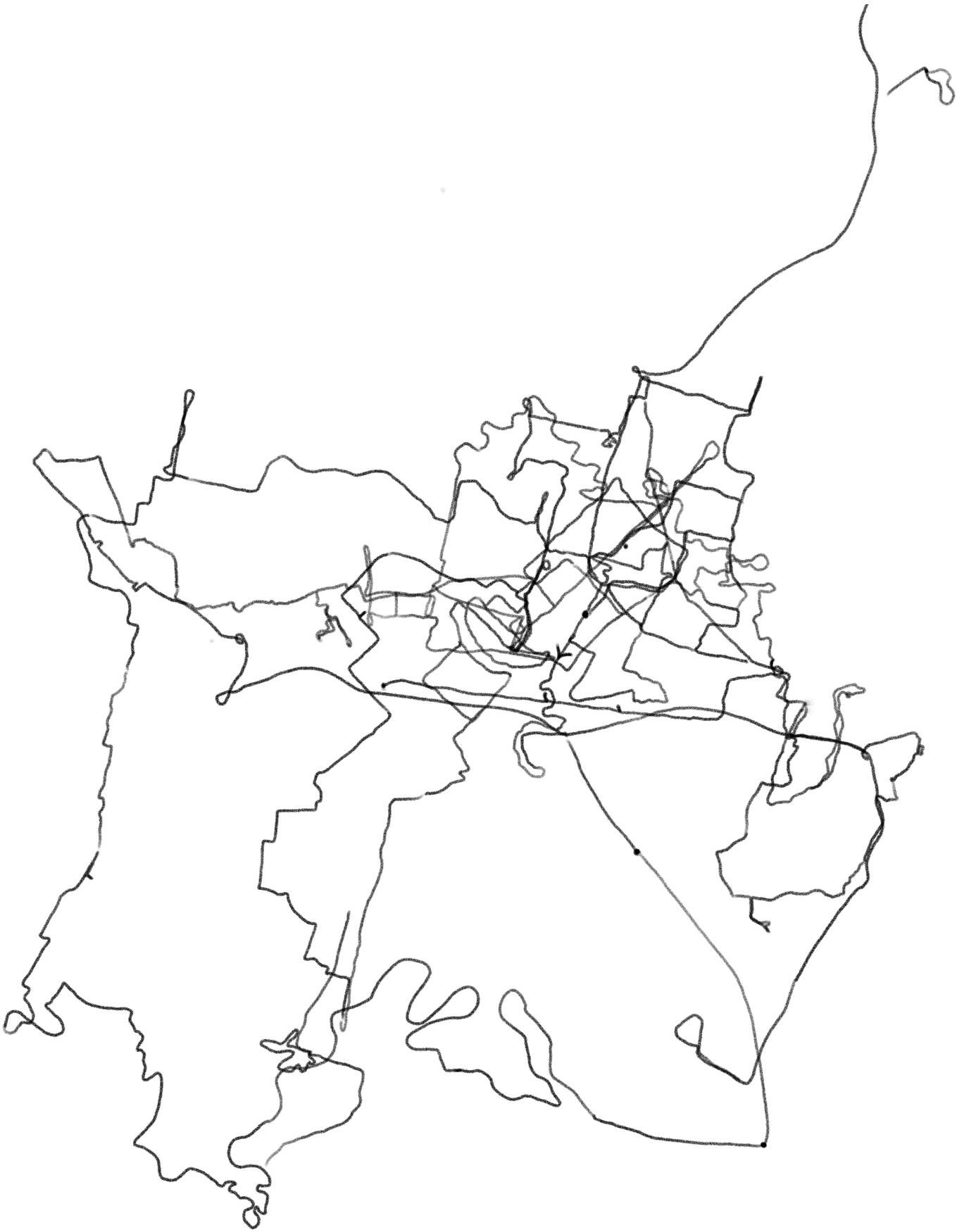

In-between

Imagining the Future of
the Silesian Metropolitan Area

Colophon

Master thesis Urbanism
September 2024 - July 2025

Title
In-between: Imagining the Future of the Silesian Metropolitan Area

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fig.1. Panorama of Bytom

Acknowledgments

This project began with no prior knowledge of the region, and learning about this place has been a journey of challenges and discoveries. What made this journey possible were the people who surrounded and supported me along the way.

I want to thank my mentors for supporting my constant explorations, even when they lacked a clear or concrete final goal. Your guidance helped me from my voice in the field of urbanism. Birgit, for deep knowledge of cities and a careful approach to space of which helped identify subtle yet meaningful potentials of the places. Every reference you shared, conversation we had, and discussion we engaged in helped steer this project toward its final form. Also, thank you for your patience and for understanding my often-tangled thoughts and clumsiness. Verena, for bringing the planning perspective into this work, which I have not much expertise in. You connected my spatial approach with concepts such as spatial imaginaries and territorial capital that look at space from a new perspective. Your ability to find the right words and concepts helped combine the many parts of this project into a cohesive story.

To my parents, your strength and support carried me through the most difficult moments.

To my friends for joining me in this journey, both metaphorically and physically. From countless hours in the library to moments of laughter and celebration.

To all the people I encountered and spoke with, your voices have become the true heart of this project. To my local friends, knowledge experts, and those I met for the first time, thank you for your openness in sharing your stories and personal thoughts. You gave me the inspiration and understanding that I would not be able to gain alone.

To GONT (kto wie ten wie)



fig.2. Katowice, Walentego Roździeńskiego estate, 2024

Abstract

The moment of transition is a moment when the past, present and future happen simultaneously. The project will investigate the interplay between ‘longue durée’ structures, spatial dross and socio-spatial practices as a basis for shaping common practices that support collective solidarity. This in turn, will create a notion of care and foster new spatial imaginaries. Viewing the Silesian region from an imaginary perspective, spatial concepts will become a tool for exploring different patterns of growth and degrowth. By analysing these concepts, both individually and in combination with design exploration, a series of spatial and territorial interventions will be made to support a regenerative development of the region.

What will the Silesian region look like without the coal industry?
How the shrinkage of the region can be redefined to strengthen it?
What are core values of these places?

Key words:
Regeneration, dross, spatial concepts, spatial imagination, territorial capitals



fig.3. Coal tip in Zabrze, 2024

Personal motivation

A few years ago, before I decided to pursue a master's degree in urbanism, I came across a book which told the story of a small Polish town called Miedzienaka. The book portrays how the dynamic history of the town, shaped by mining and land movements, influenced the town. It started to slowly disappear. The history has stayed with me ever since, as an example of how complex and uncertain the future can be.

A similar story is taking place in the Silesia region of southern Poland. This mining region is now facing the challenges of the ongoing energy transition. Although my initial interest in this region was mostly related to the ecological impact of heavy industries, I understood that the ecology is only a part of a much bigger challenge for this region.

Miedzianka and the Silesian region share a context of transformation, potential decline and growth. They are unique places where critical questions can be asked: How do we approach spaces on the edge of change? And how can we prepare them for what comes next?

The motivation behind the project was to explore the future from multiple perspectives, open a wide field of possibilities, and most importantly, to leave space for local communities to shape the future of their region. From a more personal side, the project has also become a journey to understand my personal interests, positioning myself in the field and defining my way of approaching different subjects. This way, professional and personal motivation were developed simultaneously with the project.



fig.4. Old mine in Katowice, 2024

Glossary

Dispersion
A spatial structure, where rural and urban cores are interwoven, creating urbanised landscapes (Wandl, 2019).

Dross
Wasted spaces that emerge from rapid urbanisation processes (urban sprawl) or previous economics, that have the capacity to be reintegrated for greater social, cultural and environmental benefits (Berger, 2006).

Longue Durée
Could be defined as a structure formed by human society's interactions with geography and nature that lasts over the centuries or longer. This can be seen as the longest historical temporality that can create a comprehensive ground for historical interpretations (Tomich, 2011). Places can be seen as palimpsests, with structures overlapping and building on each other. Longue durée structures shape the city's spatial organisation, socio-economic practices and identity.

Polycentricity
The spatial configuration of different centres that respond to each other (Thorsten Wiechmann & Stefan Siedentop, 2018). Without the functional interdependencies between cities, the city would be nothing more than a collection of cities in close proximity(Davoudi et al., 2018).

Regeneration
The process of improving or restoring something to a better condition (Mang & Reed, 2012; REGENERATION | Meaning - Cambridge Learner's Dictionary, n.d.).

Regenerative development
An approach that builds a systematic understanding of place rooted in local engagement. It supports regenerative processes that aim to find optimal health (physically, psychologically, socially, culturally and economically) between human communities and the ecosystem (Mang & Reed, 2012).

Regional design
Regional design is an imaginative and creative practice that addresses the physical, functional, and institutional organisation of a region (Lingua, 2022). Using visioning, scenario-building or design-based strategies can help tackle the uncertainty and complexity of urban-regional systems, and these strategies can be employed as soft tools for regional planning (Balz, 2019).

Spatial concepts
Spatial concepts are the perceptions of geography that incorporate knowledge, political agendas or territorial practices in order to extract the spatial logic (Balz & Zonneveld, 2018). The abstract aspect of the concept allows for reinterpretation and adaptation to a specific place (Vigano, 2010).

Spatial imaginaries
The collective understandings of socio-spatial relations that enable change in these relations (Davoudi et al., 2018, p. 101).

Spatial planning
It is a planning approach for spatial development aimed at achieving certain vision or goals, focused on coherent spatial logic, land use or resource protections(Balz & Zonneveld, 2018). Spatial planning can also be understood as a "policy of the place" (Davoudi et al., 2018, p. 105).

Territory
Geographically defined areas that are shaped by various dynamics like social, political, economic or cultural.

Territorial capitals
This policy approach focuses on the endogenous potential of the region, its assets and the qualities that make development possible. Claims that the distinct territorial character requires a more tailored strategy and place-based (Orsi et al., 2024).

Urban commons
Urban commons are shared spatial resources that emerge from collective practices. When managed together, they generate added value by fostering democracy and solidarity within the community (Polko et al., 2021).

Urban system
The urban system is understood as an interconnected system of urbanised areas with their network and centralities. Centralities are understood as spaces of character, urban landmarks or localities that create places of identity.

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fig.5. Teofil Ociepka, Miner in the Forest,1956

1 Introduction

This chapter opens the project by establishing the foundational context. It explores a set of interconnected themes that shape the region and introduces the key challenges it faces. Through an analysis of the European, national and metropolitan scales, critical issues such as energy transformation, demographic shifts and regional identity are explored. This contextual overview forms the basis for the problematisation, which will address the uncertainties surrounding the region's future. The main aim of this chapter, therefore, is to provide the background knowledge necessary for defining the project's approach, which will be developed in the next chapter.

Introduce concepts: urban shrinkage, spatial structures, dross, polycentric region



fig.6. Nikiszowiec neighberhood, 2024

1.1 Context

Coal regions in Europe

The Silesian region is one of the largest coal-producing areas in Europe. Its economic growth began in the 19th century with coal mining, which remains important to this day. Poland is the second-largest coal producer in Europe after Germany (Europe, 2023) and the leading producer of hard coal. Currently, only two EU countries produce hard coal: Poland and the Czech Republic. (Coal Production and Consumption up in 2022, 2023)

Consumption patterns reflect production, with Poland and Germany accounting for two-thirds of total EU coal consumption. (Coal Production and Consumption up in 2022, 2023) However, the impending phase-out of coal, driven by EU policy, is putting great pressure on the Silesian region to diversify its economy. At the same time, geopolitical tensions are creating uncertainties about national security and the future of coal mines.

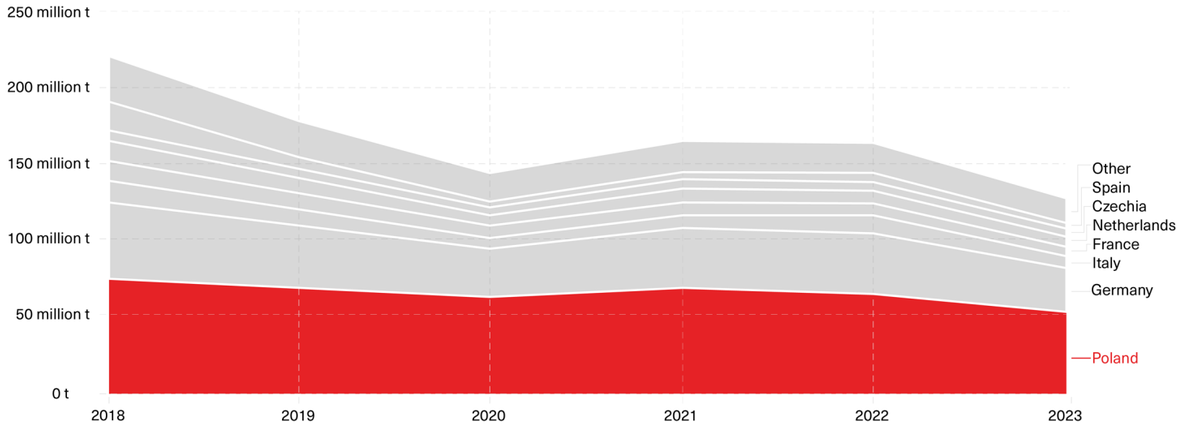


fig.7. Inland hard coal consumption

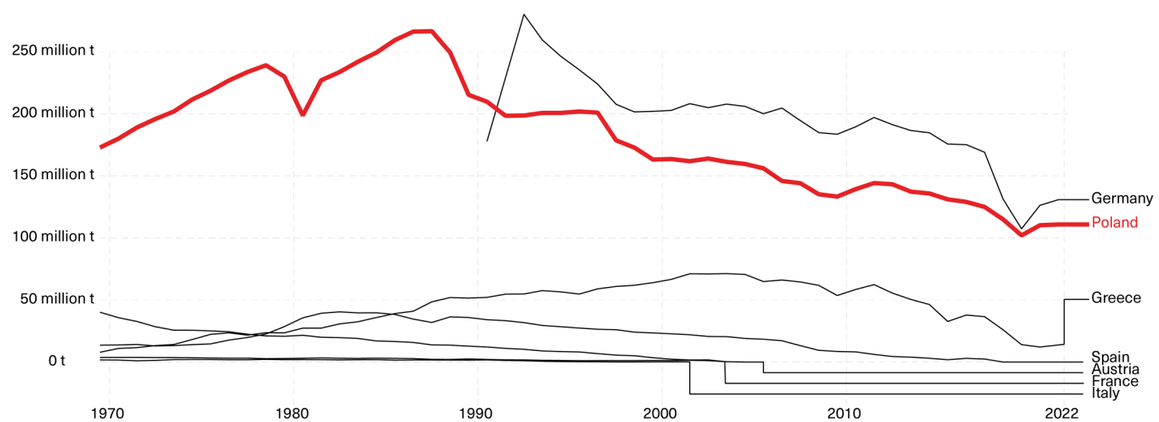
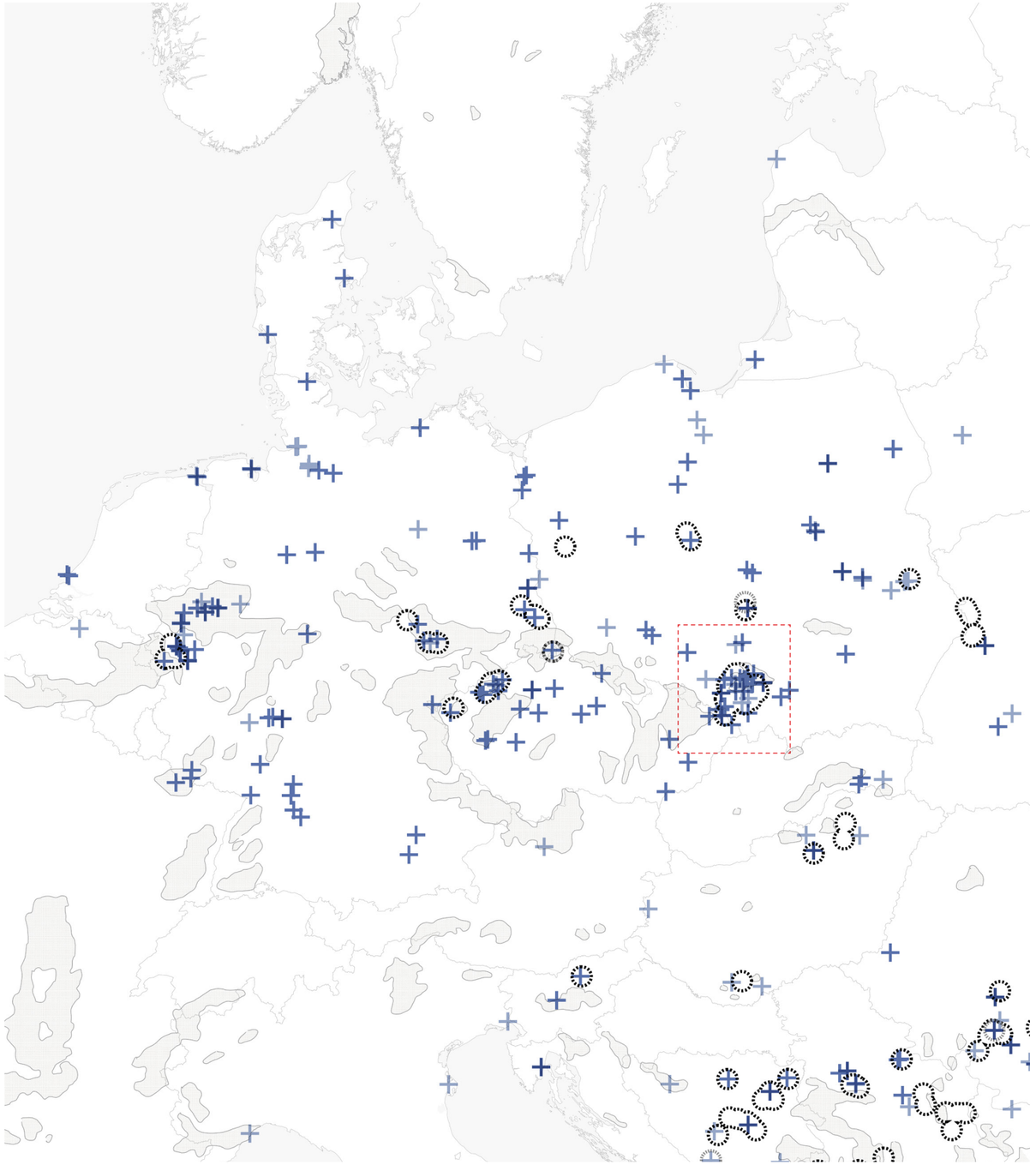


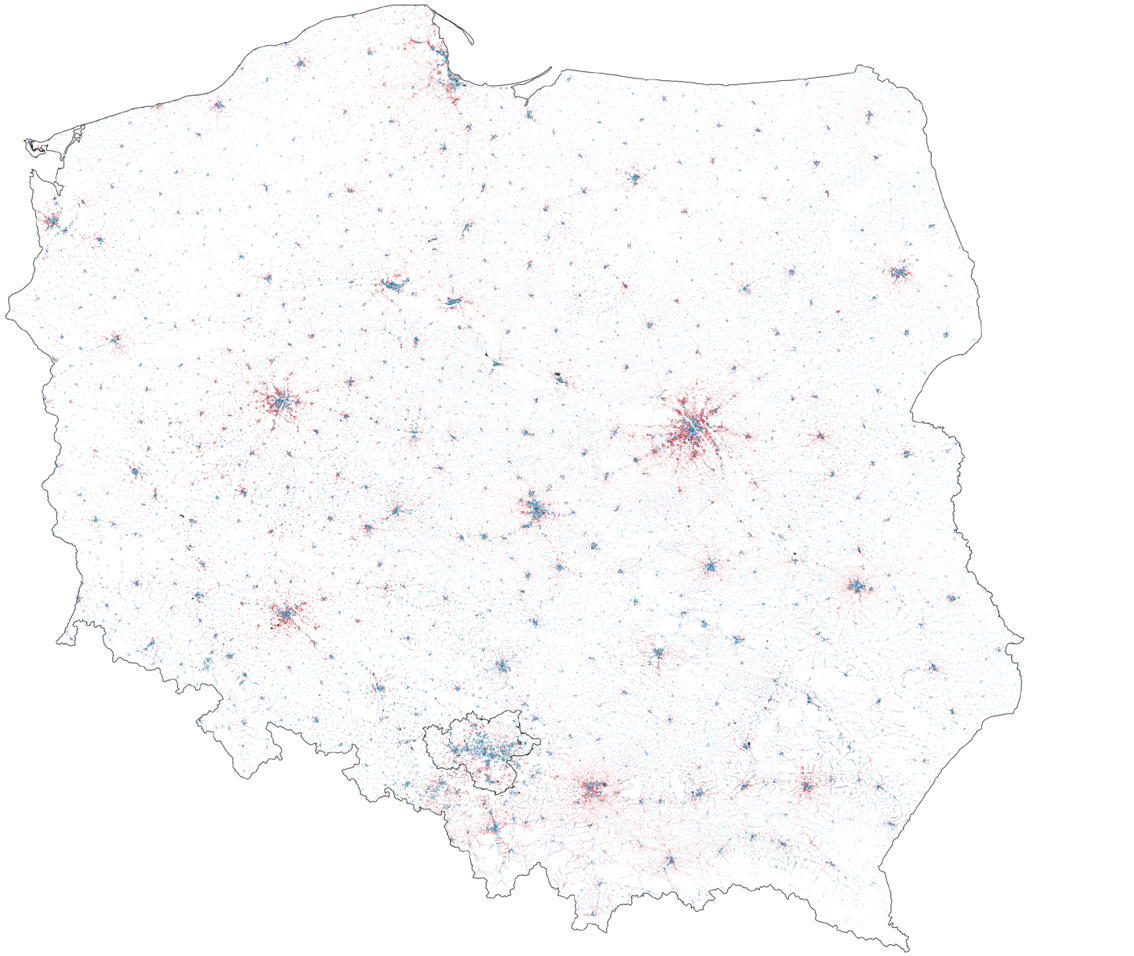
fig.8. Coal production



Coal regions in Europe with the Silesia region marked in red

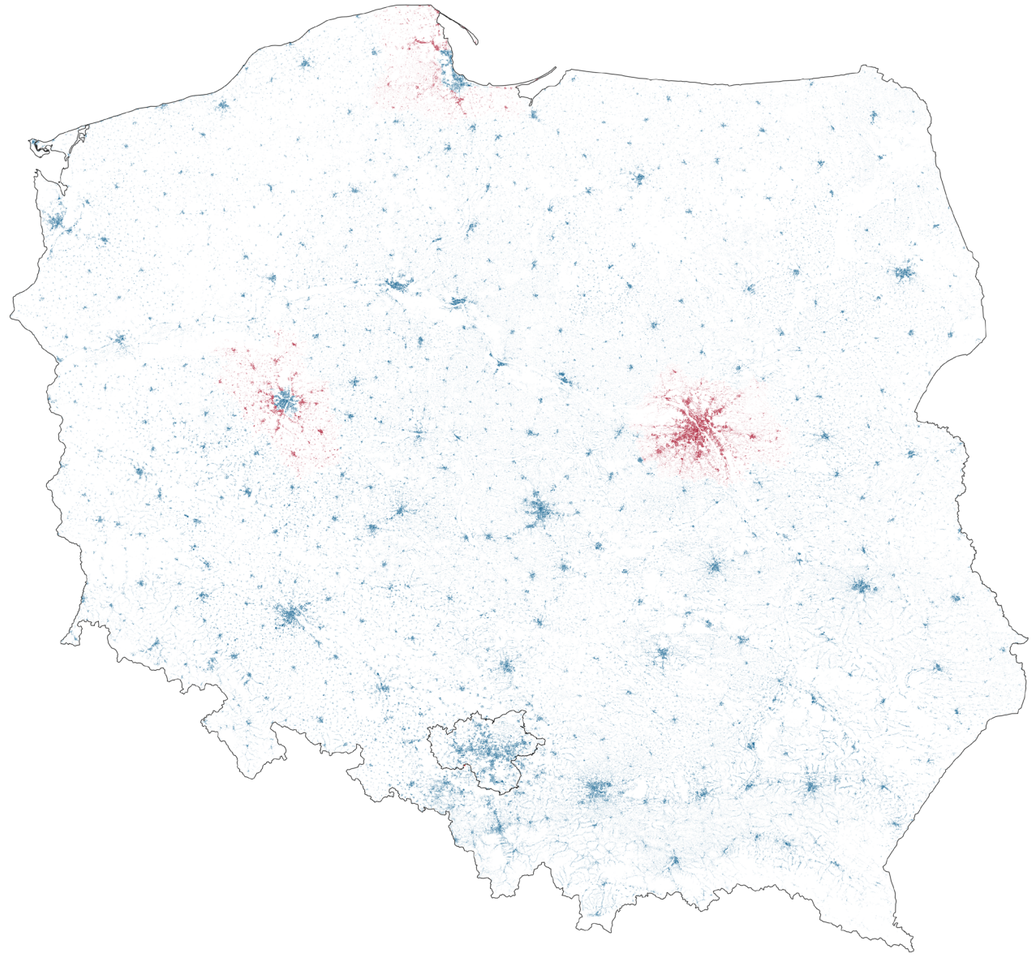
Demographic changes in Poland

The post-war period was characterised by significant demographic growth in Poland, with the population increasing by 14 million between 1946 and 1988. Since the political transformation in 1989, this growth has slowed, and in 1999 Poland recorded its first population decline since the Second World War. While there have been brief periods of demographic growth since then, projections warn of continued population decline in the coming years (Population: Demographic Situation, Languages and Religions, 2024).



Population change 2006-2024 overlap with built-up area

Future population changes are expected to affect the whole country, except for Warsaw, the suburbs of Poznań and the Trójmiasto. The Silesian metropolitan area is currently the second most densely populated metropolitan region in Poland and has the highest percentage of its population living in urbanised areas.(GZM na tle wybranych obszarów metropolitalnych, 2024) However, it is also expected to experience a significant change in population (Prognozy ludnościowe - wyzwanie dla wszystkich, 2023).



Predictions of population change 2030-2100 overlap with current built-up area

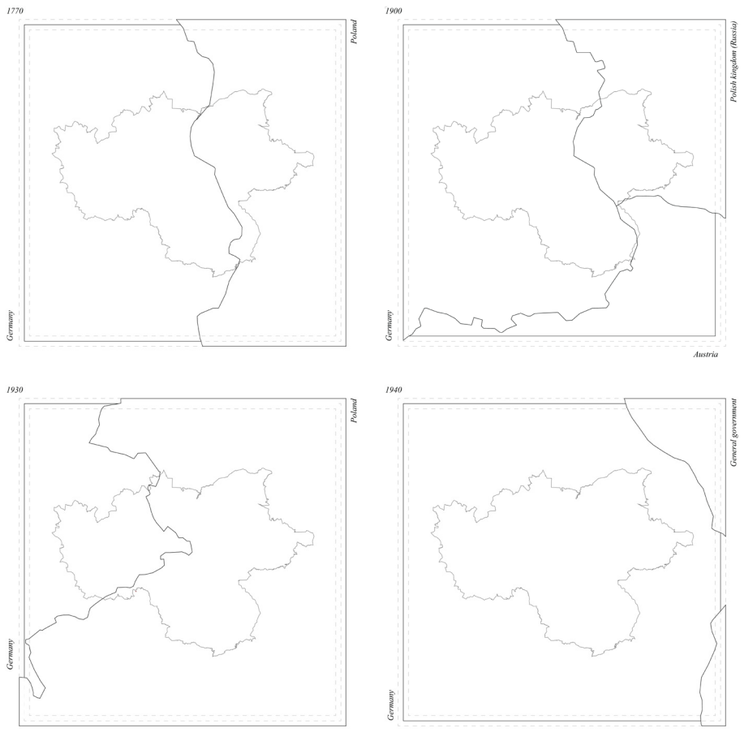
Śląsk, Silesia, Schlesien

Polish: Śląsk
Latin: Silesia
Czech: Slezsko
German: Schlesien

Cross-border area, a river or lake, a pagan tribe, the name of a mountain, an area, a dwelling and its inhabitants or a solar cultural centre; all of possible hypotheses behind the origin of the region's name 'Siliesa' (Śląsk – IBR Wiki, n.d.). The multiplicity of the ideas is picturing the difficult and convoluted history and culture of the region. For centuries, the nationality for the region was not even a question to be concerned about (Rokita, 2020). Later, Prussian, Polish, Austrian and even Czech influences shaped the region culturally, economically and politically. Ever-shifting national borders that were dividing countless industrial and mining sites, railways, roads and communities. However, what remains is the homeland.

"Until now, in the countryside, the Silesian lived in a specific homeland, which always had a father. Once a man of flesh and blood, the concept of homeland swelled over the centuries. It embraced larger communities - religious or state - but the 'father' was never lost, no matter whether it was God, king or emperor."(Rokita, 2020)

Regional identity that was defined by convoluted industrial history, today, starts to be questioned. Concepts like 'New Silesians', described by Zofia Oslislo-Piekarska as design ambassadors of the region. They create dialogue between the residents with different cultural and identity backgrounds (Nowi Slazacy_SBC.Pdf, n.d.). It is a new way to look at regional identity. It also pushes for a perhaps broader definition: who are the 'new Silesians'?



Changes in the national borders of the Silesia region throughout history



fig.9. Andrzej Czyżewski, Washing in the meadow, Tychy, 1965



fig.10. Andrzej Czyżewski, Bolesława Bieruta Street, Tychy, 1965



fig.11. Andrzej Czyżewski, Playing in a puddle, Tychy, 1965

1.2 Problematisation

Deindustrialisation

Poland, for centuries, has been strongly relying on the coal industry. It has become one of the biggest producers of hard coal in Europe (Ritchie & Rosado, 2017). Starting from the 19th century, ‘black gold’ was a driving force for the process of industrialisation and urbanisation in the Silesia region (Bijańska & Wodarski, 2024). After the Second World War, coal mining became one of the cornerstones of the economic strategy (Pepłowska et al., 2024). Today, the region is heavily industrialised. Not only are mining activities happening there, but also so-called mining-supported companies that are closely linked to coal extraction, including machinery manufacturing, engineering services, and transportation (Pepłowska et al., 2024).

The coal industry used to be an element of economic progress over the centuries, but now it has become an element of regression, especially from a European perspective. Green Deal, a European growth strategy, aims for climate neutrality, a more prosperous society and a resource-efficient economy (The European Green Deal, 2019). With European ambitions, Poland needs to redefine the economic system that is strongly connected with the Silesia region. Pepłowska points out that “this transformation is critical not only for meeting international climate targets but also for ensuring long-term economic and social stability in regions historically reliant on coal mining” (Pepłowska et al., 2024, p. 169)

The upcoming transformation creates a lot of uncertainty. Although it is decided that Poland should phase out energy that is produced from coal by 2049 (European Commisson, 2024, p. 5) there is not yet one clear path to follow. This period of the transformation could be especially hard for the municipalities that rely mostly on extraction activities, like for example Ruda Śląska, where the level of entrepreneurship is much weaker. Frankowski and Mazurkiewicz explain that it is caused by the lower number of sole proprietorships in areas of economic monocultures (Frankowski & Mazurkiewicz, 2020). Besides of lack of economic diversity in parts of the region, there is also a lack of upcoming alternatives. The old industries disappear faster than the new ones appear, and this has consequences for cities and the whole region (Mokrzycka, 2023).

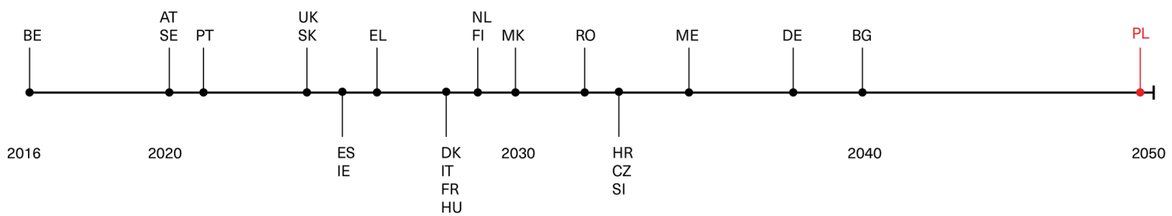
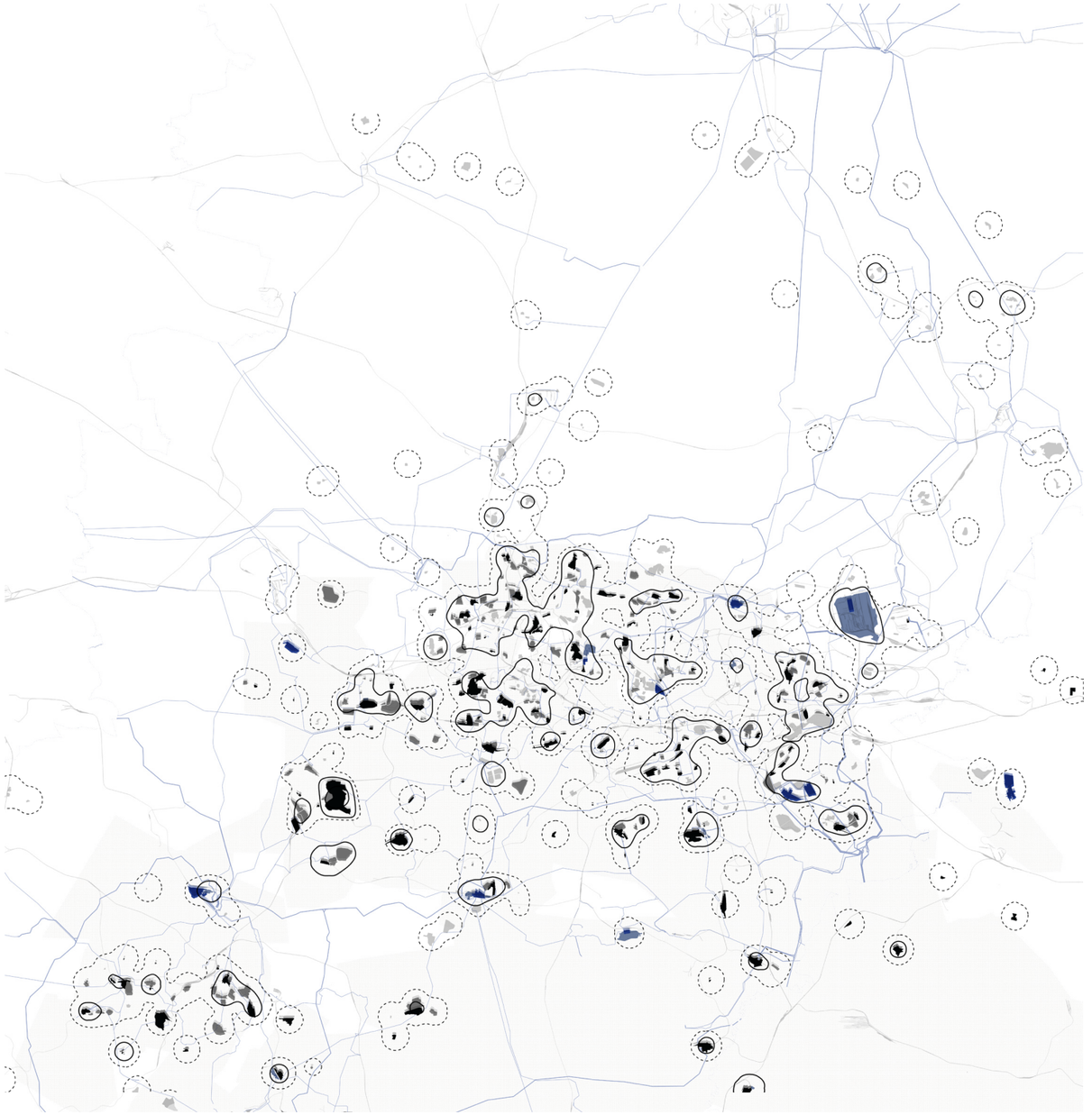
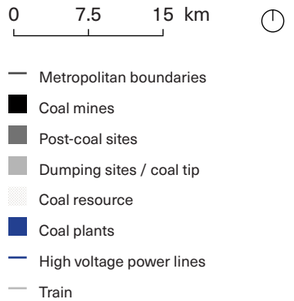


fig.12. Coal Phase-Out Plans of European Country (country codes)



Coal infrastructure in region



Phases of shrinkage

The transition from the industrial to the post-industrial age, combined with political and economic transformation, has had a significant impact on society. Unemployment, one most the most noticeable effects of transformation, was especially significant in the mining and industrial conurbations. This affected the low-inflow migration and emigration of young people who had not managed to find a job (Runge et al., 2020). So far, the difference between mining and non-mining municipalities in terms of population decline is noticeable, with the former expected to lose 8.5% of its population and the latter only 2.7% (Bukowski et al., n.d.).

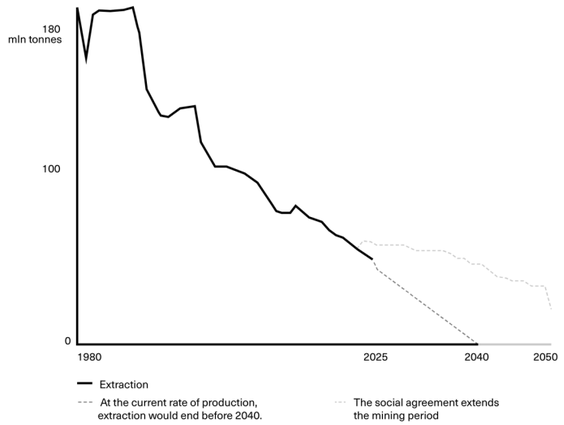
In 2020, a big part of the mining restructuring had been tackled, and only 4% of the province's workforce left the mining sector (Bukowski et al., n.d.). It is important to know that this is just a small part of the 'coal economy'. This can be noticed very well in the employment structure in mining-dependent companies in Silesia: 8% are mining companies, and 92% are other companies that are connected to coal extraction (Frankowski et al., 2023). This broader view of the region's employment structure gives an idea of how insecure the labour market is. This could be one of the reasons why young people often prefer to emigrate; another would be a lack of diversity in the market, or a lack of satisfaction with salaries (Runge et al., 2020).

Śląskie Voivodeship is one of the most urbanised and industrialised regions in Poland, where complex relationships between the socio-economic system and spatial transformation influence demographic change. Some rapid depopulation phenomena are becoming a permanent trend; some towns in the Katowice agglomeration have been experiencing population decline for more than 30 years, which could be considered urban shrinkage (Runge et al., 2020).

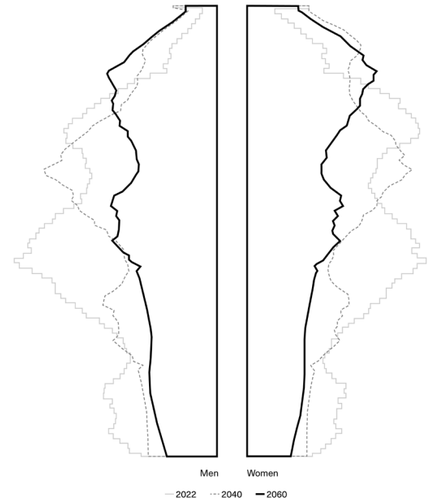
Urban shrinkage and shrinking cities can be defined in various ways. One common understanding is that they are areas experiencing, or expected to experience, a decline in population due to a range of factors. This process may or may not be accompanied by physical changes in the urban environment (Reis et al., 2016).

Shrinkage affects multiple dimensions of the city, which can be categorised into three dynamics: hardware, when depopulation leads to the degradation of physical structures and the creation of vacant properties; software, when population loss leads to major socio-demographic changes such as accelerated ageing; and mindware, which affects how a city is perceived outside its borders (Aurambout et al., 2022).

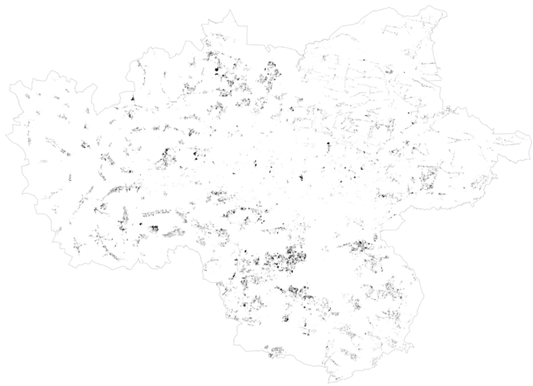
Urban shrinkage is starting to be more and more crucial to spatial planning. Until now, this phenomenon has typically been seen as a consequence of deindustrialisation. In the future, however, even economically active cities may begin to shrink due to an ageing population (Aurambout et al., 2022).



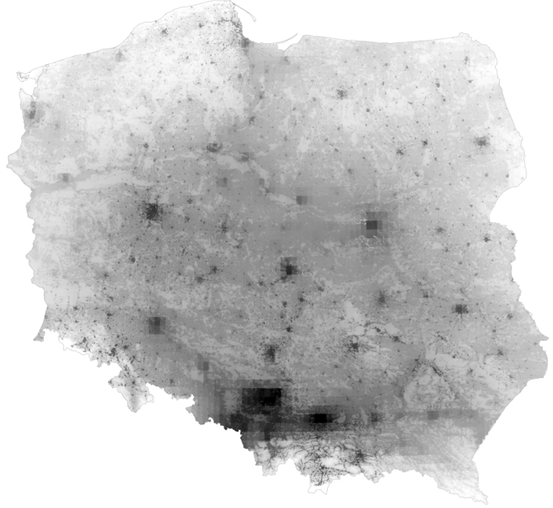
Cause 1: De-industrialisation
Forecast for coal production in Siliesa region



Cause 2: Aging population
Population structure predictions in core metropolitan areas

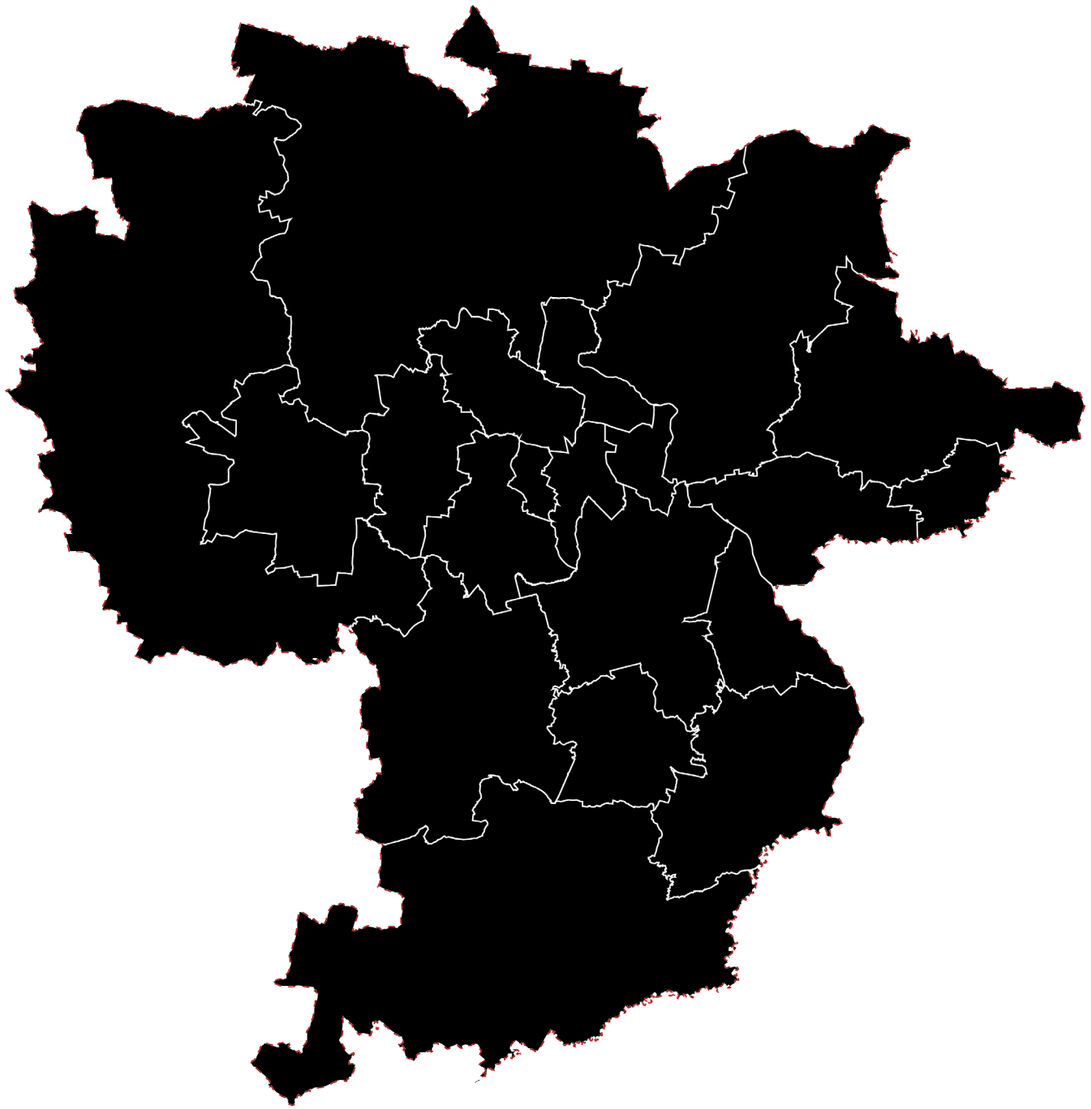


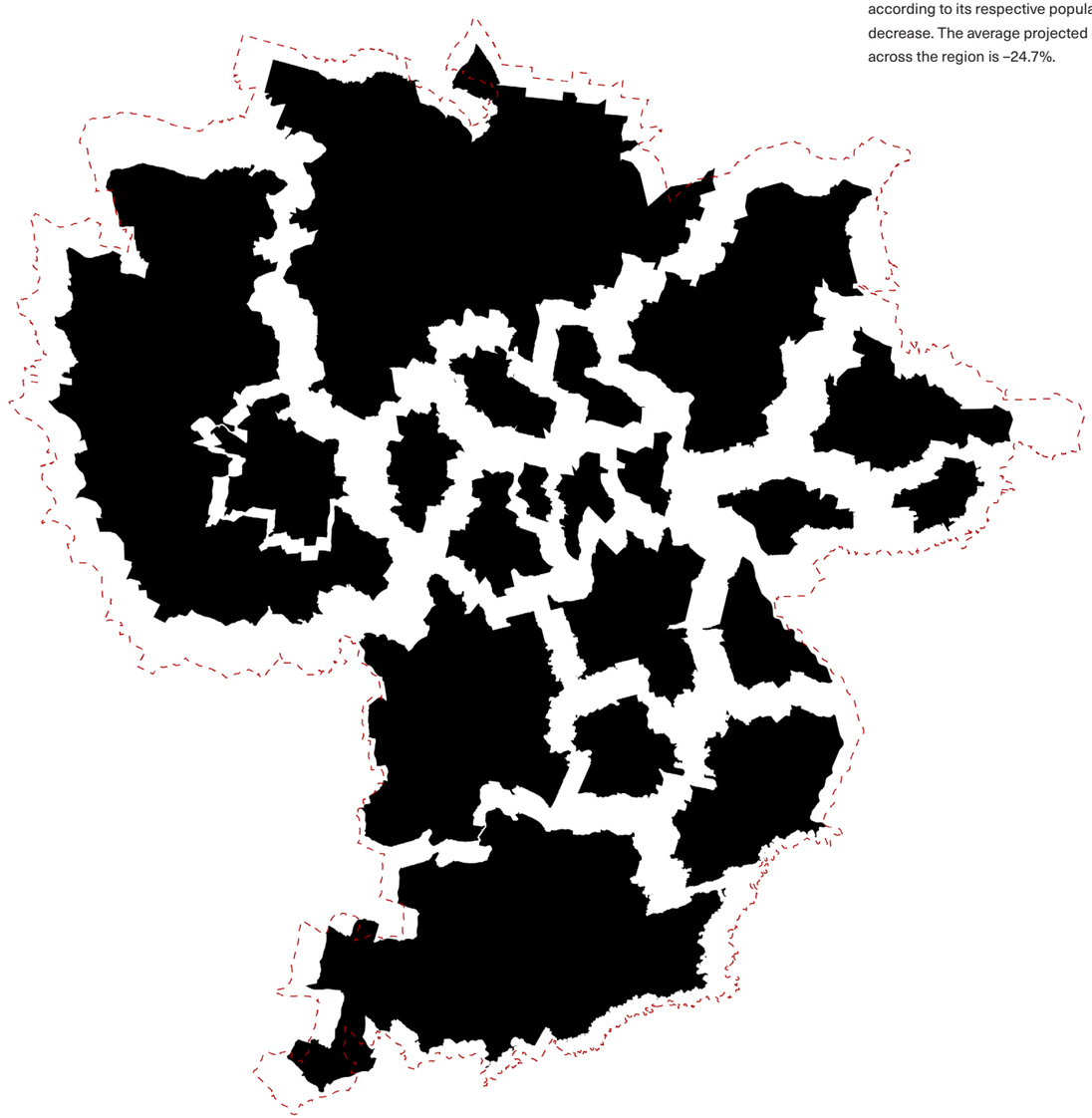
Cause 3: Suburbanisation
Change in surface area overlapped with peripheral housing areas



Cause 4: Environmental factors
Air pollution (pm25) in national scale

fig.13. Raported causes of urban shrinkage from the EU comisson report (Aurambout et al., 2022) in metropoloitan context





Population shrinkage

This diagram illustrates the percentage of population decline by comparing the number of inhabitants in 2022 with the projected numbers for 2060. Each subregion or municipality is scaled according to its respective population decrease. The average projected decline across the region is –24.7%.

Comparison between 2022 and 2060

graphic inspired by Atlas of the shrinking cities (2006)

Average percent of shrinkage: -24.7%

Space and dross

It is important to bear in mind that some cities may experience a population decline, although they may still grow physically (Aurambout et al., 2022). In the Katowice agglomeration, this phenomenon can be observed in many cases: city centres are losing population, while the peripheries are growing in terms of both population and built area. The process of suburbanisation is taking place not only in the undeveloped peripheral areas, but also in the previously built-up districts or the core of the metropolis (Spórna & Krzysztofik, 2020). This phenomenon, called ‘inner’ suburbanisation, develops between urbanised zones of neighbouring towns, which infill space with low-rise housing estates (Spórna & Krzysztofik, 2020).

In this way, the polycentric urban area of Katowice becomes a mesh of interconnected urban structures (sponges) that become difficult to comprehend. The urban structure can be defined as the spatial form and the different socio-spatial relations created by the built environment. Infrastructure, large industrial sites, post-mining areas, and remaining natural spaces disrupt today’s continuous and unstructured process of urbanisation. The region can simultaneously be viewed as isolated yet interconnected islands, offering opportunities for reinterpretation.

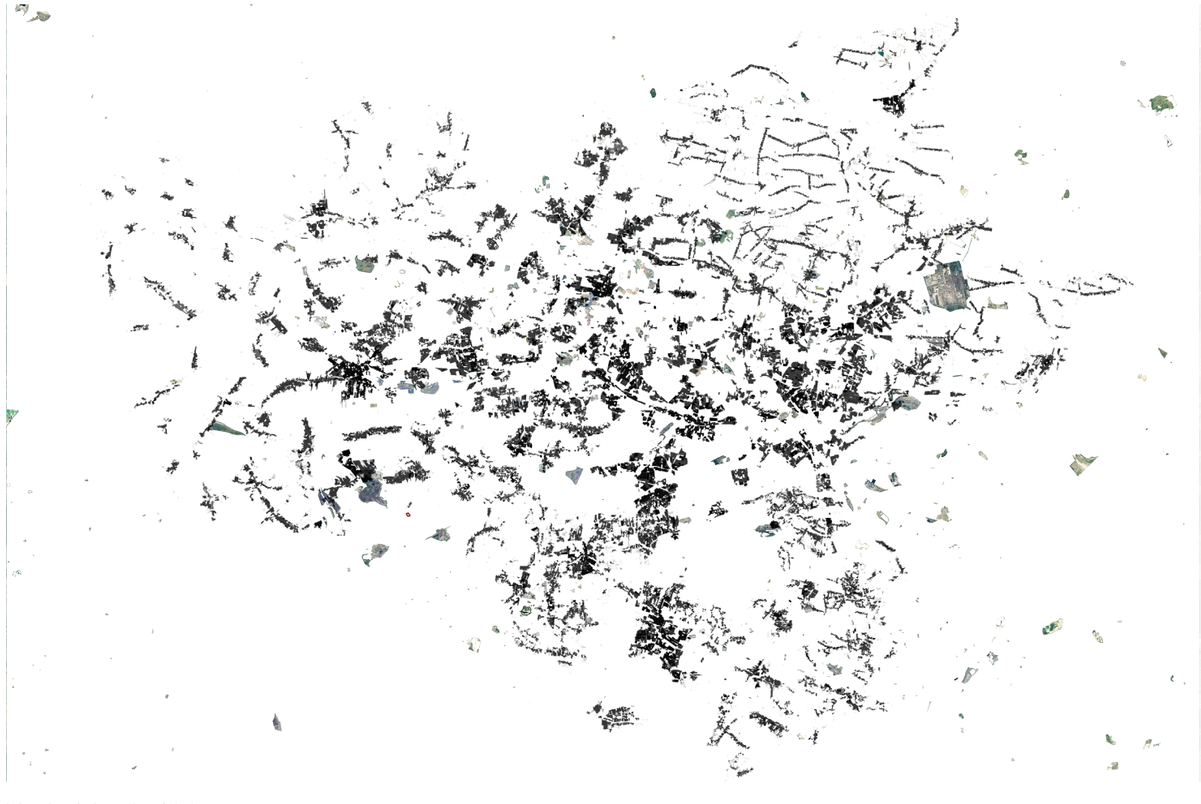
In the Katowice conurbation, urbanity has developed alongside the coal industry, which is spread across the region. Since the 19th century, mining activities, together with heavy industries, have been leaving marks on and under the ground. Long-term industrial activity, combined with extensive economic exploitation of resources, has resulted in the highest percentage of degraded land in the country (Bukowski et al., n.d.). Due to the disorderly legal status of the post-industrial sites, additional financial outlays and administrative barriers, the improvement of spatial qualities is slow compared to other provinces in southern Poland (Bukowski et al., n.d.).

For a long time, processes that ensured the economic development of the region created pressure on the land. Initial ‘consumption’ of the vacant land affected in creating today’s ‘wasted’ places like abandoned or contaminated sites and parking lots – so-called wastelands (Berger, 2006). Dross is an inherent part of any process, and as Berger explains “Dross emerges out of two primary processes: first, as a consequence of current rapid horizontal urbanization (or what some refer to as urban “sprawl”), and second, as the leftovers of previous economic and production regimes [...]”(Berger, 2006, p. 12).

These complicated spatial relations between cities, industry and its dross have their origins in the industrial era, when “the process of urbanisation was so strong that it tore down the boundaries of towns and settlements, which, by merging and covering every available space with disorderly buildings, created large industrial agglomerations”(Kaczyńska, 1970, p. 53).



Region without heavy infrastructure

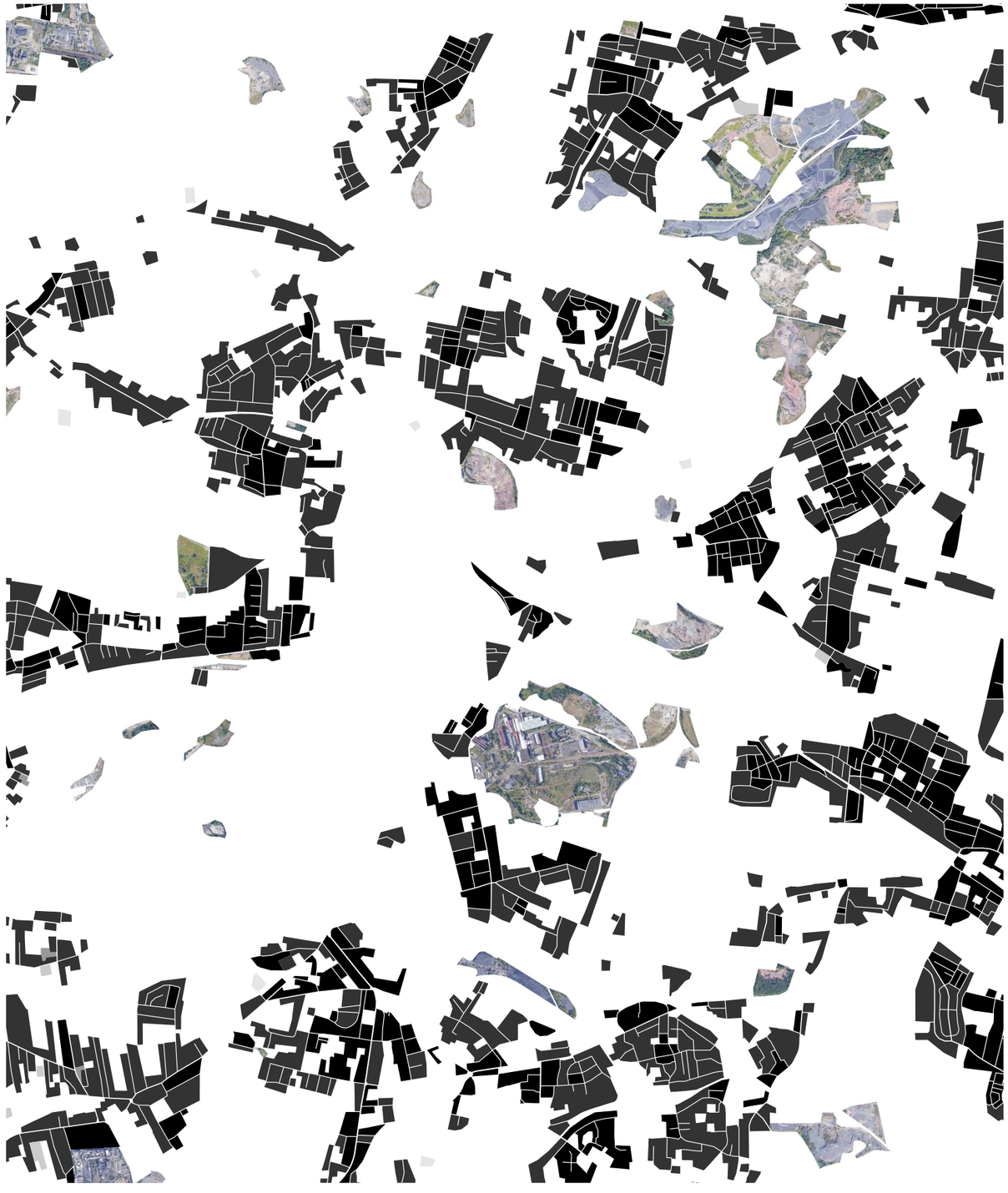


Islands of changing fabrics



Region without heavy infrastructure

0 0.5 1.0 km



Islands of changing fabrics

0 0.5 1.0 km

Continuous
Discontinuous dense
Discontinuous low
Discontinuous very low
Industrial sites

One big city and the rest

A polycentric region is characterised by two or more distinct cities located nearby, without a clear hierarchical structure, and is functionally interconnected. The Silesian region is a good example of such a region, as its cities have historically developed close to one another due to a common resource. This proximity fosters strong interrelations between the cities, which can lead to both positive and negative effects.

For instance, the process of deindustrialisation is at different stages in different municipalities, and the opportunities for residents vary. Some parts of the region, such as Katowice or Zabrze, have experienced a large loss of industrial jobs, but have managed to compensate in the service sector. The consequences can be seen in the unemployment rate, which is 1.1% in the city of Katowice and 8.2% in Bytom (Sytuacja na rynku pracy, 2024). Regions with mining activities or post-industrial sites are generally less attractive to foreign investors. The reason for this may be due to rock mass activities and mining damages, which could hinder the foundations of new buildings (Frankowski & Mazurkiewicz, 2020).

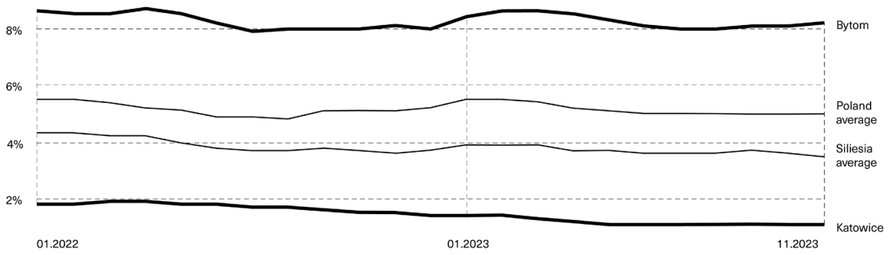


fig.14. Unemplayent rate

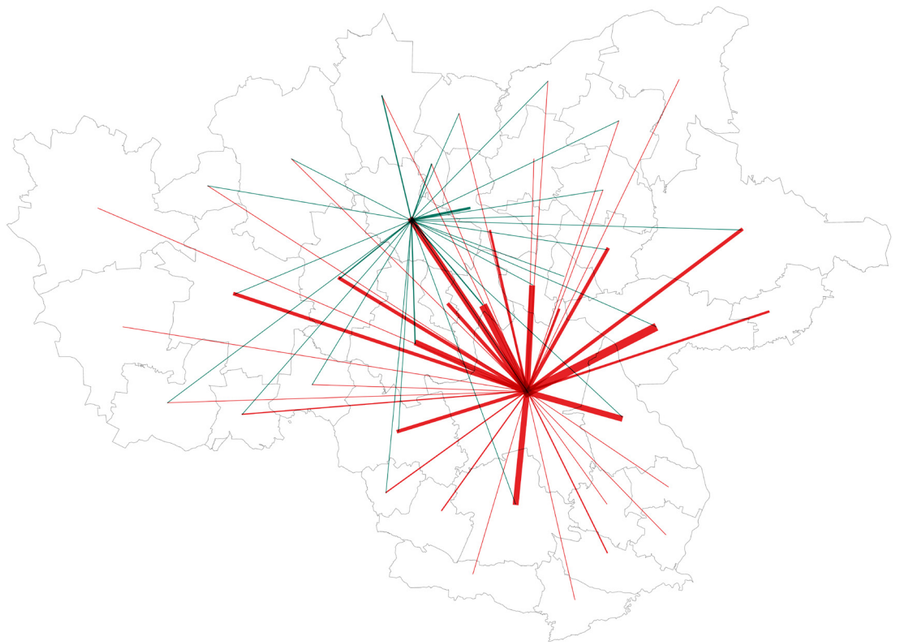


fig.15. Work commuters in the year 2023 - Bytom and Katowice

Katowice
>6000
4000-6000
2000-4000
1000-2000
500-1000
<500

Bytom
>6000
4000-6000
2000-4000
1000-2000
500-1000
<500

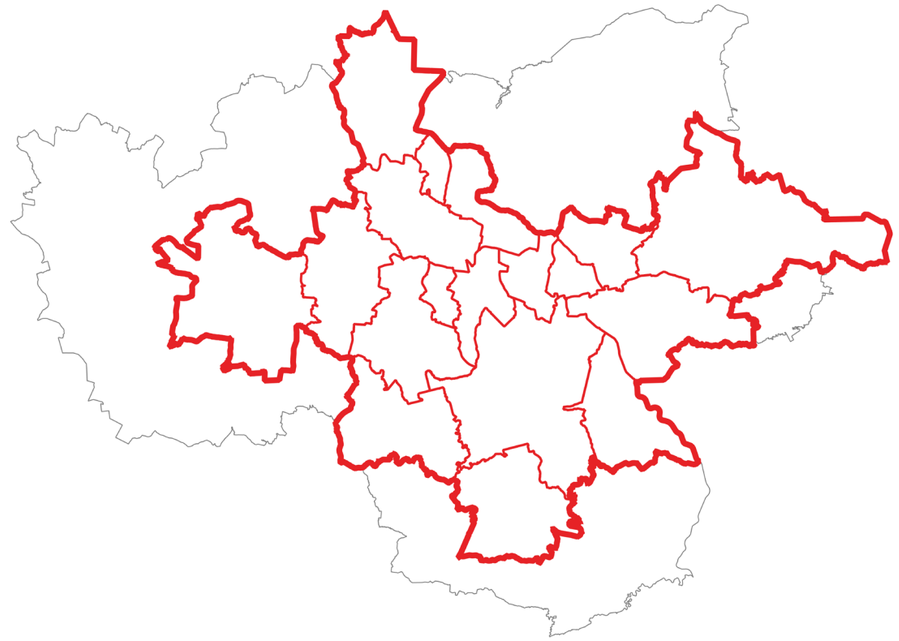


fig.16. Idea of creating one big mega city.

Smaller cities, which are still trying to make the economic transition, cannot compete with the city of Katowice, which acts as a magnet for employees, researchers and investors. Its central location and strong links with other parts of the region create the second largest commuter movement in Poland after Warsaw. In addition, Katowice as well as Gliwice are two cities with research and innovation institutions that are actively involved in the upcoming transition. These two cities create more attractive offers for residents than other less developed places (Frankowski & Mazurkiewicz, 2020).

As one of the best-known cities in the Silesia region, Katowice attracts both domestic and international investors. One in four Silesian companies on the 500 list of the largest companies is based in Katowice (Frankowski & Mazurkiewicz, 2020). That creates big income differences between Katowice and the rest of the agglomeration. Although neighbouring municipalities like Mysłowice and Świętochłowice have plenty of available land for new investments, major international investors are often unfamiliar with these smaller cities. Instead, they prefer to allocate their investments to the well-known city of Katowice, despite the limited availability of space for new developments there (Mokrzycka, 2023).

For all these reasons, a new idea appeared. The idea of creating one big ‘megacity’ or ‘supercity’. The new regional structure of the joined core municipalities of the GZM metropolis would ensure that regional development is more balanced. Within this new regional structure, cities would still be cities; however, the idea is to “introduce a certain division of competencies and to create a metropolitan municipality to carry out the above-mentioned supra-local tasks of a higher order” (Madejski, 2024).

2 Approach

The previous chapter outlined the broader context of the Silesian region and introduced key themes that problematise the project, providing a contextualised grounding for this chapter. This section aims to introduce the conceptual and theoretical approach that the project will take to tackle the region's challenges. This chapter begins by positioning the project, emphasising the roles of uncertainty, imagination and regeneration. To later present the problem statement, defining the project's objective and outlining the main research questions. These elements lay the foundation for more in-depth research and shape the theoretical approach of the project. To represent the theoretical grounding and process that the project will follow, the 'dross loop' was introduced.

Introduce concepts: spatial imagination, regeneration, commoning, longue durée, spatial concepts



fig.17. Old mine estate in Bytom

2.1 Positioning

Uncertainty

Over the past decades, there has been significant pressure on the land from industrial and urban development. Much is already happening regarding repurposing the mines, finding new green initiatives, and restoring degraded land. However, with socio-economic challenges that are caused by the upcoming transformation, this is the moment to define the new socio-economic system and dynamics between the cities.

This volume puts the uncertainties that the future can bring to the region as the main focus point. Unsure geopolitical situations might require going back to mining activities in the region, or unpredictable demographic changes can strongly influence the growth or de-growth of the region, which can greatly affect the region's development. However, these conditions should not stop hope for better futures.

Regeneration

Space can be understood as a from 'relations-between'; we begin to understand that it is not a static landscape, but a dynamic construct shaped by continuous social interactions (Doreen Massey, 2005). Starting with everyday life, we can observe how space influences our actions, emotions and behaviours, while space is also being constantly redefined by people. This mutual relationship between people and space is expressed through socio-spatial practices — the lived, embodied and collective ways in which space is experienced.

Recognising these relationships can help to address the complexity and uncertainty currently faced by Silesian regions. A central question emerges: How can a more hopeful future be cultivated in a flexible, open-ended manner, one that embraces different possibilities and fosters care and responsibility in the present? Moving towards such a future requires us to shift our role from owners or managers of space to partners with it (Mang & Reed, 2012). This shift aligns with the broader approach of regenerative development.

Regenerative development is looking at the participative way of creating a balance between human communities and the natural environment (Mang & Reed, 2012). Regeneration of the 'lost' spaces due to mining activities or abandoned places can help in bringing back the balance that regeneration approaches is seeking. This (re)production of the spatial resources can happen by finding collective practices that change the "things" into relations, communities. (Armiero, 2021)

Being involved in the regeneration process can create the notion of care about the place and a fundamental for creating local identity. By changing the role of citizens from passive to active, the sense of solidarity and encouragement can be triggered (Erica Ferigo et al., 2020). This can evolve participatory processes that create a sense of belonging to the place, new consciousness and responsibility for this socio-spatial relation that can form urban commons (Erica Ferigo et al., 2020). This concept can be seen as the soft way of showing how the regeneration process can help in transforming spaces that seem wasted to become places of relations (Armiero, 2021).
The project will attempt to position itself within the notion of regenerative approaches, which are usually presented from a socio-ecological perspective. In order to find a broader view of this

"The act of materially reclaiming a place through actions of "care" based on collaboration and sharing has a wider value: the material action taken upon the common also rebuilds the sense of identity and belonging of a community and allows it to define itself as such" (Erica Ferigo et al., 2020, p. 17).

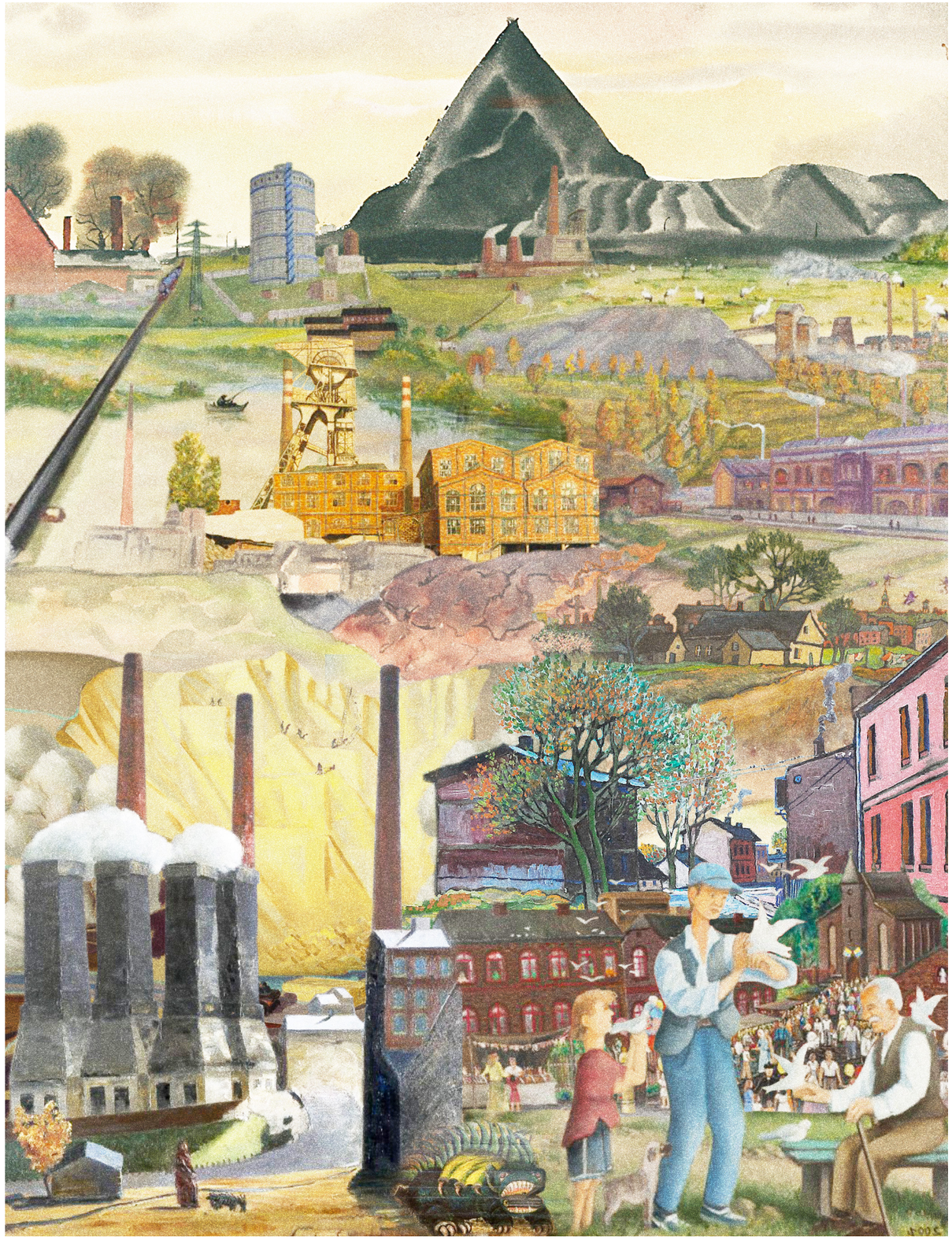


fig.18. Mining landscape

Collage combines different paintings made by local artists that capture the variety of landscapes in the region.

approach, the research will argue for the importance of in-between spaces. They will be seen as a support system for today's urban systems, as well as thresholds for the more undefined future.

Taking part in the regeneration process can foster a sense of care for a place and be fundamental for creating local identity. By shifting citizens' role from passive observers to active participants, regeneration can trigger feelings of solidarity, agency and mutual encouragement (Erica Ferigo et al., 2020). This shift supports the development of participatory processes that foster a deeper sense of belonging, awareness and responsibility towards the socio-spatial relationships that shape everyday life. Through such engagement, urban commons - shared spaces that are collectively produced and maintained - can be created (Ferigo et al., 2020).

This concept offers a subtle yet meaningful way of understanding how regeneration can transform seemingly neglected or 'wasted' spaces into places of connection, care, and community (Armiero, 2021). These transformations are not solely physical; they reflect new relational and collective ways of inhabiting and shaping space.

The research will focus on the role of in-between spaces — those overlooked or transitional areas that exist at the margins of systems. These spaces will be explored as support structures for urban life, as well as thresholds for unforeseen futures.

Imagination

By starting to dream, visualising and thinking about the 'what if ...', we create the first initial step of understanding what our possible future could be. Sometimes these vague reflections will stay in your head, but sometimes they can also become the new beginning of real change.

Exploration of new relations between people and their surroundings with the combination of powerful narratives can wildly mobilise actors, which is especially useful at the early stage of transformation processes (Galafassi, 2018). This individual or collective skill of imagination can evolve to new ways of co-existing, which can form together a transformative capacity (Galafassi, 2018). This creative driving force can be seen not only as a vague process but also as a practical tool for projecting multiple possible futures. These transformative capacities can also be seen in the definition of spatial imaginaries, as the collective understatement of socio-spatial relations that enables to change of these relations (Davoudi et al., 2018).

By starting investigations of possible changes in these relations, the project focuses on a spatial approach to the imagination. "Spatiality is understood as emergent from the relationship between the spatial, temporal, social, material and cognitive worlds" (Davoudi et al., 2018, p. 98). In this way, imagination will become an exploratory tool to tackle the territorial complexity. Project begins from a singular imagination, creates multiple scenarios, makes collages from existing spatial concepts and structures, and combines my observations with other perspectives, to create spatial imaginaries of the more hopeful future.

Therefore, the project aims to position itself within the broader framework of regenerative approaches, which are based on collective and participatory processes of engagement with place. In this context, regeneration begins with the power of imagination, a tool that can empower citizens, reshape socio-spatial practices and foster a deeper connection to place. By reimagining and actively transforming their environments, communities can enhance the quality of life today and lay the basis for a more resilient and caring future for future generations.

"The greatest work of imagination is 'its ability to imagine how we might be otherwise"(Yusoff & Gabrys, 2011, p. 12).

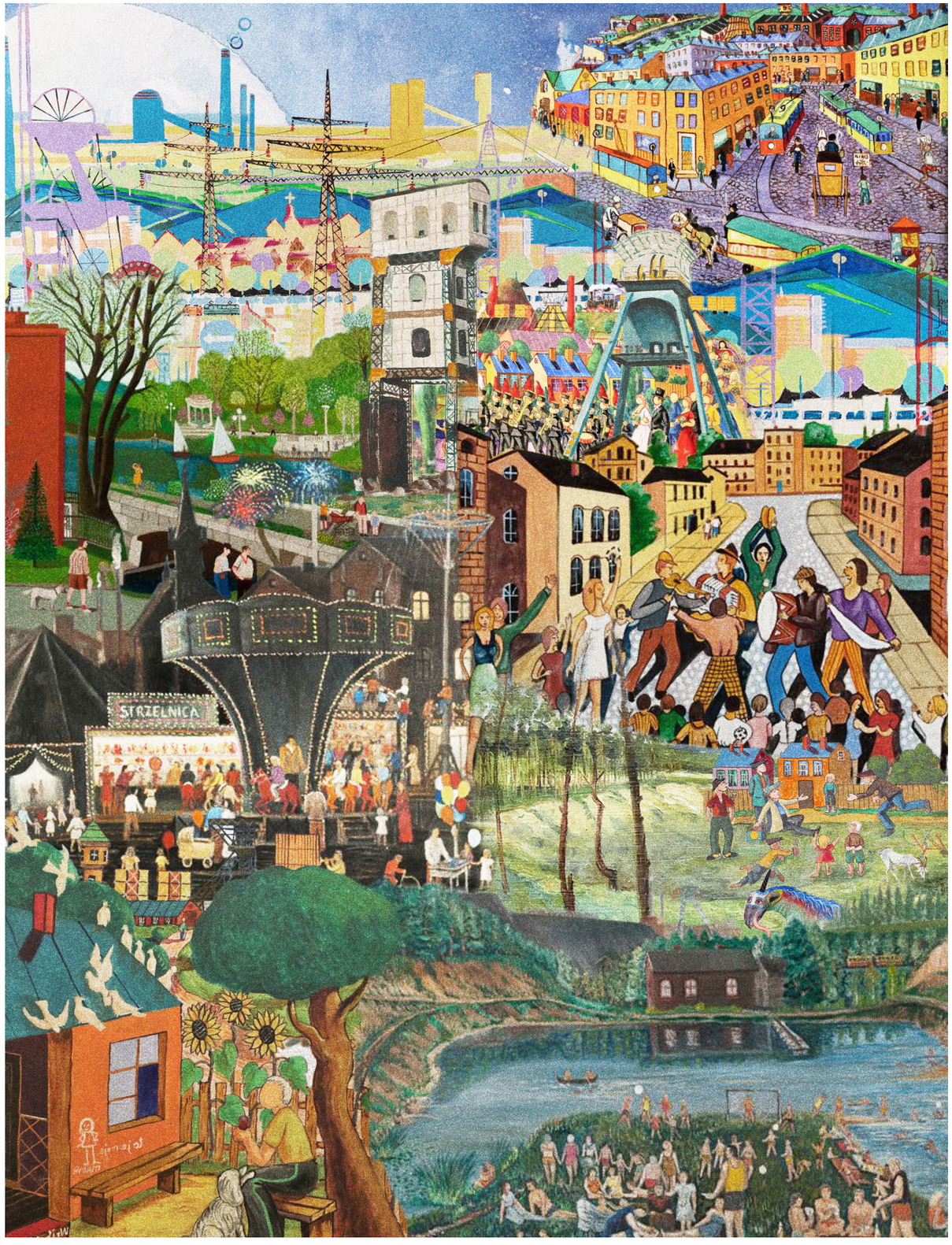


fig.19. Everyday life

The collage captures various observations and interpretations of local artists about everyday life.

2.2 Research

Problem statement

Landscape degradation, shrinking cities, and the unknown function of post-coal industries create a ‘sponge’ structure in the region. Silesia is characterised by a network of valuable and active spaces, with many gaps of degraded and empty areas in between. With the uncertain future of urban growth and de-growth, the filled and unfilled structure of the region will differ along with the socio-economic fluctuations and the way cities influence each other.

However, “some of the types of “waste” may be productively reintegrated for higher social, cultural, and environmental benefits” (Berger, 2006, p. 8). The regeneration of the region should lead to a more profound change than the simple ‘fixing’ of the space that was disturbed in the past. From a broader perspective, can reimagining the relationships between people-space, past-present-future, and city-territory contribute to a more hopeful future?

Aim

The moment of transition is a moment when past, present and future happen simultaneously. The project will investigate the interplay between ‘longue durée’ structures, spatial dross and socio-spatial practices as a basis for shaping common practices that support regenerative approach. Viewing the Silesian region from an imaginary perspective, spatial concepts will become a tool for exploring different patterns of growth and de-growth. By analysing these concepts, both individually and in combination with design exploration, a series of spatial and territorial interventions will be made to support a more regenerative development of the region.

Research question

How can the imagination of spatial and territorial structures of the Górnośląsko - Zagłębiowska metropolitan region foster a regenerative future and what spatial and territorial interventions could support this process?

Research sub-questions

1 Analysis	SQ1:	What are the spatial structures that are crucial for the region in a longue dureé?
	SQ2:	What are the socio-economic challenges and opportunities, and how do they influence longue dureé structures?
	SQ3:	How can regeneration be defined in the spatial and territorial context of the Silesian region?
2 Projections	SQ4:	How can the dynamics between cities be redefined in the polycentric structure of the region, and what conditions will this create?
	SQ5:	What spatial concepts can support the exploration of regeneration in the context of regional growth and de-growth?
	SQ6:	What are the possible re-imaginaries of the different paths of development?
3 Transformation	SQ7:	What are the possible physical elements and socio-economic practices that could foster a more regenerative territory?
	SQ8:	What elements can facilitate the integration of diverse imaginaries with spatial and territorial structures?

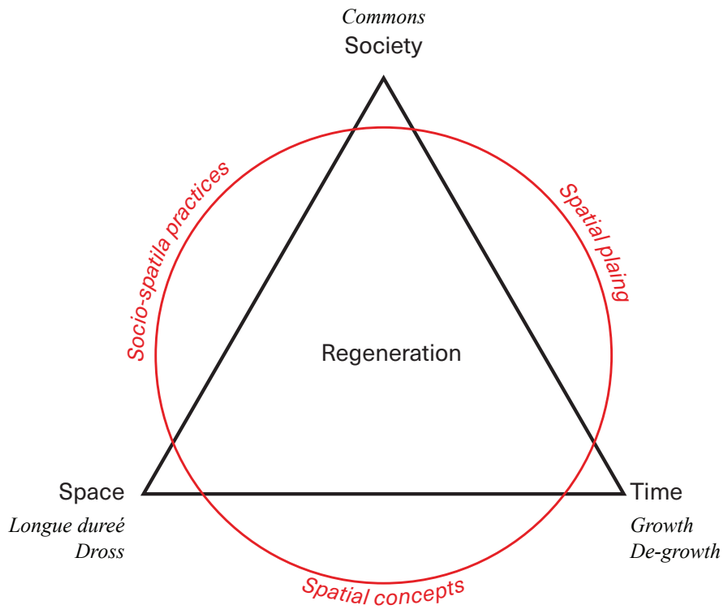
Conceptual framework

The conceptual framework has evolved into a collage of theoretical concepts, elements that introduce uncertainty, objectives and exploration tools.

In order to start thinking about regeneration, it was essential to define the subject, the object and the condition that called for a regenerative approach. To define these three elements, a triangle was created: space becomes the object of regeneration, society is the subject, and the condition is the uncertainty that the future brings to the region. In a wider frame, regeneration is about bringing balance to the region as a key principle for a more resilient future.

The tools used in this project to explore regenerative practices in the context of growth and de-growth are highlighted in red. These concepts help to define an uncertain future, contextualise the abstract concepts within the region and bring socio-spatial aspects into the process. Together, these elements create multiple perspectives and practices on possible futures, which, in a broader context, help to build spatial imaginaries.

The conceptual framework was initially created in a more intuitive way; however, it found its backbone in theories that bring together the fields of urban metabolism, governance, urban theory and social approaches, which are explained on the next page.



Conceptual framework

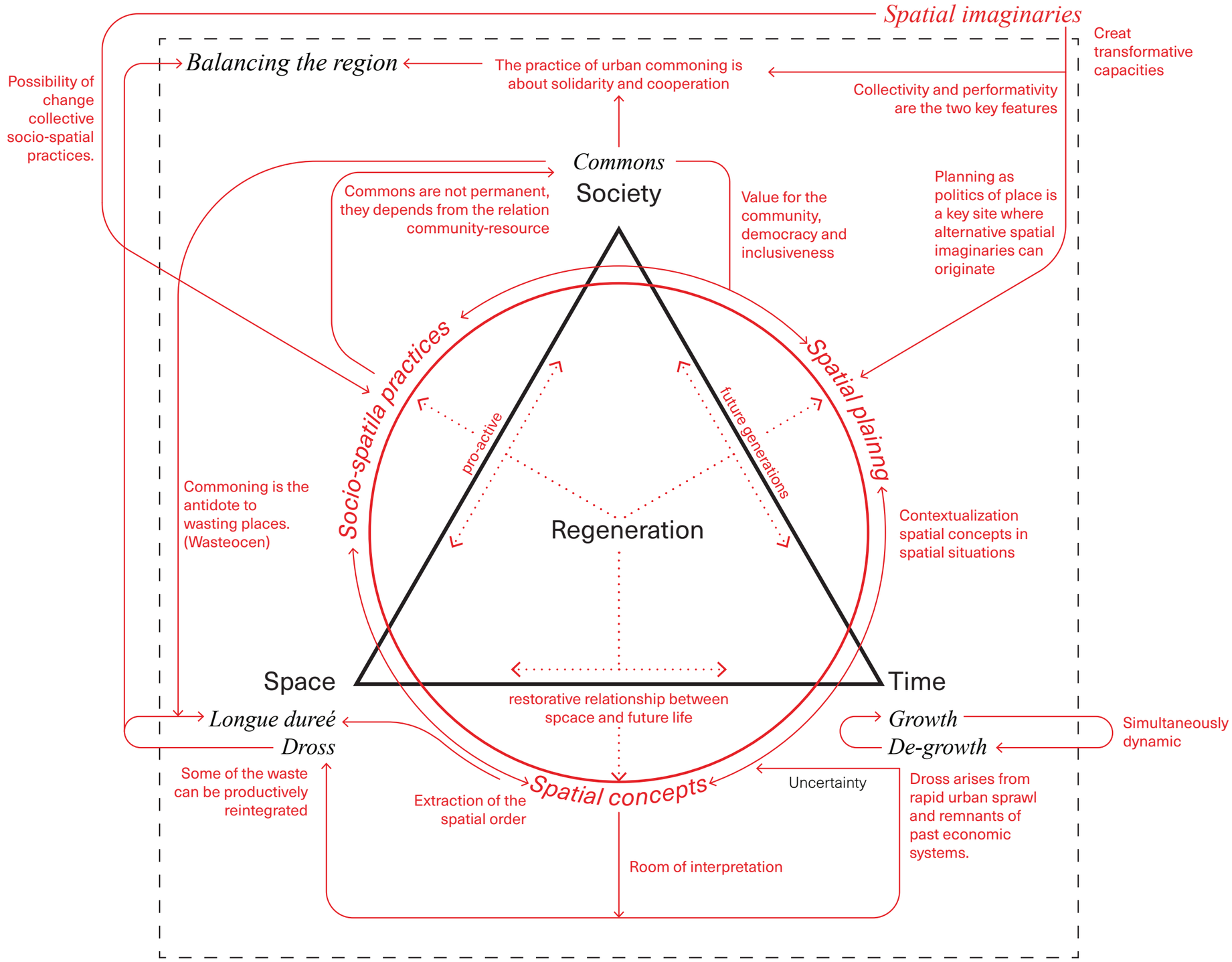
From imagination → to transformation

Elements of the framework

1 Space	1 The longue durée structures that emerge from the spatial approach will create anchor points for the transformation of the territory. 2 Dross can be seen as spaces of opportunity to strengthen longue durée structures and support the stability of the region.
2 Society	1 They can collectively imagine a different future for the region and take proactive action. 2 Only they can ‘create’ the urban commons, socio-spatial relation of sharing common spatial resources that are essential to regenerate ‘wasted’ space.
3 Time	1 Uncertainty about the region’s future growth or decline requires a more regenerative approach to space that can prepare the region for an unknown future. 2 It creates the framework for re-imagining different scenarios and visions for alternative futures.
1&3 Space and Time ***Spatial concepts***	1 The spatial concept is seen as a tool for exploring the complexity of the region by focusing on spatial logic. This will provide an entry point for understanding how different socio-economic practices, implied by different spatial concepts, change the territory in different ways. 2 Spatial concepts allow for interpretation, enabling the contextualisation of abstract concepts in real space, and facilitating their reinterpretation as required (Vigano, 2010).
1&2 Space and Society ***Socio-spatial practices***	1 Socio-spatial practices refer to the ways people interact with and within physical spaces, influencing and being influenced by their environment. This is the first step of building a common understanding, sense of solidarity and cooperation between residents and their surroundings.
2&3 Society and Time ***Spatial planning***	1 Spatial planning can be perceived as a politics of places (Davoudi et al., 2018), which enables society to shape future spatial organisation by coordinating different practices and policies.

Conceptual framework

An explanation of the conceptual framework, based on the main founding from the literature review.



Approaches and theories

Regenerative approaches can be understood through four interconnected “premises” (Mang & Reed, 2012). Imagination, along with the dynamics of growth and de-growth, forms a broader theoretical foundation for exploring fields of urban metabolism, governance and urban theory. Combined elements of with the principles of a regenerative approach, this foundation introduces essential notion for regenerative practices: care, balance, innovation, and adaptability (Mang & Reed, 2012).

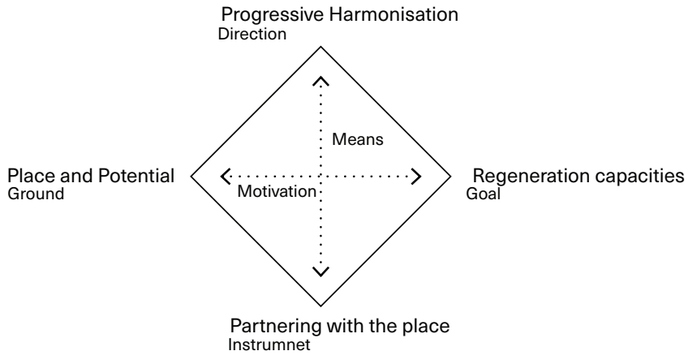


fig.20. Four premises
(Mang & Reed, 2012)

1 Premise:
Place and potential

Enables the right relationship with place to be understood and conceptualised. By looking at the evolutionary dynamics of a place, the potential for greater health and viability can be identified (Mang & Reed, 2012). In the context of the project, this element is explored through understanding urban metabolism, the concept of dross and its reinterpretation.

→ Chapter: 3 and 4

2 Premise:
Regeneration capacities

By fostering the co-evolution of the built and natural environments, we can create new capabilities that will promote healthier lives for all residents, as well as enhancing the broader systems (Mang & Reed, 2012). The capacity for regeneration is explored in the notion of care that commoning practices can create.

→ Sub-chapter: 6.2

3 Premise:
Partnering with the place

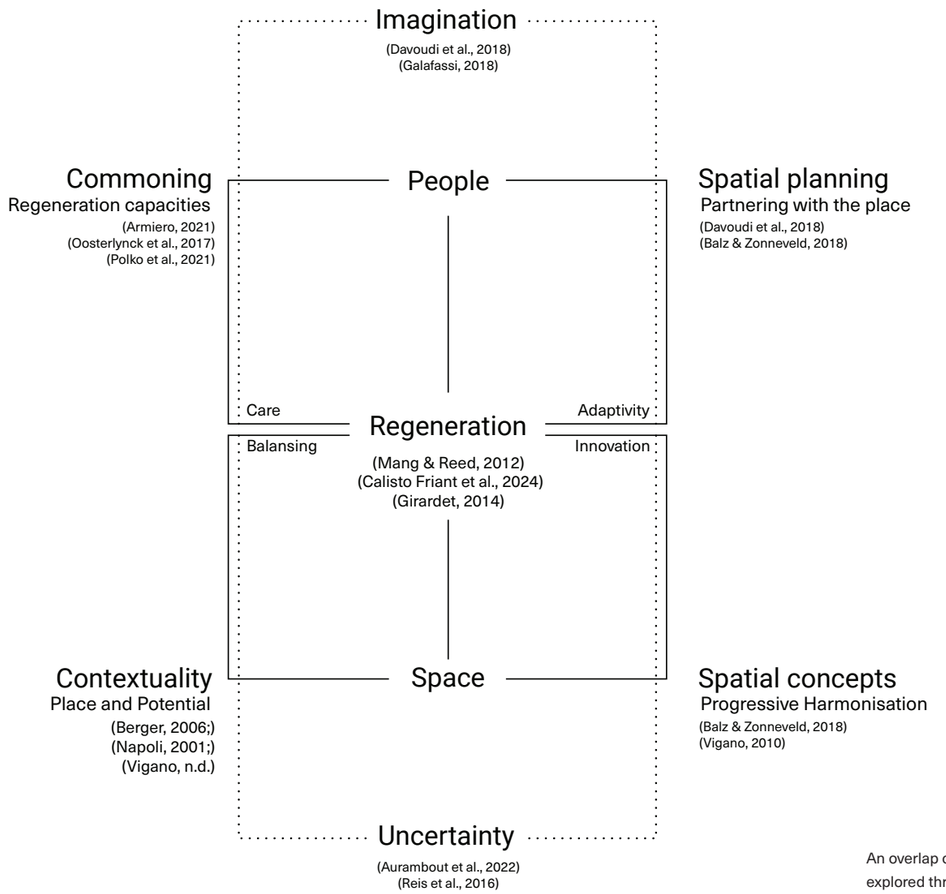
The regenerative approach requires people to play a new role in the process, “from ‘builder of systems we control’ to a gardener, working in partnership with a place and its processes”(Mang & Reed, 2012, p. 17). This new framework for spatial planning emphasises adaptive partnerships between people and space, rather than a fixed set of rules.

→ Chapter 5

4 Premise:
Progressive harmonisation

Progressive harmonisation seeks a harmony pattern between human communities and the biosphere (Mang & Reed, 2012). This aligns with the idea of a spatial concept that integrates complex dynamics, enabling the exploration of a new balance between humans and the natural environment.

→ Chapter 4 and 5



An overlap of approaches and theories explored throughout the project.

The diagram above shows how the process of regeneration can be informed by different fields within urban studies.

The top part of the diagram focuses on the social constructs that shape the relationship between people and space. On the one hand, ‘commoning’ refers to collective actions that emerge from community needs and contribute to the development of regenerative capacities. Spatial planning, on the other hand, represents the formal, policy-driven dimension of space-making, establishing legal frameworks that structure interactions between people and their environments. The two perspectives are connected by imagination, which acts as a bridge between formal planning and grassroots action, both of which offer different ways of fostering relationships rooted in care and adaptability.

The bottom part of the diagram addresses the spatial dimension, emphasising the interplay between site-specific approaches and more abstract spatial concepts. These are linked by the uncertainty of the future, a condition that both grounded and conceptual approaches must navigate. Together, they support a regenerative process that is responsive to context while remaining open to innovation. This enables co-evolution through the reinterpretation and replacement of spatial ideas over time.

Methods and process

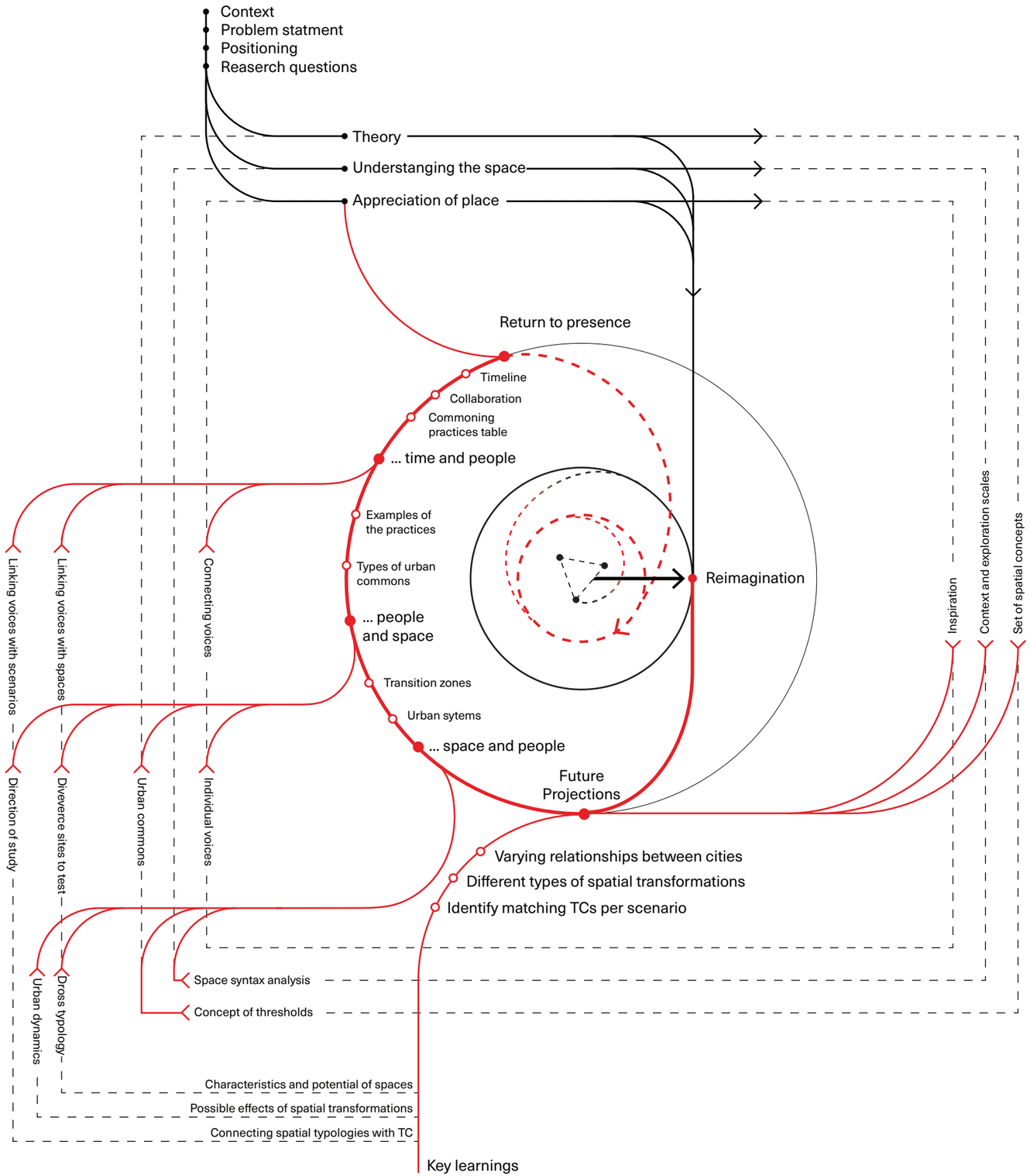
Presented on the previous pages, the problem statement, the research questions and the theoretical approach gave the starting point of project explorations and were brought up in different moments of the process again. The project's steps were formed simultaneously with conclusions and learning from different investigations. This more flexible way of working allowed for thinking loops and testing intuitive approaches that helped tackle the uncertainties and complexities of the region.

All the methods, findings and approaches were gathered in the 'dross loop', which was inspired by the ambiguous nature of the 'dross' and its capacity to be regenerated (Berger, 2006). Presented on the next page, the loop has become the core that holds together a project and has become its timeline. Each of the project's steps has a crucial role in the loop, which is described below.

Project steps	Discribtion	
1 Context	The opening chapter creates the context for the project and introduces the key challenges that are shown in the bigger picture.	→ Sub-chapter 1.1
2 Problematisation	In this part, the challenges introduced earlier will be discussed in the context of the Silesian region more deeply. A detailed picture of them will be the starting point of the project	→ Sub-chapter 1.2
3 Positioning	This part gives the direction that the project will take. Rooted in problematising, it emphasises the aspect of uncertainty, which is crucial to the project. This is the moment when the concept of spatial imaginaries and regeneration is introduced.	→ Sub-chapter 2.1
4 Research questions	Throughout the analysis and right up to the final steps of the project, the research questions helped to guide the exploration and to create a coherent story.	→ Sub-chapter 2.2
5 Theory	The theoretical background has brought together different conceptual ideas whose foundations start from space. This allows for testing diverse frameworks and various spatial concepts in real spaces.	→ Sub-chapter 2.4 ← SQ3
6 Understanding the space	By analysing the region from different angles, a broader context was created for further work. The research also enabled the depiction of three scales that will be used in the process.	→ Chapter 3 ← SQ1, SQ2
7 Appreciation of the place	The combination of different perspectives, from the local to the external to the governmental, captures the vastness of the wishes, observations and questions about the future. These have been collected in the territorial capitals (TC). This brings the voices of the people into the project.	→ Chapter 4 ← SQ2
8 Future Projections	This part focuses on far distant possible futures. Three spatial concepts, voices and spatial analyses helped in scenario-building and informed different development paths. Three scenarios capture different socio-spatial dynamics, focus areas for next steps and different spatial transformations. The explorations of the long-distance future have become the basis for the next three steps, which relate to the short-term time framework.	→ Chapter 5 ← SQ4, SQ5, SQ6
9. ... space and time	Understanding the relationship between space and the future is the focus of this part. Summerside in mapping the fields of possibilities that can happen in the future; part argues for the regeneration of the spaces in-between that leave room for seen and unforeseen future developments.	→ Sub-chapter 6.1 ← SQ7
10 ... people and space	The process of regeneration requires space and people to come and work together. This is related to the practice of urban commons, collectively shared special resources that last as long as the community needs (Polko et al., 2021). This part explores different ways of fostering these practices, highlighting hidden opportunities embedded in both society and space.	→ Sub-chapter 6.2 ← SQ7
11 ... time and people	In this step, the combined voices become separate again. This will make it possible to find common ground between people, policies, space and time. The integration of these elements will bring the territorial capitals forward in the discussion on the future of the region.	→ Sub-chapter 6.3 ← SQ8
12 Returning to presence	This is the final part, which summarises and concludes the exploratory learning. Although this will be the last part, it aims to reopen the ongoing discussion about the future of the Silesian region.	→ Chapter 7 ← Answer to main research question → Index ← Addressed research question

Dross loop

The conceptual loop was based on the territorial structure of the region. The centre represents the polycentric relationships between cities, the first black ring symbolises the space, and the outer ring represents the spatial dross. The black arrow indicates the starting point for the project's reimaginings, while the red colour highlights its key elements. Outside the loop, process links illustrate connections between different stages of the project.



Used methods in the project

LR -Literature review
SA - Spatial analysis
HA - Historical analysis
StA - Statistical analysis
SM- Stakeholder mapping
PO - Policy overview
F - Fieldwork
SB - Scenario-building
DE- Design exploration
B - Backcasting

Project steeps		Used methods per step
1.	Context	LR, SA, HA, StA
2.	Problematisation	LR, SA, StA
3.	Positioning	LR
4.	Research questions	
5.	Theory	LR
6.	Understanding the space	LR, SA, HA, StA
7.	Appreciation of place	SM, PO, F
8.	Future projections	SA, SB, DE
9.	... space and time	SA, SC, B
10.	... people and space	SC, DE, B
11.	... time and people	B, SM
12.	Return to presence	

Explanation of methods

Literature review
(LR)

The literature review sets a theoretical basis for the exploration of design, establishing the basis for a regenerative approach to urban planning and design. It also outlines existing approaches, practices and knowledge in the fields of urban planning, urban metabolism and the dynamics of growth and decline. Through a comprehensive literature review, a conceptual framework has been developed, synthesising insights from a variety of sources. Additionally, the review contextualises the project by analysing the socio-spatial dimensions of the Silesian region.

Spatial analysis
(SA)

As the project started from a place-based approach, spatial analysis plays a major role in understanding the dynamics and spatial logic of the project. This analysis is an integral part of the problematisation and positioning chapter. It also forms the basis for further work, including scenario building and imagining possible futures. By integrating QGIS-based mapping with hand-drawn analysis, the region is explored from various perspectives: one that is more analytical and data-driven, and another that is more conceptual and synthetic.

The spatial emphasis in this section was placed on conducting morphological analyses of different types of spatial environments and urban centrality. This enabled a better understanding of the dispersed spatial structure of the metropolitan region and its nuances.

Historical analysis
(HA)

This analysis aims to identify the longue dureé structures that have shaped the region. Understanding these spatial elements is essential for understanding the region's spatial identity and applying the most effective strategies for strengthening it. It is also key to exploring the relationships between past, present and future in the context of socio-spatial practices that have shaped the region's identity. The analysis relies on maps, photographs and literature to explore these elements in depth.

Statistical analysis
(StA)

This analysis allows for comparisons between sub-regions and provides a socio-economic overview of the current situation, its challenges, opportunities and future projections. Demographic statistics are crucial for understanding the shrinking of the region, including its causes and consequences.

Stakeholder mapping
(SM)

The analysis links the project to the actors and stakeholders who play a key role in the regenerative approach. By examining their power dynamics, levels of involvement and perceptions of the region, the analysis enables the project to address concepts such as urban commons, spatial imaginaries and solidarity within the existing context.
Stakeholder mapping was part of the intensive Focus course and played an important role at the beginning of the project. It has been included in the appendix of this volume.

Policy overview
(PO)

The policy overview provides an insight into current ideas and visions for the region from a planning perspective. This was combined with the individual perspectives of various experts, resulting in the introduction of the concept of territorial capitals, which has become a significant part of the project's exploration.

Fieldwork
(F)

The site visit adds a tangible, physical dimension to the project. By analysing the space yourself, it helped to understand the scale and scope of the project. It also provides insights into how local people use the space and reveals the potential of different areas as understood through the experience of being in the place. The site visit is essential for defining the problem, guiding scenario building and shaping further work. The outputs of this methodology include soft maps, photographs and interviews, which together provide a diverse perspective and insight into the region.

Scenario-building
(SB)

Scenario building is an exploratory tool used to answer the question 'What if...?' This method allows the projection of a range of possible future developments for the region. By creating different conditions and dynamics between cities, each scenario illustrates its implications for four layers: infrastructure, greenery, urbanity and society-economy. The scenarios help to explore different scales and spatial concepts that will later inform three

Design explorations
(DE)

This method will focus on exploratory design under different theoretical scenarios, examining the types of 'dross' that emerge in different contexts. By seeing dross as a new opportunity, the design will raise the question of how it can be reintegrated to strengthen longue dureé structures. The concept of urban commons is used as a key investigative tool, with the outcomes providing an overview of multiple small-scale spatial interventions of the regeneration approach in the region.

Backcasting
(B)

The exploration of potential regional dynamics leads to the creation of different models of urbanisation and alternative scenarios, contributing to a collective imaginary for the region. The use of the backcasting method will help to go back from the future to the present moment and propose spatial guidelines and interventions to collectively promote a more resilient region.

Interviews
(I)

The interviews offer insight into the region from a local perspective, helping to establish its socio-economic context and deepen the understanding of its identity.

Participants were grouped into four categories: local experts, external experts, adult residents, and young residents. Local experts provided perspectives on the region's approach to energy transition, as well as the roles of identity and heritage in community building. External experts shared their observations and insights from an outsider's perspective, often reflecting a more urban viewpoint. Adult and young residents shared their experiences of daily life, struggles, and aspirations for the future.

All of the talks and meetings were combined and together created the voices of the project that highlight different values and potentials embedded in the region.

Importance of scales

The mapping process revealed three distinct scales of the project. Each scale provides a distinct spatial context, and collectively, they establish a complementary framework that supports the exploration.

The analyses started from a metropolitan scale. This captures the whole metropolitan system of urbanity and its surroundings. This helped in setting a wider context and picturing the scale of the region.

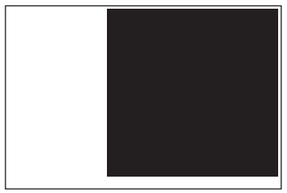
The initial regional analysis of key layers—demography, economy, greenery, and mobility—enabled the selection of a transect area that integrates all critical aspects for exploring a regenerative approach on a smaller scale. The transect includes areas of both population growth and decline. It also lies within the economic cluster, overlapping with mining areas, and is between two large cities, Katowice and Gliwice. This scale was mainly used in this chapter to understand on smaller-scale past development and the current urban system.

To better understand the morphology of the built environment, a zoomed-in scale was needed. The density of different compactness, road network centralities and historical origins of the urban structures that as shown in the map of urban peaks, helped to pick the area. Starting from the city centre of Katowice and ending on the western borders of the municipalities of Bytom and Ruda Śląska, captures regional urban diversity that intertwines with post-industrial sites and vast regional infrastructure. This scale helped in mapping morphology clusters.

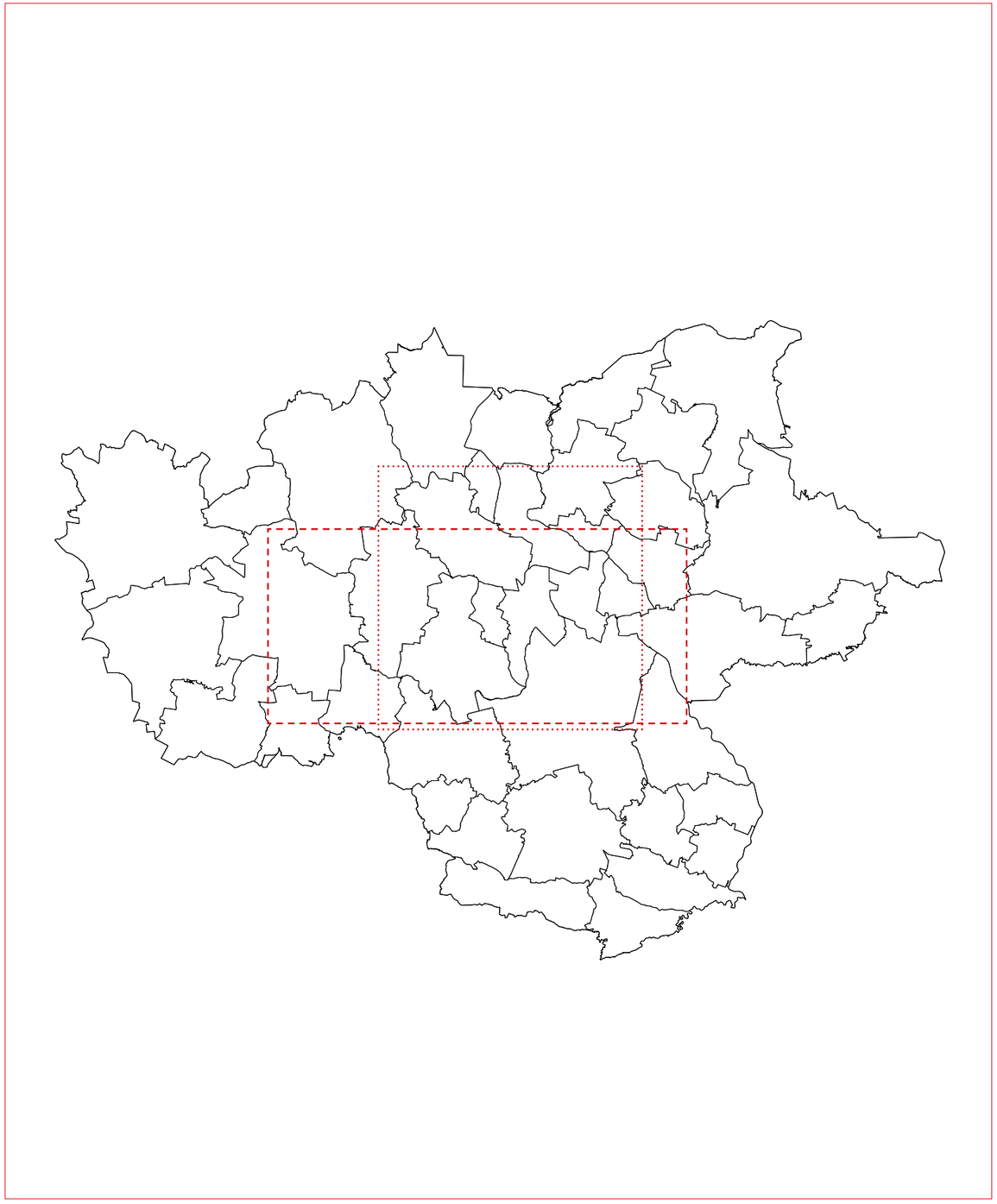
Transects and zoom-ins will be revisited in Chapter 5: Future Projections, where three potential future scenarios will be explored. The insights gained from this analysis will serve as the foundation for Chapter 6. Although the transects and zoom-ins appear to cover roughly the same geographic area, they are presented differently. The transects emphasise the continuity of a long spatial stretch, while the zoom-ins focus on mapping more detailed aspects at a larger scale on the page.



Transect layout



Zoom-in layout



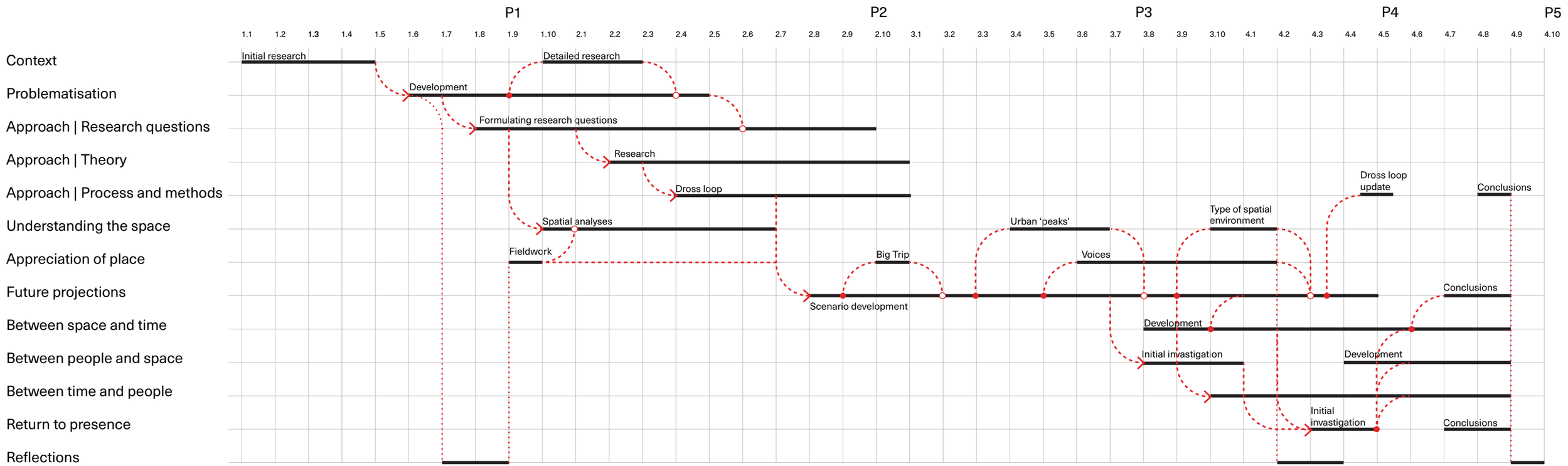
Project scale

0 5 10 15 km

Metropolitan scale
Transect
Zoom in

Thesis timeline

The project timeline is divided into five key presentation moments, following the structure of the academic year. Each presentation builds upon the previous one, introducing the next phase of the project. This overlapping approach enabled the various elements to connect and form a coherent narrative. It also provided a framework for organising intuitive explorations, which later formed the basis for drawing conclusions and shaping the project methodology.



Project timeline

The timeline explains the chronological order of explorations throughout the year, with elements connected to show how they influenced one another.

Beginning of new investigation

Going back to previous investigation

Input to ongoing investigation

3 Understanding the space

This chapter establishes the spatial context of the project. It begins with an exploration of the region on a metropolitan scale, mapping various factors such as population shifts and industrial changes. This metropolitan perspective informs the following analysis of urban evolution over time along a transect. The analysis then moves on to investigate how urban ‘peaks’ can be identified within the region’s ‘sponge’ spatial structure. To further unpack this structure, the final section describes different types of spatial environment. A statistical cluster analysis conducted at the smallest scale reveals detailed nuances of the built environment. These types will be brought back in the next chapters, 5 and 6.

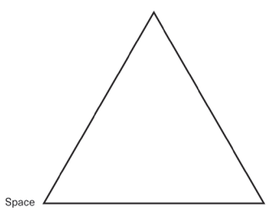




fig.21. Old energyplant in Bytom, 2024

3.1 Spatial mapping

Administrative outlook

The Górnośląsko-Zagłębiowska Metropolitan Area (GZM), also known as the Katowice Metropolitan Area, is one of Poland's 13 metropolitan areas and is in the Silesian Voivodeship. It comprises 41 municipalities, 13 of which have the status of 'powiat', which means that they function at the sub-regional level within the Polish local government structure

The metropolitan region is divided into two levels: the core and the surrounding area. The 13 municipalities that make up the core include Katowice, which functions as the main administrative city (Info Mapa, n.d.).



Metropolitan region in national scale, Area: 2554 km², Population: 2 128 034



1 Bytom



2 Chorzów



3 Dąbrowa Górnicza



4 Gliwice



5 Katowice



6 Mysłowice



7 Piekary Śląskie



8 Ruda Śląska



9 Siemianowice Śląskie



10 Sosnowiec



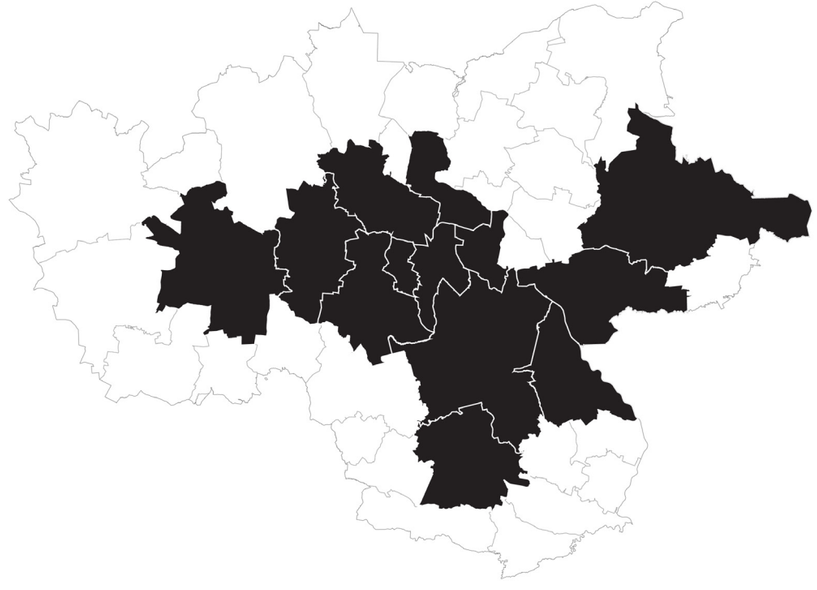
11 Świętochłowice



12 Tychy



13 Zabrze



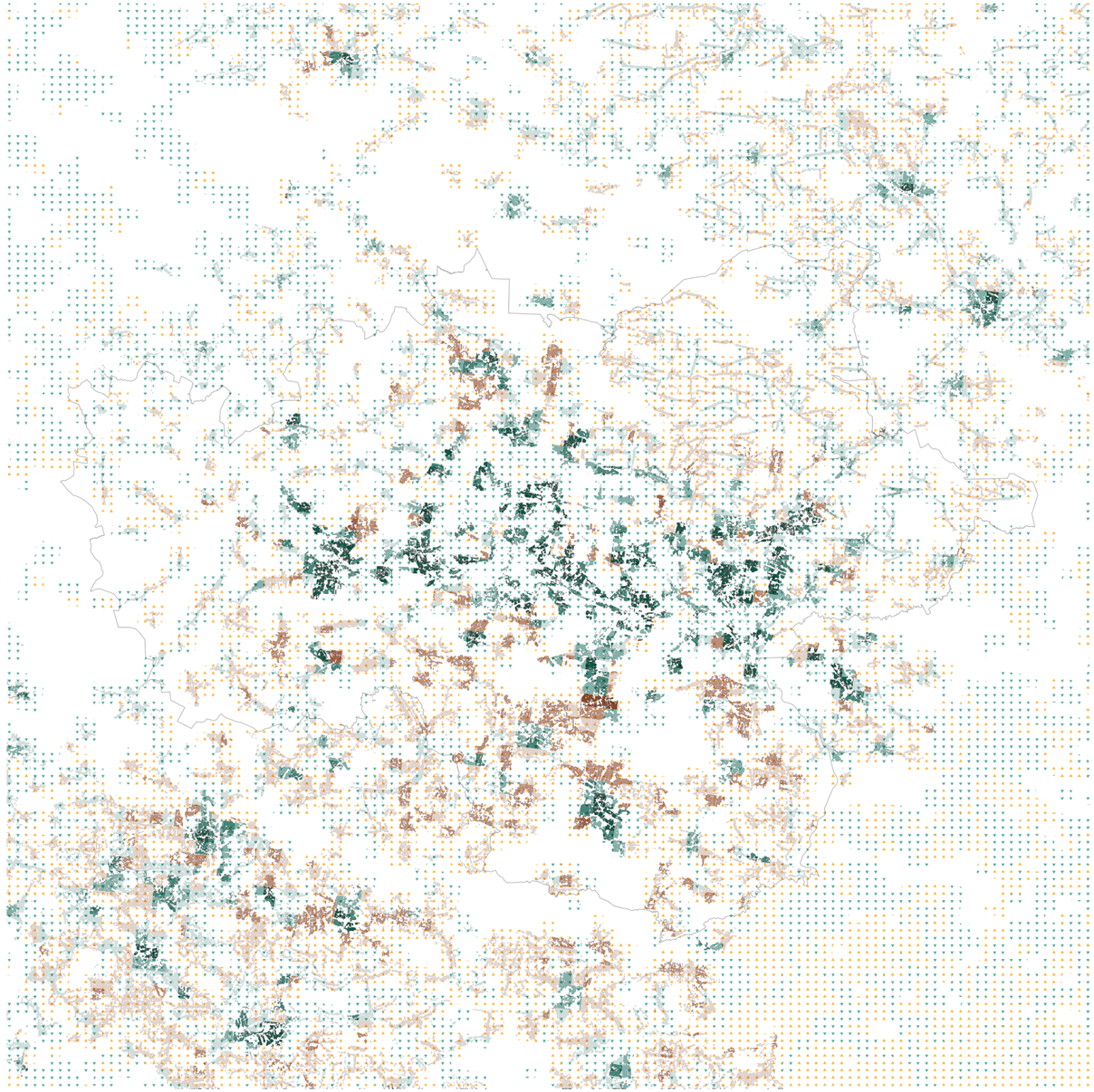
Administrative areas of GZM

Demography of the region



Population change in 2006-2024 overlapped with the amount of inhabitants in 2024 [1x1km]

The mapping of demographic change shows that the population of the central parts of the conurbation is decreasing, while the suburban areas are gaining new inhabitants. The largest increases can be seen in the suburbs of the city of Katowice, the largest city in the agglomeration (southern part of the map).



Population change [amount of inhabitants 1x1km]2006-2024 overlaid with built-up areas

Demographic outlooks

The phenomenon of population shrinkage has been a consistent trend across all cities in the region, both historically and in projections for the future. The most significant declines are anticipated in Sosnowiec, Zabrze, and Bytom. Although, Katowice and Gliwice remain key cities that attract people, they are also expected to experience population decline.



Name	1 Bytom	2 Chorzów	3 Dąbrowa Górnicza	4 Gliwice	5 Katowice	6 Mysłowice	7 Piekary Śląskie
Density in 2023 [people per km2]	2 127	3 019	601	1 269	1 695	1 085	1 297
Population in 2013	173 439	110 761	123 994	185 450	304 362	75 129	57 148
Population in 2023	147 759	100 593	113 460	169 915	279 190	71 280	51 707
Population in 2060	98 517	76 450	74 070	118 893	204 913	57 813	36 726
2013 - 2023	-14.8%	-9.2%	-8.5%	-8.4%	-8.3%	-5.1%	-9.5%
2023 - 2060	-33.6%	-24.5%	-34.9%	-29.9%	-26.3%	-19.1%	-29.0%

Source: https://infogzm.metropoliagzm.pl/



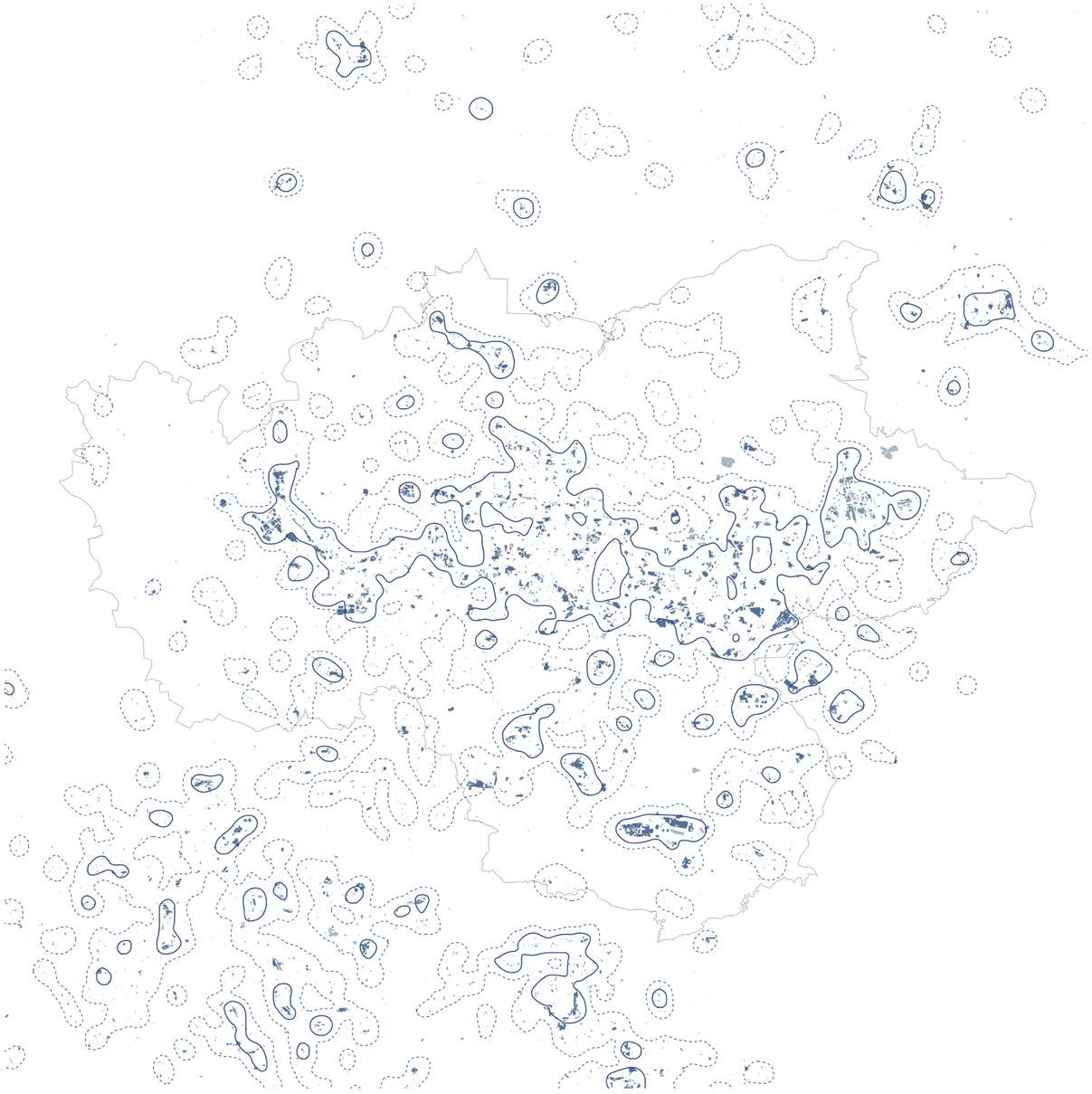
Name	8 Ruda Śląska	9 Siemianowice Śląskie	10 Sosnowiec	11 Świętochłowice	12 Tychy	13 Zabrze
Density in 2023 [people per km2]	1 678	2 485	2 053	3 416	1 492	1 913
Population in 2013	141 521	68 844	211 275	51 824	128 799	178 357
Population in 2023	130 302	63 401	187 115	45 434	122 045	153 838
Population in 2060	92 861	44 638	114 279	30 892	89 880	99 897
2013 - 2023	-7.9%	-7.9%	-11.4%	-12.3%	-5.2%	-13.7%
2023 - 2060	-28.9%	-29.6%	-38.9%	-32.0%	-26.5%	-35.1%

Source: https://infogzm.metropoliagzm.pl/

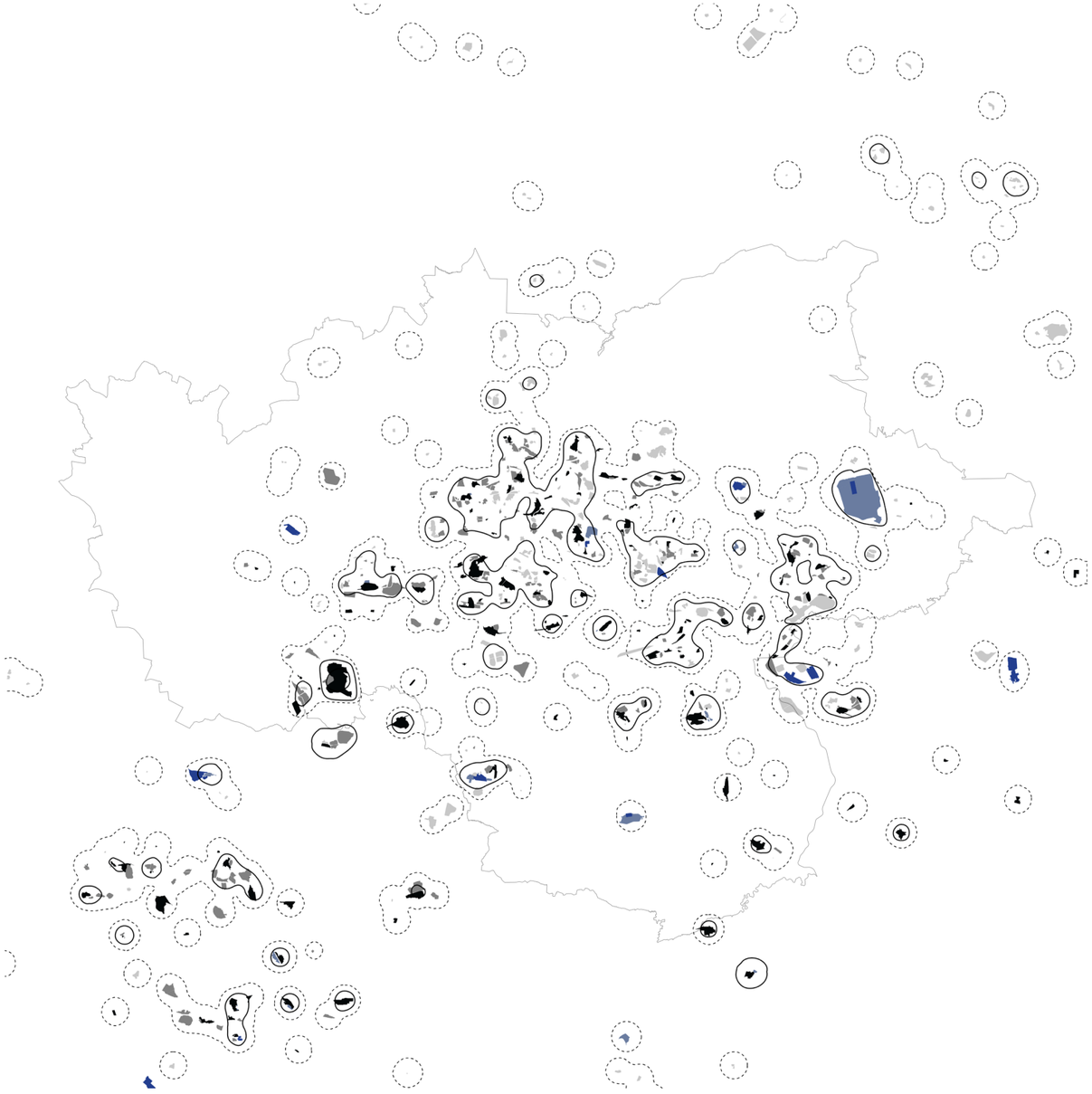
On average,

-29,9%

Industries



Industrial sites



Post-industrial sites and coal related sites

Different types of industries are spread across the region. When grouped into larger categories, it becomes clear that a continuous cluster stretches across the conurbation from west to south, facilitated by well-developed road and rail infrastructure. Coal-related sites, such as mines and quarries, are more concentrated along a north-south axis.

0 5 10 15 km

- Dense structures
- Compact structures
- Loose structures
- Coal power plants
- Steel plants
- Clusters
- Areas of appearance

0 5 10 15 km

- Mines
- Post-mining sites
- Post-industrial sites
- Coal power plants
- Steel plants
- Clusters
- Areas of appearance

Economic outlook of the subregions

An individual analysis of each city shows that Katowice has an economic advantage over the others. It has the lowest unemployment rate, the highest number of universities and research institutions, and is the main commuting destination.



Name	1 Bytom	2 Chorzów	3 Dąbrowa Górnicza	4 Gliwice	5 Katowice	6 Mysłowice	7 Piekary Śląskie
Unemployment rate 4th quarter 2023	8.2%	3.4%	4.6%	2.2%	1.1%	4.2%	7.4%

Workforce in 2018



Mining sites



Main commute directions and numbers



Higher education



Source: https://infogzm.metropoliagzm.pl/
(Krzysztof Gwosdz et al., 2021)








Name
Unemployment rate
4th quarter 2023

8 Ruda Śląska	9 Siemianowice Śląskie	10 Sosnowiec	11 Świętochłowice	12 Tychy	13 Zabrze
2.6%	3.8%	5.3%	4.5%	1.6%	3.9%

Average unemployment rate in November 2023

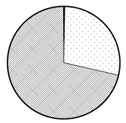
5.0%

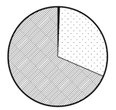
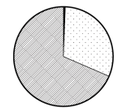
Workforce in 2018

- Agriculture
- Industry
- Services

225k
100k
30k
0





Mining sites

- Active
- Inactive

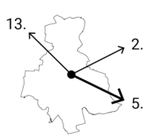


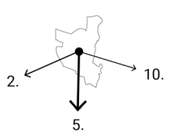


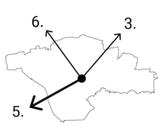


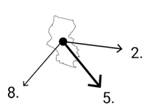

Main commute directions and numbers

- 4000 <
- 1000 - 4000
- 1000 >













Higher education

- Institutes
- Universities

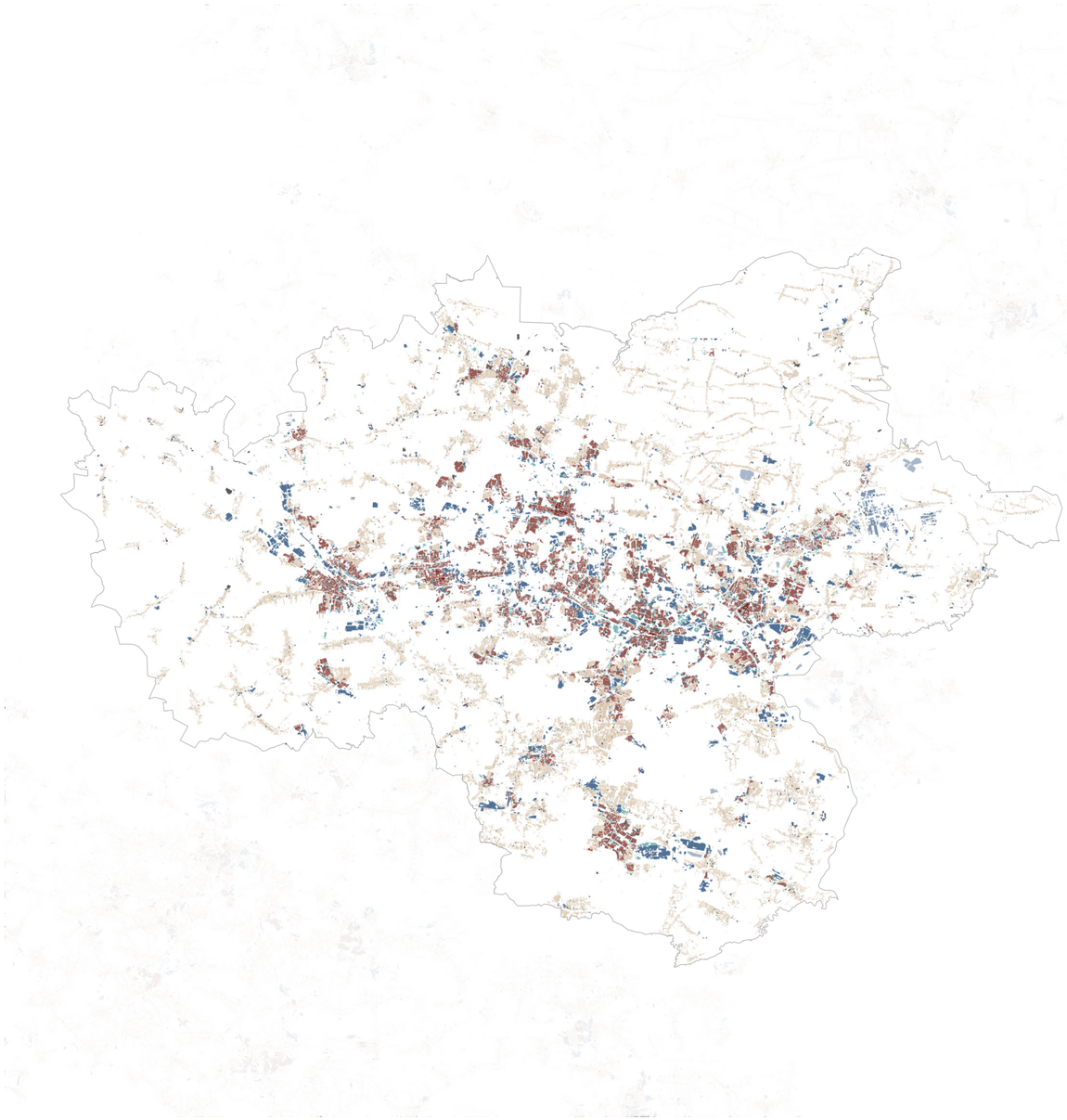







Source: https://infogzm.metropoliagzm.pl/
(Krzysztof Gwosdz et al., 2021)

Land use

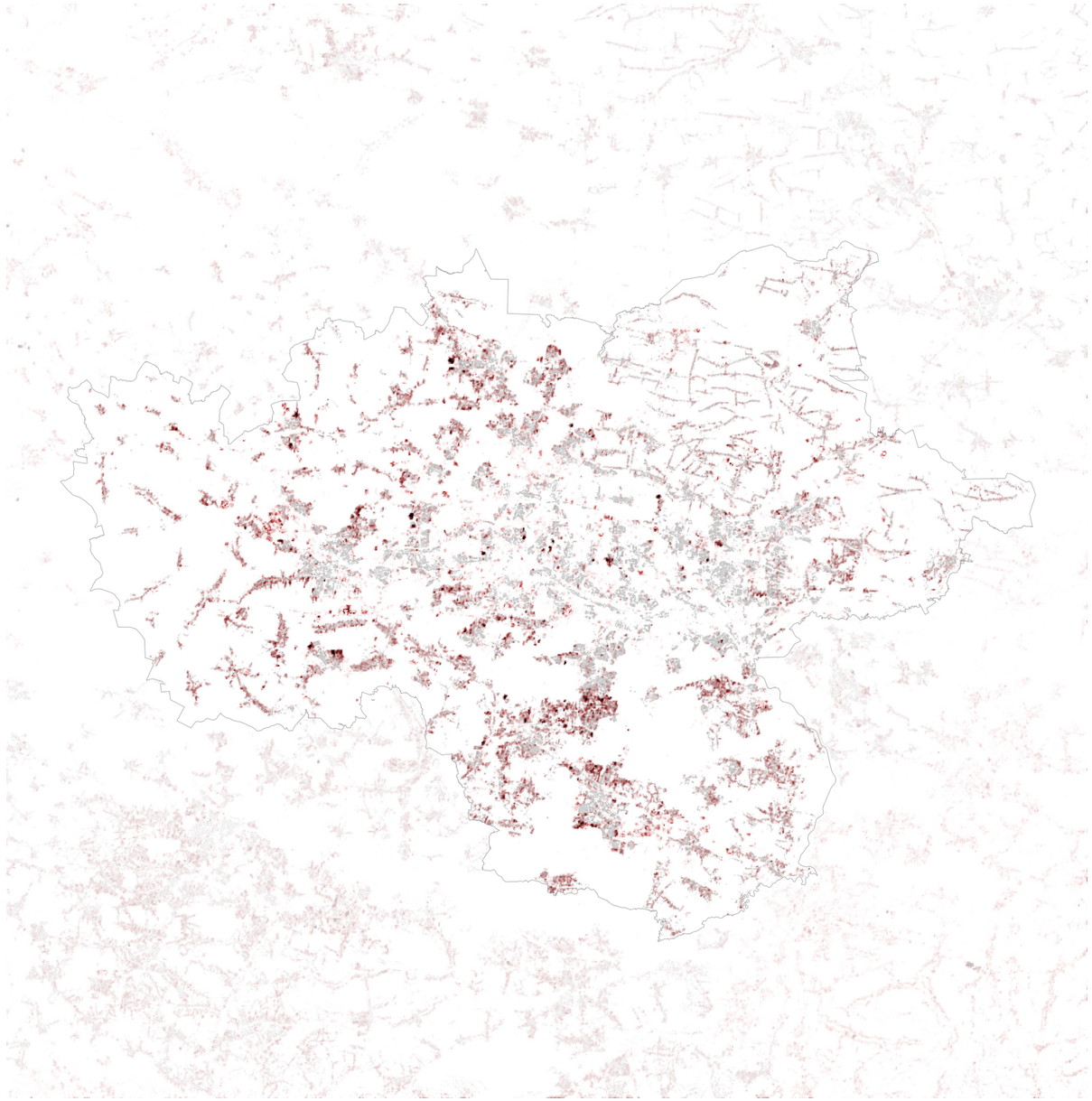


Land use and density

0 5 10 15 km

- Residential
- Single family house
- Commercial
- Industrial
- Other

The analysis of land use shows that not only industries follow the main transport routes, but also residential areas, shown in red. Dwellings are concentrated in the central part of the region and form a densely urbanised area that is almost a continuous network. The shift in built-up residential areas is in line with demographic trends in the region. Family settlements are creating a new, continuously dispersed structure stretching from Tychy to Gliwice.



Built-up surface

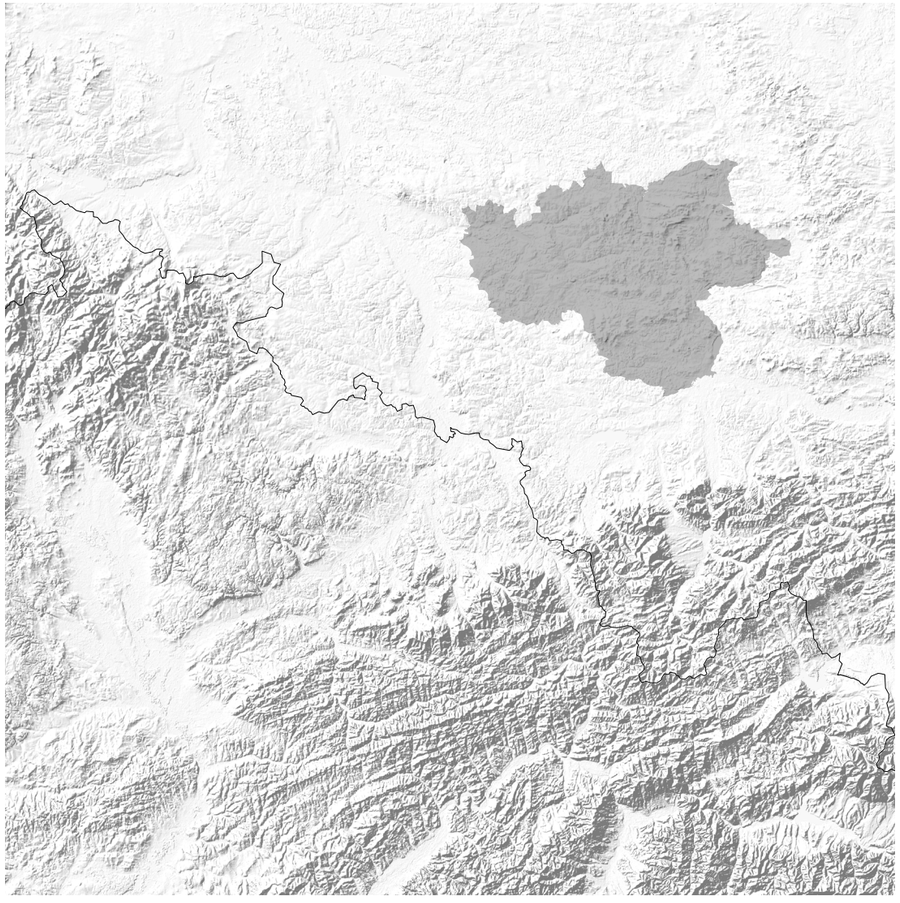
0 5 10 15 km

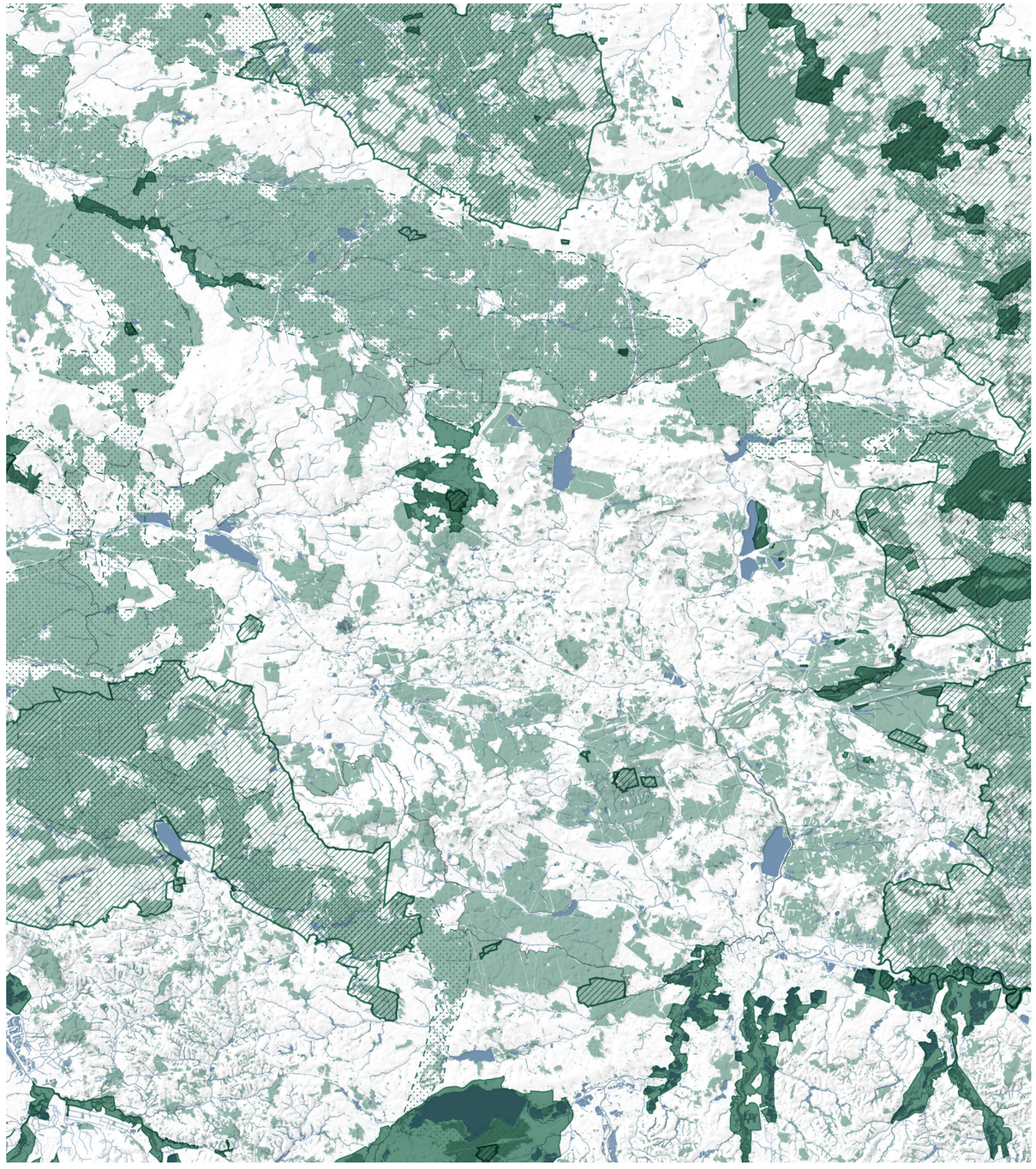
- Residential area
- Changes in built-up surface in residential areas 2006-2024 [0-2500 m²]

An analysis of changes in the built-up surface reveals how the metropolitan region has grown over the past 15 years. By comparing data sets from Global Human Settlement, it becomes evident that suburban areas near Katowice have experienced the most significant growth. Additionally, rural areas have also become increasingly built-up.

Green

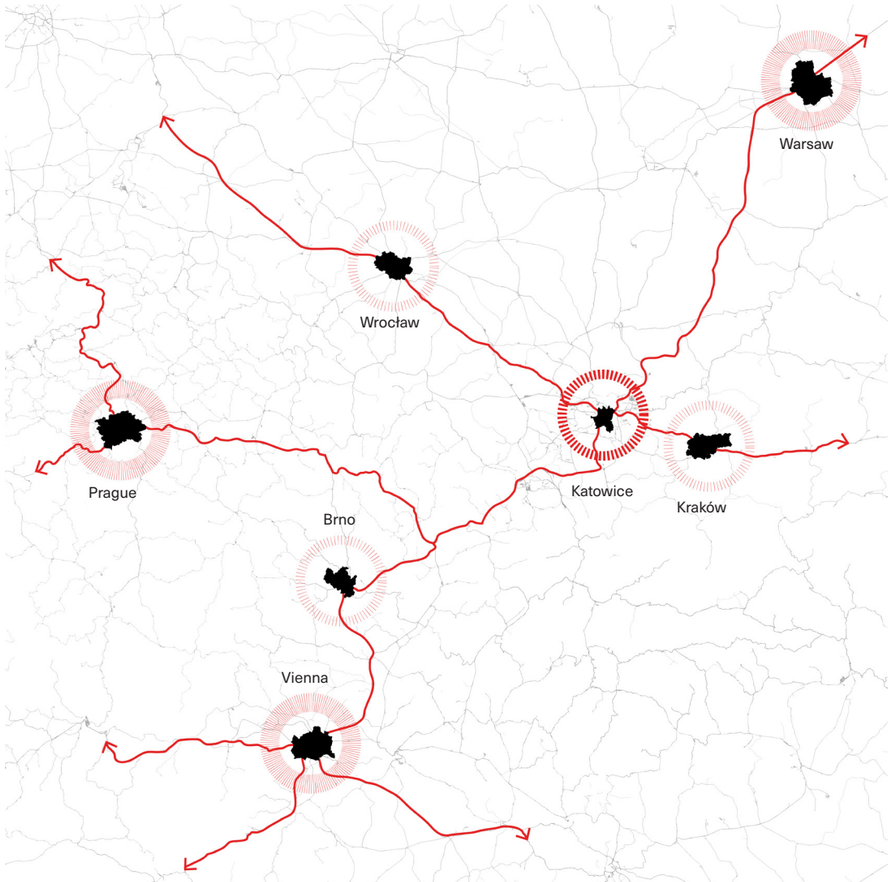
The metropolitan region is located between two of Poland's largest river basins, and its proximity to mountainous areas makes it an ideal location for recreation. In addition, the metropolitan area's borders are close to protected natural areas, which not only support a diverse ecosystem network, but also create a limit for expansion. Although the natural areas on the periphery of the conurbation are vast, the green network within the region is becoming increasingly fragmented.





Mobility

The region is well connected both internationally and regionally. It lies on the route between the Polish capital, Warsaw, and other European capitals such as Vienna and Prague. It is also located between Poland's second-largest cities, Wroclaw and Krakow. This strategic location provides the metropolis with a significant opportunity to combine international and regional dimensions together. However, this connectivity also has drawbacks. Mainly prioritizing car-based transport on motorways or expressways - at the expense of promoting stronger local connections between cities although soft mobility was significantly improved in the past decade.





3.2 Urbanisation process

Evolution factors

The conditions of each city in this metropolitan region were shaped by different events and decisions in the past that created evolutionary factors. For some, it was geographical location, for others, access to resources, and for others, it was more political. The timeline follows a subchapter of Krzysztof Gwosdz's book, which captures the historical developmental factors that shaped the functional and spatial form of the metropolis until the political reform in 1989 (Gwosdz, 2014).

XIX

The settlement system was characterised by a sparse network of small towns, without a dominant center. This was caused by the low settlement attractiveness of the region and to border location of the region.

The first settlement cluster that started to form was a cluster of gateway towns: Niwka, Modrzejów, Mysłowice (Krzysztofik 2005; Krzysztofik and Runge 2011).

Another one was the belt developed along the then main road route Kraków-Sławków-Czeladź-Będzin-Bytom-Gliwice-Toszek was more active.

Location at the junction of the borders of Prussia, Russia and Austria. Institutional and political factors, together with different access to discovered natural resources, developed individual parts of the conurbation - Upper Silesia (Prussian), Zagłębie (Russian) and Galicia (Austrian). This was the origin of today's contrast within the region.

The main driving force behind the population and settlement development the expansion of mining activities and related industries. Favouring the dispersal of settlements.

In this period railway was another factor that influenced which cities would develop more regional functions. For instance, the train connection that was connecting Wroclaw-Gliwice-Katowice-Myslowice missed the city of Bytom at the request of the Bytom municipal authorities. This decision negatively affected the future of the city.

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The economic competitiveness and differences in social structure between the new, rapidly growing industrial settlements and already existing cities started to shape the hierarchy within the region. Gliwice and Bytom, which managed to maintain their positions as main centres, Katowice, which gained equal position in 1914 to them and the growing importance of Sosnowiec.

Similarity of functions and activities, which were mostly dominated by the mining and metallurgical industries, could be interpreted as the "clone" towns.

1922

The hierarchy between towns changed when Katowice became the capital of a new voivodeship in the Polish part of Silesia. The growing importance of Katowice overtook the leading role of Bytom and Gliwice.

Meanwhile, due to the change of the borders, Bytom was separated from its hinterlands, and this created a limitation for city growth. This trapped the city in focusing only on mining activities.

The time between the wars brought major development for the centres that focused on service functions.

The Second World War and its consequences left a painful mark on local communities. German-Polish-Silesian-Jewish multiculturality was strongly disturbed that irretrievably change the character of the region.

1945

After 1945, the metropolitan region has belonged to one country ever since.

This period of time focus on strengthening a monofunctional economy, based on mining and other heavy industries. This was also a time of the emergence of a new socialist city – Tychy.

70's industrial developments concentrated mainly on the eastern and southern part of the agglomeration, which attracted a younger population. 'Katowice' steel plant was the biggest industrial investment of the socialist period in Poland. This influenced the urban transformation in cities like Dąbrowa Górnicza.

The growing importance of Katowice as a centre of socialist administration gave it an even greater advantage over other cities. Cities such as Bytom or Sosnowice began to become more and more like other smaller cities.

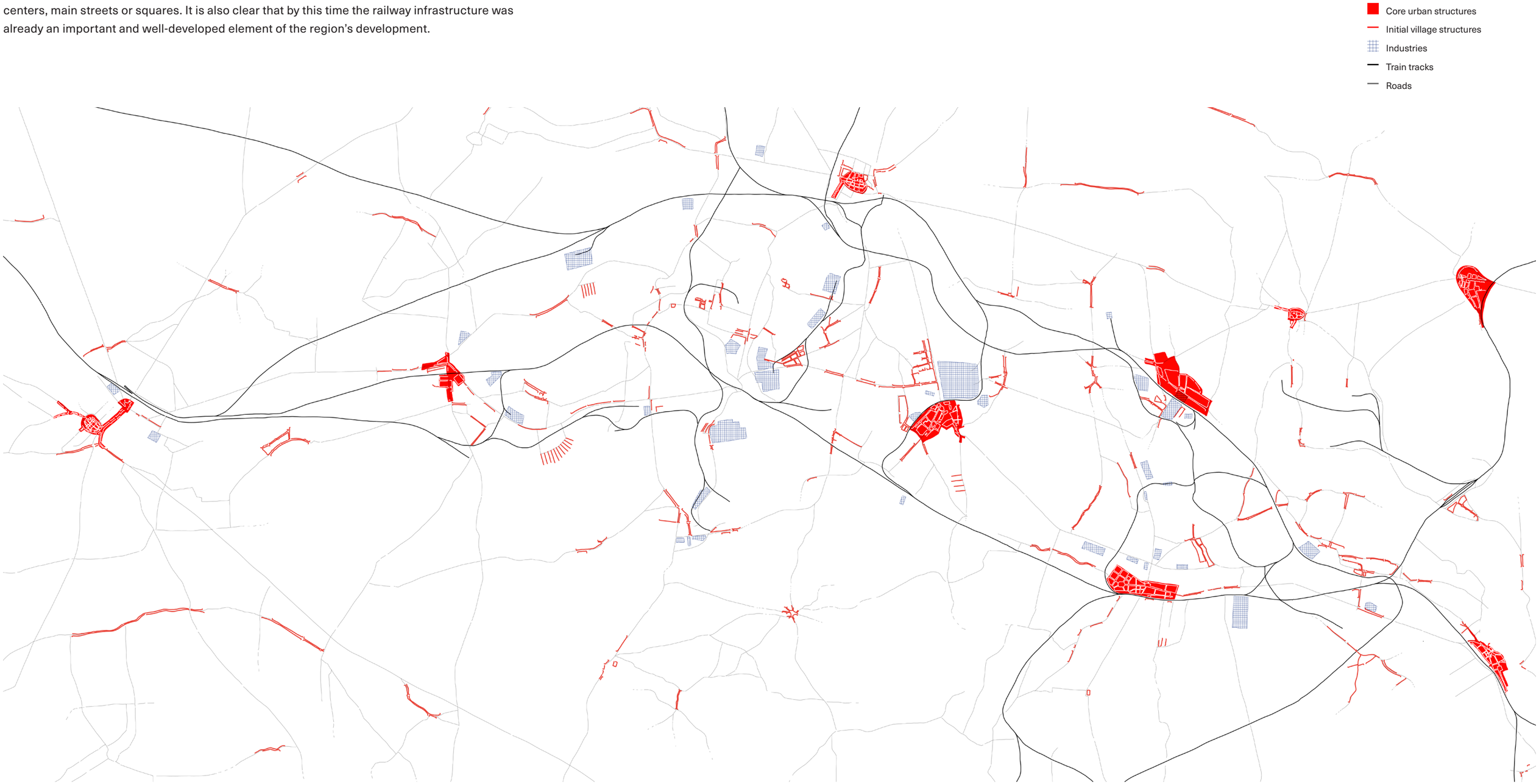
At the same time, there was a phase of administrative consolidation of the settlements and towns of the agglomeration. From several hundred smaller settlements, which existed in the XIX century, a few larger and medium-sized ones emerged. Some of them managed to regain their original independence in the 1990s, such as Bieruń or Chełm Śląski, which belonged to the Tychy commune for over 20 years (Jarczewski, 2002).

1989

Spatial development

1883

To unravel the complex urban structure of the region, a historical analysis of the transect will be used to provide insights into the process of urbanisation from the late 19th century. This period marks the beginning of the coal industry, while historic towns and villages had not yet expanded significantly, although their todays centers were marked by spatial structures of historic town centers, main streets or squares. It is also clear that by this time the railway infrastructure was already an important and well-developed element of the region's development.



1954

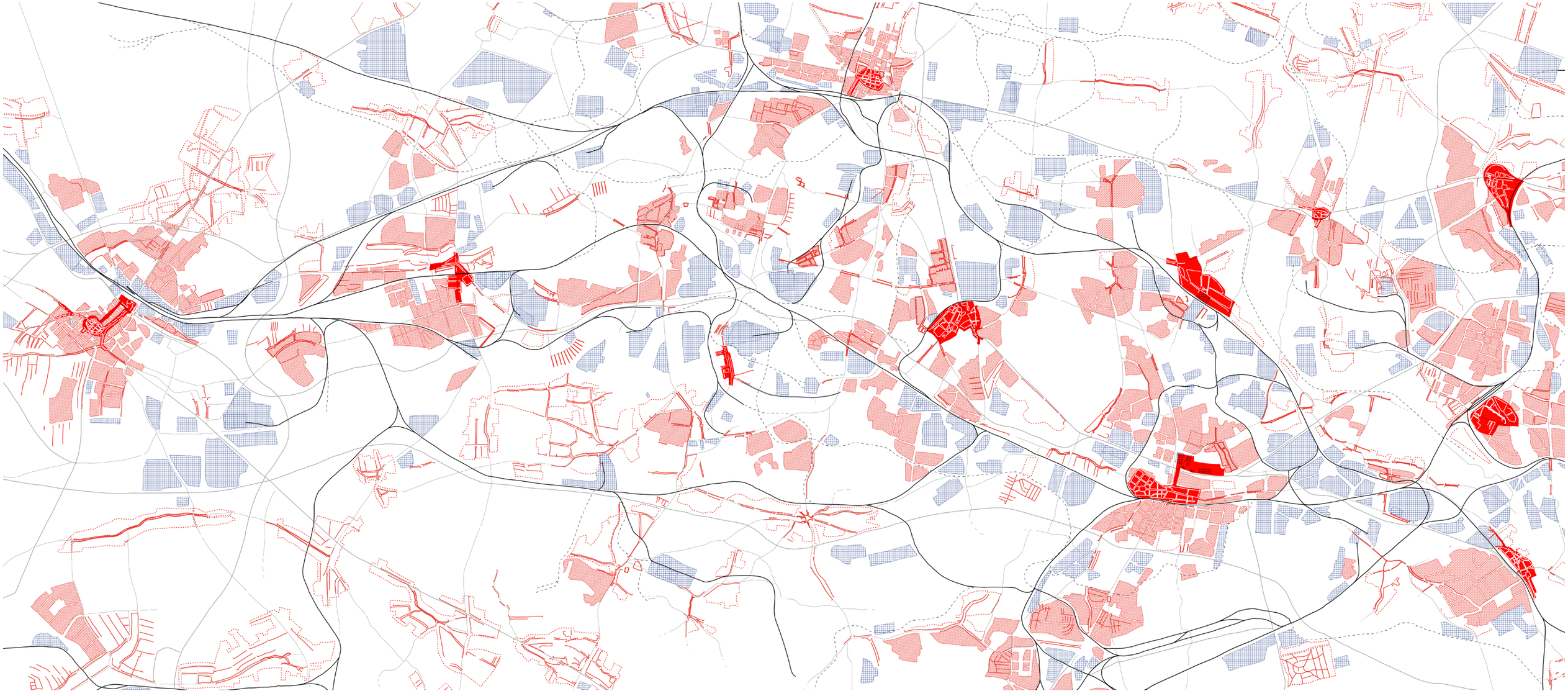
This period in history, after the Second World War, saw Poland under the influence of the Soviet Union. It was a time when the country had to rebuild after the devastation of the war. The second half of the 20th century was marked not only by industrial development but also by significant urban expansion. New cities such as Dąbrowa Górnicza and Tychy were founded. Between 1950-1990, large Soviet-style monofunctional housing estates were built to accommodate the growing population. (Urbanizacja – IBR Wiki, n.d.) During this period, infrastructure was also expanding to support the region's industrial and urban growth.



2024

Today, the processes of industrialisation and urbanisation continue to advance, but in two different ways. Most cities have expanded, both through denser urbanised areas and lower-density developments. Villages that once followed linear structures have been transformed into dispersed patches of single-family housing.

However, the dual nature of the infrastructural and industrial changes is interesting. On the one hand, they continue to grow, with train tracks, motorways and new industrial sites built in recent decades. On the other hand, some tracks and industrial sites that were heavily used in the past are now abandoned; they are the marks of the past.

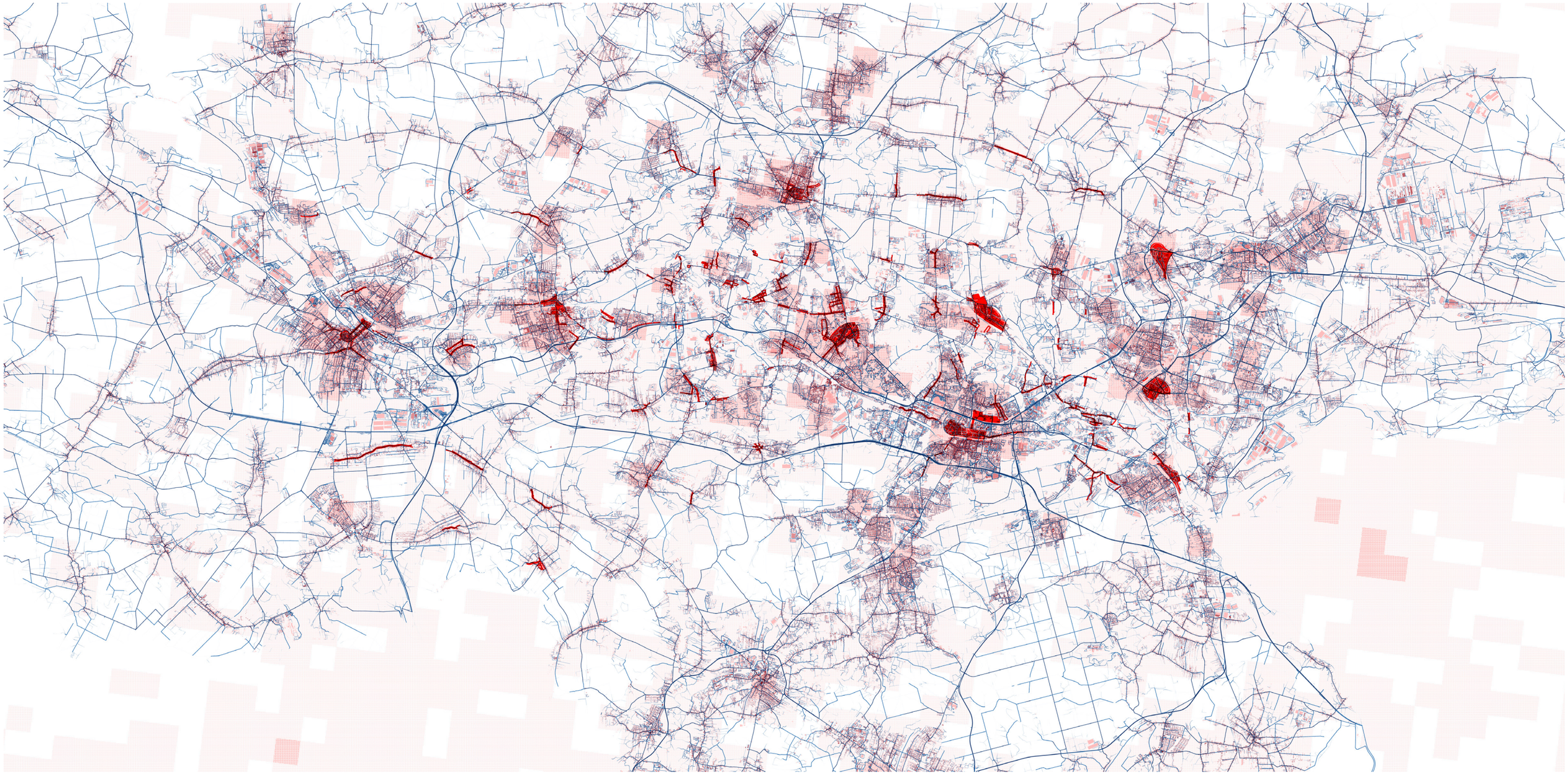


Urban “peaks”

The analyses of historical development helped in identifying of the four layers for the analysis of urban peaks. Urban peaks are understood as places that are or can become places of higher vibrancy and dynamics. This analysis especially helps in finding various of places in dispersed structure of the region, that have potential to become urban centers.

The layers of the map consist for information:

1. Population and land-ues (red hatch: biger dots - urban areas, smaller dots - peri-urban areas)
2. Road network centralities (blue lines: thick- main roads, thin- possibility local centers)
3. Compactness (shades of red buildings: the darker more compact the area is)
4. Historical urban structures (strong red hatch and lines)



3.3 Types of spatial environment

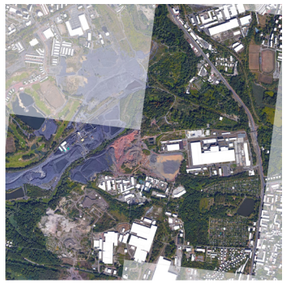
To better understand the diversity of urban forms, the built environment was clustered into 8 groups, by comparing data about: population, the average of built area and the average gross floor area. This statistical analyses helped in finding areas of similar urban structures, their characteristic and forms of sharing common spaces.

Industrial clusters

Cluster 5

Population:	302
Amount of floors average:	1.54307
Area average [m²]	478.405
Average gross floor area [m²]:	695.803

Industrial sites, a little bit of residential buildings





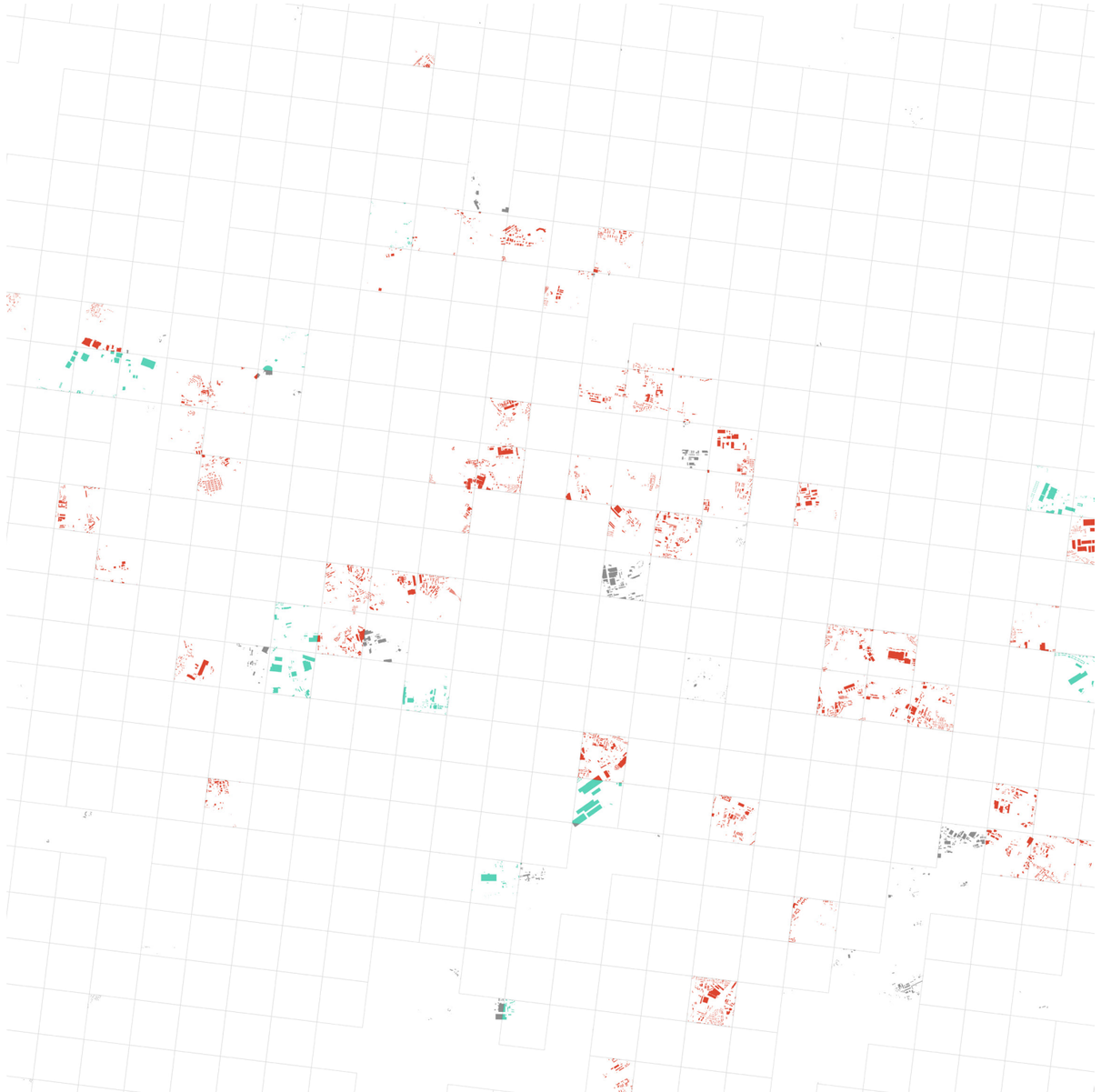
Cluster 8

Population:	108
Amount of floors average:	1.5
Area average [m²]	1757.1
Average gross floor area [m²]:	2441.43

Industrial sites on the suburbs







Cluster 5 and 8

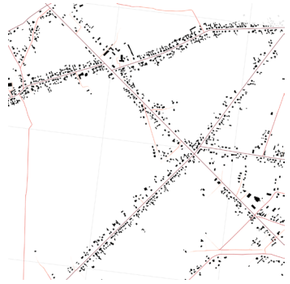
Peri-urban clusters

Cluster 1

Population:	228
Amount of floors average:	1.62883
Area average [m²]	116.722
Average gross floor area [m²]:	197.772

Linear dispersed singe-family houses.
One main road that connects everything together.





Cluster 2

Population:	162.5
Amount of floors average:	1.39321
Area average [m²]	114.514
Average gross floor area [m²]:	165.724

Dense single-family houses, a little bit of mix use





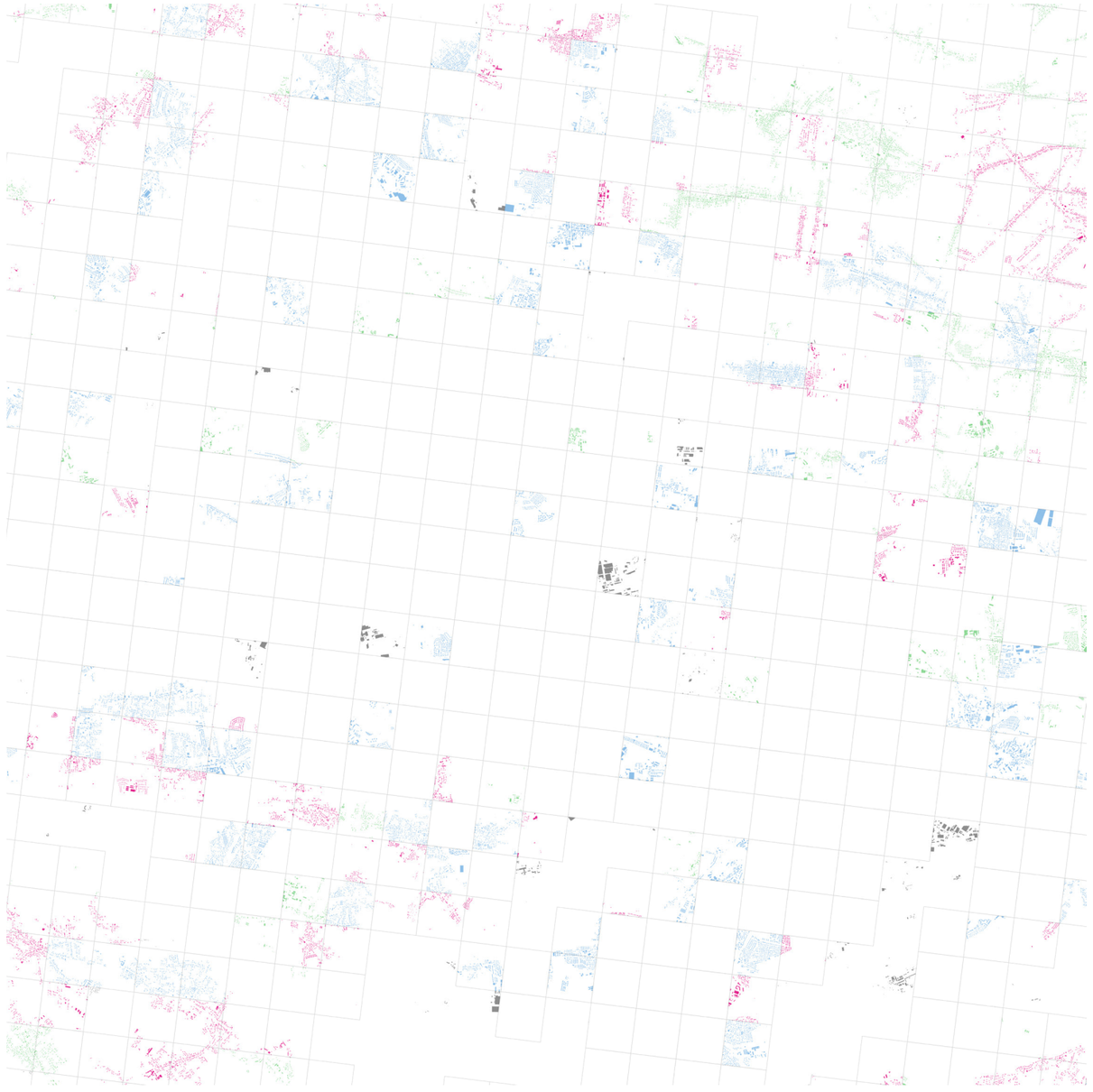
Cluster 3

Population:	1405.5
Amount of floors average:	1.73589
Area average [m²]	135.746
Average gross floor area [m²]:	243.019

Grouped single-family houses or residential blocks, mix use







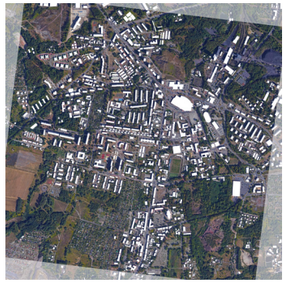
Cluster 1, 2 and 3

Low density urban clusters

Cluster 4

Population:	3919.5
Amount of floors average:	2.03653
Area average [m²]	183.448
Average gross floor area [m²]:	456.571

Tall residential blocks or grouped single-family houses, mix use

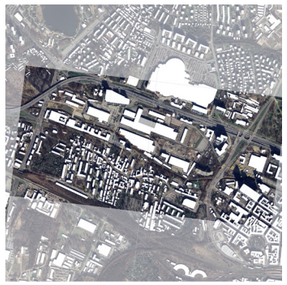




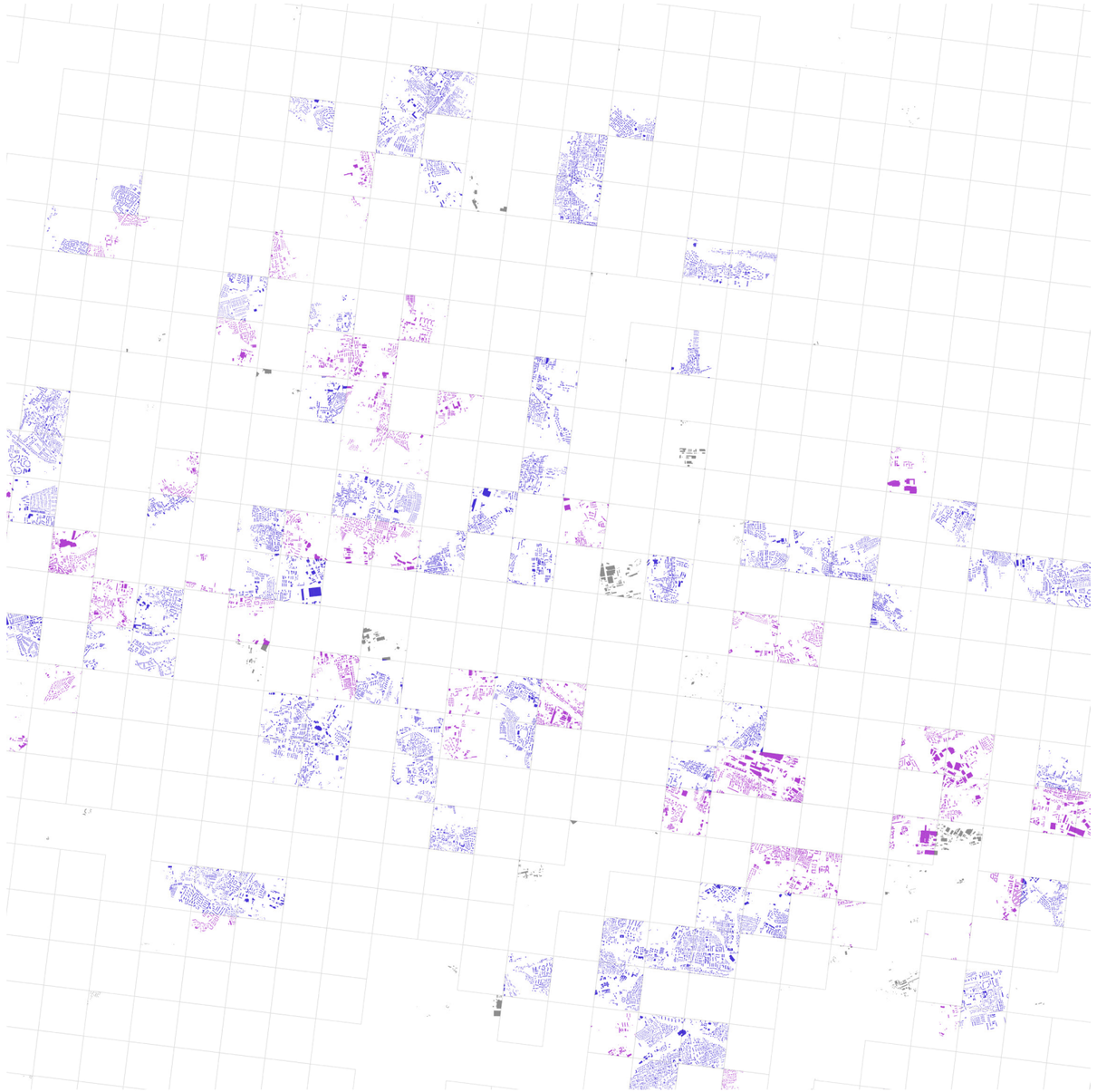
Cluster 6

Population:	2416
Amount of floors average:	2.30606
Area average [m²]	368.432
Average gross floor area [m²]:	883.763

Mix of residential blocks small industrial sites and commercials







Cluster 4 and 6

Compact city clusters

Cluster 7

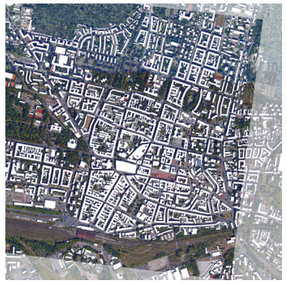
Population:	7534
Amount of floors average:	2.67894
Area average [m²]	281.166
Average gross floor area [m²]:	902.356

A city centers that evolved from a linear village structure.





City center with historic main square.





High rise soviet estates.





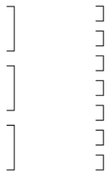


Cluster 7

Degree of continuity and permeability

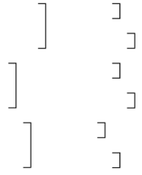
Clustering different types of spatial environments allowed for exploring in more detail the various ways urbanity and open space intersect. Whether defined by a continuous urban edge or a more permeable boundary, these interfaces shape the relationship between the city, its inhabitants, and nature. This analysis later informed our investigation into how interventions in both central and peripheral areas can complement each other and contribute to a cohesive, continuous system.

Continuous edge



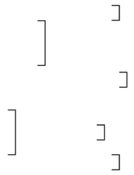
Continuous edge is defined by dense urban forms, which may consist of compact urban blocks or tightly arranged single-family housing.

Dispersed edge

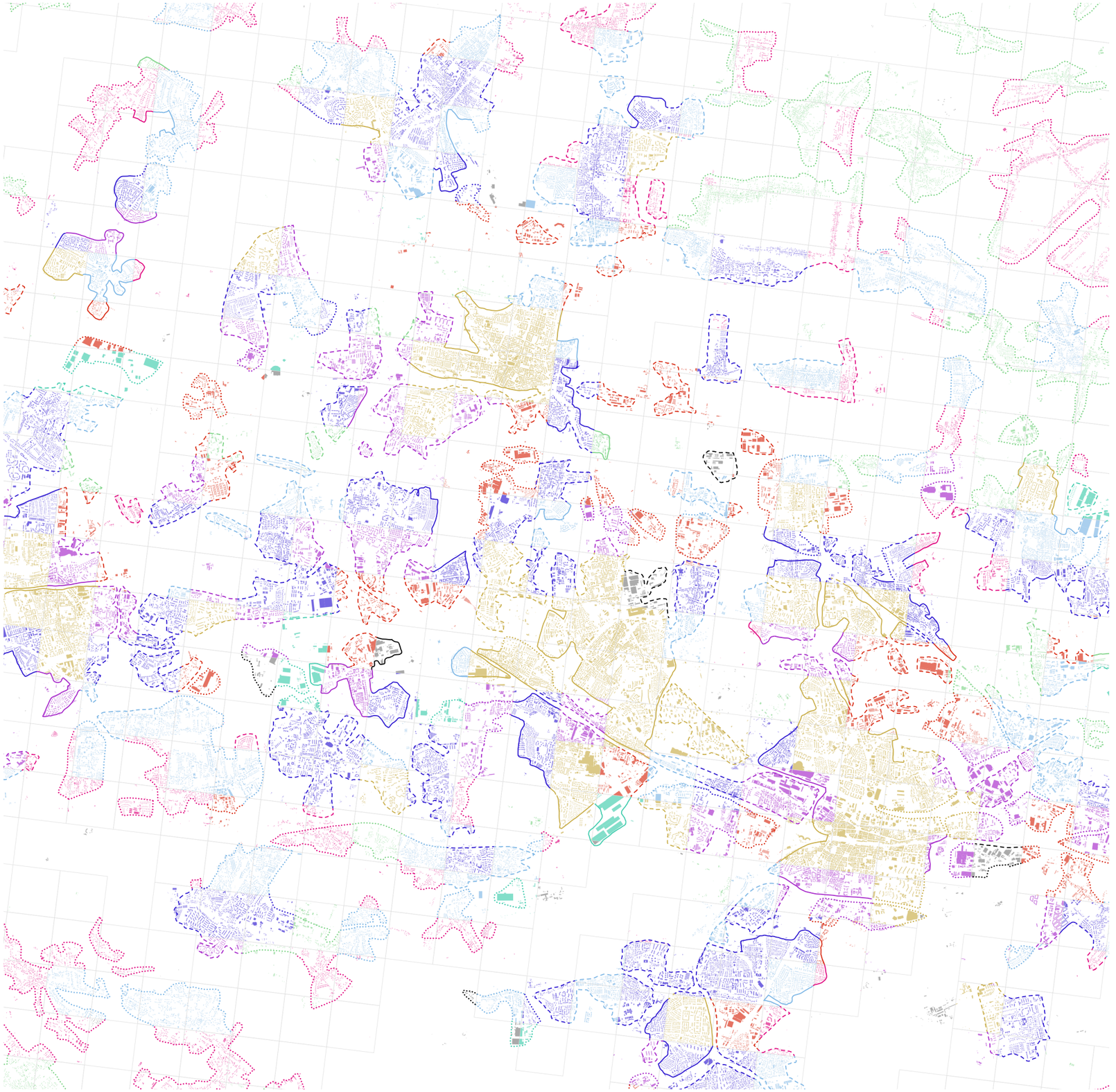


Dispersed edge emerges in areas where the urban boundary develops more gradually, often through medium-sized residential buildings, clusters of industrial structures, or loosely grouped single-family homes.

Dissolved edge



Dissolved edge is characterized by a sparse arrangement of built forms, such as scattered single-family houses, isolated industrial buildings, or open-form Soviet-era housing estates.



3 Appropriation of place

This chapter aims to focus on the perception of space, a more subjective approach to spatial analysis that will complement the previous chapter.

This softer way of exploring the space starts from solitary explorations of the space and will be combined with collective observations of my international colleagues. This helped to uncover the importance and impact of four territorial elements: infrastructure, socio-economic level (dynamics), nature and urbanity. These four elements will be brought back in different scenarios to better understand what each development path means for them.

Our common voices of the external perspective will become the introduction to more important voices, the local voices. These local voices include perspectives of individuals and ones that come from policy analyses. This combination of different imaginations of regional future will lead to the introduction of the territorial capitals that will become a fundamental element of this project. They will inspire scenarios and explorations of urban commons and create opportunities for future collaboration.

Introduced concepts: territorial capital, voices

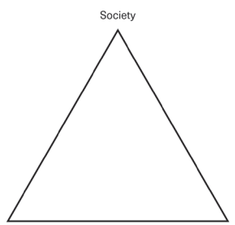




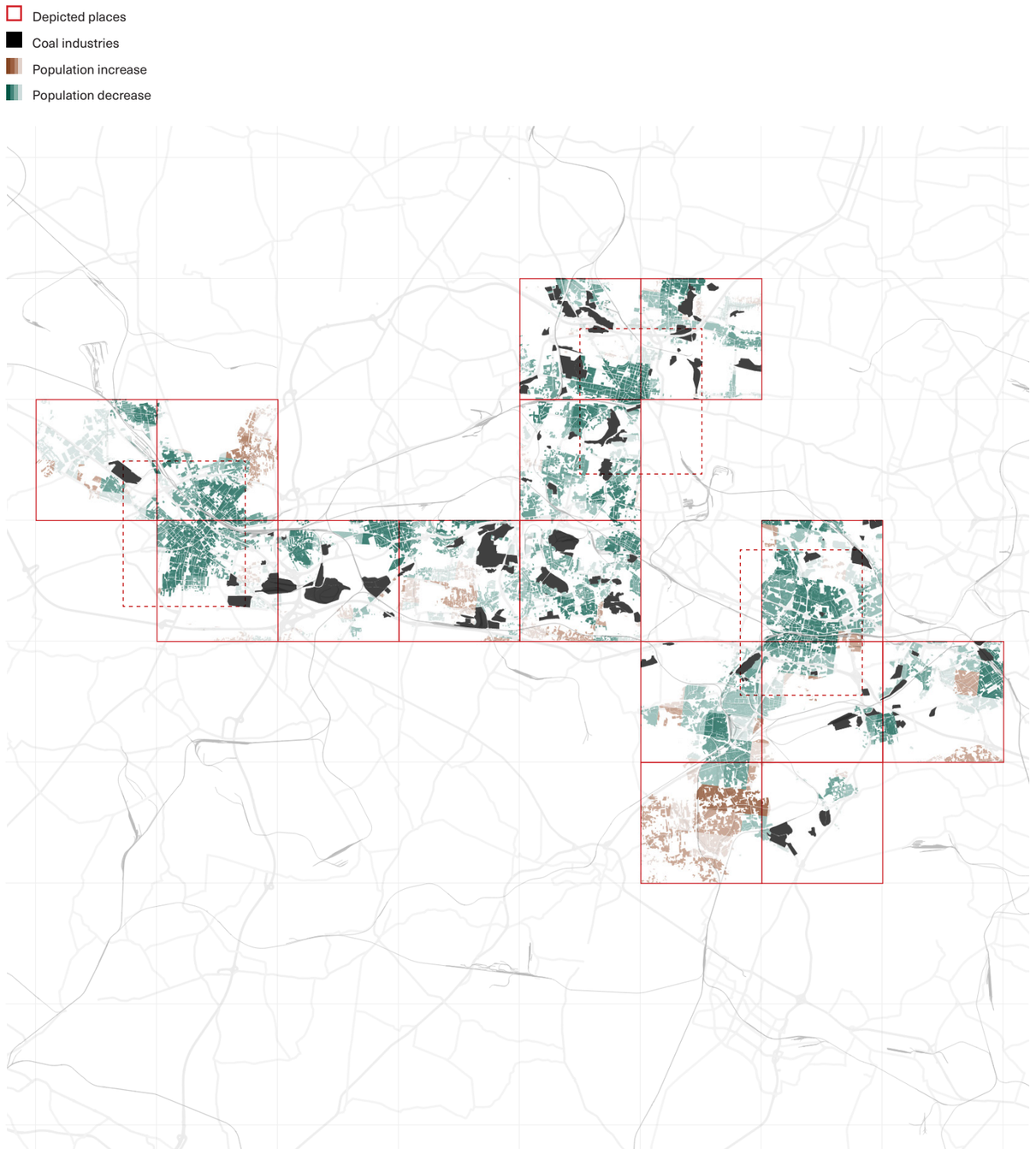
fig.22. City center in Katowice, 2024

3.2 Fieldwork

Region

The fieldwork was planned to explore the region of the transect, visiting sites connected with the coal industry, such as pits, mine tip and miners' estates. Travelling around the region allowed me to observe its different parts and contrasts. Each day ended in a different town: Bytom, Gliwice and Katowice.





Overlap of the layers

Bytom

It is one of the cities where urban shrinkage is evident. Abandoned buildings that reflect the city's rich history and mining sites that have caused land subsidence in the city centre highlight the urban challenges of the mining region. However, there are also positive elements, such as restored mine tips and newly renovated miners' estates.

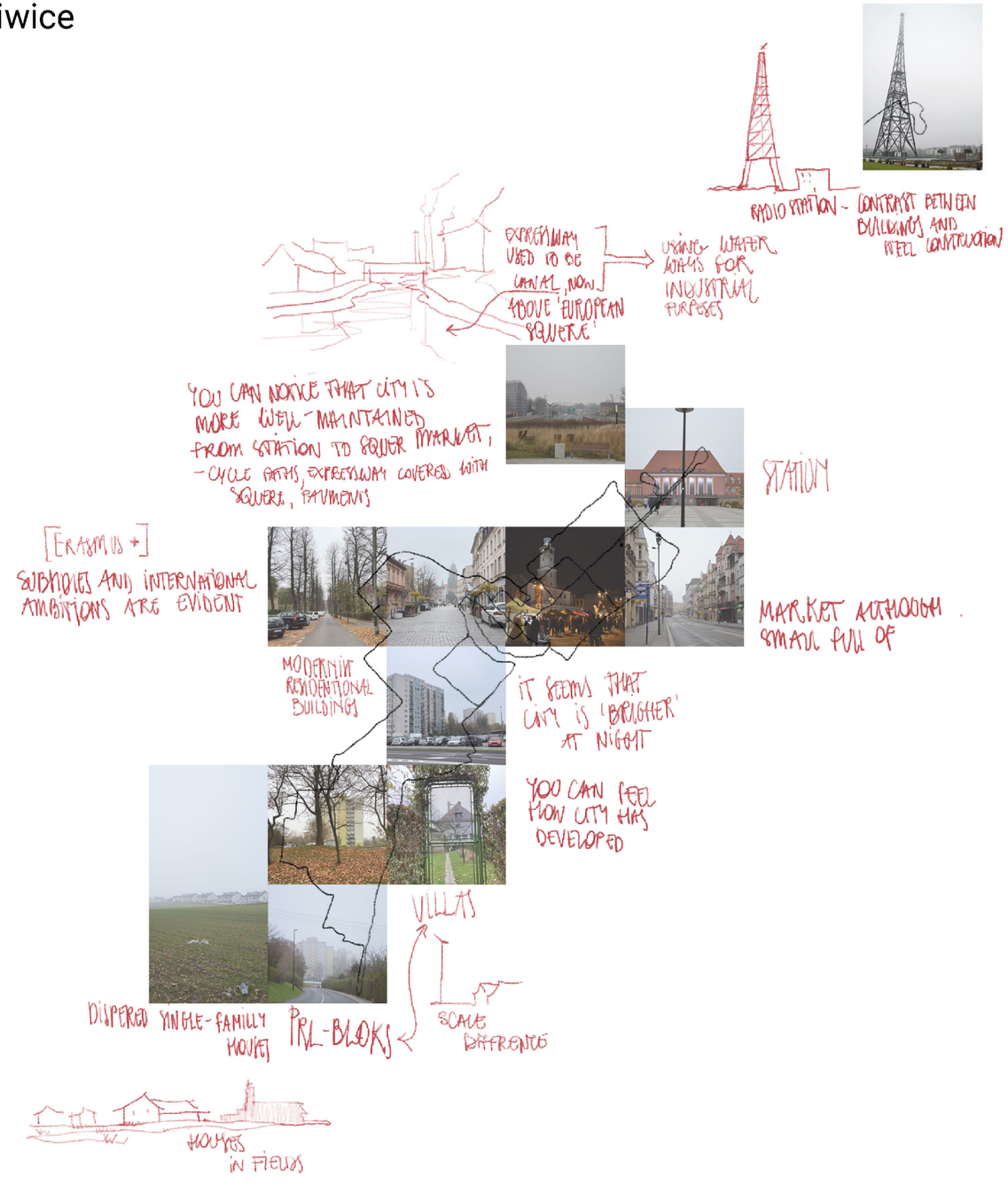




Gliwice

It is a strong contrast to Bytom, with which it shares a common history. Once a city of heavy industry and mining, Gliwice is now more associated with innovation, functioning as a hub for various industries, universities and research institutions. It is also notable that the city has more resources for maintenance and has more international ambitions.

Gliwice





Katowice

The region's largest city has a completely different structure to the other two. Formed by the amalgamation of villages, its transport network divides parts of the city. The city centre is a mix of modernist buildings, Soviet-era estates, vast infrastructure and significant investments that have become regional icons.





Outside voices

During the academic year, a group of students, together with the POLIC association, decided to arrange the annual trip to Poland. The ongoing energy transition was a reason for them to come and understand what this time means for our role as urbanists. This three-day excursion to Katowice focused on finding various ways of collecting data about three topics: landscape morphology, spatial justice and adaptation to change.

During the trip, the group managed to meet local experts who are involved in different transformations, on various scales and in different ways. This helped later in group explorations that went to different areas of the region.

After the excursion, I asked my friends to create the mind maps that would collect their experiences and observations, that are put on paper. The maps become a base for the colleague, who is on the next page, that combines parts of each of the ten maps. By analysing each of the perspectives and combining them, I could see which elements they focused on and which ones stayed with them the strongest.

“Is this a very scattered urban area? Or a very populated/urbanised rural area?”, “Just purely a Polish morphology of the landscape” or “so much potential in industrial sites ... too much potential!” are just a few of the peers’ observations that overlapped with my observations. This exercise highlighted the important role of a four-layered infrastructure, socio-economic dynamics, nature and urbanity as well as the significant role of perception in urban design.



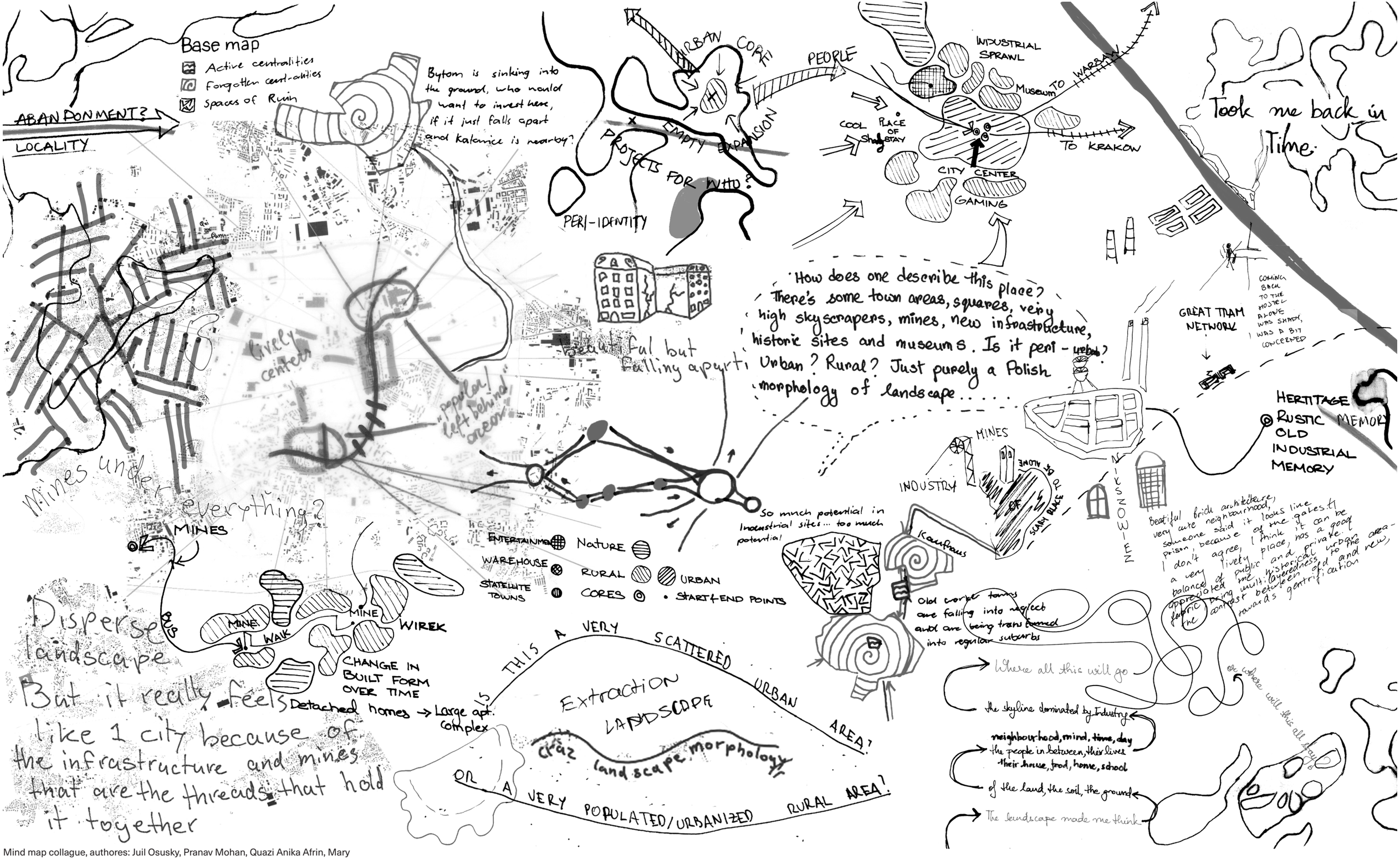
fig.24. author: Evgenia Vamvakousi





fig.23. author: Ganesh Umasankar





Mind map collague, authores: Juil Osusky, Pranav Mohan, Quazi Anika Afrin, Mary Sutherland, Wouter Versnel, Megha Sahu, Martin Cardoso Suter, Eleonora Alghileri

Summary

The presence and contrast of four territorial layers became clearly visible on both field trips. Each layer has its potential and challenges. Although these layers were initially analysed separately, they are deeply intertwined. The project will explore how they can support and strengthen one another.

Infrastructure

Main observation

While travelling across the region, I realised how, at the same time is easy and hard to move by car through the region. It was easy to travel between major cities. However, if you wanted to leave the main roads, the routes were complicated and obstructed by obstacles. Hard infrastructure can be seen as a dividing line, separating urban areas and creating spatial boundaries. I also observed how everyday life goes along those lines.

Potentials

1 Connecting different parts of the region, not only locally but also with other regions.
An integral part of the region, evident in development analyses, personal observations, and
2 initial discussions with local residents.

Challenges

1 Difficult to maintain as it is highly developed and spread across the region.
2 Divisions and separation of urban spaces.



fig.26. Highway underpas, 2024



fig.25. City center in Katowice, 2024

Socio-economic dynamics

Main observation

It was during the tour that I really understood how different economic opportunities shape space and daily life. These contrasts were particularly evident at night: in the upper parts of Gliwice and Katowice, the streets were lively, while the centre of Bytom was quieter, with life mostly hidden in apartments or a shopping center.

Potentials

1 The diverse character of the cities - Katowice with neon lights and a more modern look, while Bytom and Gliwice are older cities with an historic spirit.

Challenges

1 Ensuring equal opportunities and potential for all residents
2 A direction for problematization, focusing on how cities can support each other in the regenerative process.



fig.27. City center in Katowice



fig.28. City center in Gliwice

Nature

Main observation

After spending time there, I realised the value of having nature nearby. The contrast between the vast industrial sites, the dense urban environment and the silence of the forest highlighted its role as a vital space to breathe and rest.

Potentials

1 The region already has extensive forests and lakes, which can be more easily restored and enhanced in the future.
2 Nature is of great value both locally and regionally.
3 The diversity of the landscape, from nature reserves to transformed post-mining areas, creates a unique combination.

Challenges

1 These should be recognised as a shared regional value that has been disturbed in the past and need care now.
2 It is also important to preserve the ecological links between different parts of the region. In some areas, forest areas are not easily accessible.
3



fig.30. Forest disrupted by a fast-traffic road, 2024



fig.29. Mining heap, 2024

Urbanity

Main observation

During the fieldwork, I visited different cities to explore the liveability and conviviality of different spaces. From these visits, I became aware of the diversity of place typologies, ranging from historic city centres and miners' estates to Soviet-era blocks and contemporary urban sprawl. These elements mix and intertwine to create a varied collage of urban typologies.

Potentials

1 The diversity of urban forms brings great potential for meeting different lifestyles and needs.

2 Some of the places are unique and together create great potential.

Challenges

1 Some of the urban structures may not be seen as attractive places to live now, some are old or in poor condition. This creates reason for urban sprawl.



fig.32. Real estate in Katowice, 2024



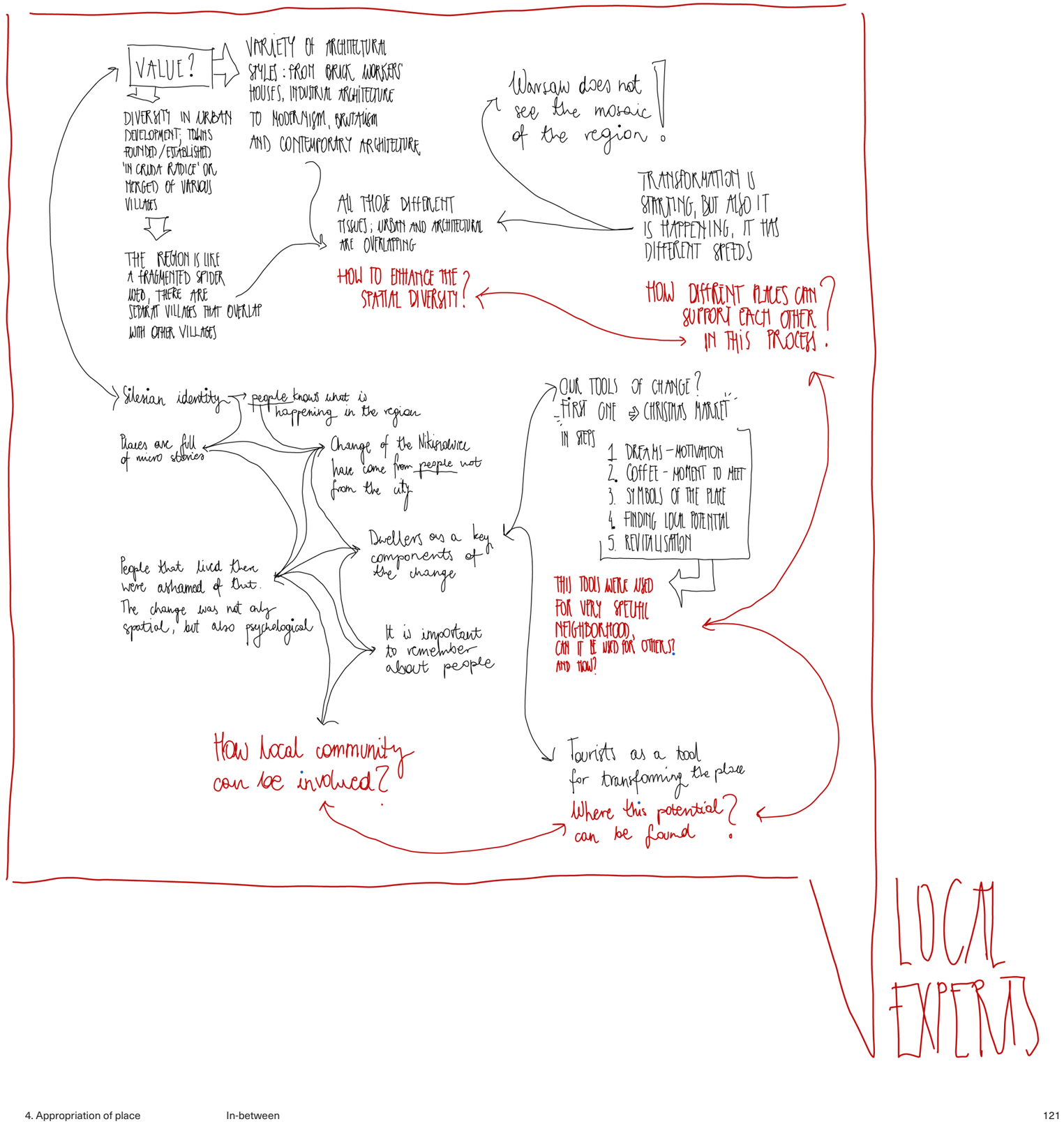
fig.31. City center in Gliwice, 2024

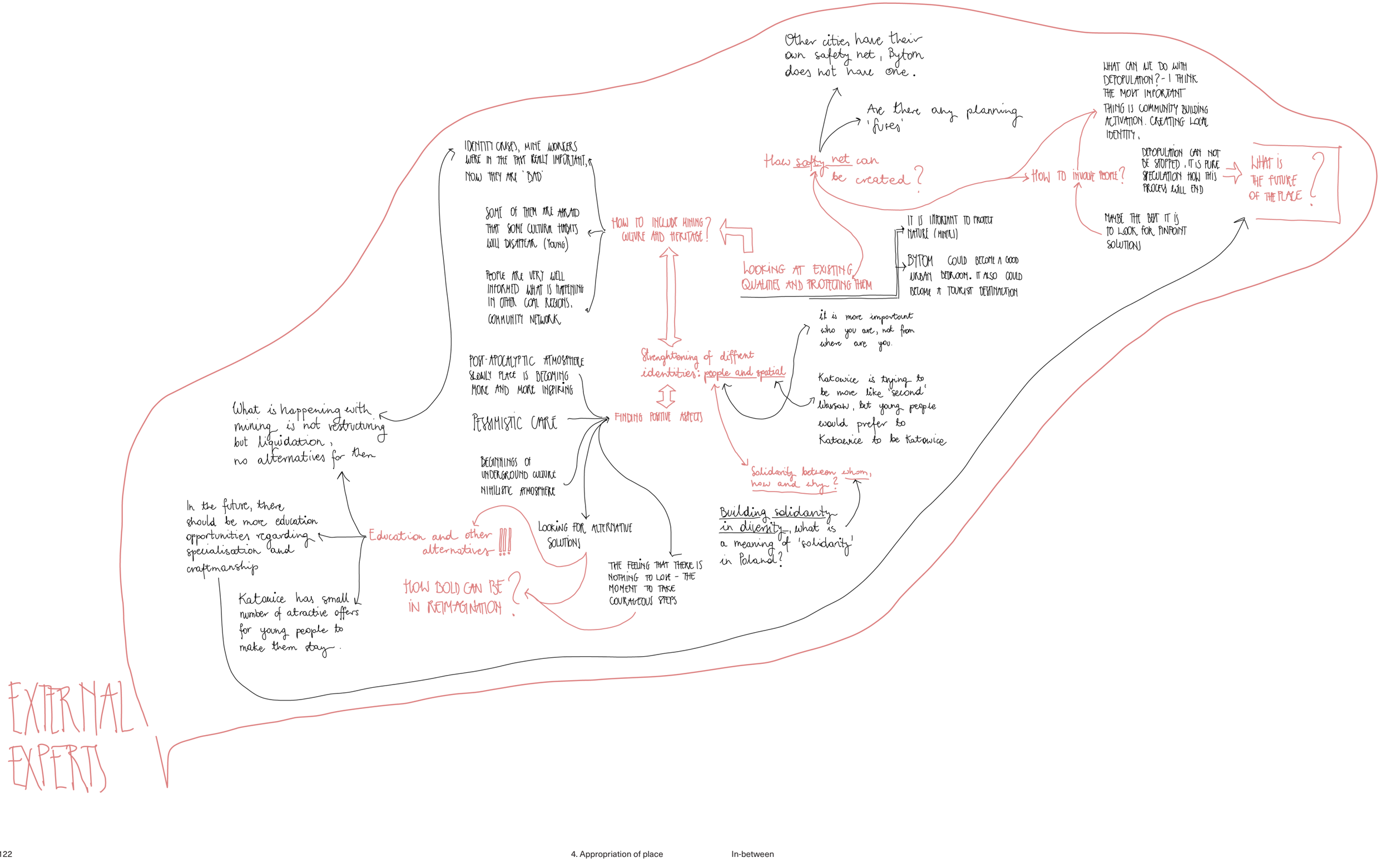
3.3 Experts

Local voices

Interviews, lectures and talks that I was a part of helped in acknowledging different personal perspectives - each equally important. By gathering all contributions and cross-connected them, the collective mind map was created to represent the different groups of voices. Red text highlights my reflections, which aim to synthesis various inputs into questions or statements that will guide project's explorations. During both trips, I managed to encounter different local voices that created four groups.

1. Local experts: this is a combination of the local professionals who are working with space in different ways. Fields of their specialities were economics, heritage preservation and NGOs.
2. Externa experts: these are the voices of two urbanists: a researcher and professor, who are not from the region, but their professional work is connected with the Silesian region.
3. Young: Those are the voices of four students from different parts of a metropolitan region. Three of them are studying and living in Katowice now, the fourth decided to work abroad and currently pursues a master's degree in Warsaw.
4. Adults: This group consists of diverse adult residents from across the region, working in a range of professions including warehouse labour, steel industry jobs, and various business sectors.




Other cities have their own safety net, Bytom does not have one.
Are there any planning 'fixes'
How safety net can be created?
HOW TO INVOLVE PEOPLE?
WHAT CAN WE DO WITH DEPOPULATION? - I THINK THE MOST IMPORTANT THING IS COMMUNITY BUILDING ACTIVATION. CREATING LOCAL IDENTITY.
DEPOPULATION CAN NOT BE STOPPED, IT IS PURE SPECULATION HOW THIS PROCESS WILL END
WHAT IS THE FUTURE OF THE PLACE?
MAYBE THE BEST IT IS TO LOOK FOR PINPOINT SOLUTIONS
IDENTITY CAUSES, MINE WORKERS WERE IN THE PAST REALLY IMPORTANT, NOW THEY ARE 'BAD'
SOME OF THEM ARE AFRAID THAT SOME CULTURAL THINGS WILL DISAPPEAR (YOUNG)
PEOPLE ARE VERY WELL INFORMED WHAT IS HAPPENING IN OTHER COAL REGIONS, COMMUNITY NETWORK
HOW TO INCLUDE MINING CULTURE AND HERITAGE?
LOOKING AT EXISTING QUALITIES AND PROTECTING THEM
IT IS IMPORTANT TO PROTECT NATURE (MINES)
BYTOM COULD BECOME A GOOD URBAN BEDROOM. IT ALSO COULD BECOME A TOURIST DESTINATION
Strenghtening of diffent identities: people and spatial
it is more important who you are, not from where are you.
Katowice is trying to be more like 'second' Warsaw, but young people would prefer to Katowice to be Katowice
Solidarity between whom, how and why?
Building solidarity in diversity - what is a meaning of 'solidarity' in Poland?
What is happening with mining is not restructuring but liquidation, no alternatives for them
POST-APOCALYPTIC ATMOSPHERE SLOWLY PLACE IS BECOMING MORE AND MORE INSPIRING
PESSIMISTIC CAMPE
FINDING POSITIVE ASPECTS
BEGINNINGS OF UNDERGROUND CULTURE
NIHILISTIC ATMOSPHERE
In the future, there should be more education opportunities regarding specialisation and craftmanship
Education and other alternatives !!!
Katowice has small number of atractive offers for young people to make them stay.
LOOKING FOR ALTERNATIVE SOLUTIONS
THE FEELING THAT THERE IS NOTHING TO LOSE - THE MOMENT TO TAKE COURAGEOUS STEPS
HOW BOLD CAN BE IN REIMAGINATION?
EXTERNAL EXPERTS

There are a lot of large scale stores which are contributing to the closure of small local shops, and this is happening almost everywhere in the region.

I was scared to go to school in Katowice because I was afraid I would be stuck in traffic every day.

In general there is also a big problem with parking, because if you drive a car there are usually few places to stop in the centre and this also affects the popularity of the big shops.

Is there any alternative for car-based life style in this region?

AND THERE ARE CONSTANT ROAD WORKS EVERYWHERE

MY TOWN, PIERARY SLĄSKIE, IS POORLY COMMUNICATED, WITH TRAFFIC JAMS AND BUSES STANDING IN THESE JAMS

USUALLY THIS BUS STOPS ON THIS STOP, I KNOW THE SCHEDULE VERY WELL - WE RELAY ON THE PUBLIC TRANSPORT

GLIWICE ARE BADLY COMMUNICATED - I USED TO GET TO UNIVERSITY FROM MY TOWN BY CAR, AND MANY PEOPLE TOO.

KATOWICE DO NOT HAVE A GOOD SPATIAL CONNECTIONS WITHIN THE CITY, IF YOU WANT TO GET FROM A TO D, IT'S OFTEN VERY DIFFICULT

WHAT SHOULD CHANGE? THE LABOUR MARKET AND INFRASTRUCTURE, PUBLIC TRANSPORT

SOFT MOBILITY, GOOD PUBLIC TRANSPORT, GOOD CONNECTIONS BETWEEN CITIES AND WITHIN CITIES

KATOWICE WORKS IN SUCH A WAY THAT IT IS AN INTERMEDIATE CITY, IT IS ATTRACTIVE TO PEOPLE LIVING IN THE SURROUNDING AREA, BUT NOT TO PEOPLE FROM OTHER LARGER CITIES (FOR STUDING)

HOW IT COULD BECOME A ATTRACTIVE DESTINATION? COLLABORATION BETWEEN UNIVERSITIES AND THE REGION? HOW TO IMPROVE QUALITY OF LIVING ENVIRONMENT?

OVERALL THE LEVEL OF SCHOOLS IS GOOD, BUT AFTER THEM, WHAT? FOR THE YOUNG IN KATOWICE, THERE ARE SMALL ARCHITECTURAL JOB OPPORTUNITIES

HOW ENERGY-TRANSFORMATION CAN START NEW ERA IN THE REGION?

What do I like about Silesia? I like this place with its identity its history. Silesia has a lot of verve. I also like the view and there are mountains nearby, of course. And food!

Where is Silesia? - Silesia simply is

Silesians love Silesia. And this is identity

I quite like that they say 'that we eat coal' there

WHEN I WAS IN HIGH SCHOOL (7 YEARS AGO) THEY WERE STILL TRAINING YOUNG PEOPLE TO BE MINE WORKERS

ALMOST EVERYONE HAD A MINER IN THEIR FAMILY

I think that this upcoming transformation will not affect identity It's a history, that will not be forgotten. It can be used as potensial. And still there will be traditions, like Barbórka.

COAL IS NOT THE FUTURE, YOU NEED SOMETHING THAT PROVIDES SIMILAR WORKING CONDITIONS

How can future development strengthen the existing identity?

Politechnika Gliwice - dead, people don't want to stay, young people party in the dorms because there was nowhere else to go

There was no high school in my village so I used to go to Bytom. After school, I was going home because there was nothing else to do.

find alternatives, places for leisure for young, affordable.

Young people have nowhere to go in winter, they find shelter in shopping centers.

They need place where they can meet, somewhere with their friends and not have to pay

HOUSING GENTRIFICATION, NOW DEVELOPERS ARE PROFIT ORIENTED AND THEY ARE BUILDING SMALL FLATS THAT ARE EVEN NOT AFFORDABLE FOR US

THERE IS A PROBLEM WITH GENTRIFICATION. IN KATOWICE PRICES ARE ALMOST LIKE IN WARSAW BUT IN BYTOM ARE STILL DECENT ONES.

MORE AFFORDABLE HOUSING? DIFFERENT WAYS OF LIVING? COLLECTIVES?

How local potential can be used make cities attractive.

In Zabrze there is nothing to do

Bytom is terrible and very neglected

When I visited my family in Katowice, I was always finding this place as gloomy and grey.

Small towns are very quiet and this is to their advantage

Gliwice, a city for the young with an old people's mentality

Bytom has really a lot of potential, but people don't appreciate it People don't care about the space they live in.

Chorzów is such a bedroom.

What can be done to improve living conditions in the region?

People are moving out from Bytom because they are afraid of the area they live in

Most of my friends have left for Warsaw, Katowice, Sosnowiec or went abroad

How to improve safty?

There are football gangs and it's a massacre, because often there are some fights and you can also be punched because how you look.

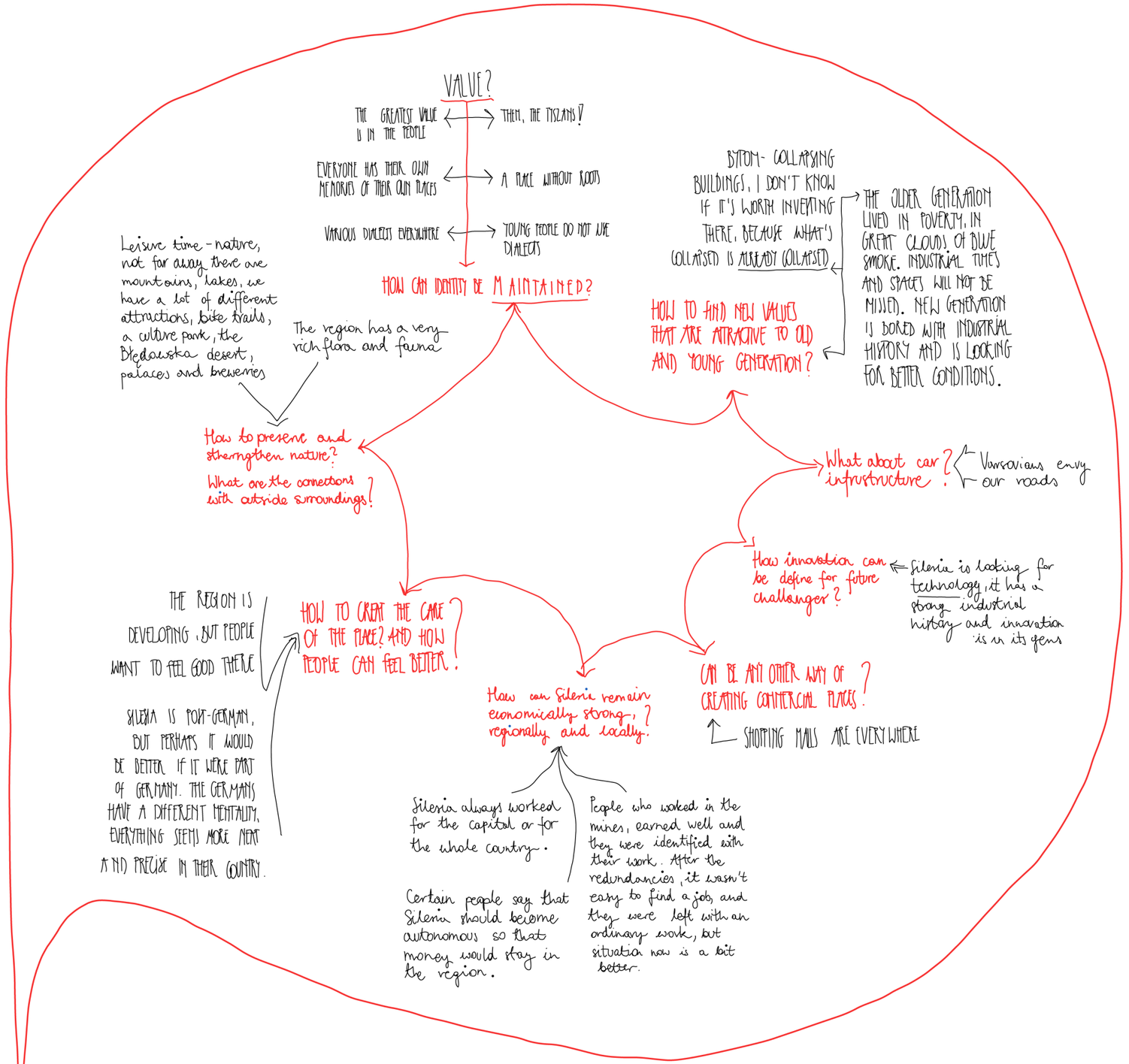
IMPROVE GREEN CONECTIONS MORE GREEN PLACES

IT WOULD BE NICE TO HAVE MORE GREENERY IN TH CITIES

WHEN THE WEATHER IS NICE, ALL THE PARKS ARE FULL OF PEOPLE

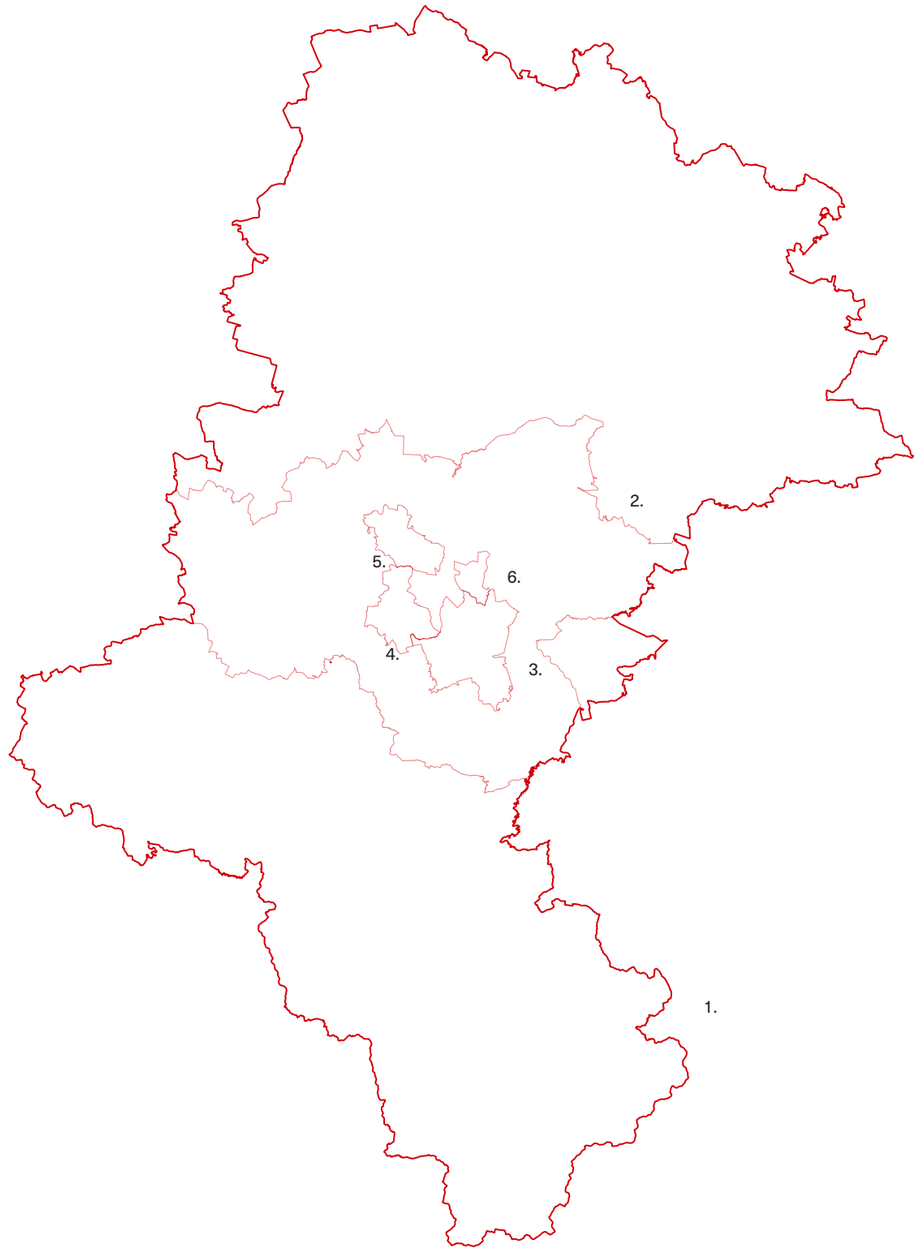
WHAT HAS CHANGED? THERE ARE NEW FOOTPATHS, TOWN ARE GETTING GREENER

YOUNG


VALUE?
THE GREATEST VALUE IS IN THE PEOPLE
THEM, THE TYSLANS?
EVERYONE HAS THEIR OWN MEMORIES OF THEIR OWN PLACES
A PLACE WITHOUT ROOTS
VARIOUS DIALECTS EVERYWHERE
YOUNG PEOPLE DO NOT USE DIALECTS
HOW CAN IDENTITY BE MAINTAINED?
Leisure time - nature, not far away there are mountains, lakes, we have a lot of different attractions, bike trails, a culture park, the Błędowska desert, palaces and breweries
The region has a very rich flora and fauna
How to preserve and strengthen nature?
What are the connections with outside surroundings?
BYTOM - COLLAPSING BUILDINGS, I DON'T KNOW IF IT'S WORTH INVESTING THERE, BECAUSE WHAT'S COLLAPSED IS ALREADY COLLAPSED
THE OLDER GENERATION LIVED IN POVERTY, IN GREAT CLOUDS OF BLUE SMOKE. INDUSTRIAL TIMES AND SPACES WILL NOT BE MISSED. NEW GENERATION IS BORED WITH INDUSTRIAL HISTORY AND IS LOOKING FOR BETTER CONDITIONS.
HOW TO FIND NEW VALUES THAT ARE ATTRACTIVE TO OLD AND YOUNG GENERATION?
What about car infrastructure?
Warsawians envy our roads
How innovation can be define for future challenger?
Silesia is looking for technology, it has a strong industrial history and innovation is in its gens
CAN BE ANY OTHER WAY OF CREATING COMMERCIAL PLACES?
SHOPPING MALLS ARE EVERYWHERE
HOW TO CREAT THE CARE OF THE PLACE? AND HOW PEOPLE CAN FEEL BETTER?
THE REGION IS DEVELOPING, BUT PEOPLE WANT TO FEEL GOOD THERE
SILESIA IS POST-GERMANY, BUT PERHAPS IT WOULD BE BETTER IF IT WERE PART OF GERMANY. THE GERMANS HAVE A DIFFERENT MENTALITY, EVERYTHING SEEMS MORE NEAT AND PRECISE IN THEIR COUNTRY.
How can Silesia remain economically strong, regionally and locally.
Silesia always worked for the capital or for the whole country.
People who worked in the mines, earned well and they were identified with their work. After the redundancies, it wasn't easy to find a job, and they were left with an ordinary work, but situation now is a bit better.
Certain people say that Silesia should become autonomous so that money would stay in the region.
ADULTS

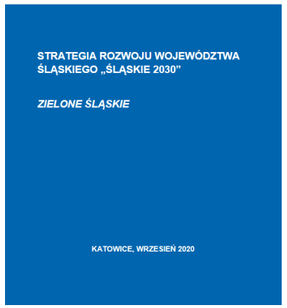
Policy Overview

Although a bit different from the personal voice presented on previous pages, policies are another group of voices that describe the vision, goals and priorities for the future. The policy overlooks will collect through scales different documents that inform socio-economic ambitions and spatial implications. The selection of policies was based on the governmental level, starting with the strategy of the Silesian Voivodeship, the metropolitan region and ending with the municipal level. Also, to better understand the lowest administrative level and how the strategies differ in the region, the analyses will focus on four cities: Katowice, Ruda Śląska, Bytom and Siemianowice Śląskie. They have been chosen for their different historical backgrounds, current challenges and size, and all are covered by all three scales in which the project operates.



Map of analysed documents

1. Silesian Voivodeship
2. Metropolitan area GZM
3. Municipality - Katowice
4. Municipality - Ruda Śląska
5. Municipality - Bytom
6. Municipality - Siemianowice Śląskie



1. The development strategy for the Silesian Voivodeship ‘Silesia 2030’ – Green Śląskie

Vision

date: 2020

level: Voivodenship

“The Silesian Voivodeship will be a modern European region with a competitive economy, resulting from a responsible transformation, offering development opportunities for its residents and providing a high quality of life in a clean environment.”

Goals

Silesian Voivodeship as a region of responsible economic transformation

Silesian Voivodeship as a resident-friendly region

Silesian Voivodeship as a region of high-quality environment and space

Silesian Voivodeship as an efficiently governed region



2. Development Strategy for the Upper Silesian and Zagłębie Metropolis 2022-2027, with an Outlook to 2035.

Vision

date: 2022

level: Metropolitan region

“The Upper Silesian-Zagłębie Metropolis is envisioned as an attractive area for living, learning, working, and leisure—well-integrated, drawing on the synergy of diversity, tradition, and industrial heritage. It develops a vibrant cultural offer and a modern economy, undergoing transformation toward climate neutrality and resilience to crises, with a strong position among metropolitan areas.”

Goals

Adaptation to Climate Change and Resilience The Metropolis GZM guided by the principles of sustainable development

Mobility and Accessibility GZM as mobile, low-emission, and transport-cohesive

Space and Social Cohesion GZM as open, friendly, and committed to spatial order and quality of life

Metropolitan Character and Innovation GZM as innovative, economically strong, and enhancing human capital

Cooperation and Openness GZM as initiating, inspiring, and internally integrated



3. Development Strategy of the City Katowice 2030

Vision

date: 2016

level: Municipality

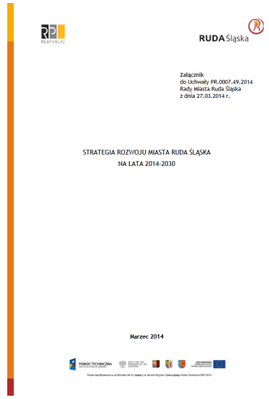
“The vision of Katowice in 2030 draws from urban development concepts focused on a city that strengthens and unlocks internal potentials, within global flow networks, innovative and entrepreneurial, green, compact, friendly, and resilient.”

Goals

Katowice – a city of high and equal living standards

Katowice – the capital of Upper Silesia and a 21st-century metropolis

Katowice – a centre of business and the modern economy



4. Development Strategy of the City of Ruda Śląska 2014-2030

Vision and mission

date: 2014

level: Municipality

“A city of districts that do not divide — a good place to live, work, and relax.

[...] To create a modern and friendly city based on the potential and activity of its residents.”

Goals

aware of its potential, standing out in the region

proud of its mining traditions

creating modernity while preserving tradition,

where the distinctiveness of districts does not divide, but connects and integrates

where people live in prosperity

is family-friendly



5. Development Strategy of the City of Bytom “Bytom 30+”

Vision

date: 2022

level: Municipality

A vibrant, future-oriented city with a strong identity rooted in heritage, known for its quality of life, social cohesion, and innovation. It supports residents' development, attracts talent, fosters a modern economy, offers clean, attractive public spaces, and is efficiently and inclusively managed as a key part of the Metropolis.

Goals

City of solidarity, safety, and learning

City of active communities

Intelligent city

City of start-ups

City as a vital space

City as an innovation hub of the metropolis



6. Development Strategy of the City of Siemianowice Śląskie until 2030

Vision

date: 2020

level: Municipality

A city of integrated local community, combining the intimacy and friendliness of a medium-sized center with access to metropolitan amenities.

Goals

A Vital City – Socially, Professionally, and Educationally Active Residents Shaping the City.

A City of Modern Economy – Cooperation Between Traditional Economy and Modern Technologies, Entrepreneurship Creation, and Innovation.

A City of Sustainable Development – Socially, Economically, Spatially, and Environmentally Sustainable Development that Improves the Quality of Life.

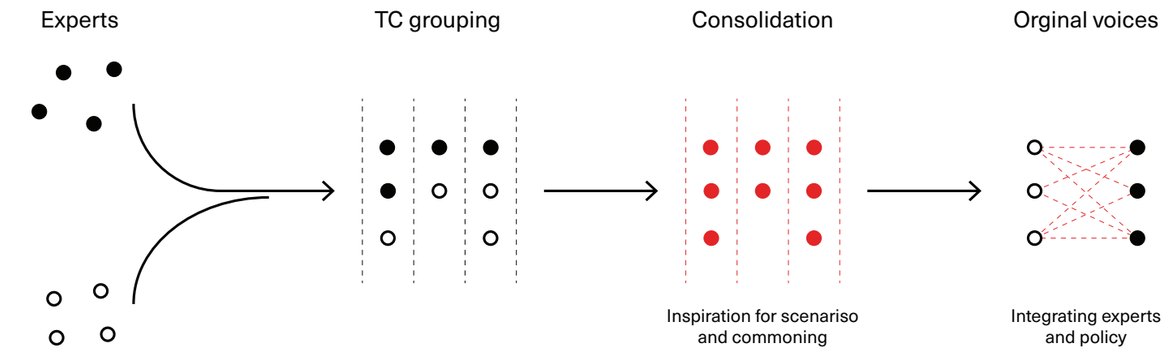
→ More detailed infromations in appendix

3.4 Voices

Within this chapter, the exploration focused on the different perspectives for the regional future. Starting from personal ones and the joint perspective of the urbanist students, it was possible to investigate the spatial characteristics of the region, which helped to better understand the perception of the region from the human perspective.

This contextualisation of the physical fame gives background for local perspectives of residents, from young to adults, experts to policy makers. Infrastructure, resources, economy, heritage, security or identity and lifestyle are just a few of those elements that various voices have mentioned. This created the tangible and intangible assets of place-specific conditions that shape today's quality of milieu' (Orsi et al., 2024) and can be redefined in the future.
By approaching the imagination of the future from a more place-based perspective, the concept of territorial capital creates a link between place and policy. Concepts emerge from "place-based territorial approaches and greater convergence between spatial planning and regional development policies"(Orsi et al., 2024, p. 1). Looking at the region more sensitively, the capitals that come from not only the economy but also society, building environment and nature, all different endogenous elements that can be included in the process of shaping a regional identity (Orsi et al., 2024). In this way, not only does economic transformation become the focus point of spatial planning, but also more 'soft' aspects of territory, like solidarity or locality, can be included in the transformation of the region.

By understanding different voices, their opinions, desires and needs, the experts and governance goals were grouped into nine territorial capitals and sub-categories. This helped capture the elements of the territory that are important for any of the voices. For the next steps of the project (chapter 4), the imagining of the different paths will be inspired by the territorial capital. Each of the paths has a different focus point, which creates different opportunities for including different subgroups of TC. In this part of the project is it is not important whose voice it is, but more of the collective imagination where the combination of different capitals can be explored. In Chapter 5, the focus will be on the possible collaboration and cocreation of common imaginaries between different voices.



Polic overview

How TC wil be used in the project

Consolidated voices

Infrastructure | Innovation

mobility

soft mobility

Soft mobility, good public transport, safe bike lines and side walks

Development of sustainable urban mobility and promotion of public transport as the first choice for daily travel

Promotion of micromobility, including cycling and the sharing economy

Sustainable transport and mobility.

roads

Being proud of road infrastructure

Creating infrastructural and organizational conditions for the development of public and road transport

train

Development of rail transport

infrustructure

Efficient infrastructure

Developed technical infrastructure.

Technical infrastructure meeting the growing expectations of users.

energy

How energy-transformation can start new era in the region?

Energy transformation and improvement of air quality

innovation

How innovation can be define for future challenges?

circularity and sustainability

Integration of municipal waste and sewage sludge management systems, with a focus on a circular economy

Technologies supporting sustainable development.

collaboration

Cross-sector cooperation and support for innovation.

concentration

Concentrated innovation hubs and new economy enterprises,

Greenery | Environment

quality

connection

Improve green connections, more green places

What are the connections with outside surroundings?

quality

High environmental quality

Well-maintained and diverse natural environment

Green, healthy spaces.

High attention to environmental and recreational values.

preservation

protection

How to preserve and strengthen nature?

Preserved natural resources

awareness

Promoting awareness of climate change and sustainable development

climate adaptation

nature based solution

Development and management of blue-green infrastructure

adaptation

Resilience to climate change and epidemics.

Climate change prevention and adaptation

Job | Education

education

attractive

More diverse education opportunities and alternatives

Attractive and effective education and research system

How it could become a active studying destination?

strong

Enhancing the competitiveness of academic institutions and schools

A strong academic, research, and cultural hub,

Strong institutional capital.

economy

strong and competitive

How can Siliesia remain economically strong and create new jobs?

Higher level of economic development in Ruda Śląska.

Competitive economy Innovative economy

Creating conditions for economic growth and innovation

support local entrepreneurship

Strong local entrepreneurship

Friendly to entrepreneurial residents.

Conditions that stand out within the Metropolis for establishing and running local businesses.

diversification

How to diversified economy and use upcoming transiton for new economy?

Economic specializations supporting transformation.

Economic specializations and high attractiveness of the city for investors.

sustainability

Sustainable and responsible economy.

accessibility and potential

High accessibility to an attractive labor market in the City and the Metropolis.

Increased development potential of the city's residents.

collaboration

investors

Attractive for investors.

Strong cooperation between local entrepreneurs and investors

university and market

The best conditions for university graduates.

Modern education system in partnership with local and regional businesses.

More attractive job opportunities for university graduates

Collaboration between universities and the region?

Engagement | Community

involvement / collaboration

local

How to involve people?

How local community can be involved in the process?

Conditions for integration and social engagement.

Active participation of residents in the city's development.

external

Development of internal and external cooperation within GZM

Active cooperation with external stakeholders and strong regional branding

activation

Active residents

Active local communities

building local communities

This tools (transformationof the nikiszowiec) were used for very specific neighborhood, can it be reused for others? How?

Improving conditions for the development of open, active, and creative communities

High level of self-organization in local communities, as well as innovation and social solidarity.

solidarity care

Building solidarity between whom, how and why?

How to creat the care of the place? and how people can feel better?

Identity | Heritage

identity and values

strengthening

How can identity be maintained?

How can future development strengthen the existing identity?

defining identity

Identity is in people or in place?

tradition vs. modernity

How to find new values that are attractive to old and young generation?

Where tradition intertwines with modernity and new trends are being set

Events highlighting uniqueness and history.

local potential

using

How local potential can be used and make cities attractive?

protection

Looking at existing qualities and protecting them

heritage

tourism

High degree of utilization of the city's cultural heritage

Respect for cultural heritage.

Tourism based on culture and heritage.

Where is truistic potential?

industrial heritage

Place for Mining culture and heritage

Protection of heritage, especially post-industrial.

Revitalization of post-mining and post-industrial areas.

Proud of its mining traditions

Security | Safety

safety network and stability

safety network

How safety net can be created?

How different places can support each other in this process?

High social trust

demographic safety

Active response to demographic challenges

Stable demographic structure.

safety physical

How to improve safety?

support

different life stages

Equal opportunities for young people.

Support at every stage of life.

migration

Openness to immigration that supports the city's development.

housing

diversity and quality

Different ways of living

High quality and consistency of housing conditions across districts

Attractive living conditions

affordability

More affordable housing

Access to housing.

social services

High quality of social services, including healthcare

Quality | Use of space

balance and integration

balance

What can be reused | repurosed?

Rational use of space in the context of urban shrinkage and suburbanization

Balanced territorial development

integration

A city with a high level of spatial integration

quality of space

attractive

Attractive city space and elimination of functional conflicts.

Clean environment and aesthetic space.

where spatial order is preserved — the urban space is organized, aesthetically pleasing, green, and the natural potential is utilized

(Ruda Śląska) as a modern, attractive, and friendly place to live and grow – a city with an integrated social space

diverse spaces

How to enhance the spatial diversity?

care

Comprehensive revitalization

Finding positive aspects of the place and situation

Life | Leisure

quality of space

attractive leisure spaces

Accessible, well-designed public spaces

Find alternatives places for leisure for young people, affordable

diverse uses

An integrated city centre combining various functions and activities.

A rich and diverse range of public services,

quality

Improve quality of the living environment?

re-definition

commers

Can be any other way of creating commercial places?

car based life

Is there any alternative for car-based life style in this region?

for young

What can be done to keep young people in the region?

Governance

administration

modern

Modern public administration

Modern governance

Smart solutions supporting business and administration (in Siemianowice)

promotion

Promotion of GZM

strengthening

functions

Strengthening metropolitan functions

integration

integrated both with the region and internally, while maintaining the distinct character of each district

image

Positive image of the city.

Experts

Young

Adults

External academics

Local experts

Policy

Voivodship

Metropolitan region

Ruda Śląska

Katowice

Bytom

Siemianowice Śląskie

5 Future projections

This chapter brings together all previous chapters. The aim is to explore three different possible futures and learn from them how an uncertain future can be tackled in the next chapter. To set the broader context for the scenario building, this chapter starts by introducing a discussion about polycentricity and dispersion. This explains the relation between spatial and territorial structures that will become the two main elements that will be explored in the three development paths.

To build the scenario frameworks, the three models of regional relations create the core of the scenarios to which different spatial analyses and territorial capitals are linked. This framework is giving the context for the conceptualisation of dispersed regional structure and a deeper understanding of how each scenario influences the four main regional layers. More detailed mapping of scenarios helped in a deeper analysis of different topics that link to different aspects of the regenerative approach.

The first scenario is focusing on sustainability, locality and living environment.
The second scenario is focusing on the relation between cities, industries and spatial dross.
The third scenario is focusing on the green-blue infrastructure and mobility.

Introduced concepts: regional models (clones, diversification, hierarchy), urbanisation structures (dispersion, galaxy/islands, star, ring, compact)

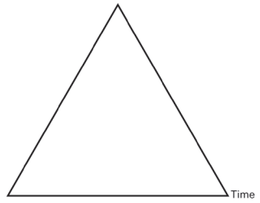




fig.33. Ventilation Shaft ‘Krystyna’ in Bytom, 2024

5.1 Polycentricity or dispersion

From the analysis of the urbanisation process, we can identify three stages of development, introduced by Cedric Price in 1982. Price compared the evolution of cities to the three stages of an egg: boiled, fried and scrambled (Gheysen, 2020).

In 1883, the region's cities were more compact and mostly confined within their historic boundaries. In contrast, contemporary urban forms resemble the 'scrambled' stage, characterised by mixed and intertwined urban fabrics.

Cedric Price's diagrams are in line with other observations of urban development at a more regional scale, the transition from monocentric urban models to more polycentric structures (Davoudi, 2003). Cities are increasingly understood as interconnected systems, with diverse economic activities, cross-commuting networks and a mix of different lifestyles (Davoudi, 2003).

This network of cities can be seen in the GZM metropolitan region and corresponds to the definition of a polycentric urban region as a territory composed of two or more relatively equal cities situated close to one another and characterised by functional interactions (Davoudi, 2003). Today, the metropolitan region is also called the Katowice conurbation - a conurbation defined by GEMET as "a large, densely populated urban area formed by the growth and merging of individual towns or cities" (Conurbation, n.d.).

The current 'scrambled' mix of urban fabrics provides an interesting point of reference within the wider research surrounding the distinction between polycentric cities/regions, defined as cities with a system of sub-centres, and dispersed cities characterised by chaotic sprawl (Davoudi, 2003).

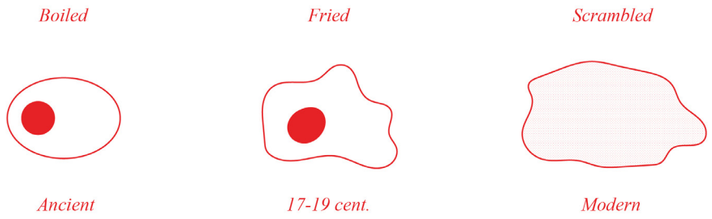


fig.35. Cedric Price diagrams of city evolution

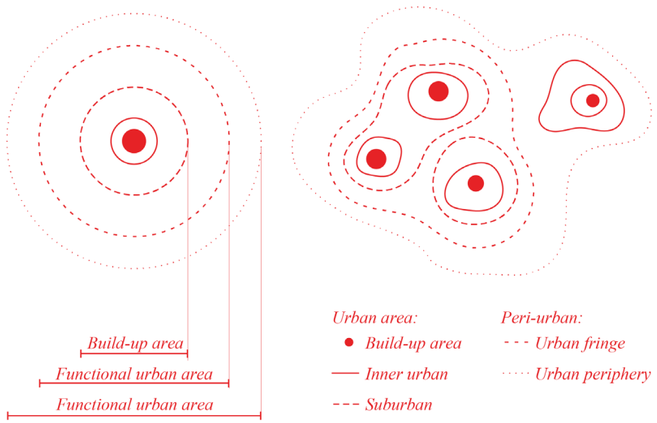


fig.34. The polycentric representation of a metropolitan area and its hinterland by the PLUREL project (2007)

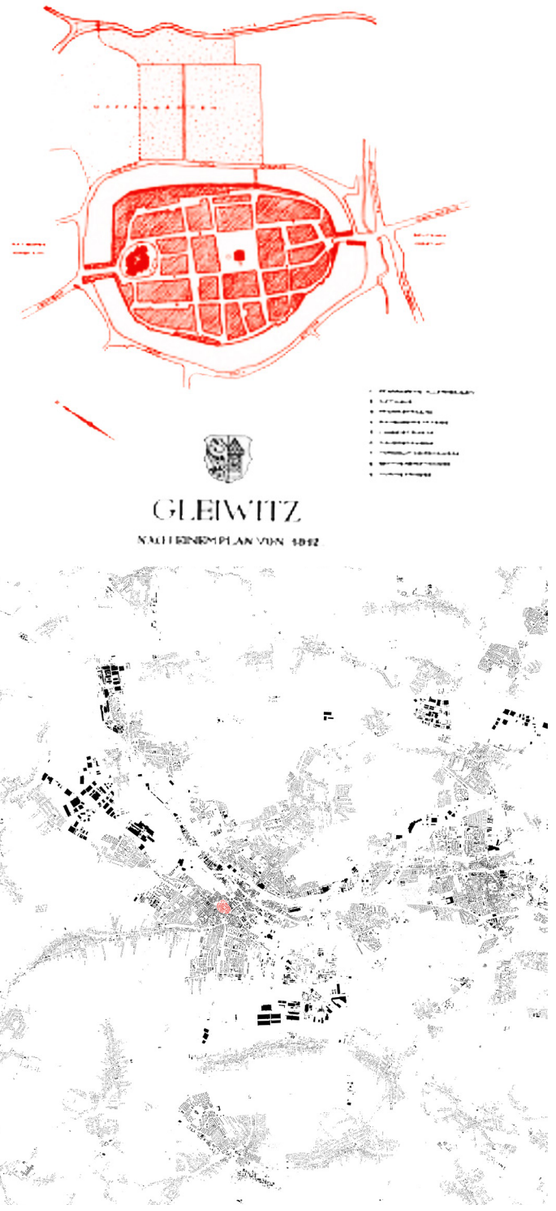


fig.36. Gliwice city in 1812
source: https://rcin.org.pl/dlibra/doccontent?id=26955

Gliwice city in 2024 with - old structure marked with red color

During this debate, one element remains constant: interrelation. Thomas Sieverts' concept of the Zwischenstadt describes a "new form of urbanisation resulting from the interplay between global and local systems in time and space" (Wandl, 2019, p. 25). Within this framework, the Górnośląsko-Zagłębiowska Metropolia (GZM) can be redefined as a reflection of these interrelations.

This chapter integrates and redefines two key concepts: polycentricity and dispersion, within the spatial context of the metropolitan area. Together, these concepts provide a framework for considering the conditions that contribute to growth or decline and function as a tool for imagining different approaches to regeneration.

5.2 Reimagination

Before starting to reimagine the region, there is not only the physical aspect of the region that should be taken into consideration. By looking at the dynamic past of the region, how different conditions and events influenced the region spatially, socially or economically, it can be seen how complex the relationship between space and its invisible dynamics that influences urban developments. This relation can, however, be abstracted and sensitised.

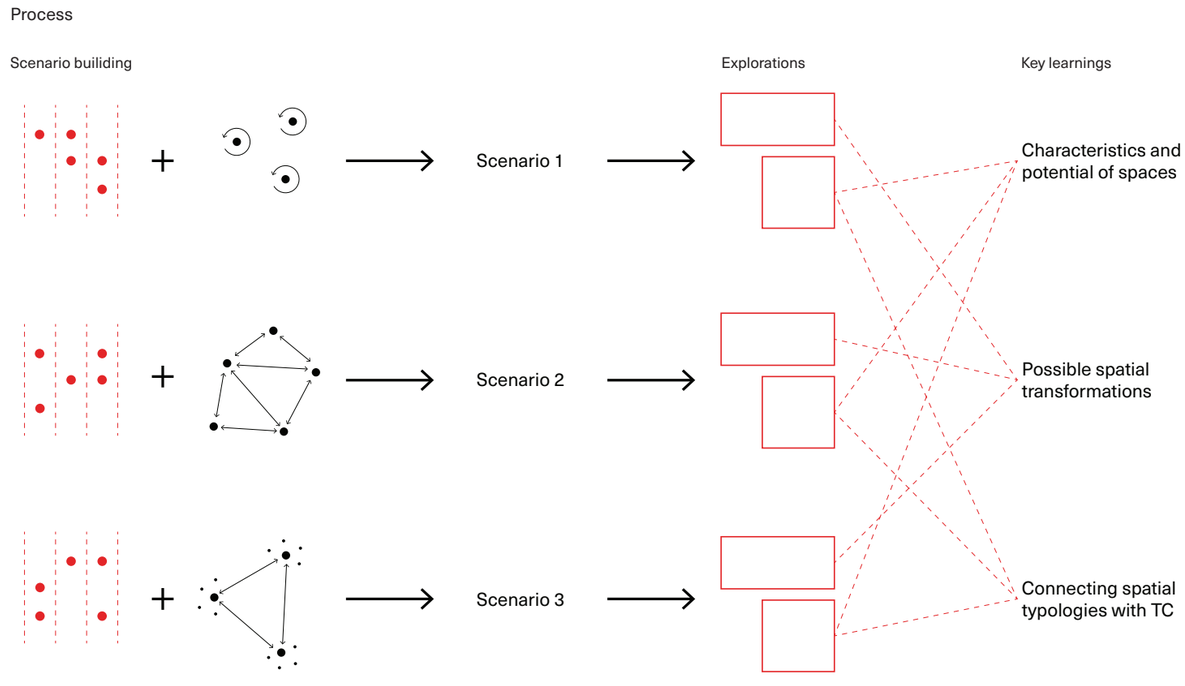
Spatial concepts can include convoluted internalisations of “analytical knowledge, political agendas, and territorial practices from which spatial logics are then extracted” (Balz & Zonneveld, 2018, p. 364). Those will become an exploration tool for developing the possible future of the Silesia region. Spatial concepts. By using an already existing concept, the investigation will focus on the concepts that will help redefine regional dynamics and urban structures. Carefully interpreted, they can create an opportunity for a “conceptual shift that either can reveal unforeseen or simply hidden aspects” (Vigano, 2010), that can become a new spatial frame for diverse regenerative approaches.

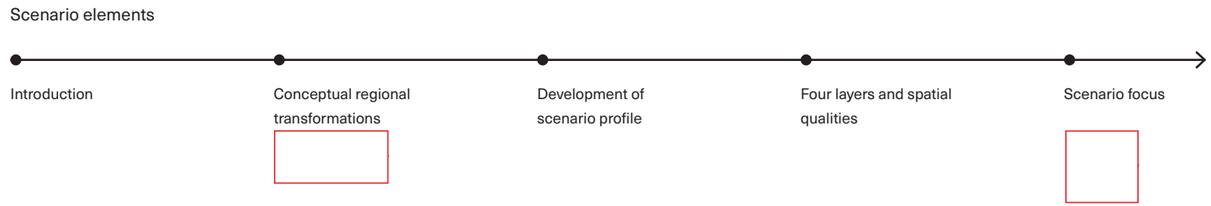
Initial construction of the scenarios comes from the spatial observations, different voices, and dynamics between the municipalities; the elements that can form different ways of the ‘balanced’ development path for the metropolitan region.

The titles of the scenarios come from three models defined by Blotevogel in 1983: 1. Close, 2. Diversification and 3. Hierarchical. They informed the metropolitan roles of the municipalities and their relations with each other. They also give the socio-economic implications for the region: How are communities built? Or where are the industries? Since each scenario focuses on different aspects, different territorial capitals are included in each of them, which sharpen each of the scenarios’ profiles.

With the exploration of possible new urban structures of the region, the currently dispersed structure of the region can be refined. The Blotevogel’s concepts influenced the general roles of mapping newly identified types of spatial structures, their main elements and implications. Following the model defined in the text “The Patterns of the Metropolis” by K. Lynch, urbanised areas will receive a new structure. Although this part of the scenario starts from spatial exploration, the structures also influence socio-spatial practices and spatial qualities that can be transplanted to the scenario’s last part.

The last part of the scenario, where the scenario is focused on a zoomed-in area. This will help in understanding better what each of the scenarios means for the four main layers: infrastructure, greenery, built environment, economy and society.





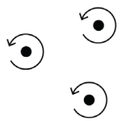
Concepts as exploitive tool

In this project, spatial concepts are used as exploratory tools to imagine potential development paths. In response to the existing context, they show how space can be transformed and introduce new possibilities for shaping socio-spatial relationships. As explained on the previous page, two groups of spatial concepts play different roles in scenarios. These concepts will now be introduced in more detail.

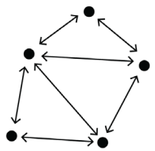
Metropolitan developments concepts

The dynamics between the different cities within the metropolitan area play a crucial role in the growth and decline patterns. A polycentric urban region can create diversity of relations between the cities, their surroundings and socio-economic profile. These relations influence cities' role and function in the metropolitan region.

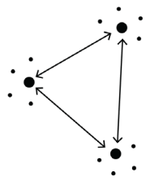
This concept, together with voices, will be applied to each of the scenarios.



Clones
"If all cities in a given system were affected by a similar set of activities (functions), the links between them would be limited or non-existent" (Gwosdz & Sobala-Gwosdz, 2012)



Diversification
If all city has a distinct function and there is strong complementarity between them, this will strengthen the links between the cities. (Gwosdz & Sobala-Gwosdz, 2012)

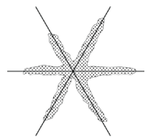


Hierarchy
"The leading centre of the system gathers all functions, while other cities have a smaller set of functions." (Gwosdz & Sobala-Gwosdz, 2012)

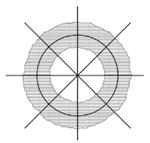
Urbanisation structures

The metropolitan area has a spongy, fragmented and disorganised structure, with one city seamlessly connected to another. This creates opportunities for numerous reinterpretations and alternative approaches to urbanisation models. The model, defined in the text "The Patterns of the Metropolis" by K. Lynch, can be used to explore different urban expansion patterns, which will be defined by the scenario profiles.

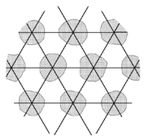
This concept will help in conceptual mapping of the larger scale, that is, looking at different spatial transformations that can happen in distant future.



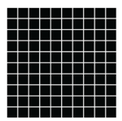
Star
"Tongues of open land would be incorporated into the metropolitan area to produce a density pattern that is star-shaped in the central region and linear at the fringes." (Lynch, 1961)



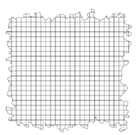
Ring
"In this case, the center would be kept open, or at very low density, while high densities and special activities surround it, like the rim of a wheel."(Lynch, 1961)



Galaxy | Islands
"... let development be bunched into relatively small units, each with an internal peak of density and each separated from the next by the zone of low or zero density" (Lynch, 1961)



Compact
" ... would then be packed into one continuous body, with a very intensive peak of density and activity at its center." (Lynch, 1961)



Dispersed
" The old center and most subcenters could be dissolved, allowing city-wide activities to disperse throughout the region, with a fine grain." (Lynch, 1961)

Graphics by Kevin Lynch in book The Pattern of the Metropolis, Adapted by author

Scenario 1: Clones

Broader view on concept

The context for this development path lies in the history of regional growth. In XIX century, due to coal mining and related industries, dispersed cities were able to create an economy that was relying on a similar set of functions and activities. As long as each of them had its market to export goods and ensured the fundamental function of the city, the relationship between the cities would be limited or non-existent (Gwosdz & Sobala-Gwosdz, 2012). Nowadays, it would be hard to imagine a metropolitan region which consists only of similar cities, which resemble to urban ‘clones’, that is why the initial concept will be reshaped. In this development path, the focus will be on imagining the future where each city is responsible for its economic profile and must ensure the basic set of services that help cities to function. In this way, cities become less vulnerable to neighbouring cities, start to become more independent and focus on their social and spatial potential.

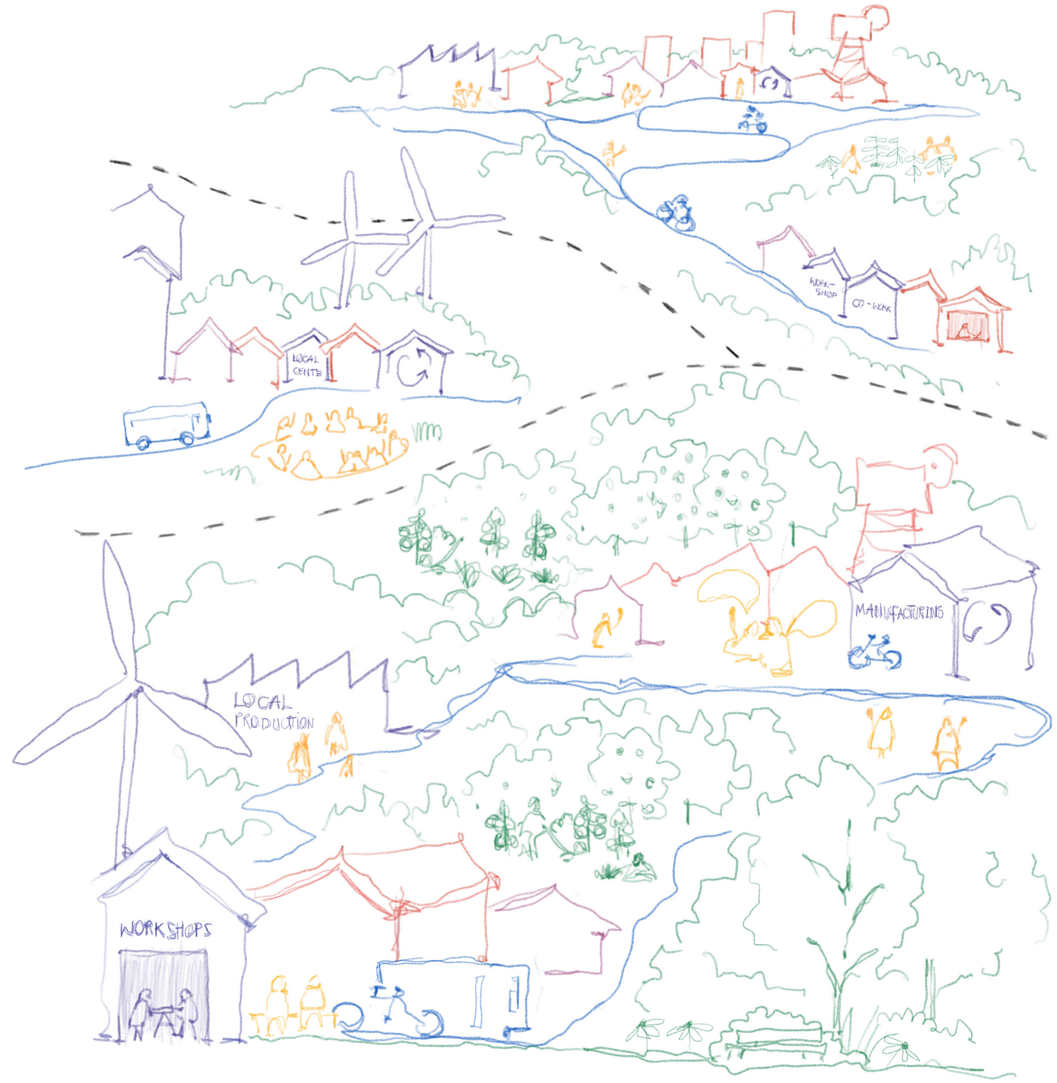
How people will live?

This scenario imagines a society that is closely connected to the places they call home. Most people are able to work and study either digitally or in locations close to their homes. As a result, local communities become more embedded within the city, strengthening relationships between residents and improving quality of life overall. The built environment becomes more diverse, incorporating a wider range of functions and promoting soft mobility to contribute to a more vibrant and attractive urban experience.

The city will prioritise providing essential services that are crucial for the everyday needs of residents, while certain metropolitan-scale systems, such as food distribution, water supply or higher education, continue to operate in order to support urban life.

Why is this scenario important?

The scenario allows for a focused look at each city individually, helping to understand their unique characteristics and embrace their specific identities. It explores the potential of creating more compact, mixed-use cities that support sustainability and locality.



An abstract interpretation of the region within this scenario.

Conceptual regional transformations

This was the first attempt to spatialise the concept of clones in real space. This conceptual mapping was based on the idea of cities becoming more independent. This gives the possibility to ask the question: What urban forms will not go beyond the administrative boundaries of the municipality? This initial thought led to the search for more compact structures that each of the cities could shape. The logic behind the expansions was to fill in the spaces between the urban patches; in this way, more ‘eye-catching’ structures were created.

Roles of the mapping:

Limits: Administrative boundaries and protected greenery



Types of expansion: Primary internal expansion to create the intended urbanisation structure



Territorial structure: Administrative structures and networks connecting neighborhoods



Core urban structures
Municipality borders
Compact
Ring
Linear
Islands
Dispersed

0 2.5 5 km

Development of scenario profile

Focus elements based on territorial capital:

Infrastructure | Innovation

- Soft mobility, good public transport, safe bike lines and side walks
- Promotion of micromobility, including cycling and the sharing economy
- Integration of municipal waste and sewage sludge management systems, with a focus on a circular economy

Greenery | Environment

- Green, healthy spaces.
- High attention to environmental and recreational values.
- Preserved natural resources

Job | Education

- Competitive economy, innovative economy
- Strong local entrepreneurship
- Friendly to entrepreneurial residents.
- Sustainable and responsible economy.

Engagement | Community

- How to involve people? Active participation of residents in the city's development.
- Active local communities
- High level of self-organization in local communities, as well as innovation and social solidarity.
- How to create the care of the place? and how people can feel better?

Identity | Heritage

- How can future development strengthen the existing identity?
- High degree of utilization of the city's cultural heritage
- How local potential can be used and make cities attractive?

Security | Safety

- High social trust
- How safety net can be created?
- Support at every stage of life.
- More affordable housing

Quality | Use of space

- What can be reused or repurpose?
- Rational use of space in the context of urban shrinkage and suburbanization
- A city with a high level of spatial integration
- Finding positive aspects of the place and situation

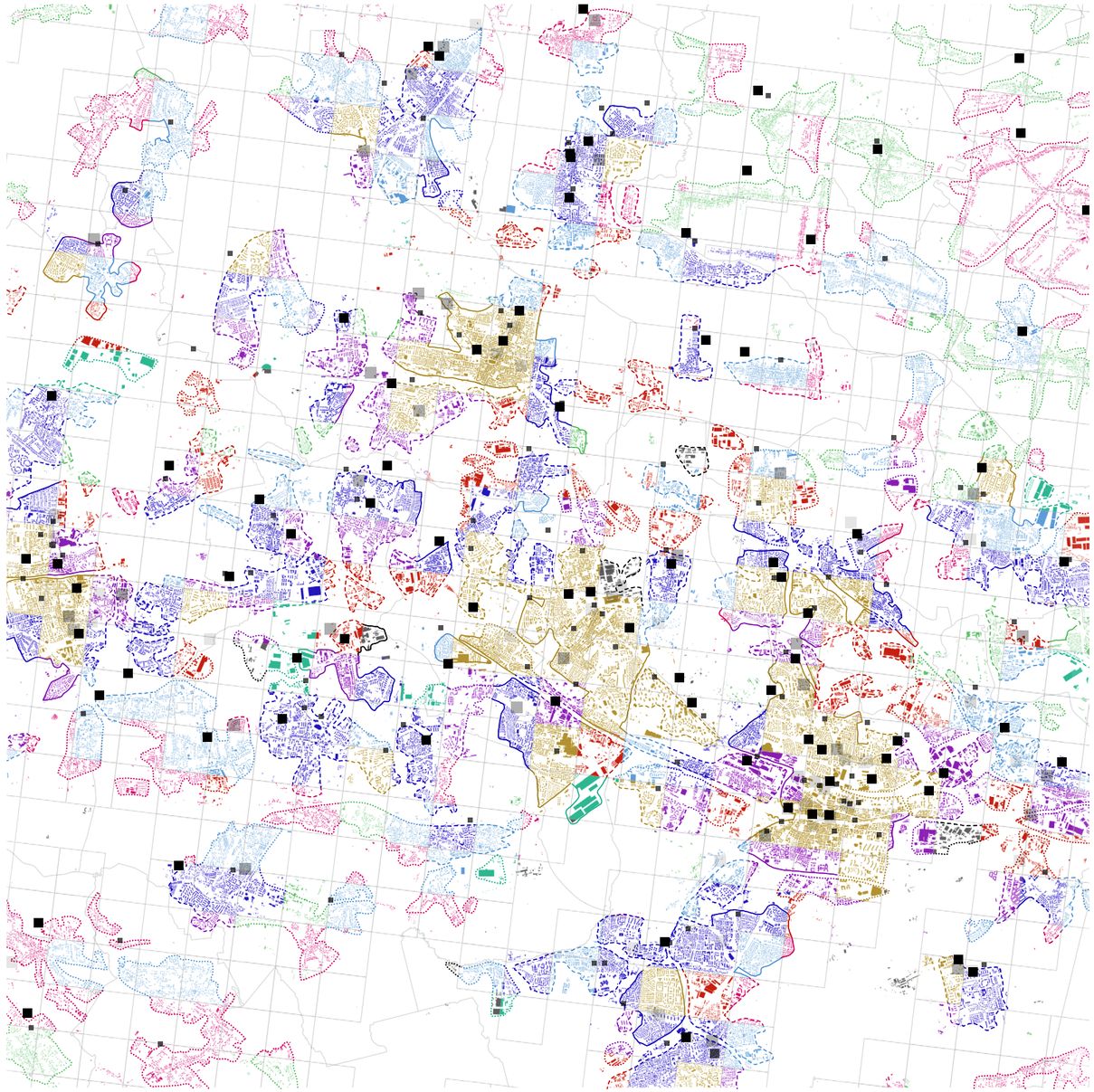
Life | Leisure

- Is there any alternative for car-based life style in this region?
- Can be any other way of creating commercial places?

Governance

- Modern governance
- Positive image of the city.

more in appendix: 242

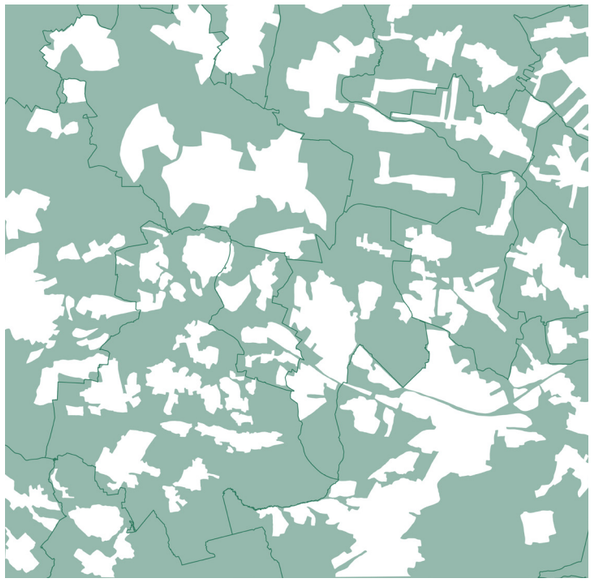


Spatial analyses

Four layers and spatial qualities

Spatial qualities are the spatial characteristics of space that influence experience, perception, as well as social behavior or power dynamics. In order to better understand what the clones path of development means for the four territorial layers, each of them was analysed separately to find different spatial qualities.

Greenery



Description

Although the landscape currently forms a continuous structure, this connectivity can be disrupted by the buildup of hard edges and urban development. As urban expansion pressures increase, it becomes increasingly important for municipalities to preserve their natural resources. Strengthening a connected green infrastructure at the municipal level

Spatial qualities

- Healthy urban environment
- Protection of spatial resources

Infrastructure



Description

Connectivity is enhanced through the creation of new links between city districts, which supports soft mobility options such as walking and cycling, as well as the development of efficient public transport systems

Spatial qualities

- Fine-grain connectivity with defined frame
- Short-distance flows
- Movement comfort

Urbanity



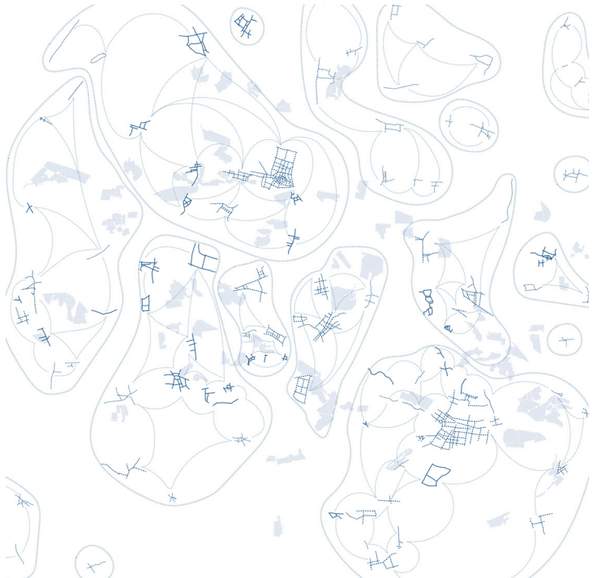
Description

Cities must recognise the limitations of available space, which calls for smarter reuse and strategic densification. Municipalities can either work toward creating a more continuous urban fabric or embrace a patchwork structure of the city districts.

Spatial qualities

- compactness and density
- enhancing existing spatial logic
- Spatial resourcefulness

Society and Economy



Description

A more locally rooted lifestyle can foster stronger community ties and support the development of diverse services and functions at the neighborhood scale. This approach not only strengthens local identity but also helps reconnect districts that are often overlooked or disconnected from broader urban development.

Spatial qualities

- Diversity of use
- Sociability and collectivity
- Creating sence of beloning

Scenario focus

In this development path, municipalities focus on their potential, emphasising local strengths and opportunities. The digitisation of society and the growth of everyday services and local workplaces have made it increasingly feasible for residents to remain in their cities while only occasionally commuting to neighbouring areas.

As a result, new types of local centres are emerging as the core of social life—spaces designed to gather and engage residents, fostering stronger, more connected communities. This perspective places emphasis on the diversity of centres, shaped by previously studied types of spatial environments, already existing social infrastructure and study of urban peaks.

Dense centre

These are areas with well-developed connectivity networks and high population density. In such locations, the focus can shift to smaller-scale, pinpoint interventions that encourage alternative socio-spatial practices and enhance local life through small changes.

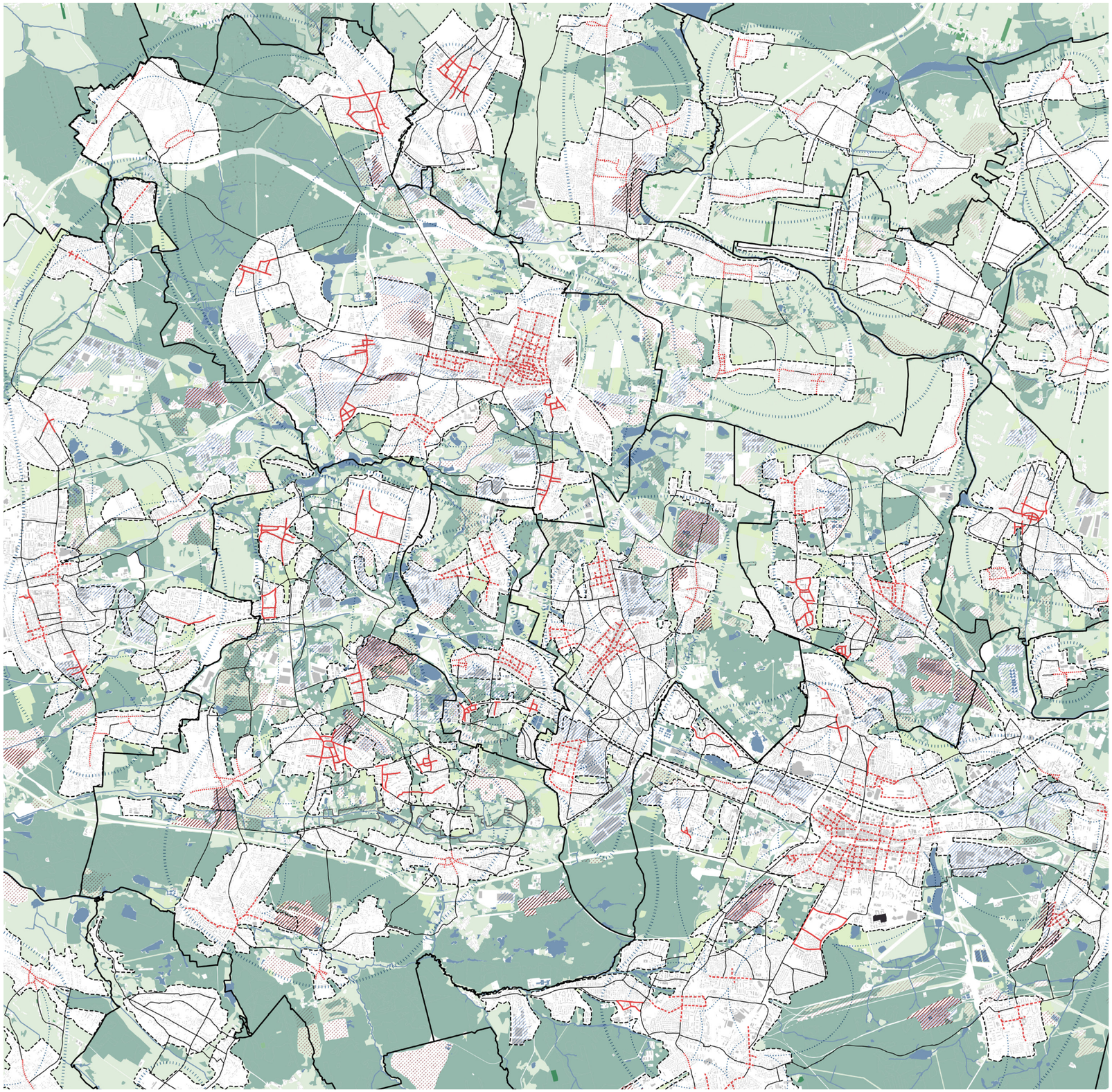
Diffused centre

Characterised by modernist estates or loosely arranged urban blocks, these areas offer spatial flexibility. Here, larger interventions are possible, such as creating new urban connections or exploring opportunities for densification to support more vibrant and cohesive environments.

Village-type centre

In the course of development, some villages have retained their linear spatial structure. In these cases, the “centre” of social life goes along a main street. Therefore, interventions aim not to create one continuous central space, but rather to diversify functions along the linear layout.





Scenario 2: Diversification

Broader view on concept

This development path will take the opposite direction from the previous one. While time was passing, cities started to form the relations-between each other, one focused on mining activities and the other on higher education or manufacturing. This way, cities developed complementarily and diverse functions, which led to inner metropolitan integration (Gwosdz, 2014). This interdependent development path is called “diversification” and focuses on strengthening links between the cities by creating cities with distinct functions but complementary to each other.

By fulfilling two preconditions – differentiation and functional overlap (Meijers, 2007) – the cities can benefit from the concept of ‘borrowed size’. The idea allows two cities to borrow and lend functions between each other to create a diverse and more specialised offer to citizens and companies. This allows smaller cities to become as important as the bigger ones and create the network of a “diffused criss-cross pattern of spatial interactions”(Meijers, 2007, p. 891). Horizontal hierarchy and strong collaboration can ensure more balanced, equal and resilient development of the metropolitan region.

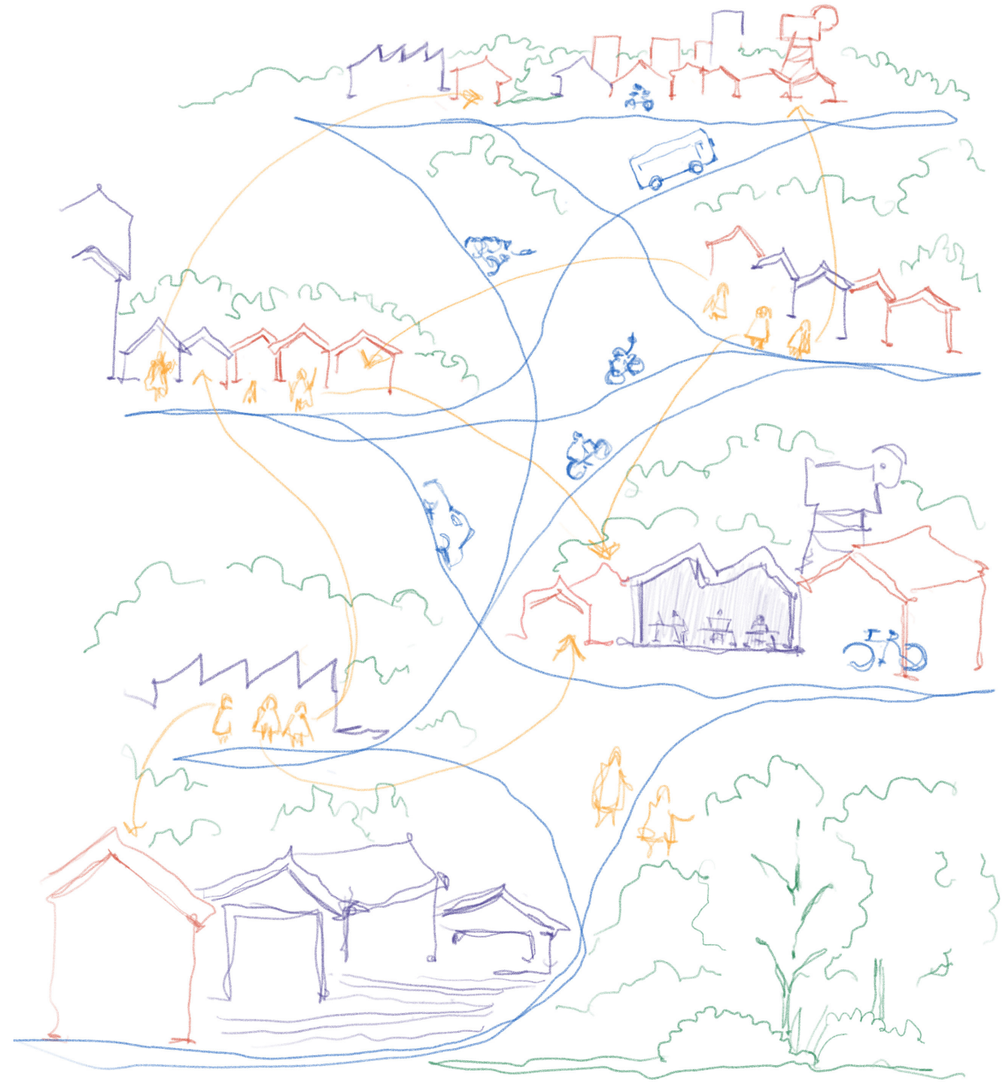
How people will live?

This scenario imagines a future in which people live, work and study in different places. They might work in one city and live in another, belonging to multiple communities that fulfil their various social aspirations. They travel by train, bike or car, depending on what suits them most.

The economy thrives thanks to a diverse range of industries, companies and institutions that encourage collaboration across sectors.

Why is this scenario important?

This scenario helps explore the fluidity of the urban system, allowing connectivity and spatial belonging to be understood beyond fixed boundaries. It also highlights the various forms of diversity that emerge at the metropolitan scale.



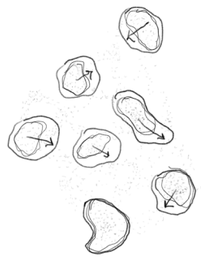
An abstract interpretation of the region within this scenario.

Conceptual regional transformations

This conceptual mapping focused on creating similarly sized urban patterns, inspired by the spatial possibilities observed in other cities. Infrastructure played a dual role: while large-scale infrastructure created growing barriers, smaller-scale infrastructure served as a spine for development.

Roles of the mapping:

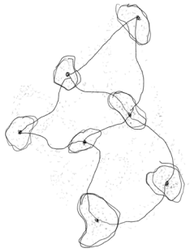
Limits: Similar size and main hard infrastructure



Types of expansion: Primary internal expansion and outer expansion to create similar sizes of the urban patches



Territorial structure: Secondary network and local centers



Core urban structures
Compact
Ring
Linear
Islands
Dispersed



0 2.5 5 km

Development of scenario profile

Focus elements based on territorial capital:

Infrastructure | innovation

- Developing efficient public transport between the cities.
- Maintaining well-developed car infrastructure.
- Cross-sector cooperation and support for innovation.

Greenery | Environment

- Preservation and enhancement of natural resources.
- Creating diverse natural environment.
- Improving green connections between the cities.

Job | Education

- Creating divers and equality distributed high educations with attractive offer.
- Economic diversification and specialisation based on local potential and complementary function for other cities.
- Creating attractive and divers job opportunities for graduates and professionals.

Engagement | Community

- By building communities that are dispersed across the metropolitan region, residents belong to many different communities.
- Development of internal cooperation between municipalities within GZM.

Identity | Heritage

- Identity is associated more with lifestyle and personal values than with place of residence.
- Developing the tradition intertwines with modernity and new trends.

Security | Safety

- Creating a stable demographic structure through the development of a diversified economy and social links between residents.
- Supporting equal opportunities for residents and supporting them at every stage of life.

Quality | Use of space

- Enhancing spatial diversity
- Balanced territorial development

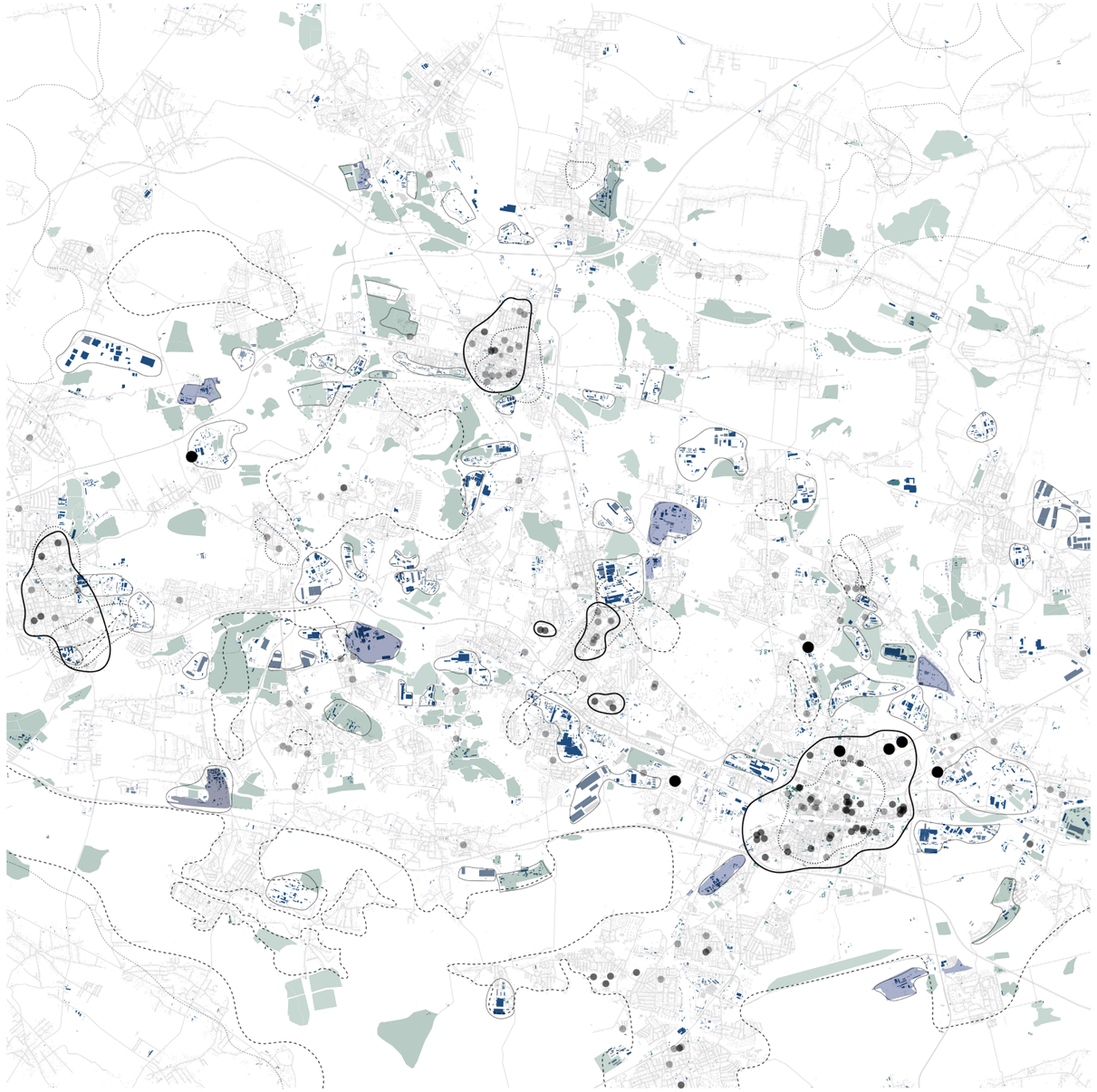
Life | Leisure

- Fining alternatives and wild range of places for leisure activities.
- An integrated city center that combines various functions and activities.

Governance

- Strengthening metropolitan functions and promotion of GZM.
- Modern governance and public administration.
- Integrated both with the region and internally, while maintaining the distinct character of each district

more in appendix: 244



Four layers

Spatial qualities are the spatial characteristics of space that influence experience, perception, as well as social behavior or power dynamics. In order to better understand what the diversification path of development means for the four territorial layers, each of them was analysed separately to find different spatial qualities.

Infrastructure



Description

A connected sequence of green spaces, ranging in size and function, from parks and agricultural fields to greened road corridors, plays a crucial role in shaping sustainable urban development.

Spatial qualities

- Sequence and porosity
- Diversity
- Ecological buffering

Greenery



Description

The urban patches become connected through a network of equally important routes, creating a seamless system of movement. This structure supports multiple modes of mobility, such as walking, cycling, and public transport, and enables free transitions between different parts of the city.

Spatial qualities

- Fine-grain connectivity
- Short-distance flows
- Free movement, hierarchical softness

Urbanity



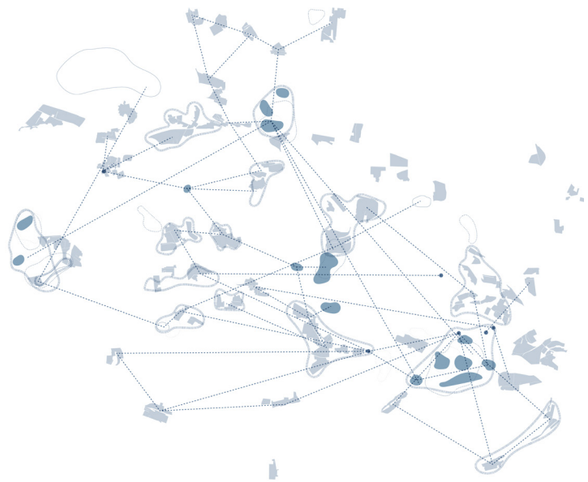
Description

The urban fabric consists of relatively small units, each with its own distinct character and identity. While these units remain spatially separated, they share a balanced pace of urban development, contributing to a more equitable and polycentric urban structure.

Spatial qualities

- Morphological diversity within a framework
- Distributed centralities
- Equally spread development

Society and Economy



Description

The urban structure is composed of diverse and complementary functions, including specialised centres that are spatially distributed. These centres are relatively equal in importance, fostering a balanced urban network. They serve multiple communities and form connections with different places, reinforcing a sense of shared belonging across the region.

Spatial qualities

- The temporality of communities
- Mixed and diversified socio-economic structure

Scenario focus

The diversification scenario works as a model of a strong relationship between cities, which host different functions that complement each other. The research institutions and universities cooperate with the industry, the industries cooperate, and the people are not bound to one place; they live in one city and work in the other. Due to the heavy industries that most of the sites are, rather than focusing on the alternative options of the types of industries that could be there, the scenario focused on the surroundings of the sites and their proximity to the city. In this way, they were grouped into four categories that focus on their ability to influence their surroundings.

A similar logic was followed in creating typologies for post-industrial sites. Old landfills, brownfield sites or old questions were the focus of these analyses, which first looked at what kind of pathways they were sourced from, to later suggest possible transformations.

Industries and city

It can be well integrated into dense urban structures. Closer mixed-use areas with good connectivity for commuting and other reasons. There is also the possibility to create a wider community than just the work environment.



Between industries and city

It is well accessible, but not very connected to the urban structure. They are usually close to more dispersed, low-density urban structures. They are usually found on the outskirts of urbanised areas.



Remote industries

Industrial sites in remote locations that are easily accessible. Commuting is purely related to work. This creates opportunities for growth and for locating more disruptive or space-intensive industries in appropriate areas.

Dross between cities

Creating common ground between citizens of different cities.



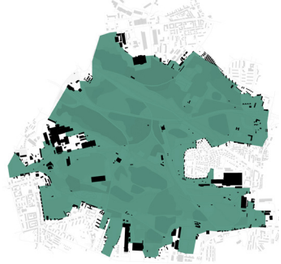
Dross between industries

Involving the private sector in the regeneration process.
Additional space for industries.



Dross between industries and cities

Creating common ground between citizens and the private sector.

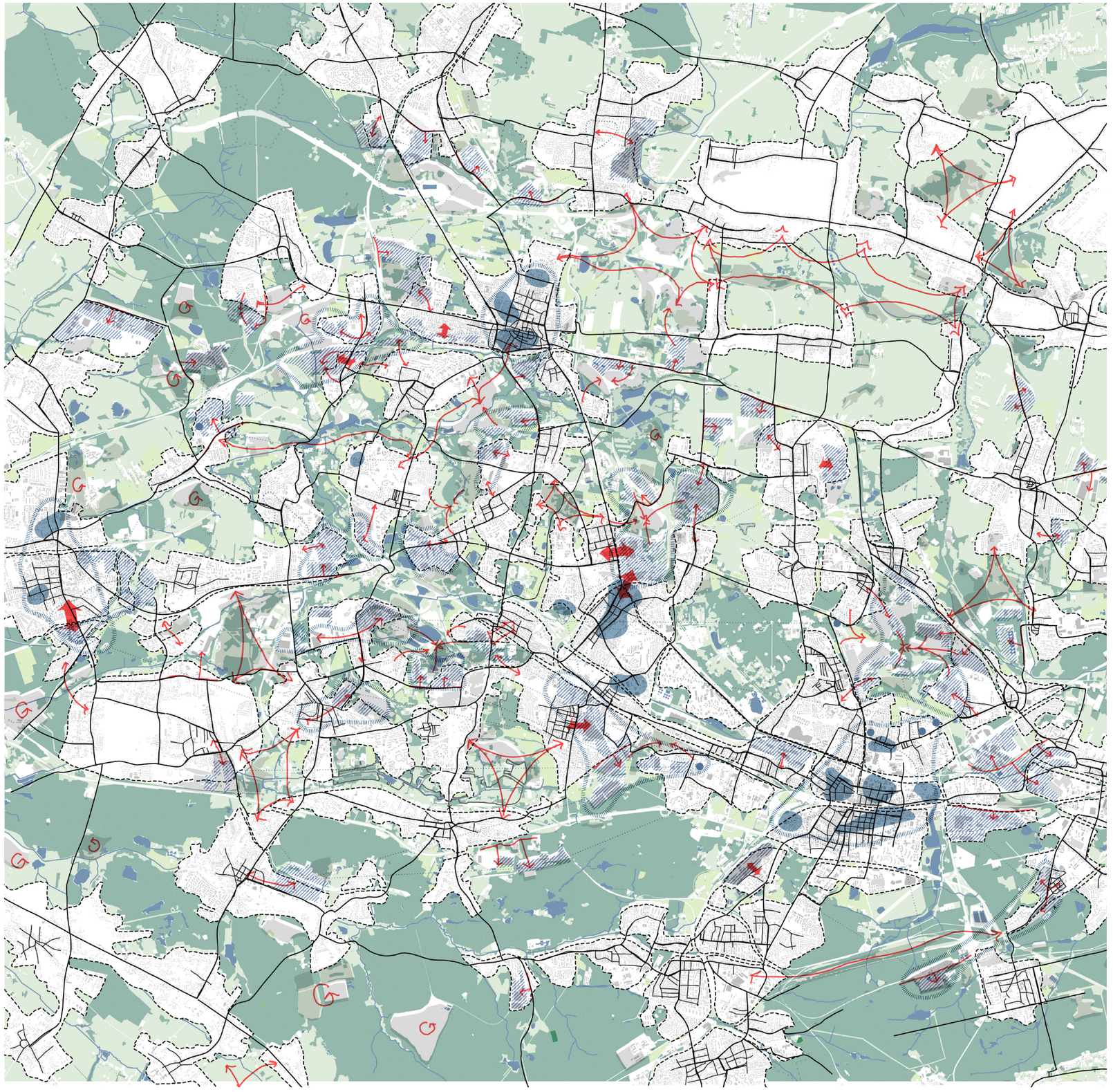


- Main infrastructure
- Possible local centers
- Urbanised area
- Industries
- Economic hub
- Collaboration links

- Industries and city
- Between industries and city
- Remote industries
- Dross between cities
- Dross between industries
- Dross - industries - cities
- Remote dross

- Post-industrial site
- Forest
- Water

0 2 km



Scenario 3: Hierarchy

Broader view on concept

What if some of the cities from the “diversification” path would develop faster or have better localisation? In the system of interdependent cities, sooner or later, one of them starts to take the role of leader. Usually, it is the one that has well-developed higher-level services, such as administration or higher education, and well-developed links with other cities (Gwosdz, 2014). This way, the system of hierarchy between the cities is developed. The main city is gathering the most important functions for the metropolitan region, while other cities have a smaller, less important set of functions (Gwosdz & Sobala-Gwosdz, 2012).

Within this scenario, the focus will be on exploring the future where creating a strong regional core can become an interregional player. All metropolitan networks and elements mainly support the leading city. To explore this possible future, the scenario considers Katowice as a leading city, with the possibility of enhancing the main metropolitan functions, while other cities would become commuter cities.

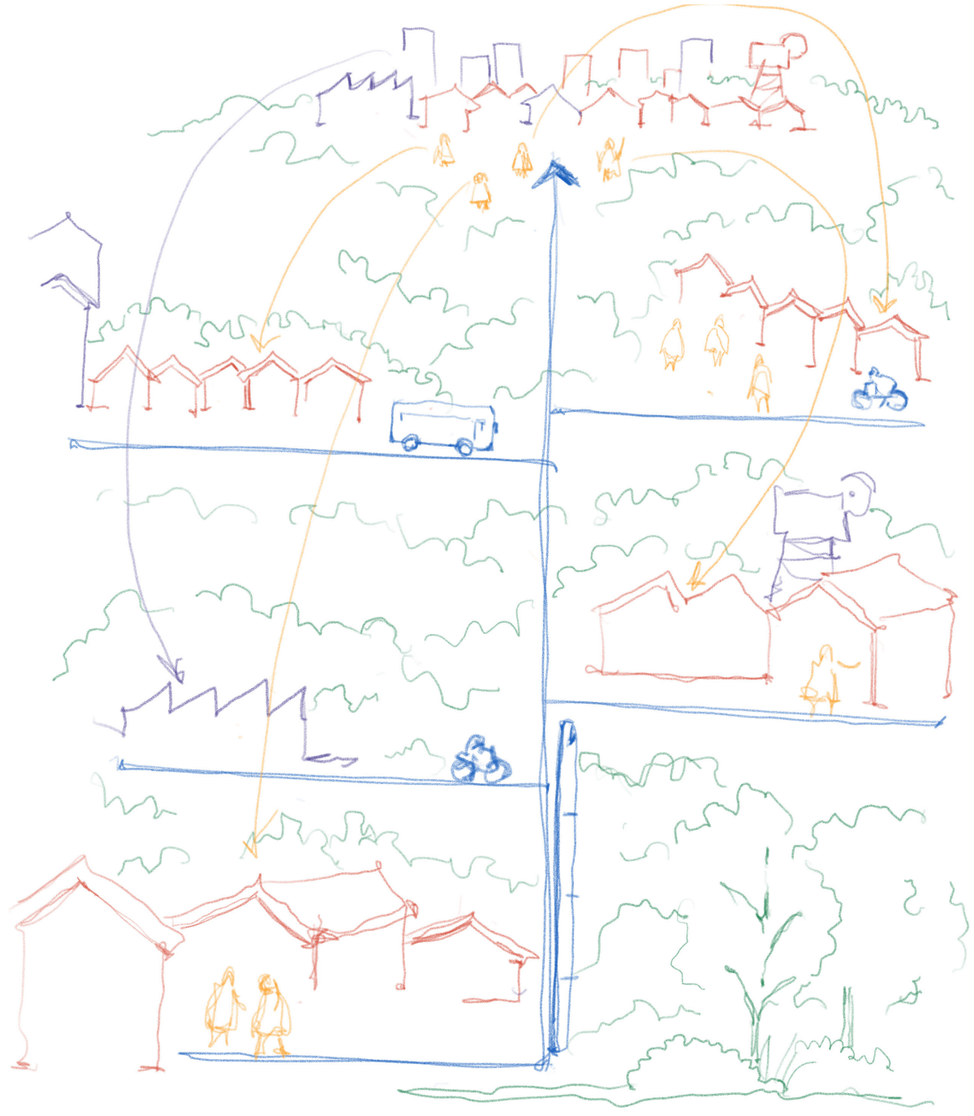
How people will live?

In this scenario, people can live in a large metropolitan city that offers a diverse range of functions, uses, and leisure activities. The city concentrates the most important economic roles and institutions but can also distribute some functions to other cities when necessary.

Residents may also choose to live in smaller satellite cities that embrace a slower, calmer lifestyle. For those who work in the main city but live elsewhere, the well-designed transport system efficiently integrates multiple modes of movement, ensuring smooth and convenient travel.

Why is this scenario important?

This scenario explores the potential that lies beyond municipal boundaries. It focuses on the efficiency and connectivity of regional structures, supporting sustainable growth and development.



An abstract interpretation of the region within this scenario.

Conceptual regional transformations

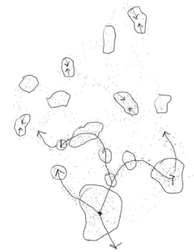
This conceptual mapping focused on creating similarly sized urban patterns, inspired by the spatial possibilities observed in other cities. Infrastructure played a dual role: while large-scale infrastructure created growing barriers, smaller-scale infrastructure served as a spine for development.

Roles of the mapping:

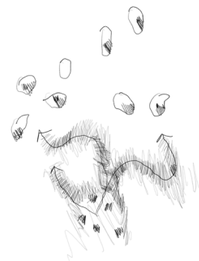
Limits: For main cities no-limits, supportive cities size are district scale



Types of expansion: Primary linear expansion of main cities with secondary infills of the structures.



Territorial structure: Growth lines and urban continuity.



- Core urban structures
- "Leading" city
- Compact
- Ring
- Linear
- Islands
- Dispersed



0 2.5 5 km

Development of scenario profile

Focus elements based on territorial capital:

Infrastructure | innovation

- Efficient public transport between main cities and supportive cities, especially focus on the train infrastructure and metropolitan connection.
- Concentrated innovation hubs and new economy enterprises in main cities.

Greenery | Environment

- Improving connections and qualities of green areas.
- Cohesive development and management of blue-green infrastructure that can be adapt to climate changes.

Job | Education

- To establish a strong academic, research and cultural center that creates attractive and efficient cooperation between educational institutions and the private sector.
- To create a strong economy that can compete nationally and internationally with other metropolitan regions.
- Providing diverse employment opportunities that attract people from all over the country.

Engagement | Community

- Development of internal and external cooperation within GZM

Identity | Heritage

- Create a regional identity based on the region's industrial heritage that is recognisable nationally.
- Personal identity is associated more with lifestyle, personal values or whole region.

Security | Safety

- Creating divers and affordable housing offer and attractive living conditions.
- High quality of social services, including healthcare.

Quality | Use of space

- Improving qualities of the public spaces and offering attractive ways of spending time.
- Attractive city space and elimination of functional conflicts.
- Comprehensive revitalization to create new touristic destinations.

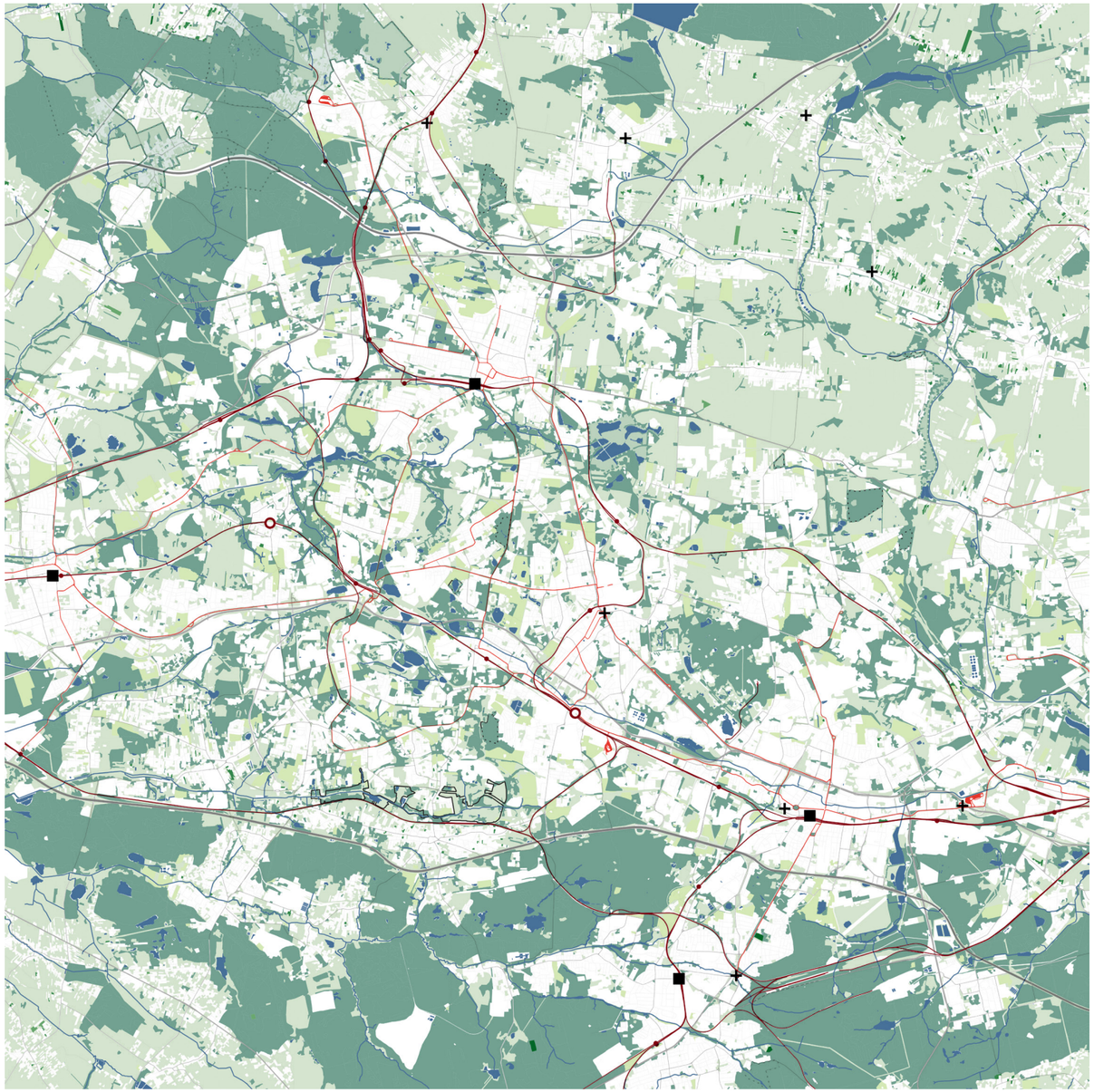
Life | Leisure

- Accessible, well-designed public spaces
- Find alternatives places for leisure for young people that can be affordable

Governance

- Creating strong metropolitan imagine, that enhance metropolitan functions and promote the region nationally.
- Creating efficient public administration and governance.

more in appendix: 246



Spatial analyses

Four layers and spatial qualities

In order to better understand what the diversification path of development means for the four territorial layers, each of them was analysed separately to find different spatial qualities. Spatial qualities are the spatial characteristics of space that influence experience, perception, as well as social behaviour or power dynamics.

Infrastructure



Description

1The landscape is shaped by long, continuous green corridors that stretch widely across the region, forming an interconnected green network that seamlessly links urban spaces to the natural ‘outside.’ These expansive green corridors not only provide ecological connectivity but also create a spatial framework for development.

Spatial qualities

- Unbroken and continuous ecological flow
- Operate at a regional or metropolitan scale
- Clear spatial logic, durable frame for urban form

Greenery



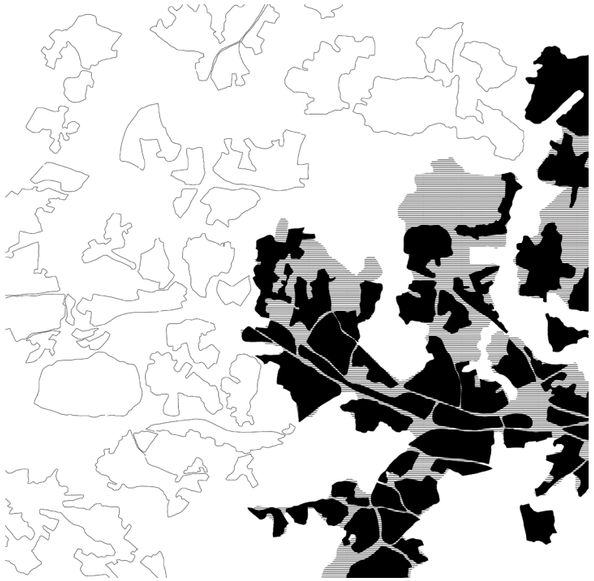
Description

The network prioritises strong connections to the main city, organising traffic types into a clear hierarchy. Characteristic and dynamic nodal points enhance navigation, making it easier to orient within the transport system.

Spatial qualities

- Connectivity, emphasizes strong and direct links
- Layered scalable system
- Intuitive, clear and safe

Urbanity



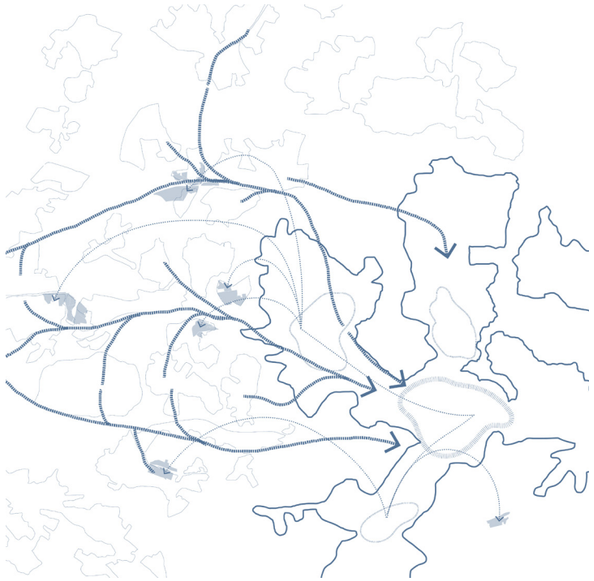
Description

The urban fabric is continuous but interspersed with smaller, distinct islands. The highest density is concentrated in the centre, featuring a mix of functions. Surrounding areas vary in density and intensity, offering different living environments.

Spatial qualities

- Hierarchy of the centers
- Density gradient and diversity of built-environment

Society and Economy



Description

The centre serves as a hub, concentrating functions and activities. Transition zones and gathering places support commuting communities, and strong branding strengthens the main city’s identity.

Spatial qualities

- Concentration of functions
- Temporality of community
- Symbolic capital of the region

Scenario focus

In this scenario, the main aim of the development was to strengthen the leading city, Katowice. The finger-like urban structure of this city guided exploration focuses on understanding how greenery creates a continuous system that connects the city centre with a wider system of green-blue spaces. this way, three types of corridors were created: forest corridor, corridor of altered landscape with endogenous lakes and corridor of agricultural land. These corridors not only support the main city but also define the limits of growth and support smaller urban paths.
By creating a hierarchical relationship between cities, where most functions are located in one city, people need to commute daily, which requires efficient public transport. The already well-developed transport infrastructure has been further strengthened by reusing the old infrastructure, allowing smaller towns to be connected to Katowice.

Forest corridor

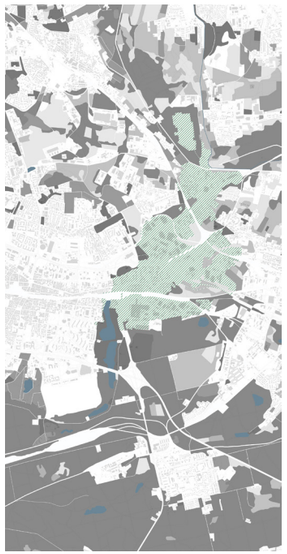
The natural forests surrounding the metropolitan area provide beautiful green spaces that bring balance and moments of peace amid the city's dynamic life. To enhance their connectivity, one possible intervention is to establish new links between infrastructural nodes.

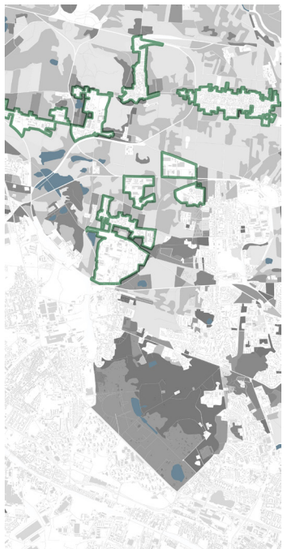
From part to agriculture corridor

This corridor focuses on landscapes that support the everyday lives of metropolitan residents. It starts from parks encouraging diverse activities, through industrial sites, to agricultural lands on the outskirts. Although the corridors include elements of the built environment, they are surrounded by open spaces, and they respect this gradient, managing expansion carefully.

Altered landscape corridor

Due to various human activities, parts of the landscape have gradually changed. Land subsidence and dumping sites have transformed metropolitan landscapes, which have become unique. This corridor can be enhanced by connecting these spaces into one continuous landscape, allowing residents to move freely and supporting nature's regeneration.

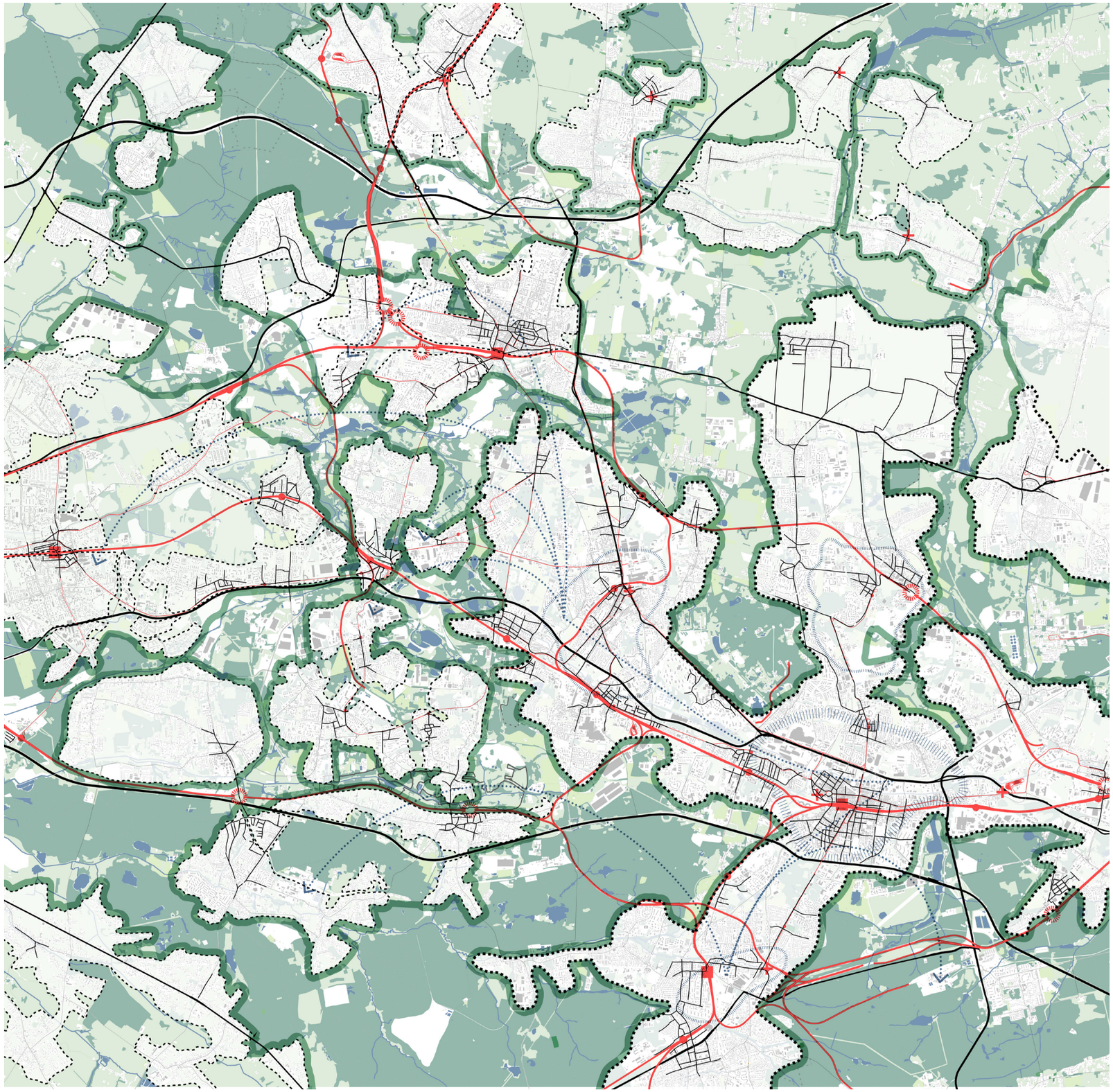






- Railway infrastructure
- Tram
- Mobility hubs
- Train | tram stop
- Bus station
- New train stations
- Main infrastructure
- Possible local centers
- Urbanised area
- Leading city
- Economic hub
- 'Borrowing' industrial site s
- Green corridor
- Forest
- Water

0 2 km



5.3 Time, people, space

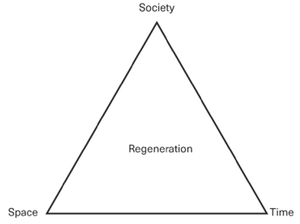
Conclusions of scenario investigations

Based on territorial capital and different spatial concepts, constructed and developed scenarios help to first analyse the space from a scenario perspective and later create different ideas for spatial transformations. This study helped to find not only the future spatial qualities, but also the existing ones. These different spatial qualities exist or could exist at different scales, from neighbourly to more regional. This showed the importance of understanding space and time together and exploring them in different perspectives.

While describing each of the main layers and focusing on the spatial aspect of them, I also realised that I was not only describing the physicality of space, but also the socio-economic qualities that spatial development implies. The scenarios explored different ways of living, different definitions of local communities and development potentials. This exploration highlighted the relationship between people and the space around them.

The scenarios focused on the distant future, where collective voices have become the guiding values for the development paths that have been explored. This leads to the question of how we can connect different time dimensions: today and the future, and how our desired futures can be achieved.

Scenarios extracted the importance of the relation between people, space and time, which will be the focus of the next chapter.



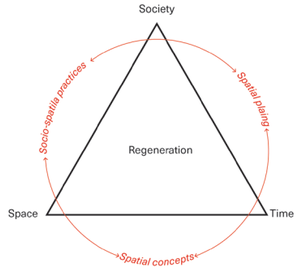
Key findings to take forward

Characteristics and potential of spaces	Each of the scenarios explored equally key layers: greenery, infrastructure, urbanity and society-economy, in order to later focus on more important layers for each perspective. The first - Clones - focused on connecting different parts of the city and building local communities. This focuses mainly on the layer of urbanity, the diversity of extensions and local potentials. The second - Diversity - delved deep into the spatial relationship between society, economy and urbanity. This enhanced the understanding of the role of proximity and diversity of functions. The last scenario - Hierarchy - looked at the larger system that can support the main city. This developed a focus on green spaces and infrastructure.
Possible spatial transformations	Different developed paths explored different ways of conceptualising urban structures. By defining different spatial roles and combining different urbanisation structures, different spatial transformations could be explored. This identified more dynamic areas that could change a lot, and more stable areas.
Linking spatial typologies with TC	The basis for the scenarios was urban concepts, together with different territorial capitals. By exploring these in real space through the setting of the scenario, the different spatial typologies could be found. These can be traced back to TC, allowing them to be spatialised in the next steps.

6 Navigating the In-between



This chapter explores the insights gained from understanding the space, appreciation of the place and future projections to investigate diverse approaches to regeneration that can support an uncertain and unforeseen future. It begins by unpacking the project's title, In-Between, which is closely tied to the conclusions drawn from the scenarios presented in the previous chapter. The scenarios emphasise the interconnectedness of people, space, and time - an interplay that forms the structure of this chapter. Each of these relationships is introduced step by step, grounded in a theoretical context and linked to previously discussed elements. The focus of these explorations is on developing spatial interventions and actions which open a range of possibilities for fostering a more regenerative approach.



This chapter consists of three subchapters:
... space and time – where a spatial framework of different possibilities and potentials is developed.
... people and space – where this framework are "filled in" with exemplary commoning practices.
... time and people – where the dynamic role of time and the previously explored practices are viewed as a starting point for regeneration.

Introduced concepts: urban system, transition zones, urban commons

6.1 In-between

In the previous chapter, the explorations focused on the possible distant futures of the region and how it could grow and develop. This might be a bit confusing due to the current prognoses of the population decline for the next 50 years. However, the reason behind it is well argued in Philippe Panaerai and his colleagues in the text “Analyse urbaine”, where they emphasised the need to see urban growth as a continuous process:

“First and foremost, because it offers an understanding overall of the conurbation from a dynamic perspective. Periods of stability, in which the city’s internal cohesion is asserted, are followed by moments of rupture, marked by major extensions and sudden advances across the territory. From this perspective, the current state is only a precarious moment in time” (Panerai et al., 1999, p.49). This way, the upcoming transformation and its influences can be perceived as a temporary stage that will influence what comes next. By exploring different territorial elements in each scenario, it was possible to see the possibility of preparing the field of possibilities that can foster the unforeseen future.

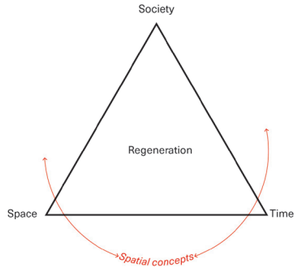
“Secondly, by revealing the fixed points of past transformations, it points to logics that are deeply rooted in the territories and that shed light on the challenges of current developments. ”(Panerai et al., 1999, p. 49). Scenarios helped in reimagining the main territorial layers, and the importance of the elements of the past development will be present in the future.

My decision on the title of this volume was an overlap of the aspects of time, space and humans. In-between time and space. By analysing the past and possible future developments, combining different imaginations, the project rather gives fixed and finished suggestions. It stays in-between possibilities but is not neutral; it sets the common rules that ensure the balance between humans and nature.

In-between city and nature are not only a spatial relation between proximity and density of physical elements, but it also relates to how people live within those spaces and what the connection with city and nature means.

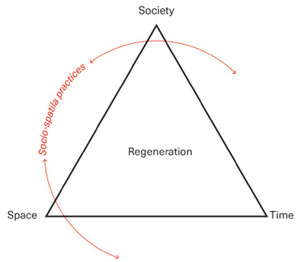
In-between people and time, this is a proposal of collaboration and creation between residents and policymakers, that can create spatial imaginaries, which are the first step in building care and trust. This chapter describes the three ‘in-between’ relationships that the project finds itself in. The key principles for them are care, balance, innovation, and adaptability, which can establish a foundation for a more regenerative territory (Mang & Reed, 2012).

In-between



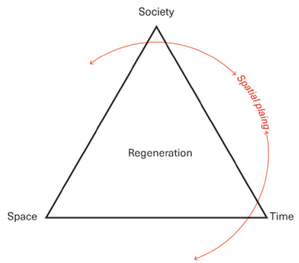
... space and time

By analysing the past and possible future developments, combining different imaginations, the project rather gives fixed and finished suggestions. It stays in-between possibilities but is not neutral, it sets the common rules that ensure the balance between humans and nature.



... people and space

In-between city and nature is not only a spatial relation between proximity and density of physical elements, but it also relates to how people live within those spaces and what the connection with city and nature means.



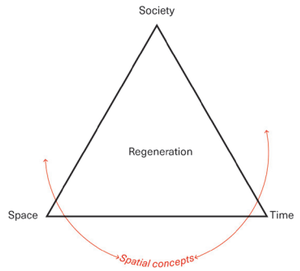
... time and people

In-between people and time, this is a proposal of collaboration and creation between residents and between residents and policymakers, that can create spatial imaginaries, which are the first step in building care and trust.

6.2 Between ...

... space and time

Timeframe is one of the elements in spatial planning that helps define what kind of future we want to achieve or predict in a certain time distance. By setting a long-distance timeframe in the previous chapter, it enabled us to explore different possible futures, investigate various dynamics and see what remained the same in all of them. This way, the question about the stable and unstable territorial elements starts to play a crucial role in thinking about a shorter timeframe. How to create a regional frame that can help in fostering any possible future, but at the same time set a general role or directions where the balance between built and unbuilt space can be achieved?



This part will explore how the elements of the long durée structures and transition zones, which are prone to change in the future, can support each other. Firstly, this subchapter will introduce how the urban system and transition zones are defined in this project, before mapping these two elements in the region. This will lead to the creation of a field of possibilities, which will be explored in the next subchapter.

Urban system

Urban system are understood as structures that are deeply rooted in territorial logic, have become a part of the identity and will least in future. Selecting these elements involves identifying which aspects are essential and must be preserved, which can be modified or substituted, and which can be excluded if necessary (Structuurplan Open Stad 1996 Deel 1 Het Plan, n.d.). This element will be responsible for ‘holding’ the region together to create a common and cohesive regional system. Although those elements seem to be persistent, it does not mean that they will never change; they will.

Elements: Starting places of the urbanisation, urbanised patches, growth lines, growth barriers (lake, forest, road, railway, high-voltage line)

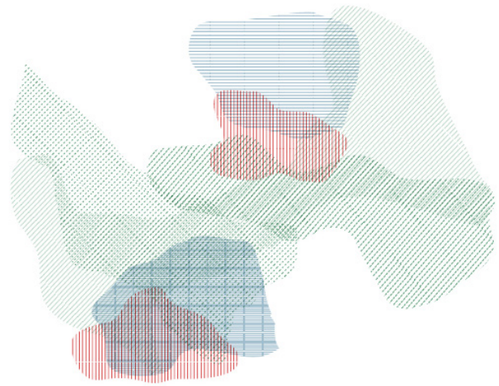


An interconnected urban system shaped by multiple centralities (doted line), the built environment (green line), and external connections (continuous line).

Transition zones

This frame of long durée structure will be complemented with zones that will enable adaptivity and flexibility that is needed for creating room for an uncertain future. Those spaces can be associated with the concept of thresholds - areas viewed as “a mediating zone of varying size that exists in-between”(Stavrides, 2010, p. 17). These zones can create a connection between today and the future by maintaining the spatial resources of the vacant spaces for future developments. These vacant spaces not only have a role of space ‘storage’, but also, more importantly, they can be seen as connecting zones of shared domain (Structuurplan Open Stad 1996 Deel 1 Het Plan, n.d.).

Elements: spatial dross (industrial and urbanisation), infrastructure corridors, green corridors, dynamic urban areas



Overlapping elements of transitional zones are shown. Green hatching represents drosscapes—green open spaces; blue hatching indicates industrial areas between places; and red highlights dynamic urban zones.

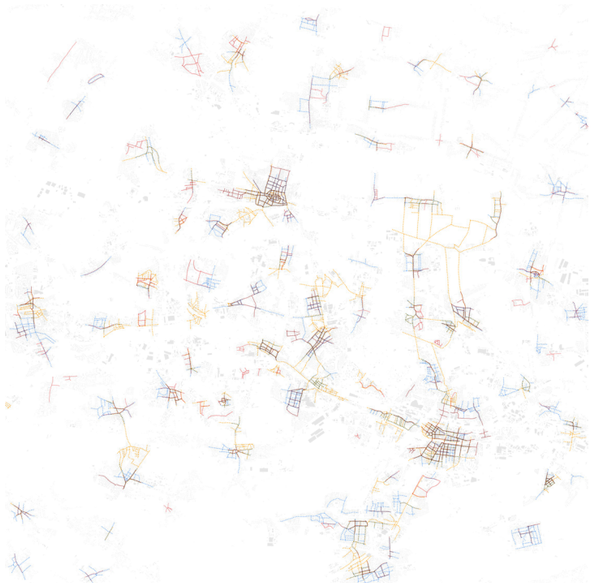
Timeframe and speed of transformation

Examining various transition zones reveals that each will require its own timeframe and pace of transformation. Some areas may benefit from a dynamic approach to quickly activate and realise existing potential. Others may require a longer period focused on restoration and regeneration to allow for future interventions that are yet unknown. Taking a more adaptive and flexible approach to the regional territory enables these differing speeds to be integrated and support one another. This can lead to the emergence of a more coherent and resilient system of regional regeneration.

Mapping the layers

Elements of urban system and transition zones will gather spatial analyses, spatial typologies, scenarios and conceptual regional transformations from previous chapters. This overlapping of different mappings creates the spatial framework that generates fields of possibilities.

Centralities



Dense center
Diffused center
Village-type center
Centrality 2
Centrality 3

Description

This layer is informed by all three scenarios, each exploring how different types of centralities emerge under varying conditions. In the first scenario (red lines), centralities arise from local-scale dynamics; in the second (blue lines), they are shaped by economic opportunities; and in the third (yellow lines), they form around mobility nodes.

Areas where all three centralities overlap show strong existing or potential metropolitan roles, while those with fewer suggest opportunities to develop or reveal urban centralities.

Though this layer spans a long timeframe, small, dynamic interventions can trigger unexpected shifts within it

Spatial quality

- Responsive for different social trends
- Concentration of urban life
- Diversity of characters and different scales

New connections



New soft-mobility connections
Railway infrastructure

Description

The layer of new connections was primarily explored in the first and third scenarios, each focusing on different aspects of mobility. The first emphasised local-scale movement, suggesting new bike routes, while the third scenario explored railway connections.

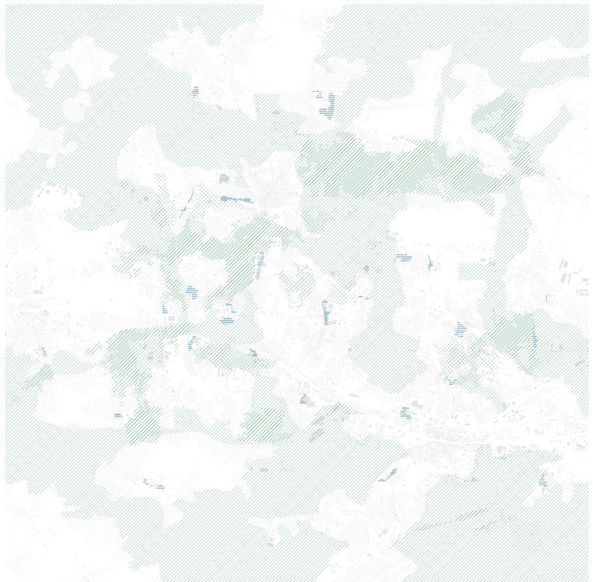
Both investigations aimed to find alternatives to the currently dominant car-based infrastructure in the region. They also considered reviving old routes that, while no longer in use, still leave a spatial mark.

The pace of transformation in this layer will depend on the urgency and relevance of creating specific connections.

Spatial quality

- Connectivity and fluent movement
- Infrastructure integration
- Rediscovery of old spatial elements

Between spaces



Industries and city
Between industries and city
Green corridor
Dross between cities and industries
Dross between cities

Description

This layer emerges from the second scenario, which focused on the understanding differences ‘between’ spaces. With emphasis on socio-economic dynamics, the layer maps out the connections between cities, industries, and dross.

The aim is to understand the potential of these spaces, those that link between more defined urban functions. Due to slightly different profiles within these areas, the layer first categorises spaces into general types, offering an initial direction for potential further explorations.

This layer accommodates both long-term changes like reforestation and short-term uses, such as seasonal markets.

Spatial quality

- Places of engagement
- Fluidity and gradient of different uses
- Bridging different places

Dynamic urban areas



Dynamic urban area

Description

This map is a synthesis of conceptual mappings developed across all three scenarios. By mapping urban expansion patterns, it identifies overlaps linked to five urban forms that guide future development.

This layer doesn’t fix the future but highlights areas with strong transformation potential. In this sense, it acts as a necessary ‘margin’ in urban development, offering flexibility and openness to what may emerge.

Given its exploratory nature, this layer’s changes are hard to predict. To remain dynamic, spaces should avoid fixed uses and encourage temporary actions.

Spatial quality

- Ambiguity of use and flexibility
- Open and adaptive form
- Connectives to urban system

Field of possibilities

By combining all the layers, the map shows the spatial framework that can become the basis for future imaginaries. Field of possibilities. By looking at the space in terms of existing and future potentials and qualities, the map extracts the relationship between the urban system and transition zones that can support each other.

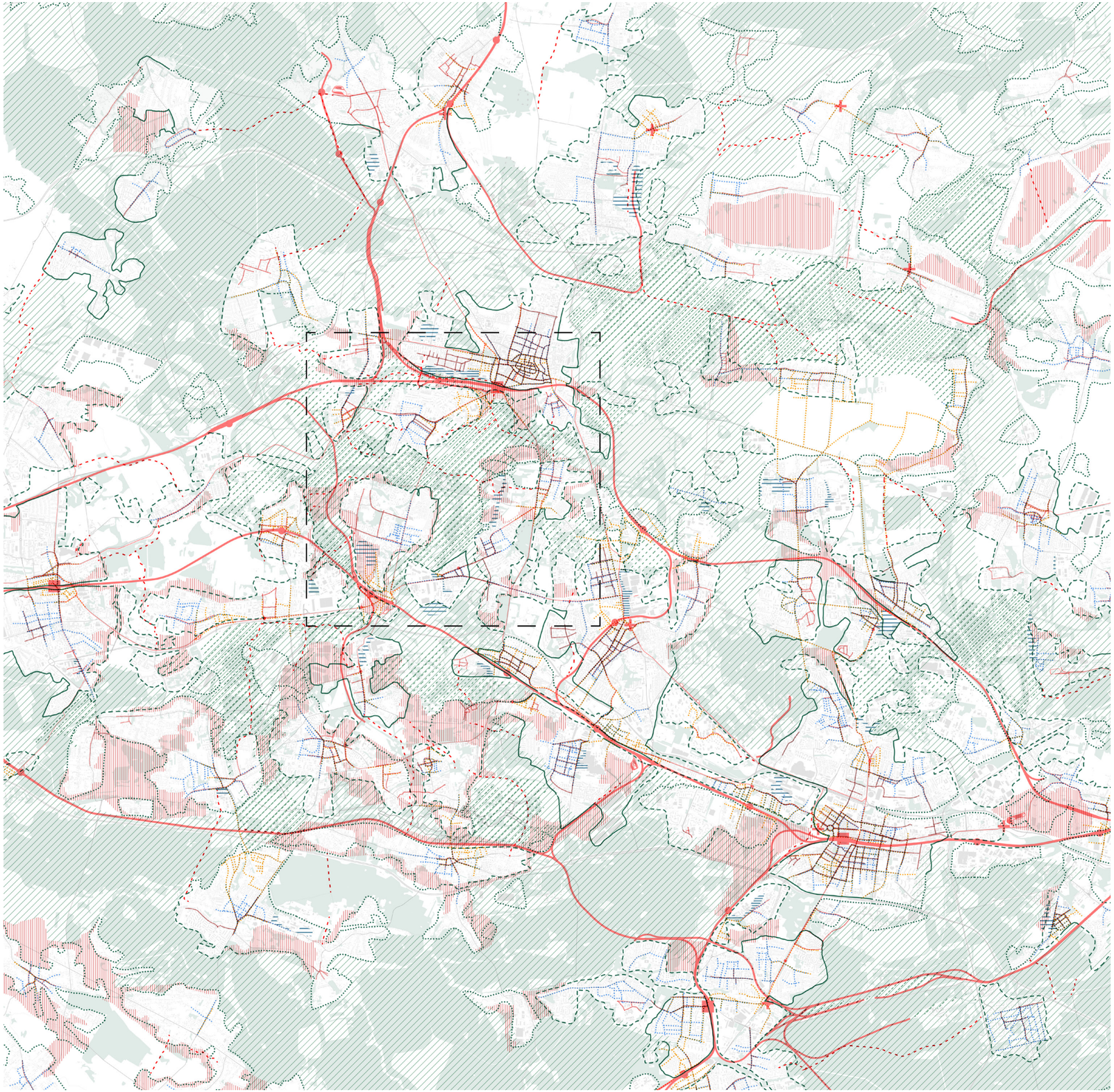
The urban system is understood as an interconnected system of urbanised areas with their network and centralities. Centralities are understood as spaces of character, urban landmarks or localities that create places of identity. Because of the uncertainty about the growth or shrinkage of places, the urban system can be seen as a slowly changing dynamic. The map combines today's centralities but also tries to predict how they may change in the future.

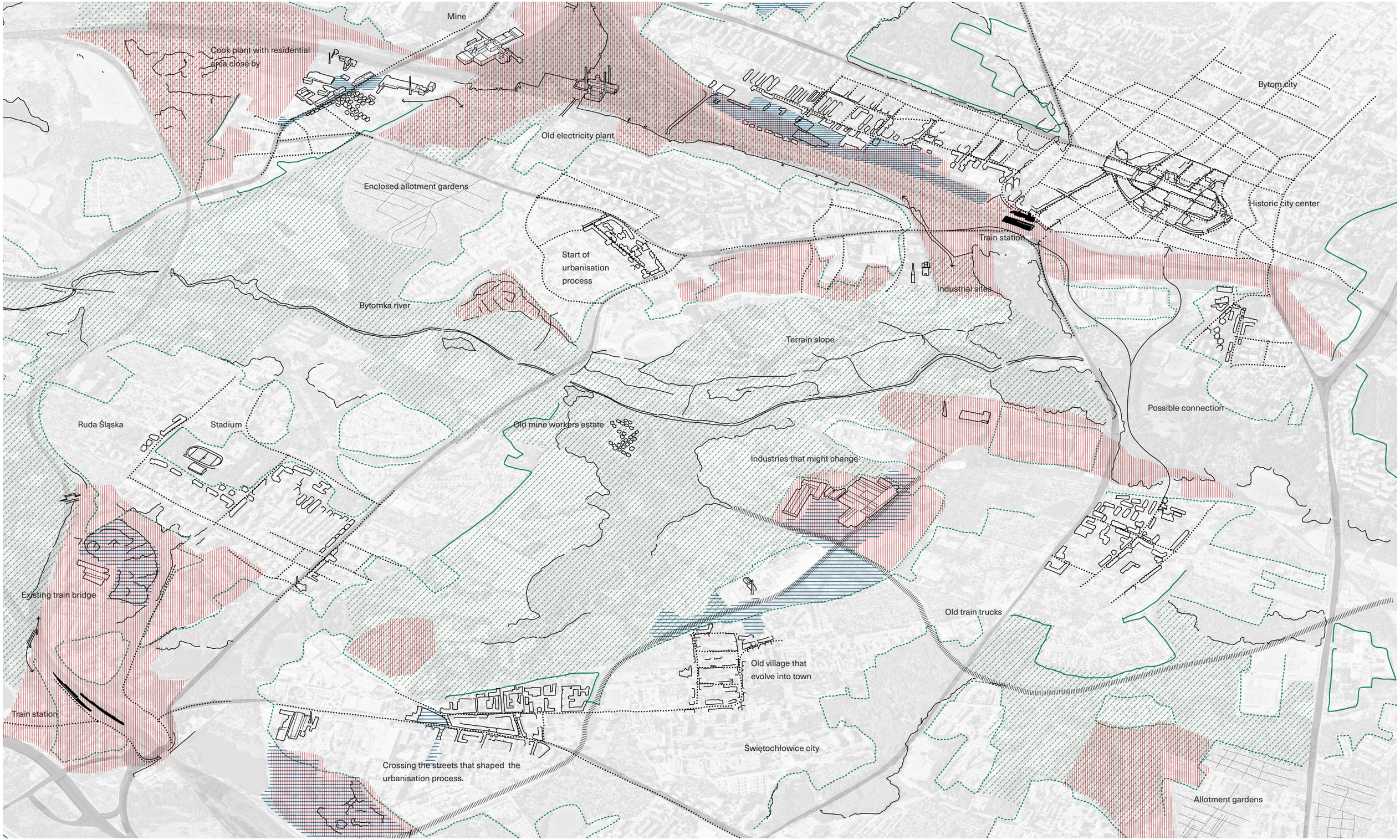
Transitional zones are a combination of more dynamic places that, because of their spatial qualities and functional ambiguity, can create space for different spatial and territorial transformations. Although transitional zones can be seen as adaptive frameworks, there are also limits to transformation set by places of protection and conservation.

In what ways can urban systems and transition zones support each other?

By forming an interconnected network of centralities and diverse transition zones, a landscape of varied spatial qualities is created, each with the potential to attract and connect different groups of inhabitants. This creates a field of possibilities, a territorial network where spatial elements are intertwined with social dynamics, enabling more integrated and adaptive forms of urban regeneration.

Depending on how the city meets the open space, the connections between the urban system and transitional zones can be gradual. Alternatively, these transitions can be immediate when the two are in close proximity.





Field of possibilities within regional contexts

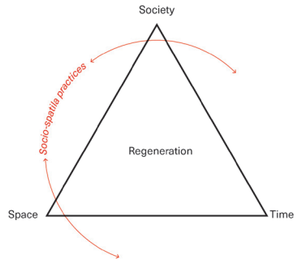
This map explores the interaction between transition zones and urban systems within the region's spatial context. (On previous page the area of the view is marked.)

Green corridor
Centrality
Dross between cities
Industries and city
Dross between cities and industries
Between industries and city
Dynamic urban area

... people and space

Commoning

Mapping the field of possibilities sets a spatial frame that can foster different social dynamics. The relation between residents and spatial resources, which is formed by common values and willingness to participate, is the basis of regeneration. This links with the concept of urban commons that can be defined as “collectively develop and apply a set of values and norms (the so-called social protocol) for the stable, just and fair sharing of resources for the common benefit of the urban community members.”(Polko et al., 2021) Urban commons give a room for citizens to become engaged and collectively find solutions to urban issues that concern them. This way, empowered citizens can proactively care for the desired space and share it with others (Urbancommonscookbook.Pdf, n.d.). This enables urban commons to support a safety network based on solidarity, inclusivity and democracy (Polko et al., 2021).



While recognising the spatial and social benefits is important, it is also necessary to address the governance aspect of urban commons. For long-lasting commons, clear frameworks must be established, such as defining community boundaries or creating conflict resolution mechanisms. (Ostrom, 1990).

Although this can seem like a complicated concept, everyday values and practicality are at the heart of the urban commons (Urbancommonscookbook.Pdf, n.d.). The focus of this part is to explore the diversity of relations between people and space. Based on the voices of the experts, scenario exploration and additional analyses, the range of common practices will be explored.

This subchapter presents different types of urban commons connected to spatial contexts, along with possible examples of commoning practices. It explores, in more site-specific conditions, what each type of transition zone could mean.

Lesson from Nikiszowiec

During the field trips, I had the opportunity to visit Nikiszowiec, a neighbourhood that was originally built to house workers from nearby mines. From the beginning, the area attracted many residents thanks to the high standard of living and employment opportunities it offered. However, over time, the situation began to deteriorate. The neighbourhood developed a negative reputation, and its inhabitants started to feel ashamed of living there.

This began to change when a small organisation called Fundacja Zimbardo decided to intervene. They initiated this change by organising a Christmas market, which served as a catalyst for transformation. From there, they developed five tools of change:

1. Dreams: creating motivation and vision for the future
2. Coffee: offering a space for people to meet and talk.
3. Symbol of the place: fostering local identity
4. Discovering local potential: recognising and mobilising community strengths.
5. Revitalisation: improving the physical and social environment.

Today, the foundation collaborates closely with local residents, some of whom have become tour guides. They help preserve the neighbourhood's unique identity and resist the pressures of gentrification.

During the lecture at the foundation, the presenter emphasised that these tools were specifically developed for Nikiszowiec and may not easily transfer to other cases. However, they align with broader urban approaches that focus on identifying local potential and understanding transitional urban zones. This real-life example shows that practices for creating urban commons already exist. The following pages will explore the potential for enabling urban commons and imagine possible futures for them.



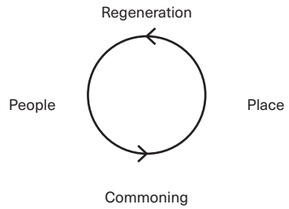
fig.37. Nikiszowiec street, 2024



fig.38. Visit in fundation, photo by Evgenia Vamvakousi, 2024

Types of urban commons

The network of proposed possibilities connects different types of territorial elements, each with the potential to foster various forms of urban commons. This serves as a linking moment between different spaces, areas of urban action, and territorial capital. It connects diverse places that can accommodate different needs, desires and practices, which can support the regeneration of these places over time.



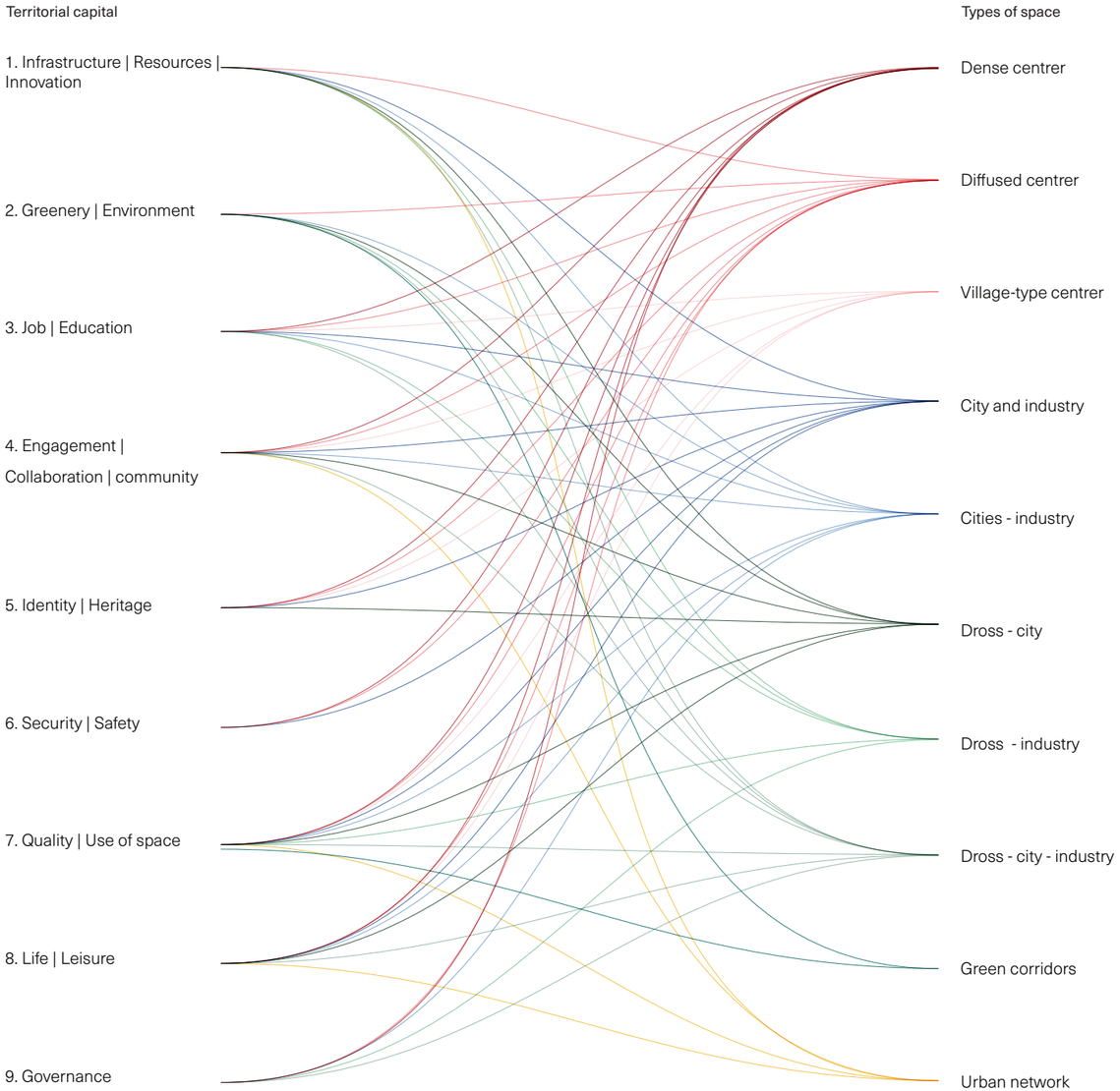
Main areas of urban commons based on gE.CO museum Stories of Generative Urban Commons (Erica Ferigo et al., 2020)

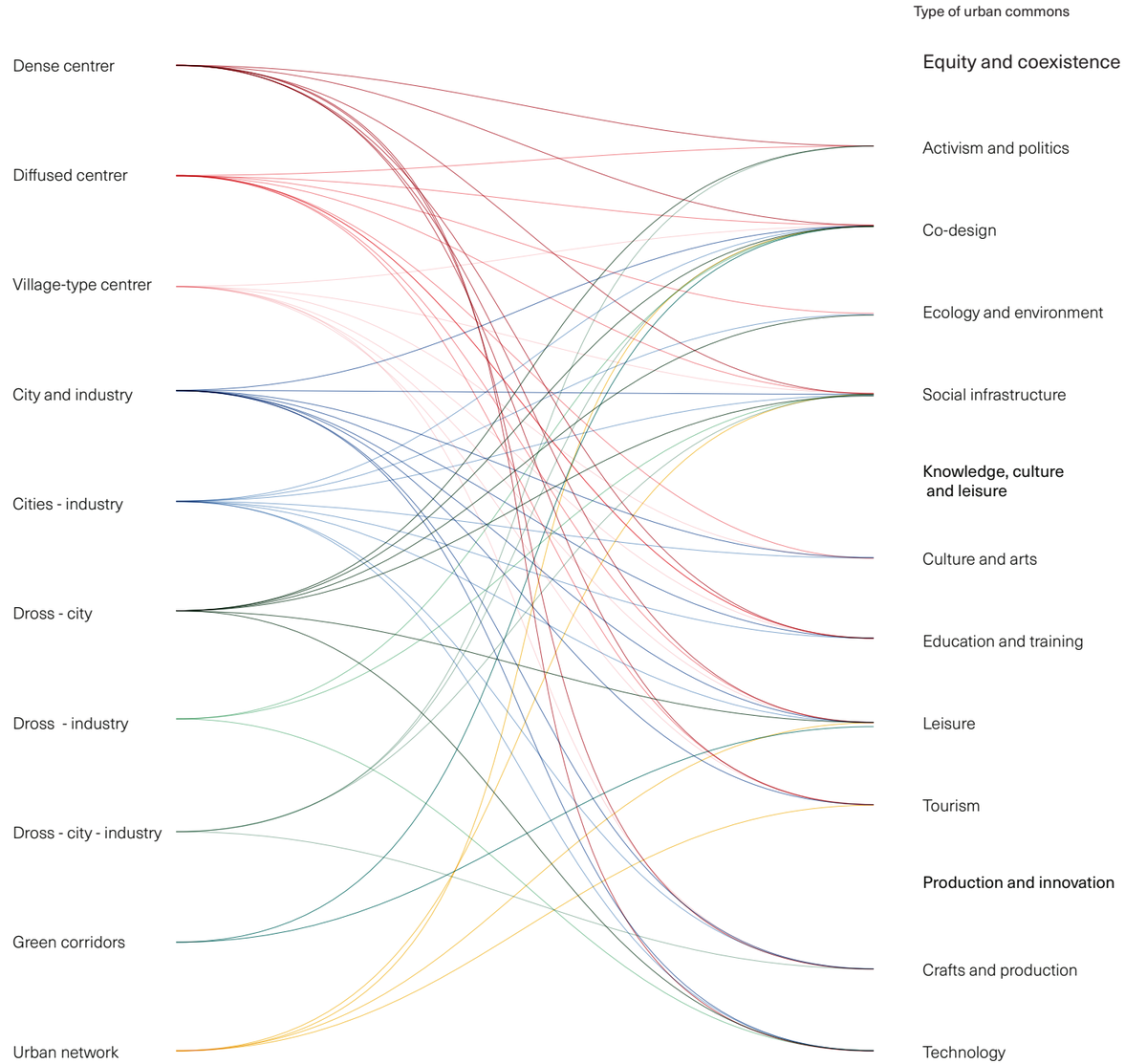
Equity and coexistence
1. Activism and politics
2. Co-design
3. Ecology and environment
4. Social infrastructure
5. Accessibility

Knowledge, culture, and leisure
1. Culture and arts
2. Education and training
3. Leisure
4. Tourism

Production and innovation
1. Crafts and production
2. Technology

Types of urban commons





Commoning practices

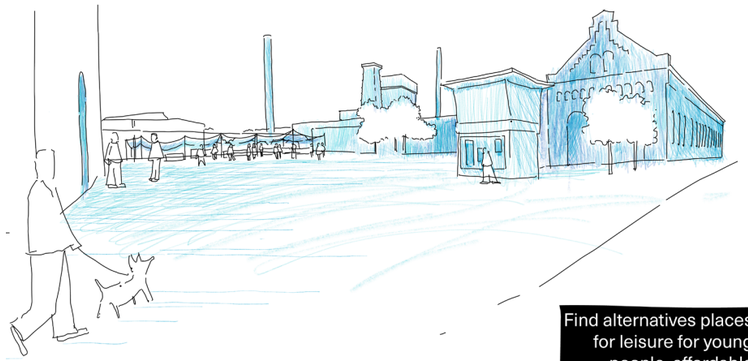
The types of urban commons explored on the previous page helped to establish a connection between space and people. By first analysing a range of possibilities for practising urban commons, it became possible to connect explorations with real space. Studying more specific sites within various types of transitional zones enabled to recognise of more site-specific conditions and potentials, which led to interventions or actions that are more contextual.

How local potential can be used and make cities attractive?

How can identity be maintained?

Events highlighting uniqueness and history.

Conditions for integration and social engagement.



Industries and cities

Studied place

An existing coke factory is located on the opposite side of the street from a residential area characterized by the region's distinctive architecture.

Spatial quality

- Place of unique history and atmosphere
- Diversity of spaces and structural elements
- Visibility

Possible urban common

Community center with museum cared by community.
Parking that can be used as weekly market.

Find alternatives places for leisure for young people, affordable

Active participation of residents in the city's development.

Active participation of residents in the city's development.

Cross-sector cooperation and support for innovation.



Between industries and city

Studied place

A steel-related industry is located in the middle of the neighborhood. The vast industrial site is almost entirely built up with warehouses, creating an irregular layout.

Spatial quality

- Closeness to the neighborhood and city
- Variety of indoor-outdoor spaces
- Visibility

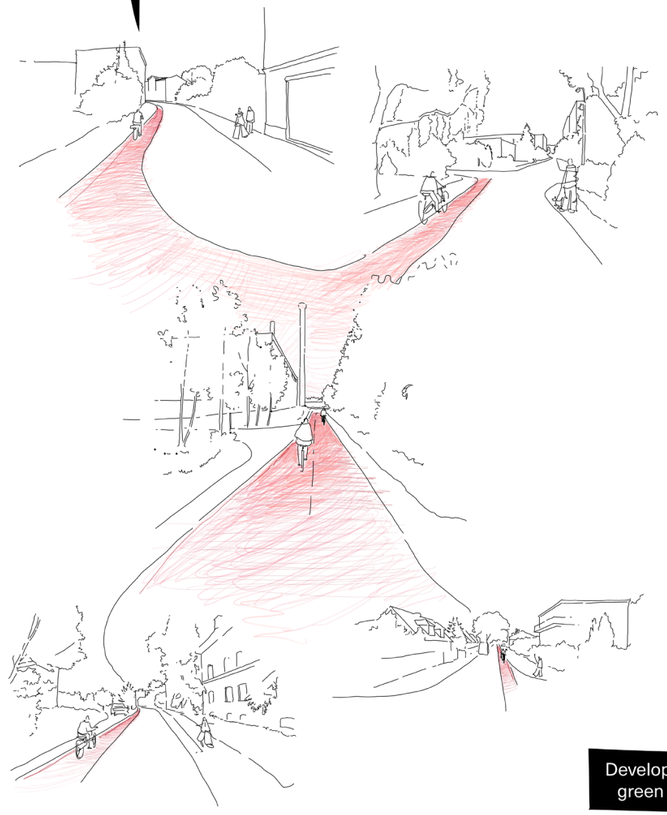
Possible urban common

Cultural hubs, workshop and workspace with open access. Sharing skills intersect with local street art and community creativity.

Development of blue-green infrastructure

How to creat the care of the place?

Revitalization of post-industrial areas.



Between industries and cities

Studied place

This green site is situated between fenced industrial areas and is located in close proximity to several cities.

Spatial quality

- Continuity of green structure
- Variety of landscape
- Proximity to cities and industries

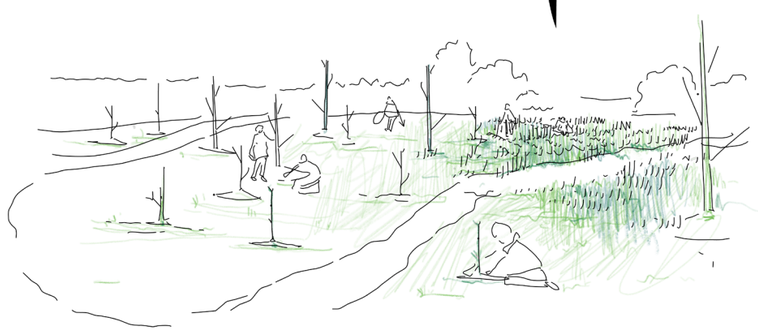
Possible urban common

Creating a bike line through industrial sites to connect different neighborhoods.

Development of blue-green infrastructure

How to creat the care of the place?

Revitalization of post-industrial areas.



Between cities

Studied place

An altered transitional landscape bridging the edge of residential development and expansive green areas.

Spatial quality

- Connectivity between city and nature
- Open and vacant space
- Informality

Possible urban common

Community garden, that helps in soil regeneration and reforestation of the post-industrial site.

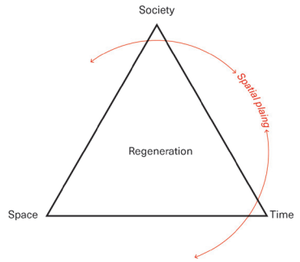
Network of urban commons

Inspired by local voices, drawing shows how the transition zones can interact with urban systems by creating shared spatial resources and a community around them.

New soft connections
Urban commons - centers
Urban commons - industries
Urban commons - dross

... people and time

The transition phase can be perceived as the dynamic time where changes and new practices can give a new direction for future development. There are two different ways of tackling time in urban practices: traditional planning and temporary use. The first starts with defining the goal and the ways to achieve it by creating strategies and timelines. The second one reverses the process and focuses more on triggering the dynamic without knowing the end result (Oswalt et al., 2013). Bringing them together is linked to Cedric Price's idea of 'weak planning', which focuses on opening up possibilities and removing obstacles to development, rather than aiming for a fixed outcome (Oswalt et al., 2013).

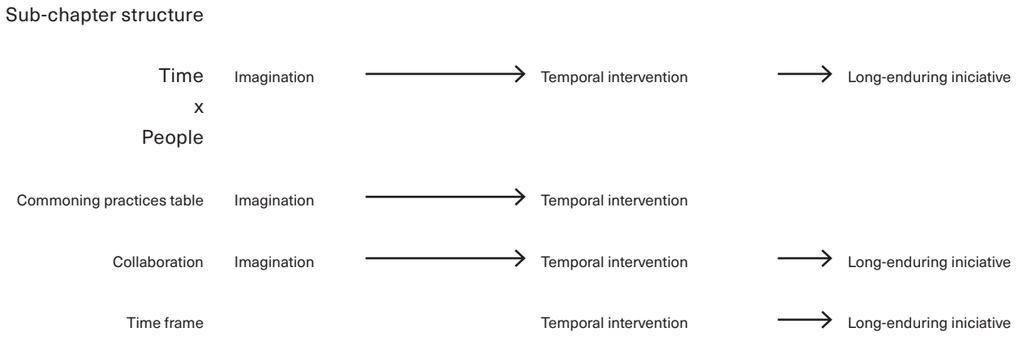


The desires previously explored, which were drawn from various scenarios and voices, enabled the creation of collective imaginaries that envisaged both the near and distant future. These imaginaries were the first step in initiating change.
This section looks at commoning practices to understand who can be involved, how time and space are framed, and what conditions support the emergence of such practices. Through this lens, different actions and interventions can be considered as links between the present and potential futures. While these interventions may initially be temporary, they have the potential to become a permanent element of the territory.

Here, the voice is returned to the people. The views of local groups are distinguished from formal policy documents — not to create opposition, but to identify shared interests and consider the part each can play in the transformation process.

This subchapter consists of three elements: voices and commoning, which link temporary uses with territorial capital; a section exploring different actors and stakeholders who can form communities around urban commons; and finally, a timeline of possible temporary use actions, inspired by Philipp Oswalt, to reflect on the potential next steps the project could take.

Sub-chapter structure



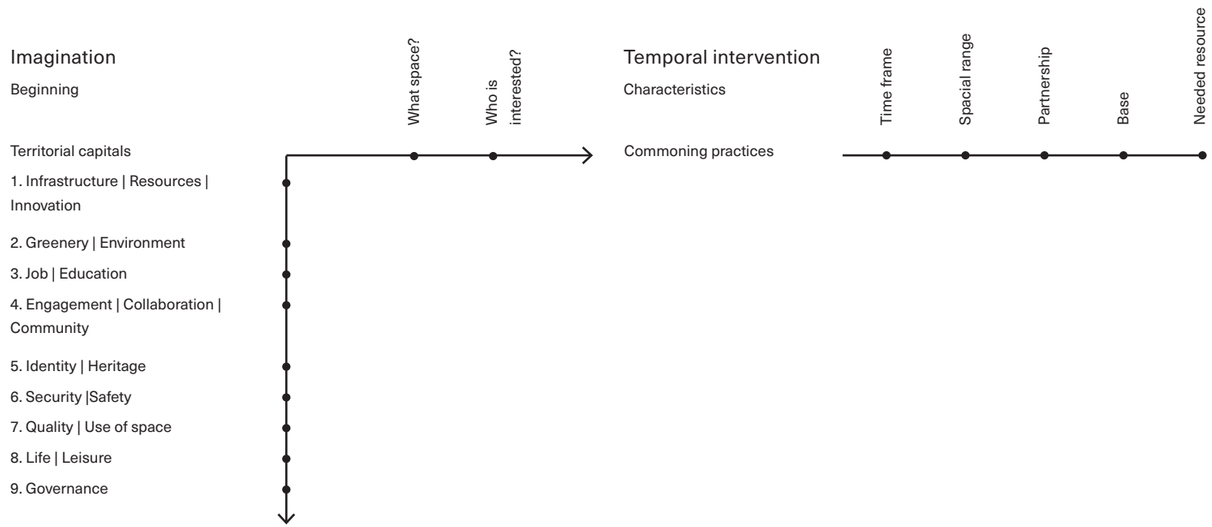
Commoning practices table

This part translates the voices of local experts into a Commoning practices table. The table begins with territorial capitals shaped by local voices, each representing different local imaginaries.
The next two columns focus on identifying which territorial capitals can be embedded in specific spaces, and who might be interested in creating or supporting them. From there, the voices are matched with exemplary types of commoning practices, drawn from various forms of urban commons [p. 190].

Each selected practice is then described through five dimensions:

1. Timeframe	Indicates the duration of the practice: whether its effects are long-lasting, short-term, or recurring over time.
2. Spatial range	Describes the spatial extent of the practice: whether it is neighbourhood-based, city-wide, or extends to broader scales such as the region (voivodeship) or even other countries.
3. Partnership	Explains the kinds of relationships that the practice creates. While civil society is the foundation, practices may involve collaboration with either the public or private sector.
4. Base	Identifies the foundation of the practice, which could be rooted in spatial conditions, a specific place, shared interests, or lifestyle.
5. Needed resources	Outlines the types of resources needed to initiate the activity or intervention.

The table on the next page is meant to be read from left to right, reflecting this thinking process. Each category - territorial capital and commoning practice - is evaluated using the guiding question "Is it...?". Possible answers are "yes," "can be", and "maybe", and the size of the table dots used reflects the strength or likelihood of each possibility.



Commoning practices table

Maybe
Can be
Yes

Territorial capital

1. Infrastructure | Resources | Innovation
2. Greenery | Environment
3. Job | Education
4. Engagement| Collaboration
5. Identity | Heritage
6. Security | Safety
7. Quality | Use of space
8. Life | Leisure
9. Governance

Soft mobility development
Development of car infrastructure
Development of train infrastructure
Development of energy infrastructure
Circular economy and sustainability
Promote innovation
Improve nature's connectivity and quality
Preservation of natural resources
Climate adaptation
A dyamic educational and research system
Creating conditions for economic growth
Support of local entrepreneurship
Cross-sector cooperation
Social integration
Foster active and creative communities
Building a solidarity network
Strengthening the local identity
Where tradition intertwines with modernity
Enhancing local potential
Respect for cultural heritage
Providing support at every stage of life
Responding to demographic challenges
Diverse lifestyles and better quality of life
More affordable housing
Balanced use of space
Spatial integration
Spatial diversification
Attention to spatial aesthetics
Affordable ways of spending time
Alternative to shopping malls
Alternative to car-based lifestyle
Creating modern governance
Promoting the region
Create a positive image of the city

Space
Dense centre
Diffused centre
Village-type centre
City and industries
City - industry
Dross - residential areas
Dross - industry
Dross - city - industry
Green corridors
Urban network

Voices
Voivodship
Metropolitan region
Municipalities - Katowice
Municipalities - rest
Young
Adults
Local experts
External experts

Examples of commoning pratcices

Bike- and car-sharing cooperatives
Co-financed infrastructure
Co-managed public transit initiatives
Shared energy systems
Citizen-run recyclable hubs
Research hubs
Urban farms, community gardens
Commons-based reforestation projects
Urban biodiversity corridors
Community-run schools or workshops
Community land trusts
Shared workspaces with open access
Skill-sharing networks
Community centers
Community planning initiatives (co-designing)
Self-governed neighborhood councils
Language or storytelling circles
Community archives and oral history projects
Art interventions
Cultural heritage sites cared by communities
Shared care spaces (elderly, day care)
Urban prototypes co-developed with citizens
Creating neighborhood space for activities
Urban commons housing
Vacant properties under temporary use
Transitional spaces (e.g. underpasses)
Urban labs run by the local community
Informal adaptations by residents (e.g. benches
Youth hub
Informal weekend markets
Pedestrianised streets by local communities
Self-governed neighborhood councils
Connect with external common-base initiatives
Cultural festivals

Timeframe
Short-tearm
Long-tearm
Seasonal

Spatial scope
Broader
Intercity
City
Neighbourhoodood

Partnership
Civil society
Civil-public partnership
Civil-privat partnership

Base
Place based
Intrest/lifestyle based

Needed resource
Network
Founding
Knowladge
Creative thinking
Time (participation)

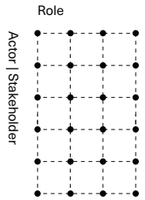
Collaboration

The commoning practices table helped identify where the strongest alignments lie between local voices and specific interests. It revealed which voices are more connected to hard capitals, such as the development of mobility infrastructure, and which relate more to soft capitals, such as social relationships and community networks. It also helped uncover which territorial capitals can overlap within the same space and highlighted opportunities for cross-partnerships or mixed-base urban commons. Additionally, it pointed to where the need for resources is most critical.

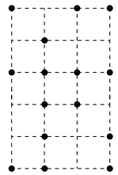
While the table explores the interests of different local actors, forming urban commons requires interaction between these actors. The form of interaction depends on their roles, which may vary, from property owners to community members, or even as passive audiences who observe and engage with the practice.

To better understand how the same actor or stakeholder might hold multiple roles, a matrix of stakeholders/actors × roles was developed. To link this with The commoning practices table, roles were analysed across the 11 identified types of urban commons [page 190]. The connections between stakeholders, represented through dots and linking blobs, helped identify potential relationships for co-creation and collaboration in specific commons-based initiatives.

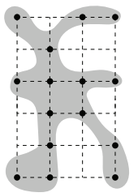
Method of mapping possible connections



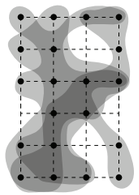
Identify separately relevant actors, stakeholders and roles involved in the creation of urban commons.



Map these roles in relation to each type of urban common.



Analyse the connections to uncover potential communities formed around specific urban commons.



Identify the points that are not covered by any bubble, indicating that the actor or stakeholder does not play this role in the process.

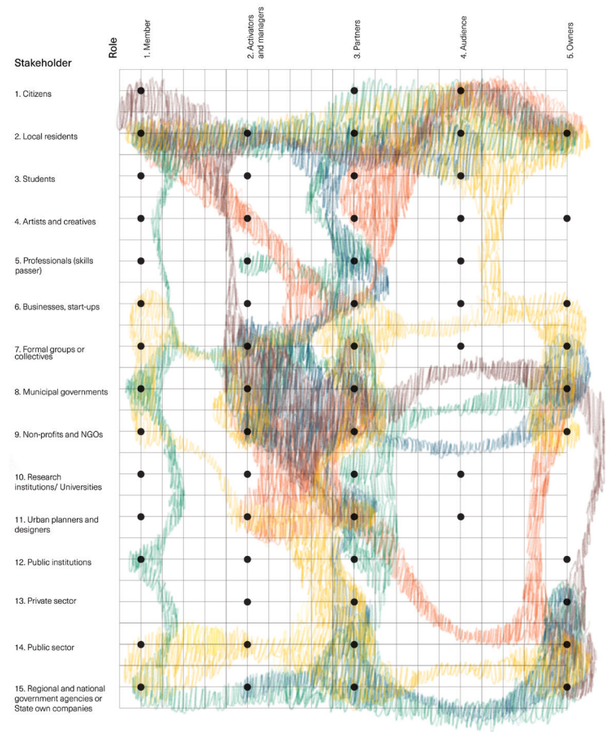
List of stakeholders/actors

1. Citizens
2. Local residents
3. Students
4. Artists and creatives
5. Professionals (skills passer)
6. Businesses, start-ups
7. Formal groups or collectives
8. Municipal governments
9. Non-profits and NGOs
10. Research institutions/ Universities
11. Urban planners and designers
12. Public institutions
13. Private sector
14. Public sector
15. Regional and national government agencies or State own companies

stakeholders mapping [appendix page 248]

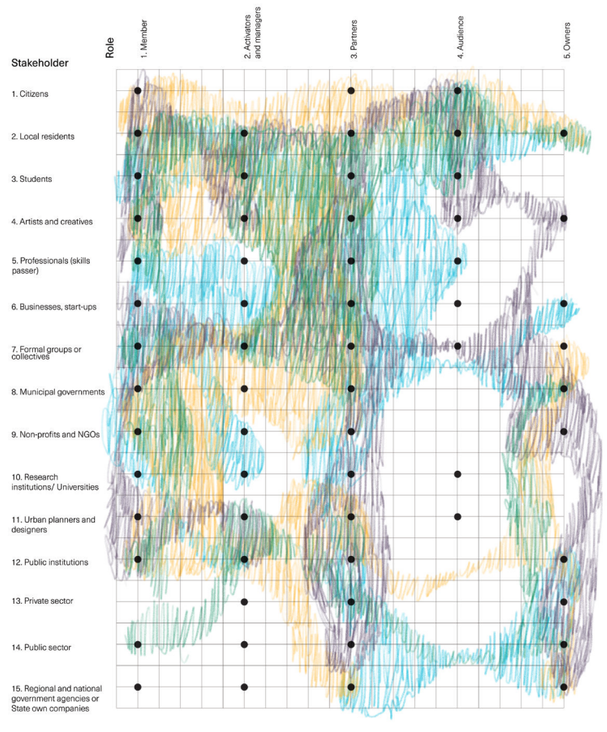
Roles

1. Members	Individuals who actively participate in the practices and are deeply connected to the urban common.
2. Activators and managers	Core members who initiate the community or project, take responsibility for coordination, and bring others together.
3. Partner	Temporary contributors who support the community with specific expertise or resources.
4. Audience	The broader civil society that may engage with the community but does not actively participate.
5. Owners	Entities that legally own the land or property; their involvement can be either passive or active.



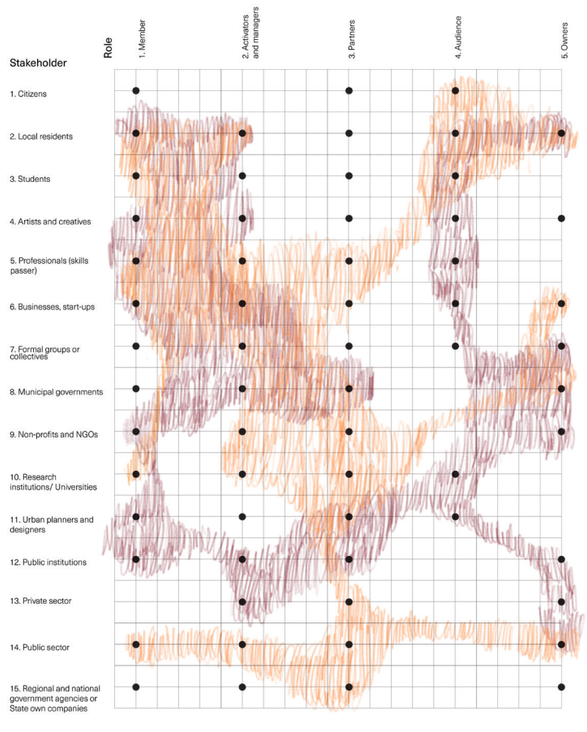
Equity and coexistence

1. Activism and politics
2. Co-design
3. Ecology and environment
4. Social infrastructure
5. Accessibility



Knowledge, culture, and leisure

1. Culture and arts
2. Education and training
3. Leisure
4. Tourism



Production and innovation

1. Crafts and production
2. Technology

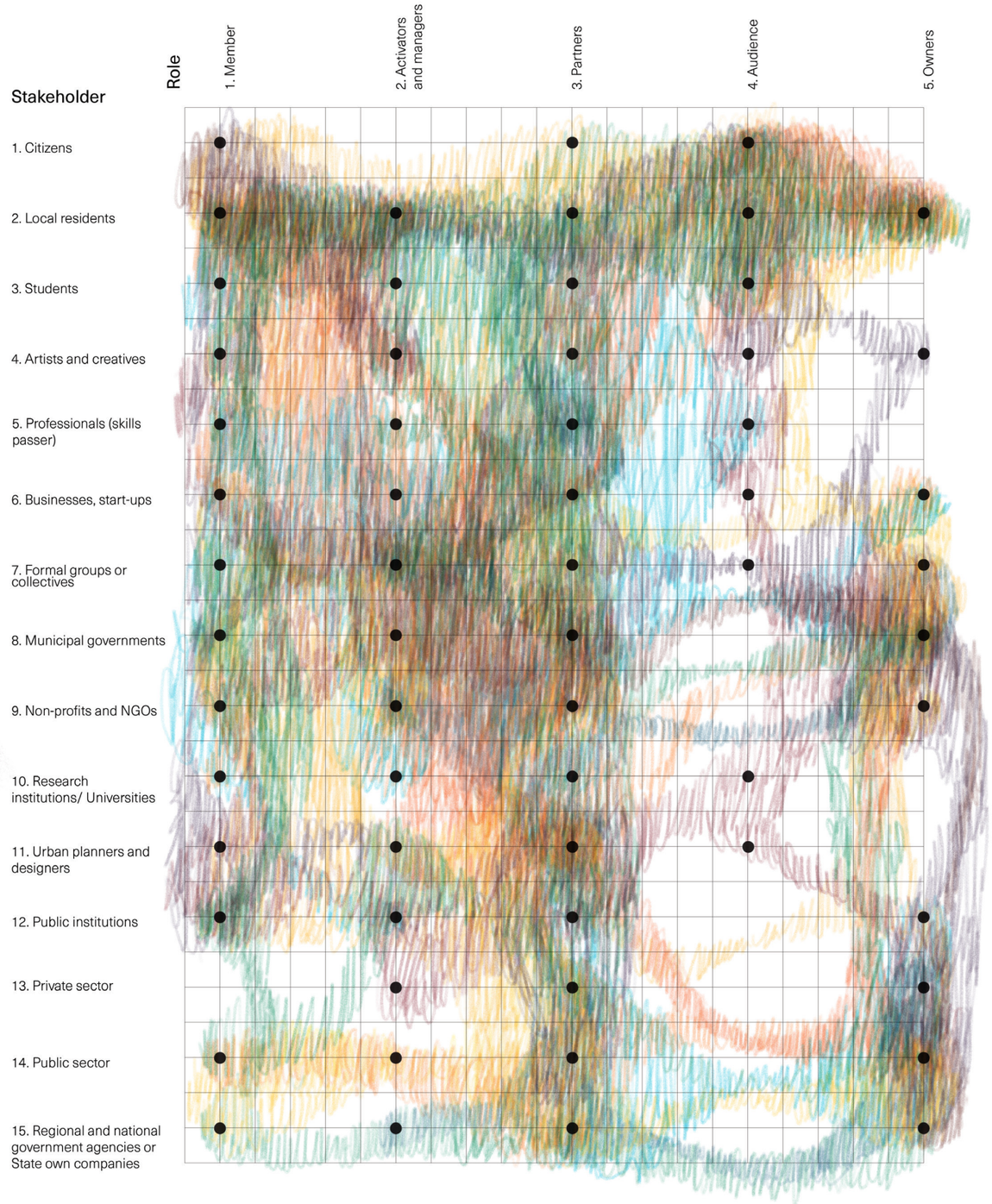
Conclusions

From the overlaps, it becomes evident that local residents are key members of each urban common. They often belong to multiple groups, allowing them to act as connectors between different communities. Many also serve as activators and managers, and through the development process, may evolve into more organised collectives.

A variety of partners can support urban commons, with the municipality playing a key role across all types. In equity and coexistence, urban planners, collectives, and NGOs are essential. For knowledge, culture, and leisure, important contributors include residents, artists, professionals, and public institutions. Municipalities and urban designers are particularly relevant in the final category, where overlaps reinforce their importance.

The most significant audience for engaging with various initiatives includes residents, and more broadly, diverse groups of citizens.

The owner role primarily involves public or private sector entities, including municipalities, regional and national government agencies, and state-owned companies.



Matrix stakeholders/actors × roles

Equity and coexistence

1. Activism and politics
2. Co-design
3. Ecology and environment
4. Social infrastructure
5. Accessibility

Knowledge, culture, and leisure

1. Culture and arts
2. Education and training
3. Leisure
4. Tourism

Production and innovation

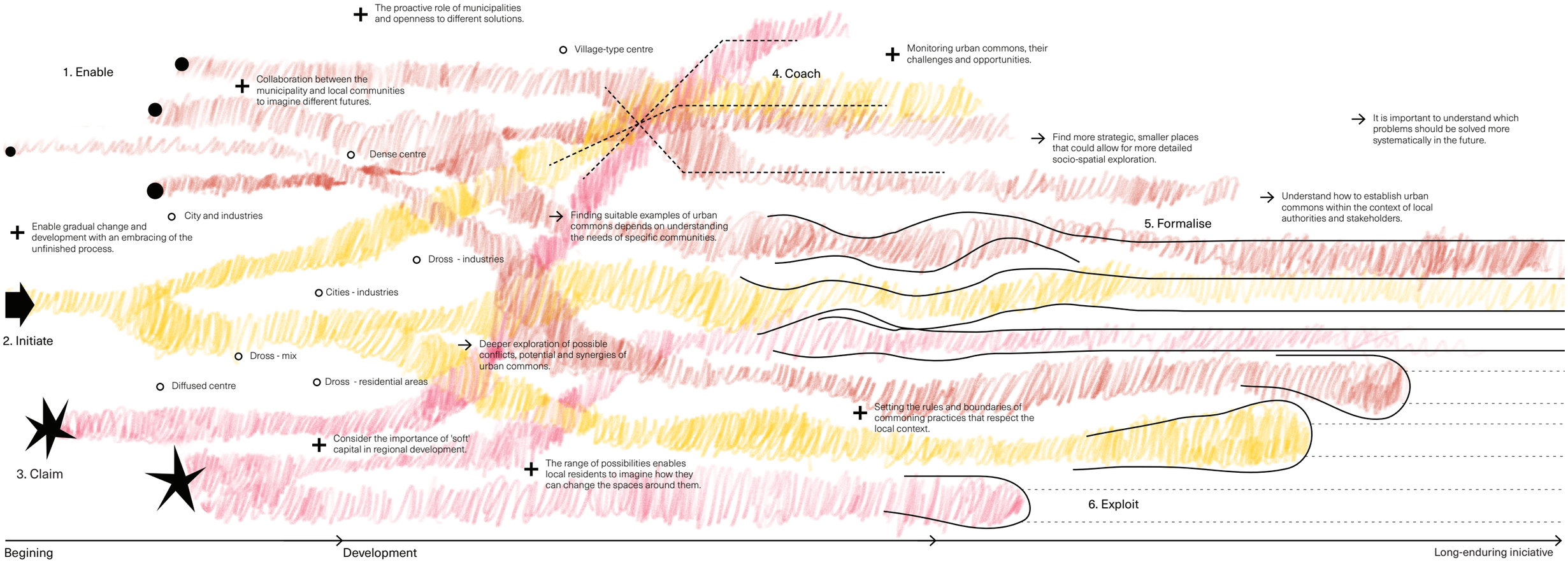
1. Crafts and production
2. Technology

Timeline

The temporality of the commons comes from the core of the concept, the relation between the communities and resources, so they can disappear as fast as they appeared (Polko et al., 2021). Therefore, urban commons can be seen as part of the temporary use that has a great possibility to become a long-lasting intervention that is rooted in place.

To explore potential development paths and future projections for different types of urban commons, a timeline was constructed. Based on strategies for action described by Philipp Oswalt in The Power of Temporary Use, explain how temporary uses can be initiated and how they may develop over the long term.

These pre-defined actions served as a framework to understand which types of strategies or trajectories can be followed in different types of transition zones. Furthermore, the timeline became a reflective tool to assess what changes or additional actions could support the co-creation of urban commons, and to speculate on the next steps if the project were continued.



Enable

Numerous small vacant properties are now more easily accessible for temporary use. This initiative is led by the city, which acts as a connector between property owners and potential users. The aim is to create diverse and dynamic spaces distributed throughout the urban area (Oswalt et al., 2013).

Initiate

For more sizable, unused areas, the cluster of temporary use can be initiated by agents. Associations or planners act as agents to create an agreement with owners and develop a temporary strategy that includes a variety of users Oswalt et al., 2013).

Claim

Temporary uses often arise from users challenging official plans with alternative ideas for space. The goal is to create a new public space that generates a socio-cultural impulse and serves as a social platform capable of resisting commercialised developments by fostering dialogue and demonstrating alternative uses (Oswalt et al., 2013).

Coach

Various initiatives and actions are beginning to connect, forming a supportive network. This shared platform strengthens the spatial visibility of smaller actors in the public realm and fosters further development. The network may be self-organised or supported by the government or an engaged external party (Oswalt et al., 2013).

Formalise

When temporary use proves successful and there is interest in extending its potential, it can be formalised. Informal solutions and improvised actions are then transformed into a legal, structured framework. Clearer community models can support new programmes, enhance the neighbourhood, and evolve into lasting organisations (Oswalt et al., 2013).

Exploit

Property owners may initiate temporary use to attract public attention and link their sites to urban life through culture, art, or recreation. Though often self-interested, this can benefit surrounding areas and help create a diverse, vibrant neighbourhood (Oswalt et al., 2013).

Based on “Power of temporary use” by Philipp Oswalt, graphic from the book was adapthed by author.

7 Return to presence

The final chapter summarises the project's approach and answers the main research question and reflects on the imaginative aspects of the process. By extracting the essence of the spatial conceptualisation of the Silesian region, the chapter reflects on the role of time and thresholds. This reflection illustrates how intuitive and systematic thinking can be integrated to develop a regional design approach that is grounded in a place-based perspective. The chapter then highlights the project's main lessons and critical steps, offering insights into how this process might be adapted and applied in other contexts.



fig.39. Closed mine 'Pokój' in Ruda Śląska, 2024

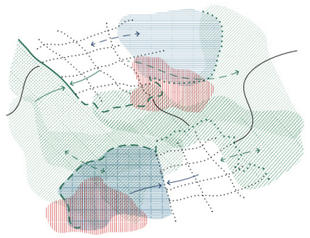
7.1 Project summary

Main spatial conceptualisation of the Silesian region

The project looked at different approaches to spatial conceptualisation in the Silesian metropolitan region. This involved conceptual mapping, the creation of abstract representations, and the development of scenarios. These explorations were synthesised into a main conceptual framework comprising a network of diverse spatial typologies that support one another and are linked with different social dynamics.

At the core of this framework is a ‘fixed’ structure interwoven with adaptive transition zones. This conceptualisation aims to reveal the region’s potential through regenerative approaches. Rather than focusing on a single solution to the upcoming transformation, the project imagines the region as a landscape of diversified socio-economic and spatial morphology that fosters resilience and long-term sustainability.

The project presents a field of possibilities that integrates multiple temporalities and regenerative strategies, emphasising the value of engaging with time in varied and flexible ways. While long-term planning is still important, including temporary uses highlights the need for leaving room for the unforeseen. In this context, urban design is not about providing definitive solutions, but rather about expanding the collective imagination. It becomes a tool for sparking questions of how it could be otherwise.



Urban system and transition zones

The main learnings from the projects approach

1. Addressing complexity and uncertainty through the development of multiple scenarios, which guided in-depth analysis and explored how different paths of development influence the main territorial layers.
2. Explorations always begin with the same starting point: space. They then unfold in multiple directions, which can later be traced back to a shared starting point.
3. Approaching spatial planning and design through spatial qualities that already exist or can be strengthened. By simply highlighting the potential, people can be inspired and start to imagine their own spatial futures.
4. Recognising uncertainty as part of the process helped in accepting that not everything can be predicted. This openness to the unknown can be embraced and translated into actions that help us to tackle the uncertainty.
5. Using spatial concepts as tools for imagination. Although spatial concepts are abstract interpretations of different spatial logics, they can also be contextualised to reveal existing spatial relationships and ask the question ‘what if ...’

Project steps

During exploration, it was not possible to see the whole picture. By describing this process and analysing each of the steps it becomes clearer the logic behind it. It becomes clear that chapters of understanding the spaces and application of places give the needed context that navigates the in-between chapter. By firstly understanding the conditions, it was possible to understand what dynamics can influence creation uncertainty and find the territorial layers that are affected by them.

This helped define the purpose of the field of possibilities and elements that can support it.
The project was, from the beginning, an exploratory journey—one in which each step held equal importance and influenced the next. It unfolded through a sequence of investigations, each building on the previous, as follows:

1. Understanding the challenges	The starting point was identifying the core challenge: the uncertainty and complexity of spatial relationships within the Silesian region.
2. Engaging with time and dynamics	By acknowledging the multiple temporalities and dynamics involved, the explorations were guided towards the direction of establishing a flexible spatial framework that could accommodate various development trajectories.
3. Contextual analysis	Spatial and social analyses helped to understand the existing context, both in physical and societal terms. Also introduced the concept of territorial capitals to the project.
4. Identifying key elements	Based on the contextual understanding, it was possible to identify key components for constructing scenarios. In this project, these included territorial capital and three conceptual models of metropolitan relationships.
5. Developing scenarios	These scenarios explored how specific conditions might influence urban development. For the Silesian region, those were expansion patterns, highlighting spatial dimensions such as the relationship between cities and industries or varying forms of centrality.
6. Synthesising into a framework	From the scenarios, the conclusions could be drawn and brought together elements with regenerative potential into a unified
7. Introducing urban commoning	Established spatial framework led to a discussion on urban commoning as an important element of the regenerative approach. First, urban commons were explored from a spatial perspective and later expanded to include time and governance dimensions.

Key steps

Throughout this process, the full picture was not always visible. But by reflecting on and analysing each stage, the underlying logic became clearer. The two key steps in this process are to first understand the space and appreciate the place that provides the necessary context to navigate the transitions in between. By first exploring the territorial conditions, it became possible to understand the dynamics driving uncertainty and identify the spatial layers most affected by them. This, in turn, helped clarify the role of the field of possibilities and the elements required to support and sustain it.

Transferability of the project approach

The project can be understood as an exploratory process that begins with an examination of socio-spatial dynamics and other contextual factors. This foundational analysis enables spatial concepts to be identified that can be used to explore different possible futures through scenario building. The insights gained from these scenarios are then synthesised into a spatial framework designed to support regenerative practices.

While the approach is transferable, it must remain site-specific in its application. Each step must be adapted and interpreted in relation to the local context. In this way, scenarios serve as both an exploratory and analytical tool. In the case of the Silesian region, it was important to address issues related to urban shrinkage, so the selected spatial concepts and scenarios were tailored to reflect this.

Limitations of the project and the process

1. To achieve more comprehensive results, it would have been essential to incorporate a wider range of local voices and perspectives.
2. The project did not engage deeply with local laws or the complex structures of land ownership.
3. Despite the analysis being broad and multi-perspective, the complexity of the region meant that other important aspects could not be fully addressed.
4. The topic of energy transition was not covered, as it is tied to broader geopolitical and national energy security issues. The project instead focused on the local spatial context.
5. Without a stronger theoretical foundation to clearly define and differentiate them, using a multiplicity of spatial concepts can become confusing.
6. Relying solely on spatial concepts to explore space can be limiting as it risks overlooking important factors such as social practices, governance and lived experiences.

Advantages of the project and the process

1. The project emphasised the importance of territorial capital and brought it together with the spatial dimension into the regional context.
2. The project views local voices and input as a source of inspiration and a reflection of local values, which have been explored throughout various stages of the process.
3. It enabled open-ended exploration, allowing for the discovery of hidden or unforeseen spatial potential.
4. It emphasised the importance of temporality and the value of gradual, long-term spatial development.
5. Rather than inventing something entirely new, the project builds upon existing elements, recognising their value and suggesting ways in which they can be strengthened and interconnected.

7.2 Main research question

“Uncertainty, the feeling of not being sure what will happen in the future”(UNCERTAINTY | English Meaning - Cambridge Dictionary, n.d.)

Uncertainty is a widespread feeling that resonates strongly with questions about the future of the Siliesna region. Once thriving on coal mining and heavy industry, the region now faces the challenge of redefining its identity. This context formed the starting point for the project, which began with the question:

How can the imagination of spatial and territorial structures of the Górnośląsko-Zagłębiowska metropolitan region foster a regenerative future, and what spatial and territorial interventions could support this process?

Why regeneration?

The regenerative approach not only refers to restoring what has been lost but also points to the possibility of discovering new values embedded in space. In this way, the project has found space as a primary medium for exploration. The project focuses on building place-based partnerships - starting with understanding local conditions and then co-imagining possible futures.

What spatial and territorial interventions could support this process?

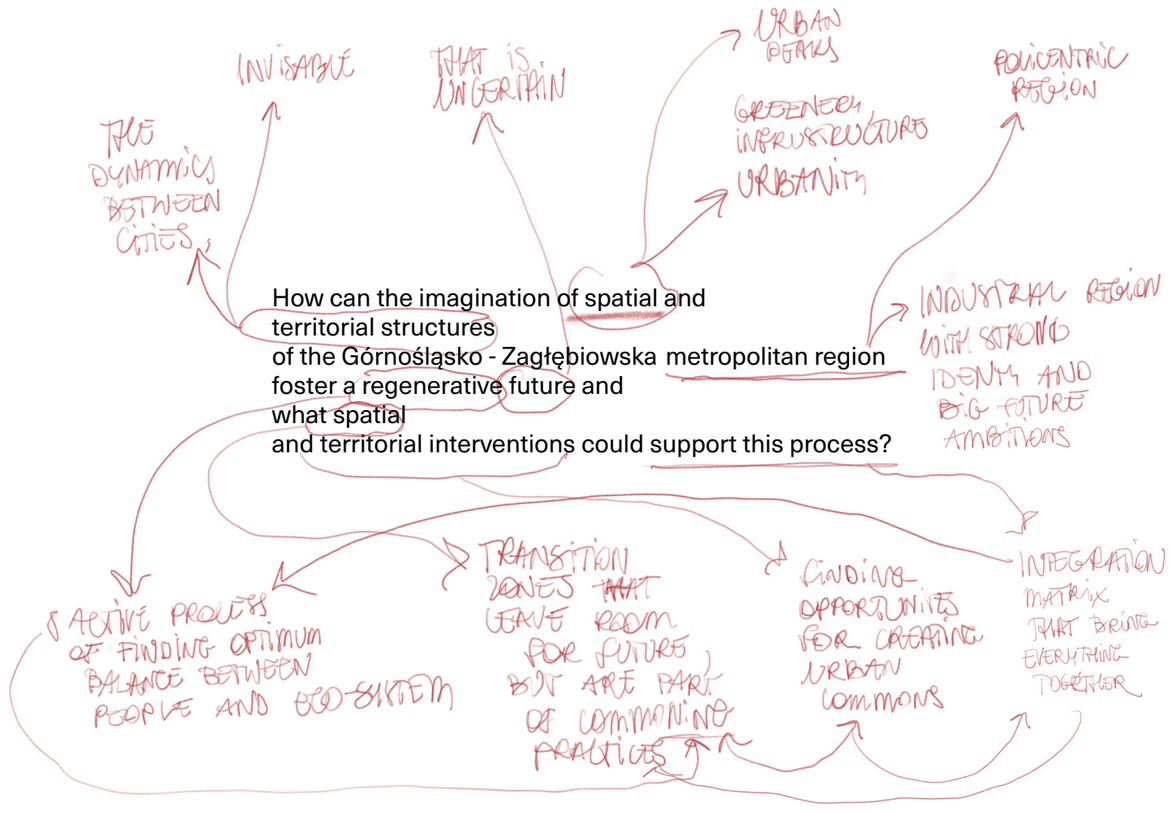
To find guidance for the future, the project first explored the distant future, to later return with conclusions and lessons learned. The relationships between people, space and time have been highlighted as key elements that need to be connected to support the regeneration process. By linking them step by step, from the spatial intervention - transition zones and urban system, through the territorial intervention of urban commons, to the moment of integration, people’s desires and visions for the future of regions are connected by the temporality of urban commons. This supportive network of three elements can form the fundamentals for more regenerative approaches.

Why imagination?

Imagination was, for the most part, the vague concept that allowed the project to explore intuitively different futures. The concept of spatial imagination brings the aspect of the collective and change to the project. Imagination was seen in different ways - by creating many futures based on different voices, by combining different spatial concepts or by finding the possibilities for fostering common practices.

This was a moment of learning the most important lesson of the project. The project was not about fixed rules or guidelines. It is about funding, redefining and showing the field of opportunities that are embedded in the space and territory of the region. This place-based process hopes to reopen the current discussion about the future of the region.

So, what comes next?



Main research question

Reflections

This chapter focuses on my learnings from this project and afterthoughts. The first part of the reflection focuses on the academic aspect of the work, analysing the methodology and bridging to a wider theoretical background. The second part describes personal position, the learning process and the role of intuition in it. Finally, the chapter reflects on the scientific and societal relevance of the work, considers ethical implications, discusses its potential for transferability and how the project is connected to the Urbanism master's track.



fig.40. Road to Gliwice, 2024

Academic reflection: method, research, and design

The moment of transition is when the past, present and future happen simultaneously. By starting to work in the Silesian region, the time complexity started to become more and more clear to me. In the region, where history and identity go hand in hand, the current energy transition is a leverage point shaping the future. This significant moment concerns many voices, both loud and quiet. To ensure none were overlooked, I approached them from a spatial perspective - the most intuitive and natural lens for me. This resonates with Foucault's idea of the epoch of space and simultaneity, the epoch "of juxtaposition, of the near and far, of side-by-side, of the dispersed" (Foucault, 1984, p. 1).

The slow uncovering of the convoluted space of the dispersed polycentric structure of the metropolitan region helped build an understanding of the territorial logic. By redrawing over and over the same places, the past and present could be seen as one continuous process that changes the way the territory can be perceived. This approach links to a larger way of looking at the process of mapping, the agency of mapping, which "lies in neither reproduction nor imposition but rather in uncovering realities previously unseen or unimagined, even across seemingly exhausted grounds" (Corner, 2011, p. 98). This way of mapping can not only become a tool for understanding the place, but also for imagining futures that are already rooted in spatial logic and place-specific.

Another way to approach complexity is to detach space from its roots and focus only on the spatial logic extracted from knowledge, agendas and practices (Balz & Zonneveld, 2018). This is the method of constructing spatial concepts. Due to the certain ambiguity and vagueness of the nature of these concepts (Balz & Zonneveld, 2018) They can become a tool for spatial interpretations and explorations. The conceptual shift creates the possibility of finding new meaning and thoughts that can help in translating abstract ideas into real space (Vigano, 2010).

Overlaying spatial concepts with site-specific mapping grounds the approach, helping envision where and how a regional future might emerge. However, those questions become increasingly difficult to answer when the vision must be formed under the pressure of transformation. The collective understatement and reshaping of socio-spatial relations enables us to answer these questions (Davoudi et al., 2018). It has identified the full audience to whom the future should be addressed. The place and its inhabitants.

The partnership between them, respecting each other's needs and finding the balance in this dynamic, is the core of regenerative development. The approach focuses on restorative relationships, which enhance the resilience of the natural environment and ensure a better future for the next generation (Girardet, 2014a). This requires a systematic shift towards four premises that together create a framework for a regenerative approach: place and potential, goals focused on regenerative capacity, partnering with place and progressive harmonisation (Mang & Reed, 2012).

Studying the future as well as the past allows us to perceive urbanisation as a continuous process, characterised by different dynamics, densities and proximities (Panerai et al., 1999). In this way, combined before mapping and spatial concepts are perceived as exploratory tools, the research informs design and design informs research. By testing different regional models of relations, urban structures and exploring their intersection with real space, the conclusions relate to Kevin Lynch's thoughts on metropolitan development. He emphasises the importance of preventing premature abandonment and insufficient use, which corresponds with the project's position. While Lynch argues that the urban form places relatively minor importance on metropolitan development, the project takes a contrasting position. It highlights how urban form can influence socio-economic practices and ways of living, which greatly informs the region's future development (Lynch, 1961, p. 79).

The lessons from the different development paths helped me to understand the importance of the spaces in-between, which can foster different unforeseen opportunities and leave space flexible and adaptive for today and the future. This way, the relationship between people and the space is strengthened. The main outcomes of the work were to create room for unforeseen spatial relations and transformations, empowering local communities with spatial resources and integrating citizens, decision makers, and places. All three highlight the importance of imagining collective futures together.

Personal reflection: positioning and learning process

This open-ended narration developed through this project reflects the personal position of an outsider engaging with a unique place, which has a strong local identity that is currently in the process of transformation. Not taking a strong position on the future identity of the region could be perceived as a weakness; however, by approaching places, people and time carefully, the project takes a step back and leaves space for others. It is sensitive to an uncertain future and seeks collaboration instead of being rigid and sure of its correctness.

The uncertainty and doubts were present during explorations, which are fundamental to the project. Being explorative and intuitive is not the easiest path to follow in evidence-based approaches, which are ubiquitous in urban practices. During different investigations, I let my intuition guide me to gather all findings later, conclude and again be intuitively 'free'. Although intuition and logical thinking are often seen as opposites, together form a base for human thought processes (Daniel Kahneman, 2011). This was for me a learning process, to combine these two modes of thinking: building a logical narrative, project positioning and outcomes simultaneously with more intuitive explorations.

This process is also connected to my struggle for a deeper understanding of who I am as an urbanist, what my way of thinking is and what I am interested in. This was a stepping stone process. After the P1 reflection, I understood my interest - the undefined and unnoticed spaces. The P2 reflection made me acknowledge my approach of coming from space to unfold other elements. Before P4, the way I connect elements, find typologies and explore became clear to me. In this process, the mentoring sessions and feedback were not only project guidance but also moments to reflect.



Scientific relevance

The processes of growth and degrowth in a region are deeply interconnected and often occur simultaneously. Historically, most spatial concepts have primarily focused on the expansion of urban areas, overlooking the complexities of shrinkage. Today's urbanists must incorporate both possibilities, expansion and shrinkage, into their practices. As noted by Oswalt, the global population is projected to peak sometime between 2070 and 2100, marking the near completion of the urbanisation process (Oswalt, 2006).

Both growth and degrowth generate spatial dross, which can be reimagined as opportunities for constructing a shared regenerative future. Viewing these spaces through this lens introduces a new dimension to the existing discourse on care. This approach connects to broader discussions on planetary boundaries, the circular economy, and the role of spatial imagination in addressing global challenges.

Societal relevance

Reimagining the existing dynamics between cities, exploring alternative economic approaches, and considering spatial dross as a valuable resource can contribute to the ongoing conversation about the region's future. By framing regeneration as "a fairer, restorative relationship between cities, the natural world, and future life"(Girardet, 2014b, p. 20). This project places society and its interactions with 'wasted' spaces as the key element of the process.

By examining the values of collectively and collaboration, the project investigates new relations between people and space across different scales - local and regional - and perspectives, from planning to everyday life. Projects emphasise the importance of leaving room for uncertainty, while simultaneously forming new foundations for balance and regeneration that will strengthen the region for future generations.

Ethical considerations

This project started from environmental awareness of how the coal industries impact the natural environment. This initial focus expanded to spaces that are not purely natural but also affected by urbanisation processes, abandoned or degraded urban forms. The contrast between 'wasted' and newly developed parts made me think about the ethical responsibilities of land use and its limits. If we can imagine an alternative future of a more balanced and carefully planned region, it becomes essential to explore as many possibilities as possible.

This project will use imagination as an exploration tool to propose alternative visions that can help various stakeholders and actors to collaboratively imagine a common future for the region. However, it is important to note that "In dreams begin responsibilities" (Yeats, 1914, epilogue). With this in mind, the project, rather than proposing a fixed design solution, aims to create room for discussion and further re-imaginations.

Transferability

The overlay of the different methods and various ways of exploration allowed this project to investigate a difficult aspect of growth, de-growth and re-growth, which is difficult to predict, but is becoming more and more relevant in urban planning. The interplay of the research and mappings helps in gaining 'knowledge intuition' that enables freer explorations. This way, uncertain futures can be visualised, studied and compared to be used to see today's challenges from a different angle.

The shrinkage of regions or cities is a ubiquitous phenomenon in Europe. By focusing more on the existing values and potentials, the project tried to look at the territorial elements that are already embedded in the region's morphology and can help in developing a more resilient region. This way uncertain future of urbanised spaces can find alternatives for development, which does not always mean expansion. By investigating different scenarios, the project tries to find approaches that can help create a regenerative regional frame that would be transferable to other regions.

Relation to master's track and master's programme

The project is deeply rooted in the approach of working with uncertainties, as one of the approaches taught by the TU Delft Urbanism department. This practice is essential and crucial in addressing the pressing climate and environmental challenges of our time. By acknowledging the existing socio-spatial context and redefining it for more regenerative purposes, the project aligns with the department's focus on circularity, social equity, and ecologically inclusive urbanisation.

The project's explorations aim to uncover more resilient and sustainable opportunities within the existing body of urbanism theory. It will investigate the relations between theory and practice, treating their collaboration as a foundation for innovation. This approach reflects the multidisciplinary approach of the master's program, which emphasises integrating diverse disciplines to advance sustainable development.

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fig.41. Old mine in Nikiszowiec, 2024

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Data sources

Base map	https://download.geofabrik.de/
World borders of the countries	https://ec.europa.eu/eurostat/web/gisco/geodata/administrative-units/countries
Poland administrative borders	https://gis-support.pl/baza-wiedzy-2/dane-do-pobrania/granice-administracyjne/#
Raster layers	https://mapy.geoportal.gov.pl/imapnext/imap/index.html?moduleId=modulZK&mapview=51.978352%2C19.400858%2C4000000s
Land us Copernicus - Urban Atlas	https://land.copernicus.eu/en/products/urban-atlas
GHS Settlement Model grid (R2023)	Global Human Settlement - Download - European Commission
GHS built-up surface	Global Human Settlement - Download - European Commission
Built-environment	https://pzgik.wodgik.katowice.pl/bdot10k
Buildings	https://pzgik.wodgik.katowice.pl/bdot10k
People calculation	https://www.opi-tpp.pl/map
Post-industrial	https://www.opi-tpp.pl/map
Post-mining	https://mosaic.ipums.org/historical-gis-datafiles
Historic borders	https://geoportal.orsip.pl/image/services/MapyHistoryczne/SuchaGora_10_1883_AP/ImageServer/WMSServer
Historic maps	https://geoportal.orsip.pl/poi
Museum	https://geoportal.orsip.pl/poi
Exhibition or conference hall	https://geoportal.orsip.pl/poi
Sports and entertainment hall	https://geoportal.orsip.pl/poi
Community centre	https://geoportal.orsip.pl/poi
School/nursery	https://geoportal.orsip.pl/poi
University	https://geoportal.orsip.pl/poi
School/nursery	https://geoportal.orsip.pl/poi
Church	https://geoportal.orsip.pl/poi
High-speed railways	https://experience.arcgis.com/experience/2a24effbf2a1495aa0d20966f4b70886/page/Land-use/?dlg=Welkomstvenster
Not high-speed railways	https://opendata.zuid-holland.nl/geonetwork/srv/dut/catalog.search#/metadata/31fc0bba-c585-4146-a61b-d0523d374c1e
Communes	https://ec.europa.eu/eurostat/web/gisco/geodata/administrative-units/communes
Population change 2024-2100	https://ec.europa.eu/eurostat/databrowser/view/PROJ_19RP3/default/table?lang=en&category=proj.proj_19r
Population change 2006-2024	https://ec.europa.eu/eurostat/web/gisco/geodata/population-distribution/geostat
Coal mines	https://envirosolutions.pl/otwarte-dane-gis
Coal deposits	https://baza.pgi.gov.pl/en/geoportal/uslugi/gis
Heaps	https://baza.pgi.gov.pl/en/geoportal/uslugi/gis
Landslides	https://pzgik.wodgik.katowice.pl/bdot10k
Water sea	https://www.eea.europa.eu/en/datahub/datahubitem-view/d09a1d82-8e11-4448-85a5-e2613aeccf57?activeAccordion=1083843
Terrain EU	https://www.eea.europa.eu/en/datahub/datahubitem-view/357f686f-1939-4652-8e79-c9ac7a1c5da6?activeAccordion=1084464%2C1084433
Landscape parks	https://envirosolutions.pl/otwarte-dane-gis
National parks	https://envirosolutions.pl/otwarte-dane-gis
Nature reserves	https://envirosolutions.pl/otwarte-dane-gis
Protected landscape	https://www.gov.pl/web/gdos/dostep-do-danych-geoprzestrzennych
Predicted land subsidence as a result of mining	https://dm.pgi.gov.pl/
Water quality	https://baza.pgi.gov.pl/en/geoportal/uslugi/gis
Mine water and depression	https://baza.pgi.gov.pl/en/geoportal/uslugi/gis
Ecological corridor	https://www.gov.pl/web/gdos/dostep-do-danych-geoprzestrzennych
Natura 2000	https://www.eea.europa.eu/data-and-maps/data/natura-14/natura-2000-spatial-data
Green and arable land	https://pzgik.wodgik.katowice.pl/bdot10k
EU coal resources	https://link.springer.com/article/10.1007/s11698-022-00256-7/figures/1
Soil contamination zoom in (2003)	https://mapgeochem.pgi.gov.pl/wp-content/uploads/2021/09/Atlas-zanieczyszczen-gleb-miejskich-w-Polsce_en.pdf
Air pollution	https://powietrze.gios.gov.pl/depoz/mapa-opadow-ph

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*Different paintings from both websites were used for each of the colleagues.

Appendix

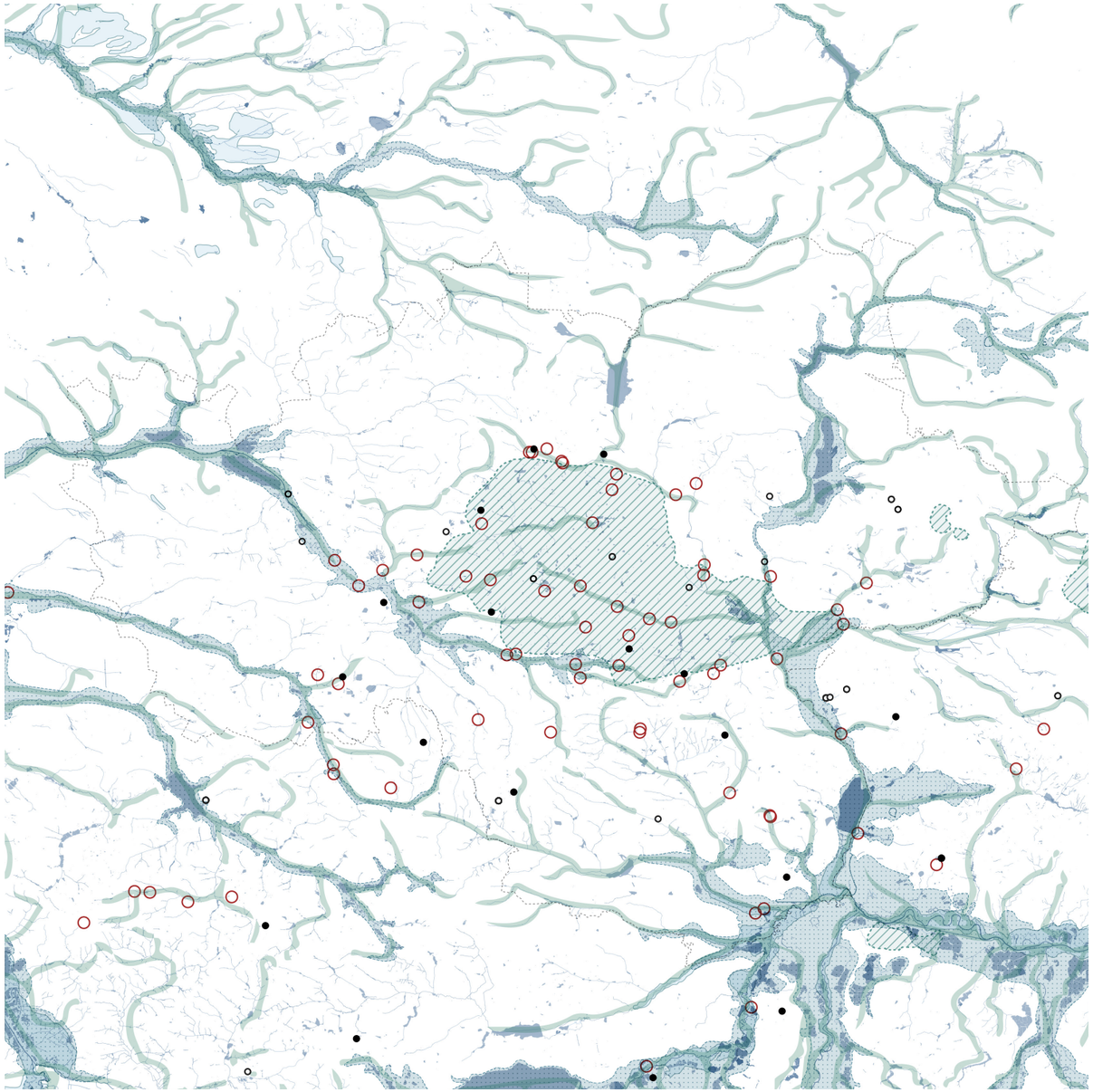


fig.42. Katowice city center

Environmental challenges

1 Water

In 2022, the Odra environmental crisis happened. More than 360 tons of fish died due to prymnesium paravum algas that can develop in highly saline water and cause fish to die(Sabela, 2023). Water quality affected by human activity, such as the dumping of coal industry wastewater, is the primary reason of this disaster. In Poland, two major rivers: the Odra and the Vistula start close to the region of coal industry: coal mines, coal power plants and other coal-related industries that affect water quality and quantity (Pazderski et al., 2023).



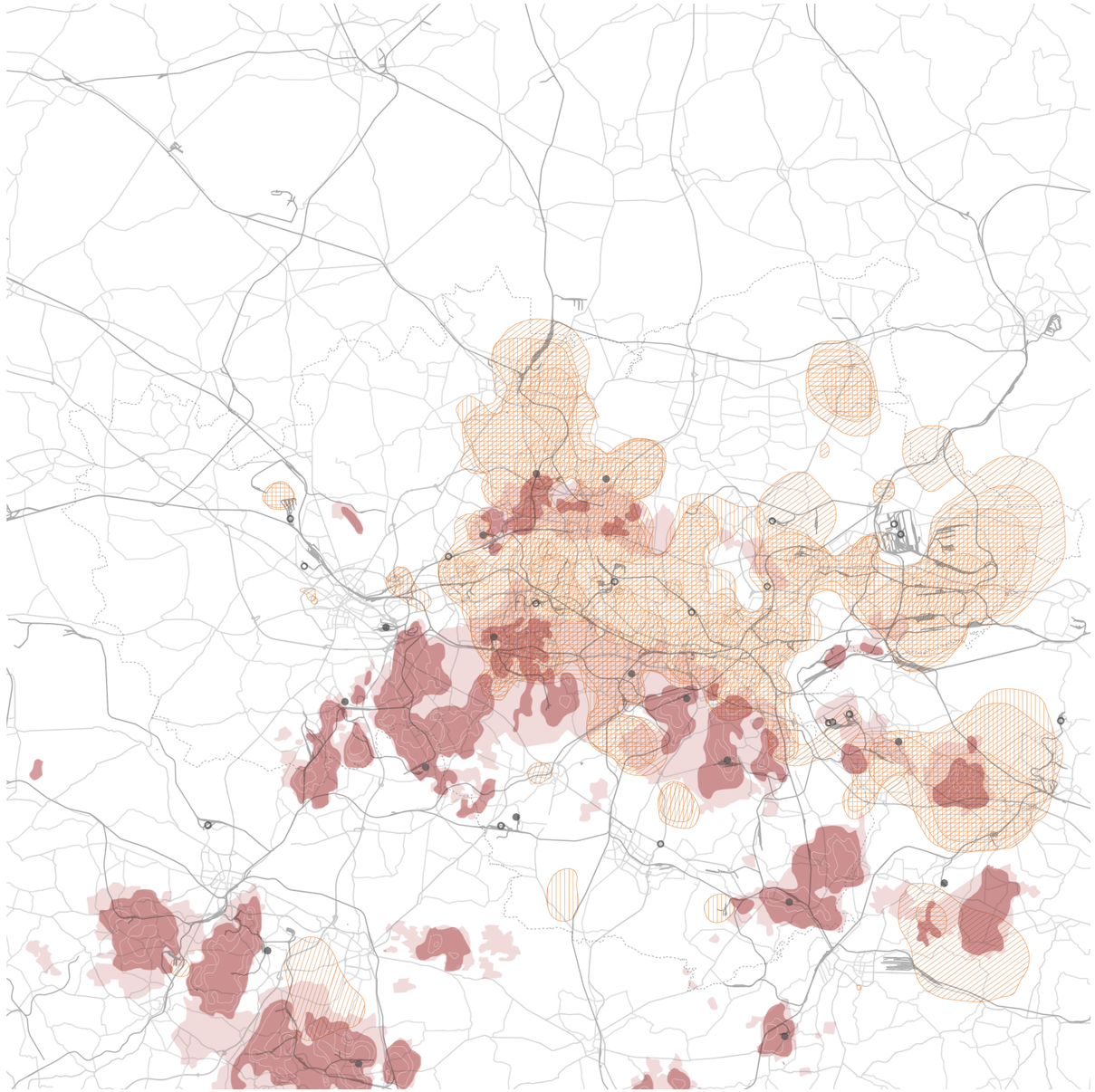
Water contamination

2 Soil

Not only water quality is influenced by coal industries in Silesia, but also soil contamination and land subsidence are side effects of the industrial activities. “Extraction of coal is accompanied by various geohazards like ground displacements, seismic tremors, sinkholes, flooding and inundations, slope instabilities, and collapses of spoil heaps, air, soil, and water pollution by toxic waste from mining. Subsidence is one of the most significant threats related to underground mining activities.”(Przyłucka et al., 2022). Now we can notice that in some areas the subsidence could have even reached over -25 mm/year average in years 2016-2020. “This highlights the high concentrations of most metals, i.e., arsenic, antimony, and sulphur, in the surface layer of soils (topsoil) due to historic Zn-Pb ore mining and Zn and Fe metallurgy.”(Nadłonek et al., 2024).



Townhouse in Bytom, cracks on the wall due to subsidence



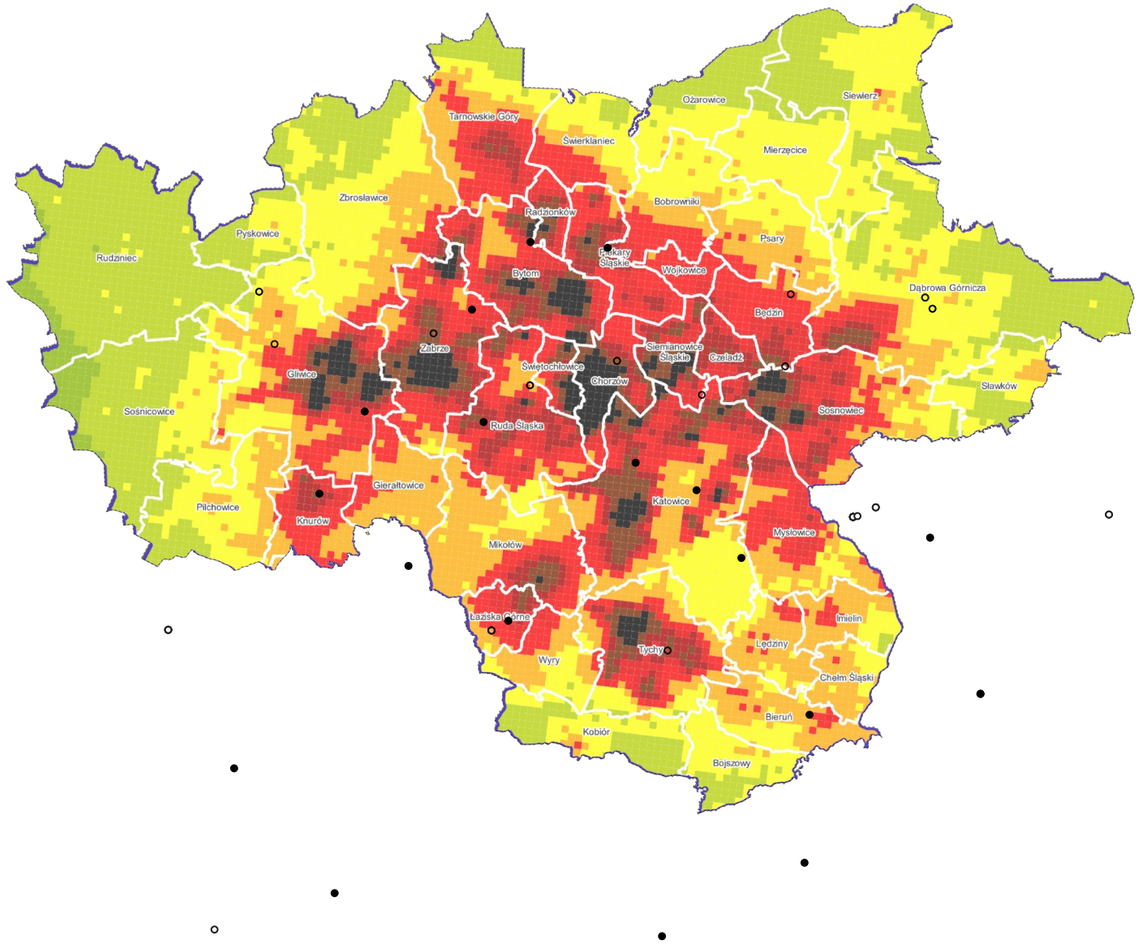
Soil

3 Air pollution

Air quality in the region remains a challenge due to the presence of heavy industry, coal-based domestic heating and an extensive car infrastructure. However, improvements have been observed. In 2023, the Katowice monitoring station recorded an average PM10 concentration of 20.6 µg/m^3, a decrease of 22.5% compared to 2022 (Jakość powietrza w Katowicach poprawia się z roku na rok. Wskazują na to dane Głównego Inspektoratu Ochrony Środowiska, n.d.).
This positive trend can be attributed to initiatives such as the national program “Czyste powietrze” (“Clean air”) or the local program “Ciepłe mieszkanie” (“Warm house”). Despite these efforts, air quality continues to be a major concern for residents. According to a recent survey, 35% of respondents prioritised improving air quality, second only to the need to stabilise energy prices (Orłowska & Piekarz, 2024).



First line
Second line



Air - PM 2.5 [µ/m^3] - 2017

0 7.5 15 km

Metropolitan boundaries
Coal industries

<10.0	23.0 - 25.5
10.0 - 12.5	25.5 - 28.0
12.5 - 15.0	28.0 - 30.0
15.0 - 17.5	30.0 - 32.0
17.5 - 20.5	32.0 - 35.0
20.5 - 23.0	>35.00

Spatial concept analyses

	DENSITY/FORM	FLOW	VISUAL IMAGE	SOCIAL ASPECTS/ VALUES	ACTIVITIES	FLEXIBILITY/ SPONTANEOUS	DIS/ADVENTAGES
Dispersion	**DENSITY** Lowest densities practicable, with substantial interstices of open land kept in reserve. **DISPERSION** Metropolitan region would rapidly spread over a vast continuous tract **OLD FABRIC** The old center and most subcenters could be dissolved, allowing city-wide activities to disperse throughout the region, with a fine grain.	**NETWORK** A continuous grid designed for an even movement in all directions. There would be no outstanding nodal points, no major terminals. **COST** Its cost would be high and distances remain long. **ACCESSIBILITY** Accessibility would be good, given high speeds of travel and low terminal times	**IDENTITY** No promise of heightening the sense of political identity in the metropolitan community **IMAGE** No promise of visually vivid and well-knit image of environment.	**ENGAGMENT AND INDEPENDENCE** Local participation, personal comfort, and independence to a maximum **STABILITY** In the end it might promote **population stability and the conservation of resources**, since all areas would be favored alike.	**BALANCED ALLOCATION** Balanced cross-section of the population at any given point, in teams of activates and density. **ACTIVITIES DISPERSION** Work place and residence might be adjacent or miles apart. Automatic factories and intensive food production might be dispersed throughout the region.	**SPONTANEOUS** Spontaneous or accidental communication which is one of the advantages of present city life, might be impaired by the lack of concentration. **FLEXIBILITY** Such a pattern might not only raise flexibility	**+ RURAL AREAS** Accessibility to **rural land would become unnecessary,** since outdoor recreational facilities would be plentiful and close at hand. The permanent low-density residence would displace the summer cottage.
Galaxy	**FORM** Development bunched into relatively small units, each with an internal peak of density and each separated from the next by a zone of low or zero structural density.	**DISPERION** The system of flow would also be dispersed but would converge locally at the center of each cluster. **TRANSPORT** The individual vehicle must be the major mode of transportation, but buses running from center to center would now be feasible. **MOVMENT BETWEEN THE CITIES** The factor of time-distance might remain rather high, unless people could be persuaded to work and shop within their own cluster, which would then become relatively independent with regard to commutation.	**IMAGE** In the same sense, the visual image at the local level would be sharpened, though the metropolitan image might be only slightly improved.	**EQUALITY** Centers, each of which **would be relatively equal in importance** to any of the others. **VALUES** Comfort, independence, and stability, **ENGAGMENT** It would presumably encourage participation in local affairs by favoring the organization of small communities but not on the metropolitan scale.	**ACTIVTICES DIVERSIFICATION** The centers might be balanced in composition or they might vary by specializing in a type of activity, so that one might be a cultural center, another a financial center. **DENISTY PICKS** City-wide activities could also be concentrated at the density peak within each urban cluster **INDIVIDUALITY** Local centers, too, might develop a monotonous similarity, unless they were given some specific individuality. **EXTRIM SPECIALISAON** lack of the very specialized activities that might exist in larger centers.	**NO FLEXIBILITY** Flexibility might be lost, since local clusters would of necessity have relatively fixed boundaries, if interstitial spaces were preserved, and the city wide activities would be confined to one kind of location. **NO INTENS COMMUNICATION** This pattern has a somewhat parochial complexion and lacks the opportunities for intensive, spontaneous communication **SEAMLESS COMMUNICATION** this scheme probably enhances general communication, and certainly spontaneous communication, through creating centers of activity	**+ OPEN COUNTRY** provides a wider range of choice than does pure dispersion, and a greater accessibility to open country, of the kind that can be maintained between clusters. **INCREASED LAND OCCUPATION** The ground occupied by the whole metropolis would increase proportionately; even if the interspaces were of minimum size, the linear dimensions of the metropolis would increase from thirty to fifty percent.
Star	**FORM** Tongues of open land would be incorporated into the metropolitan area to produce a density pattern that is star-shaped in the central region and linear at the fringe. [...]The dominant core, however, would remain, surrounded by a series of secondary centers distributed along the main radials. **LINEAR CONNECTIONS** These lines of dense development along the radials might in time extend to other metropolitan centers, thus becoming linear cities between the main centers. **DENSITY** Moderate densities	**FLOWS** The system of flow would logicality be organized on the same radial pattern, with supplementary concentric rings. **PUBLIC TRANSPORT** An efficient public transportation system of high capacity could operate along the main radiais, whereas the ring roads could accommodate public transit of lower intensity.	**IMAGE** The visual image is potentially a strong one and should be conducive to a sense of the metropolis as a whole, or at least to the sense of one unified sector leading up to a common center.	**PERSONAL CHOICE** Individual choice should be fairly wide, both in regard to living habitat, access to services, and access to open land - this land lies directly behind each tongue of development, even at the core, and leads continuously outward to rural land. **ACCESSIBILITY** Accessibility to services would be unequal as between inner and outer locations.	**ACTIVITES** The metropolitan center of the star pattern would again contain the most intensive types of city-wide activity. Elsewhere, either in the subcenters or in linear formations along the main radials - whichever proved the more suitable - these activities would be carried on at a less intense level. **CENTER** This form retains the central core with its advantages of rapid communication and specialized services yet permits the location of other kinds of major activities.	**GROWTH** Growth could occur radially outward, and future change could be **accomplished with less difficulty** than in the compact pattern, since densities would be lower and open land would back up each strip of development.	**PROBLEM** circumferential movement, of potential congestion at the core and along the main radiais, and of the wide dispersion as it recedes from the original center
Ring	**FORM** Other possibilities certainly exist - e.g., the compact high-density core pattern might be turned inside out, producing a doughnut-like form. In this case the center would be kept open, or at very low density, while high densities and special activities surround it, like the rim of a wheel. **DENSITY** Densities within the rim would have to be rather high, while those beyond the rim could be low. The central area could either be kept quite open or devoted to special uses at low densities.	**FLOW** The principal channels of the flow system would then be a series of annular rings serving the high-intensity rim, supplemented by a set of feeder radials that would converge at the empty center. This well-adapted to public transportation, both on the ring roads and the cross radials, while individual vehicles might be used for circulation outside the rim **CONGESTION** Congestion at any single center is avoided, yet there is a high concentration.	**VISUAL IMAGE** The visual image would be strong (though perhaps a little confusing because of its circularity), producing a particularly clear impression of the centers around the rim, in contrast to the central openness, and of their successive interconnections. The whole metropolis would seem more nearly like one community.	**ACCESSIBILITY** A high accessibility, both to services and to open land; a wide choice of habitat and location of activities; and a good foundation for efficient public transit.	**ACTIVITES** City wide activities could be spotted round the rim in a series of intense centers, supplemented by linear patterns along the annular roadway. **CENTERS** There would be no single dominant center but rather a Umited num ber of strong centers (an aristocracy rather than a monarchy). These centers might also be specialized in regard to activity - finance, government, culture, ec	**RIGIDNESS** The ring tends to be rather rigid and unadaptable as a form. **RIGIDNESS** [...] but it might dovetail with an observable trend toward emptying and abandoning the central areas. The plan could be modified by retaining a single major center, separated by a wide belt of open space from all other city-wide activities to be disposed along the rim.	**SIZE OF THE RING** Should it be small enough for the major centers to be in close proximity to one another or big enough to allow all the residences and other local activities to be related to it? **GROWTH** One of the most difficult problems would be that of growth, since much development beyond the rim would soon blur the contour and require a new transportation system.
The core city	**DENSITY** median structural densities fairly high, perhaps at 1.0 instead of 0.1 **INTENSIVE PICK** The metropolis would then be packed into one continuous body, with a very intensive peak of density and activity at its center. **COUNTINUOUS** Parts of the city might even become "solid," with a continuous occupation of space in three dimensions and a cubical grid of trans portation lines.	**FLOWS** The system of flow would necessarily be highly specialized, sorting each kind of traffic into its own channel. Such a city would depend almost entirely on public transport, rather than individual vehicles. **ACCESSIBILITY** Accessibility would be very high, both to special activities and to the open country at the edges of the city. [...] Accessibility would be excellent and time-distance low, although the channels might be crowded.	**COMMUNITY** Such a metropolis would indeed produce a vivid image and would contribute to a strong sense of the community as a whole. Individual participation, on the other hand, might be very difficult.	**INDIVIDUAL** The nearness of open country and the many kinds of special services should on the whole extend individual choice. **SEGREGATION** The segregation of social groups, as far as physical disposition can influence it, might be discouraged, although there is a level of density above which inter communication among people begins to decline again.	**MULTI-LEVEL** Most probably there would be a fine grain of specialized activities, all at high intensity, so that apartments would occur over factories, or there might also be stores on upper levels. **WEEKEND VILLAS** Each family might have a second house for weekends; these would be widely dispersed throughout the countryside	**SPONTANEOUS** Spontaneous communication would be high, so high that it might become necessary to impede it so as to preserve privacy.	**DISCONFORT** The high density might increase discomfort because of noise or poor climate, although these problems could perhaps be met by the invention of new technical devices. **COSTS** Cost would be lower because of the more efficient use of services and transportation, but initial costs would undoubtedly be very high

Policy overview

DOCUMENTS	VISON	GOALS	KEYWORDS	SPACES	POSITION in the region
Voivodship  	The Silesian Voivodeship will be a modern European region with a competitive economy, resulting from a responsible transformation, offering development opportunities for its residents and providing a high quality of life in a clean environment.	**STRATEGIC GOAL A** **Silesian Voivodeship as a region of responsible economic transformation** • Competitive economy • Innovative economy • Strong local entrepreneurship **STRATEGIC GOAL B** **Silesian Voivodeship as a resident-friendly region** • High quality of social services, including healthcare • Active residents • Attractive and effective education and research system **STRATEGIC GOAL C** **Silesian Voivodeship as a region of high-quality environment and space** • High environmental quality • Efficient infrastructure • Attractive living conditions, comprehensive revitalization, climate change prevention and adaptation **STRATEGIC GOAL D** **Silesian Voivodeship as an efficiently governed region** • Balanced territorial development • Active cooperation with external stakeholders and strong regional branding • Modern public administration	• Reindustrial Silesia • Innovative Silesia, the Highway of Future Enterprises • Touristic Silesia • Healthy Silesia • Cultural Silesia • Vital Silesia • Educational Silesia • Socially Engaged Silesia • Silesian Park • Low-Emission Silesia • Eco Silesia • Mobile Silesia • Safe Silesia	An essential aspect of external linkages is improving the efficiency of flows and integrating urban centers along the southern belt of Poland, as well as toward Ostrava and Žilina. The region is territorially balanced, building its development on a system of metropolises, agglomerations, cities, and strong rural areas—harmonizing functions and preserving regional cohesion.	"Active cooperation with surrounding partners and the creation of a strong regional brand Open to cooperation on both national and international levels.
Metropolitan region  	The Upper Silesian-Zagłębie Metropolis is envisioned as an attractive area for living, learning, working, and leisure—well-integrated, drawing on the synergy of diversity, tradition, and industrial heritage. It develops a vibrant cultural offer and a modern economy, undergoing transformation toward climate neutrality and resilience to crises, with a strong position among metropolitan areas. **Mission of the GZM (the expected role of the institution in achieving the vision):** *We create cohesion within the metropolitan area, integrate the potential of municipalities, initiate actions, and inspire development through openness, cooperation, and modern governance.*	**PRIORITY A – Adaptation to Climate Change and Resilience** **The Metropolis GZM guided by the principles of sustainable development** • Development and management of blue-green infrastructure • Energy transformation and improvement of air quality • Integration of municipal waste and sewage sludge management systems, with a focus on a circular economy • Promoting awareness of climate change and sustainable development **PRIORITY B – Mobility and Accessibility** **GZM as mobile, low-emission, and transport-cohesive** • Development of sustainable urban mobility and promotion of public transport as the first choice for daily travel • Creating infrastructural and organizational conditions for the development of public and road transport • Development of rail transport • Promotion of micromobility, including cycling and the sharing economy **PRIORITY C – Space and Social Cohesion** **GZM as open, friendly, and committed to spatial order and quality of life** • Rational use of space in the context of urban shrinkage and suburbanization • Active response to demographic challenges • Improving conditions for the development of open, active, and creative communities **PRIORITY D – Metropolitan Character and Innovation** **GZM as innovative, economically strong, and enhancing human capital** • Creating conditions for economic growth and innovation • Strengthening metropolitan functions • Enhancing the competitiveness of academic institutions and schools in GZM **PRIORITY E – Cooperation and Openness** **GZM as initiating, inspiring, and internally integrated** • Modern governance • Development of internal and external cooperation within GZM • Promotion of GZM	• Attractive • well-integrated, • diverse, • developing its cultural offer and modern economy, • undergoing a transformation towards climate neutrality and resilience to crises, • with a strong position among metropolitan areas.	• Further urbanization based on the 15-minute city concept. • Recycling of already developed areas (e.g., brownfields). • Limiting suburbanization and adapting to the phenomenon of shrinking cities: treating space as a scarce and hard-to-renew resource.	**We create cohesion within the metropolitan area, integrating the potential of the municipalities."** **"A strong position among metropolitan areas."**
Ruda Śląska  	By 2030, the city of **Ruda Śląska** should be a place: • where prosperous, active, aware, educated, happy, and entrepreneurial residents with potential live, • integrated both with the region and internally, while maintaining the distinct character of each district, • where spatial order is preserved — the urban space is organized, aesthetically pleasing, green, and the natural potential is utilized, • where tradition intertwines with modernity and new trends are being set, • where modern industry based on new technologies and innovative services develops, • attractive for investment. **The vision of Ruda Śląska** is: A *city of districts that do not divide — a good place to live, work, and relax.* By 2030, **Ruda Śląska** should be a city: • aware of its potential, standing out in the region, • proud of its mining traditions, • creating modernity while preserving tradition, • where the distinctiveness of districts does not divide, but connects and integrates, • where people live in prosperity, • that is family-friendly. **Therefore, the mission of Ruda Śląska** is: *To create a modern and friendly city based on the potential and activity of its residents.*	**Area: Social** 1. Ruda Śląska as a modern, attractive, and friendly place to live and grow – a city with an integrated social space. **Area: City Potentials and Resources** 2. A city with a high level of spatial integration, preserved natural resources, and developed technical infrastructure.O 3. High degree of utilization of the city's cultural heritage.b 4. Increased development potential of the city's residents. **Area: Economy and City Promotion** 5. Higher level of economic development in Ruda Śląska.	• Sustainable developmentz • Integrated • Active • Conscious • Modern and traditionalr Proud	A city with a high degree of spatial integration, preserved natural resources, and developed technical infrastructure.	Integrated with the region and internally, while maintaining the distinct character of each district.

Policy overview

DOCUMENTS	VISON	GOALS	KEYWORDS	SPACES	POSITION in the region
Katowice  	Katowice is a city that effectively tackles the challenges of the contemporary world, particularly by initiating the strategy of creating a larger urban center within the GZM framework. It is a city that draws from its post-industrial heritage, an example of successful social, economic, environmental, and spatial transformation. Through leadership cooperation, it promotes and shares knowledge and experience within its metropolitan, regional, national, and international surroundings. Katowice is a city making a social and green turn, balancing metropolitanism and locality. Respecting its diverse community, it creates new development perspectives for it and with its participation, ensuring equal opportunities for all people. By building an urban ecosystem, it offers good living conditions in the face of climate change and the pursuit of a zero-emission economy. The vision of Katowice in 2030 draws from urban development concepts focused on a city that strengthens and unlocks internal potentials, within global flow networks, innovative and entrepreneurial, green, compact, friendly, and resilient.	**QUALITY OF LIFE** *Katowice – a city of high and equal living standards:* • High quality and consistency of housing conditions across districts, • Accessible, well-designed public spaces, • A rich and diverse range of public services, • Active local communities, • Well-maintained and diverse natural environment. **METROPOLITAN CHARACTER & CITY CENTRE** *Katowice – the capital of Upper Silesia and a 21st-century metropolis:* • A strong academic, research, and cultural hub, • An integrated city centre combining various functions and activities. **ENTREPRENEURSHIP & ECONOMIC DEVELOPMENT** *Katowice – a centre of business and the modern economy:* • Concentrated innovation hubs and new economy enterprises, • Strong cooperation between local entrepreneurs and investors, • Growth of creative and technology industries, • More attractive job opportunities for university graduates, • A modern service and production offer.	• Adaptability • identity, • subjectivity, partnership for environmental resources and space transformation • Green • Smart • Resilient • 4 I - Intelligence, Innovation, Integration, Internationalism	• Compact • Spatial cohesion of the functional urban areas • [Mobility] Spatial cohesion of the functional urban area	Katowice as the centre of the Upper Silesian Metropolis and a strong centre within the network of Polish and European metropolitan cities returns a balance between metropolitanity and locality.
Bytom  	**Based on the challenges, potential, and aspirations of its residents, a vision for the development of the city of Bytom can be outlined, with the city in 2030 being:** • A city with a strong, positive identity built on heritage and a shared vision for the future, • Distinctive in the region as an attractive place to live, work, and engage in social activities, • Well-regarded by its residents and the surrounding community, • Supporting the development of its residents and attracting individuals with aspirations, • Characterized by strong social bonds and high levels of trust, • Fostering social and economic innovations, • With a modern economy based on creative industries and Industry 4.0, • Offering accessible, safe, and aesthetically pleasing public spaces, • With a clean environment and highlighted natural assets, • Playing an important role within the Metropolis, • Managed efficiently and in a participatory manner.	**BYTOM – A CITY OF SOLIDARITY, SAFETY, AND LEARNING** • High social trust and active participation of residents in the city's development. • Equal opportunities for young people. • Support at every stage of life. • Access to housing. **BYTOM OF ACTIVE COMMUNITIES** • Conditions for integration and social engagement. • Respect for cultural heritage. • Local stewards of public spaces. • Openness to immigration that supports the city's development. **BYTOM INTELLIGENT** • High digital competencies among residents. • Technologies supporting sustainable development. • Services tailored to needs. • Sustainable transport and mobility. **BYTOM START-UP** • Friendly to entrepreneurial residents. • Cross-sector cooperation and support for innovation. • The best conditions for university graduates. • Attractive for investors. • Sustainable and responsible economy. **BYTOM – A VITAL SPACE** • Clean environment and aesthetic space. • Protection of heritage, especially post-industrial. • Green, healthy spaces. • Resilience to climate change and epidemics. • Revitalization of post-mining and post-industrial areas. **BYTOM – AUTHENTIC** • Stable demographic structure. • Positive image of the city. • Events highlighting uniqueness and history. **BYTOM – INNOVATION HUB OF THE METROPOLIS** • Economic specializations supporting transformation. • Strong institutional capital. • Tourism based on culture and heritage.	• SOLID, SAFE, LEARNING BYTOM • BYTOM OF ACTIVE COMMUNITIES • INTELLIGENT BYTOM • BYTOM START-UP • BYTOM WITAL SPACE • AUTHENTIC BYTOM • CENTER OF INNOVATION METROPOLY • Sustainable • Transformaja	• undertaking investment activities of space and environment	With a strong position in its surroundings, achieved by offering specialised and complementary functions to the Metropolis. Bytom into an innovative centre of development for the Metropolis.
Siemianowice Śląskie  	Siemianowice Śląskie – a city of integrated local community, combining the intimacy and friendliness of a medium-sized center with access to metropolitan amenities.	**Priority 1: A Vital City – Socially, Professionally, and Educationally Active Residents Shaping the City.** • High level of self-organization in local communities, as well as innovation and social solidarity. • Pro-development attitudes of residents, their high digital competencies, and professional activity. • Modern education system in partnership with local and regional businesses. **Priority 2: A City of Modern Economy – Cooperation Between Traditional Economy and Modern Technologies, Entrepreneurship Creation, and Innovation.** • Conditions that stand out within the Metropolis for establishing and running local businesses. • Economic specializations and high attractiveness of the city for investors. • High accessibility to an attractive labor market in the City and the Metropolis. • Smart solutions supporting business and administration in Siemianowice. **Priority 3: A City of Sustainable Development – Socially, Economically, Spatially, and Environmentally Sustainable Development that Improves the Quality of Life.** • Technical infrastructure meeting the growing expectations of users. • Attractive city space and elimination of functional conflicts. • High attention to environmental and recreational values.	• Vital city • City of modern economy • City of sustainable development		A medium-sized center with access to metropolitan amenities.

TC

Infrastructure, resources and innovation

mobility

soft mobility

Soft mobility, good public transport, safe bike lines and side walks

Development of sustainable urban mobility and promotion of public transport as the first choice for daily travel

Promotion of micromobility, including cycling and the sharing economy

Sustainable transport and mobility.

roads

Being proud of road infrastructure

Creating infrastructural and organizational conditions for the development of public and road transport

train

Development of rail transport

infrstructure?

Efficient infrastructure

Developed technical infrastructure.

Technical infrastructure meeting the growing expectations of users.

energy

How energy-transformation can start new era in the region?

Energy transformation and improvement of air quality

innovation

How innovation can be define for future challenges?

circularity and sustainability

Integration of municipal waste and sewage sludge management systems, with a focus on a circular economy

Technologies supporting sustainable development.

collaboration

Cross-sector cooperation and support for innovation.

concentration

Concentrated innovation hubs and new economy enterprises,

Greenery and environment

quality

connection

Improve green connections, more green places

What are the connections with outside surroundings?

quality

High environmental quality

Well-maintained and diverse natural environment

Green, healthy spaces.

High attention to environmental and recreational values.

preservation

protection

How to preserve and strengthen nature?

Preserved natural resources

awareness

Promoting awareness of climate change and sustainable development

climate adaptation

nature based solution

Development and management of blue-green infrastructure

adaptation

Resilience to climate change and epidemics.

Climate change prevention and adaptation

Job | education

education

attractive

More diverse education opportunities and alternatives

Attractive and effective education and research system

How it could become a active studying destination?

strong

Enhancing the competitiveness of academic institutions and schools

A strong academic, research, and cultural hub,

Strong institutional capital.

economy

strong and competitive

How can Siliesia remain economically strong and create new jobs?

Higher level of economic development in Ruda Śląska.

Competitive economy Innovative economy

Creating conditions for economic growth and innovation

support local entrepreneurship

Strong local entrepreneurship

Friendly to entrepreneurial residents.

Conditions that stand out within the Metropolis for establishing and running local businesses.

diversification

How to diversified economy and use upcoming transiton for new economy?

Economic specializations supporting transformation.

Economic specializations and high attractiveness of the city for investors.

sustainability

Sustainable and responsible economy.

accessibility and potential

High accessibility to an attractive labor market in the City and the Metropolis.

Increased development potential of the city's residents.

collaboration

investors

Attractive for investors.

Strong cooperation between local entrepreneurs and investors

university and market

The best conditions for university graduates.

Modern education system in partnership with local and regional businesses.

More attractive job opportunities for university graduates

Collaboration between universities and the region?

Engagement/ collaboration/ community

involvement / collaboration

local

How to involve people?

How local community can be involved in the process?

Conditions for integration and social engagement.

Active participation of residents in the city's development.

external

Development of internal and external cooperation within GZM

Active cooperation with external stakeholders and strong regional branding

activation

Active residents

Active local communities

building local communities

This tools (transformationof the nikiszowiec) were used for very specific neighborhood, can it be reused for others? How?

Improving conditions for the development of open, active, and creative communities

High level of self-organization in local communities, as well as innovation and social solidarity.

solidarity care

Building solidarity between whom, how and why?

How to creat the care of the place? and how people can feel better?

Identity / heritage

identity and values

strengthening

How can identity be maintained?

How can future development strengthen the existing identity?

defining identity

Identity is in people or in place?

tradition vs. modernity

How to find new values that are attractive to old and young generation?

Where tradition intertwines with modernity and new trends are being set

Events highlighting uniqueness and history.

local potential

using

How local potential can be used and make cities attractive?

protection

Looking at existing qualities and protecting them

heritage

tourism

High degree of utilization of the city's cultural heritage

Respect for cultural heritage.

Tourism based on culture and heritage.

Where is truistic potential?

industrial heritage

Place for Mining culture and heritage

Protection of heritage, especially post-industrial.

Revitalization of post-mining and post-industrial areas.

Proud of its mining traditions

Security/safety

safety network and stability

safety network

How safety net can be created?

How different places can support each other in this process?

High social trust

demographic safety

Active response to demographic challenges

Stable demographic structure.

safety physical

How to improve safety?

support

different life stages

Equal opportunities for young people.

Support at every stage of life.

migration

Openness to immigration that supports the city's development.

housing

diversity and quality

Different ways of living

High quality and consistency of housing conditions across districts

Attractive living conditions

affordability

More affordable housing

Access to housing.

social services

High quality of social services, including healthcare

Space

balance and integration

balance

What can be reused | repurosed?

Rational use of space in the context of urban shrinkage and suburbanization

Balanced territorial development

integration

A city with a high level of spatial integration

quality of space

attractive

Attractive city space and elimination of functional conflicts.

Clean environment and aesthetic space.

where spatial order is preserved — the urban space is organized, aesthetically pleasing, green, and the natural potential is utilized

(Ruda Śląska) as a modern, attractive, and friendly place to live and grow – a city with an integrated social space

diverse spaces

How to enhance the spatial diversity?

care

Comprehensive revitalization

Finding positive aspects of the place and situation

Life and leisure

quality of space

attractive leisure spaces

Accessible, well-designed public spaces

Find alternatives places for leisure for young people, affordable

diverse uses

An integrated city centre combining various functions and activities.

A rich and diverse range of public services,

quality

Improve quality of the living environment?

re-definition

commers

Can be any other way of creating commercial places?

car based life

Is there any alternative for car-based life style in this region?

for young

What can be done to keep young people in the region?

Other

administration

modern

Modern public administration

Modern governance

Smart solutions supporting business and administration (in Siemianowice)

promotion

Promotion of GZM

strengthening

functions

Strengthening metropolitan functions

integration

integrated both with the region and internally, while maintaining the distinct character of each district

image

Positive image of the city.

Experts

Young

Adults

External academics

Local experts

Policy

Voivodship

Metropolitan region

Ruda Śląska

Katowice

Bytom

Siemianowice Śląskie

TC, scenario 1

Infrastructure, resources and innovation

mobility

soft mobility

Soft mobility, good public transport, safe bike lines, side walks

Development of sustainable urban mobility and promotion of public transport as the first choice for daily travel

Promotion of micromobility, including cycling and the sharing economy

Sustainable transport and mobility.

connection within city

roads

Being proud of road infrastructure

Creating infrastructural and organizational conditions for the development of public and road transport

train

Development of rail transport

infrastructure?

Efficient infrastructure

Developed technical infrastructure.

Technical infrastructure meeting the growing expectations of users.

?

energy

How energy-transformation can start new era in the region?

Energy transformation and improvement of air quality

small scale

innovation

How innovation can be define for future challenges?

circularity and sustainability

Integration of municipal and sewage sludge management systems focus on a circular economy

Technologies supporting sustainable development.

need to be more resourceful

collaboration

Cross-sector cooperation and support for innovation.

concentration

Concentrated innovation hubs and new economy enterprises,

Greenery and environment

quality

connection

Improve green connections, more green places

What are the connections with outside surroundings?

connection within city

quality

High environmental qual

Well-maintained and diverse natural environment

Green, healthy spaces.

High attention to environmental and recreational values.

local resource

preservation

protection

How to preserve and strengthen nature?

Preserved natural resources

awareness

Promoting awareness of climate change and sustainable development

climate adaptation

nature based solution

Development and mani of blue-green infrastruc

small scale

adaptation

Resilience to climate change and epidemics.

Climate change prevention and adaptation

Job | education

education

attractive

More diverse education opportunities and alternatives

Attractive and effective education and research system

How it could become a active studying destination?

strong

Enhancing the competitiveness of academic institutions and schools

A strong academic, research, and cultural hub,

Strong institutional capital.

economy

strong and competitive

How can Silesia remain economically strong and create new jobs?

Higher level of econo development in Ruda

between the cities

Competitive economy
Innovative economy

Creating conditions for economic growth and innovation

support local entrepreneurship

Strong local entrepreneurship

Friendly to entrepreneurial residents.

Conditions that stand within the Metropolis establishing and runni businesses.

local businesses

diversification

How to diversified economy and use upcoming transiton for new economy?

Economic specializations supporting transformation.

Economic specializations and high attractiveness of the city for investors.

sustainability

Sustainable and responsible economy.

accessibility and potential

High accessibility to an attractive labor market in the City and the Metropolis.

Increased development potential of the city's residents.

collaboration

investors

Attractive for investors.

Strong cooperation between local entrepreneurs and investors

university and market

The best conditions for university graduates.

Modern education system in partnership with local and regional businesses.

More attractive job opportunities for university graduates

Collaboration between universities and the region?

Engagement/ collaboration/ community

involvement / collaboration

local

How to involve people?

How local community can be involved in the process?

Conditions for integration and social engagement.

Active participation of residents in the city's development.

external

Development of internal and external cooperation within GZM

Active cooperation with external stakeholders and strong regional branding

activation

Active residents

Active local communities

building local communities

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solidarity care

Building solidarity between whom, how and why?

How to creat the care of the place? and how people can feel better?

Identity / heritage

identity and values

strengthening

How can identity be maintained?

How can future development strengthen the existing identity?

defining identity

Identity is in people or in p

place

tradition vs. modernity

How to find new values that are attractive to old and young generation?

Where tradition intertwines with modernity and new trends are being set

Events highlighting uniqueness and history.

?

local potential

using

How local potential can be used and make cities attractive?

protection

Looking at existing qualities and protecting them

heritage

tourism

High degree of utilization of the city's cultural heritage

Respect for cultural heritage.

Tourism based on culture and heritage.

Where is truistic potential?

industrial heritage

Place for Mining culture and heritage

Protection of heritage, especially post-industrial.

Revitalization of post-mining and post-industrial areas.

Proud of its mining tradi

multiple similar attractions in region ?

Security/safety

safety network and stability

safety network

How safety net can be created?

How different places can support each other in this process?

High social trust

demographic safety

Active response to demographic challenges

Stable demographic structure.

safety physical

How to improve safety?

support

different life stages

Equal opportunities for young people.

Support at every stage of life.

migration

Openness to immigration that supports the city's development.

maybe important for the further growth?

housing

diversity and quality

Different ways of living

High quality and consistency of housing conditions across districts

Attractive living conditions

affordability

More affordable housing

Access to housing.

?

social services

High quality of social services, including healthcare

Space

balance and integration

balance

What can be reused | repurosed?

Rational use of space in the context of urban shrinkage and suburbanization

Balanced territorial development

?

integration

A city with a high level of spatial integration

quality of space

attractive

Attractive city space and elimination of functional conflicts.

Clean environment and aesthetic space.

where spatial order is preserved — the urban space is organized, aesthetically pleasing, green, and the natural potential is utilized

(Ruda Śląska) as a modern, attractive, and friendly place to live and grow – a city with an integrated social space

diverse spaces

How to enhance the spatial diversity?

care

Comprehensive revitalization

Finding positive aspects of the place and situation

Life and leisure

quality of space

attractive leisure spaces

Accessible, well-designed public spaces

Find alternatives places for leisure for young people, affordable

diverse uses

An integrated city centre combining various functions and activities.

A rich and diverse range of public services,

quality

Improve quality of the living environment?

re-definition

commers

Can be any other way of creating commercial places?

car based life

Is there any alternative for car-based life style in this region?

for young

What can be done to keep young people in the region?

Other

administration

modern

Modern public administration

Modern governance

Smart solutions supporting business and administration (in Siemianowice)

promotion

Promotion of GZM

strengthening

functions

Strengthening metropolitan functions

integration

Integrated both with the region and internally, while maintaining the distinct character of each district

image

Positive image of the city.

important element

? *i don't know how to interpret it*

Experts

Young

Adults

External academics

Local experts

Policy

Voivodship

Metropolitan region

Ruda Śląska

Katowice

Bytom

Siemianowice Śląskie

TC, scenario 2

Infrastructure, resources and innovation

mobility

soft mobility

Soft mobility, good public transport, safe bike lines, side walks

Development of sustainable urban mobility and promotion of public transport as the first choice for daily travel

Promotion of micromobility, including cycling and the sharing economy

Sustainable transport and mobility.

connection within city

roads

Being proud of road infrastructure

Creating infrastructural and organizational conditions for the development of public and road transport

train

Development of rail transport

infrastructure?

Efficient infrastructure

Developed technical infrastructure.

Technical infrastructure meeting the growing expectations of users.

?

energy

How energy-transformation can start new era in the region?

Energy transformation and improvement of air quality

small scale

innovation

How innovation can be define for future challenges?

circularity and sustainability

Integration of municipal and sewage sludge management systems focus on a circular economy

Technologies supporting sustainable development.

need to be more resourceful

collaboration

Cross-sector cooperation and support for innovation.

concentration

Concentrated innovation hubs and new economy enterprises,

Greenery and environment

quality

connection

Improve green connections, more green places

What are the connections with outside surroundings?

quality

High environmental qual

Well-maintained and diverse natural environment

Green, healthy spaces.

High attention to environmental and recreational values.

local resource

preservation

protection

How to preserve and strengthen nature?

Preserved natural resources

awareness

Promoting awareness of climate change and sustainable development

climate adaptation

nature based solution

Development and mani of blue-green infrastruc

small scale

adaptation

Resilience to climate change and epidemics.

Climate change prevention and adaptation

Job | education

education

attractive

More diverse education opportunities and alternatives

Attractive and effective education and research system

How it could become a active studying destination?

strong

Enhancing the competitiveness of academic institutions and schools

A strong academic, research, and cultural hub,

Strong institutional capital.

economy

strong and competitive

How can Silesia remain economically strong and create new jobs?

Higher level of econo development in Ruda

between the cities

Competitive economy

Innovative economy

Creating conditions for economic growth and innovation

support local entrepreneurship

Strong local entrepreneurship

Friendly to entrepreneurial residents.

Conditions that stand within the Metropolis establishing and runn businesses.

local businesses

diversification

How to diversified economy and use upcoming transiton for new economy?

Economic specializations supporting transformation.

Economic specializations and high attractiveness of the city for investors.

sustainability

Sustainable and responsible economy.

accessibility and potential

High accessibility to an attractive labor market in the City and the Metropolis.

Increased development potential of the city's residents.

collaboration

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Attractive for investors.

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Collaboration between universities and the region?

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Active local communities

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safety network and stability

safety network

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How different places can support each other in this process?

High social trust

demographic safety

Active response to demographic challenges

Stable demographic structure.

safety physical

How to improve safety?

support

different life stages

Equal opportunities for young people.

Support at every stage of life.

migration

Openness to immigration that supports the city's development.

maybe important for the further growth?

housing

diversity and quality

Different ways of living

High quality and consistency of housing conditions across districts

Attractive living conditions

affordability

More affordable housing

Access to housing.

?

social services

High quality of social services, including healthcare

Space

balance and integration

balance

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Balanced territorial development

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integration

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diverse spaces

How to enhance the spatial diversity?

care

Comprehensive revitalization

Finding positive aspects of the place and situation

Life and leisure

quality of space

attractive leisure spaces

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re-definition

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External academics

Local experts

Policy

Voivodship

Metropolitan region

Ruda Śląska

Katowice

Bytom

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TC, scenario 3

Infrastructure, resources and innovation

mobility

soft mobility

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Development of sustainable urban mobility and promotion of public transport as the first choice for daily travel

Promotion of micromo… including cycling and t… sharing economy

Sustainable transport and mobility.

oads

Being proud of road infrastructure

Creating infrastructural and organizational conditions for the development of public and road transport

rain

Development of rail transport

long distances

infrastructure?

Efficient infrastructure

Developed technical infrastructure.

Technical infrastructure meeting the growing expectations of users.

?

energy

How energy-transformation can start new era in the region?

Energy transformation and improvement of air quality

?

innovation

How innovation can be define for future challenges?

circularity and sustainability

Integration of municipal waste and sewage sludge management systems, with a focus on a circular economy

Technologies supporting sustainable development.

collaboration

Cross-sector cooperation and support for innovation.

concentration

Concentrated innovation h… and new economy enterprises,

only in main cities

Greenery and environment

quality

connection

Improve green connections, more green places

What are the connections with outside surroundings?

quality

High environmental quality

Well-maintained and diverse natural environment

Green, healthy spaces.

High attention to environmental and recreational values.

preservation

protection

How to preserve and strengthen nature?

Preserved natural resources

awareness

Promoting awareness of climate change and sustainable development

climate adaptation

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Development and management of blue-green infrastructure

adaptation

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Job | education

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Access to housing.

better connected sub-cities

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Space

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diverse uses

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A rich and diverse range of public services,

sub-cities can focus on improving living conditions

quality

Improve quality of the living environment?

re-definition

commers

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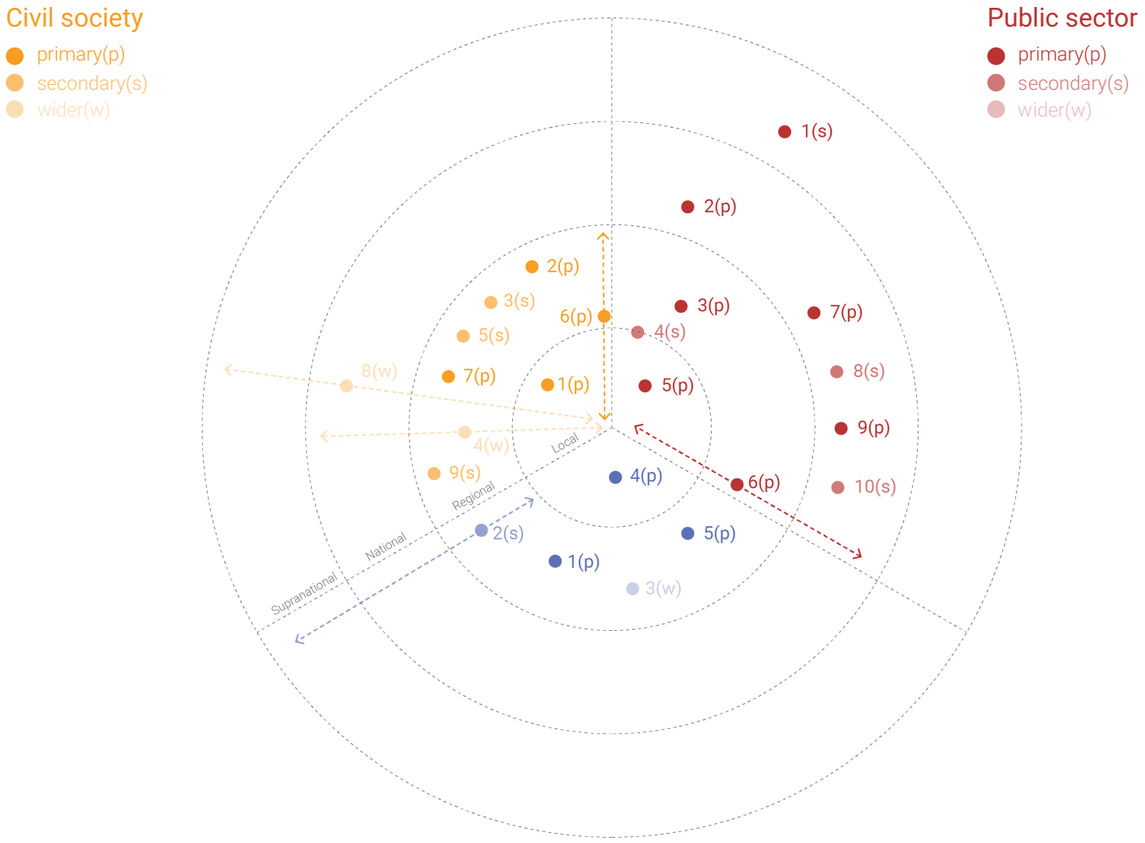
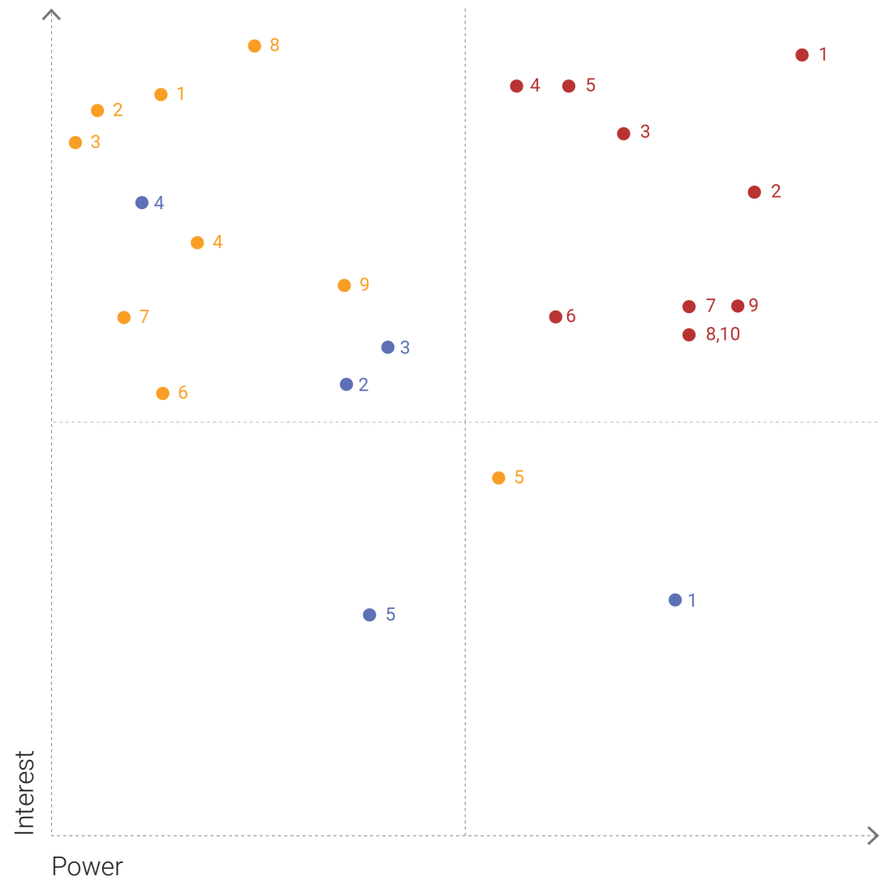
Stakeholder analysis

Stakeholder mapping



Interest and power matrix



Stakeholders

Public sector

1. European Union
2. Polish Government
3. Siliesian Voivodenship
4. GZM metropolitan area
5. Municipality
6. Plaining Agencies
7. Ministry of Environment
8. Ministry of Infrastructure
9. Ministry of Development and Technology
10. Ministry of Culture and National heritage

Private(semi-private) sector

1. State own companies: mines and energy plants
2. Research institutions
3. Investors| Real estate developers
4. Small local businesses
5. Land owners

1. 14. Regional and national government agencies or State own companies

Civil society

1. Local communities
2. Vulnerable citizens (regarding just-transition: young residents elderly residents)
3. Vulnerable citizens (regarding floods or soil subsidence)
4. NGO's
5. Trade union
6. Employees (mine workers)
7. Employees (non-mine workers)
8. Environmentally concern citizens (social media)
9. Universities

Overlapping dross with stakeholders

