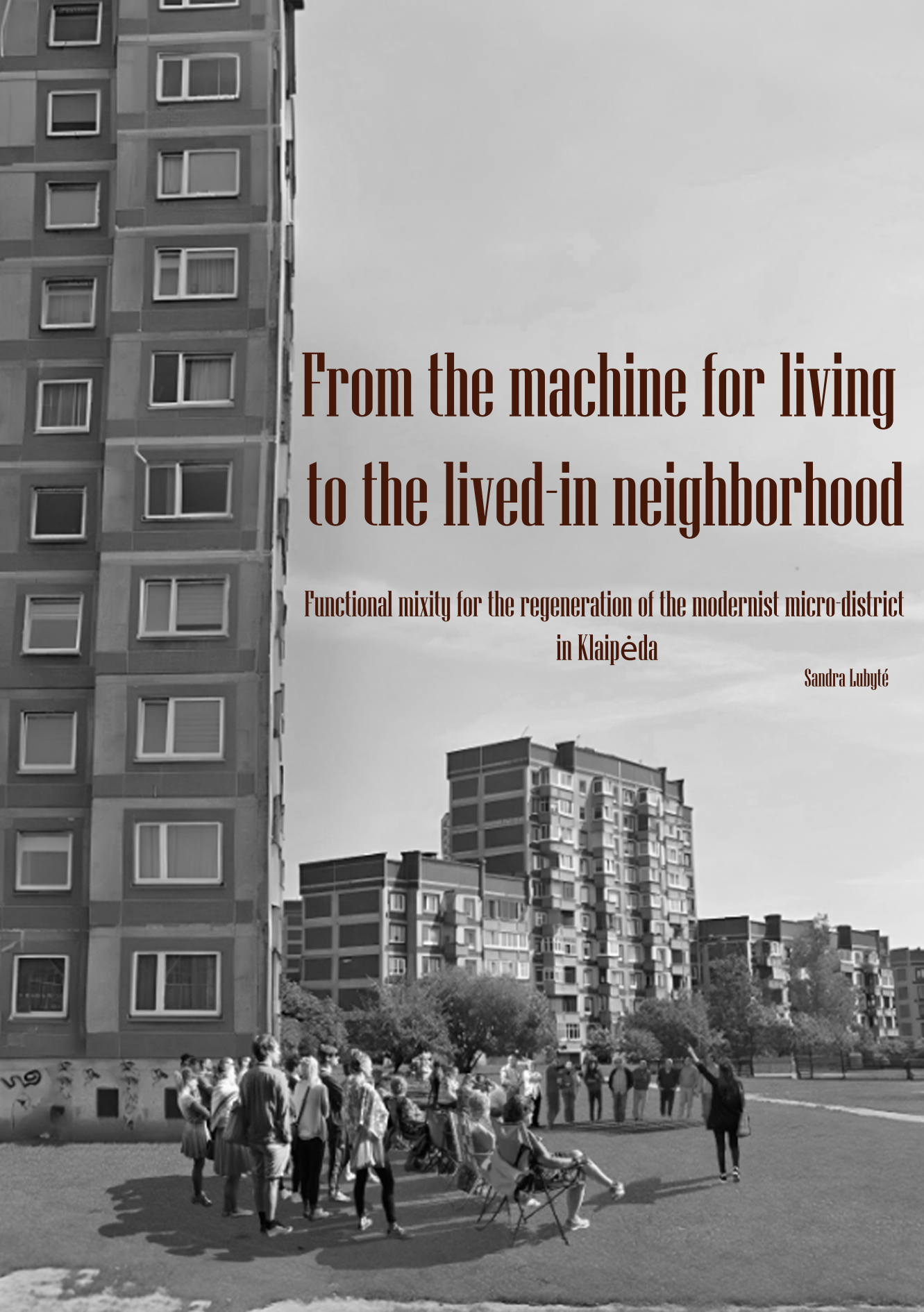




From the machine for living to the lived-in neighborhood

Functional mixity for the regeneration of the modernist micro-district
in Klaipėda

Sandra Lubyté

FROM THE MACHINE FOR LIVING TO THE LIVED-IN NEIGHBORHOOD

FUNCTIONAL MIXITY FOR THE REGENERATION OF THE MODERNIST MICRO-DISTRICT IN KLAIPĖDA

How to regenerate the model of modernist micro-districts in order to improve their habitability, from public space to the domestic sphere?

The case of the micro-district «Varpai» in Klaipėda, Lithuania.

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I would like to thank all the teachers from the atelier for their support during my architectural studies. Their teachings, demands, and diverse approaches significantly contributed to shaping my perspective and enriching this thesis.

I warmly thank my family, who remained in Lithuania, for their hospitality during my stays and for maintaining a constant connection with my hometown. Their presence, support, and testimonies were invaluable throughout this work. I also extend my gratitude to my parents and Pierrick, who stood by my side, helping me with organization and preparations.

Finally, I wish to thank all those, near and far, who contributed directly or indirectly to this thesis, with special mention to the residents of Klaipėda and the various urban planning agencies who agreed to share their experiences. Their testimonies and perspectives were essential in understanding the lived realities behind urban transformations and possibilities.

Thank you.

This thesis is part of a double perspective that has accompanied me since the beginning of my career: that of the architecture student trained in Belgium, and that of the Lithuanian citizen deeply linked to her native territory. Born in Klaipėda, I lived there for the first ten years before arriving in France. This move marked a geographical break, but it never broke the intimate bond that I maintain with my hometown. My family still lives there, I return regularly, and these trips have gradually taken on a new dimension over the course of my studies.

What was initially a matter of family visits has become, almost in spite of myself, a form of careful observation. As an architecture student, I started to look at the spaces I thought I knew differently: the streets of my childhood, familiar buildings, neighborhoods that were once crossed without paying attention. These stays then became real moments of analysis, where personal and academic perspectives overlap and confront each other.

It is in this context that I was struck by a visual transformation that was both obvious and disturbing. The grand complexes inherited from the Soviet period, long perceived as monotonous and degraded, are now adorned with bright colors, new insulating envelopes and modernized facades. At first glance, the city seems to renew itself, to revitalize itself, almost to reinvent itself. Yet this transformation seems to be part of a fragmented logic. It does not respond to a global urban vision or a clearly identifiable overall strategy, but rather to a succession of punctual interventions, carried out building by building. This «case-by-case» approach produces a heterogeneous urban landscape, where renovated buildings coexist with others left on hold, creating a form of visual and spatial discontinuity. In this process, energy performance often appears as the main priority, sometimes at the expense of a broader reflection on architectural quality, uses or living spaces.

In seeking to understand the reasons for this fragmentation, it seemed essential to me to focus on the very structure of ownership. Inherited from the post-Soviet period, it is largely based on individual ownership: most inhabitants became homeowners after independence. This model, which can be perceived as a form of emancipation, also has direct consequences on the dynamics of urban transformation.

Renovation projects depend on the operation of condominiums. They must be voted collectively, with an absolute majority (50% + 1). Even if this system is democratic, it often slows down decision-making. It also highlights the differences between inhabitants, according to their needs and financial means.

The economic factor is therefore central. The cost of the work is a significant obstacle, and public aid is often considered insufficient. Moreover, these neighborhoods are marked by the aging population. For many elderly residents, with few resources, these expenses are not a priority because the benefits are mainly visible in the long term. This creates a gap between the collective objectives of renovation and individual choices, which hinders transformations.

This thesis seeks to understand how a renovation works, where the inhabitants play a central role. He also wonders about the place of the architect in this context: how to intervene when residents are both actors and sometimes obstacles to change? And how to think about transformations that go beyond individual housing to include the city?

These questions, nourished both by my personal experience and by my perspective as a student in architecture, constitute the main thread of this work.

INTRODUCTION

The legacy of modernist urban planning is now one of the major challenges of the urban fabric in Eastern Europe. Designed in the aftermath of a post-war emergency to address an unprecedented housing crisis, Soviet micro-districts radically reshaped the landscape of the Baltic cities. In Klaipėda, this model of the «radiant city» has imposed itself on a historical tabula rasa, transforming a port city into a vast laboratory of socialist modernity. However, thirty years after the fall of the Soviet bloc, this built heritage is facing a multidimensional crisis: technical, social and above all demographic.

The paradox of thermal renovation

Today, the landscape of Klaipėda is marked by a visible but superficial metamorphosis. With the entry into Europe in 2004, energy renovation programs are multiplying to give a new image to this city which is trying to develop its tourism¹. Yet, this «surface renovation»² raises questions. If the thermal envelope improves, the spatial obsolescence of housing and the rigidity of public spaces remain unchanged. This discrepancy highlights a gap between compliance with technical standards and a real regeneration of quality of life. The micro-neighbourhood model, once a symbol of progress, seems to have frozen in an urban form that no longer meets contemporary aspirations for comfort, flexibility and urbanity.

The absence of meeting spaces

This housing crisis is aggravated by a glaring lack of collective spaces. In these neighborhoods now in private condominiums, it is difficult to get together to decide the future of buildings. In the absence of dedicated places, residents must gather outside, in the rain or cold, or pay themselves to rent a room to exchange. This lack of resources discourages residents from getting involved, which causes a drop in participation to votes on renovation projects.

Yet, a collective life exists, mixing several generations that coexist daily. But this desire to share and meet is struggling to develop due to a lack of meeting places. Public space, once thought of as an open park, is now saturated with parking, leaving no room for spontaneous or organized social interactions.

1. «It is naive to think that by erasing the material traces of the Soviet era, we will plunge society into collective amnesia.» Petrušis, V. (2021). *Apie sovietinio modernizmo architektūrą*. sa.lt : <https://sa.lt/architekturologas-v-petrulis-apie-sovietinio-modernizmo-architektura/> (Accessed 10.12.2024)

2. «From today's point of view, it is an absurd treatment of architecture: apartment buildings of various shapes and colors, but the quality of life is identical. In many cases, it is similar or even worse today: materials and technological things are new, but the quality of the living space, its understanding and realization do not differ much from the previous one.»(p3) . Butkus, T. (2002). Urban design and planning. 3rd Klaipėda. Archiforma

A city facing its demographic decline

This architectural observation is part of a demographic context. Klaipėda is experiencing a constant decline, marked by the departure of young populations and the aging of historical residents from micro-districts. The residential attractiveness of these areas is being eroded by peripheral urban sprawl, leaving behind dormitory neighborhoods whose social ties are deteriorating. Urban regeneration no longer depends on a centralized vision, but on the ability of residents with divergent interests to agree on a common project.

Problem

To curb the departure of residents and restore value to these former neighborhoods, this work proposes to go further than a simple renovation of facades:

How to regenerate the model of modernist micro-districts in order to improve their habitability, from public space to the domestic sphere?

In order to address this issue, this thesis is organized into four parts, articulating a progression from historical analysis to the definition of transformation strategies.

The first part proposes a perspective of the modernist model in Klaipėda, by going back on the rupture of 1945 and on the theoretical foundations that led to the formation of micro-neighborhoods. It is also based on the study of the district of Varpai, nourished by the words of the inhabitants.

The second part analyzes the scale of the neighborhood. The aim is to transform the «dormitory district» into a real «city district» by improving the layout of public spaces and diversifying activities, using concrete examples studied in Lithuania.

The third part approaches the building. She explores how to transform existing buildings, hesitating between preserving the existing or expanding them, to integrate shared spaces and adapt apartments to today's needs.

Finally, the fourth part deals with how to renovate. It compares different construction techniques to propose a sustainable rehabilitation model, capable of meeting both the technical challenges, the needs of the inhabitants and the evolution of lifestyles.

Selective population decline

This concept describes a phenomenon of urban fragmentation where certain sectors—generally the large peripheral areas—undergo demographic decline and impoverishment with social changes, while the rest of the agglomeration maintains its growth or restructures.

«The decline is not a uniform process; it affects neighborhoods in a differentiated way, accentuating spatial disparities between reinvested centers and peripheries inherited from the industrial period that are losing their attractiveness.»³

This term should be distinguished from the concept of *Shrinking City*, which refers to a city that is massively losing its population, economy, and vitality across its entire territory.⁴

Klaipėda is a city with shrinking areas. The decline in dormitory neighborhoods accentuates the aging of micro-neighborhoods, as young workers leave these rigid structures.

Urban regeneration

Unlike simple «renovation» (which repairs) or «rehabilitation» (which brings standards), regeneration is a more comprehensive approach. It aims to revitalize a neighborhood by acting simultaneously on the built environment, local economy, environment and social cohesion. «A comprehensive and integrated vision and action that leads to the resolution of urban problems and seeks to bring about a lasting improvement in the economic, physical, social and environmental conditions of an area that has been subjected to change.»⁵

Micro-district

The basic unity of Soviet urbanism radicalized by socialist ideology. It is designed as an autonomous cell with hierarchical planning: the services (schools, kindergartens, shops) are accessible on foot, away from major roads

«The micro-district became the basic cell of the urban structure, designed as an autonomous residential unit where the citizen's «daily cycle» —living, shopping and accessing basic services—could be accomplished at a walking distance, separated from the noise and dangers of major traffic arteries.»⁶

The micro-district is today a monolithic enclave. If he has succeeded in the challenge of access to services, he has failed to create a complex urbanity, often turning into a dormitory area without any dynamism.

3. Roth, H. (2011). Espaces en déclin, espaces en décroissance : une approche géographique (Note de synthèse pour l'Habilitation à diriger des recherches) (Declining spaces, shrinking spaces: a geographical approach). (p.19) . Université Paris-Sorbonne, Paris, France.

4. Definition from the site <https://geoconfluences.ens-lyon.fr/glossaire/shrinking-city> (Accessed 20.04.2026)

5. Roberts, P., & Sykes, H. (2000). *Urban regeneration: A handbook*. London, England: SAGE Publications. This book follows in the wake of the British Urban Renaissance of the late 1990s. It marks a break with the strictly real estate project urbanism of the 1980s by proposing a theoretical framework where physical revitalization is inseparable from a long-term social and economic strategy.

6. Safronovas, V. (2017). *Klaipėda in the twentieth century: A history of a European city*. (p.160). Vilnius, Lithuania: Vilnius University Press.

Urban Modernism

Urban modernism is defined as the encounter between a functionalist doctrine theorized by Le Corbusier through the sectorization of life into four functions (living, working, recreating, moving), the use of industrial materials (concrete, steel) and thus the offer of «sun, space and greenery» to all, and a historical necessity analyzed by Leonardo Benevolo as the total rationalization of human needs in the face of the emergence of mass society.

«The keys to urban planning are in the four functions: living, working, recreating (body and mind), moving.»⁷

«If modernism is defined aesthetically by the stripping of ornament, it expresses itself in the micro-district as a desire for total rationalization of human needs.»⁸

Modernism in Klaipėda allowed rapid construction after the destruction of the city, but its rigidity (standard buildings, absence of commercial ground floors) is now its main weak point. The challenge is to «post-modernise» these structures in order to make them more humane.

Common areas vs Collective areas

Common space is not fixed by the architect, but created through use. These are the places whose management requires a 50% + 1 vote. They are shared spaces that residents can appropriate.

«Common spaces emerge as spatio-temporal thresholds. They are spaces of in between. As spaces in the making, they are produced and inhabited as passages rather than fixed places; passages that serve as mediators and transitions connecting adjacent areas without creating an indivisible whole.»⁹

The collective space is defined as an intermediate space of socialization, extending domestic functions outside the private cell to make them available to a delimited social group. This falls within the scope of social use, which is designed and developed upstream. These are the spaces where collective life takes place.

«Collective space is a portion of urban territory whose use is shared by a specific social group (the residents of a building or block), constituting an intermediate scale between the private space of housing and the public space of the city.»¹⁰

7. Le Corbusier. (1943). *La Charte d'Athènes*. (p.95). Paris, France : Éditions Plon. L'auteur y pose les «clefs de l'urbanisme» par la séparation stricte des fonctions vitales.

8. Benevolo, L. (1988). *Histoire de l'architecture moderne* (Trad. par G. et I. Gaillard). (p.458). Paris, France : Dunod. He defines modernism not as a style, but as a reorganization of the habitat to meet the minimal needs of industrial society.

9. Stavrides, S. (2016). *Common Space: The City as Commons*. (p.11). Londres, Angleterre : Zed Books. The author analyzes the failure of modernist space while proposing a way for its regeneration.

10. Choay, F. (1965). *L'Urbanisme, utopies et réalités*. (p.27). Paris, France : Éditions du Seuil.

METHODOLOGY

To carry out this research, I chose to adopt a hybrid stance, combining my sensitivity as a former resident of Klaipėda and my critical perspective as an architecture student. My methodology has been built iteratively, ranging from historical narratives and scientific data to direct confrontation with the field and its actors.

Research to understand history and grasp the present

At first, I immersed myself in a thorough bibliographic research, relying notably on the work of the historian Vasilijus Safronovas or the architect Tomas Butkus. I completed these readings with visits to museums and archives in Klaipėda, as well as viewing period documentaries. These sources helped me understand how Soviet ideology shaped domestic space and why Prussian heritage was so radically erased in favor of the micro-neighborhood model. This was necessary in order to fully understand the events that made Klaipėda, the city it is today. These historical contributions form the basis of my work, allowing me to provide a comparison between what was initially thought and desired during the occupation of the country and the transition to independence, in order to extract from it the current problems.

Domestic immersion through contact with the inhabitants

My personal knowledge of the city and the language opened doors that could have been closed to someone unaware of this culture. I was able to carry out visits to apartments, taking surveys to better assess their current condition. I then mainly focused my attention on the quality of light, the use of different rooms, meeting spaces, and development work.

These visits allowed me to conduct informal discussions with the inhabitants to gather their feelings. It was during these exchanges that I measured the seriousness of certain situations. Of course, I had my own experience, but it was not representative of today's reality since I mainly had childhood memories. I needed more perspective, more testimonies from people of different ages in order to understand the daily lives of the inhabitants through the years. These interviews brought other topics, thanks to the anecdotes that allowed me to anchor this work in its territory.

In order to go beyond the simple individual testimony, I distributed online surveys with a broader sample of residents. These quantitative data allowed me to confirm a widespread dissatisfaction regarding habits, travel, and renovation work.

Case studies and interviews with their designers

To understand why the transformation projects seem so fragmented, I sought interviews with leading Lithuanian architectural agencies such as PUPA¹¹, MMAP¹² and OFFICE DE ARCHITECTURA¹³. These exchanges were decisive for my research. By questioning these architects and urban planners about their design processes and their management of micro-neighborhoods, I was able to identify the political and financial levers that dictate the current urban form, which I was able to use to develop the different project strategies. The analysis of their local case studies (projects in Vilnius or Klaipėda) allowed me to confront my own project intuitions with concrete achievements. This was necessary in order to see how I could link my knowledge of architecture through teaching in Belgium, and their applications in a very specific field rooted in its history and culture.

Visual production as a projection and communication tool

Finally, to go beyond the simple diagnosis and offer a vision of the future, I used my computer skills to produce graphic visuals.

This tool not only helped me to communicate the stages of my project, it also served as a design support, allowing me to physically project myself into the urban space and to concretely imagine the requalification of soils.

This realization of «Avant-Après» helped me to confront the frozen current state with a transformed «possible», thus making my ideas about landscape and new uses more tangible.

11. PUPA (Public Urbanism Personal Architecture) is a Lithuanian-based urban planning and architecture agency, specializing in territorial strategies, urban planning and regeneration projects.

12. MMAP is a Lithuanian architecture and urban planning agency whose projects are at different levels, combining architectural design, urban planning and strategic reflection on contemporary territorial dynamics.

13. OFFICE DE ARCHITECTURA is a Lithuanian architecture and urban planning agency based in Kaunas, renowned for its critical and analytical approach to the architectural heritage of the twentieth century, which proposes to rebuild rather than demolish.

CONTENTS

Thanks
Foreword
Write Context
Introduction
Glossary
Methodology

PART I — The history of Klaipėda and the modernist micro-districts

	1. 1945 : Geography and historical rupture
16.....	1.1 Geographical location on the Baltic
20.....	1.2 Russian invasion in a «city without a past»
24.....	1.3 Growth and North-South linear plan
	2. Micro-district theory: the modernist ideal
36.....	2.1 Urban planning principles and spatial organization of the micro-district
42.....	2.2 Inspirations théoriques (Ville radieuse et Neighbourhood Unit)
	3. The construction of mass housing
48.....	3.1 Prefabrication and industrialization of buildings
50.....	3.2 The standardization of housing and spatial minimalism

PART II — The future of the micro-district: local and European perspectives

	1. The Varpai micro-district
60.....	1.1 Urban and spatial study of the micro-neighborhood
76.....	1.2 Typological analysis of buildings
86.....	1.3 Current problems
98.....	1.4 The development of the program with the inhabitants
	2. Urban case studies in Lithuania
106.....	2.1 Transformation of the Gabija district, Mažeikiai , Lituanie - PUPA, 2022
112.....	2.2 Transformation of the Rumpiške district, Klaipėda, Lituanie - PUPA, 2015
116.....	2.3 Regeneration of the Pašilaičiai district, Vilnius, Lituanie - Ignas Uogintas, 2014
	3. The case studies of building transformations in 1970 in Europe
124.....	3.1 Case study: PANELAK project, Slovakia - GutGut, , 2014
128.....	3.2 Transformations keeping the initial density
130.....	3.3 Transformations reducing the number of dwellings

PART III — Urban Strategy: The quarter-hour district

	1. Lever 1: Qualify soils
138.....	1.1 Car parkings
148.....	1.2 Green area
	2. Lever 2: Create a functional mix
158.....	2.1 Diversification of collective uses
164.....	2.2 Strategy to extend

PART IV — Building Strategy: Expansion

	1. Lever 3: Add common areas
170.....	1.1 Strategy 1: Add the program within the existing building
172.....	1.2 Strategy 2: Add the program to the sprockets
	2. Lever 4: Rethinking domestic practices
176.....	2.1 Housing Expansion Strategy
188.....	2.2 Renovation with prefabricated panels
196.....	Conclusion
202.....	Bibliography
206.....	Iconography
214.....	Annexes

PART I

The history of Klaipėda and the modernist micro-districts

1. 1945 : Geography and historical rupture

GENERAL PRESENTATION OF KLAIPEDA

Located between the Baltic Sea and the Curonian Lagoon, Klaipėda occupies a special place in Lithuania, both geographically and strategically. As the country's only access to the sea, it has played an essential role in trade since its foundation in the 13th century. Formerly known as Memel and marked by the presence of the Teutonic Order¹⁴, the city has developed in a meeting with Germanic and Baltic influences.

Throughout its history, Klaipėda has experienced several changes in sovereignty, which have profoundly marked its identity. After the First World War, it was placed under international administration before being occupied by France between 1920 and 1923¹⁵. It was then attached to Lithuania, then annexed by Nazi Germany in 1939, before being integrated into the Soviet Union at the end of World War II. These successive transitions explain the composite character of the city and the complexity of its urban and cultural heritage. As the historian Vasilijus Safronovas points out, Klaipėda can thus be understood as a «border city», whose development has been strongly influenced by political changes and power relations in Europe¹⁶.

The proximity to the Russian enclave of Kaliningrad, located just south, gives Klaipėda a special geographical position. This makes the city a major strategic point in the Baltic Sea region. Klaipėda must therefore manage both security issues, related to the presence of a neighboring Russian territory, and unique economic opportunities. As a gateway between the EU and its neighbor, the city plays a crucial role.

The city's development is closely linked to its port, one of the few in the Baltic not to freeze over in winter. It constitutes a structuring element of its economy and its spatial organization. For a long time, Klaipėda served as a trading point for resources such as wood, flax or amber. According to Vytautas Nikulin¹⁷, this close relationship with the sea has influenced an architecture adapted to climatic conditions, marked by wind and humidity.

Today, Klaipėda is no longer limited to its port activity. It has become a hub for research and innovation, particularly in the maritime sector. The sea also remains at the heart of the city's cultural identity, as evidenced by the annual Fête de la mer. It is this balance between the dynamism of the port and the local quality of life that makes all the appeal of Klaipėda.

14. Catholic military and religious order founded in 1128 by German pilgrims from Bremen and Lübeck. Recognized by the pope in 1198, it became a major actor of the Baltic crusades and a powerful monastic state in Prussia and Livonia before being secularized in the sixteenth century. Source : <https://www.intermedes.com/article/5447-l-ordre-teutonique/> (accessed 07.04.2026)

15. Chandavoine, I. (2003). *Prancūzmetis Klaipėdoje ir kas po to (1920–1932)*. Vilnius, Lituanie

16. Safronovas, V. (2017). *Klaipėda in the twentieth century: A history of a European city*. Vilnius, Lithuania: Vilnius University Press.

17. Nikulin, V. (2018). *Klaipėda: Klaipėda: Urbanization and port identity in the Baltic*. Éditions Baltos Lankos. (p45-47)

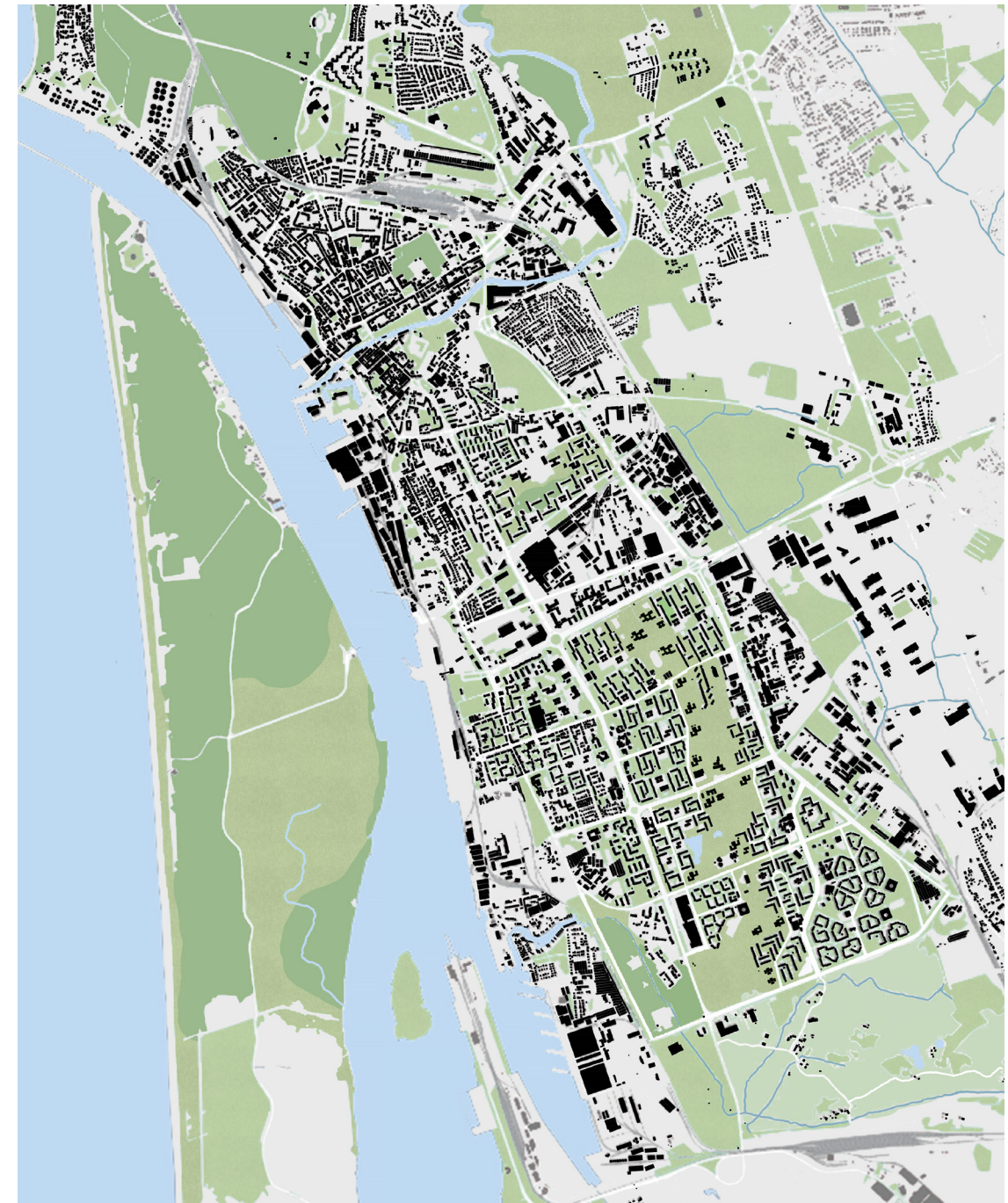
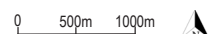


Fig 1. The city plan of Klaipėda



RUSSIAN INVASION IN A «PASS-FREE CITY»

The year 1945 represents a major turning point for Klaipėda. The city, which had existed for centuries, is almost completely destroyed and starts from scratch. Before that, it occupied a special position: after the First World War, it was placed under the control of the League of Nations, without clearly belonging to any country and becoming an «orphan political entity» after the Treaty of Versailles. It was located between the German and Lithuanian influence, which made it a kind of intermediate zone, but also an important strategic target.

During the Second World War, Klaipėda (then called Memel) was controlled by Nazi Germany. From 1944, the Red Army advanced westward as part of the Soviet counteroffensive against Germany. The objective is to retake the territories occupied by the Nazis and secure strategic positions, notably ports on the Baltic Sea. Klaipėda is therefore an important issue, because it is a port that allows direct access to the sea. It was in this context that the Soviet army arrived and took the city in 1945. The bombings of 1944 and 1945, then the fires during the capture of the city by the Red Army, destroyed about 60% of the buildings. Almost everything from before 1800 is gone.

After the war, the city is not only in ruins, but also almost empty of its inhabitants. According to the historian Vasilijus Safronovas¹⁸, in 1947 the original inhabitants, who remained after the Second World War, represented only 1.5% of the population. This is explained by the massive evacuation of German-speaking populations in the face of the advance of the Red Army and the desperate flight of the last civilians during the siege of the city.

«When the Soviet army captured Klaipėda on 28 January 1945, only a handful of people remained. Klaipėda has undoubtedly become the only city in Europe where, after the Second World War, the population was completely replaced.» (p. 162).

Most of the newcomers had no connection with the history of the city, which then became a kind of «city without memory» for its inhabitants. For the Soviet power, it was a golden opportunity because by erasing the traces of the past and installing a new population, it could easily impose its own vision

To realize this vision, major investments are being made to transform a regional trading port into a heavy industrial complex. There is the installation of continental-scale infrastructure: the shipyard «Baltija», huge fish canneries and later the ferry terminal Mukran. This generated an immediate need for labor that the residual local population could not fill. The state thus organized migratory flows, attracting engineers and workers from all over the Soviet Union (Belarus, Ukraine, Russia) as well as Lithuanian peasants fleeing collectivization.¹⁹

18. Safronovas, V. (2020). *Klaipėdos miesto istorija*. (p.162). Klaipėda, Lietuva: Mažosios Lietuvos istorijos muziejus.

19. Bėčienė, J., Černiūtė-Vaitiekūnienė, I., & Petrušis, V. (2020). *Klaipėda: Architektūros gidas* (p.237). Vilnius : Architektūros fondas.



Fig 2. Klaipėda after the bombings of 1945. © Eugenijus Šiško / LCVA (Lietuvos centrinis valstybės archyvas)



Fig 3. Ruins of downtown Klaipėda in January 1945. © Lietuvos energetika / Source : <https://www.delfi.lt/miestai/klaipeda/klaipedos-elektrinei-90-metu-mena-laikus-kai-visas-miestas-skesdavo-dumuose-81482755>. Accessed 06.04.2026

RUSSIAN INVASION IN A «PASS-FREE CITY»

In this model of the «factory city», housing was no longer an extension of the historic urban fabric but a logistical function of industry; it was often the industrial ministries themselves that financed the construction of micro-neighborhoods for their employees. Urban growth was then carried out by a mechanical repetition: each expansion of the port dictated the creation of a new dormitory neighborhood in the outskirts. The current urban morphology of Klaipėda is therefore inseparable from the radical demographic transformations that followed the Second World War, which resulted from this process of massive repopulation, accompanied by a broader political and cultural project.

The population increased from about 3,600 inhabitants in 1945 to more than 200,000 in 1989²⁰. As early as 1945, official decrees promised new arrivals significant benefits in terms of housing, employment, and credit, promoting rapid and sustained migration. This movement is self-sustaining: the first settlers in turn invite families, friends and acquaintances, further accelerating population growth. Thus, in the summer of 1946, Klaipėda reached about 30,000 inhabitants²¹, despite precarious reception conditions and an already marked shortage of housing.

The old Prussian identity was deliberately erased in favor of a new working-class and socialist identity. Rather than rebuild the historic centre, authorities have favored a massive expansion to the south by creating new neighborhoods. This choice was not only aesthetic because it responded to an industrial logic and the urgency of housing workers. After repairing the war damage in the city center, the authorities implemented a strategy to turn Klaipėda into a major industrial and port hub. This change was materialized by the General Plans of 1963 and 1971, which completely redesigned the city.

The new general plan has broken with the organic and compact structure of the old city of Memel to adopt a linear development model. Constrained by geography—the Baltic Sea to the west and the lagoon to the east—urban planners projected the city on a north-south axis. This organization responded to the modernist functional zoning: a clear separation between the industrial port area along the shore and the residential areas further east. As Vaidotas Petrulis²² points out, this extension was not only a response to the housing crisis, but a desire to create an «urban machine» optimized for port productivity.

The extension to the south was planned through the unit of the Mikrorajon (micro-district). Rather than extending existing streets, planners designed giant islands that were autonomous and self-sufficient. Historian Safronovas explains that this structure was intended to free the individual from domestic tasks to focus on work, while ensuring equal access to «sun, space and greenery» advocated by the modernist.²³

20. Safronovas, V. (2017). *Klaipėda in the Twentieth Century: A History of an European City*. (p.169). Klaipėda: Libra Memelensis.

21. Klaipėdos miesto vykdomasis komitetas. (1946). Reports on the state of buildings and plans for reconstruction of the city. State Archives of Lithuania, Vilnius/Klaipėda, Lithuania.

22. Petrulis, V. (2021). *Modernism in Lithuanian architecture: Development and legacy*. (p.82). Kaunas, Lituanie : Kaunas University of Technology Press.

23. Safronovas, V. (2017). *Klaipėda in the Twentieth Century: A History of an European City*. (p.172). Klaipėda: Libra Memelensis. By integrating collective services in the heart of neighborhoods, the state sought to minimize the time spent on private and domestic sphere. The individual, thus «freed» from the constraints of the home, could devote most of his energy to industrial reconstruction and productivity of the port.

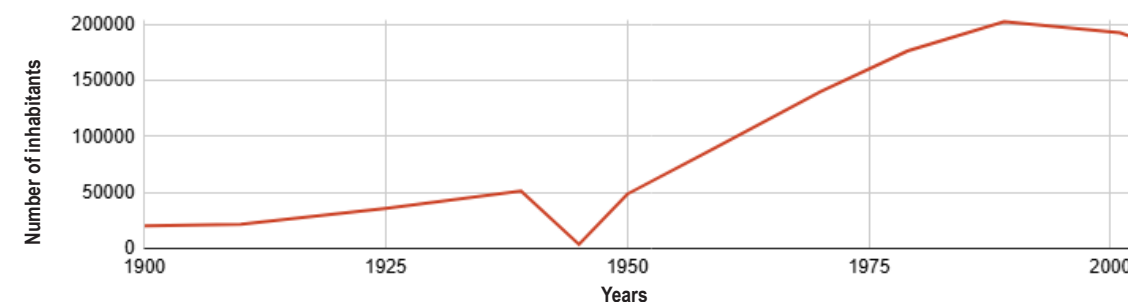


Fig 4. The demographic evolution of the city of Klaipėda since the capture of the USSR

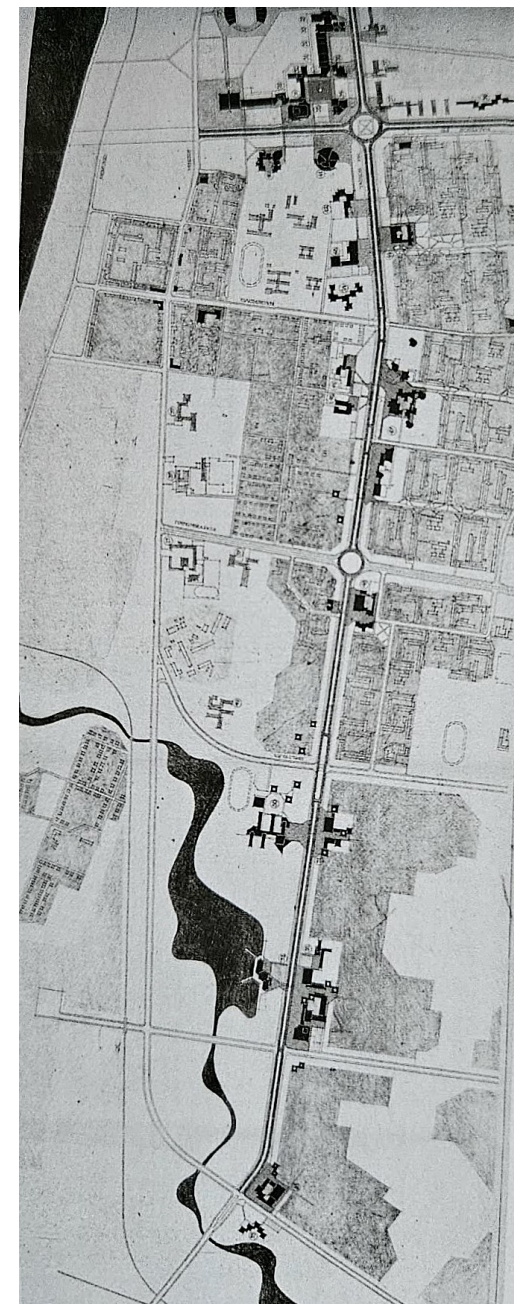


Fig 5. General plan of Klaipėda, 1976. From the book *Klaipėda: Architektūros gidas* (p.246)



1925

The city is organized around a dense historic center with brick roofs. It is a laboratory phase where the first modern and industrial extensions related to the port are emerging, while respecting a human scale and low templates.



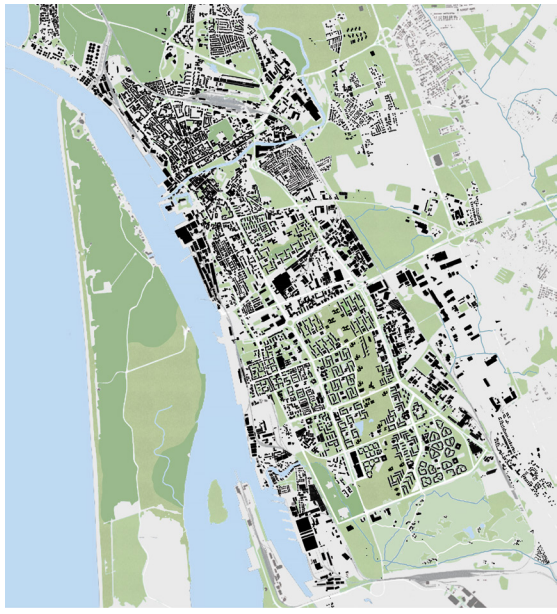
1946

This is the tipping point towards the Soviet model: planning abandons identical reconstruction to impose an airy framework, marking the beginning of standardization and the first low-rise collectives.



1973

The city stretches southward along a linear axis. It is the era of massive prefabrication: districts with 5 and 9 floors dominate the landscape. The urban structure is now governed by autonomous service areas and large collective green spaces.



2025

Klaipėda completed its transition with towers reaching 20 floors and more. The current urban landscape confronts the rigid legacy of the Soviet blocs with contemporary renovation projects, a densification of residual spaces and a reopening of the waterfront on the lagoon.

Fig 6. Plans showing the evolution of the city of Klaipėda

CURRENT URBAN STRUCTURING

Today, the spatial organization of the contemporary city reflects this historical and functional stratification marked by a clear break between eras and uses. This structure is divided into three distinct morphological sequences that illustrate the passage from the organic city to the planned city. First, the historic center in the north that embodies the traditional city, characterized by a mix of uses and a built density where housing, trade and institutions overlap in a fabric of narrow streets. Here, the social and symbolic function predominates, offering a striking contrast with later developments.

The area between the center and the periphery, once occupied by concrete plants, has changed dramatically. It has become a commercial and leisure area, while keeping its imposing buildings. This transformation clearly shows that the city has replaced industrial production with services.

Further south, the residential neighborhoods, composed of large complexes, have a different logic. Unlike the city center where everything is mixed, these neighborhoods are only dedicated to housing. The inhabitants must therefore constantly move between different areas: they sleep in these peripheral districts, work in the former industrial zones and entertain themselves in the historic centre.

This organization, which made it possible to build housing quickly with concrete, ended up cutting the city into several separate pieces. Today, Klaipėda no longer looks like a unified whole, but rather an archipelago of isolated functions, connected by major roads, where each activity remains confined to its own space.



Fig 7. The grafting of the first buildings onto the historical fabric. © Photographic archives of the city of Klaipėda, 1963

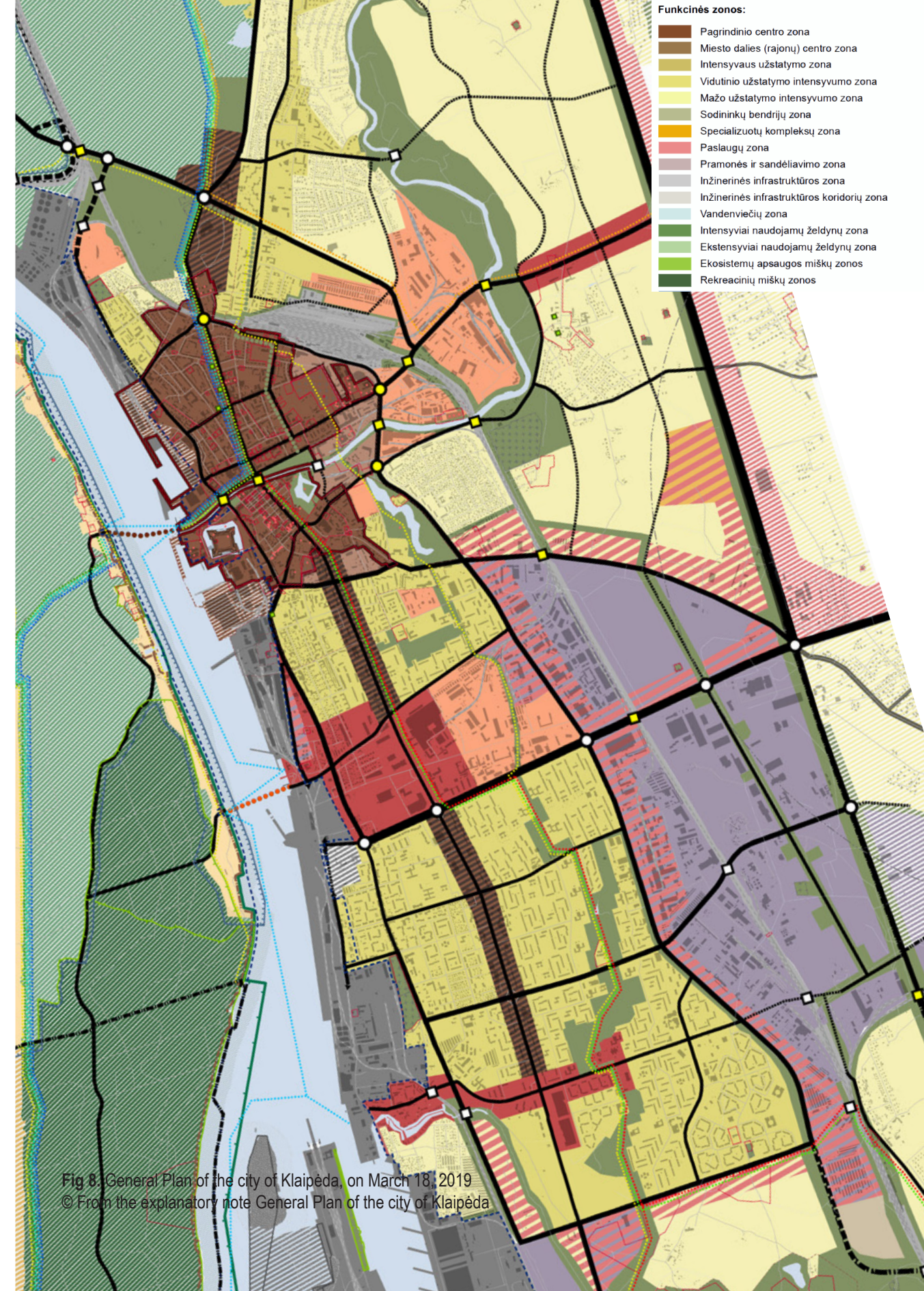


Fig 8. General Plan of the city of Klaipėda, on March 18, 2019
© From the explanatory note General Plan of the city of Klaipėda

STRUCTURING OF THE SOUTHERN PART OF THE CITY

The southern part is thus organized around a succession of micro-neighborhoods, which form the main frame of the south of the city. There are several, including Bandužiai, Varpai, Debreceenas and Laukininkai, each constituting a relatively autonomous residential unit. The structuring of this whole is based on a clear hierarchy of spaces and circulations. Micro-neighborhoods are delimited by major roads, which provide city-wide connections while clearly separating residential units from each other. This organization allows to limit transit traffic inside the neighborhoods, reinforcing their residential and relatively autonomous character.

Moreover, these neighborhoods are crossed by a major axis that is a central green corridor that serves as a backbone. This linear space of 4km brings together parks, sports fields and relaxation areas, offering the inhabitants places to meet. It also makes it possible to connect the different micro-neighborhoods and provide a little more space in a very dense and uniform urban environment.

Thus, the south of Klaipėda is organized in a very readable and repetitive way. Each micro-neighborhood is clearly delimited, connected by roads and articulated around this network of green spaces. This structure reflects a modern vision of the city, where the separation of circulations, the precise organization of spaces and the integration of public facilities allow for planning urban life on a large scale.



Fig 9. Žardė Shopping Center. © Photograph by Audronius Ulozevičius. Klaipėda, 1986. <https://www.epaveldas.lt/preview?id=C160000276001>. Consulté le 11.04.2026

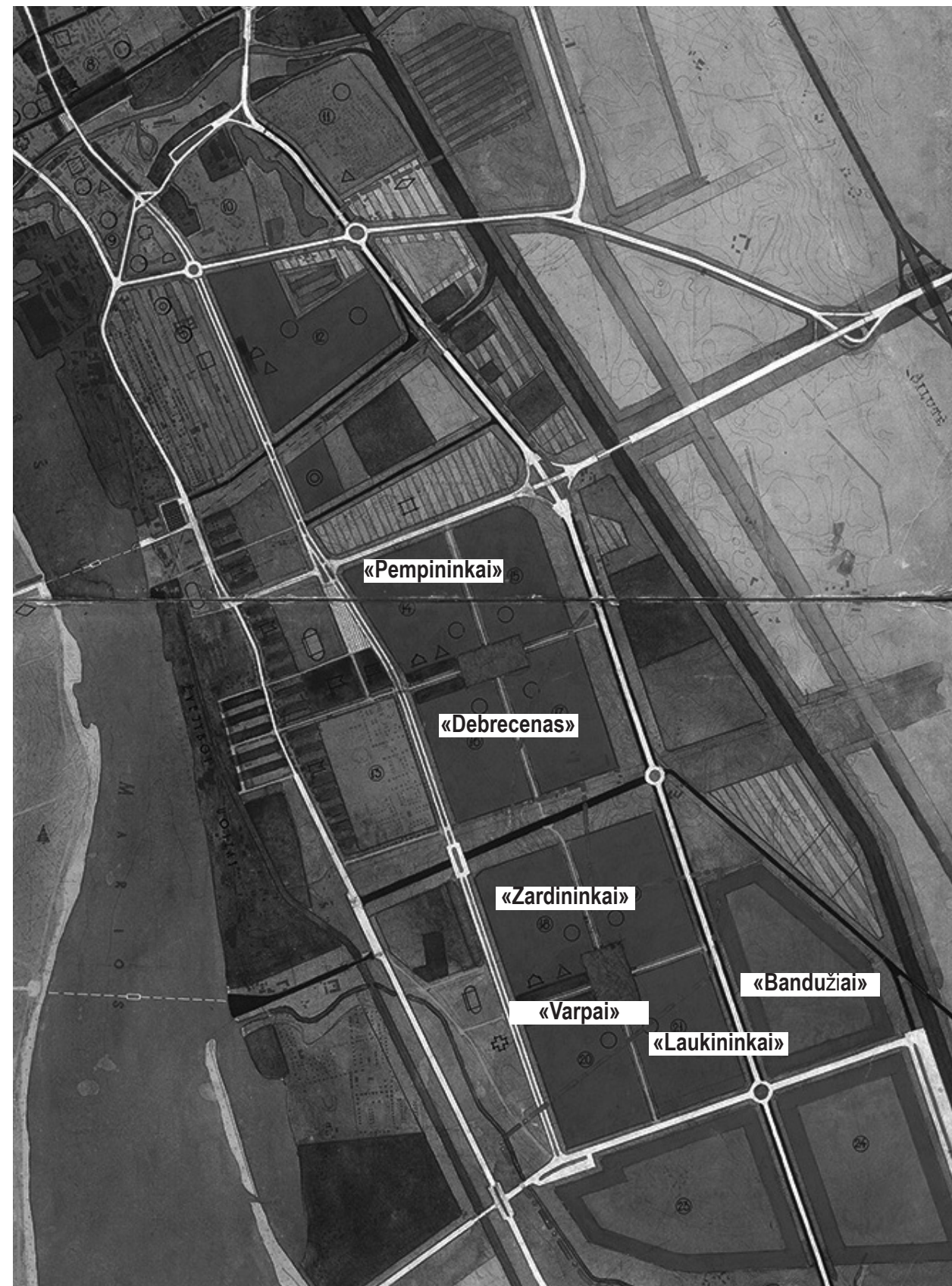


Fig 10. Part of the main drawing of the planning project for the city of Klaipėda, 1962. © P. Janulis and others; UAB «Urbanistika». 1962.

The historic centre of Klaipėda is distinguished by half-timbered architecture that reflects its Germanic heritage in stark contrast to modern developments in the south of the city. Inherited from the former Memel, this architecture is based on an apparent wooden frame structure, whose voids are filled with bricks or render. The facades, often punctuated by dark beams drawing geometric patterns, give the center a warm visual identity on a human scale, marked by artisanal detail and diversity of forms.

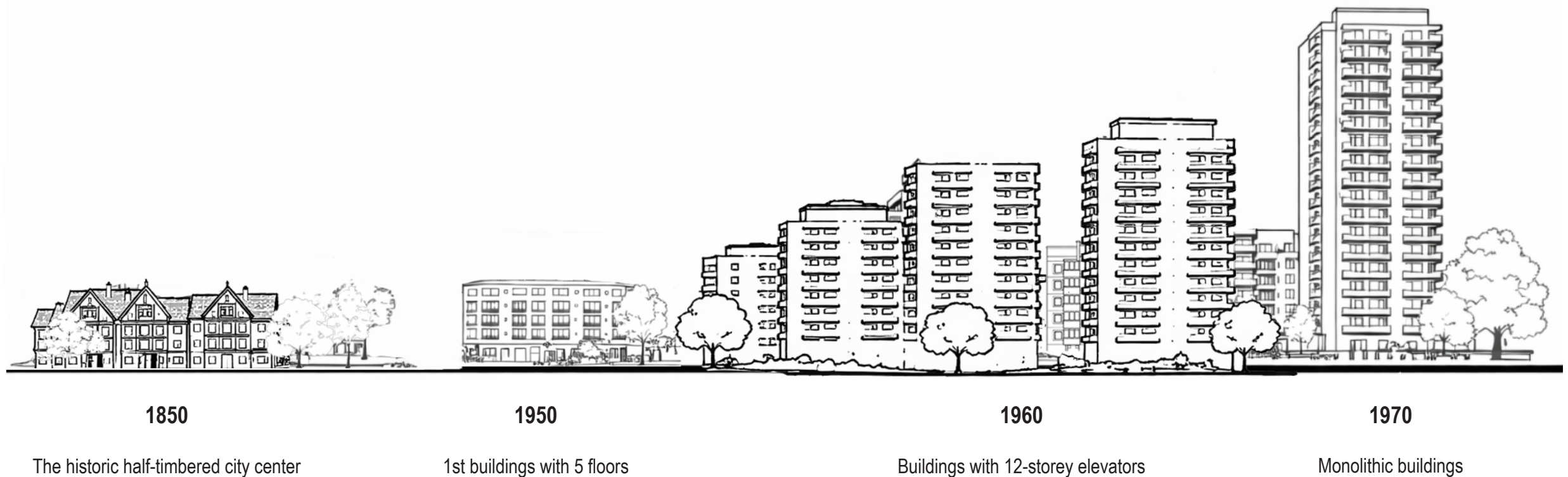
This old fabric is also characterized by a more compact and irregular urban organization: narrow streets, thin plots, low-rise buildings and continuous installation on the street front. The whole produces a dense but nuanced urban landscape, where each building has a certain singularity, in contrast with the repetitiveness of more recent constructions.

The heavy industrialization of the 1960s imposed the model of the Khrushchyovka (5 floors), a standard without elevator optimized for rapid and inexpensive construction. However, faced with population growth and the need to densify the territory without extending indefinitely on agricultural or port areas, the silhouette of Klaipėda has risen dramatically.

As the plan progressed southward (districts of Pempininkai, Debreceenas, then Varpai), the density and height of buildings increased exponentially. If the first neighborhoods of the post-war period were limited to 4 or 5 floors (bricks), the extensions of the 1970s and 1980s introduced heavy prefabrication and towers from 9 to 12 floors.

This verticalization was not only a response to the housing shortage, it also served as a tool of urban composition. These increasingly tall buildings were visual landmarks in the flat coastal landscape, marking service centers or major axes of micro-neighborhoods. The historian Vasilijus (Safronovas, Klaipeda in the twentieth century. A history of a European city, 2017) notes that this planning ended up creating a total landscape rupture, where the new center of gravity of everyday life has moved from the historic heart to these new monolithic peripheries. Today, this stratification of the heights reflects the chronological evolution of the city: the farther away from the historic center, the more buildings rise, forming a vertically archive of the history of precast concrete.

Fig 11. The evolution of the city’s architecture, visible in sections from left to right (from the north part to the south part)



URBAN CONTRAST BETWEEN THE NORTH AND SOUTH PARTS



Fig 12. Collage of the characteristic architectural details of the historic center of Klaipėda

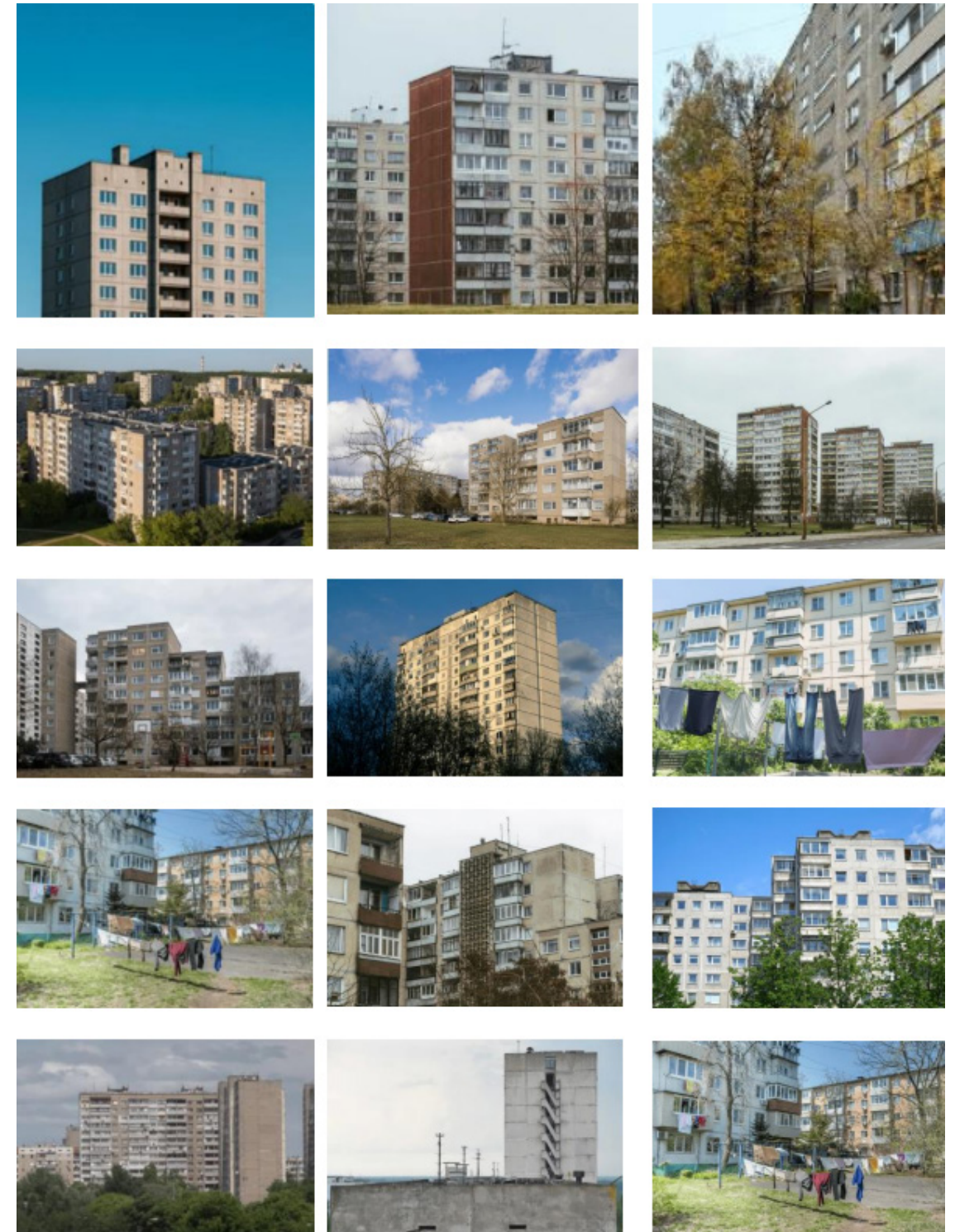


Fig 13. Collage of the characteristic architectural details of the southern part (micro-districts) in Klaipėda

2. Micro-district theory: The modernist ideal

URBAN PLANNING PRINCIPLES AND SPATIAL ORGANIZATION OF THE MICRO-DISTRICT

The concept of a micro-neighborhood, theorized and massively deployed since the 1950s, represents the culmination of modernist planning in the Soviet Union and its satellite states. Unlike the traditional European city organized around the street and the square, the micro-district is defined as a self-sufficient neighborhood unit, isolated from major traffic flows and structured by service ratios.

The operation of the micro-neighborhood is governed by a logic of sectorization of needs. The objective was to minimize daily travel by ensuring quick access to basic services. The distances were calculated scientifically:

- The school and the nursery: Placed at the geometric center of the neighborhood to avoid children crossing large avenues. The walking radius should not exceed 300 to 500 meters.
- Local shops: A local shopping center (grocery, pharmacy, services) was located at a maximum distance of 500 meters from each building entrance.
- Transport: The bus stops were located on the outskirts of the district, with direct pedestrian access from the heart of the block, limiting walking to less than 10 minutes²⁴.



Fig 14. Diagram of the spatial organization of a micro-district

The micro-neighborhood was not just a spatial unit, it was a tool of social management. Each neighborhood was designed for a specific population (typically between 8,000 and 12,000).

Each unit had to include a school, a kindergarten, a health center and premises for sports or cultural activities of the Party.

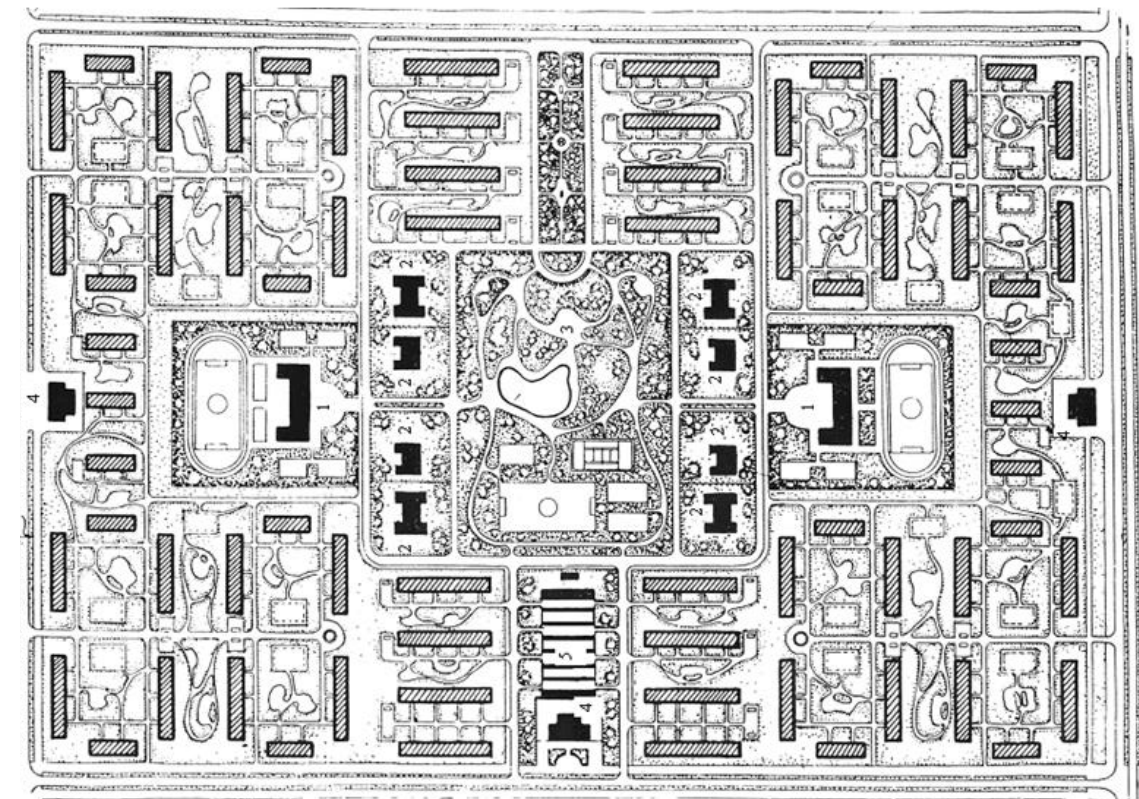
This organization led to an infinite repetition of the same models of buildings, creating a readability of the territory but also a visual monotony that contemporary architects are now trying to break. Indeed, the concept of the micro-neighborhood has generated major flaws:

- The distances between buildings, designed for sunshine, have often created «no man's land» («espaces de personne») that are difficult to maintain and lack identity.
- The separation of functions (housing on one side, grouped shops on the other) has made the foot of buildings deserted.

24. Safronovas, V. (2017). *Klaipėda in the Twentieth Century: A History of an European City*. (p.171). Klaipėda: Libra Memelensis.



Fig 15. Sketch of the micro-district IV, 1965. From the book *Klaipėda: Architektūros gidas* (p.249)



1. Schools
2. Kindergartens and nurseries
3. Gardens with sports fields
4. Shops
5. Public service areas and garages

Fig 16. Example of a micro-district plan for 20,000 inhabitants, 1961. Source: <https://fgis-tp.ru/statya-36-gradostroitelnye-reglamenty-i-parametry-razreshyonogo-ispolzovaniya-zemelnix-uchastkov-i-objektov-kapitalnogo-stroitelstva-v-zonax-proizvodstvennoj-inzenerno-transportnoj-infrastruktur-5/>. Accessed 19.04.2026



Fig 17. Reconstruction of the initial organization of functions in micro-neighborhoods in the residential area of Klaipėda, based on 1994 diagrams from the book by Tomas S. Butkus, Vasilijus Safronovas and Vaidas Petrulis, Klaipėdos urbanistinė raida 1945–1990 (Urban development of Klaipėda 1945–1990).



Fig 18. The current organization of functions in micro-district in the residential area of Klaipėda, 2025



Fig 19. New location of a future building, 1988. © Photo by Bernardas Aleknavičius (Archive of the Ieva Simonaitytė Public Library in Klaipėda County).



Fig 20. New apartment blocks behind the «Zarde» shopping centre, 1986. © Photo by Bernardas Aleknavičius (Ieva Simonaitytė Public Library Archives of Klaipėda County).



Fig 21. Pedestrian walkway running from Taikos Avenue to Šilutė Road, connecting the micro-districts of Pempininkai and Neringa by the green corridor. View from the side of Pempininkai. © Photo by Bernardas Aleknavičius (Ieva Simonaitytė Public Library Archives, Klaipėda County).



Fig 22. Construction of Avenue Baltija, which connects the new micro-districts in 1986. © Photo by Bernardas Aleknavičius (Ieva Simonaitytė Public Library Archives of Klaipėda County).

The influence of Le Corbusier’s²⁵ Radiant City, theorized as early as the 1920s and embodied by the Marseille Habitation Unit in 1952²⁶, constitutes the fundamental pillar of modern Soviet urbanism. The Radiant City is based on the concept of the «land liner», a structure bringing together under the same roof housing, shops, health services and sports facilities. For the Soviet planners, this vision of a “common house” represented the technical culmination of the socialist ideal: an inhabiting machine capable of housing thousands of people in a hygienic way while freeing up soil.

The first borrowing lies in vertical densification. Le Corbusier advocated the replacement of the traditional corridor street by «towers in the park». For the Soviet planners, this verticality was not only aesthetic but was the engine of industrialization. By concentrating the habitat in high-rise blocks (the dom), maximum ground clearance was released. This strategy made it possible to create large collective green spaces between the buildings, guaranteeing each worker access to air and light, pillars of hygienic urban planning. As Petrulis points out, soil no longer belongs to the individual but to the community, becoming a continuous plant carpet where car traffic is banned.

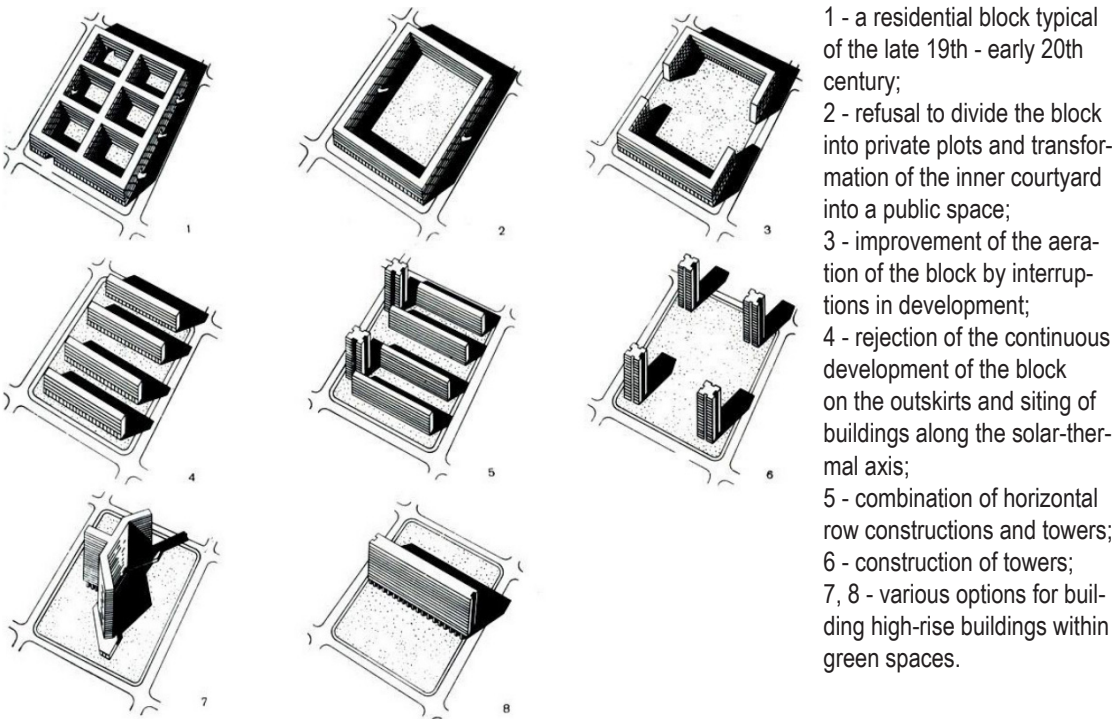


Fig 23. Research for the transformation of the development of a residential block.
Source: Bunin A.V., Savarenskaya T.F. - History of the art of urban planning. In 2 volumes. 2nd ed. (1979)

25. Le Corbusier. (1952). *L'Unité d'habitation de Marseille*. Marseille, France : Éditions Le Point
26. Corbusier, L. (1935). *La ville radieuse*. Boulogne: Editions de l'Architecture d'Aujourd'hui.

La Cité Radieuse introduced the concept of the city as a segmented machine. The micro-neighborhood pushed this logic by applying a strict separation of flows and uses. The main arteries are relegated to the outskirts of the district, while the interior is reserved for pedestrians and local services. One then achieves a functional separation: to live, work, move around, cultivate one's body.

For the Soviet architects, the Radiant City represented the ultimate form of the «common home». However, where Le Corbusier saw a luxury artisanal object (the raw concrete of Marseille), the USSR saw a prototype for heavy prefabrication. Like the Kopp²⁷ analysis, the genius of the Soviet system was to transform the Corbusian idea into an infinitely repeatable technical standard. Nevertheless, this made it possible to create neighborhoods without streets, airy and bathed in light (the triptych «sun, space, greenery»), establishing itself as the architectural standard of the new working-class cities until the end of the USSR.v

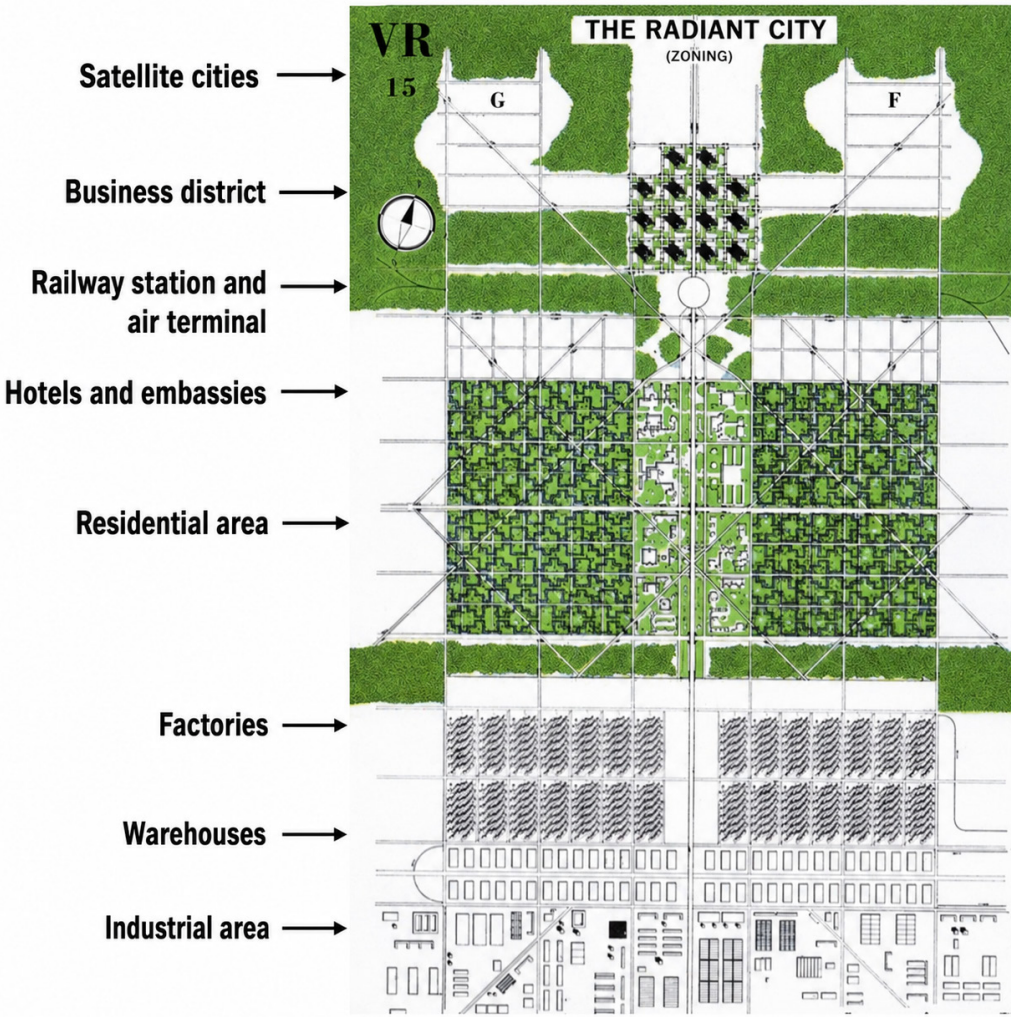


Fig 24. Diagram of the functioning of the Radiant City © ADAGP, Paris, 2025. Source: Le Corbusier (1935) Éditions de l'Architecture d'aujourd'hui.

27. Kopp, A. (1969). Architecture and social life: Current events of the 1920s. *Raison présente*, (9), p75-88

The model of the Neighborhood Unit ⁽²⁸⁾, theorized by Clarence Perry in 1929 as part of the regional plan for New York, is a second source of inspiration for micro-neighborhoods. Whereas Le Corbusier proposed a rather vertical organization of the neighborhood, Perry developed a horizontal approach.

This model is based on a base unit of about 65 hectares, calculated as the distance that a child can walk to primary school. The organization is thought in a hierarchical way: the main roads are located outside to avoid traffic in the neighborhood, while the interior is reserved for pedestrians. Essential services, such as the school and leisure areas, are grouped in the centre and occupy about 10% of the area, ensuring safe access on foot for all residents.

Although born in the North American context, this model strongly influenced socialist urban planning. As early as the 1950s, Soviet planners were inspired by it to create the concept of a «micro-neighborhood». They retained the idea of an autonomous residential unit organized around local services. Just as in the original model, the size of the neighborhood depends on the school's capacity, and essential services (nurseries, canteens, public facilities) are placed near the housing to simplify daily life and organize domestic chores in a collective manner.

This continuity shows a form of technical rapprochement despite different ideological contexts. Perry's model provides a basis for spatial organization that Soviet urban planners adapt to their social and political objectives. The separation between commercial functions on the outskirts and facilities in the center allows to structure autonomous neighborhoods, designed to meet the needs of the population while limiting travel.

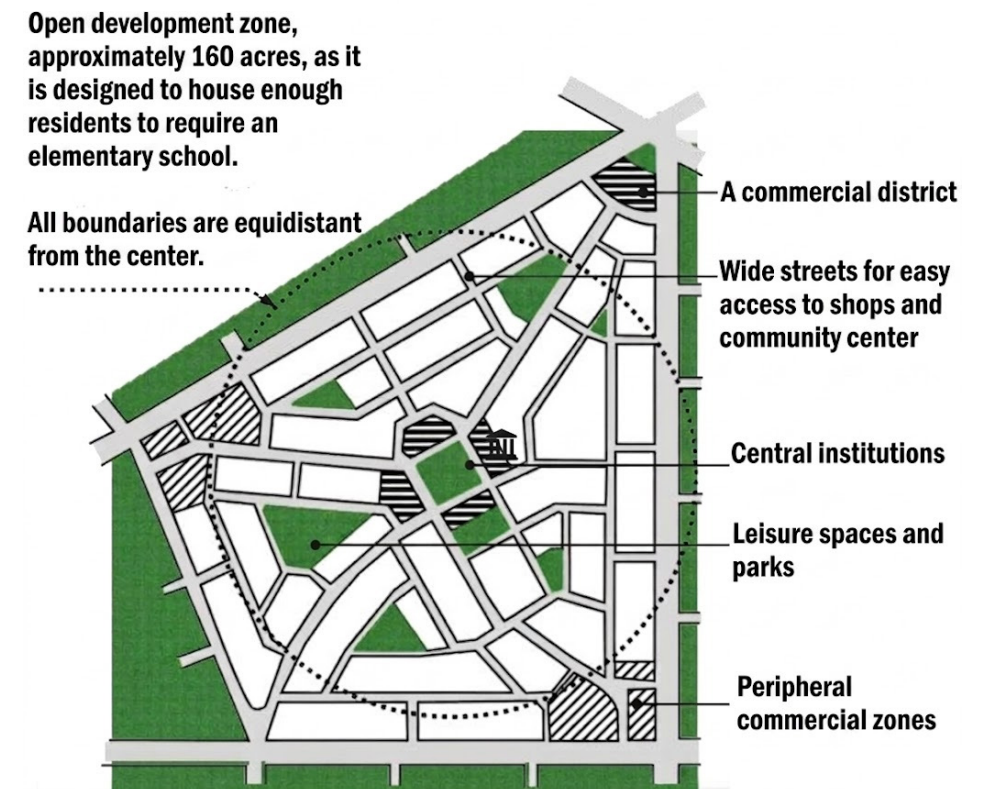


Fig 25. Diagram of the functioning of the Neighborhood Unit model © Personal achievement, inspired by the ideal plan of an urban micro-district according to Clarence Perry (published in 1929).

28. Perry, C. A. (1929). *The neighborhood unit: A scheme of arrangement for the family-life community*. In Regional survey of New York and its environs: Vol. VII. Neighborhood and community planning. New York, NY: Committee on Regional Plan of New York and Its Environs. Theorized in the context of the automobile explosion of the 1920s in the United States, this model proposes to segment the city into autonomous «neighborhood units». The objective was to protect the residential area from transit traffic and to recreate social cohesion through central infrastructure, mainly primary school, whose walking radius defines the limits of the unit.

3. The construction of mass housing

PREFABRICATION AND INDUSTRIALIZATION OF THE FRAME

In 1957, the new demographic pressure in Klaipeda reached a critical threshold: it was necessary to find a way to accommodate 85,000 people in a city initially made for 50,000 inhabitants. In this context of housing shortages and rapid urbanization, it was necessary to find an approach that meets the need to rationalize, standardize and make the act of building reproducible. The industrialization of construction, as it developed in particular in the Soviet Union from the 1950s onwards, was therefore not limited to the manufacture of prefabricated elements: it encompassed the entire building process, from the initial design and planning of the project to on-site transport and assembly.

The prefabrication of concrete panels is then imposed as «the solution» in this logic. Indeed, in 1948, the French engineer Raymond Camus filed a patent for the «Camus process»²⁹. This is the revolution of precast concrete panels in factories. Soviet engineers bought the patent and other French and Scandinavian systems to adapt them to a gigantic industrial scale. This is the birth of series of mass housing (such as the famous Khrushchyovkas), where the building was built like a construction game. Unlike traditional on-site construction, a large part of the production is transferred to specialized factories, where load-bearing walls, floors, facades and stairwells are made. These reinforced concrete elements are cast in standardized metal formwork, with an integrated steel reinforcement before casting, then mechanically vibrated to ensure their compactness and strength.

In this system, the construction site mainly becomes a place of assembly. The panels are transported by truck or rail and then erected using cranes. The building rises in a repetitive and rapid sequence: installation of load-bearing walls, installation of floors, then placement of facades. The assembly is based on welded or bolted metal connections, then sealed to concrete or mortar, while the joints are filled to ensure structural continuity and tightness. This organization allows a very fast execution, a floor can be assembled in a few days.

This industrialization deeply influences architectural design. The dimensions of the elements are no longer dictated solely by aesthetic considerations, but by production and transport capacities: maximum panel size, manipulable weight, logistical constraints. With technical progress, increasingly large and heavy elements are produced, leading to the development of adapted means of transport.

On the construction site, mobile cranes, on rails or fixed, play a decisive role. Their scope and power directly determine the size of the panels that can be assembled, and therefore the architectural expression of the buildings. But it is also urban planning that structures the built forms: in order to avoid the displacement of crane tracks during construction, the layout of buildings is designed according to their trajectory and accessibility.

29. Raymond Camus (1881-1966), the «Camus Process»: a heavy prefabrication system based on the industrial production of large-scale reinforced concrete panels in factories, integrating insulation and joinery from the casting stage before their assembly on site.

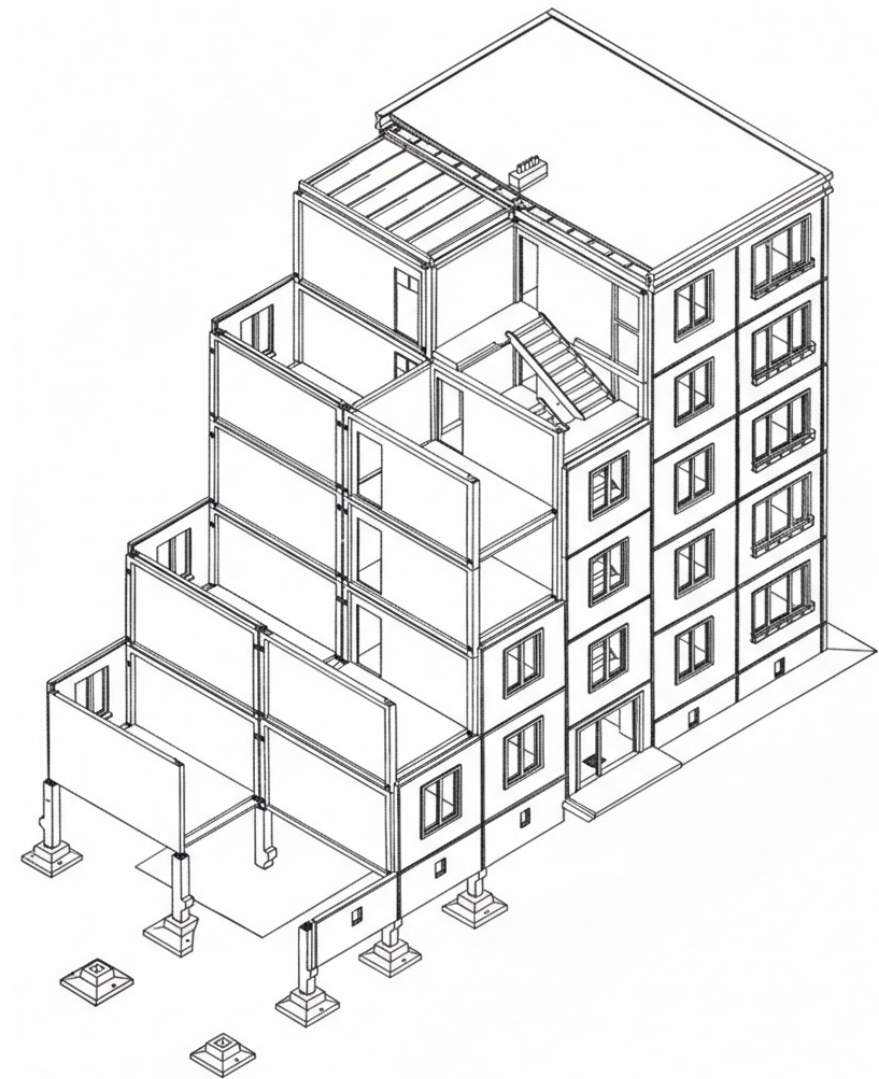


Fig 26. Axonometry showing the different steps of the assembly. © Mmap

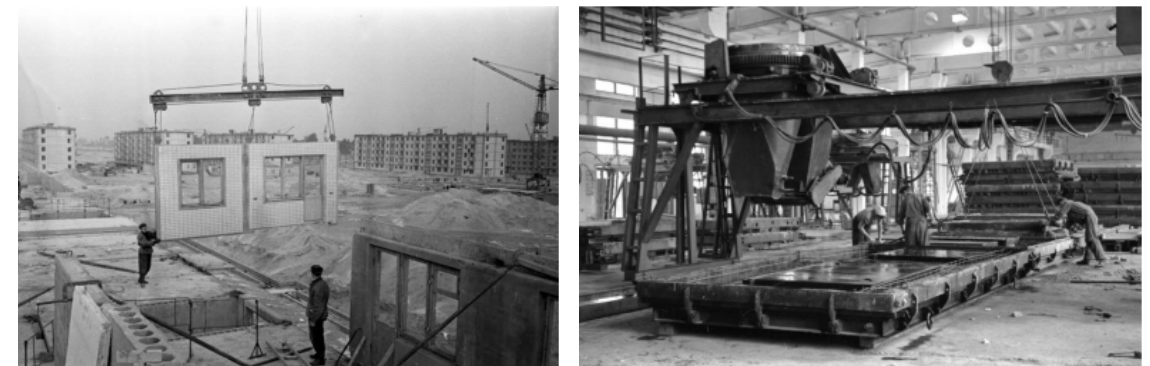


Fig 27. The machining and assembly of panels, 1960. © S. Pshenychnogo

HOUSING STANDARDIZATION AND SPATIAL MINIMALISM

For the speed of construction, residential complexes are generally organized according to repetitive patterns: buildings aligned according to the progression of the rails, constructions in parallel with a central crane, or even «snake» compositions matching the layout of the rails. In addition, experiments are aimed at further optimizing the process, such as the construction of an entire floor on the ground before its elevation using hydraulic cylinders attached to a grid of columns, sometimes allowing greater flexibility in plans. For economic reasons, the spaces deemed «surplus» were abandoned and the apartments were designed in an extremely economical way: the rooms are small, the sanitary facilities and the storage areas are cramped, and the functional diagram of the apartment is dominated by the hallway. The goal was to build quickly, without really worrying about comfort, while responding to communist ideology, and on this subject Khrushchev replied: *Should we build a thousand decent apartments or seven hundred good ones? And would a citizen prefer to move into a decent apartment, or wait ten to fifteen years to get a very good one? Management must act according to the principle of using available material resources in order to satisfy the needs of the people as quickly as possible.*^{30.}

High population growth has forced the authorities to impose extremely austerity space standards. For this, they set a standard of living space of 6.4 m² per person, a figure that reflects the reduction of housing to its simple function to live. It was only later, with the exhaustion of the most acute crisis and the introduction of new series of buildings (such as the 1-464 series or the 120 PSS series designed for the city of Klaipėda), that this standard would be increased to 9 m² per person, remaining, however, far below the European standards of the time (12m²)^{31.}

The rise of mass architecture in Soviet Lithuania, described by the historian Regina Lakačauskaitė-Kaminskienė³² as an «explosion of serialism and standardization,» established a «minimum architecture» where technical efficiency served as a screen for a deep ideological project. This extreme rationalization aimed to house a maximum of citizens with a minimum of resources, while standardizing lifestyles. In the Soviet era, apartments were allocated to families free of charge. The formula applied was “ $K = N - 1$ ”, where ‘K’ is the number of rooms to live in and ‘N’ is the number of inhabitants.³³ According to this rule, a family of three would be allocated, for example, a two-room apartment. There was also a different gender assignment for children: a boy and a girl were required to have a different room.

30. Morton, H. W. (1984). *The Contemporary Soviet City*. In H. W. Morton & R. C. Stuart (Eds.), (p.9). New York: M.E. Sharpe. Morton analyzes Khrushchev's radical pragmatism. He explains how the Soviet leader deliberately chose quantity over quality to solve the housing crisis that left millions of citizens in communal apartments (kommunalka) or makeshift shelters after the war.

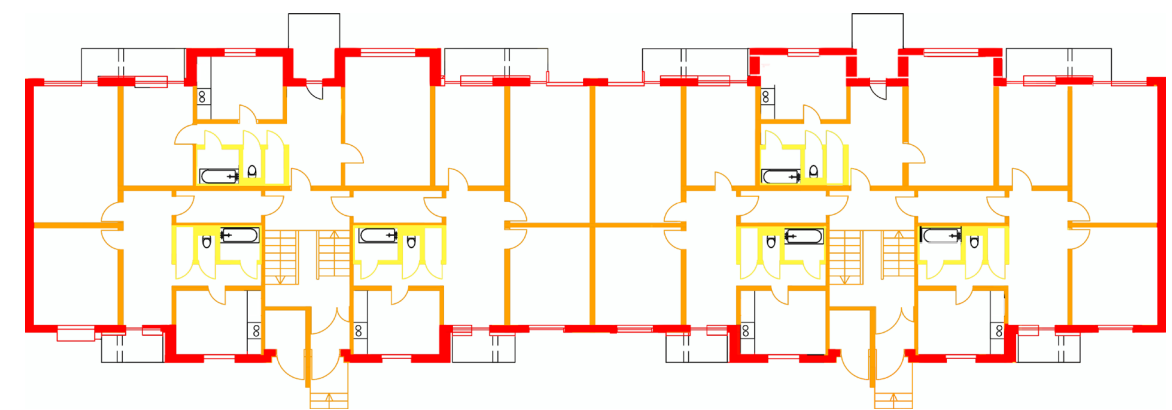
31. Bėčienė, J., Černiūtė-Vaitiekūnienė, I., & Petulis, V. (2020). *Klaipėda: Architektūros gidas* (p.238). Vilnius : Architektūros fondas.

32. Lakačauskaitė-Kaminskienė, R. (2010). *Miestiečio butas sovietų Lietuvoje 1945–1990 m.: ideologijos atspindžiai gyvenamajame erdvėje*. Naujasis Židinys-Aidai, (1-2), 13-22. The author analyses how the Soviet state attempted to transform the domestic habits of Lithuanians through architecture. In particular, she explains how the elimination of corridors, the reduction of the size of kitchens or the creation of «multifunctional» living rooms were used to break down traditional family structures in favor of a collective and standardized lifestyle.

33. Gerdvilis, K. (2020). *Klaipėdos urbanistinė raida 1945–1990 m.*(p.180). Klaipėda: Klaipėdos universiteto leidykla.



Fig 28. Assembly of the various elements into prefabricated panels using cranes on rails. Source: initial photo made by Bernardas Aleknavicius 1987-1988.



Primary structure in prefabricated concrete panels (1st stage)
Secondary structure with prefabricated blocks (3rd stage)
The prefabricated concrete panels 35cm for the facade (2nd step)

Fig 29. Ground floor plan of a 120 PSS building showing the various assembly elements.



Fig 30. The poster of the sketches of the new 120 PSS series created for the city of Klaipėda by architects Bronius Krūminis, Vidas Sargelis, Vaclovas Zubrus. Source: Lietuvos nacionalinis muziejus (National Museum of Lithuania).

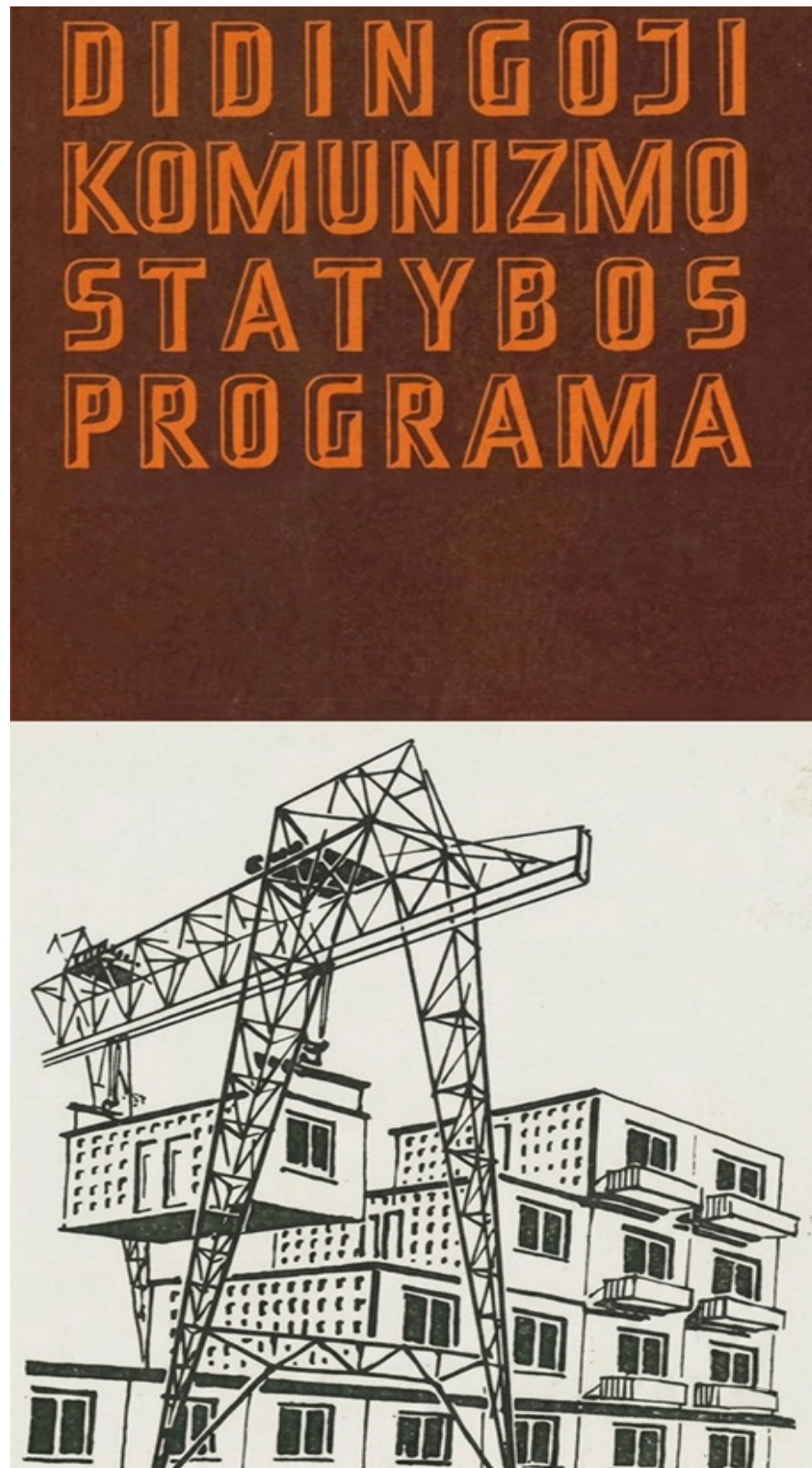


Fig 31. «The great program of building communism». Source: The lecture by Dr. Marija Drėmahilton | „Žmogus ir miegamieji rajonai“ (“The human and dormitory neighborhoods”), 2024, <https://www.youtube.com/watch?v=j8eDVnT72xk>

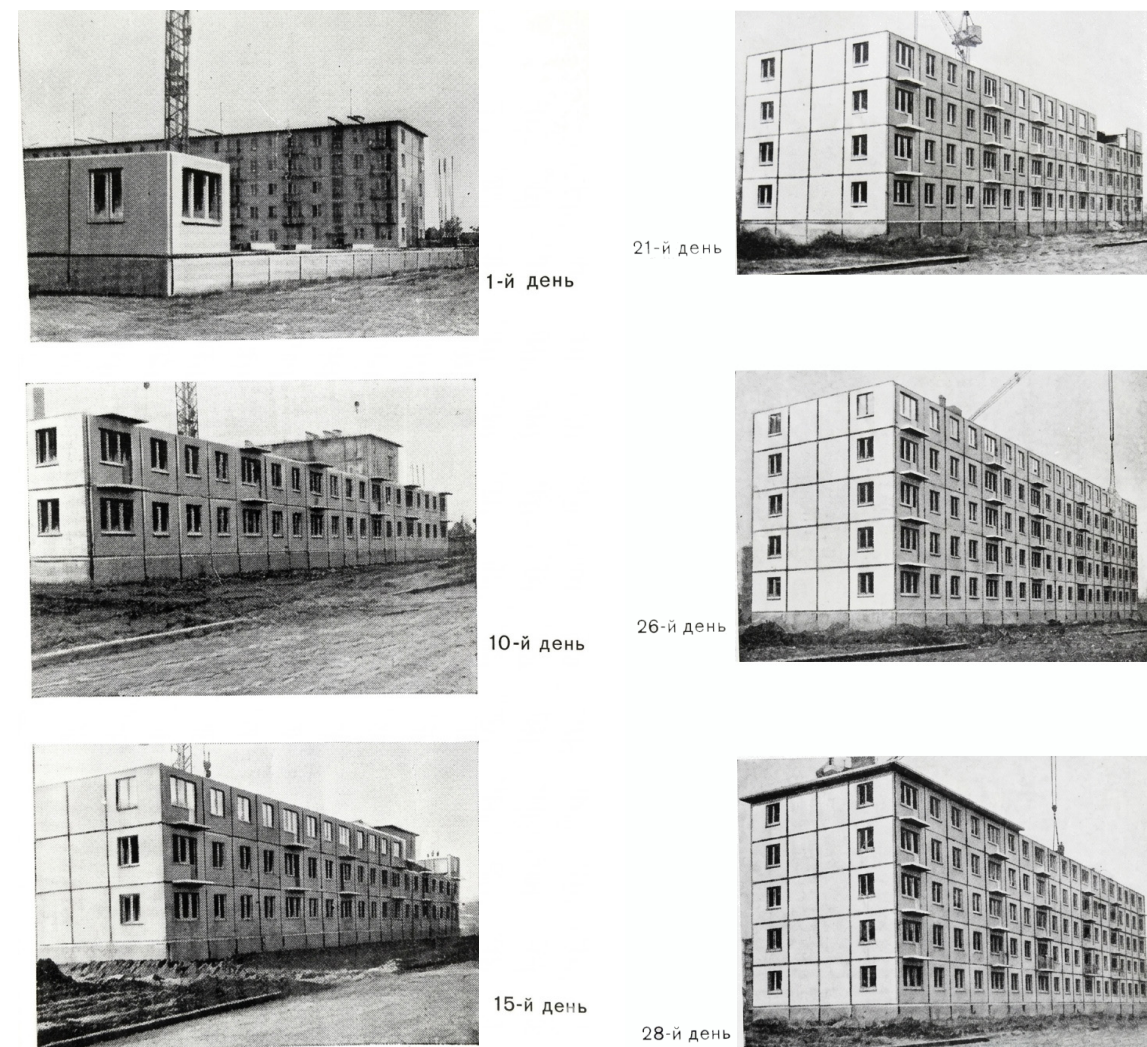


Fig 32. Construction of a 5-storey building in 28 days. Source: Review *Stroít'stvo i arkhitektura Moskvy* [Construction and architecture of Moscow], year 1973, number 2.vk. com

This spatial restriction is particularly obvious in the design of kitchens (often less than 6 m²). Far from being a simple lack of means, the small size responded to a double logic: on one hand, an ergonomic optimization aimed at limiting the movements of the housewife; on the other hand, a desire to dissolve the traditional family unit. As the historian Algirdas Jakubčionis reminds us, Khrushchev saw the kitchen as a simple auxiliary room intended to warm up semi-finished products, with catering remaining collective so as not to encroach on working time.

“Khrushchev’s policy was to turn the private lifestyle into a semi-public process. The cramped kitchen was not only a technical constraint, but an ideological decision: it was to be used only to reheat food prepared by the state canteens. The goal was to free citizens—and especially women—from «unproductive» household tasks to industrial production. »³⁴

The interior of the dwellings extended this standardization by removing any trace of individualism. The smallness of the rooms required a planned and centralized furniture, sometimes so inadequate that it had to be hoisted through the windows, the doors being too narrow. Lakačauskaitė-Kaminskienė points out that the systematic installation of integrated «factory» cabinets and pavilion cupboards was intended to limit any spatial «interpretation» by residents. This austerity was accompanied by a deterioration in the quality of life: the dark and poorly ventilated «wagon» rooms reinforced the feeling of daily oppression.

Due to the shortage of goods, the diversity of interiors was extremely limited—even today, many residents can be found on the same shelves and sideboards.

After the return to independence and the opening of markets, there were many opportunities to renovate one’s home. A greater variety of materials and furniture appeared, which was sorely lacking in the Soviet era. We wanted to bring modernity and exclusivity. The apartments have been fitted out according to each person’s wishes: demolition of walls, merging of rooms, glazing of balconies, modification of the original divisions of window frames, etc.

These arbitrary renovations undoubtedly have their consequences. From time to time, articles appear in the media about cracks in the exterior and interior walls of buildings and, in 2020, in Lazdynai (Vilnius), a 15th floor balcony collapsed. This shows the poor state of buildings in the Soviet era. The exterior renovation of buildings represents projects requiring significant investments, expenses and resources.

34. Anušauskas, A. (dir.). (2005). *The Anti-Soviet Resistance in Lithuania and the Spirit of Resistance*. (p.342) .Vilnius : Genocide and Resistance Research Centre of Lithuania.



Fig 33. Photos of a Soviet apartment with the furniture from that time.

PART II

The future of the micro-district: local and European perspectives

1. The micro-district of Varpai

PRESENTATION OF THE «VARPAI» MICRO-DISTRICT



Micro-district
«Žardininkai»

Saint-Joseph-Artisan Church

Micro-district
Laukininkai

Smilteles g.

Varpų g.

Taikos av.

«BIG»

Micro-district
«Varpai»

«Sajūdžio» park

Jūrininkų av.

67,6 ha	Land area
7,10 ha	District area
1,01 ha	Construction area
0,14	Construction density
11 000	Inhabitants
40	Residential buildings (8 of 10 floors + 32 of 6 floors)
768	Number of apartments
150	Inhabitants per hectare
40 years	Average age of inhabitants



Fig 34. Photos of the micro-district Varpai

THE «VARPAI» MICRO-DISTRICT—BEFORE AND TODAY

The 7th residential district of Klaipėda is the last and largest planned housing complex in the city during the Soviet era. Its development is part of a long period, between 1974 and 1993, under the direction of architects R. J. Valatka and G. Galdikienė³⁵. This project responds to a high demand for housing due to urban growth, in particular due to the proximity of the large western ship repair company, one of the main employers in Klaipėda.

The district covers about 139 hectares and was to accommodate nearly 36,000 inhabitants, with more than 400,000 m² of living space planned. It is organized into six micro-neighborhoods, designed by several architects, including Juozas Mureika, Raimondas Norkus and Edmundas Benetis. Urbanization is based on classic modernist principles: large-panel buildings of 5 to 10 floors, complemented by taller buildings (12 to 16 floors), introducing new forms of housing, especially for small families.

The urban composition is organized around major structuring axes, with micro-neighborhoods arranged on both sides of the main avenues. The project also provides for integrated public facilities, such as schools and kindergartens, according to Soviet planning principles.



Fig 35. The initial plan of the «Varpai» micro-district from 1994. taken from the book Bėčienė, J., Černiūtė-Vaitiekūnienė, I., & Petrulis, V. (2020). *Klaipėda: Architektūros gidas* [Klaipėda: Guide d'architecture].

35. Bėčienė, J., Černiūtė-Vaitiekūnienė, I., & Petrulis, V. (2020). *Klaipėda: Architektūros gidas* [Klaipėda: Guide d'architecture] (p.291). Vilnius : Architektūros fondas. Gražina Galdikienė is a major Lithuanian urban architect of the Soviet era. Specializing in «third generation» housing estates, she designed the districts of Bandužiai and Varpai with a view to diversifying the heights of buildings and rationalizing pedestrian traffic within the rigid model of the micro-district.

The first inhabitants settled in 1983, but the development of the district was quickly slowed down. From the mid-1980s, and especially after the fall of the Soviet Union, several parts of the project remain unfinished. The 5th micro-district is only partially built and undergoes significant transformations, notably with the appearance of commercial functions. The 6th micro-district, meanwhile, will never be realized.

In this context of transition, new constructions appear gradually, without having been planned in the initial plan. Facilities such as the church of St. Joseph-Artisan, the «BIG» shopping center and the Pranas Mašiotas primary school have been established over time, meeting emerging needs and changing lifestyles after the Soviet period. These additions partly modify the structure and functioning of the micro-neighborhood, introducing new centralities and strengthening its autonomy.

Thus, the 7th micro-district of Klaipėda testifies both to the ambition of the major Soviet urban projects and to the transformations they underwent afterwards. It illustrates a period of transition, where a rigidly planned project had to adapt to ever-changing economic, social and urban realities.

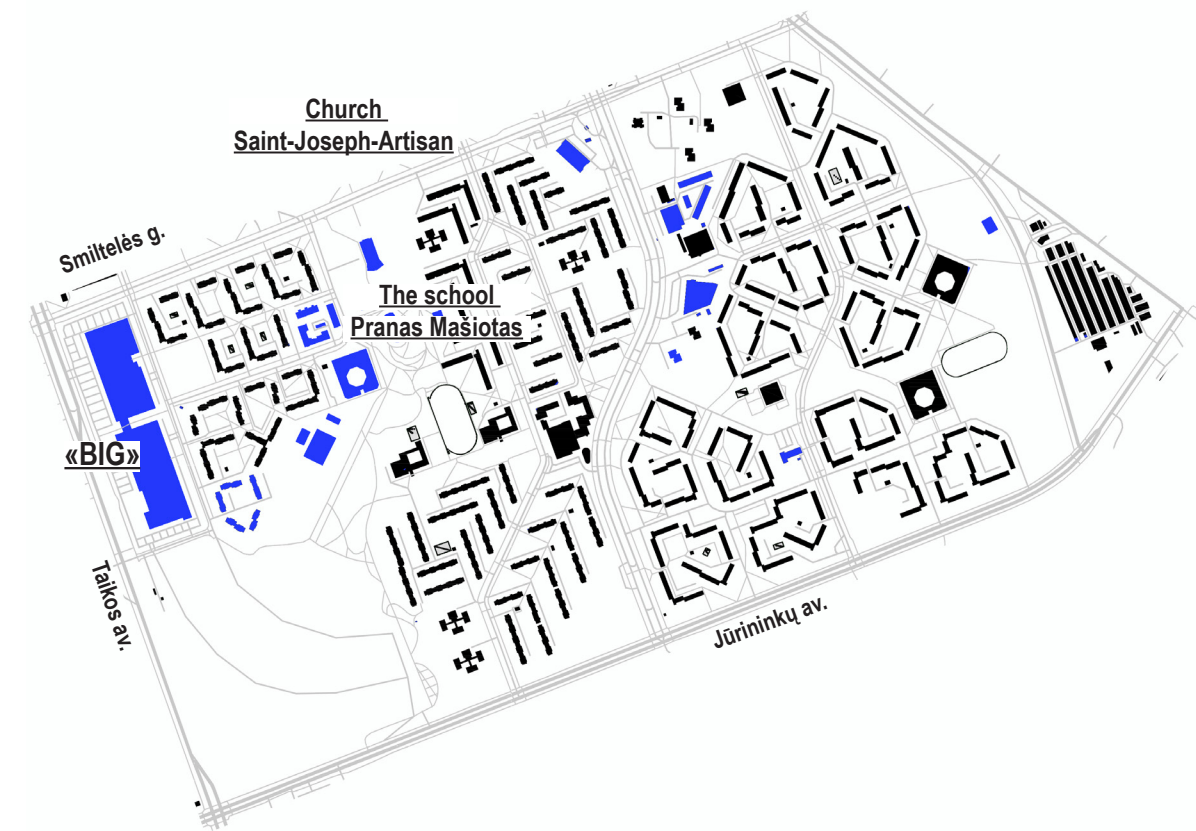


Fig 36. The plan of the «Varpai» micro-district today. In blue: the additions after 1994.

The district of «Varpai» is surrounded by the street «Liubeko» and the street «Varpu». These are the two main traffic routes serving the buildings and the park. They offer parking spaces and pedestrian paths. The courtyards of the buildings are connected by several small rather degraded and narrow pedestrian paths. There isn't necessarily a very clear logic regarding their organization. On the contrary, the large park offers very wide paths with curves, allowing for bike lanes and breaks with sports equipment and games.

Fig 37. The plan showing the system of pedestrian areas and public spaces



«Sajūdžio» park

© A. Jasinskiene dans 15min.lt. 2016



«Sajūdžio» park



Paths through the courts



Varpu street



Liubeko street

Fig 38. Photos of the pedestrian paths in the micro-district

The micro-districts have the characteristic of offering generous green spaces. In this neighborhood, these green spaces are found in the courtyards, between buildings, in the form of grass fields, with very few trees. The park also offers large green plains with a little more trees of different species. This green corridor includes water points, further accentuating the natural side of the neighborhood.

Fig 39. The plan showing the green space system



«Sajūdžio» park

© A. Jasinskiene dans 15min.lt. 2016



«Sajūdžio» park



«Sajūdžio» park



Green spaces between buildings



Entry

Fig 40. Photos of the different types of green spaces in the micro-district

The district of Varpai is organized around a hierarchical grid, structured by large peripheral arteries that delimit the micro-neighborhood. Car traffic is mainly targeted in the outskirts (Varpu g. and Liubeko g.). Inside, the network consists of service roads leading to parking areas located at the foot of buildings.

The infrastructure is also characterized by a meshed pedestrian network, independent of roads, which crosses green spaces to connect homes to facilities. The southern border is marked by a commercial infrastructure, the BIG center, surrounded by vast surface parking lots.

Fig 41. The plan showing the different infrastructures



Parking at the foot of buildings



Parkings



Parking «Big»



Varpu street



Liubeko street

Fig 42. Photos of the infrastructure of the micro-district

The district of Varpai is designed as a small autonomous city where everything is accessible on foot. At its center are the Pranas Mašiotas School, kindergartens and sports fields, all set away from cars for the safety of residents. Social life is also organized around the church of Saint-Joseph-Artisan, which serves as a point of reference in the neighborhood. For daily needs, the large «Big» shopping center brings together all the necessary shops and services on the southern edge. The whole is connected by large green spaces and pedestrian paths that allow easy movement between the housing units and the various facilities.

Fig 43. The plan showing the various public and social functions



Playground



Saint-Joseph-Artisan Church



«Big» shopping Centre



Pranas Mašiotas School

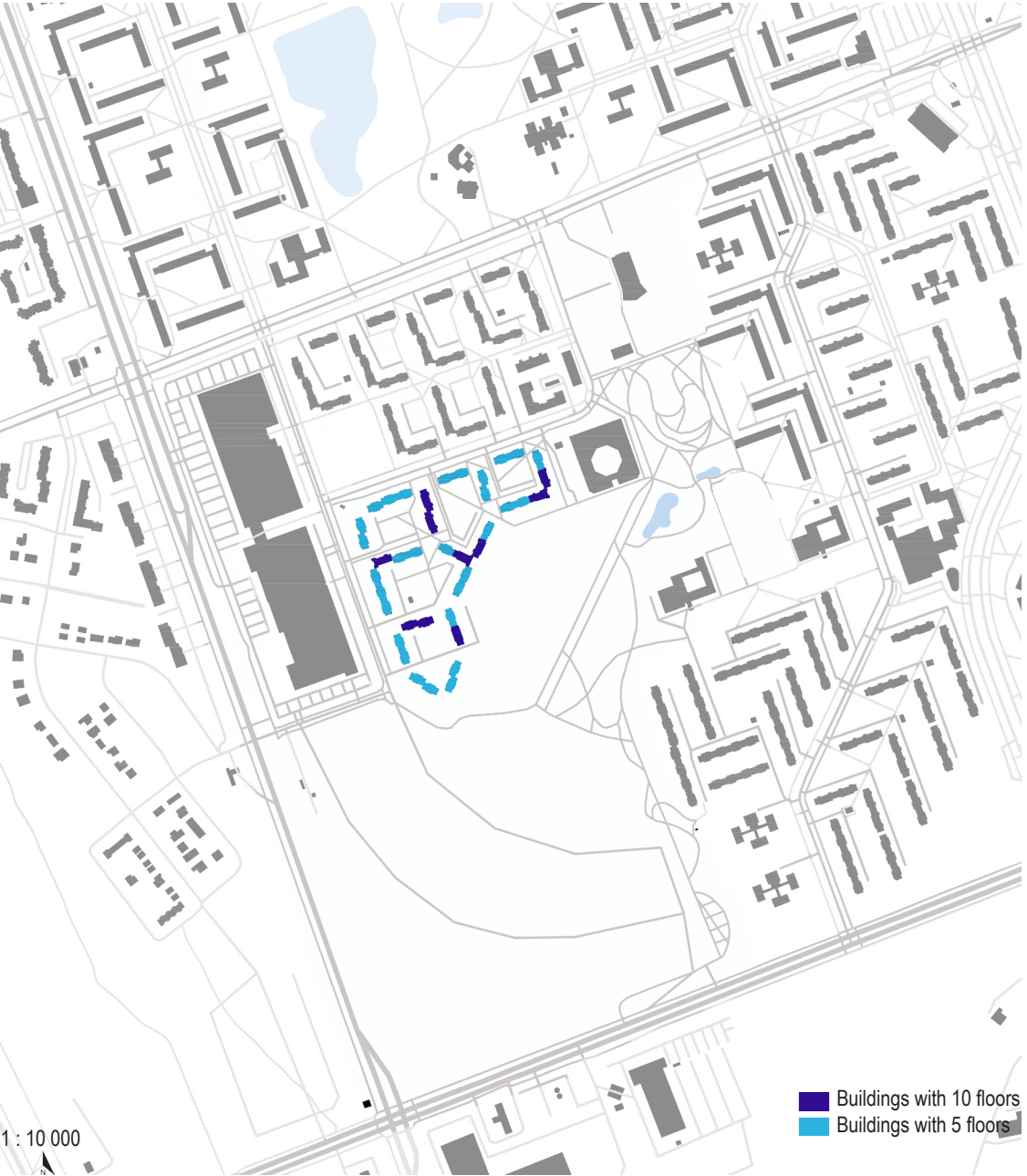


Sports stadium

Fig 44. Photos of the different functions of the micro-district

The district of Varpai consists mainly of two types of buildings that alternate to vary the landscape. First, there are 5-storey buildings, rather low and horizontal, built of red concrete panels, some of which have been recently renovated with more vibrant colors. At their sides rise blocks higher by 10 floors which serve as visual markers and allow to accommodate more inhabitants. These tall buildings are recognizable by their gray or white central part which houses the elevators. All these buildings are arranged in such a way as to form large open courtyards, leaving space at the foot of the accommodation for car parking and play areas.

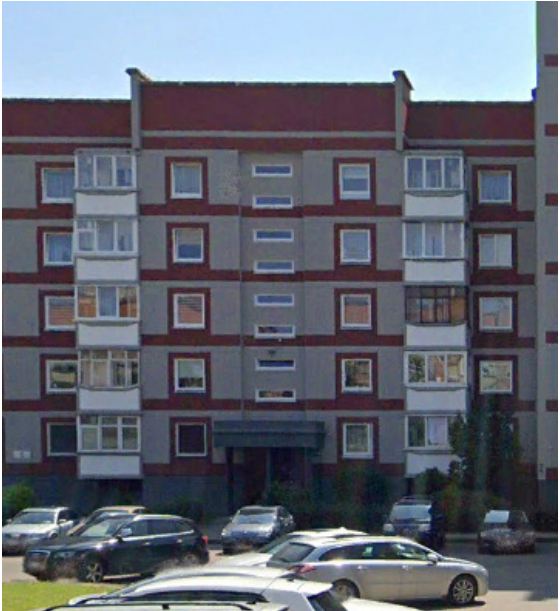
Fig 45. The plan showing the typologies of buildings



Buildings with 5 floors



Buildings with 10 floors

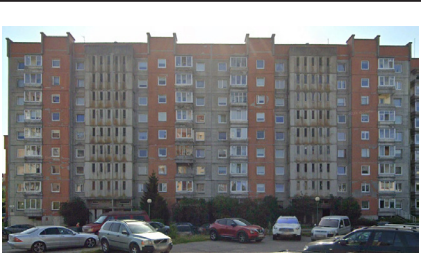
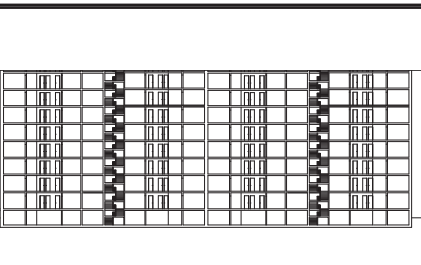
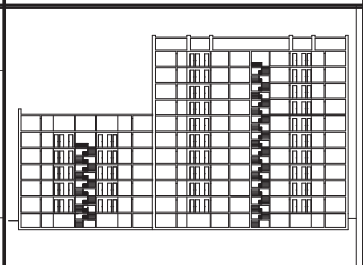
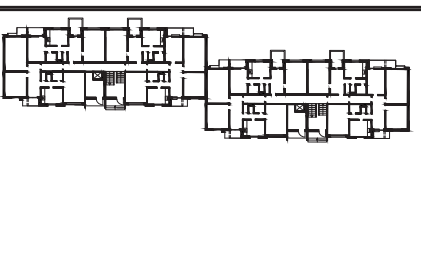
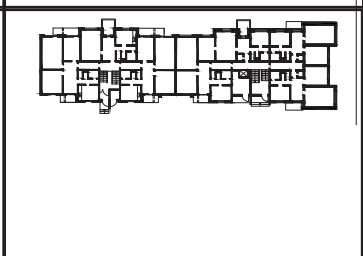


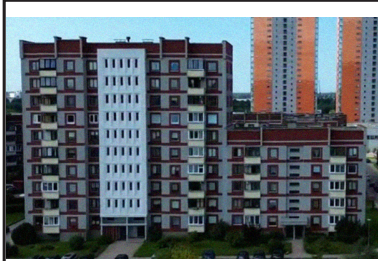
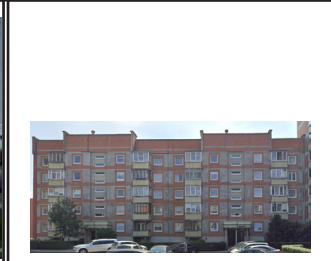
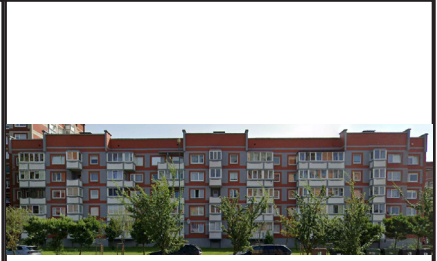
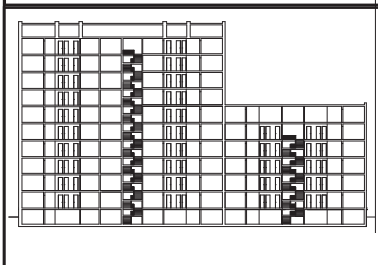
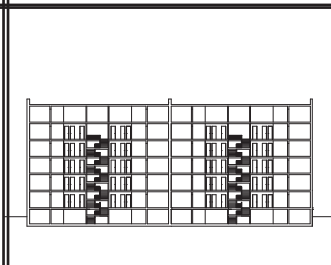
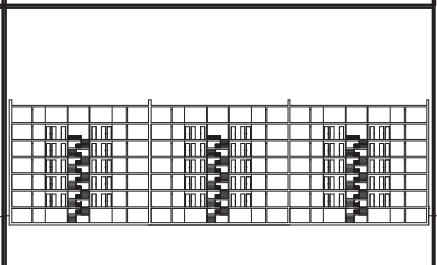
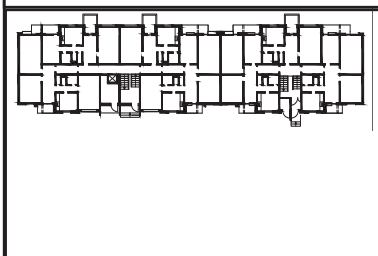
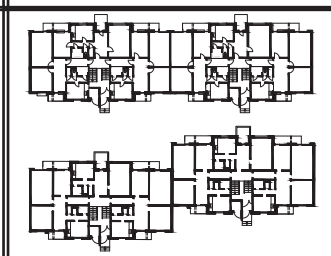
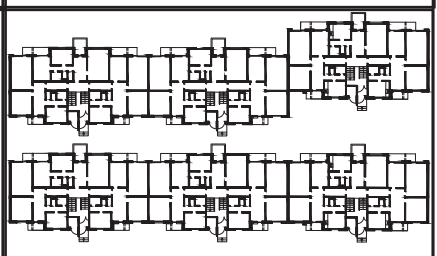
Repainted 5-storey building



Building with 10 floors repainted

Fig 46. Photos of the buildings in the micro-district

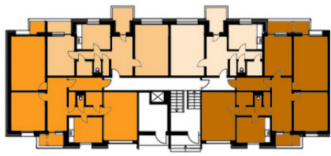
Building		
Elevated view		
Sectional view		
Plan view		
Number of buildings	1	3
Nombre d'étages	9	5-9
Number of floors	2	2
Number of apartments	64	15+32 = 47
Building area	822m2 x 11 =9 042 m2	281m2 x 7+351m2x11=5 828m2
Living area	602m2 x 9=5 418m2	213m2 x 5+257m2x9=3 378m2
Area of smallest housing	45m2	45m2
Largest housing area	99m2	84m2

		
		
		
		
3	10	2
9-5	5	5
2	2	3
32+15= 47	30	45
411m2 x 11+281m2x7= 6 488m2	562m2 x 7 = 3 934m2	843m2 x7 = 5 901m2
301m2 x 9+213m2x5= 3 774m2	426m2 x5 = 2 130m2	619m2 x 5 = 3 095m2
45m2	45m2	45m2
99m2	84m2	84m2

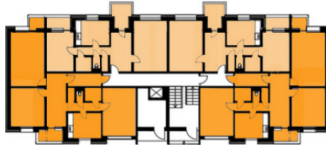
4 521 m ²	3 861 m ²	1 967 m ²
411 m ²	351 m ²	281 m ²
367 m ²	309 m ²	259 m ²
44 m ²	42 m ²	22 m ²

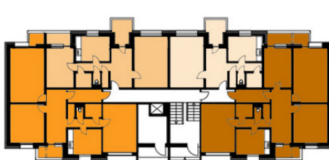
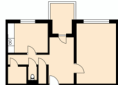
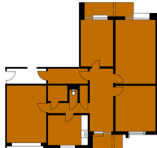
1ère variante d'organisation des appartements

I2
 I3
 I4
 I5

					
Number of this typology	Apartment area	Number of this typology	Apartment area	Number of this typology	Apartment area
1	46 m²(+4.9 m² balcon)	-	-	1	45 m² (+4.9 m² balcon)
1	57 m² (+7.9 m² balcon)	4	54 m²- 59 m²-70 m²	-	-
1	87 m² (+5 m² balcon)	-	-	2	80 m² (+8.7 m² balcon)
1	98 m² (+8.7 m² balcon)	-	-	-	-

2ème variante d'organisation des appartements

					
Number of this typology	Apartment area	Number of this typology	Apartment area	Number of this typology	Apartment area
-	46 m ² (+4.9 m ² balcon)	1	42 m ² (+4.9 m ² balcon)	-	-
2	57 m ² (+7.9 m ² balcon)	2	59 m ² (+3 m ² balcon)	1	69 m ² (+9 m ² balcon)
2	87 m ² (+5 m ² balcon)	1	82 m ² (+3 m ² balcon)	1	80 m ² (+8.7 m ² balcon)
-	98 m ² (+8.7 m ² balcon)	-	-	1	-

				
	T2 = 46 m ²	T3 = 57 m ²	T4 = 87 m ²	T5 = 98 m ²
<u>Input Area</u>	4.5 m ²	2 m ²	4.5 m ²	
<u>Kitchen area</u>	8.9			
<u>Bathroom surface</u>	2.3 m ²			
<u>Toilet area</u>	0.7 m ²			
<u>Living room area</u>	6.7 m ²		11 m ²	
<u>Bedroom area</u>	11 m ²	11 m ² + 18 m ²	13 m ² + 17 m ² + 19 m ²	11 m ² + 13 m ² + 17 m ² + 19 m ²
<u>Balcony surface</u>	4.9 m ²	7.9 m ²	5 m ²	8.7 m ²

Input Area

Kitchen area

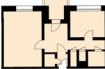
Bathroom surface

Toilet area

Living room area

Bedroom area

Balcony surface

				
	T2 = 46 m ²	T3 = 54 m ²	T3 = 59 m ²	T4 = 82 m ²
	1.3 m ²			4.5 m ²
	7.9 m ²		8.9 m ²	
	2.3 m ²			
	0.7 m ²			
	5.4 m ²		7.5 m ²	11 m ²
	17 m ²		11 m ² + 17 m ²	12.5 m ² + 16 m ²
4.9 m ²		7.9 m ²	5 m ²	8.7 m ²

<u>Input Area</u>	1.3 m ²			4.5 m ²
<u>Kitchen area</u>	7.9 m ²		8.9 m ²	
<u>Bathroom surface</u>	2.3 m ²			
<u>Toilet area</u>	0.7 m ²			
<u>Living room area</u>	5.4 m ²		7.5 m ²	11 m ²
<u>Bedroom area</u>	17 m ²	11 m ² + 17 m ²	12.5 m ² + 16 m ²	11 m ² + 13 m ² + 17 m ²
<u>Balcony surface</u>	4.9 m ²	7.9 m ²	5 m ²	8.7 m ²

Input Area

Kitchen area

Bathroom surface

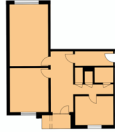
Toilet area

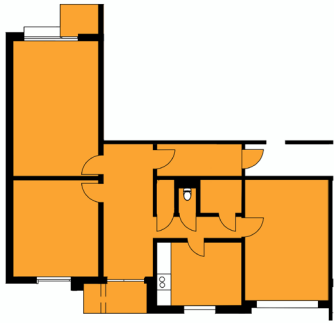
Living room area

Bedroom area

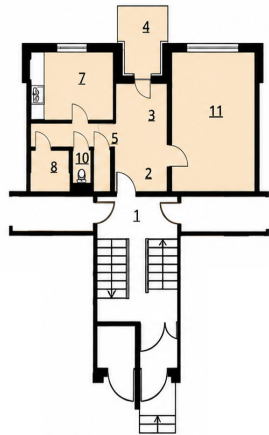
Balcony surface



				
	T2 = 46 m ²	T3 = 69 m ²	T4 = 80 m ²	T5 = 98m ²
<u>Input Area</u>	2 m ²	4.5 m ²		
<u>Kitchen area</u>	8.9 m ²			
<u>Bathroom surface</u>	2.3 m ²			
<u>Toilet area</u>	0.7 m ²			
<u>Living room area</u>	6.7 m ²	10.7 m ²		
<u>Bedroom area</u>	18 m ²	13 m ² + 18 m ²	11 m ² +13m ² +18m ²	11m ² +13m ² +18m ² +18m ²
<u>Balcony surface</u>	4.9 m ²	5 m ²	8.7 m ²	8.7 m ²

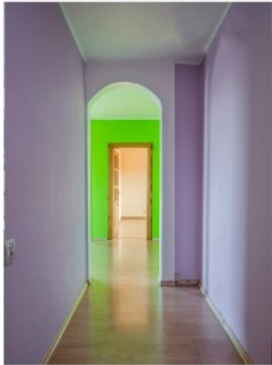


Area	77.86 m2
Number of bedrooms	3
Floor	10/10
Year built	1992
Number of inhabitants	4



Surface	44 m²
Number of bedrooms	1
Floor	2/5
Year of construction	1993
Number of occupants	2

1- Le hall d'entrée



2- La chambre d'amis



3- Le balcon



4- Le salon



5- La chambre



6- Le salon



7- Cuisine



8- La salle de bain



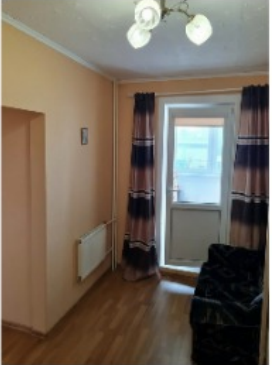
1- La cage d'escalier



2- Le hall d'entrée



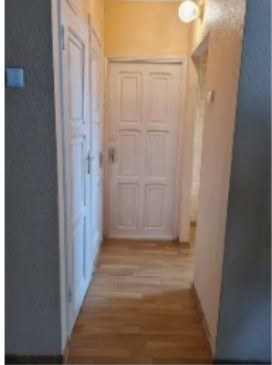
3- Le salon



4- Le balcon



5- Couloir cuisine et salle de bain



6- Cuisine



7- Cuisine



8- Cuisine



9- Salle de bain



10- WC

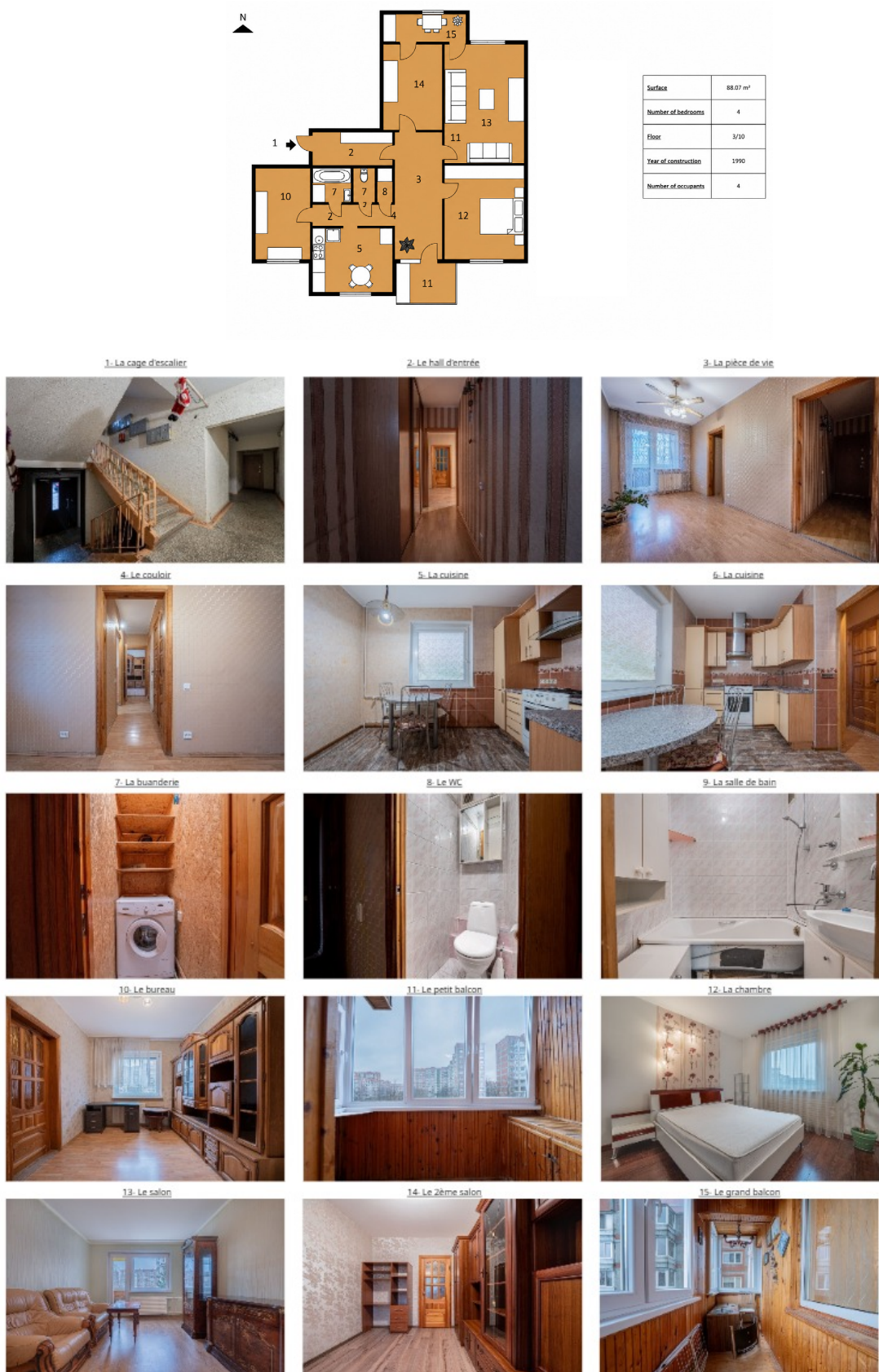
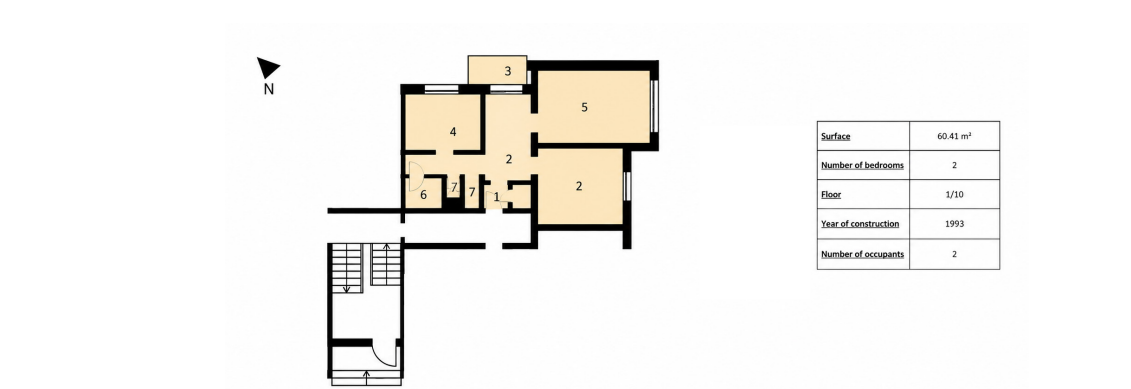


11- La chambre



12- La chambre





2. Current problems

The demographic trajectory of Klaipėda presents a complexity, combining historical heritage and contemporary changes. To understand the current situation, it is essential to analyze the long-term evolution, illustrated by the graph showing the population dynamics between 1967 and 2013. We know that the Soviet period experienced growth with a historical peak of 202,929 inhabitants in 1989. However, the fall of the Soviet bloc marked a sharp turn. From 1989, the trend was reversed, with the city entering a phase of continuous demographic decline. In 2013, Klaipėda had only 158,541 residents, a loss of more than 44,000 inhabitants in the space of 24 years. This massive depopulation is explained by the combination of natural factors, notably a permanently low birth rate and an aging population, and migratory factors, marked by strong emigration towards Western Europe, especially after Lithuania’s integration into the European Union in 2004.

Yet, this drop in intra-muros figures does not mean a total abandonment of the region by its inhabitants, but rather a need for spatial restructuring. The map of migration flows for the more recent period (2011-2021) reveals a geographical redistribution of populations rather than a simple escape. There is a clear territorial opposition: while the dense city center and residential neighborhoods are experiencing a sharp decline, losing 15,000 inhabitants over the decade, the peripheral areas that literally surround the city show marked population growth, winning 10,500 residents. This suburbanization movement, where households, in search of a better living environment and individual housing, leave the center apartments to settle in the communes, is the main driver of the demographic decline of the city-center in favor of its green peripheral crown.

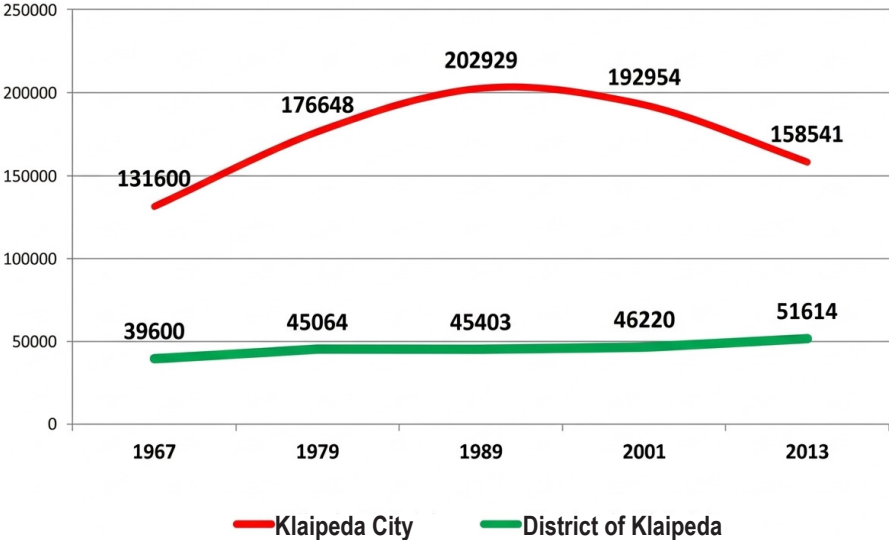
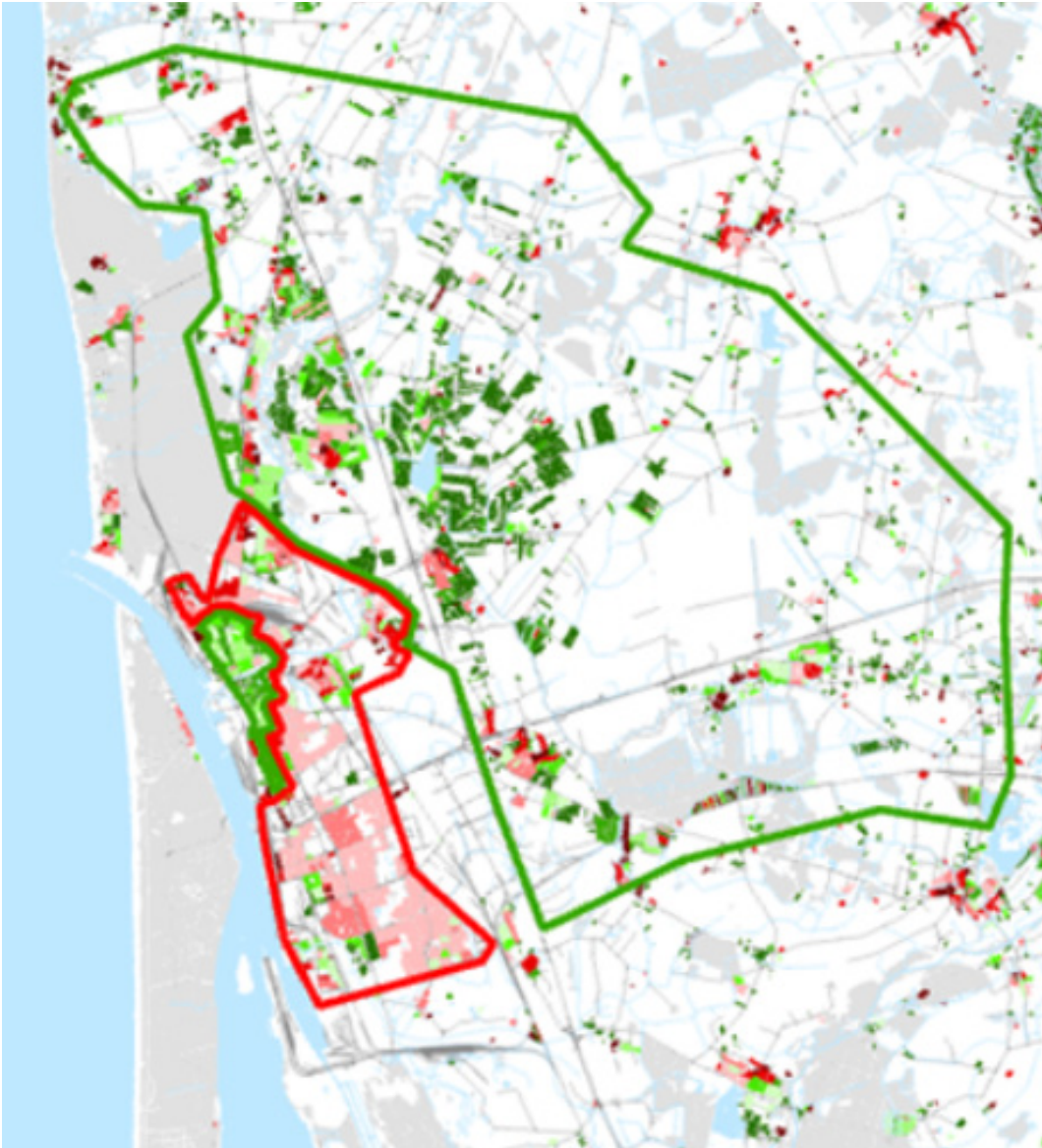


Fig 47. Dynamics of the number of inhabitants in the city and in the district of Klaipėda. Source: Follow-up of the general plan of Klaipėda. Report 2007–2013, p.



Augimas – apvesta žaliai,
Mažėjimas – apvesta raudonai

Sovietinio laikmečio rajonai – 15 000
Centras + 2 000
Periferija + 10 500

Fig 48. The change in the number of inhabitants between 2011-2021 (%). Source: Ministry of Environment of the Republic of Lithuania

36. Data from the monitoring of the general plan of Klaipėda: Report 2007–2013, (p. 205).
37. Data from the Ministry of Environment of the Republic of Lithuania, 2024. am.lrv.lt

The population decline that has occurred in Klaipėda does not occur uniformly throughout the entire urban area, but reveals a spatial fragmentation between a declining south and a changing north. If the city has lost a significant part of its population since independence in 1991, data from the Klaipėda 2030 Master Plan highlight that this withdrawal primarily affects micro-neighborhoods. The lack of interest in these neighborhoods is no longer just an obsolescence of Soviet buildings, but a structural shift in the city's centers of gravity. The south, marked by a «residential mono-functionality» inherited from industrial planning, is directly affected by environmental nuisances, notably air pollution, odors and noise generated by the extension of heavy port activities³⁸. This deterioration of the living environment pushes the inhabitants towards a movement of internal migration to the north and the immediate periphery.

This phenomenon is accentuated by a shift in strategic employment areas. The economic development of the region is now concentrated in the north, around the academic and health pole, as well as in the east with the Free Economic Zone (FEZ), which has become the main employment area of the municipality. This directly impacts car traffic since the roads are very quickly saturated in the morning and evening, thus increasing travel time. A person living in a southern micro-neighborhood easily spends 35 minutes to cover 7 km. As a result, residents are moving away from the old southern residential districts to these new decision-making and production centers. This rapprochement with the center-north also responds to an aspiration for urban mix: residents seek to break away from car dependency imposed by the functional zoning of the Soviet era in order to access a denser cultural and commercial offer.

Thus, while the district of Klaipėda (the periphery) is experiencing steady growth (+7.7% in recent years), the central city is facing a «suburbanisation» that is emptying its southern districts of their middle classes³⁹. The contemporary challenge for the municipality is therefore no longer just to house the population, but to transform these declining residential areas into multifunctional neighborhoods capable of competing with the attractiveness of the north. Otherwise, the south of the city will sink permanently into socio-spatial segregation.

38. Klaipėda City Municipality (2021). *Klaipėda City Profile 2021*. Klaipėda: Klaipėda City Municipal Administration.(p.47)
39. Bardauskienė, D., & Pakalnis, M. (2011). Social and spatial aspects of suburbanisation in Lithuania. *Town Planning and Architecture / Urbanistika ir Architektūra*, 35(1), (p.5–15). The authors emphasize that this phenomenon of suburbanization creates a major socio-spatial imbalance: infrastructure and services remain concentrated in the central micro-districts which are emptying, while the periphery extends without offering any real urban mix.

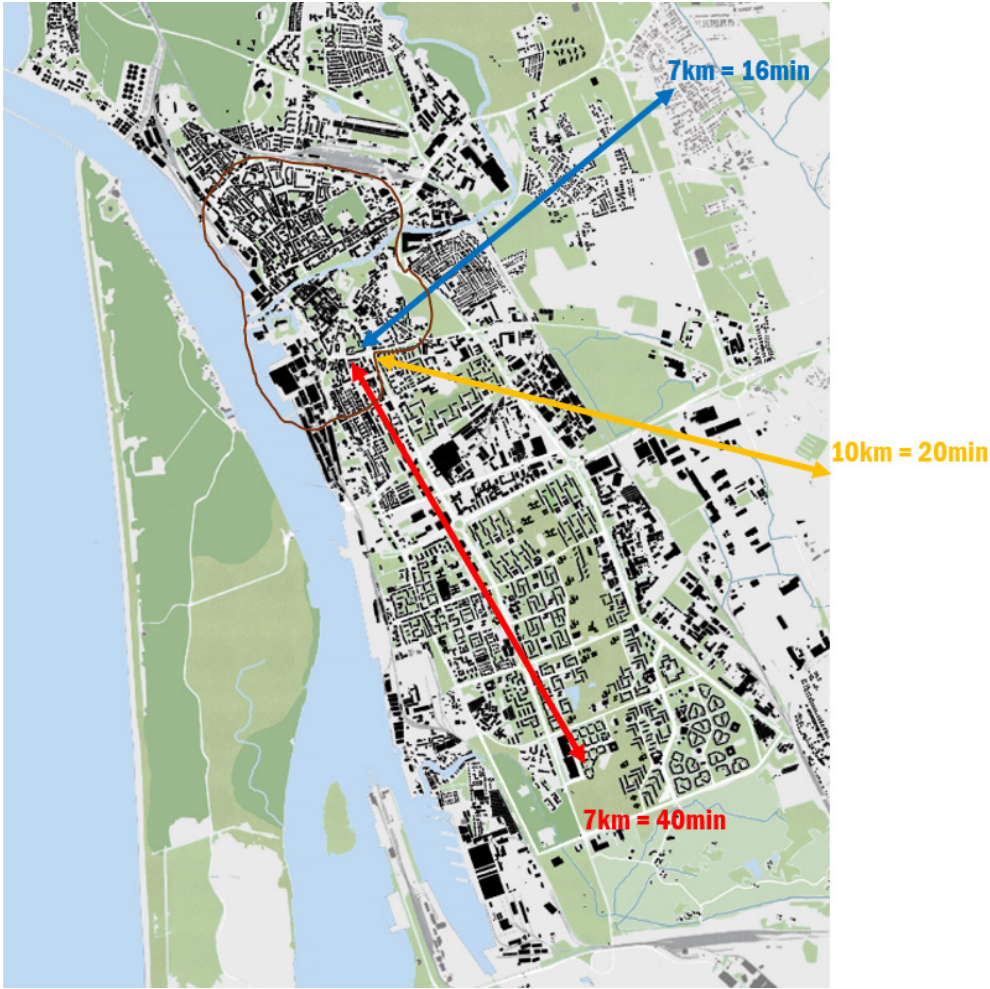


Fig 49. Travel time by car during rush hour.

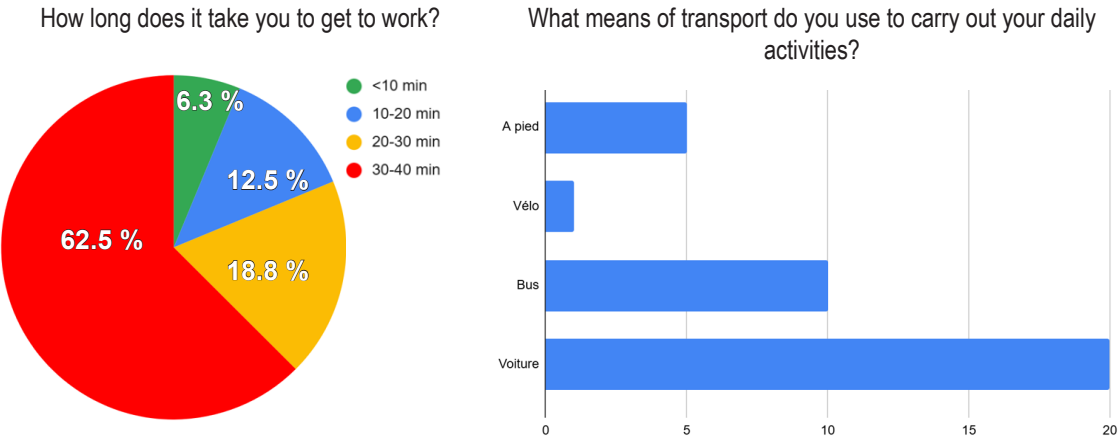


Fig 50. Excerpt from the survey conducted among residents of southern micro-districts, 2025-2026

CURRENT URBAN PROBLEMS

Demographic decline

The transition from a standardized apartment to a single-family home is more than just a change of living; it is a direct response to the uniformity imposed by the Soviet model. The rising middle class, seeking to escape the density and technical obsolescence of southern micro-neighbourhoods, has invested in neighboring rural areas. As highlighted by Bardauskienė and Pakalnis (2011), this withdrawal towards the periphery empties the central districts of their living forces, creating an increased spatial segregation.

Contrary to the rigid and centralized planning of the 1960s, these new residential areas often developed spontaneously, following a market logic. We are witnessing a «fragmentation» of the territory where the city is no longer divided between two parts, north and south, but rather into three parts, with the new residential areas.

This suburban development in the north and east has shifted the city's centers of gravity. Business zones such as the Free Economic Zone (FEZ) have been established on the edge of these new living areas, accentuating the decline of former industrial and residential districts in the South.



Fig 51. The tension between the three zones: the historic center to the north, the residential area to the south, and the residential area to the east.



Fig 52. The historic city center



Fig 53. The micro-districts



Fig 54. The residential district

This increased dependence on the automobile, dictated by the movement of employment centers to the north and the periphery (FEZ, university area), generates a spatial saturation that deeply distorts the identity of southern neighborhoods. Designed at a time when the automobile rate was marginal, the micro-districts of Klaipėda do not have the necessary infrastructure to absorb the current car fleet, which now exceeds 450 vehicles per 1,000 inhabitants instead of the previous 100⁴⁰. In the absence of dedicated parking spaces, the car has taken over every available corner, invading sidewalks, green spaces and, more critically, the old playgrounds located in the heart of the courtyards. This wild occupation of the common area has multiple consequences: beyond visual pollution and the disappearance of the original plant landscape, it deprives children of any safe recreational space in the immediate vicinity of their homes.

The physical domination of the car thus transforms planned socialization areas into unsanitary transit and parking zones, generating air and noise pollution at the very foot of homes. This environmental and aesthetic degradation reinforces a sense of insecurity for pedestrians, especially the young and the elderly, and ends up making these neighborhoods repulsive for families. As the historian Marija Drėmaitė⁴¹ points out, we are witnessing here the complete shift of modernist utopia: the «free and radiant» space initially designed for collective fulfillment has become a constrained and fragmented space by individual management of mobility. This lack of access to courtyards acts as a powerful catalyst for the demographic decline in the south, with residents fleeing a parking city to seek gardens and the security that the Soviet microdistrict can no longer guarantee them.

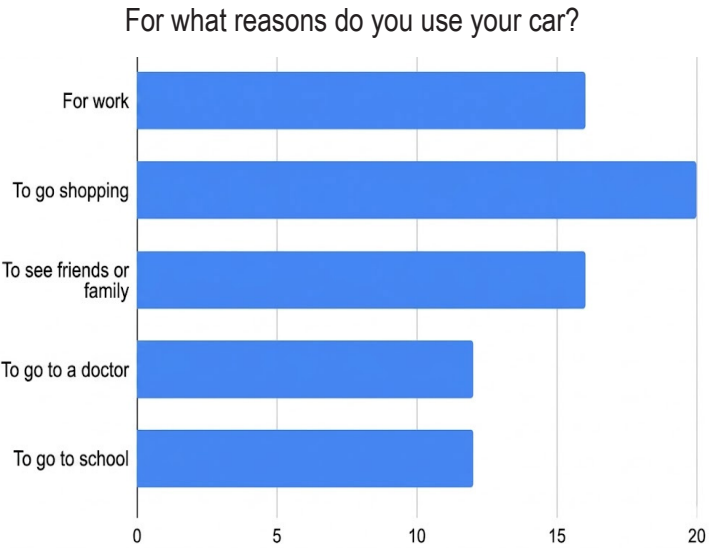


Fig 55. Excerpt from the survey conducted among residents of southern micro-districts, 2025-2026

40. Klaipėdos miesto savivaldybė (2018). Klaipėdos miesto darnaus judumo planas iki 2030 m. SĮ « Susisiekimo paslaugos » (p.55).

41. Drėmaitė, M. (2017). *Baltic Modernism: Architecture and Housing in Soviet Lithuania*. Berlin : Dom Publishers.(p. 210-215)



Fig 56. Cars parked on playgrounds

Heavy prefabrication allowed rapid urbanization but bequeathed a structural and social legacy that is now critical. The main problem lies in the rigid standardisation of processes (large panel systems or *krupnopanelny*), which sacrificed architectural quality and durability for speed. The first critical observation concerns the building envelope, the first line of defense against climatic aggressions. There is a deterioration of the exterior walls between 10% and 30% ⁴². This figure reflects not only surface wear, but above all the loss of cohesion of reinforced concrete panels designed without adequate thermal insulation. For the inhabitants, this failure of the envelope results in massive thermal bridges on a daily basis, making the dwellings icy in winter and stifling in summer. The resulting energy inefficiency, coupled with an often outdated centralized heating system, leads to long-term energy poverty and disproportionate heating bills.

In addition, the deterioration of the parapets and cornices reaches a peak of 45%. These elements, which are crucial for the waterproofing of flat roofs, now act as moisture funnels. Their degradation leads to recurring infiltrations in the roofs, trapping water within the very structure of the building. This trapped moisture is the catalyst for the second phase of deterioration, as illustrated by the pathology of balconies and loggias, whose rate of deterioration explodes from 13% to 50%. Moisture penetrates the housing, promoting the proliferation of mold on the interior walls. (deteriorated to 10%), which leads to chronic respiratory problems and allergies that can affect the health of families.

The internal structure is not spared. The deterioration of stairwells (11-25%) and floors (10%) highlights the failure of maintenance management on critical load-bearing elements. For residents, this decay of common areas, with their peeling paint, rusted railings and cracked floors, acts as a powerful marker of social degradation. These spaces, which are supposed to promote socialization, become unsanitary places of transit. Moreover, the internal structure, with its load-bearing interior walls in reinforced concrete, constitutes an absolute architectural rigidity because these walls limit any reconfiguration of the apartments, blocking any adaptability to contemporary lifestyles.

Regeneration can no longer be satisfied with superficial insulation solutions, but requires a large-scale structural and social intervention to restore the comfort of the inhabitants.

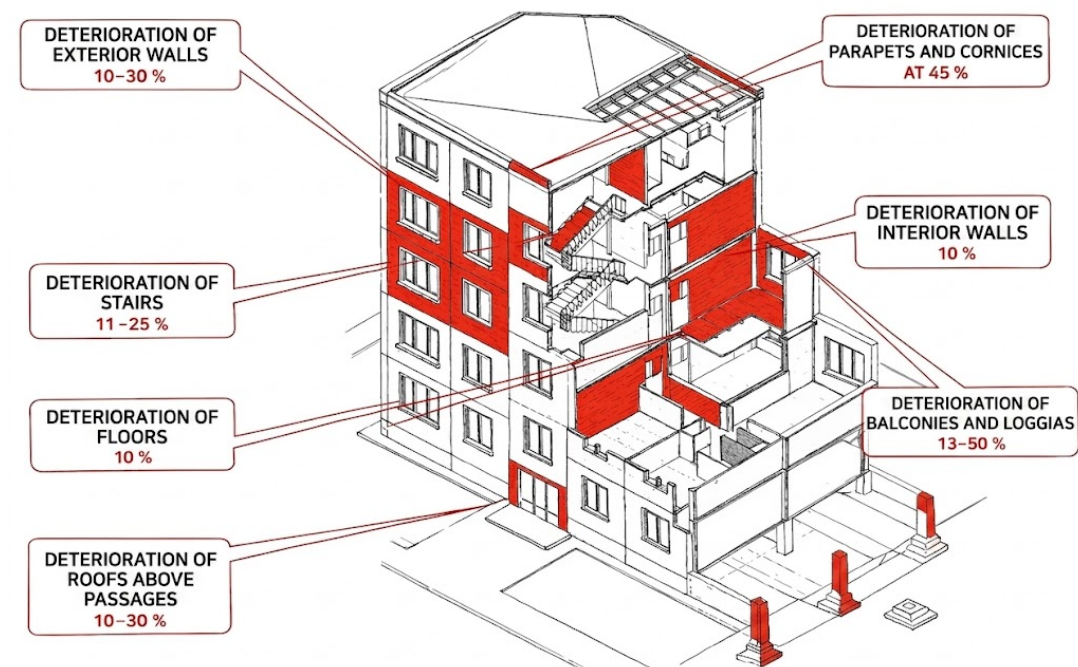


Fig 57. The main problems of prefabricated buildings. Source: Seminar Re-Topia| Martynas Marozas - Microrayon transformation strategies: lessons learned: <https://www.youtube.com/watch?v=U0Xc5c4AFg>.



Fig 58. The deterioration of the facades seen on the buildings in the «Varpai» district, 2026.

42. Marozas, M. (2014). « *Daugiabučių gyvenamųjų namų kvartalų regeneracija* ». Vilnius : Lietuvos architektų sąjunga. (p.48)

THE PROBLEMS OF COMMON AREAS

This «architecture of the minimum» has also sacrificed the quality of the light input. The excessive density of the micro-quarters and the depth of the blocks resulted in dark, poorly ventilated rooms. The design of through-apartments was rare in the first series, often condemning living rooms to a single and insufficient exposure. The rooms, narrow and long, received little natural light in their center, reinforcing the feeling of compactness and oppression. By limiting openings to reduce heat loss and panel manufacturing costs, the system produced an austere indoor environment where the dark rooms and narrow kitchens reminded residents daily of the absolute priority given to the quantity of housing produced over the actual quality of life.

Finally, the deliberate absence of common spaces within the buildings completed this control system. Economically, every square meter not dedicated to sleep was considered an unnecessary luxury. However, the ideological motive was predominant: by removing halls or meeting rooms, the regime sought to fragment the social fabric and prevent citizens from gathering in places where they could not be seen or controlled by the authorities.

«The Soviet apartment was never a private castle; it was a transparent space, the layout of which was designed to discourage unsupervised social gathering. By minimizing common halls or meeting spaces within buildings, the regime aimed to fragment the social fabric, ensuring that citizens could not gather in places where they would remain invisible to the authorities.»⁴³

The stairwell remains the only meeting place, although its use by children is often a source of tension due to the acoustics. Historically, this absence was strategic: beyond the economy of means, the Soviet regime sought to limit any unsupervised grouping to avoid possible protest ideas. To socialize, residents had no choice but to leave the neighborhood for the city or meet in local beer distribution areas. Collective life was thus deported to the outside, in parks or official clubs easily scrutinized by those in power.



Fig 59. The absence of common areas visible in the ground floor plans of the three building typologies.

43. Boym, S. (1994). *Common Places: Mythologies of Everyday Life in Russia*. Cambridge, MA : Harvard University Press. (p.125)



Fig 60. In a micro-district, residents meet near tanks of gira (kvass) and beer, 1978. © Algimantas Žižiūnas.



Fig 61. Children playing in the stairwell. 1990. © Ingrida Lengvinienė.

Varpai's architectural and functional analysis has highlighted a rigorous and thoughtful structure. However, the quality of a micro-neighborhood is not only measured by the geometry of its islands or the theoretical distribution of its services, but also by the way in which its inhabitants reclaim this space forty years later.

In order to confront the realities of use, I collected testimonies from inhabitants of different generations directly on site but also on the internet. These interviews were essential to put the user at the heart of the project in order to propose a well-grounded strategy in their territory. The goal was to understand how the inhabitants appropriated public spaces, whether they used them often, what changes they were able to notice through these two periods, what changes they would see there. These interviews took place in different forms: vox pop with inhabitants spontaneously met, qualitative interviews with the residents who showed me around their apartments, testimonies on the internet. These different forms therefore influenced the duration of the interviews, but all were guided by general questions about the functioning of the neighborhood prepared in advance.

Here is presented the summary of residents' opinions on the district and its operations:

The promise of a better life

For the first residents, the arrival in Varpai represented a promise of modernity. Verticality, far from being endured, was then synonymous with light and social advancement. The inhabitants were satisfied with the conditions because they received apartments free of charge and obtained all the necessary services on a daily basis. Aldona, 64 years old, bears witness to this initial enthusiasm: «I remember the day we received the keys in 1986. When I went up to the 9th floor, I felt dizzy, but when I opened the balcony door, I saw the Baltic in the distance and all that emptiness at the bottom. For once, we really couldn't complain about the view. It was a period full of promise. Water and electricity for everyone, free apartments even if the wait was long. We thought, «Finally, a government that cares about simple people like us.» We were happy. Everything had just been built, so everything was in very good condition. Of course, it was much cleaner than it is now. We had to show a good image of this period.»

Relationship to green spaces and the landscape	How much time do you spend in green spaces? What are your reasons for going there? What do the trees in the neighborhood mean to you? (A legacy, a visual barrier, a nuisance?) In your opinion, are the green spaces sufficiently maintained and equipped (benches, lighting, trash cans)? Do you prefer the view from your balcony or direct contact with the ground in the park? How do you think you can contribute to maintaining green spaces?
Mobility and the place of the car	How do you find the balance between pedestrian areas and parking zones? How will you note the condition of the pedestrian paths? Do you have any difficulties parking or walking safely? Would you be willing to walk 5 minutes more to park if it allowed to transform the current parking lots into gardens or playgrounds?
Social life and gathering places	Where are you most likely to run into your neighbors and talk with them? Does the neighborhood have a real «center» in your opinion? If so, where is it located (the BIG shopping center, the church, the school, a particular park)? Do you use playgrounds or sports fields? How often? If not, what are you missing to stay longer?
Historical evolution and transition (Soviet period vs Today)	How has the atmosphere in the neighborhood changed since you arrived? In your opinion, what worked better then and has deteriorated today? How do you perceive the recent renovations of the buildings? Has this changed your sense of belonging in the neighborhood?
Amenities and local services	Does the neighborhood cater to all your daily needs without having to take the car or bus into the city center? What do you think of the commercial offer at the «BIG» center compared to the old small local shops? In your opinion, are school and sports facilities the strong or weak point of the neighbourhood?
Perspectives and desired changes	What is the first change you would make on your street or at the foot of your building? Do you fear the construction of new buildings in the current empty spaces? What would make you stay here for another 20 years, or on the contrary, what would make you leave?

Fig 62. Questions from the survey of residents

Complex infrastructure

If «green» is perceived as a heritage, today it is the conflict of use with the automobile. The district, designed for a society with little motorization, is dominated by the car that makes play areas disappear. Viktoras, 42 years old, expresses this rupture between childhood and adult life: «When I was a kid, this big rectangle of grass between the buildings was our stadium. We used to run around without ever checking if a car was coming. Today, I have two cars myself, and I am part of the problem. It's true that you quickly get used to parking in front of your entrance, it's very convenient. It was much simpler before when there weren't so many cars. We wanted the freedom of the micro-neighborhood and that of the car, but the two do not fit in the same plan. What is funny but problematic at the same time, is that children have had to get used to this landscape and use the presence of cars to play, to hide. It had become their new playground. Today, that's less the case. Young people prefer to stay home and play video games.»

Meeting areas

Finally, the survey highlights a change in social interactions. The modernist «void», if it offers air, can also generate a sense of isolation, pushing residents towards new landmarks such as the church or the shopping center. Rasa, 29 years old, highlights the difficulty of living in public spaces: «Varpai is big but it can be lonely. The green spaces are just abandoned grass fields. I haven't lived here for very long, but even in other neighborhoods it's the same story. If you want to enjoy nature, go to the «Simonaityte» mountain or the «Žardininkų» park. It's pretty well laid out, so that's where everyone meets. The «Sajudzio» park is very popular with people who walk their dog or children who roller-skate. But the grass plains, well, we walk fast to get home because nothing keeps us outside. Before, my parents used to say it was more dynamic, but that's normal, it was new. Now we've let ourselves go. Here, the wind is always a little too strong, we look for the sun.»

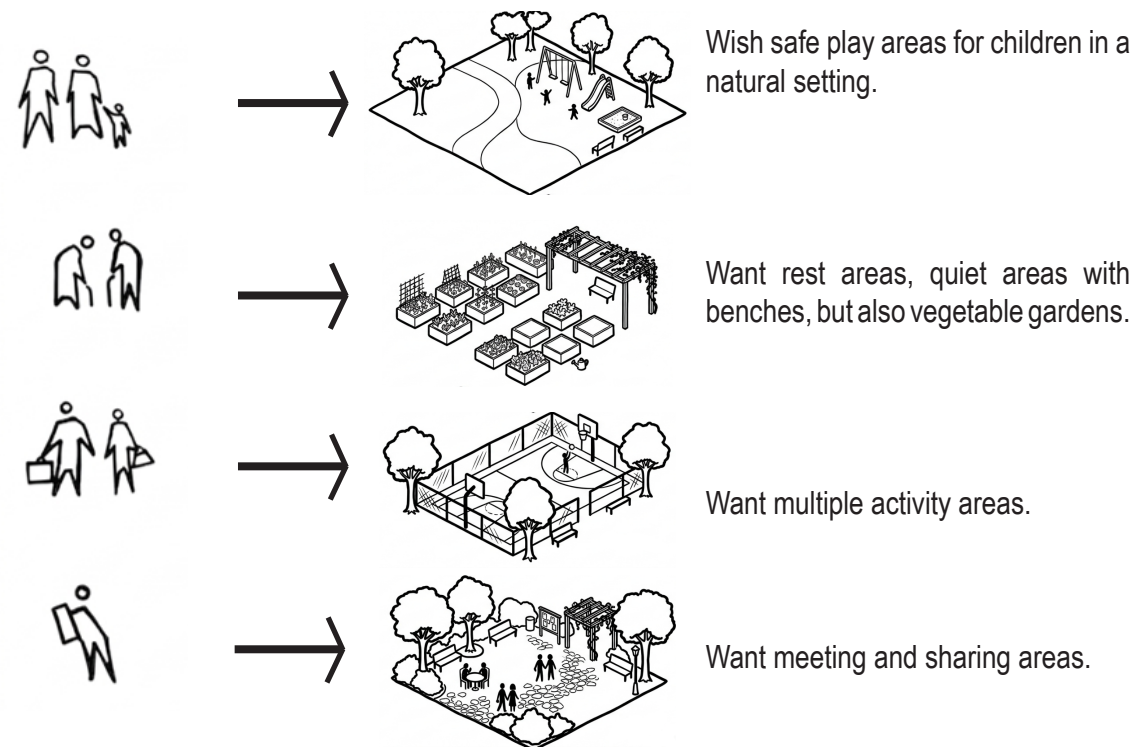


Fig 63. Wishes of the residents

Assets

- The territory benefits from a strategic location in the city;
- Presence of concentrated public spaces: Sajūdžio park, skatepark, sports stadiums;
- System of pedestrian paths and bike lanes;
- Green spaces constitute the majority of the total area of the territory;
- Concentrated street network;
- Ongoing projects for the redevelopment of the Sajūdžio park

Disadvantages

- Cycling and pedestrian links to other underdeveloped parts of the city;
- Lack of connections between the buildings;
- The pedestrian paths are worn out and neglected;
- Green spaces are unattractive;
- Domination of the car in the courts;
- Typologies of identical buildings;
- Entrances to buildings not adapted for people with disabilities;
- Lack of identity specific to the different parts of the neighborhood;
- Few young people and children, majority of elderly residents.

Opportunities

- Create a new pedestrian walkway system, connecting apartment buildings and public spaces;
- Develop and renew the recreational potential of courtyards;
- Rethink existing vegetation and plantations in order to restore green spaces;
- Create a new access structure to the buildings, or improve the existing one during renovations;
- Satisfy the need for parking spaces with new spaces;
- Neighborhoods can be divided into groups of smaller buildings, which would make it easier to manage the territory and create a distinctive image for each group of dwellings;
- Bring new public services to develop work, trade, meeting spaces;
- Create collective spaces for the inhabitants in order to enhance collective life.

Risks

- During the development of infrastructure, the main attention is often paid to the car and road network, to the detriment of the development of cycle and pedestrian paths;
- By meeting the need for parking spaces, environmental hygiene standards and the well-being of residents may be affected;
- The potential costs of renovating buildings could be higher than the possibilities offered by new construction;
- The complex renovation may not proceed smoothly due to the general passivity of the inhabitants;
- The residents' calm is likely to be violated by the new flow of people;
- Parking spaces might not be enough if too many job opportunities arise.

3. Urban case studies in Lithuania

The analysis of the Varpai neighborhood in Klaipėda highlights a paradox: despite a quality landscape inherited from modernism, the neighborhood is now struggling to adapt to contemporary lifestyles, especially in terms of mobility and social life.

To go further on this observation, it is necessary to examine the architectural and urban responses currently implemented in Lithuania. In this section, I thus propose to study three representative cases of the renewal of micro-neighborhoods: the strategy carried out in Mažeikiai by the PUPA⁴⁴ agency, the Gabija project in Vilnius⁴⁵, also designed by this agency, as well as the reflections of Ignas Uogintas proposed in his work at the end of his studies.⁴⁶

The urban regeneration project carried out by PUPA (Life Over Space) in the Gabija and Sodų neighborhoods of Mažeikiai in Lithuania (2022) is a case study of resilience strategies in the face of the abandonment of post-Soviet microneighborhoods. Extending over an area of 56 hectares, with 9,500 inhabitants, this intervention seeks to go beyond the simple thermal renovation of buildings to propose a structural transformation of the living environment, centered around the revaluation of public spaces. One of the strengths of this feasibility study lies in its participatory methodology: the agency has implemented a thorough consultation process including public meetings and resident surveys. The study was therefore based on the answers given by the 1,043 participants. This approach made it possible to confront urban ideals with the real needs of the inhabitants, revealing sometimes divergent expectations, particularly regarding the place of the car. From this consultation, two distinct strategies were born to modulate the intensity of the transformation according to the priorities of the condominiums. By proposing two scenarios, the agency gives decision-making power back to the inhabitants: they are no longer mere spectators of the planning, but actors in the future of their courtyard. Thus, architects create places that directly meet the contemporary needs of the inhabitants.

44. PUPA (2022). Mažeikių daugiabučių kiemų vizija ir viešųjų erdvių strategija. [Urban study]. Mažeikiai District Municipality.

45. Vilniaus Planas / PUPA (2021). Gabijos gatvės viešųjų erdvių sutvarkymo projektas. [Development project]. Vilnius City Municipality.

46. UOGINTAS, Ignas. Graduation work for the Master degree: Analysis of history, problems and development possibilities of Pašilaičiai residential district in Vilnius. Royal Danish Academy of Fine Arts (KADK), School of Architecture, Copenhagen.



Fig 64. The mass development plan of Mažeikiai, PUPA

1st strategy «The green district»

The first strategy, known as «balanced rationalization», focuses on a pragmatic reorganization of parking without reducing its capacity. The initial diagnosis highlighted a break with the original modernist model: building courtyards, designed as green lungs, were dominated by uncontrolled parking. In this option, the car remains a priority for some of the residents working outdoors, but its influence is strictly limited. The parking lot is grouped and paved in specific areas on the outskirts of the blocks, thus freeing up sidewalks and security access. Although less radical, this approach already makes it possible to «sanctuarize» portions of classes for rest and play.



Fig 65 Transformation of parking spaces, 1st strategy © PUPA, 2022

2nd strategy «My court»

The second strategy, more ambitious and focused on «intensive naturalization», meets the expectations of families and residents wishing a total break with the «parking city». Here, priority is given to the creation of a multifunctional landscape and soft mobility. This option provides for a reduction of parking spaces in the heart of the islands in favor of active landscape infrastructure: modern playgrounds, fitness areas and community gardens. It also incorporates nature-based solutions, such as landscape valleys for rainwater management, combating soil waterproofing.



Fig 67. Transformation of parking spaces, 2nd strategy © PUPA, 2022

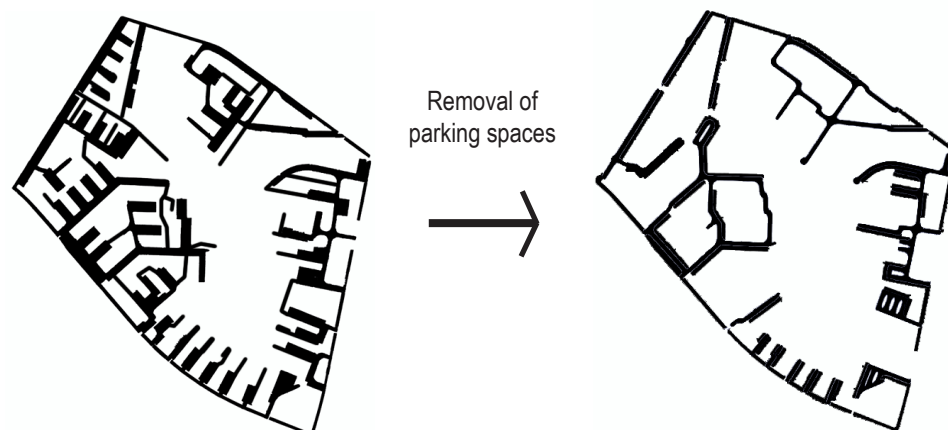


Fig 66. Schema of the first proposal

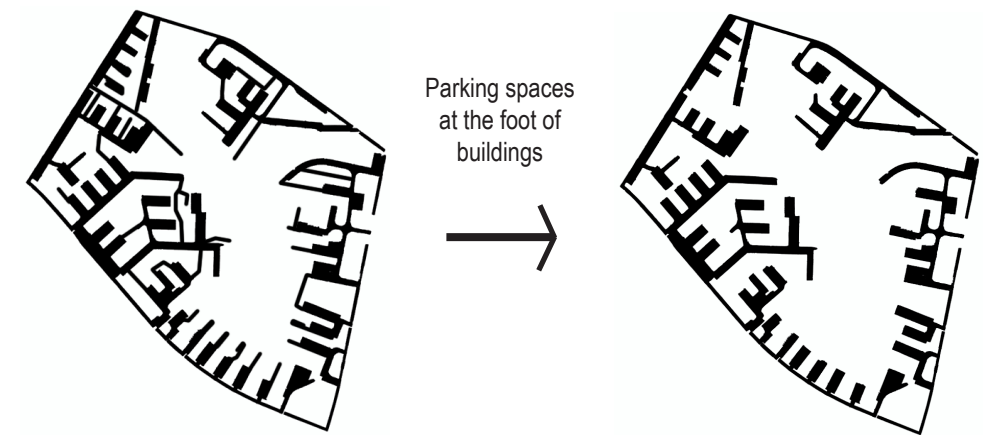


Fig 68. Diagram of the second proposal

1st strategy «The green district»

- Collectivization: Shared management by the inhabitants.
- The expulsion of the car: The movement of the parking lot towards the outskirts (outside the block).
- The ecological priority: Creating a central green infrastructure.
- Complexity: The admission that this solution is more demanding in terms of management and consultation.

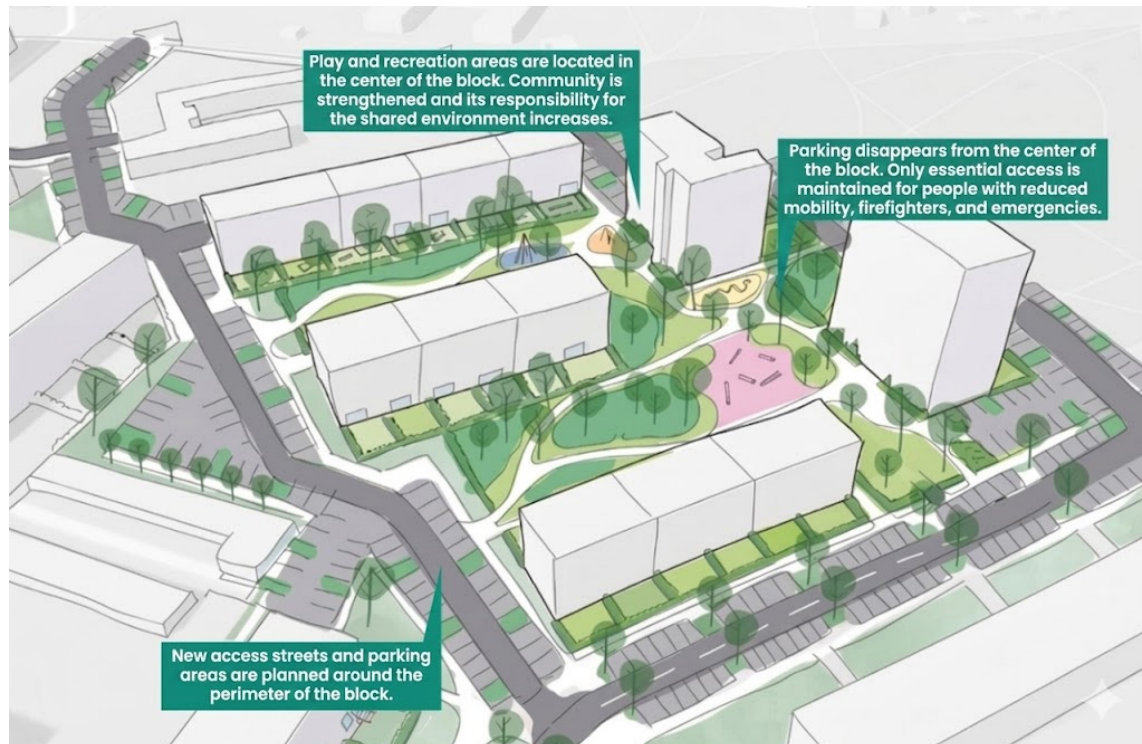


Fig 69. Transformation of green spaces, 1st strategy © PUPA, 2022

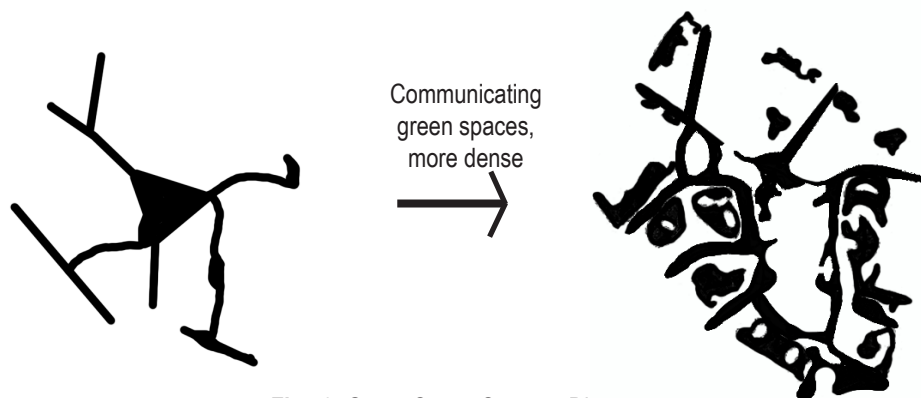


Fig 70. Green Space Strategy Diagram

2nd strategy «My court»

- The residents of each building maintain the land belonging to their own building, while taking into account the adjacent lands.
- The courses and their orientation are formed in such a way that there are no non-standardized solutions, difficult to reconcile or requiring additional planning.
- Parking areas are organized separately in the courtyard of each building.
- The common-use streets are not used for parking; they ensure smooth access to the courtyard of each building.

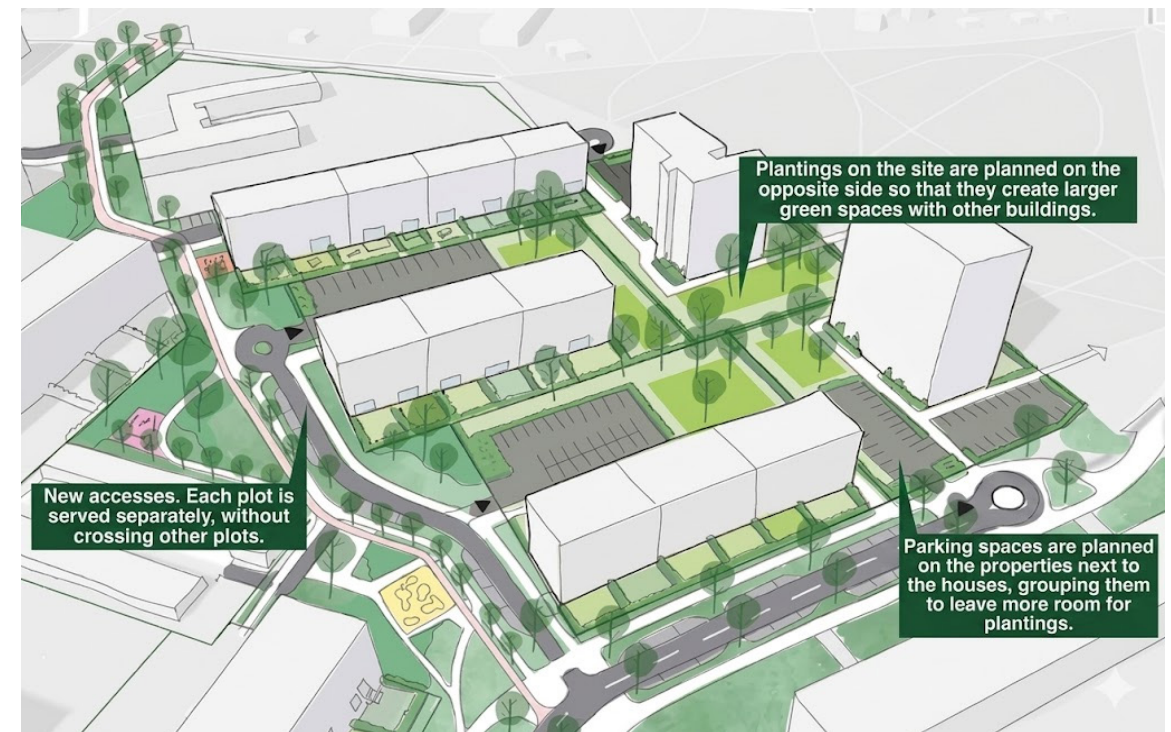


Fig 71. Transformation of green spaces, 2nd strategy © PUPA, 2022

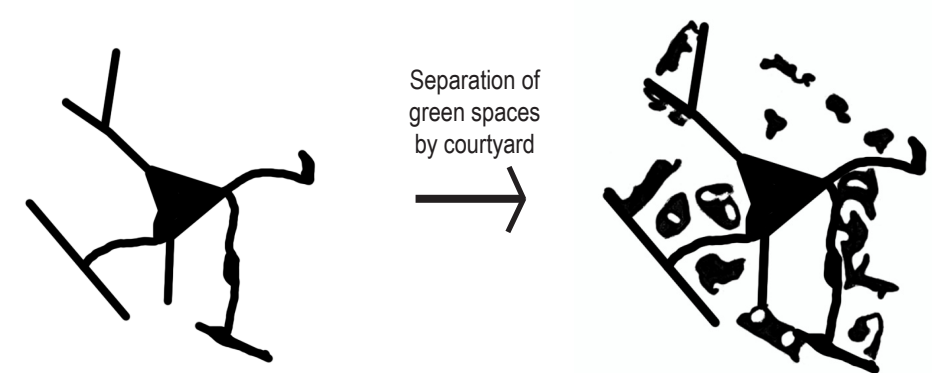


Fig 72. Parking space strategy diagram

The revitalization project of the Rumpiškė district in Klaipėda, designed by PUPA (Public Urbanism Personal Architecture) in 2015, is an exemplary case study on the transformation of a modernist micro-neighborhood into a contemporary and qualitative living space. Based on the feasibility study entitled «Study of Possibilities for Development of Public Spaces and Courtyards in Targeted Klaipėda Territories»⁴⁷, the intervention was structured around a methodology aimed at addressing the degradation of outdoor spaces and the saturation of parking.

The approach adopted by urban planners is based on a methodology based on an in-depth diagnosis of existing malfunctions. Among these were in particular the advanced degradation of outdoor spaces, the indeterminacy of spatial statuses and the increasing pressure exerted by car parking—all recurring issues in the large planned complexes of the twentieth century. In order to respond appropriately, the agency has undertaken an inventory of the daily practices and expectations of the inhabitants, revealing the informal dynamics already at work in these often under-qualified spaces.

This analytical work led to a spatial recomposition strategy based on the fragmentation of large residual surfaces. Initially perceived as undifferentiated «voids», these were reconfigured into a succession of spaces on a human scale, clearly hierarchical and programmed. One of the major objectives of the project was thus to redefine the gradients between public space, collective space and semi-private space, while intensifying the uses and increasing the social and functional value of the soil.

Furthermore, as the urban planner Justina Muliolytė⁴⁸ pointed out during my interview with her, the project has also outlined avenues for reflection regarding potential extensions of the apartments. However, these proposals remained at an exploratory stage. «We have not delved into the issue to this extent. We rather thought conceptually (at the idea level) about how to add surface and new spaces, but we did not look at the housing plan itself.»

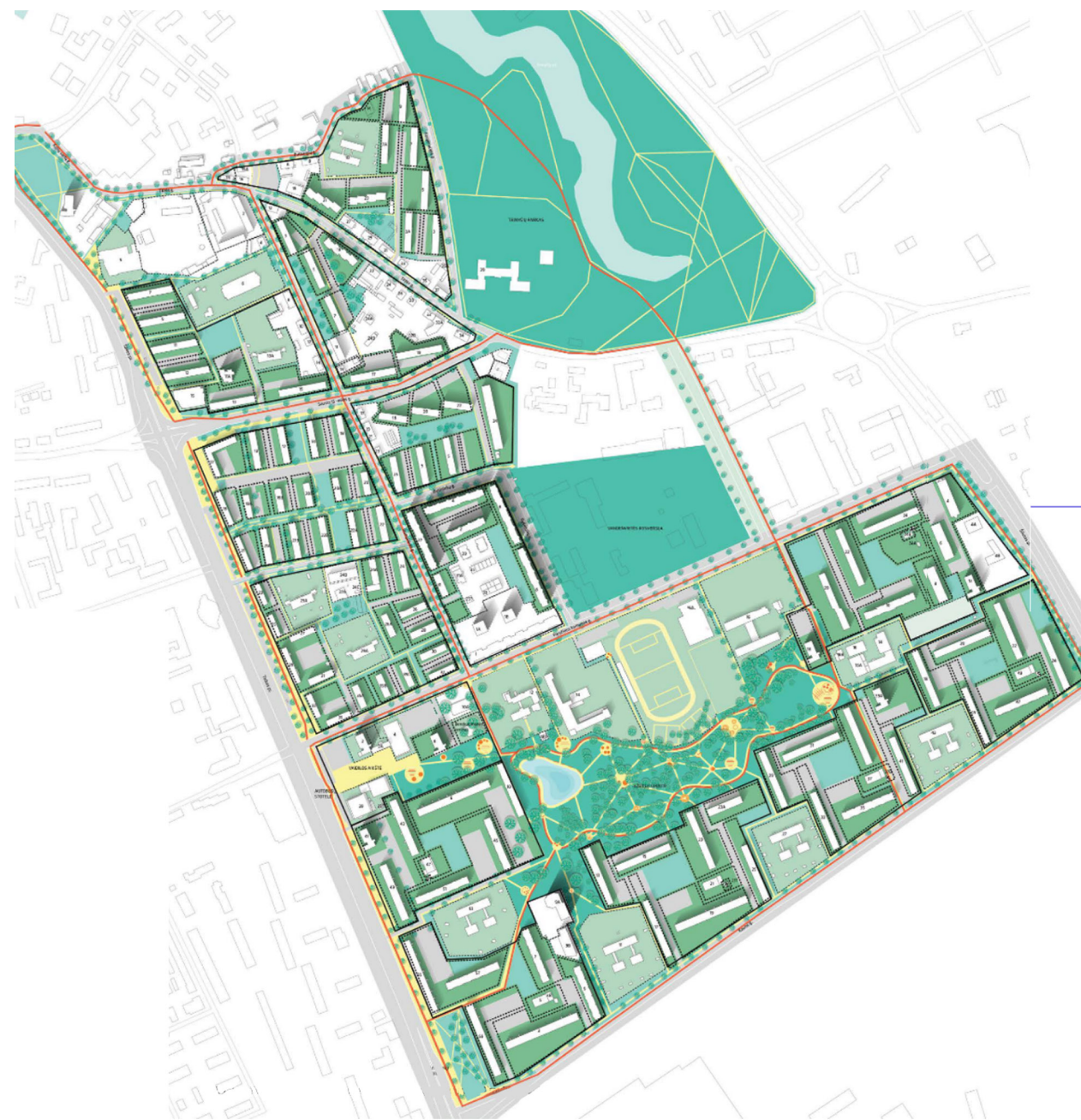


Fig 73. Study of the possibilities for the development of public spaces and courtyards in targeted areas of Klaipėda.
© PUPA, 2015

47. Klaipėdos miesto savivaldybė (2019). Klaipėdos miesto tikslinių teritorijų viešųjų erdvių bei kiemų tvarkymo galimybių studija (Feasibility study for the development of public spaces and courtyards in targeted areas of Klaipėda city)

48. Interview conducted with Justina Muliolytė, urban planner and co-founder of the PUPA agency, on 30.03.2026. See annexes

On the operational level, this approach has resulted in the creation of clearly delimited parking spaces, as well as the establishment of longitudinal car parks strategically positioned at the periphery of the blocks and along the main traffic routes. This redeployment has made it possible to relieve congestion in the heart of the block, which had previously been saturated by vehicles, and to restore these spaces for pedestrian and collective use.

The release of these surfaces, previously waterproofed or degraded by illegal parking, made it possible to work on landscape requalification. The soils have been renatured, promoting rainwater infiltration and ecological continuity, while new facilities dedicated to soft mobility and social practices have been introduced.

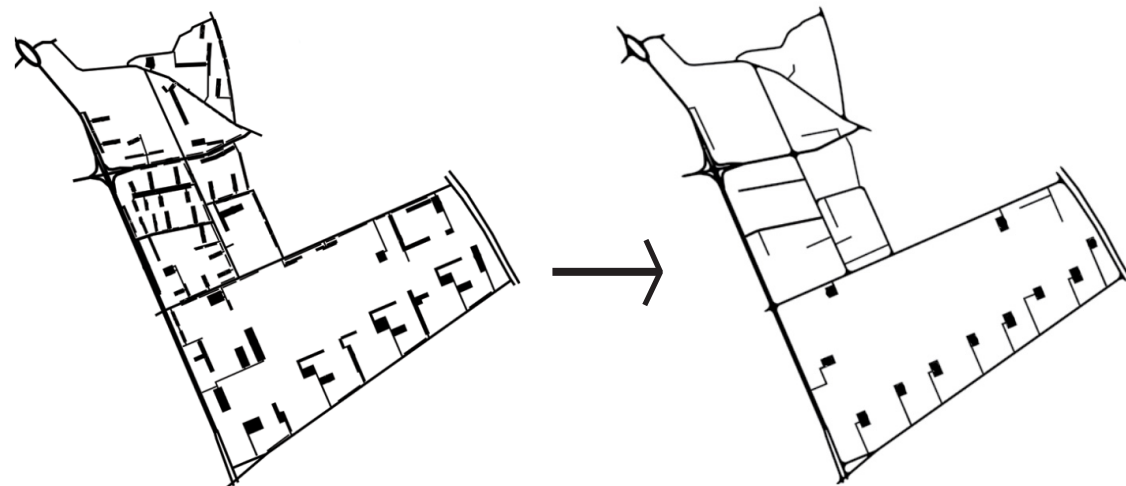


Fig 74. Parking space strategy diagram

In their initial state, the neighborhood's outdoor spaces were characterized by poor legibility, functional fragmentation, and gradual deterioration due to lack of maintenance and uncontrolled uses. These «urban voids», often residual, allowed neither a clear identification of the functions nor a true appropriation by the inhabitants. Faced with this observation, PUPA's intervention was based on a strategy of clarification and prioritization of public, collective, and semi-private spaces.

The project proposes a varied landscape organization, composed of different types of green spaces. Instead of a uniform layout, urban planners have focused on diversity: neighborhood gardens, themed playgrounds, relaxation areas or open squares. This variety meets the needs of all inhabitants and promotes encounters between generations.

Nature plays a key role here in the structure of the neighborhood. Much more than just a simple decoration, it serves to delimit spaces, create transitions and guide movements thanks to a precise organization of the plantations. Moreover, this vegetation helps to improve the urban climate, manage rainwater and enrich biodiversity.

Finally, the use of coherent urban furniture (benches, lighting, games) and careful treatment of floors makes the neighborhood more readable and pleasant. These facilities are designed to encourage social interactions and help residents take full ownership of their living environment.

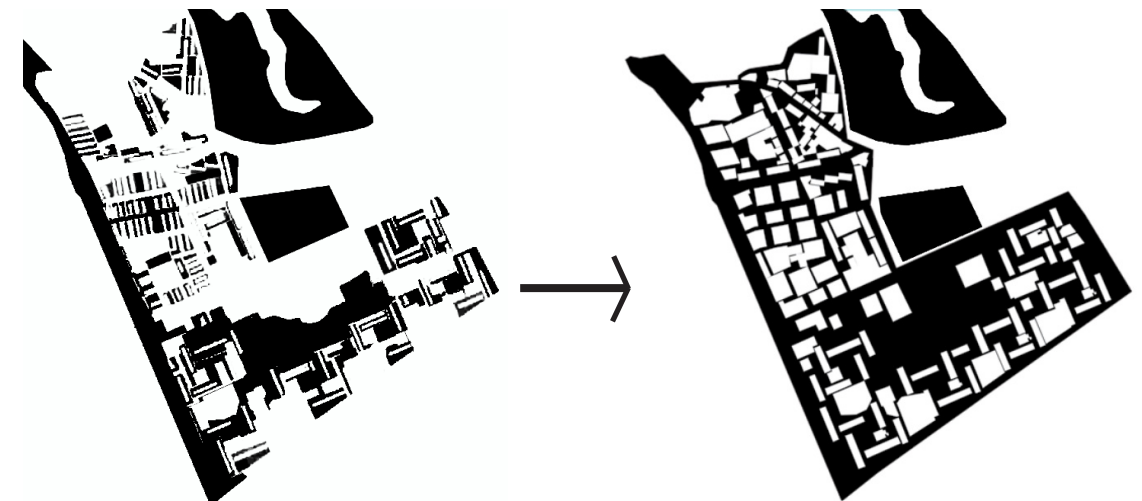


Fig 75. Green Space Strategy Diagram

The regeneration project of the Pašilaičiai district in Vilnius⁴⁹, carried out by the architect-urban planner Ignas Uogintas, is the third important case study for thinking about the future of large modernist complexes in Lithuania. Rather than proposing a radical or only aesthetic transformation, his approach is based on a detailed understanding of the existing neighborhood. The aim is not to wipe the slate clean, but rather to «repair» and adapt this urban fabric to contemporary lifestyles.

Developed in particular within the framework of his research at the Royal Danish Academy of Fine Arts, his approach is based on the principle of «urban acupuncture». This means intervening in a targeted way, by small touches. These precise interventions allow to gradually improve the quality of the neighborhood without upsetting its general organization.

By considering empty spaces as a resource and promoting daily uses, the project proposes a progressive way to improve the quality of life on three different scales: territory, neighborhood, building. These interventions are then thought as a whole to create a harmonious strategy whose transformations respond to each other.

The main idea is to recreate a connection between the different areas in order to structure everything in a single large green space that brings together the various new functions: community center, shared spaces, public gardens.

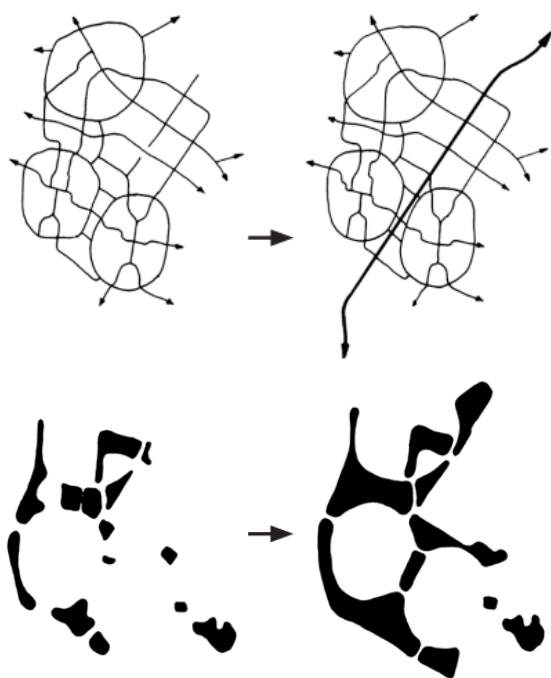


Fig 76. New connection between the zones and unification of the neighborhood © Ignas Uogintas,



Fig 77. New development proposal for the micro-district Pasilaiciai© Ignas Uogintas, 2015

49. UOGINTAS, I.(2014), Graduation work for the Master degree: Analysis of history, problems and development possibilities of Pašilaičiai residential district in Vilnius. Royal Danish Academy of Fine Arts (KADK), School of Architecture, Copenhagen.

As in the two projects of the PUPA agency, here there is also a question about parking. By reorganizing and limiting it, it becomes possible to free up space for vegetation, walking or cycling, and meeting places. Outdoor spaces are no longer residual areas, but real supports of collective life.

Noting that the anarchic presence of cars degrades outdoor spaces and harms the sense of security, this project proposes to better organize parking. The idea is to group vehicles in dedicated areas, on the outskirts of buildings or along roads, rather than letting them invade building bases.

This reorganization frees the interior courtyards, which can then become places of play, meeting or green spaces. The goal is not to eliminate the car, but to limit its place in order to give space back to the inhabitants.

Finally, particular attention is paid to the design of these parking areas. Thanks to appropriate materials, clear markings and the addition of plants, these spaces become more discreet and better integrated into the landscape. They thus serve as a transition area between car traffic and quieter living spaces.

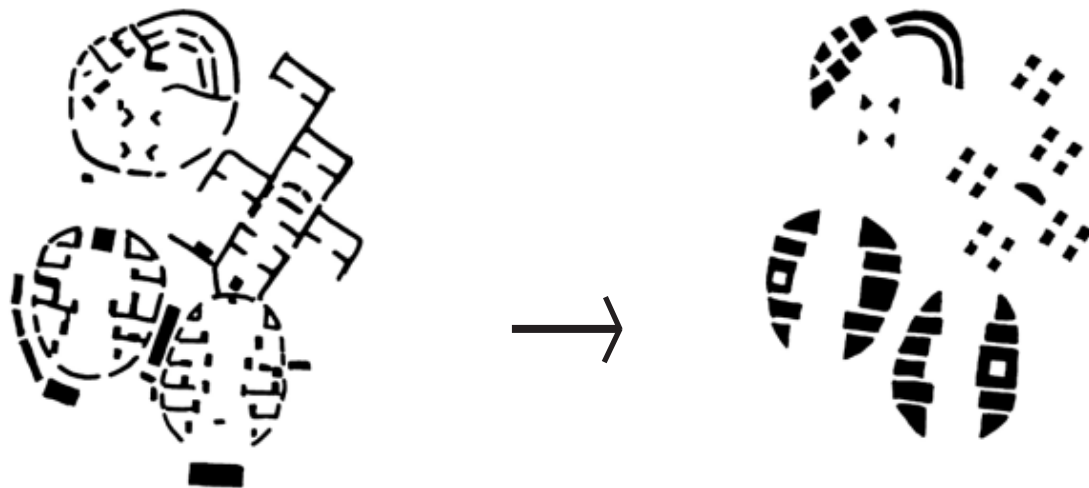


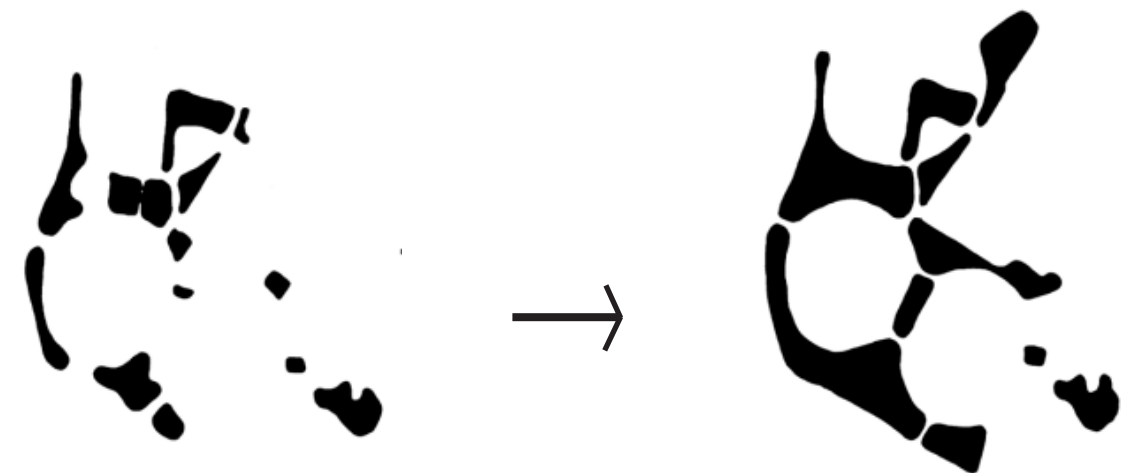
Fig 78. Diagrams of transformations in public spaces © Ignas Uogintas, 2015

The second challenge of the project is to restore a clearer structure to outdoor spaces. In these neighborhoods, the large spaces between buildings are often vast but little used and difficult to appropriate. By dividing them and assigning them specific functions, Uogintas recreates a legible hierarchy between streets, public spaces and residential courtyards. In these modernist ensembles, large open spaces are often perceived as vague places, little used and without any real function. The goal is therefore to transform these «voids» into living and appropriable spaces to allow residents to better understand and use their daily environment.

For this, he relies on urban design to better organize the space. This involves the creation of well-identified thresholds, thanks to changes in materials, slight unevennesses or the installation of urban furniture. These elements make it possible to clearly distinguish more private spaces, such as courtyards, from collective spaces or areas of passage.

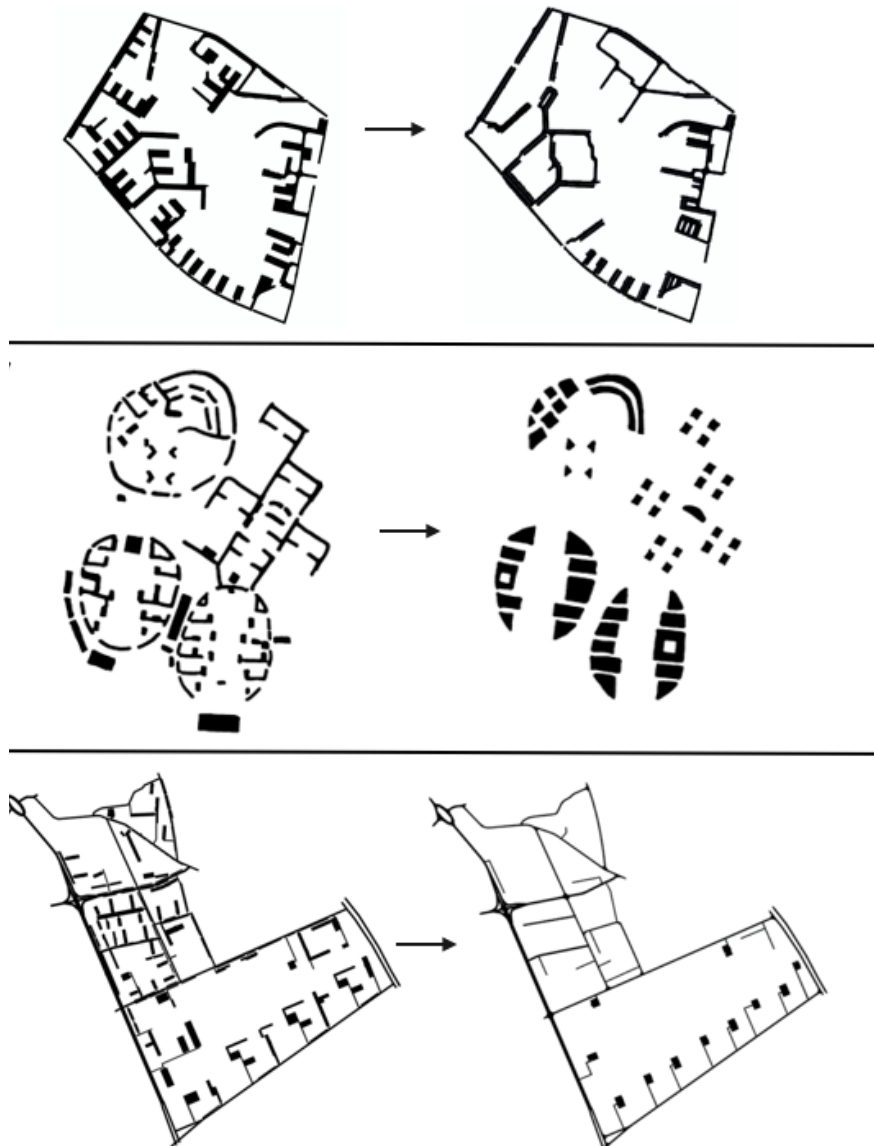
This organization also makes it possible to introduce a diversity of uses: instead of large lawns that are little used, the project proposes concrete developments such as playgrounds, sports areas or shared gardens. Outdoor spaces thus become more active and better adapted to the needs of the inhabitants.

One of the desired effects is also to improve the sense of security. Better defined, more frequented and more visible spaces encourage a more constant human presence. At the same time, this transformation contributes to giving a stronger identity to the neighborhood, by creating varied and recognizable atmospheres.



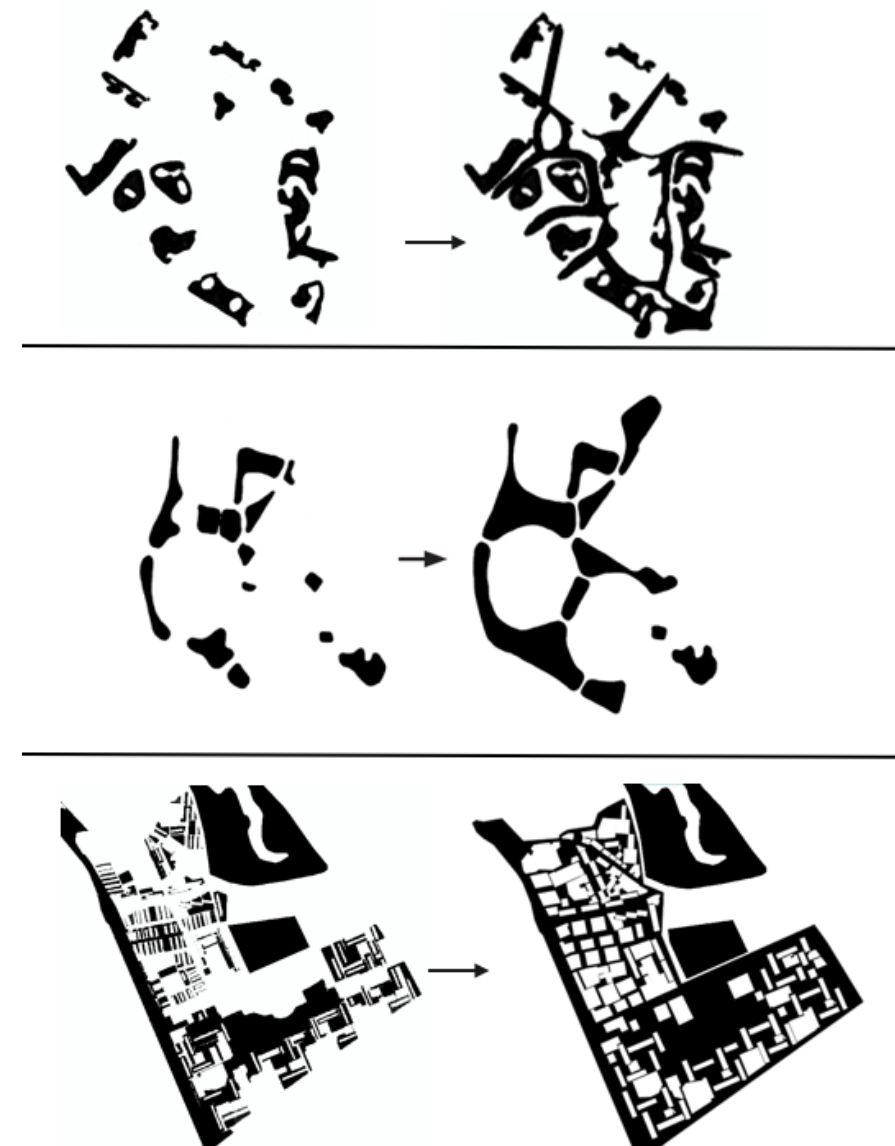
This part of the thesis thus explores three case studies that propose the renewal of micro-neighborhoods: the overall strategy of Mazeikiai led by the PUPA agency, the Gabija project in Vilnius also designed by PUPA, and the strategic reflections of Ignas Uogintas. The choice of these references makes it possible to address the issue at different scales, ranging from the systemic management of urban voids to the precise requalification of interior courtyards, while observing how to transform abandoned or anarchic parking zones into versatile public spaces. This comparative approach demonstrates that the neighborhoods of the Soviet era are organisms capable of mutating if the right methodological tools are used.

Fig 79. Transformations related to parking



At the end of the analysis of these three projects, I was able to identify two fundamental levers on which it is possible to intervene at the urban level: on one hand, the need to completely rethink parking spaces in order to free up space for pedestrians, and on the other hand, the requalification of public spaces in order to better delimit the areas and bring new uses, creating a functional mix that meets the current needs of the population.

Fig 80. Transformations related to public spaces



4. Case studies of building transformations in 1970 in Europe



Fig 81. Building before renovation work

The prefabricated collective housing of the socialist era was based on a logic of extreme rationalization: the surfaces were optimized, the types of dwellings repeated and the spaces deemed «useless» reduced to a minimum. In these buildings, the ground floors and common areas were designed solely for logistics—entrances, stairs, or technical rooms—and not as meeting places. This space economy reveals a major contradiction of the modern model: although the micro-neighborhood aimed to create an ideal of collective life, the very design of the buildings limited real opportunities for residents to gather.

The project of transformation of the panelák by the collective gutgut is part of a critical approach towards this heritage. It does not question the constructive structure, but rather questions the internal spatial hierarchy of the building, specifically targeting traditionally under-qualified areas: the ground floor and intermediate spaces.

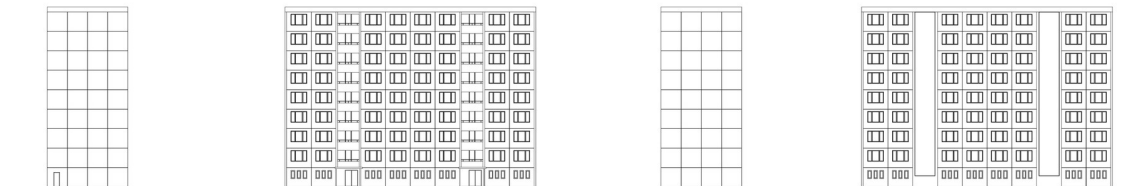


Fig 82. Building facades before the renovation work

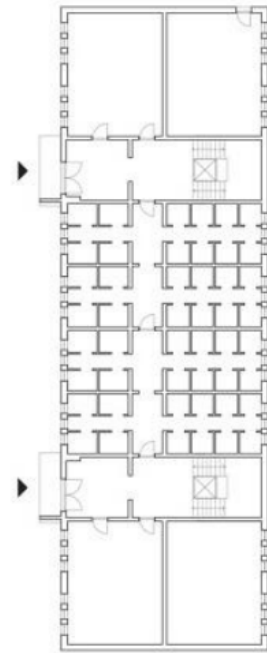


Fig 83. Building after the renovation work

In the original typology of the Panelák, the ground floor was a blind transition area, an intermediate technique consisting of storage rooms and cellars. GutGut identifies this level as the main lever for reconnecting the building to its urban fabric.

Through sawing concrete and structural reinforcement, the architects removed non-load-bearing walls and pierced the structural walls to create an unprecedented porosity. This spatial process transforms a labyrinth of dark cells into an open and traversing volume.

By installing a café, offices and service areas (reception, accessible bike shed), the project breaks the idea of the residential block. The base becomes a third place. This transparency, materialized by large windows any height, abolishes the border between the public domain and the private sphere. The building is no longer just a place to host; it actively participates in the life of the city, transforming the foot of the building into a social meeting space.



Fig 84. Facades of the building after the renovation work

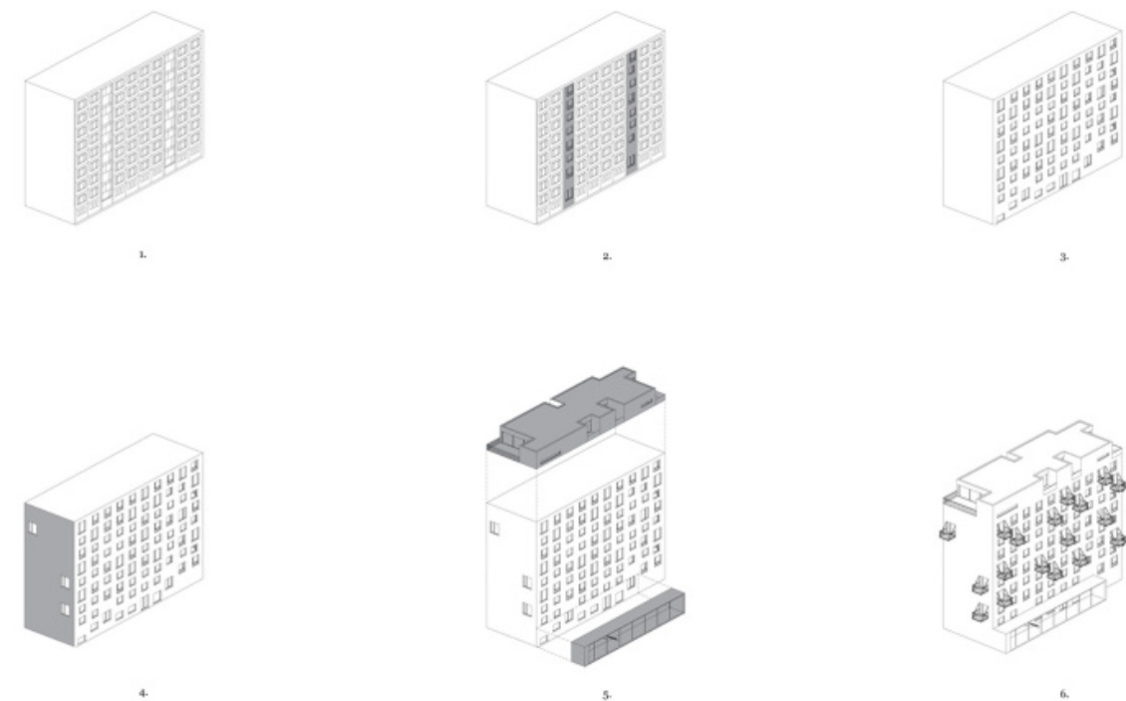


Fig 85. The stages of the work carried out

Gutgut proposes a revaluation of these spaces not by monumentalization, but by qualitative re-qualification: improvement of natural light, clarification of the courses, occasional enlargement of the levels, possibility of complementary uses. This intervention transforms circulations into relational spaces.

These devices participate in the construction of an «intermediate space», neither totally public nor strictly private. They are places of weak contact, conducive to informal daily interactions.

Thus, the common space ceases to be a residue of the constructive system and becomes a social infrastructure. Unlike many renovation operations focused on the thermal envelope or the architectural image, the Gutgut project favors an internal and structurally measured transformation. This approach reveals a detailed understanding of the economic and technical constraints specific to prefabricated assemblies.

In this proposal, the architects chose to sacrifice narrow individual storage spaces present on the ground floor in favor of more open common areas.

Fig 86. Ground floor plan at the origin VS New

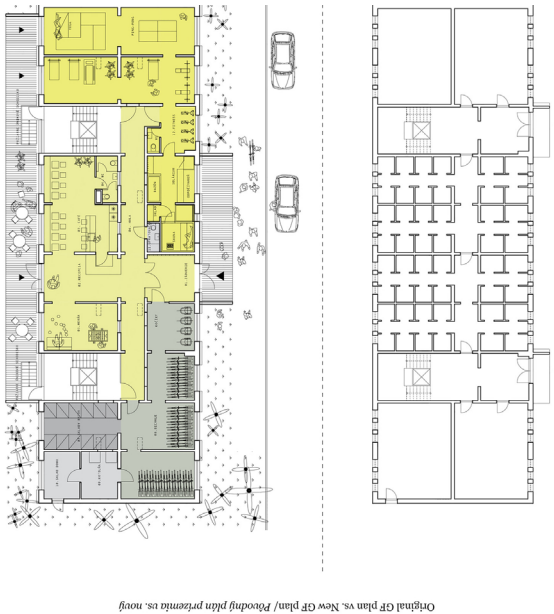


Fig 87. Original floor plan VS New floor plans



The transformations reducing the number of apartments

The selection of reference projects presented in this TFE is based on a selection that meets three criteria that echo the issue of Klaipėda. All selected projects concern ensembles built during the 1970s, a pivotal period when the heavy industrialization of housing reached its paroxysm of standardization. The original building shares with the southern districts of Klaipėda an identical morphology: reinforced concrete structures, a rigid constructive framework and modular repetitiveness. By isolating this specific period, my approach aims to demonstrate that the architectural solutions proposed are directly transferable to Soviet construction systems, despite different initial political contexts.

My approach favors projects that go beyond simple thermal renovation (often limited to a new facade cladding).

Faced with the obsolescence of housing cells initially designed for maximum standardization, many architects make the radical choice of reducing the number of units to favor spatial quality, typological diversity and adaptability to contemporary lifestyles.

In Halle-Neustadt (Germany), the intervention of Stefan Forster Architekten illustrates this intention. By moving from 125 types of identical apartments to 81 diversified units, the architect breaks the monotony of the long and repetitive facade. The method used is based on partial deconstruction and horizontal or vertical merging of cells. By removing floors or building sections, we create duplex apartments and large terraces. The goal is to transform an anonymous bar into a series of overlapping «urban villas». Forster explains that the reduction of the number of housing units is an economic and social necessity: it is a matter of retaining the middle classes by offering areas comparable to suburban housing, but within the urban fabric formed

In Winterthur, Switzerland, the project by Burkhalter Sumi Architekten illustrates how a reduction in the number of dwellings – from 48 to 33 units – can offer a spatial generosity that was originally absent. By merging small apartments, the architects created corner housing benefiting from a double exposure and loggias. The goal is to correct the obsolescence of the 1960s: narrow kitchens and bathrooms are enlarged, even if it means reducing the total number of apartments.

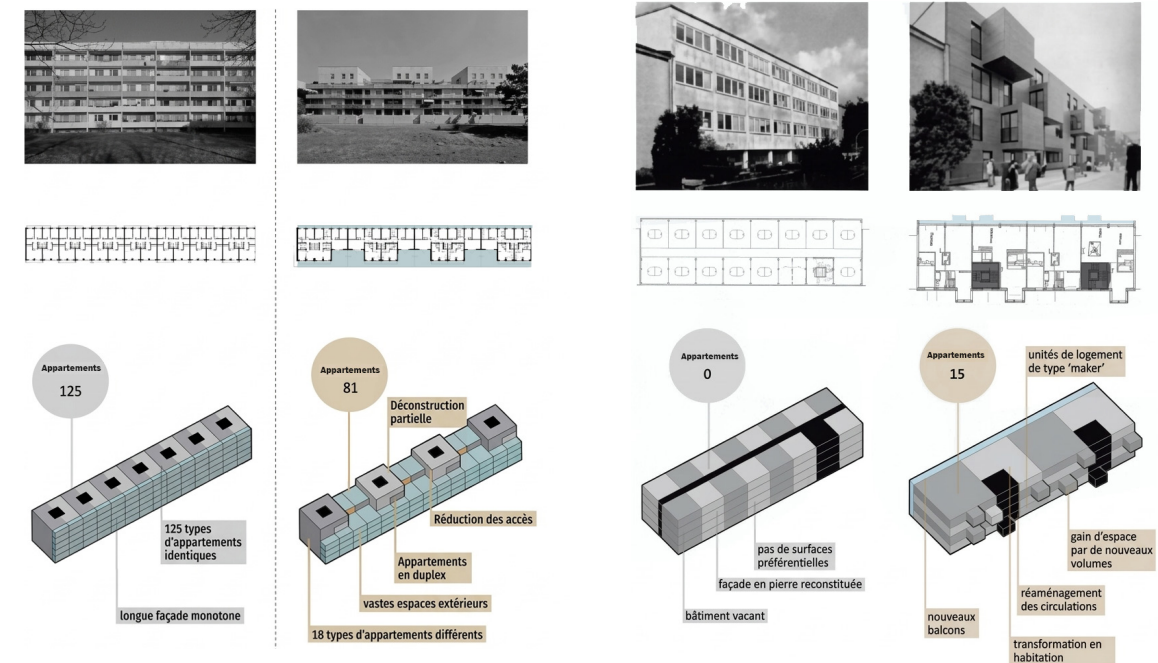
Other projects, such as those of Blauraum Architekten in Golfe-Persique (Hamburg) and GutGut Architekten in Rimavská Sobota (Slovakia), explore the structural transformation of buildings. In Golfe-Persique, a vacant building has been completely reorganized to integrate workshop housing, thus promoting mixed use. In Slovakia, GutGut reduced the number of housing units from 72 to 42 to insert duplexes and add balconies. The idea is to «unfreeze» the built mass by creating visual and physical openings.

These examples show that the quality of life in collective housing no longer depends on the number of units produced, but on the ability of architecture to offer flexible and malleable spaces.

Fig 88. Projects that have chosen to reduce the number of apartments

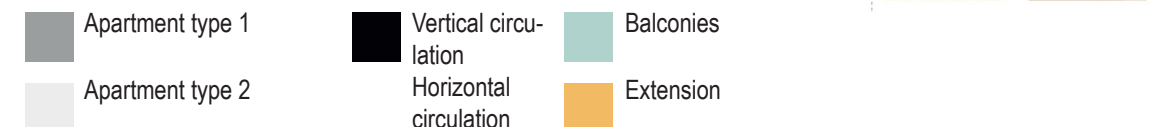
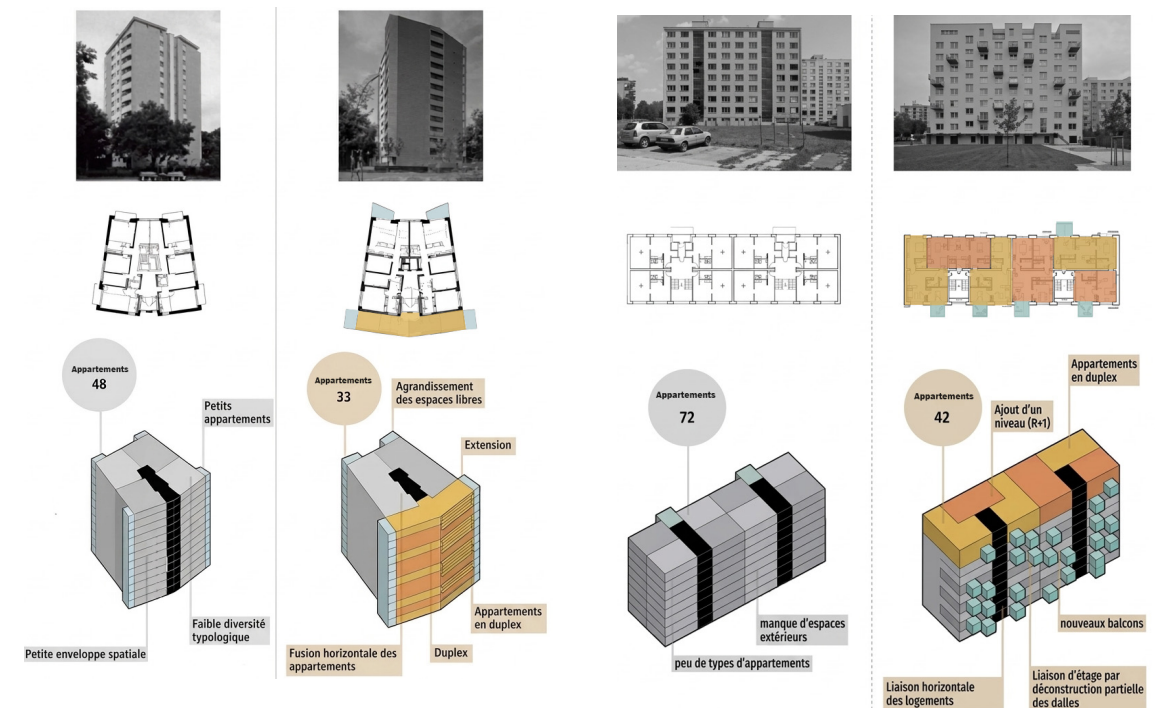
Halle-Neustadt (Série P2, Allemagne), Stefan Forster Architekten

Steilshoop, Hambourg (Allemagne), Blauraum Architekten



Winterthur (Suisse), Burkhalter Sumi Architekten

Krmenka Sobota (Slovaquie), GutGut architekts



THE TRANSFORMATIONS KEEPING THE INITIAL DENSITY

In the contemporary debate on neighborhood regeneration of the 1970s, one approach stands out for its pragmatism and generosity: that of preserving the initial number of apartments while acting by extension. This method, illustrated by figures such as Lacaton & Vassal or Stefan Forster, is based on the idea that collective housing should no longer be a closed cell, but rather a space capable of expanding outwards. As summarized by Anne Lacaton and Jean-Philippe Vassal: «*Never demolish, never subtract or replace, but always add, transform and use*»⁵⁰. The intention here is to requalify the habitat by providing light, space and energy performance, without altering the social balance of the building.

The Grand Parc project in Bordeaux, led by Lacaton & Vassal, has become the global reference for this approach. Retaining the original 530 dwellings, the architects added winter gardens and balconies 3.80 meters deep thanks to a prefabricated light structure. The intention is twofold: to improve thermal performance through a buffer zone and to offer an unprogrammed «freedom space». In Berlin (Bernauer Straße), the agency Canals Moneo adopts a similar logic by extending the volume with new modules that increase the surface area of the rooms. These architects consider that the apartment of the 1970s is a «capable structure» that only needs to be expanded to meet current standards of comfort.

Another modality of extension is to act vertically or by adding new accesses. In Frankfurt (Lyoner Straße), Stefan Forster Architekten retains the 40 apartments of the original tower but transforms the building with an extension of the base and the creation of a «landscape roof» by raising it. The intention here is to restore an urban identity to a once isolated tower. Forster explains that «the rehabilitation must offer a sculptural added value to the building so that it becomes an integral part of the city again». In Hamburg, the Blauroom Bidding agency uses the wooden extension to add two floors of duplex on an existing structure, thus improving the profitability of the operation while keeping the original tenants on the lower floors.

Blauroom's intervention in Hamburg also demonstrates how extension can break the «low typological diversity» without reducing the number of units. By grafting wood volumes on the roof and facade, architects transform simple dwellings into duplex apartments with large open spaces. The intention is to create a «spatial heterogeneity» within a once monotonous bar.

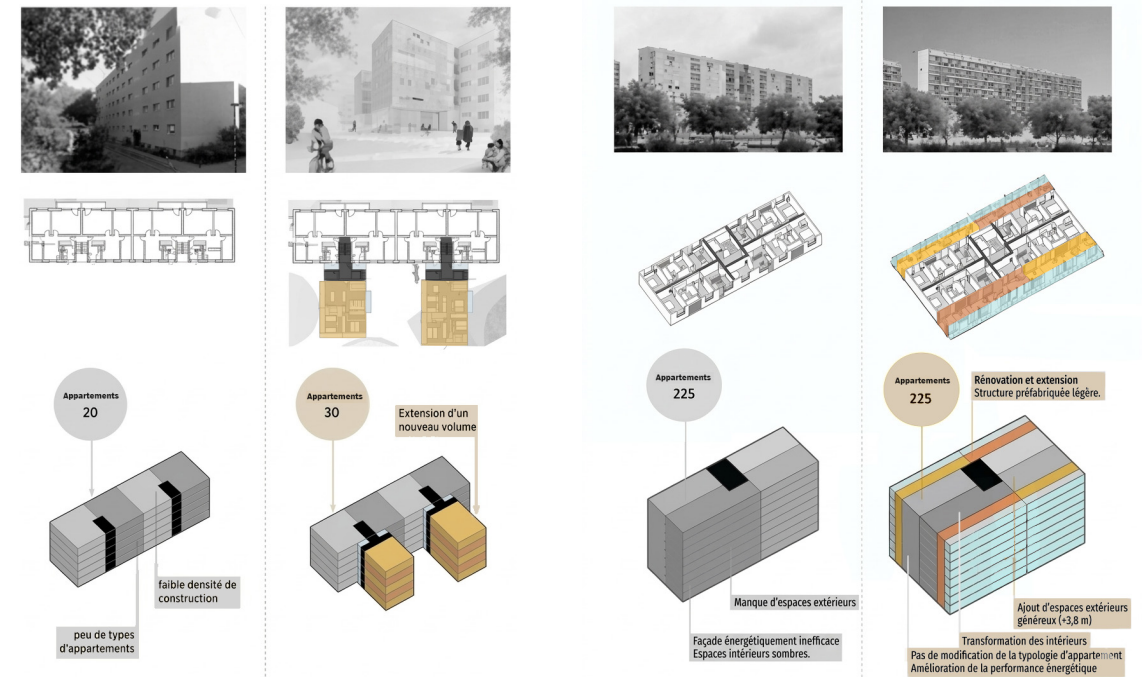
These projects prove that rehabilitation by extension is the most sustainable response to the 1970 neighborhood challenge. By acting through lightweight structures (steel, wood), architects limit the carbon footprint related to demolition and allow residents to stay on site during the work. It is a strategy of architectural «care» where we complement the existing one. As indicated by Frédéric Druot, this approach makes it possible to transform a building considered «energy-intensive and obsolete» into a luxury building, while maintaining an affordable rent for the historic inhabitants.

50. Lacaton, A., & Vassal, J.-P. (2007). *La sauvegarde des grands ensembles*. Paris : Éditions du Linteau, p. 28.

Fig 89. Projects that kept the initial number of apartments

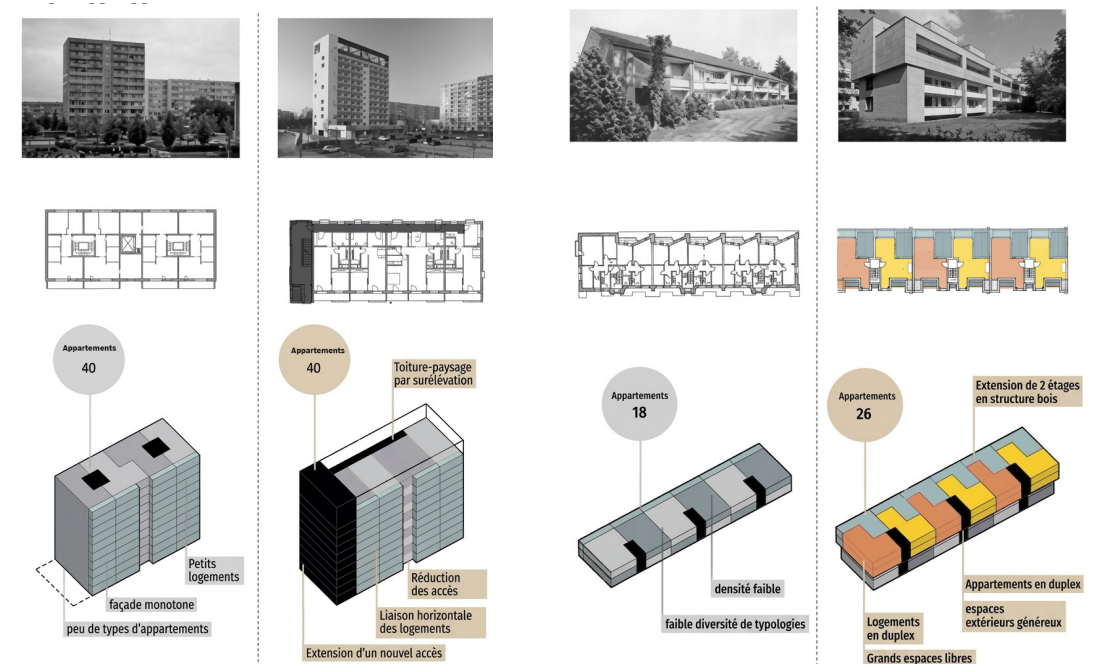
Bernauer Straße, Berlin (Allemagne), Canals moneo

Quartier du Grand Parc, Bordeaux (France), Lacaton & Vassal



Wohnhochhaus Lyoner Straße, Francfort (Allemagne), Stefan Forster Architekten

Wohnsiedlung, Hambourg (Allemagne), Blauroom Architekten



District	Pempininkai	Neringa	Debrecenas	Alksnyne	Zardininkai	Laukininkai	Jurininkai	Banduziai
Typologie Surface : 100ha								
The place of vegetation Surface : 100ha								
Types of buildings								
Total number of buildings	58= 11 (9 floors)+47 (5 floors)	45= 12 (9 floors) + 32 (5 floors)	59 (5 floors)	30=4 (10 floors)+ 26 (5 floors)	45= 12 (9floors) + 33 (5floors)	24= 16 (5 floors)+8 (9 floors)	43= 26 (10 floors)+ 17 (5 floors)	138= 65 (5floors) + 73 (9floors)
Number of buildings renovated	14	15	15	3	4	2	5	8
Style of the already renovated buildings								
Year of construction of the building	1969	1970	1974	1977	1980	1984	1985	1989
Duration of the work	98 months	36 months	35 months	42 months	76 months	5 months	72 months	20 months
Number of floors	9 floors	9 floors	5 floors	10 floors	9 floors	5 floors	5 floors	9 floors
Number of apartments	72 apartments	72 apartments	60 apartments	37 apartments	171 apartments	30 apartments	45 apartments	72 apartments
Living area	3718 m ²	3818 m ²	2073 m ²	2280 m ²	9204 m ²	2073 m ²	3008 m ²	4756 m ²
Residential density	361 log/ha	278 log/ha	354 log/ha	171 log/ha	415 log/ha	106 log/ha	198 log/ha	300 log/ha
Type of housing								
Types of work performed	Thermal/ Facade modernization	Thermal/ Facade modernization	Thermal/ Balcony additions/ Facade modernization	Thermal/ Facade modernization	Thermal/ Glass balconies/ Facade modernization	Thermal/ Facade modernization	Thermal/ Glazed traffic areas	Thermal/ Facade modernization
Common area	Staircase / Balcony / Elevator	Staircase / Balcony / Elevator	Staircase	Stairs/ elevator	Stairs/ elevator	Staircase	Staircase	Staircase / Balcony / Elevator

The atlas highlights the diversity of neighborhood typologies and renovation strategies implemented to modernize Soviet-era housing complexes in the city of Klaipeda, Lithuania.

- The neighborhoods have between 24 and 138 buildings, with varying heights of 5 to 10 floors.
- The number of renovated buildings varies greatly between neighborhoods, ranging from only 2 to 15. The work carried out includes thermal improvement, facade modernization and the addition of balconies as extensions.
- The buildings were built between 1969 and 1989, and the renovations lasted between 5 and 98 months depending on the type of work carried out.
- The number of apartments per building varies, with total living areas ranging from 2,073 m² to more than 9,000 m².
- It fluctuates sharply, from 106 housing units per hectare in some neighborhoods to 415 housing units per hectare in the densest one.
- Some buildings have elevators and balconies, while others only have stairs. From 10 floors, the building accommodates at least 2 elevators.

We see that the buildings were built with a form of standardization and have been multiplied to create very different neighborhoods. The characteristics of these constructions are clearly highlighted with the calculation of residential density, which shows the communist policy and the use of prefabricated elements for rapid construction. as well as the large area of vegetation that had created a more pleasant and colorful atmosphere.

Ultimately, following the analysis of all these references, I was able to extract 4 different levers to allow the regeneration of the «Varpai» micro-district in Klaipėda, and more broadly from modernist ensembles. This is based on a comprehensive approach that takes into account both the urban organization and the daily life of the inhabitants. The main challenge is to make these neighborhoods more pleasant to live in, by going beyond the limits of the initial model, which is often marked by empty spaces that are little used and a low quality of use.

For this, it is essential to rethink the parking space, which often occupies a large part of the floors. By reorganizing and limiting it, we can free up space to create more qualitative places: green spaces, pedestrian paths or meeting areas. These transformations make it possible to give continuity to the landscape and to make outdoor spaces more accessible and more suitable for the inhabitants.

This reconquest of public space also opens up the possibility of introducing new uses. For example, the addition of small buildings, shops on the ground floor or local amenities can help to liven up the neighborhood. This makes it possible to move from a simple residential area to a real place of life, more dynamic and more inclusive, especially for people with disabilities.

Finally, this evolution concerns not only outdoor spaces, but also the housing itself. Today, renovation only concerns the facades in order to better insulate the buildings, but this does not improve the basic problem that lies within the actual spaces. It is therefore necessary to adapt typologies, rethink the layout of rooms, offer winter gardens, and encourage practices such as shared gardens or local areas that strengthen the link between residents and their environment. Gradually, these formerly anonymous spaces become invested and lived places.

Thus, by moving from a large-scale organization to a more attentive approach to uses and inhabitants, the micro-district can regain a more human dimension and become a true place of collective life again.

«We want to return to land planning, renovation, improvement, humanization, adding space and functions, as well as the introduction of certain functional structures that were missing from the initial design and that could help us humanize this entire environment.

The idea is that people who live there do not come only to sleep, but that they have the opportunity to communicate and discover common interests. We think that small commercial activities could be set up there—which is not the case currently—so that people with disabilities can also integrate into this life; apartments must be made available for them on the ground floors. of the roadway, build small extensions of low height and find ways for individual gardens or flower beds to appear on the territory.

The goal is that all of the ground should no longer be «to anyone» — which is characteristic of Soviet thought—but that it should belong to these people, so that they start living as a true community.» Algimantas Nasvytis.⁵¹

51. Maciuika, J. V., & Drėmaitė, M. (Eds.). (2020). *Lietuvos architektai pasakoja apie sovietmeį: 1992 m. įrašai* [Lithuanian architects assess the Soviet era: The 1992 oral history tapes]. Vilnius, Lituanie: LAPAS. (p.84).

The architect Algimantas Nasvytis, since 1992, 20 years after the beginning of the construction of micro-districts, questions the administrative and rigid planning and proposes to move to a community management, on a human scale, where public space becomes again the common good of residents.

PART III
Urban Strategy: The quarter-hour district

1. Lever 1: Qualify the soils

STRUCTURING AND PRIORITIZATION OF PUBLIC SPACES

By analyzing the overall structure of Klaipėda⁵², we can see that the city now functions as a single-center system. All flows and activities converge towards a focal point, which imposes long and systematic displacements on the inhabitants. It is this model, which maintains a strong dependence on the private car and the inactivity of micro-districts. Then comes a contrast between a dynamic center and inanimate dormitory areas.

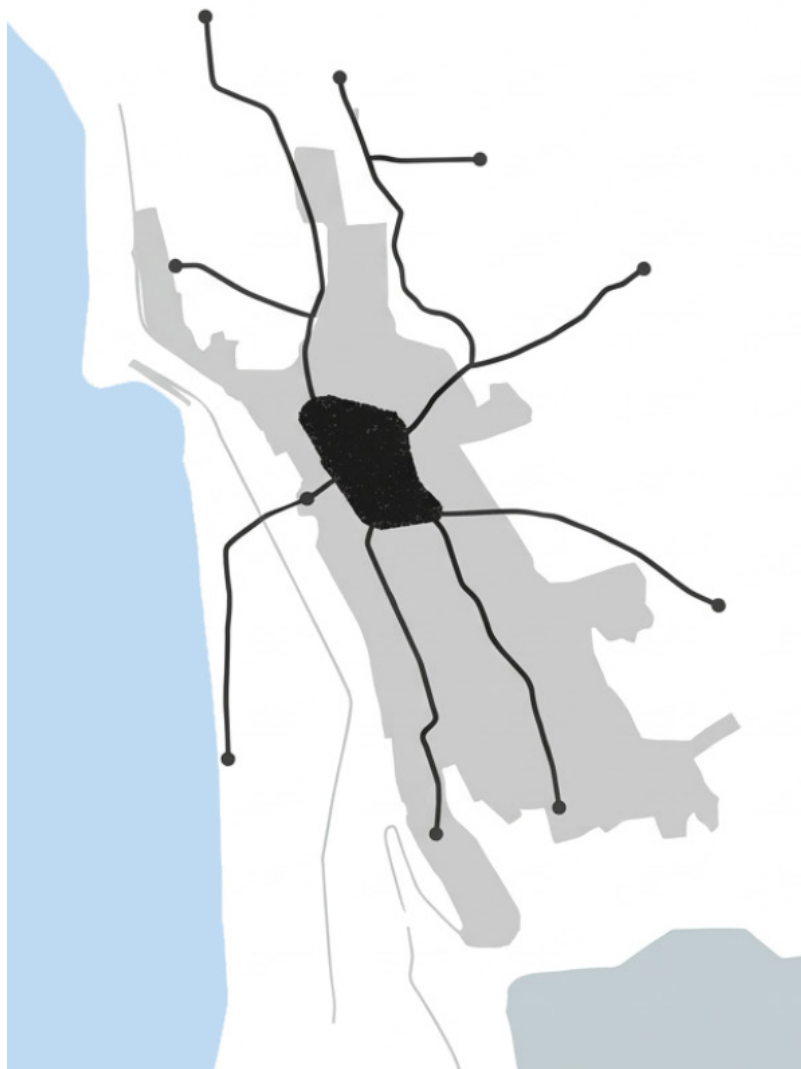


Fig 90. Existing situation: The city and its downtown area

52. The analysis included in the section describing the findings p 86-89.

For me, rehabilitating Klaipėda does not only mean renovating buildings, it is above all rethinking the city so that it is closer to its inhabitants. In this work, I propose to break with this pattern and switch to a «polycentric city». Instead of concentrating everything in the city center, I propose to activate poles of life within each micro-district. The idea is to transform these areas, now purely residential and somewhat neglected, into dynamic neighborhoods where you can find services, shops and workplaces in the immediate vicinity.

By thus reducing the distances to be covered daily, the need for cars decreases; this means mechanically fewer cars on the road and, by extension, less pressure on public space. By creating these living «micro-centers», I transform each neighborhood into an autonomous and attractive place, allowing to rebalance the flows throughout the urban territory.



Fig 91. Projected situation: The city composed of micro-districts with their center

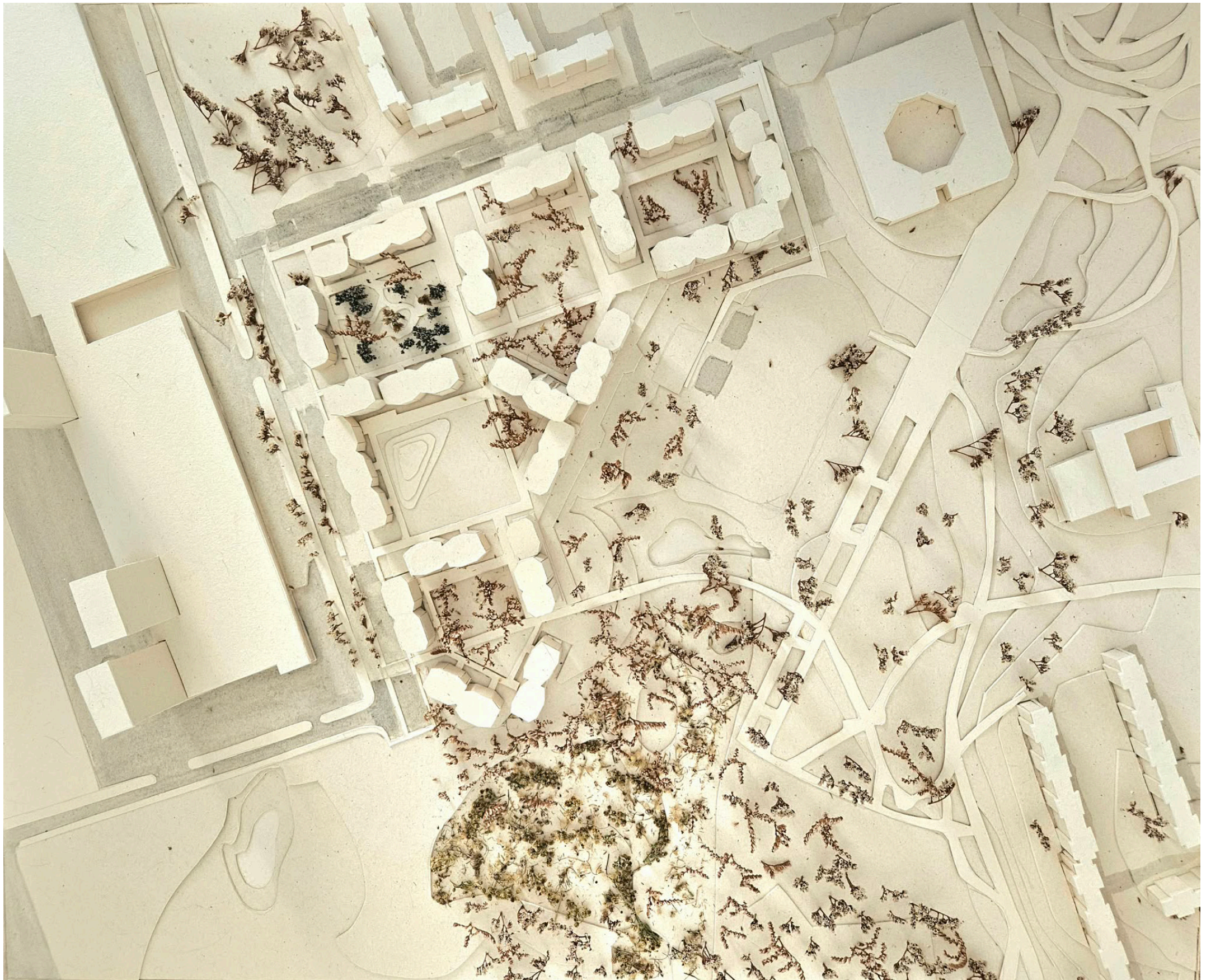


Fig 92. Current situation of the Varpai district



Fig 93. The ground plan of the redeveloped district





By analyzing the district of Varpai, we realize that parking management has become the major problem of this space, which is also the case in all micro-neighborhoods. Looking at the plan, we immediately see that parking lots have invaded the very heart of residential blocks. Instead of having green spaces or living areas below the buildings, it is the cars that occupy almost all the space.

This situation creates a real cut, both physical and visual. Concretely, these paved surfaces form barriers that prevent residents from moving freely throughout the district. Visually, the impact is just as strong since the landscape is dominated by asphalt and the accumulation of vehicles, which spoil the quality of life for residents. The district is no longer seen as a single unit, but as a set of separate courtyards, creating a sense of belonging to a courtyard. From my own experience and the inhabitants, this is usually what makes the inhabitants feel like entering private property, while it remains public spaces. For me, it is obvious that the rehabilitation of Varpai must go through a profound questioning of this place granted to the car.



Fig 94. Dark gray parking spaces dominate the interior courtyards

Faced with this observation, my project proposal is based on a simple but radical idea: to free the internal courts. To achieve this, I chose to restructure the parking lot by placing it exclusively on the outer edges of the block, along the main roads.

According to the survey of residents, 47% replied that it would not be disturbing to have parking spaces further away if the surroundings were better landscaped. To avoid degrading the landscape around the district, I imagined these new parking lots as green spaces: the use of permeable coatings and tree planting allow these parking zones to be integrated into the urban landscape rather than being subjected to them as expanses of bitumen.

This strategy allows me to completely decompartmentalize the island cores. By removing the cars that now occupy the base of buildings, I am creating spaces devoid of any automobile constraints for a landscape requalification. These indoor courtyards then become breathing spaces. By moving and revegetating the parking lot on the outskirts, I am not only trying to solve a logistical problem, but above all to recreate a sense of belonging in the neighborhood, by making nature and social encounters the pillars of housing.



Fig 95. Green parking spaces moved along traffic routes

Fig 96. The transformation of the street «Lubekio»



BEFORE

Photo taken by Sandra LUBYTE



AFTER

Projection made by Sandra LUBYTE using the 3D model on Rhino 7 and Lumion

Fig 97. The transformation of the street «Varpu»



BEFORE

Photo taken by Sandra LUBYTE



AFTER

Projection made by Sandra LUBYTE using the 3D model on Rhino 7 and Lumion

The micro-district of Varpai is part of the continuation of a 4 km long green corridor. This succession of parks allows schools and sports facilities to be grouped together in the centre. We can distinguish 4 areas that differ in their function: a natural park with lakes, a mountain, a quiet wooded park, and a park with games that can host events. Having various functions in different places creates a flow based on activities. For the urban strategy, the idea would be to use the same principle to generate flows within the neighborhood itself.

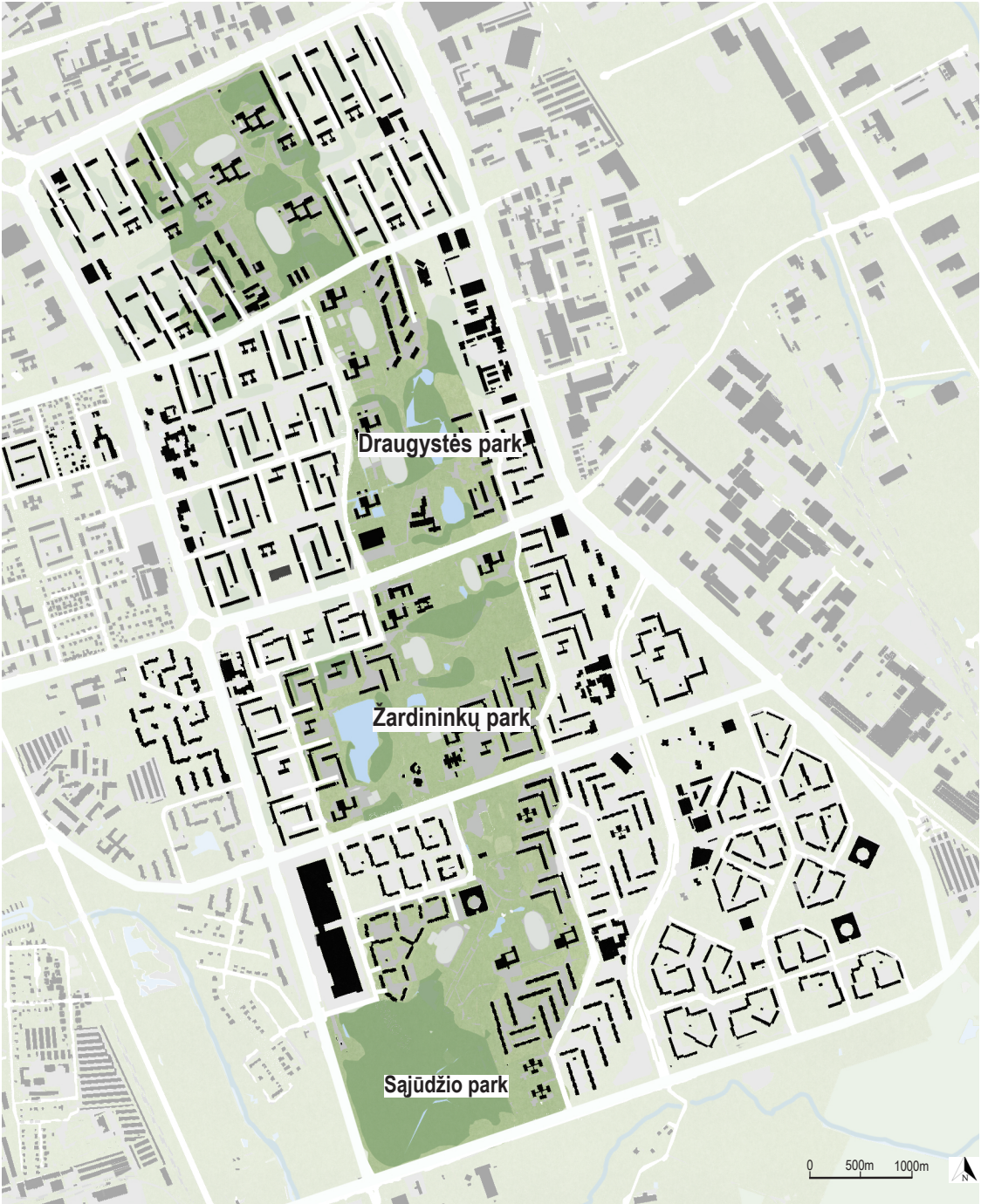


Fig 98. The current organization of functions in micro-district in the residential area of Klaipėda, 2025

Žardininkų park



©Arvidz Photography, 2025

Draugystės park



©Rasa Miuller, 2020

Sajūdžio park



©<https://www.atviraklaipeda.lt/>



©<https://www.klaipeda.lt/>

The second big step of the project is to requalify the green spaces freed from cars. If one looks at the current plan of Varpai, one might believe, at first glance, that the neighborhood is privileged with its vast expanses of greenery. These green spaces, far from being neat gardens or welcoming parks, have become residual spaces. These are large undifferentiated grassy plains, located between the bars of buildings, which are neither really public nor truly private, and of which no one seems to take proper care.

This abandonment can also be read in the poverty of uses. There are a few playgrounds, paths laid out on the ground by the footsteps of the inhabitants, for lack of coherent pedestrian connections. The problem is that these spaces no longer meet the needs of modern life. They are devoid of any function, which makes them unattractive.

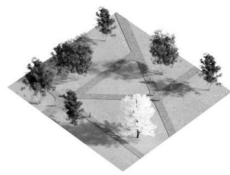


Fig 99. Dark gray parking spaces dominate the interior courtyards

My proposal reverses this logic by giving back a precise function to each inner courtyard. By freeing these 5 heart islands from the automotive footprint, I am creating a network of qualified spaces with a quiet area with a wooded path, an activity zone shared with a playground, tree-lined gardens, and collective vegetable gardens. These functions also allow a new, more streamlined organization of pedestrian paths.

The heart of my intervention also lies in the new planted promenade, a real backbone that connects the district to the Sajūdžio park and its new lake. By designing this walk as a series of terraced extensions that overlook the park and sports equipment, I create a direct visual and physical link between home and large community facilities.



Fig 100. The green parking spaces moved along the traffic routes



The project aims to strengthen the links between housing and outdoor spaces through an open and permeable architecture. The ground floors, freed from parking lots, are redeveloped into shared gardens or common areas, while vegetation structures pedestrian paths and guide residents to the different spaces.

During the creation of parking lots and green spaces, the excavated land is recovered and modeled to form an artificial mount intended for a playground. This relief, inspired by the principles of artificial topography, addresses several issues and breaks the monotony of the flat terrain characteristic of Soviet micro-districts, introducing a spatial variety that stimulates uses. At this point, children can gather away from car traffic while allowing natural surveillance from the surrounding homes.



Here, the section illustrates the shared gardens that will be found in two different places, which transform underused outdoor spaces into dynamic places of life and local production. By fitting between buildings, these gardens create a spatial and visual continuity between housing and cultivable areas, while promoting social interactions. They become meeting places, promoting intergenerational and intercultural exchanges, while serving as an educational tool through collective workshops or local initiatives in collaboration with schools and nurseries nearby. The planting of trees and structuring plants sets the pace, provides shade and freshness, and breaks with minerality.

Fig 101. Sections showing an example of shared gardens and a playground hill sheltered from cars, 1/200

Fig 102. The transformation of the surroundings of buildings



BEFORE

Photo taken by Sandra LUBYTE



AFTER

Projection made by Sandra LUBYTE using the 3D model on Rhino 7 and Lumion

Fig 103. The transformation of a courtyard into a playground



BEFORE

Photo taken by Sandra LUBYTE



AFTER

Projection made by Sandra LUBYTE using the 3D model on Rhino 7 and Lumion

2. Lever 2: Create a functional mix

Once the public spaces had been redesigned, with the aim of revitalizing the neighborhood, I turned to adding functional diversity. For this project, I thought of a strategic location for commercial spaces, offices, cafes, and workshops, a choice that directly reflects the expectations expressed by residents in the survey conducted. This project aims to break with the rigid monofunctionality inherited from the Soviet era by developing these mixed activities along the main traffic routes and on the edge of the Sajūdžio park. This makes it possible to separate the flows between residents and «outsiders» to concentrate them mainly on the outskirts of buildings, leaving the interior courtyards more «private» for the inhabitants. By creating these new poles of life, my goal is to transform spaces of simple transit into dynamic spaces that reflect the real needs of the community.

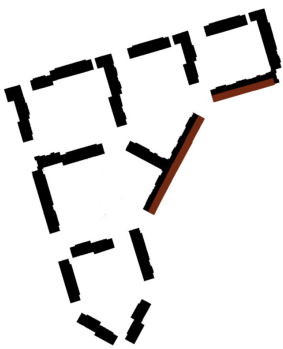
I propose to introduce local services and workspaces in the very heart of the neighbourhood, with a view to reducing dependence on cars and offering residents the opportunity to work, consume or relax within walking distance from their homes. This indeed takes up the idea of «the city of the quarter of an hour»⁵⁴. The development of a planted promenade bordered by cafés and terraces on the edge of the park to create an essential «active border», a living interface that enhances the landscape and extends the social use of this green space. Through this shift to an assumed urban mix, I wish to offer the informal meeting places that were historically missing in these micro-neighborhoods, while instilling a new local economic dynamic. By integrating these functions as closely as possible to everyday life, I propose to restore a human scale to housing estates, transforming isolated dormitory areas into a dynamic urban organism, autonomous and sustainably connected to its environment.

Installed on the ground floor, these new spaces play an important economic role. Indeed, since independence, residents have been able to buy the apartments and therefore the buildings belong to them. By renting out these spaces, residents could raise additional funds for a complete renovation of the building.

54. Concept theorized by the researcher Carlos Moreno, the «city of a quarter of an hour» refers to a model of urban planning where each inhabitant can access his essential needs (work, shelter, feed, care, educate, thrive) in less than fifteen minutes on foot or by bike from home.



Fig 104. The establishment of new activity areas along traffic routes at gable level and along the planted promenade in connection with the Sajūdžio park.



Along the planted promenade, offices, coworking spaces, retail areas, a café and a library are set up. These functions are located on the ground floor of the buildings, which are extended by 3 m along the frame of the existing structure. In the current buildings, the ground floor has a difference of 1.40m with the outside floor. Here, the floor of the shops has just aligned with the outside floor, thus offering a ceiling height of 3.5m. There are therefore different ground levels within the building, adapting to new uses.

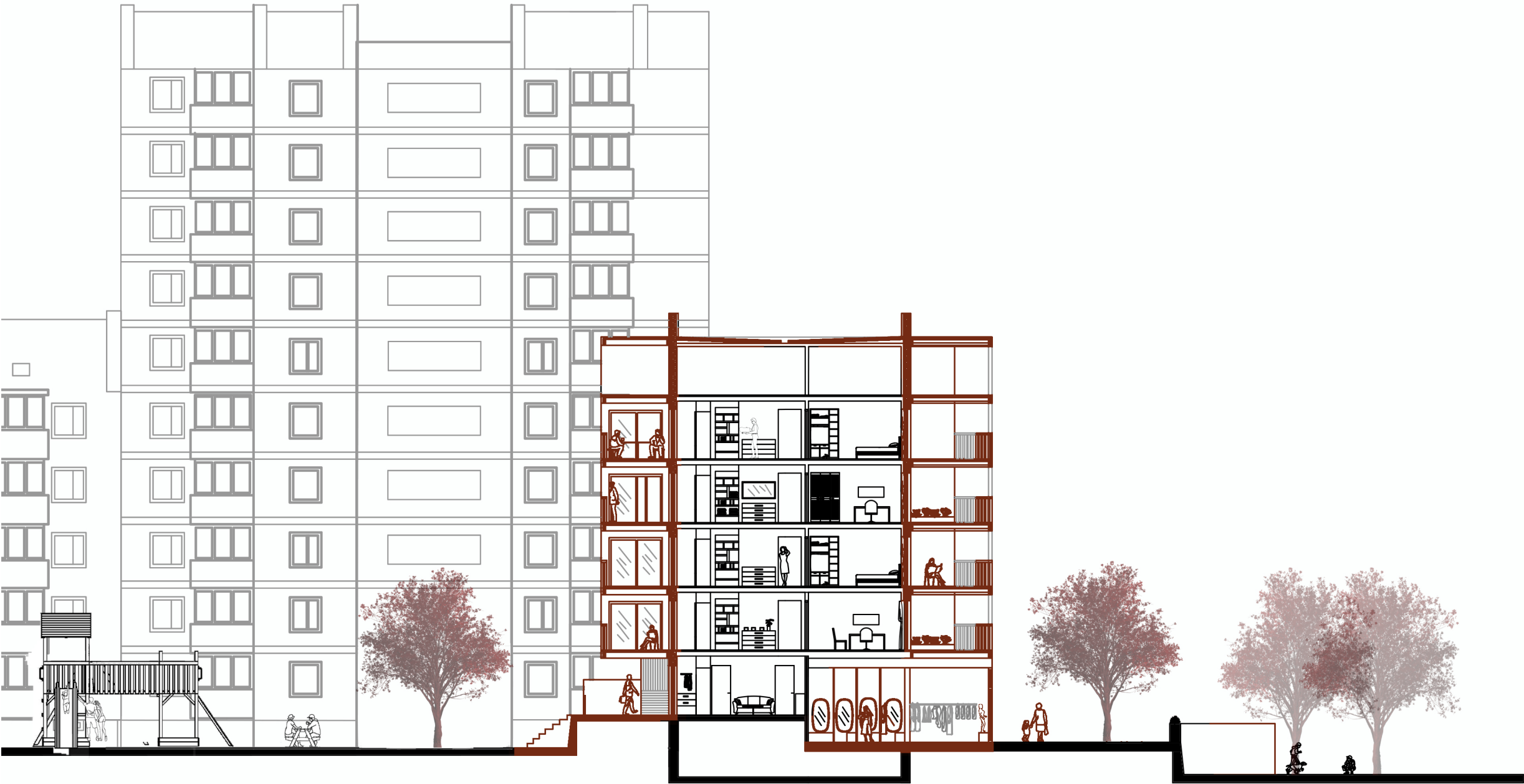
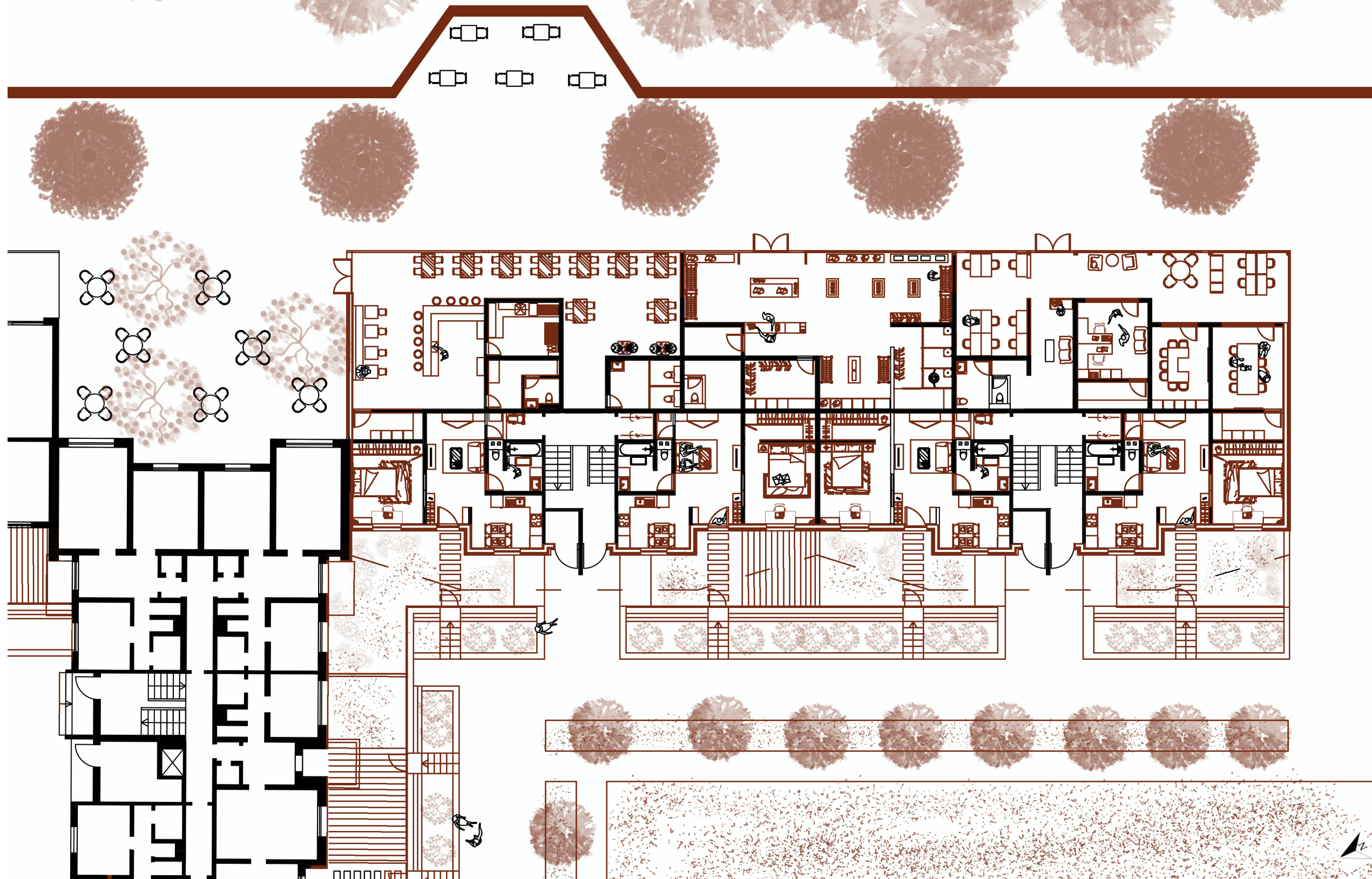


Fig 105. The differences in ground level for the separation between public (right) and private (left). 1/200

Fig 106. The ground floor plan 1/200



During the research, I also imagined possibilities with an extension at the sprockets, along the traffic axes of Varpu Street. An additional volume could accommodate local commercial premises on the ground floor and upper floors, common areas for residents (shared kitchen, shared living room, meeting room, games room). This extension will require a review of the traffic zones on the floors of the building, in order to allow access from inside the shared spaces. One of the possibilities explored was to make the apartments through by replacing the stairs and outdoor traffic areas. This is a strategy that will allow us to keep the initial number of apartments while expanding them. To do this, several extension tests were carried out taking into account the existing structure and its bearing capacity.⁵⁵



Fig 107. The location of commercial premises along Varpai Avenue at the gable ends

55. Model tests are added in the appendices.

ELEVATION
A continuous volume, built over one or two floors.

ELEVATION
A volume built over one or two floors, with private terraces.

ELEVATION
A volume built around the entire perimeter of the building.

VOLUME
Apartments are expanded in one or more directions.

VOLUME
The building is enlarged by a lateral extension.

STAIRWELL
The building entrances are enlarged.

Volume
Expanded apartments

Stairwell enclosure
Enlarged stairwell enclosures, an elevator is installed.

Volume
Extensions/elevations of different sizes and heights are constructed.

- Enlarge the building volume. In this way, residents of the building have the opportunity to enlarge their apartments and create a more diversified apartment typology.
- Install loggias, terraces, and a top floor.
- Enlarge stairwell enclosures by installing elevators and wider corridors to store bicycles and strollers.
- Choose a uniform architectural color solution for the new volumetric elements.

- Exploit the building's roof.
- Develop commercial premises on the ground floor on the street side, and terraces for residents on the courtyard side.
- Cover the stairwell enclosure entrances with an awning, use non-slip and durable materials for the stairs.
- Enlarge windows.
- Enlarge windows.
- When replacing windows or balconies, choose a uniform façade design.

- Different proportions, materials, or colors for the new volumes or elements on the façade.
- Elevations around the entire perimeter of the building.

Fig 108. The possibilities of intervention on the building by addition. Drawings inspired by the work of the PUPA

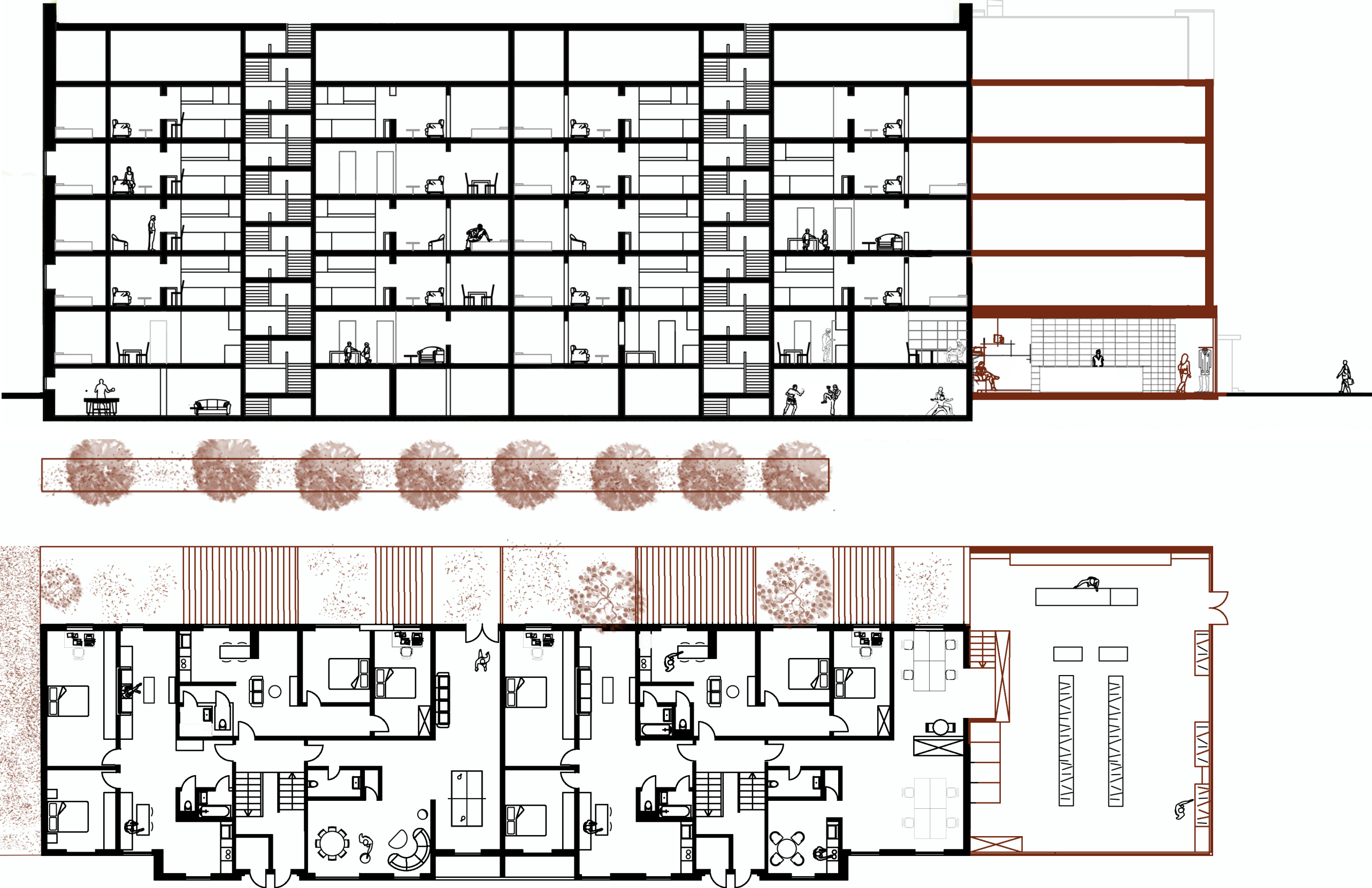


Fig 109. The ground floor plan concerning the extension of the gables for the shops, 1/200

PART IV
Building Strategy:
Extension

1. Lever 3: Add common areas

THE ADDITION OF COMMON SPACES WITHIN THE BUILDING

Beyond the landscaping and the restructuring of the parking lot, I consider that the rehabilitation of Varpai must also involve a transformation of uses within the buildings. For this, I am introducing in my project shared common areas: meeting rooms, kitchens and collective living rooms, game rooms, but also coworking spaces. The goal is to offer residents living spaces that complement their apartments, where it becomes natural to meet, work, or relax.

I particularly emphasize the importance of these meeting rooms. In my vision of the neighborhood, these places are not just amenities, they are the engine of inhabitant management. This is where residents, together with their representative, can decide together the operation of their housing, vote on future work or organize the maintenance of common areas. Today, these exchanges take place informally, at the foot of buildings. This drastically limits participation because as soon as the weather is capricious, which is often the case in this northern city close to the sea, these gatherings become impossible, which naturally excludes the most fragile inhabitants and reduces the representativeness of the decisions. By offering dedicated meeting places, we invite the inhabitants to become fully involved in the life and development of their own place.

These spaces are, in my opinion, essential to recreate a bond. Currently, in Lithuania, this practice is still rare. As the urban planner Justina Muliolyte, from the PUPA agency, told me in our interview⁵⁶, this reluctance is undoubtedly the remnant of a trauma related to the Soviet period, when everything that was «common» was perceived as a constraint or a dispossession. Yet, with the emergence of new generations and the influence of urban models from Western Europe, it becomes obvious to reinvent these spaces of sharing.

This need is all the more crucial for the elderly in the neighborhood, who are in the majority. Today, it is not uncommon to see them go down to sit on a bench at the foot of buildings, watching for an exchange or a presence. This simple bench is often their only social interface. By creating indoor meeting places that are accessible and comfortable, I want to offer them a much more welcoming alternative. These shared spaces are not just spare parts: they are concrete tools to fight against social isolation, promote intergenerational solidarity and transform the feeling of loneliness into a close-knit and lively neighborhood dynamic.

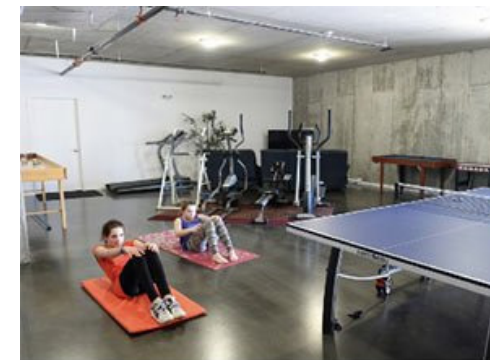
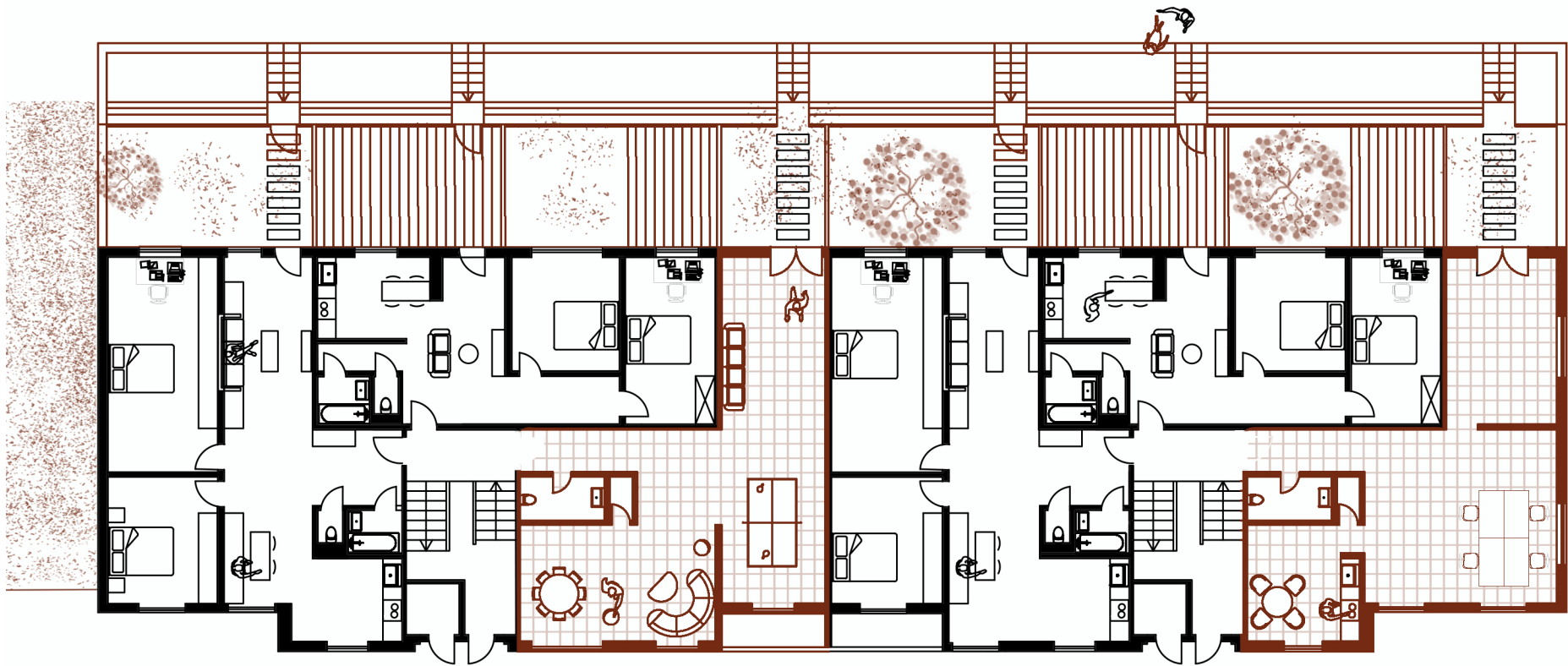
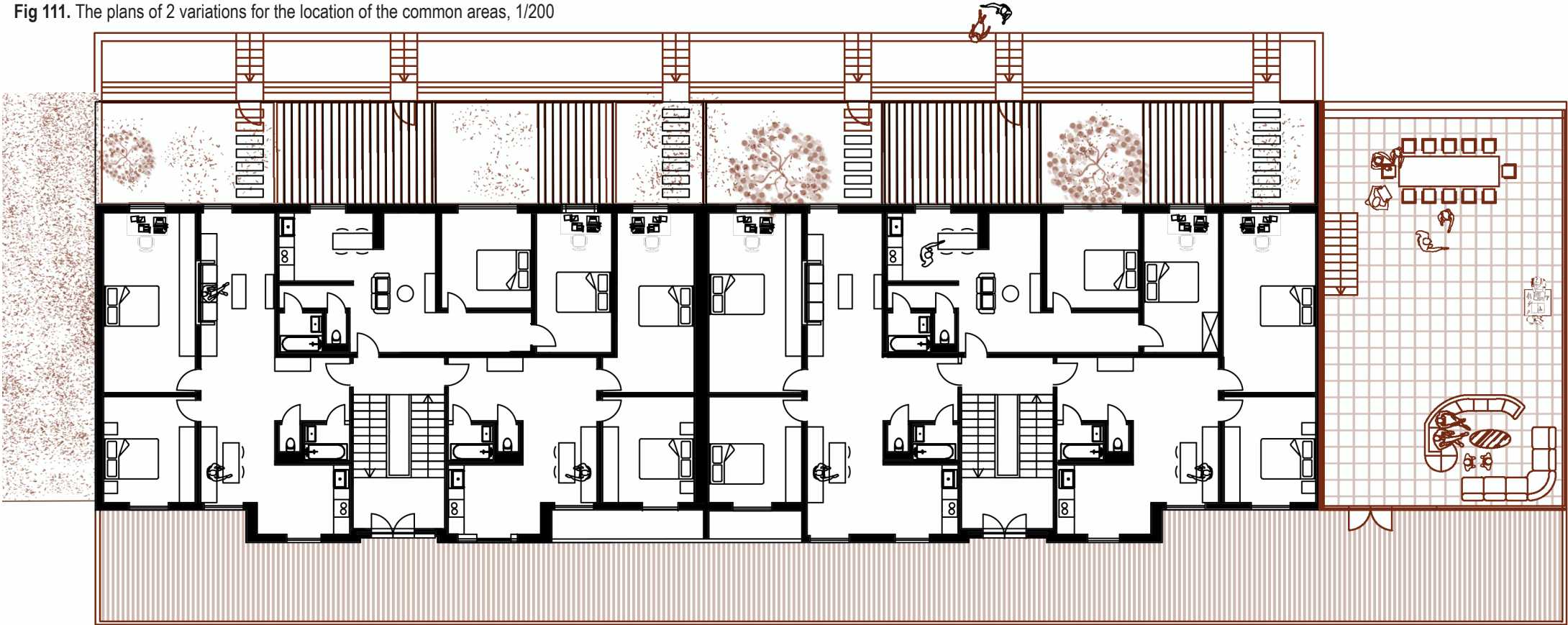


Fig 110. Participatory housing in shared common areas

56. The interview from 30.04.2026 can be found in the annexes.

Fig 111. The plans of 2 variations for the location of the common areas, 1/200



These common areas are also found on the ground floor in connection with the stairwell, which today serves as a meeting place. They are accessible from the outside, have a private garden, and allow various activities. The spaces are modular, which leaves a certain freedom to the inhabitants to appropriate the places and to live them according to their needs.



2. Lever 4: Rethink domestic practices

Beyond the restructuring of the neighborhood and the creation of shared spaces, my project addresses an often neglected aspect: the interior of the housing. Today, renovations in Klaipėda are too often limited to «cosmetic» facades—thermal insulation without any change in background. We are modernizing the facades for thermal issues, thinking of improving the quality of life of the inhabitants, but we do not care about their way of living in these dwellings. For me, it is essential to go further and rethink our domestic practices.

The major difficulty lies in the very rigid load-bearing structure of these buildings, where almost every wall is load-bearing, imposing excessive partitioning. These apartments are often sets of small rooms whose function is blurred, frequently transforming them into passive storage spaces or unused guest rooms. To release these volumes without weakening the frame, I chose to work by extending it externally via a secondary wooden structure.

Concretely, I am adding an extension of 3 meters on the north facade and 2.5 meters on the south facade. This dimension is directly related to the comfort of a kitchen and living room. This simple gesture transforms domestic practices since it goes from a kitchen of 8.9 m² to 17 m², with in addition, a dining room.



Fig 112. The north facade before and after with the photo of the model at 1/50

However, my approach to extension differs depending on the orientation of the building to optimize thermal comfort:

On the north facade, the 3m extension is designed as a light sensor where I try to maximize the contribution of natural light to compensate for darker exposure. The created balconies are found only at the level of the rooms. The kitchens and dining rooms are advanced in order to get as much light as possible.

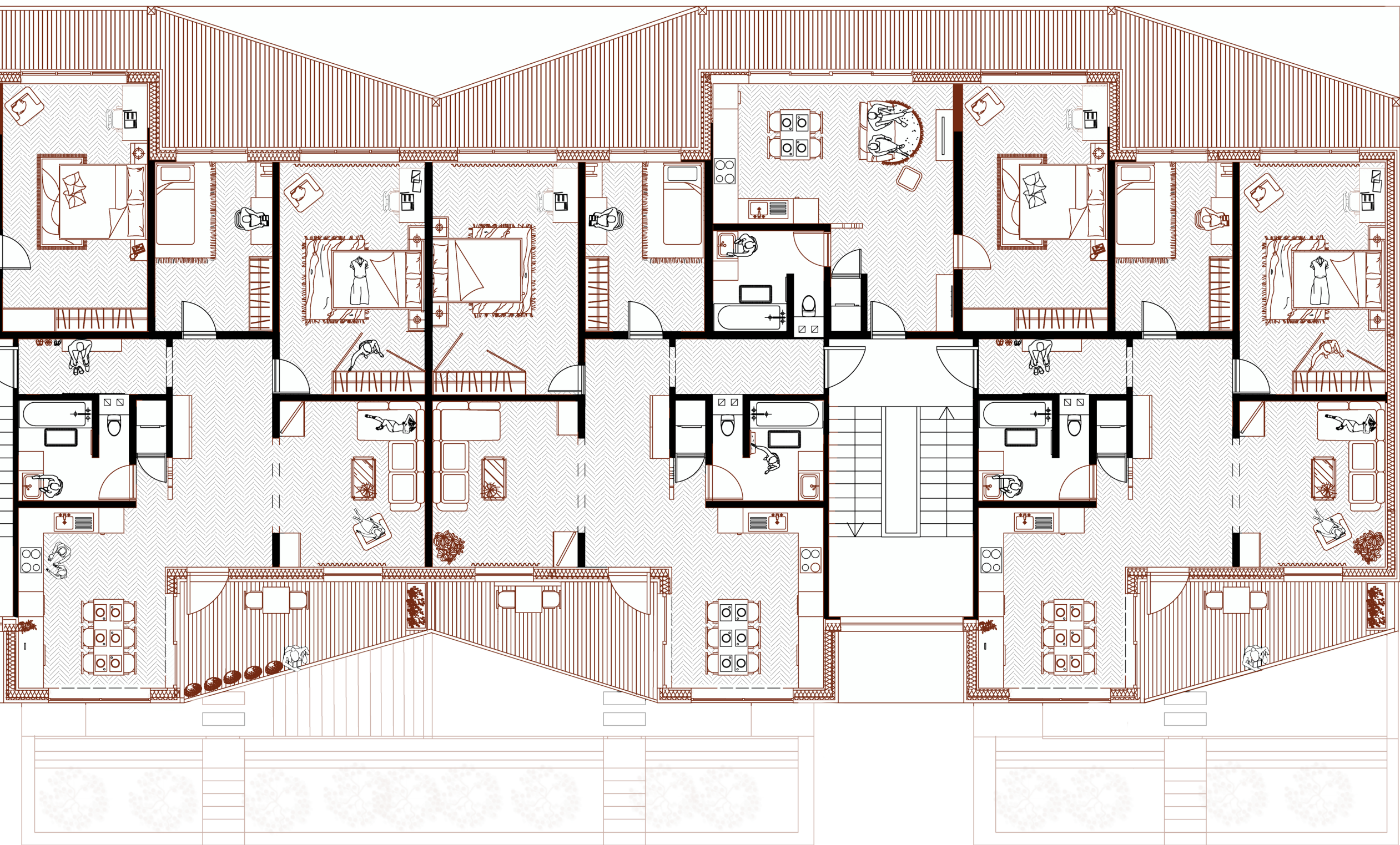
Conversely, on the south facade, the extension incorporates shading devices and balconies along the entire length of the façade. The facades are therefore set back. These elements are essential to protect the rooms from summer overheating while providing a private and pleasant outdoor space for the inhabitants.

By intervening from the outside, I obviously add square meters but I give back to the inhabitants the possibility of adapting their housing to their real needs. It is a way to make the apartment finally functional, bright and open to the rest of the neighborhood, breaking the sense of confinement inherited from the original design.



Fig 113. The south facade before and after with the photo of the model at 1/50

Fig 114. Floor plan of the apartments R+1, 1/100



Another major transformation of my project concerns the apartments on the ground floor. Currently, these dwellings suffer from an ambiguous relationship to outdoor space because the boundaries are blurred. Officially, these buildings are public spaces managed by the city, but in reality, maintenance is shared informally and anarchically between the municipality and the inhabitants themselves.

To clarify this situation, I chose to create private gardens for each apartment on the ground floor. These gardens are located in direct continuity of the interior level of the apartment, which is 1.40 meters above the natural ground. This elevation device is the key to my strategy, which allows me to establish a clear and legible physical boundary. By this simple difference in level, the code is clear to all: everything that is located 1.40 meters high is private, while the rest of the ground remains public.

These gardens, with a generous area of about 28 m², change the status of these apartments. Thanks to this distance and a separation of vegetation consisting of a line of trees, the inhabitants gain privacy since they can see without being seen, while benefiting from a privileged overview over the redesigned inner courtyard.

Access to these private gardens is through a dedicated driveway, also separated by the tree layer, reinforcing this smooth transition between the public domain of the courtyard and the privacy of the housing. By thus materializing the limit, I resolve uncertainty about the maintenance and use of these spaces: I transform a neglected «no man's land» into a true qualitative, secure and appropriate threshold that values both housing and common space.



Fig 115. Photos of the 1/50th model, the addition of private gardens in elevation for the apartments on the ground floor

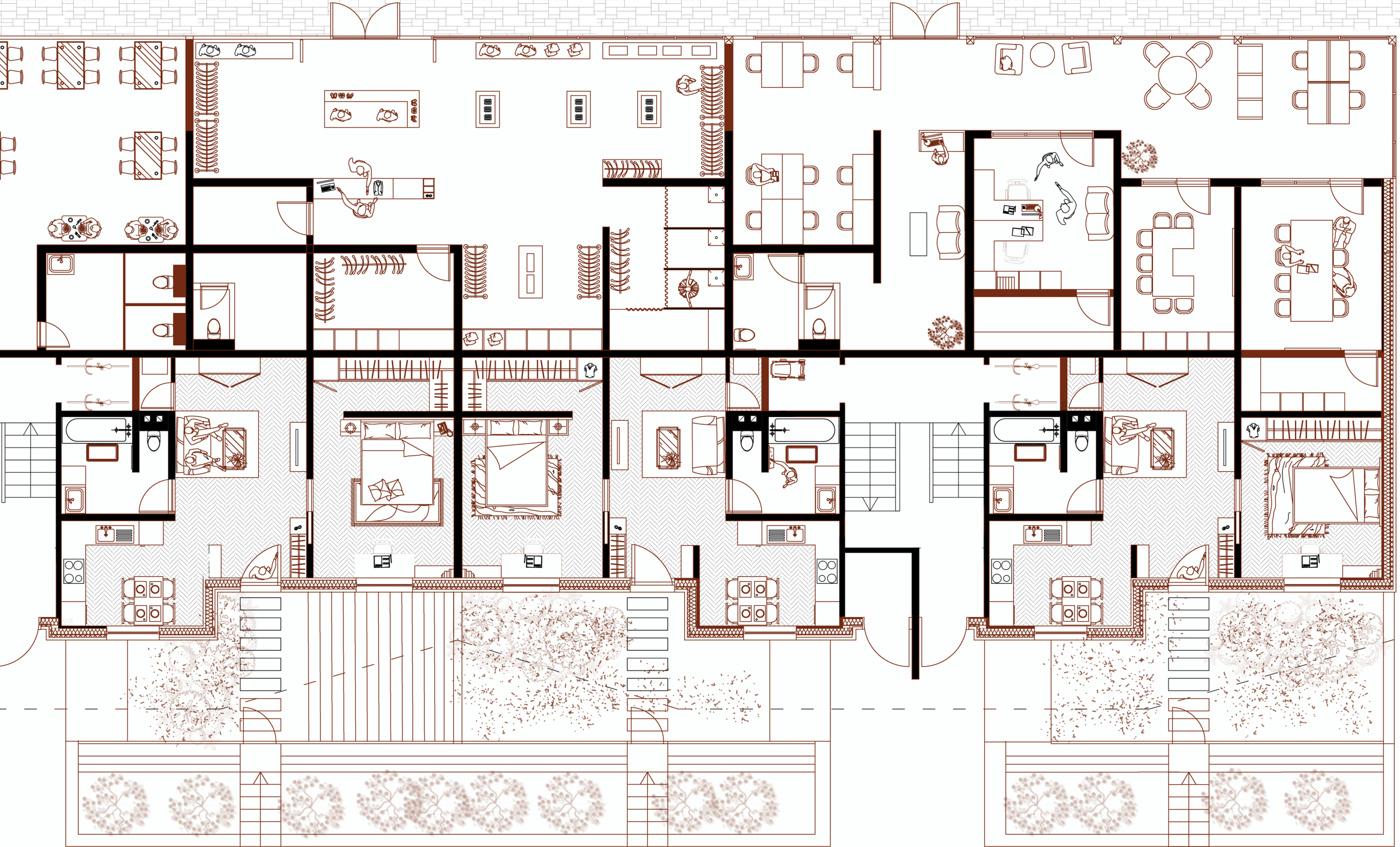


Fig 105. Ground floor plan, 1/100



Fig 117. The relationship between what is private (in height) and public, 1/100





3. Renovation strategy

To transform the thermal envelope of these buildings, I propose a renovation strategy that involves replacing old prefabricated concrete panels with new wooden panels, designed according to an industrial prefabrication logic. This method is not simply to insulate from the outside, but to give a new performance to the very structure of the building.

The composition of these panels is designed to meet current thermal and ecological comfort challenges. Each panel is structured by a robust wood structure, complemented by high-performance bio-based insulation made of wood wool and wood fiber. This combination guarantees not only excellent thermal regulation, but also a healthy hygrometric comfort for the inhabitants.

The exterior cladding, meanwhile, is chosen in a green hue, echoing traditional Lithuanian architecture. This aesthetic choice is essential for me since it is not just a matter of dressing a building, but of strengthening the local identity by reinventing ancestral codes. Drawing inspiration from the traditional methods and architecture of the region, I propose a design that is deeply local, rooted in its landscape and history.

The major innovation of this strategy lies in its assembly method. As I emphasize, drawing on the research of Martynas Marozas in his book *Sovietmečiu statytų daugiabučių kompleksinės transformacijos* (Complex transformations of collective buildings built during the Soviet era) 57, these facades are designed to be assembled in the manner of a puzzle. This modularity is a decisive logistical asset because the panels can be replaced one by one, with disconcerting precision and speed.

Concretely, this method minimizes the impact on residents' lives. Where a classic renovation requires months of noisy and invasive work, the replacement by wood panels allows for a quick intervention: it only takes one day off to give residents the benefit of an entirely new, insulated and efficient facade. This approach makes rehabilitation a «surgical» process and respectful of the inhabitants, allowing to transform the neighborhood in stages without ever paralyzing it.



Fig 118. Renovation of an apartment building with new prefabricated panels, Estonia 2025. © Svetaine.lt
Assembly of the prefabricated panels, 2024. © Lrt.lt

57. Marozas, M. (2020). *Sovietmečiu statytų daugiabučių kompleksinės transformacijos*. Vilnius: VGTU leidykla „Technika“.
«However, according to specialists, it is possible to replace the facade of such buildings by parts. After carrying out the necessary structural studies and implementing temporary compensation measures, the old facade can be dismantled in sections, row by row. Once a row of old panels is removed, the new ones are installed in their place, while simultaneously proceeding with the disassembly of the next row of old panels. With the technologies available today, it would be possible to install a section (staircase) of a collective building in a single day.» (p226).



Fig 119. Photos of traditional Lithuanian architecture, 2025.



Fig 120. Photo of the model at 1/50th with traditional facades.

To materialize these extensions, I chose wood as the main constructive material. This choice is obvious to me, in accordance with the Lithuanian territory which is made up of nearly 35.1% forests⁵⁸. Wood is therefore a local resource, abundant and accessible. Using this material means promoting a regional sector while anchoring my project in a short-circuit approach, which significantly limits the carbon footprint related to the transport of materials.

Beyond this local dimension, the use of wood is a fundamental lever for the overall sustainability of rehabilitation. Unlike heavy, energy-intensive renovation methods, this woody secondary structure is lightweight, reversible, and thermally efficient. It is delicately grafted onto the existing facade, supported by a system of columns that respects the frame and rhythm of the Soviet building. By embracing this original structure while adding a more efficient «skin», I am improving the inertia and thermal comfort of housing in a sustainable way, without erasing the history of the neighborhood.

This dialogue between the concrete of the past and the wood of tomorrow transforms the overall image of Varpai. Wood brings an organic and warm vibration that comes to «break» the mineral rigidity of the facades, while transforming the building into a more sober and environmentally friendly building.



58. Lietuvos Respublikos aplinkos ministerija. (2024). Tarptautinę miškų dieną – naujausia informacija apie Lietuvos miškus [On the occasion of the International Day of Forests – latest information about Lithuanian forests]. Vilnius: Aplinkos ministerija. Accessed on 25.04.2026 at <https://am.lrv.lt/lt/naujienos/tarptautine-misku-diena-naujausia-informacija-apie-lietuvos-miskus/>

Fig 121. Detail of the facade at 1/20

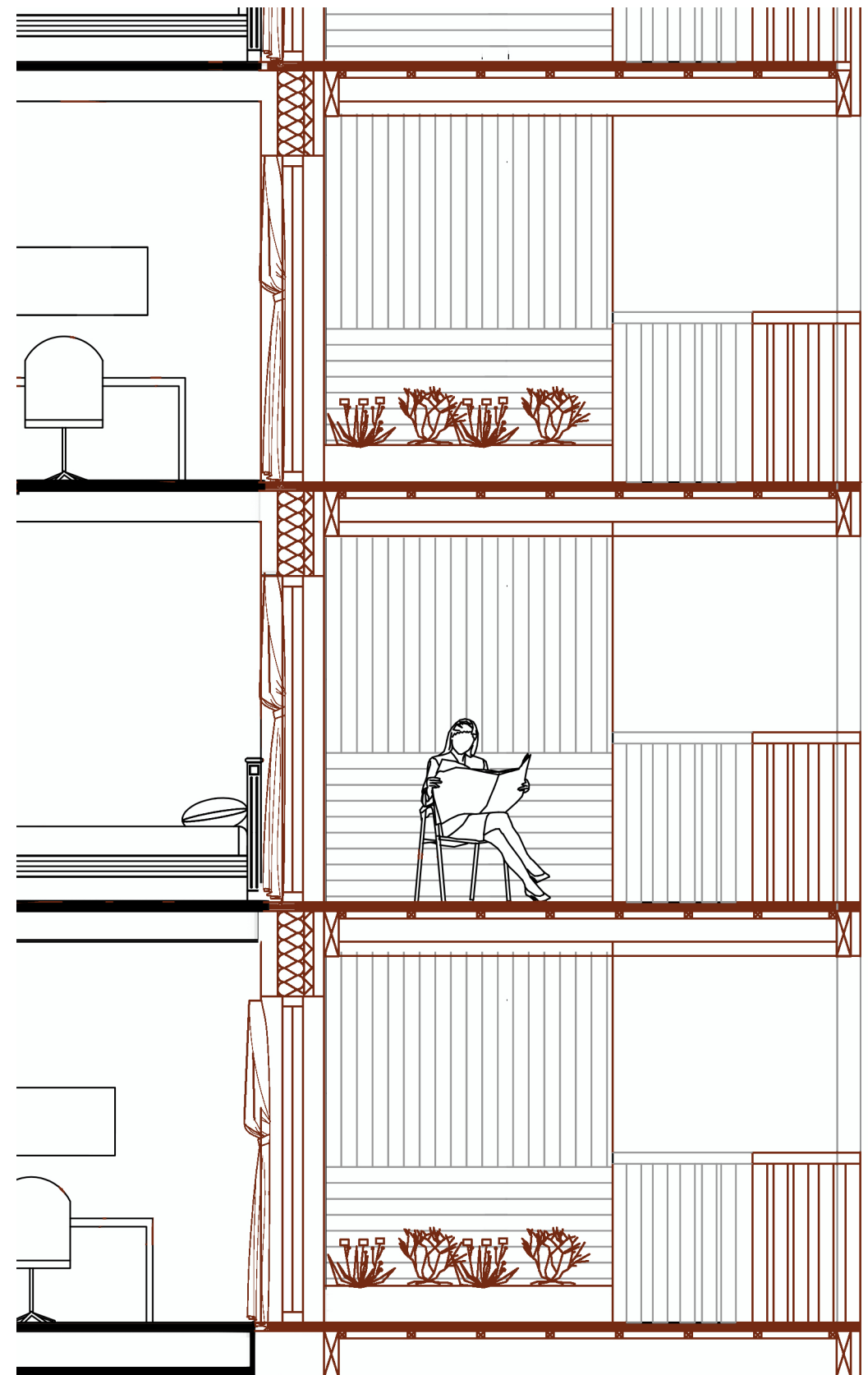
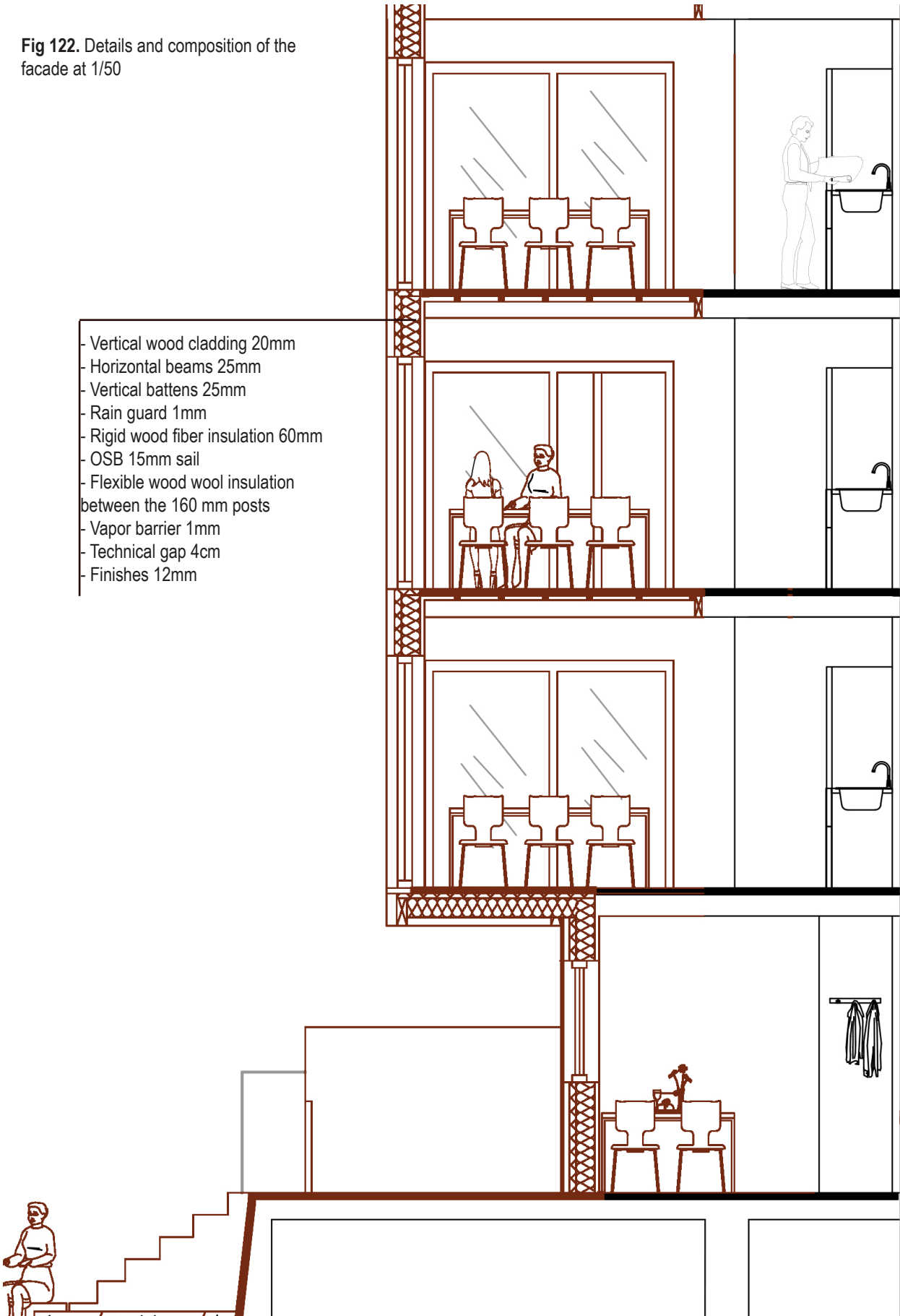


Fig 122. Details and composition of the facade at 1/50

- Vertical wood cladding 20mm
- Horizontal beams 25mm
- Vertical battens 25mm
- Rain guard 1mm
- Rigid wood fiber insulation 60mm
- OSB 15mm sail
- Flexible wood wool insulation between the 160 mm posts
- Vapor barrier 1mm
- Technical gap 4cm
- Finishes 12mm



Conclusion

This final thesis addressed a central question: how to regenerate the model of modernist micro-neighborhoods in order to improve their habitability, from public space to the domestic sphere? Through the study of the Varpai district in Klaipėda, Lithuania, I sought to understand how an urban heritage designed for an industrial and collectivist society could be rethought to meet contemporary aspirations, while preserving its identity and strengthening social ties.

Search Limits

Although this reflection is based on a thorough historical and architectural analysis, it has certain limitations:

- The work is based on interviews with about forty inhabitants. If these exchanges made it possible to anchor the project in reality, this limited sample limits the scope of the results. A survey of a wider and more diverse audience would have helped to better identify all needs.
- The study focuses on the specific case of Varpai neighborhood. Its unique characteristics do not allow directly applying the same solutions to all micro-neighborhoods, even on a Lithuanian scale. Each place requires a tailor-made analysis.
- This work only partially addresses complex issues such as the economic viability of projects, condominium management or the role of local public policies. These dimensions, however essential, deserve further research for a more complete vision.

The four levers of regeneration: contributions and results

Faced with the identified challenges - the fragmentation of spaces, the obsolescence of housing, social isolation and the domination of the car, this thesis proposes a strategy articulated around four complementary levers, designed as tools to rethink the habitability of micro-neighborhoods.

1. The requalification of land and the development of parking spaces

The first lever consists of freeing the island cores from the automotive influence by radically rethinking the parking space. In Varpai, as in many micro-neighborhoods, cars have invaded spaces originally designed for collective life, transforming courtyards into informal parking lots and green spaces into residual areas. My proposal is based on a simple principle: move the parking lot to the outskirts of the blocks, along the road, and green it to reduce its visual and environmental impact. This reorganization makes it possible to restore the courtyards to pedestrians, to introduce various uses (playgrounds, shared gardens, relaxation areas) and to recreate a landscape continuity that strengthens the sense of belonging to the neighborhood. By reducing dependence on cars, this approach also helps to limit noise and pollution, while promoting soft mobility.

2. The creation of a functional mix

This lever aims to end the purely residential specialization of neighborhoods from the Soviet era by integrating economic and social activities. By setting up shops, offices, cafés or shared workspaces on the ground floor on the roadway of buildings—particularly along the main roads and Sajūdzio Park—the project seeks to create dynamic living centers that limit the need to systematically travel to the city center. This mix has two aims: to attract new audiences, such as workers or visitors, and to increase the autonomy of residents by offering them local services. Finally, this allows for a better valuation of the ground floors while offering condominiums a source of income through the rental of these surfaces.

3. The addition of common areas

The third lever addresses a major contradiction because, although designed for the community, micro-neighborhoods are sorely lacking in suitable meeting spaces; stairwells are not sufficient, especially in a northern climate that is not conducive to outdoor activities. The proposal is to integrate shared spaces in the heart of buildings, such as meeting rooms, common kitchens, living rooms or play areas. Accessible to all, these places serve as supports for participatory management, allowing residents to gather to exchange, organize events or manage the work of their building. They also play a crucial role in breaking the isolation, especially among the elderly, who form a large part of the population of these neighborhoods. By reintroducing this collective dimension into the built environment, this approach attempts to reconcile residents with the idea of «common», which was once linked to negative Soviet memories, in order to make it today a lever of solidarity and mutual help.

4. Rethinking domestic practices

The fourth lever concerns the transformation of housing itself, which is too often neglected in renovation projects. The apartments in micro-neighborhoods, designed according to minimalist and rigid standards, no longer meet contemporary lifestyles. Their load-bearing structure, entirely composed of concrete walls, limits the possibilities for interior redevelopment. Rather than demolish or reduce the number of housing units, my proposal focuses on extending the apartments from the outside, thanks to a secondary wooden structure. This extension, with a depth of 2.5 meters, allows to enlarge the living rooms, to introduce winter gardens or balconies, and to significantly improve thermal and luminous comfort. For the ground floors, the addition of private gardens clarifies the boundaries between public and private space, while offering a smooth transition between inside and outside. By rethinking domestic practices in this way, this lever aims to give residents back control of their living space, while preserving the initial density of the neighborhood.

Reflexive feedback in and on architecture

This work allowed me to question the role of the architect in the transformation of existing neighborhoods. Contrary to the logic of a clean slate, often preferred in urban projects, the regeneration of micro-neighborhoods requires an approach that is both respectful of the past and forward-looking. It calls for coping with constraints (structural, economic, social) rather than ignoring them, and for enhancing existing resources (green spaces, urban fabric, residents' memories) rather than erasing them. In my opinion, we need to act on situations where the problems are already known, rather than embarking on a project whose problems will arise over the years.

This project allowed me to better understand the complexity of condominium dynamics and the need to actively involve residents in the transformation process. Indeed, a successful renovation is not only measured by its technical or aesthetic performance, but above all by its ability to create social ties and strengthen the residents' sense of belonging. The new common spaces, such as shared gardens or meeting rooms, are not simple facilities, but real tools of local democracy allowing residents to become actors in their living environment again.

On the environmental level, this work defends a frugal and sustainable approach by favoring the transformation and reuse of existing structures rather than their demolition. By relying on local and bio-based materials such as wood, each intervention is designed to minimize the carbon footprint while maximizing social and spatial impact. Regarding the urban aspect, this reflection highlights that former dormitory neighborhoods can become attractive again if they integrate a functional mix, quality public spaces and a rethought mobility. Thus, regeneration should not be seen as a mere thermal «lifting», but as an opportunity to foster more inclusive, resilient and humane urban models.

Avenues for improvement and future research

However, several avenues could be explored to enrich this strategy, particularly regarding the economic models that would allow for the financing of such transformations. It is indeed essential to design innovative financial arrangements to make these projects realistic, especially for condominiums composed of residents with modest incomes. Finally, the issue of governance remains central to ensuring the sustainability of common spaces, which invites us to explore models such as residents' cooperatives or neighborhood unions that have already proven themselves elsewhere.

One of the major limitations of this work lies in the lack of a detailed analysis of economic models to finance these transformations. How to convince condominiums, often composed of residents with modest incomes, to invest in expensive work? An in-depth study of innovative financial arrangements would be necessary to make these proposals realistic. Furthermore, the question of governance is central. How should we organize the management of shared spaces? What legal tools would ensure their sustainability? An interesting approach would be to explore models of residents' cooperatives or neighborhood unions, which have proven successful in other contexts.

Although this thesis incorporates the feedback from residents, the participatory approach could be deepened and systematized. Collaborative design workshops, where residents would be involved in the design of common areas or extensions, would better meet their expectations while strengthening their support for the project.

Further analysis of the environmental performance of the proposals would be useful. For example, a comparative study of different insulation materials (wood wool, wood fibre, cellulose wadding) would help identify the most suitable solutions to the Lithuanian climate. Similarly, a thermal modeling of the proposed extensions could validate their impact on the energy consumption of housing. It would be relevant to include reflections on neighborhood resilience. How to adapt public spaces to cope with heatwaves or floods? How to promote biodiversity in indoor courtyards? These questions open up avenues for future research, particularly on the integration of nature-based solutions.

Towards a more humane city?

Beyond the regeneration of micro-neighborhoods, this work invites a broader reflection on the city model we wish to build. Soviet micro-neighborhoods, with their qualities (density, green spaces, initial social mix) and their defects (rigidity, isolation, obsolescence), are the mirror of the utopias and failures of the twentieth century. Their transformation should not be seen as a simple response to a housing crisis, but as an opportunity to rethink our relationship with housing, mobility and collective life.

In a world marked by the climate emergency, rising inequality, and the fragmentation of urban spaces, the regeneration of micro-neighborhoods could present an alternative to urban sprawl and downtown gentrification, by proposing dense models, mixed and sober, where the quality of life does not depend on the possession of a car or a large home, but on the richness of social interactions and the proximity of services.

Finally, this work raises a fundamental question: how to reconcile memory and innovation? Micro-neighborhoods are witnesses of a complex history, marked by traumas (the Soviet period) but also by solidarity (post-war reconstruction). Erasing them would be a loss, but freezing them would be renunciation. Regeneration, as proposed here, seeks to overcome this dilemma by transforming these neighborhoods without denying their past, adapting them to contemporary challenges without sacrificing their identity.

Ultimately, this research has allowed me to understand that the answer does not lie in a single solution with a fixed project, but in a multiplicity of approaches, adapted to each context, and driven by a common desire: that of reinventing the city as a common good.

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Iconography

Fig 1. The city plan of Klaipėda

Fig 2. Klaipėda after the 1945 bombings. © Eugenijus Šiško / LCVA (Lietuvos centrinis valstybės archyvas)

Fig 3. Ruins of downtown Klaipėda in January 1945. © Taken from the book *Lietuvos energetika* / Source: <https://www.delfi.lt/miestai/klaipeda/klaipedos-elektrinei-90-metu-mena-laikus-kai-visas-miestas-skesdavo-dumuise-81482755>. Accessed on 06.04.2026

Fig 4. The demographic evolution of the city of Klaipėda since the capture of the USSR

Fig 5. General Plan of Klaipėda, 1976. From the book *Klaipėda: Égards*

Fig 6. Plans showing the evolution of the city of Klaipėda

Fig 7. The grafting of the first buildings onto the historical fabric. © Photographic archives of the city of Klaipėda, 1963

Fig 8. General Plan of the City of Klaipėda, on March 18, 2019. © From the explanatory note General Plan of the City of Klaipėda

Fig 9. «Žardė» shopping mall. © Photograph by Audronius Ulozevičius. Klaipėda, 1986. <https://www.epaveldas.lt/preview?id=C160000276001>. Accessed 11.04.2026

Fig 10. Part of the main drawing of the planning project for the city of Klaipėda, 1962. © P. Janulis and others; UAB «Urbanistika». 1962.

Fig 11. The evolution of the architecture of the city visible in section, from left to right (from the northern part to the southern part)

Fig 12. Collage of the characteristic architectural details of the historic center of Klaipėda

Fig 13. Collage of architectural details characteristic of the southern part (micro-neighborhoods) in Klaipėda

Fig 14. Diagram of the spatial organization of a micro-neighborhood

Fig 15. Sketch of the micro-district IV, 1965. From the book *Klaipėda: Égards*

Fig 16. Example of a micro-neighborhood plan for 20,000 inhabitants, 1961. Source: <https://fgis-tp.ru/statya-36-gradostroitelnye-y-i-parametry-razreshyonogo-ispolzovaniya-zemelnyx-uchastkov-i-jecktov-agissantnogo-stroitelstva-v-zonax-proizvodstvennoj-i-inzhenerno-transportnoj--5/>. Accessed 19.04.2026

Fig 17. Reconstruction of the initial organization of functions in micro-neighborhoods in the residential area of Klaipėda, based on 1994 diagrams from the book by Tomas S. Butkus, Vasilijus Safronovas and Vaidas Petrulis, *Klaipėdos urbanistinė raida 1945–1990 (Klaipėda Urban Development 1945–1990)*.

Fig 18. The current organization of functions in micro-neighborhoods in the residential area of Klaipėda, 2025

Fig 19. New location of a future building, 1988. © Photo by Bernardas Aleknavičius (Ieva Simonaitytė Public Library Archives of Klaipėda County).

Fig 20. New housing buildings behind the «Zarde» shopping centre, 1986. © Photo by Bernardas Aleknavičius (Ieva Simonaitytė Public Library Archives of Klaipėda County).

Fig 21. Pedestrian path running from Taikos Avenue to Šilutė Road, connecting the micro-districts of Pempininkai and Neringa by the green corridor. View from the side of Pempininkai. © Photo by Bernardas Aleknavičius (Ieva Simonaitytė Public Library Archives, Klaipėda County).

Fig 22. Construction of the Avenue Baltija which allows to connect the new micro-districts 1986. © Photo by Bernardas Aleknavičius (Ieva Simonaitytė Public Library Archives of Klaipėda County).

Fig 23. Research on the transformation of the development of a residential block. Source: Bunin A.V., Savarenskaya T.F. - History of the art of urban planning. In 2 volumes. 2nd ed. (1979)

Fig 24. Diagram of the functioning of the Radiant City © ADAGP, Paris, 2025. Source: Le Corbusier (1935) Éditions de l'Architecture d'aujourd'hui.

Fig 25. Diagram of the functioning of the Neighborhood Unit model © Personal achievement, inspired by the ideal plan of an urban micro-neighborhood according to Clarence Perry (published in 1929).

Fig 26. Axonometry showing the different steps of assembly. © Mmap

Fig 27. The machining and assembly of panels, 1960. © S. Pshenychnogo

Fig 28. Assembly of the various elements into prefabricated panels using cranes on rails. Source: initial photo made by Bernardas Aleknavičius 1987-1988.

Fig 29. Ground floor plan of a building 120 PSS showing the various assembly elements.

Fig 30. The poster of the sketches of the new 120 PSS series created for the city of Klaipėda by architects Bronius Krūminis, Vidas Sargelis, Vaclovas Zubrus. Source: Lietuvos nacionalinis muziejus (National Museum of Lithuania).

Fig 31. «The great building program of communism.» Source: The lecture by Dr. Marija Drėmahilton | „Žmogus ir miegamieji rajonai“ (‘The human and dormitory neighborhoods’), 2024, <https://www.youtube.com/watch?v=j8eDVnT72xk>

Fig 32. Construction of a 5-storey building in 28 days. Source: Review *Stroiti'stvo i arkhitektura Moskvj* [Construction and architecture of Moscow], year 1973, number 2.vk. com

Fig 33. Photos of a Soviet apartment with period furniture.

Fig 34. Photos of the micro-district Varpai

Fig 35. The initial plan of the «Varpai» micro-neighborhood from 1994, taken from Bėčienė, J., Čer-niūtė-Vaitiekūnienė, I., & Petrulis, V. (2020). *Klaipėda: Égards ktūros gida* [Klaipėda: Architecture Guide]. Vilnius

Fig 36. The plan of the micro-neighborhood «Varpai» today. In blue: the additions after 1994.

Fig 37. The plan showing the system of pedestrian spaces and public areas

Fig 38. Photos of the pedestrian paths in the micro-neighborhood

Fig 39. The plan showing the green space system

Fig 40. Photos of the different types of green spaces in the micro-district

Fig 41. The plan showing the different infrastructures

Fig 42. Photos of the infrastructure of the micro-neighborhood

Fig 43. The plan showing the different public and social functions

Fig 44. Photos of the different functions of the micro-district

Fig 45. The plan showing the typologies of buildings

Fig 46. Photos of the buildings in the micro-neighborhood

Fig 47. Dynamics of the number of inhabitants in the city and district of Klaipėda. Report 2007–2013, p.

Fig 48. The change in the number of inhabitants between 2011-2021(%). Source: Ministry of Environment of the Republic of Lithuania (am.lrv.lt).

Fig 49. Travel time by car during rush hour.

Fig 50. Excerpt from the survey conducted among residents of southern micro-neighborhoods, 2025-2026

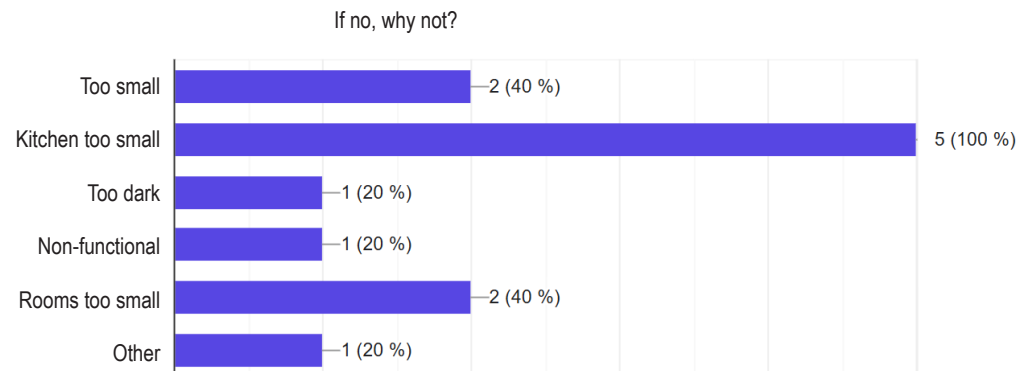
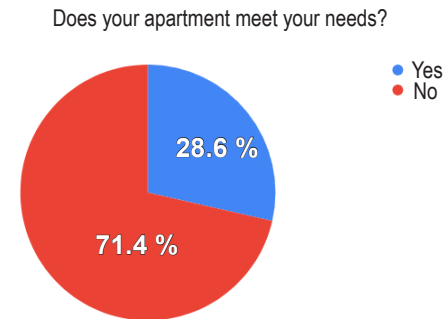
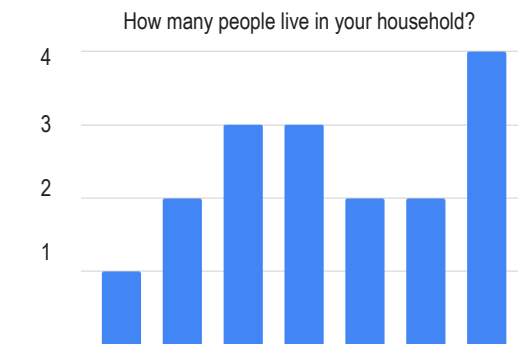
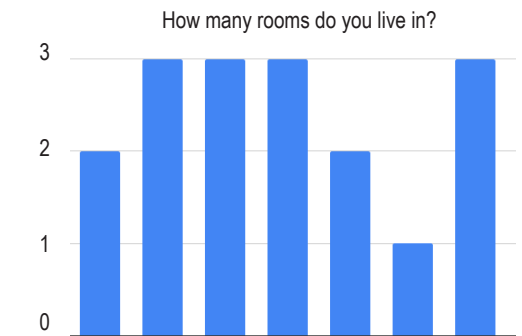
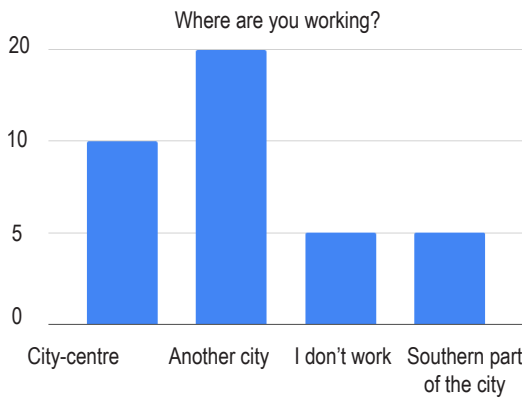
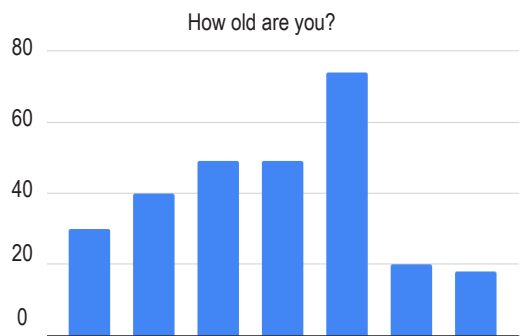
Fig 51. The tension between the three zones: the historic center to the north, the residential area to the south, and the residential area to the east.

Fig 52. The historic city center
 Fig 53. The micro-quarters
 Fig 54. The residential district
 Fig 55. Excerpt from the survey conducted among residents of southern micro-neighborhoods, 2025-2026
 Fig 56. Cars parked on playgrounds
 Fig 57. The main problems of prefabricated buildings. Source: Semminar Re-Topia| Martynas Marozas - Microrayon transformation strategies: lessons learned: <https://www.youtube.com/watch?v=U0Xc5c4AFfg>.
 Fig 58. The degradation of the facades seen on the buildings of the «Varpai» district, 2026.
 Fig 59. The absence of common areas visible in the ground floor plans of the three building typologies.
 Fig 60. In a micro-neighborhood, residents meet near tanks of gira (kvass) and beer, 1978. © Algimantas Žižiūnas.
 Fig 61. Children playing in the stairwell. 1990. © Ingrida Lengviniene.
 Fig 62. Questions from the survey of residents
 Fig 63. Wishes of the inhabitants
 Fig 64. The Mažeikiai Mass Development Plan, PUPA
 Fig 65. Transformation of parking spaces, 1st strategy © PUPA, 2022
 Fig 66. Diagram of the first clause
 Fig 67. Transformation of parking spaces, 2nd strategy © PUPA, 2022
 Fig 68. Diagram of the second clause
 Fig 69. Transformation of green spaces, 1st strategy © PUPA, 2022
 Fig 70. Strategy diagram of green spaces
 Fig 71. Transformation of green spaces, second strategy © PUPA, 2022
 Fig 72. Strategy diagram of parking spaces
 Fig 73. Study of the possibilities for the development of public spaces and courtyards in the targeted territories of Klaipėda. © PUPA, 2015
 Fig 74. Strategy diagram of parking spaces
 Fig 75. Strategy diagram of green spaces
 Fig 76. New connection between areas and unification of the neighborhood © Ignas Uogintas, 2015
 Fig 77. New development proposal for the micro-neighborhood Pasilaiciai © Ignas Uogintas, 2015
 Fig 78. Patterns of transformations in public spaces © Ignas Uogintas, 2015
 Fig 79. Transformations related to parking
 Fig 80. Transformations related to public spaces
 Fig 81. Building before renovation work
 Fig 82. Facades of the building before the renovation work
 Fig 83. Building after renovation work
 Fig 84. Facades of the building after renovation work
 Fig 85. The stages of the work carried out
 Fig 86. Ground floor plan at the origin VS New plan
 Fig 87. Original floor plan VS New floor plans
 Fig 88. Projects that have chosen to reduce the number of apartments
 Fig 89. Projects that kept the initial number of apartments
 Fig 90. Existing situation: The city and its downtown area

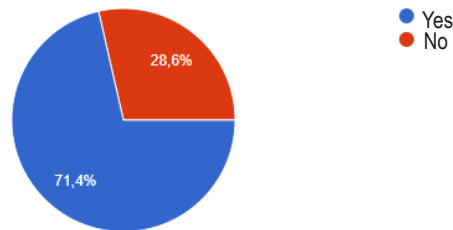
Fig 90. Existing situation: The city and its downtown area
 Fig 91. Projected situation: The city composed of micro-neighborhoods with their center
 Fig 92. Current situation of the Varpai district
 Fig 93. The ground plan of the redeveloped district
 Fig 94. Dark gray parking spaces dominate the interior courtyards
 Fig 95. Green parking spaces moved along the traffic routes
 Fig 96. The transformation of the street «Lubekio»
 Fig 97. The transformation of the street «Varpu»
 Fig 98. The current organization of functions in micro-neighborhoods in the residential area of Klaipėda, 2025
 Fig 99. Dark gray parking spaces dominate the interior courtyards
 Fig 100. The green parking spaces moved along the circulation axes
 Fig 101. Sections showing an example of shared gardens and a playground hill sheltered from cars, 1/200th
 Fig 102. The transformation of the surroundings of buildings
 Fig 103. The transformation of a courtyard into a playground
 Fig 104. The establishment of new activity areas along traffic routes at gable level and along the planted promenade in connection with the Sajūdžio park.
 Fig 105. The differences in ground level for the separation between public (right) and private (left). 1/200th
 Fig 106. The ground floor plan 1/200th
 Fig 107. The location of commercial premises along Varpai Avenue at the gable ends
 Fig 108. The possibilities of intervention on the building by addition. Drawings inspired by the work of the PUPA agency.
 Fig 109. Le plan du rez-de-chaussée concernant l'extension des pignons pour les commerces, 1/200ème
 Fig 109. The ground floor plan concerning the extension of the gables for the shops, 1/200
 Fig 110. Participatory housing in shared common areas
 Fig 111. The plans of 2 variations for the location of the common areas, 1/200
 Fig 112. The north facade before and after with the photo of the model at 1/50
 Fig 113. The south facade before and after with the photo of the model at 1/50
 Fig 114. Floor plan of the apartments R+1, 1/100
 Fig 115. Photos of the 1/50 model, the addition of private gardens in elevation for the apartments on the ground floor
 Fig 116. Ground floor plan, 1/100
 Fig 117. The relationship between what is private (in height) and public, 1/100th
 Fig 118. Renovation of an apartment building with new prefabricated panels, Estonia 2025. © Sve-taine.lt / Assembly of prefabricated panels, 2024. © Lrt.lt
 Fig 119. Photos of traditional Lithuanian architecture, 2025.
 Fig 120. Photo of the model at 1/50 with traditional facades.
 Fig 121. Detail of the facade at 1/20
 Fig 122. Details and composition of the facade at 1/50

Appendix

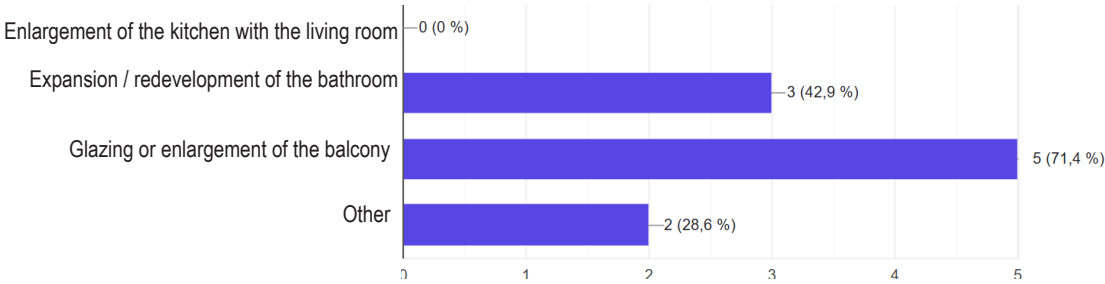
Appendix: Survey (40 participants)



Did you make any alterations or renovations to the apartment (for example, knocked down a wall or glazed a balcony)?

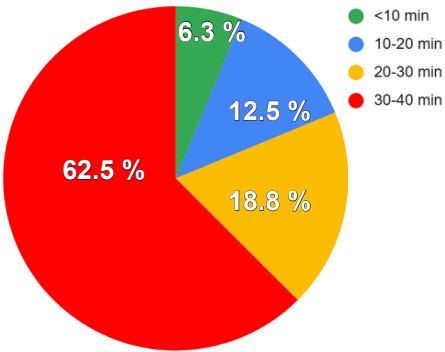


If so, what type of work?

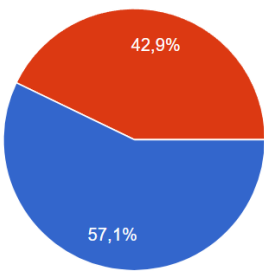


Appendix: Survey (40 participants)

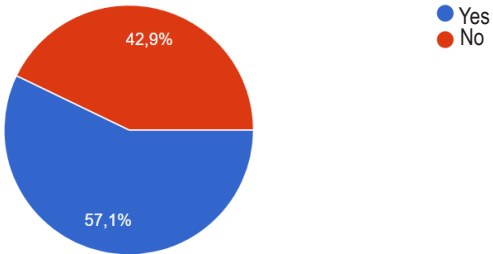
How long do you take to get to work?



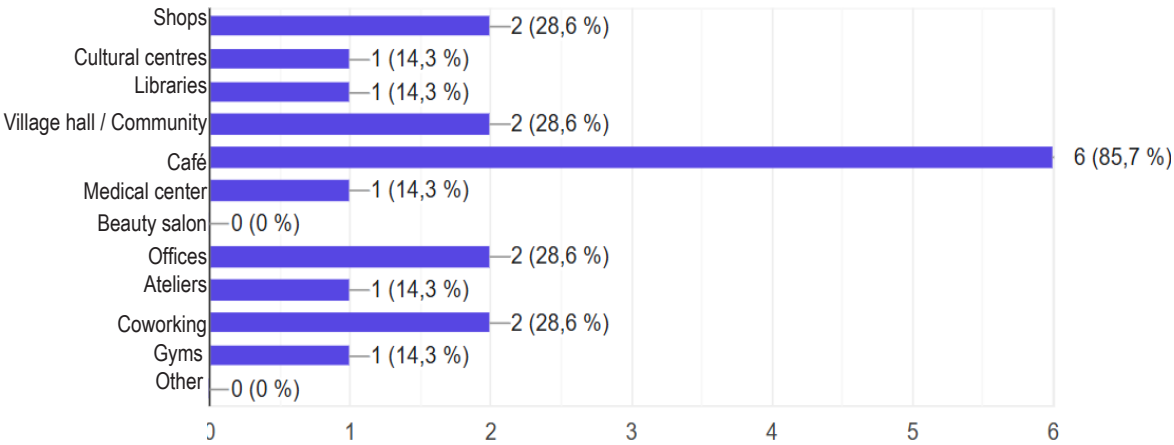
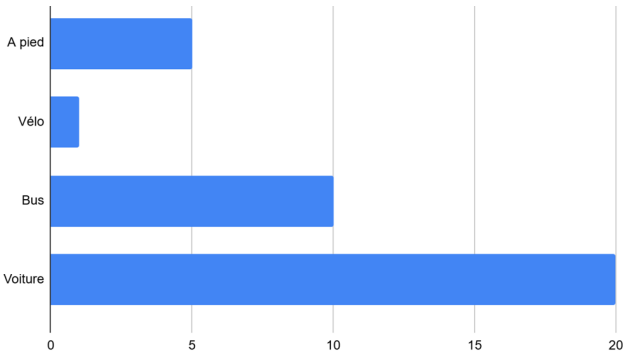
Are there any places for meeting or socializing in your neighborhood?



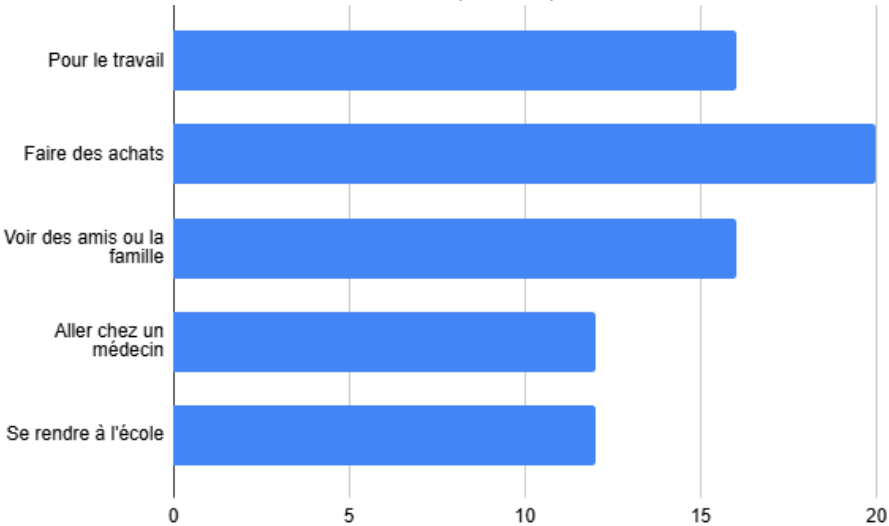
Are there enough shops and other services in your neighborhood?



What means of transport do you use to carry out your daily activities?



For what reasons do you use your car?



Appendix: Test photos of 1/200 models

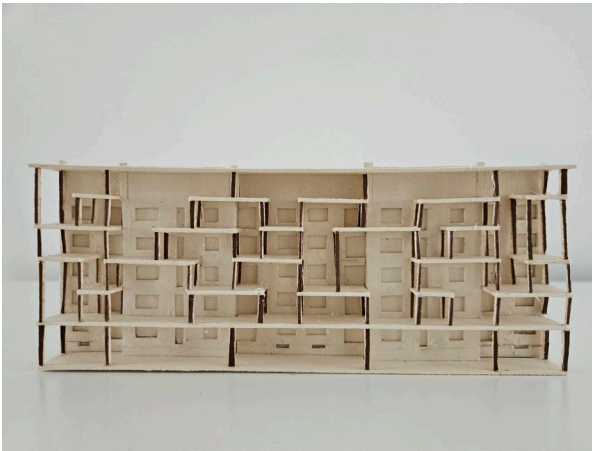
Variation 1



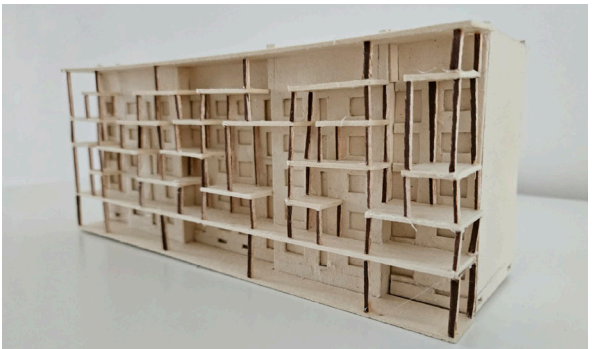
Variation 2



Variation 3

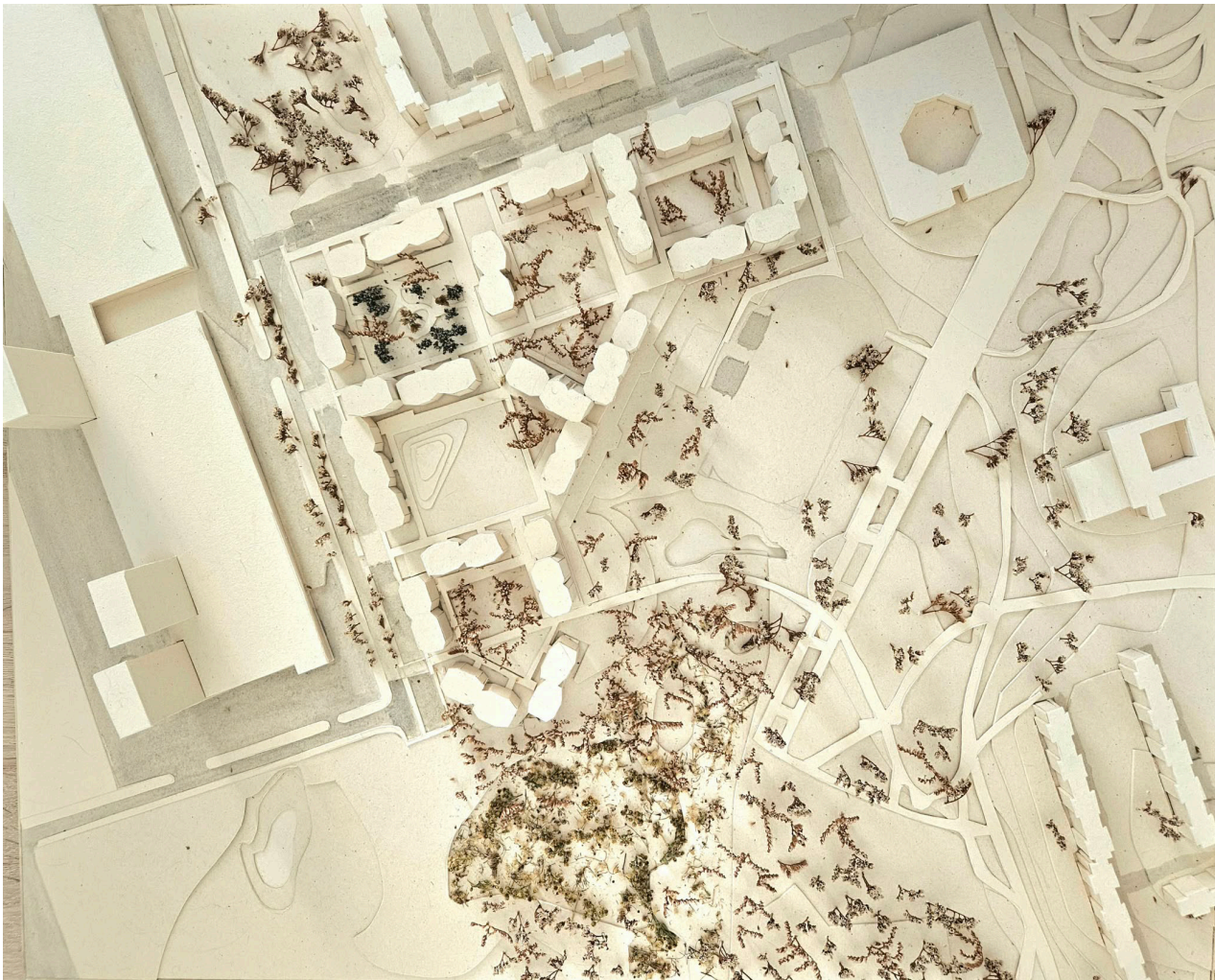


Variation 4









Appendix: The evolution of the plans



14.10.2025



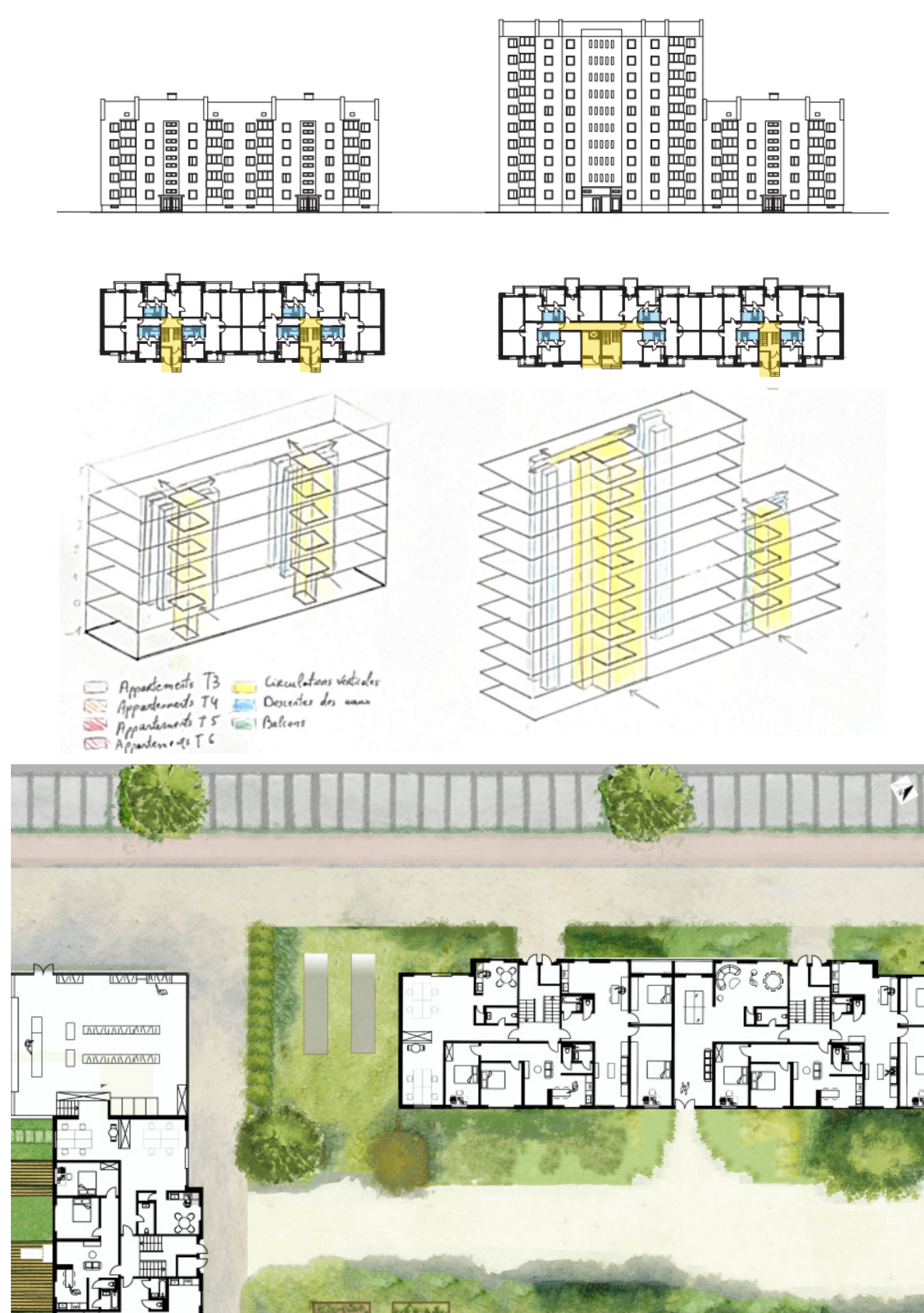
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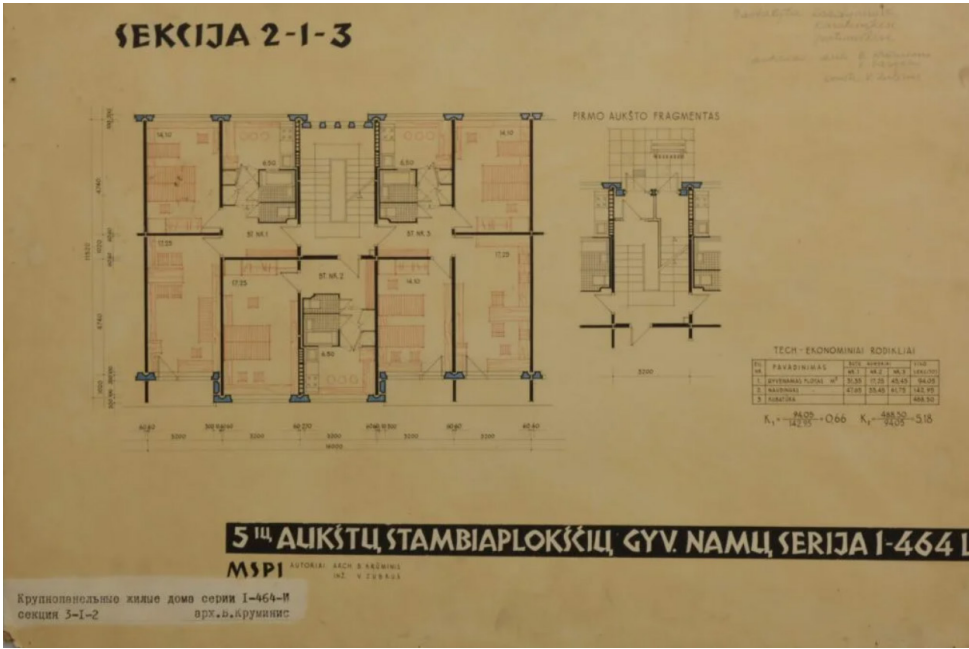
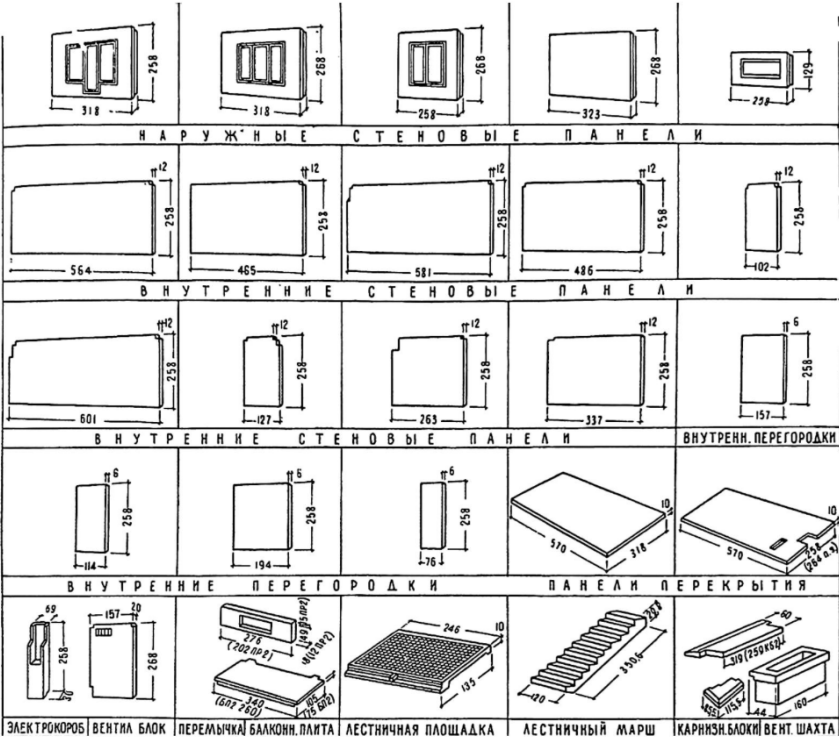
Appendix : Explorations



Appendix: Original drawings of buildings 120PSS



<https://tipdoc.ru/catalog/27351/1621430/#images>



<https://www.if.vu.lt/naujienos1/renginiai/1317-tarptautine-konferencija-residential-architecture-in-the-soviet-baltics>

Appendix: Interview 1 with Martynas MAROZAS (Synthetic)

M.M The subject is as follows: there are a series of problems that are, in part, legal problems, but also economic and legal issues for which there is already a lot of material, a lot of work. The environment ministries are doing it, there's a whole range of actors working on quarterly innovation models, and these are good sources. Then, we also developed an economic model for the neighborhoods, like what is presented on our website, a bit like these caricatures. This would make it possible to address these issues more concretely. And here, the main problems are listed.

One of them is that, well, for me too, from a practical point of view, it seems obvious: we should reassess everything in a global way. Finally, it's like that, it's a task that people don't want to take on. Everyone agrees on that. But because of these local blockages, nothing happens. The essential debate is about how to convince people to act differently.

When we start to look at how our system is designed, we see that it is designed to maximize the decentralization of projects. Everything is fragmented into small pieces. And this fragmentation results in very limited liability. We see an isolated neighborhood, and it's very complicated. Imagine these last builders or modernizers, these «just kingdoms» as in Belgium, the Netherlands, Sweden, Norway, wherever there was no Soviet regime. None of these models is applicable in Lithuania.

And this question, you know, we've tried a bit, and for years we've been working in this field and we see that actually maybe we need to create some kind of third way. Because we will not succeed in copying Germany or the Netherlands, and fortunately we will not succeed Belgium either. But their social housing system really works well. And neither will France, we won't be able to replicate it. These models are simply not adaptable.

For example, it is very important to distinguish two things: on the one hand, the form of housing renovation, and on the other hand, how the system works. We started with the form, with a study on the renovation of collective buildings in Kaunas. I proposed that, after this meeting, I meet with the community of Kaunas 10th Ward. They have some kind of project, if you want, I can share the link with you. I don't know how structured this meeting will be, but I'll try to make it a bit more concrete. You will be able to see what problems they are facing.

Because we often travel in small groups, and sometimes we give them free advice to explain that anything is possible in theory. Now, the renovation problems are, first, lack of funds, and second, land value. This means that here, a dynamic real estate market exists only in the seaside resorts and some suburbs of large cities. In Vilnius, the market is very active, in Kaunas it's average, and Klaipėda is rather lethargic. Since the 2008 crisis, Klaipėda has never really recovered its momentum. And now, there are finally a few projects that could revive the momentum, but overall, the situation is not very good.

And, without wishing to generalize, most public-private partnership models come up against a first obstacle: in a single building, there can be hundreds of co-owners. And on top of that, there are all kinds of complications that appear over time. For example, inheritances that are not settled, conflicts between co-owners. There are also elderly people who categorically refuse any renovation. So, we really need to think seriously about all these legal and technical aspects.

There are many problems listed, and the Ministry of the Environment itself identifies what is really blocking. We also made recommendations in our report. We need to start by raising the standards and norms for building maintenance. Currently, the only way to declare a building unfit for use is when it is structurally unstable, that is to say when it risks collapsing.

But for example, if the electrical wires are visible, if the pipes date back several decades, if the stairwells smell of moisture or if they are infested with cockroaches, if someone piles up garbage and takes it to the fifth floor, if there is not a single window in good condition, or if there are fungi on the walls, none of this justifies declaring the building unfit for use or unsanitary. Of course, most of the time, these problems are also related to structural issues. Maybe we only see these problems when the building is already in bad condition, but in reality our maintenance standards are much too low.

Then there is the issue of energy renovation. We have also thought about how to make this process more affordable. One of our hypotheses, which we have since abandoned, is that to renovate a large number of buildings on a massive scale, the process would have to be industrialized, as in a factory. For example, renovation by modules, as some countries do. You receive a new facade, with integrated windows, all the insulation, etc. We are thinking about the possibility of using prefabricated panels, maybe even solar panels. Maybe this is a systemic solution. You say that there are construction methods so effective and quick that you could, for example, renovate a building in two weeks. In one way or another, the cost of construction work in Lithuania is based on workers' working time, not materials. If a worker spends six months gluing the same polystyrene sheet to a facade, the cost explodes. That's how wages end up being factored into the final price.

So, we say that, on this point, we must stick to an idea: we should start renovating these buildings in a massive way. And what does «massive» mean? If we decide to renovate the entire housing stock in Lithuania, for example within 10 years, about 400 buildings would need to be renovated every week. Or, if we spread out over 20 years, 200 buildings per week. But even in the best years, we only renovate 400 buildings per year across the country, so we should multiply this rate by 50. At the very least. Otherwise, we won't be finished until we're old.

Of course, it's a long process. And when we talk about that, everyone asks: «But why do we need all this housing stock?» Perhaps we could get rid of it, but you know, the population is decreasing, the housing needs remain the same, or even increase. Perhaps we could identify some of these buildings, for example those located in less populated areas, where there is no social infrastructure, and where there are social problems. We could demolish them and compensate the owners. Offer them a turnkey solution for their rehousing.

I am talking here about the isolated Soviet buildings, lost in the middle of the fields, where there are only four floors and a few families. But by reducing the housing stock, as well as that of unoccupied dwellings, we could also solve part of the problem. And, as I was saying, it is very important: for example, in Vilnius, the price of housing in a Soviet building is about 1,000 euros per square meter, which is 3.5 times less than a new home. But today, when we talk about tools for housing, there are places in Lithuania where a home can be sold for 10,000 euros in total, while new construction costs several thousand euros. You can buy a home, but it's in a desolate place, without a job, without a school, with nothing. Perhaps the logic is not to invest in these housing units, but rather in those where there is a social infrastructure around.

That is why we have started to talk not only about the shape or color of renovations, but also about their relevance. If we are talking about Vilnius, Kaunas or Klaipėda, these housing units really deserve to be renovated, because they have land value. We did some calculations as part of our study model: in Vilnius, for example, it would be enough to add a floor to finance the renovation of the entire building, including the installation of elevators, if possible. Yes, yes, with this model. No, maybe it would take two floors, or even three, but not five. For a building with nine floors, adding one floor would not be cost-effective. We simply calculated that for a five-storey building, it might take two more floors, but this would become inefficient, because the structures would have to be reinforced.

Appendix: Interview 2 with Justina MULIUOLYTE (Synthetic)

S.L. Yes, indeed, by talking with the inhabitants, we realize that there are already quite a few examples in Europe and other countries on how to work with buildings in micro-neighborhoods. Because these spaces are very small, the transformations that work best are those where you reduce the number of housing units, but make them larger and more spacious, even if it means having fewer. There are examples like this, where neighborhoods become more attractive despite the reduction in the number of housing units. But on the other hand, in these examples, we often focus only on the renovation of the building itself, without really taking into account the environment, the neighborhoods, the adjacent green spaces, which are nevertheless essential in this type of model. These elements are very much linked to the terrain. It's a blind spot: people would like to have more activities, because currently, these micro-neighborhoods are often called «dormitory neighborhoods,» where you go home and nothing happens. During surveys, many expressed the wish to have cafes, small shops, mini-shopping centers, evening schools, meeting spaces, as residents often gather to discuss neighborhood affairs. As I mentioned, my work is supervised by Martinas Marozas.

The idea was not to see this micro-neighborhood as a simple set of buildings, but as a small town in its own right, which could reduce car traffic and save people from having to go to the city center to work. There would also be office space. Another question concerns the cars, which in the southern neighborhoods where I work are parked directly on the playgrounds. How can these problems be solved, knowing that people want to park their cars as close as possible to their homes, or make it easier to transport groceries? The aim is to propose a strategy for managing these cars, freeing up public spaces, and clarifying who owns which spaces: those intended for residents and those belonging to the city. Many questions arise, but we must try to answer them.

J.M. And does this study end this summer? What is the concrete project? A public spaces project or an overall vision for the neighborhood?

S.L. A vision for the neighborhood.

J.M. Because it's not the same thing. For an entire neighborhood, it is usually the municipality that takes care of it, because it is a large territory and these are projects it leads. Of course, the municipality must take into account the opinions of residents, and it often does so by organizing discussions or consultations. But taking into account the inhabitants does not mean fulfilling all their desires. For example, if residents want shops or cafes, the municipality cannot impose them: either a business is established, or not. The municipality can only authorize or not the use of the premises, depending on the construction standards. If residents want more green spaces, paths or benches, the municipality allocates the budget. But since it manages several neighborhoods, it allocates funds according to priorities: one neighborhood receives funding this year, another the following year. The vision that residents want is thus achievable to some extent, but not fully applicable. I don't know if that's what you wanted to know. In my work, I rely a lot on the testimonies of the inhabitants: how they lived during the Soviet era, when all life was spent outside, because the houses were small, uncomfortable and unwelcoming. Everyone used to meet on the outside. Today, with remote work, everyday life has changed. You are working on a vision for the southern neighborhoods of Klaipėda, right? The question is how to adapt this vision to the wishes of the inhabitants.

Personally, I think that an academic project should be designed solely according to the needs of the inhabitants. Of course, we must remain within reasonable limits, without proposing too futuristic ideas, but the vision must be the best possible. Where there are two entrances, where green spaces are needed, and where buildings need to be denser, we must try to meet the expectations of the inhabitants as much as possible.

But we must also take into account the constraints of the municipality and private actors, because all this concerns them as well.

S.L. One of my strategies is not to build more and to preserve as many green spaces as possible, such as parks. Notably, there is already the nearby Sajudis park, and in the general plan of Klaipėda, I saw that they wanted to destroy a small forest located south of this park to build parking lots and residential buildings.

J.M. Yes, but an academic work is precisely the opportunity to analyze the general plan, to note the needs of the inhabitants and to defend the preservation of these spaces. We need to argue: why is there a lack of green spaces? Why is there a lack of nature? In other projects, it has been noted that residents of micro-neighborhoods generally do not want densification or constructions too close to their housing. However, some diversity in the types of housing would be useful. We should therefore find spaces to develop new typologies, without necessarily building on existing buildings, but by working with them. The problem in Lithuania is that it's very complicated, because housing is private. Working on the interior of existing buildings is very difficult. In countries like the Netherlands or Germany, large buildings in micro-neighborhoods are often owned by housing cooperatives, which can rehouse residents during construction and consolidate everything. In Lithuania, if you want to consolidate housing, neighbors must agree to sell, someone must buy, and only then can you merge the spaces. It's complicated, but not impossible. In an academic project, you can try, but you also have to emphasize the risks. For my part, I think we should still try.

S.L. Yes, because we also need to clarify the economic aspects: who are the owners of the housing units, who are the associations of co-owners, who are the administrators. There are differences in decision-making processes. But the main thing is to ask architectural questions: to what extent can we rethink the facade of buildings to enlarge housing? Can we transform the ground floors into commercial or office spaces? For example, the ground floors could be accessible to all, while those overlooking the courtyard could be arranged as small individual houses, with private entrances. That would be utopian, but it would be great.

This is similar to an idea you had: on one side, create private entrances for the ground floor housing units, and on the other, on the park side, develop upper floors with terraces, exits to cafes, and a view of the park. The question is whether this vision is feasible, especially for the ground floors. Perhaps transforming only the ground floor would be more realistic, because during a renovation, it would be necessary to convince the inhabitants of the first floor to participate, for example by financing the modifications of the entrances. If commercial premises are created, it could also encourage some expansion. But in Lithuania, housing renovations are complicated because of the large number of people involved, disagreements and high costs. An idea proposed by my teachers would be to present this project by explaining that the ground floor would be intended for offices or shops. Thus, residents could rent their spaces and generate income to finance future renovations.

J.M. I find it very interesting to propose such models, because it allows us to imagine a scheme and test it theoretically. Whether it works or not, whether a project works here but not elsewhere, the important thing is to have tried. And for private gardens or private entrances to the ground floor, how does this work in terms of space distribution? Who belongs to the inhabitants and who is given to the city?

In theory, this should work like a classic renovation: each dwelling pays according to its area. For example, if you expand your space, you could pay more, because on the third floor, the renovation concerns only walls, windows and stairs, while on the ground floor, there is also the development of terraces. So you would pay for what concerns you directly. As for the land, most of the courtyards belong to the municipality, not to the buildings. Perhaps this part could be shared or assigned to certain inhabitants. But how would it work in practice? If terraces are created, who owns the land below? I speak about this subject because, even today, in the courtyards of buildings, no one really knows who owns the space. The inhabitants often maintain green spaces, plant flowers, but there is no guarantee that it will last.

Appendix: Interview 2 with Justina MULIUOLYTE (Synthetic)

If terraces were created, the inhabitants would probably maintain them themselves. But the question arises: why, for example, would the inhabitants of the other eight floors of a nine-storey building accept that those on the ground floor use part of the courtyard for their terrace? Maybe there should be specific contracts or agreements.

S.L. It's indeed complicated. But it would be a way to clarify the distribution of outdoor spaces, so that they are better maintained and everyone knows who they belong to. I saw a strategy for the Rumpiškės district that proposed different options: add floors, expand balconies or build extensions on the sides. Was it just an idea for a model, or was it studied in terms of structural feasibility?

J.M. No, we didn't go that far. We mainly thought conceptually about how to add surface and new spaces, without going deeper into the structure of the buildings themselves. But I now remember Ignas Uogintas, who did his master's thesis 6 or 7 years ago at the Academy of Architecture in Copenhagen, Denmark. His work focused on a district of panelaks (prefabricated buildings) and he was interested in whether or not to merge housing units into these typical buildings. In our case, we mostly worked on a model to see what people would think of it, but in reality, the locals are quite skeptical. They are asking themselves questions: how does it work? Why? Who will pay? How can we access these spaces?

Yet, I think it is quite feasible. For example, a developer like Tynas Vystėtojas could commit to renovating a stairwell, installing a modern elevator and creating additional spaces on the upper floor. Adding an extension on the side, like extra «boxes», is also an idea that has been explored in the past. Technically, it's doable, but I don't think the locals would do it themselves, because it's too complex and the opinions would be too divergent. Maybe a developer could get along with the locals, but it's a very complicated process. That's why it doesn't move forward, even if on the models, it looks good.

S.L. Me too, for the extensions on the sides, I propose to integrate commercial areas, especially along the streets where cars and pedestrians pass. This would align the buildings and create a beautiful continuity.

J.M. That's a very good idea. I have seen similar projects in architecture, where proposals included private terraces and commercial areas on the ground floor. There are quite a few examples like that. I told myself that if agencies or studios offer these ideas, it's not something I invented. Theoretically, it is quite possible, even if it is not always easy to find people willing to invest or get involved. But this model does exist. You just have to convince the inhabitants. In Lithuania, if such a project were born, everyone would talk about it.

S.L. When it comes to green spaces, there is also a lot to say. For example, in the district of Šilainiai, where there are these large nine-storey buildings, there are still many green spaces, but they are not really landscaped: they are just abandoned lawns. People often say that these lawns are useless: you can go, lie on the grass, but there is nothing else. The playgrounds are overrun with cars, and there are lots of little dirt roads running through these lawns. On the plan, we see a multitude of small trails that go in all directions.

I thought that it might be possible to create a large green space with trees, and to develop different spaces in the neighborhood: a shared garden here, a hill with playgrounds there, a small wood with trails elsewhere. This would allow for a diversification of uses. Sounds good, doesn't it? It's a matter of landscaping, because for now, there is only grass, nothing interesting.

J.M. Yes, it's a public space, but it's just an empty field. It's not pleasant to spend time there. We need to design a park with differentiated areas: green spaces here, activity zones there, and sports elsewhere. You have to create various atmospheres and connect them together. That's how it should be done. Often, we

hear that we should not program everything and let the inhabitants appropriate the spaces as they wish. But in practice, if you let people do what they want, nothing happens. Or else, nothing structured happens. In 50 years, these spaces have not changed.

I'm in favor of a certain kind of programming. Some places need to be quieter, others more sporty, others more wooded. That's right, creating a park. It is not a question of imposing specific activities, such as «here you read, there you play», but of designing spaces adapted to different activities. For example, a reading area is not designed in the same way as an active playground. Architecture is just that: designing spaces where people can do different things, where it's nice to do them

S.L. There have also been discussions with Martinas about the speed of renovations. Sometimes, they take a lot of time. How could we renovate these neighborhoods in a more comprehensive way, without simply adding insulation or modernizing the facades? There are also ventilation problems and other technical issues. One idea was to calculate the cost of demolishing the concrete panels on the walls and replacing them with new ones, directly placed on the old structure. But the question arises: what should be done with the inhabitants during the work? Should they be temporarily relocated? Would people agree to be rehoused during a quick renovation, where everything would be prefabricated in the factory and simply assembled on site? I don't know if it's realistic in Lithuania, because tearing down a facade doesn't seem like a simple operation to me.

J.M. Maybe it's possible, but is your project more focused on urban planning, buildings or both? Because right now, we're talking about integrating everything. The central question is to rethink the modernist model, where, as Le Corbusier said, we separate work areas, residential areas and industrial areas. Today, this model no longer works. We do the opposite.

The main idea is to see the micro-neighborhood as a small town where everything would be accessible on foot, to reduce car traffic and the number of cars. They should also be moved a little away, to create good pedestrian paths. And of course, you have to look at the buildings themselves: if you improve outdoor spaces, but people go home in uncomfortable housing, it's useless. We therefore need a global vision.

But as renovations are moving slowly, the idea of demolishing an entire facade seems... unrealistic. In practice, people have hung up shelves, paintings, and now we tell them that we are going to remove everything. Maybe, maybe... I have seen projects like «Iacaton et Vassal» in France where this is done. They expanded balconies and transformed homes in one day, without the residents having to leave their homes for too long. If it works elsewhere, why not with us? But we should consult structural engineers to find out if it is feasible with our buildings.

As for the inhabitants, would rethinking the structure of micro-neighborhoods encourage them to stay? Personally, I don't work directly with the residents of these neighborhoods, because we don't have any ongoing projects there. We worked on projects with residents from other neighborhoods, but no micro-neighborhoods. In theory, people are very attached to their neighborhood. If they want to move, many would choose to stay in the same neighborhood, but it is not always possible. For example, in Denmark or the Netherlands, where there is a greater diversity of housing units in the same neighbourhood, people often change dwellings without leaving their neighbourhood.

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This thesis questions the regeneration of Soviet modernist micro-neighborhoods, symbols of an urban utopia today confronted with functional, social and environmental obsolescence. Through the study of the Varpai district in Klaipeda (Lithuania), designed in the 1980s according to the principles of modernism, this work explores strategies for reinventing these spaces without erasing their memory, while responding to contemporary challenges: isolation of the inhabitants, car domination, degradation of housing and lack of collective spaces.

The research is based on a mixed methodology, combining a historical and urban analysis of the neighborhood, a survey of residents to identify their needs and uses of spaces and a project proposal. The TFE revolves around four levers: the requalification of soils, the development of parking spaces, the creation of common areas, and the rethinking of domestic practices.

The results highlight that the regeneration of these neighborhoods cannot be limited to a technical renovation but must reactivate their collective dimension, while integrating participatory and sustainable solutions. The project thus proposes a replicable and adaptable model, where architecture becomes a tool of urban resilience.