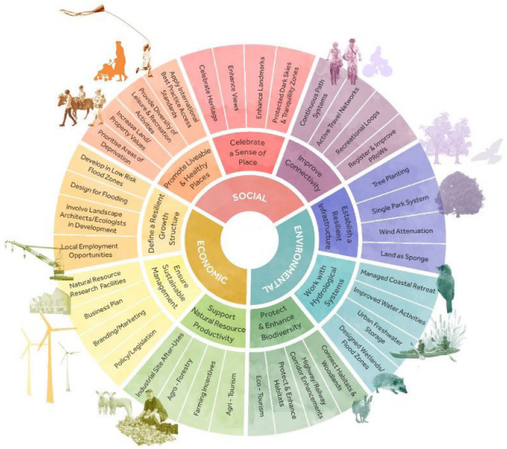
Ill. 29 Square in Tel Aviv, “White city”, Israel. Available at: https://robbreport.com/travel/destinations/slideshow/robb-report-guide-tel-aviv/inside-the-white-city/

Ill. 30 Old view from above in Belfast, Ireland. Available at: https://www.britainfromabove.org.uk/en/galleries

APPENDIX

The appendix comprises all supplementary material that was not included in the main body of the report. This encompasses additional analysis, research and other relevant information. The appendix is organized chronologically based on its appearance in the main part of the report.

CONTENTS



Ill. 1 Diagram of green and blue infrastructure

South Essex's green infrastructure comprises parks, woodlands, and gardens, while its blue infrastructure encompasses rivers, lakes, and coastal areas. Together, they support biodiversity, recreation, water management, and cultural activities.

Reference:https://alexandrasteedurban.com/project/south-essex-strategic-green-and-blue-infrastructure-study/

Ill. 2 Diagram of placemaking

A placemaking diagram visually represents the strategic planning and design process aimed at transforming public spaces into vibrant, engaging, and community-oriented environments that meet the needs and aspirations of the people who inhabit them.

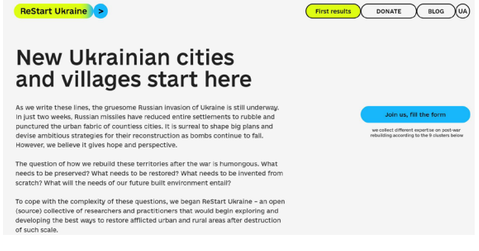
Reference:https://www.terrabkk.com/news/178394/placemaking

Ill. 3 Brochure of the campaign of the organization WeAreUkraine

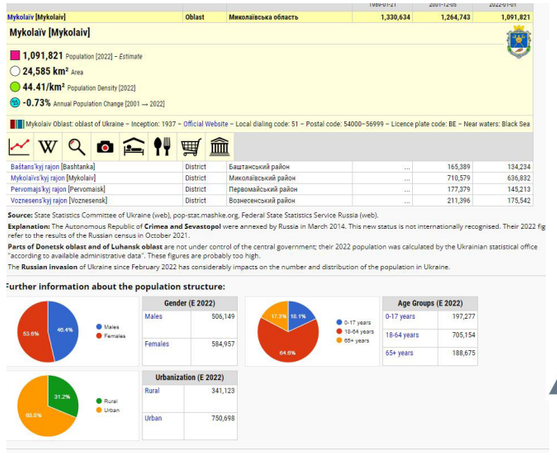
Reference: https://www.weareukraine.info/mykolaiv-to-be-a-new-copenhagen-in-future/

Reference:https://rebuildukraine.in.ua/en

The Council of Mykolaiv, in collaboration with organizations like Rebuild Ukraine and Restart Ukraine, has undertaken commendable efforts to reconstruct and revitalize the city. Their joint endeavors encompass infrastructure development, social initiatives, and economic rejuvenation, playing a crucial role in shaping a brighter future for Mykolaiv.



Reference: https://restartukraine.io

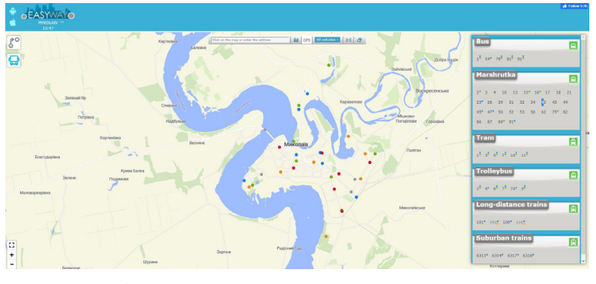


Ill. 4 Population of Mykolaiv

https://www.citypopulation.de/en/ukraine/admin/48__mykolaïv/

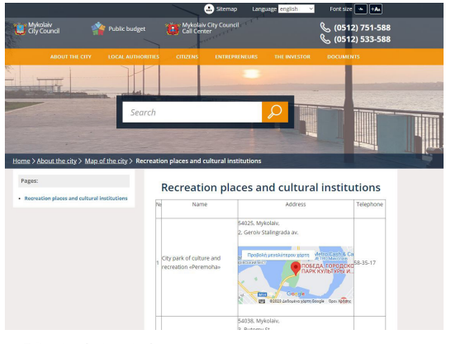
Ill. 5 Maslow’s hierarchy of needs

https://entytle.com



Ill. 6 Mobility map of Mykolaiv

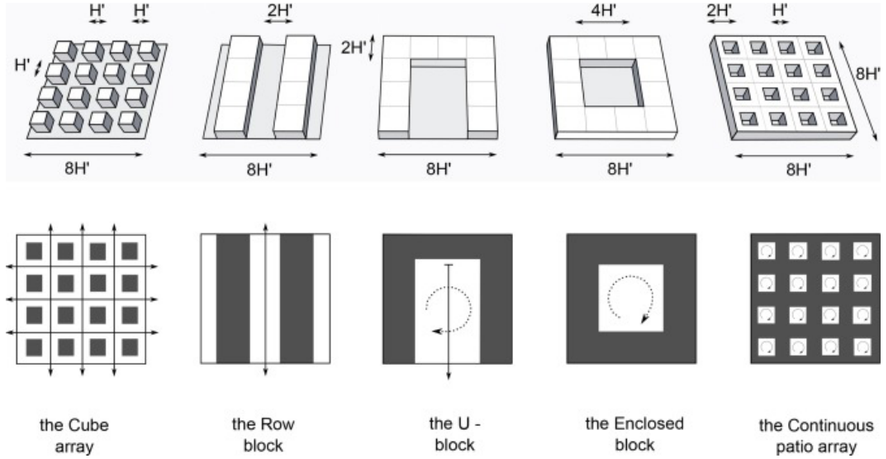
https://mkrada.gov.ua/en/content/miscya-vidpochinku-ta-zakladi.html



Ill. 7 Points of interest of Mykolaiv

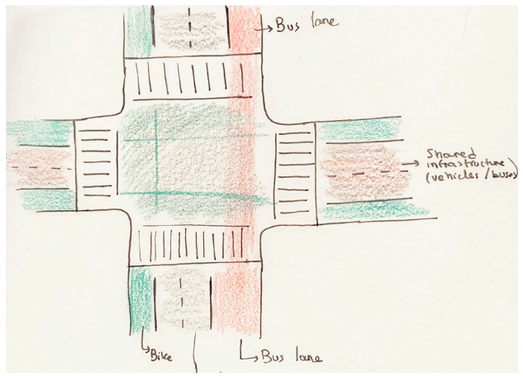
https://mkrada.gov.ua/en/

APPX 4. Building typologies

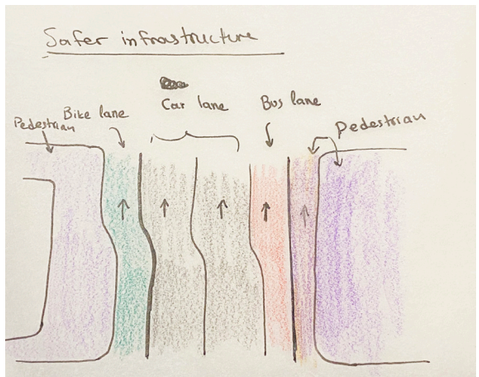


Reference: https://www.sciencedirect.com/science/article/pii/S2210670716307703

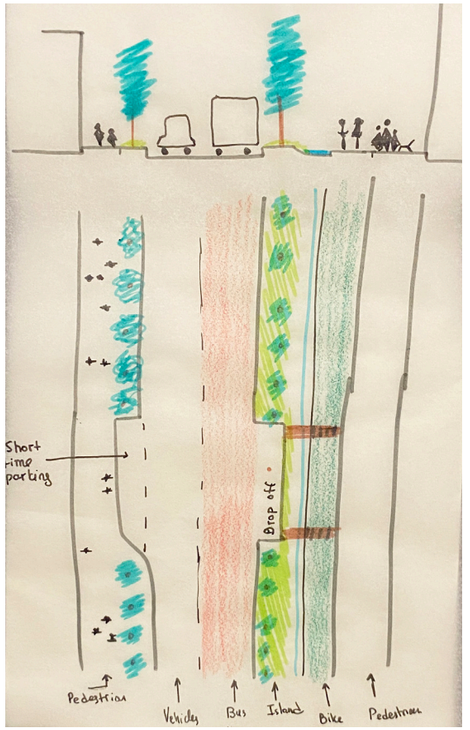
APPX 5. Initial vision sketches



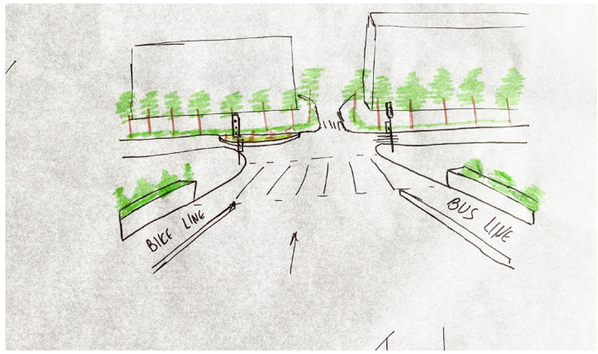
Ill. 8 Vision of the new street typology



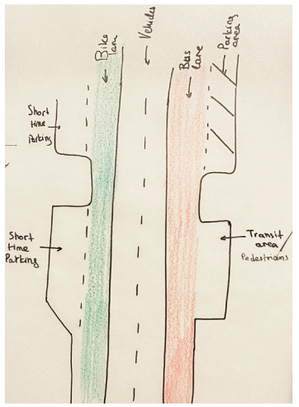
Ill. 9 Vision of the new street typology



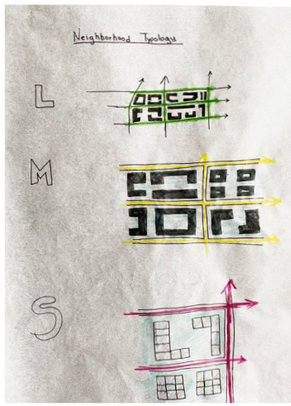
Ill. 10 Vision of the new street typology- section & plan



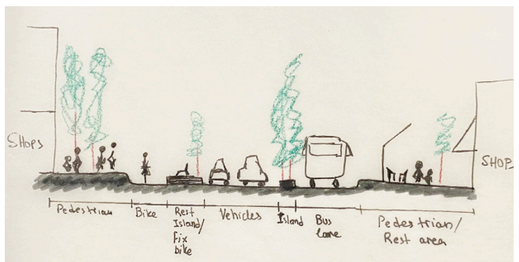
Ill. 11 Vision of the new street typology



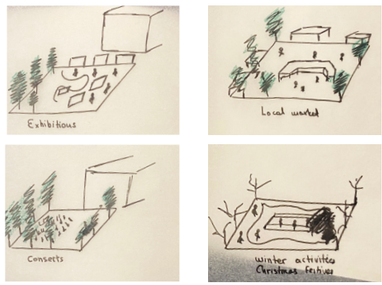
Ill. 12 Vision of the new street typology



Ill. 13 Vision of the new neigbourhood typology in 3 scales: large, medium, small



Ill. 14 Vision of the new street typology-section



Ill. 15 Vision diagrams of the new neighbourhood typology