FROM PARKING TO THE CITY

AN INTEGRATED APPROACH TO TRANSFORMATION OF ZAKOPANE CITY INTO LIVEABLE AND SUSTAINABLE URBAN ENVIRONMENT FOR ITS RESIDENTS

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ABSTRACT

Zakopane experiences mass tourism, which supports economic growth but also reduces the quality of life in the city. This is mainly due to the developed car dependency, the lack of coordination between spatial development and infrastructure, and the systemic promotion of private property at the expense of the public good, which is a phenomenon characteristic of post-communist countries.

Zakopane needs a transformation of the mobility system in terms of reducing the presence of cars in public spaces in the city while developing a mobility system that includes the spatial specificity of the various urban fabrics in the city (Newman & Kenworthy, 2015). Only by changing the transport system the liveability of public space can be regained.
Given the housing shortage in the city, the development of sustainable mobility also requires a sustainable development perspective.

The strategy of spatial transformation towards sustainable mobility and development must be adapted to neoliberal administrative conditions with limited public budgets and weak bargaining power.

Thanks to the method of research through design as “strongly contextualised research that participates in society” (Nowotny et al. 2010) , with the active participation of the stakeholders, a mobility system transformation strategy was developed based on the perspective of regional cooperation of local tourist municipalities, motivated by a special program of integrated territorial investments. Strategic actions in the long term, including the improvement of spatial quality, have to take into account other partnerships to achieve the goals: cooperation with the private sector.

Strategic actions for improving the quality of public space require both new regulations for its formation and a decision-making system enabling the cooperation of various actors, which have been developed through the simulation of the pilot project.

Thanks to this approach, the strategies for shaping the urban space, its regulations, and the way of implementation have been explored - together with the demonstration of how the needed transformations could look like in reality.

CONTENT:

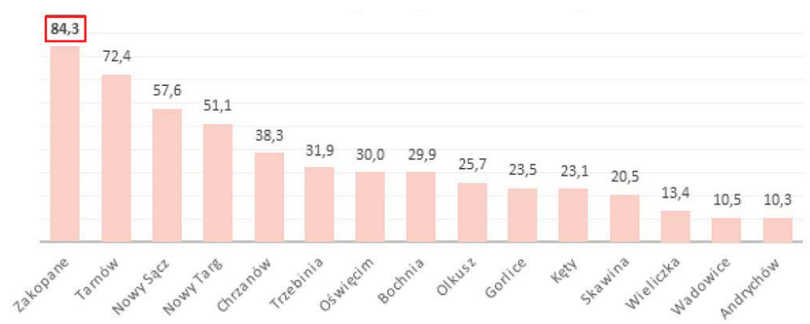
MOTIVATION

Motivation comes from my own experiences as a resident of touristic city Zakopane. Growing up, I witnessed economic development accompanied by the chaos of urbanization and environmental degradation. These phenomena have their genesis in the specific history of the city as well as the changes taking place in the country and the world that affect them.

Zakopane is a city in the south of Poland with small part of the Tatra Mountain; mostly located in Slovakia alpine character mountains (Fig. 1) At the beginning of the 19th century, it was an unknown village inhabited by 1805 residents (Pinkwart, 2010) with a forge and mining the iron ore. The situation started to change in the middle of the 19th century when the village began to gain popularity as a mountain holiday resort and sanatorium. The lack of an effective cure for tuberculosis began to attract Poland's intellectual elite to this hidden healing resort. The popularization process was accelerated by the construction of a railway connection in 1884 (Pinkwart, 2010). At the beginning of the 20th century, thanks to an investment in infrastructure, Zakopane also became a winter sports centre. This period is also the beginning of professional mountaineering and Zakopane developed a name for itself as the "Winter Capital of Poland"(unknown, 2021). Currently, however, Zakopane is much more often referred to as "the Polish capital of tourism"; big in size cty with really small urban area (fig. 2) in a mountain valley with 27,000 inhabitants (naturally adapted to resources) it is visited even by 250,000 people at a time (Król 2019) and real estate prices are comparable to those in the center of the Polish capital (Fig 3.). Area deals with enormous of car-use and pressure of land densification and rising frictions between tourists, residents and nature. The authorities seem helpless in relation to the processes taking place in the city; that are in the city. My goal is to understand these processes and propose adequate solutions.

Fig. 1 .
Location of Zakopane

AREA (KM^2) OF CITIES IN THE MAŁOPOLSKA PROVINCE



POPULATION DENSITY (PEOPLE / KM2) IN THE CITIES OF THE MAŁOPOLSKA PROVINCE

Fig. 2 .
Statistical data on the cities of the Małopolska province (except for the capital city of Krakow). Source: Zakopane (2016), p. 30

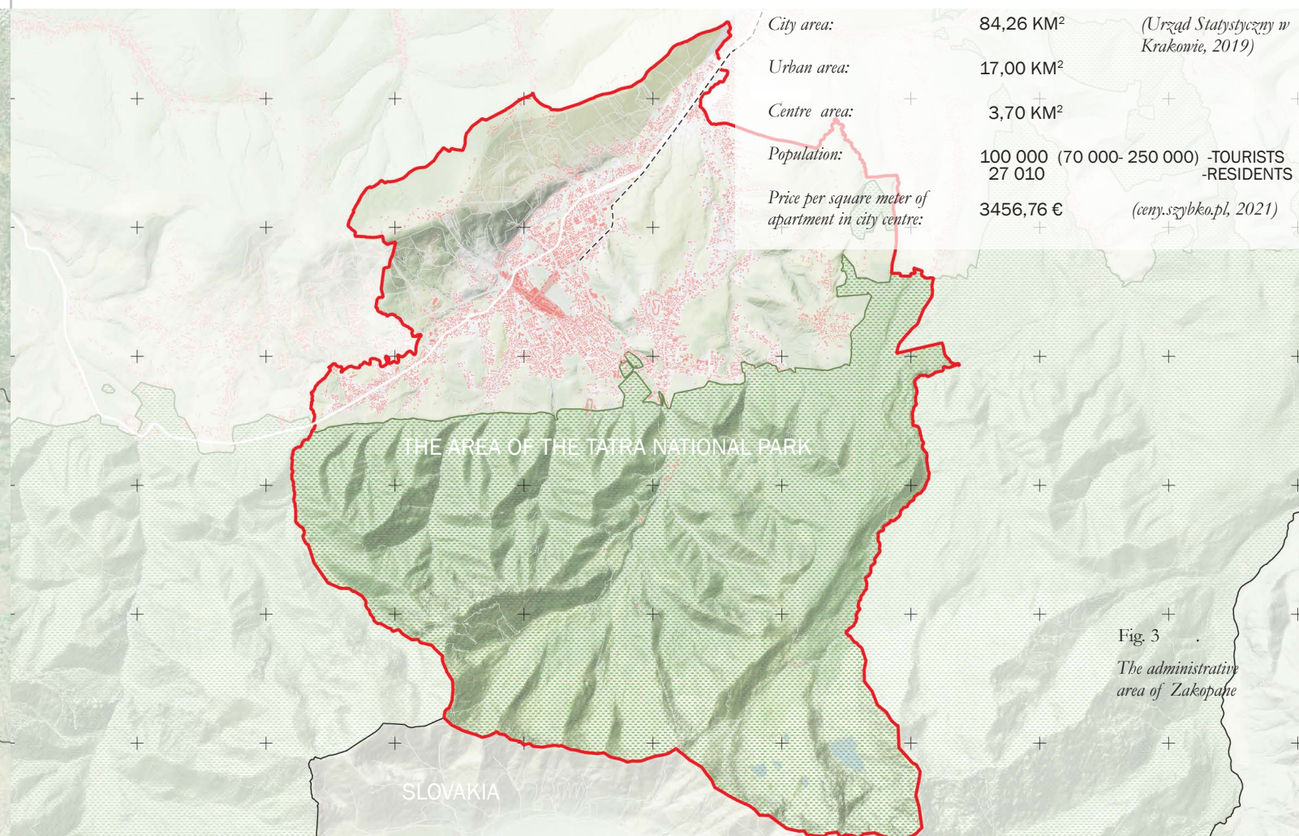


Fig. 3 .
The administrative area of Zakopane

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ICON

TEXT

INTRODUCTION

This chapter is devoted to presenting the context and issues that this project is devoted to.

The following sections discuss in detail the phenomena that make up the issues faced by this project.
The mobility section briefly describes the changes in this area from the buried perspective and their key impact on its development.
In the Governance part, the historical context is described
a massive transformation of the management method in Poland from a central economy to a market-oriented one. This change had a huge impact on the formation of Polish cities and the mobility policy.
Consequently, Zakopane takes the form of a car-dependent city, which has a negative impact on society and the environment. The imposition of these unfavorable phenomena on many levels makes Zakopane an unfriendly city for its inhabitants.

CONTEXT
TOURISM EXPANSION

Fig. 5 *Zkopane in 1889*

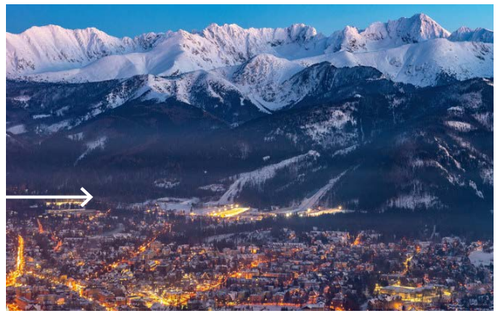


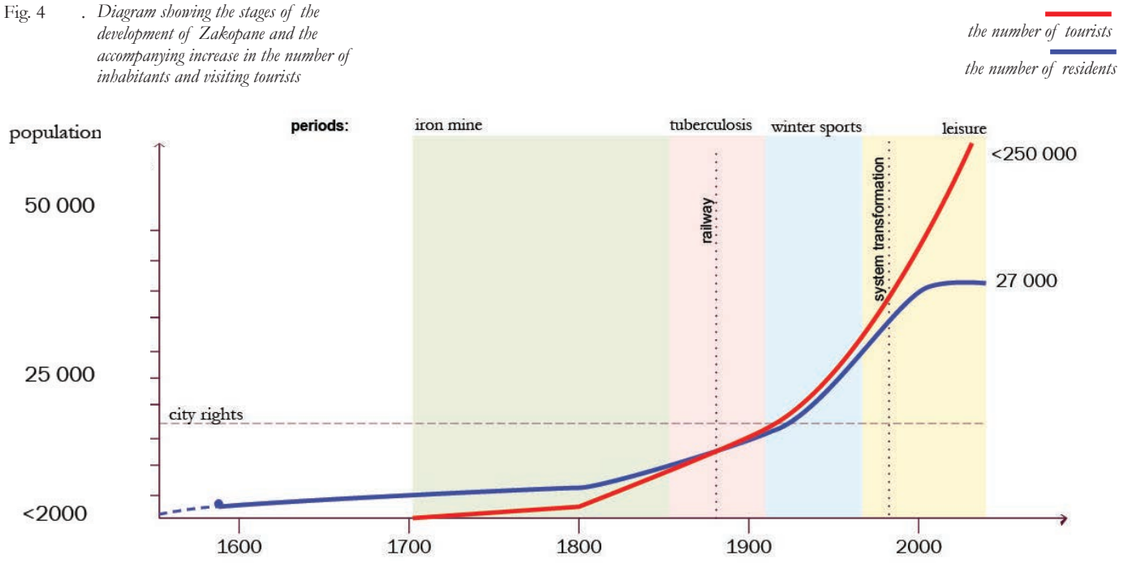
Fig. 6 *Contemporary Zakoapne*

By influence of technological innovations and new possibilities in terms of modes of transportation we are more and more mobile. We move both, for short and long distances, physically or digitally - and this has a huge impact on the way we live, on our interactions and the form of the places we live in (Kaufmann, 2011).

The widespread use of cars and airplanes has also influenced the massification of tourism (Kaufmann, 2011). It now seems obvious that we can visit any place we want, which can be clearly seen on the example of Zakopane (Fig 4.). Visitor increments took place as a consequence; construction of a railway connection in 1899 (Pinkwart, 2010), but along with the spread of the car from the second half of the 20th century, there was a jump in the number of visitors to the extent that we observe today, i.e. about 3 million tourists a year (Król, 2019). Such a scale of tourism to this, famous indeed but geographically inaccessible, place could not, however, take place without a long-term policy supporting certain mobility system.

In this chapter, I will discuss the systemic causes for form and scale of mobility to and in Zakopane and what problems it causes.

Fig. 4 . *Diagram showing the stages of the development of Zakopane and the accompanying increase in the number of inhabitants and visiting tourists*



CONTEXT
PRIVATE PROPERTY ORIENTED GOVERNANCE

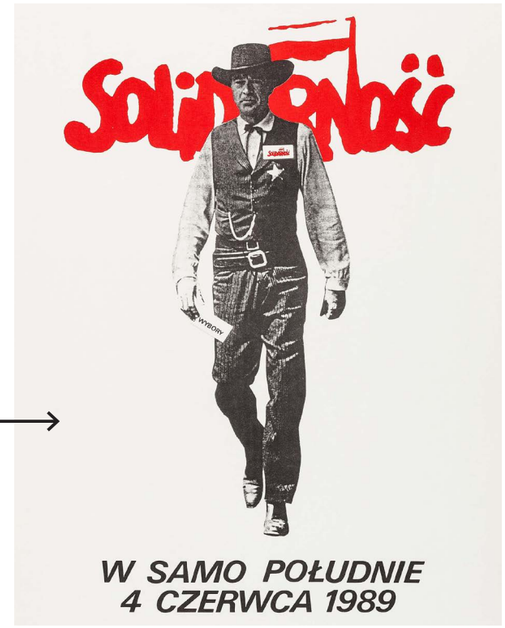


Fig. 8 . *Key Figures of Neoliberalism; R. Reagan in the USA and M. Thatcher in Great Britain (source: list on fig.)*

Fig. 9 . *Solidarnosc posters before the fall of communism in Poland. The USA and its culture was a symbol of freedom. (source: list on fig.)*

POLITICAL AND ECONOMIC REVOLUTION

The fall of communism and the political changes in Poland after 1989 coincides with the period of spreading the neoliberal doctrine in the world. This economic and social model was represented by the United States, and this country has long been a symbol of freedom (Fig. 9) for Poland so a desired model for transformation (Markiewka, 2020). There has been a sharp shift from central management to governance through the markets and reducing of regulations and coordination of government and municipalities to give space and freedom to private owners (Adams & Tiesdell, 2012). The result was a very radical privatization of enterprises, including those related to transport; separate companies were established to manage tracks, carriages and stations. A profit-oriented transport policy has resulted in a dramatic decline in the number of railroads (Fig 7) (Trammer, 2019) and public bus networks. Currently, according to Gitkiewicz, 2019: “thirteen million Poles are far away” because, especially on the outskirts of the country or administrative units, there is no attractive (or none) collective transport connection. As a result, the number of rail travellers fell by 700 million from a billion in 1989 (Gitkiewicz, 2019).

At the same time, Contrary to railroads, the road network and the motorway are handled by the governmental body established in 2002, the General Directorate for National Roads and Motorways (GDDKiA), which is responsible for financing investments from the state budget. Thanks to this and the inflow of funds after Poland’s accession to the European Union in 2004; the number of kilometers of expressways and motorways has increased the number six times (Fig. 7) (Rosa, 2020).

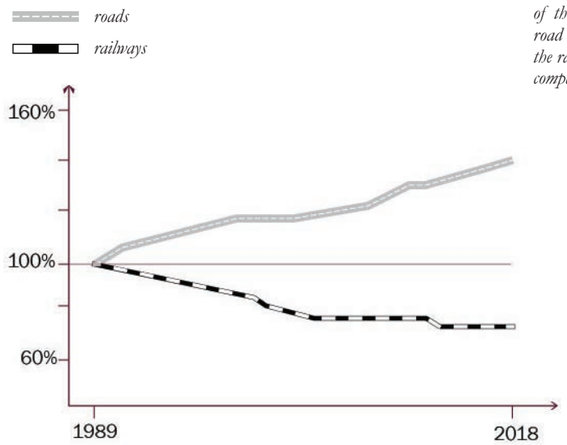


Fig. 7 . *Change in the length of the hard surface road network and the railway network compared to 1989*

CONTEXT
PRIVATE PROPERTY ORIENTED GOVERNANCE

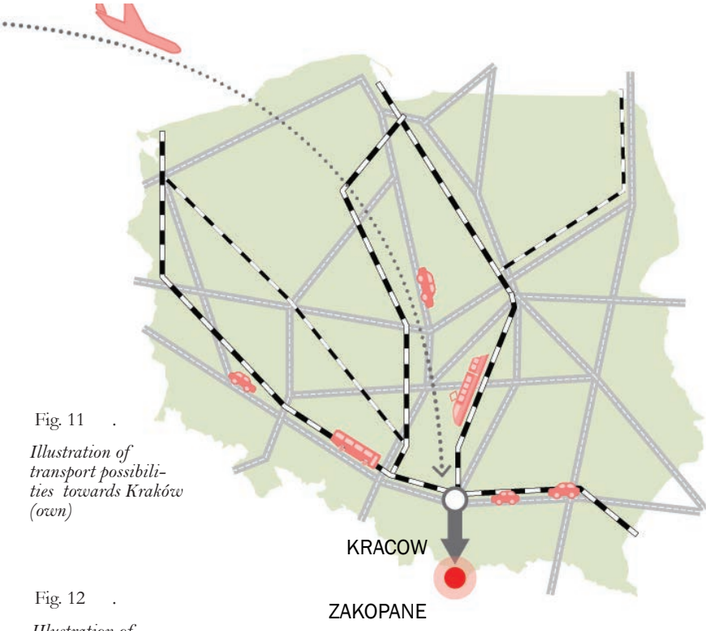


Fig. 11 .

Illustration of transport possibilities towards Kraków (own)

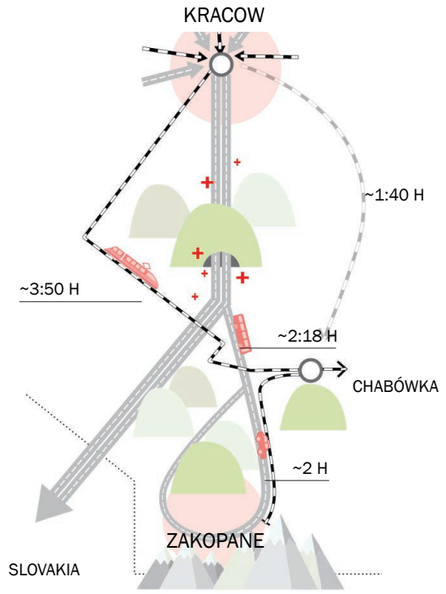


Fig. 12 .

Illustration of transport possibilities towards Zakopane (own)

These processes are reflected in the case of Zakopane. the road to this mountain town runs through a transit point which is the second largest city in Poland; Krakow. This metropolis is well connected with the other most important cities in the country both, by rail and road (Fig. 11) and also has one of the largest airports in Poland.

The problem options on the Kraków-Zakopane section are much more limited (Fig 11.). Most of this 102 km route coincides with the road leading to the important border crossing with Slovakia in Chyżne so huge sums are allocated to its development and modernization which it will speed up the journey currently taking about 2 hours (Fig. 11).

Fig. 13 .

A new route to Zakopane. (source. lisdt of fig.)

In opposition to this, there are many years of neglect in the modernization of the railway connection. The route, built in 1899, is still single-track and despite the modernization works on some sections of the route, the journey takes an average of 3:50 h, which is a record bad time average- the fastest train ride on this route (2:18 h) was recorded in 1936 (Onet, 2020)! Polish Railways (PKP PLK) declares that after the completion of the modernization, planned for 2023, the fastest connections will be achieved in 2 hours which is only up to the current standard of the car variant. The funds allocated to these investments are also more than half smaller than those corresponding to the road infrastructure (Gov, 2020).
A more significant change, limiting the travel time to only 1:40 h, thanks to the construction of an alternative line on the section to Chabówka (Fig. 12). Such a key investment, however, has been postponed for 30 years in order to improve the condition of roads for private vehicles as a priority, and only now is the construction finally expected to begin in 2023 (Salamon, 2020).

CONTEXT
CAR DEPENDENCY

CAR DEPEDENCY

The result of such management is the car dependence of most smaller towns in Poland.
In Zakopane most of tourist or accommodation destinations are not avaliable by car (Fig. 14) (Z. BIP, 2020).
The vacuum of public services is filled by private entrepreneurs supporting the car communication system with a rich parking offer, both in the city and in the vicinity of tourist attractions (Fig. 15).

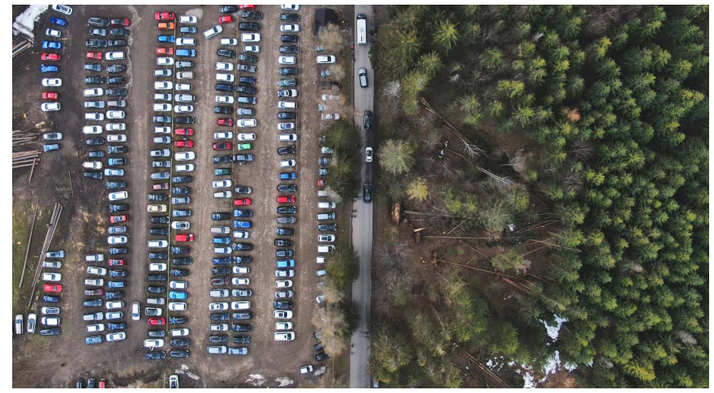


Fig. 15 .

Parking at the popular entrance to the National Park. (source; list of fig.)

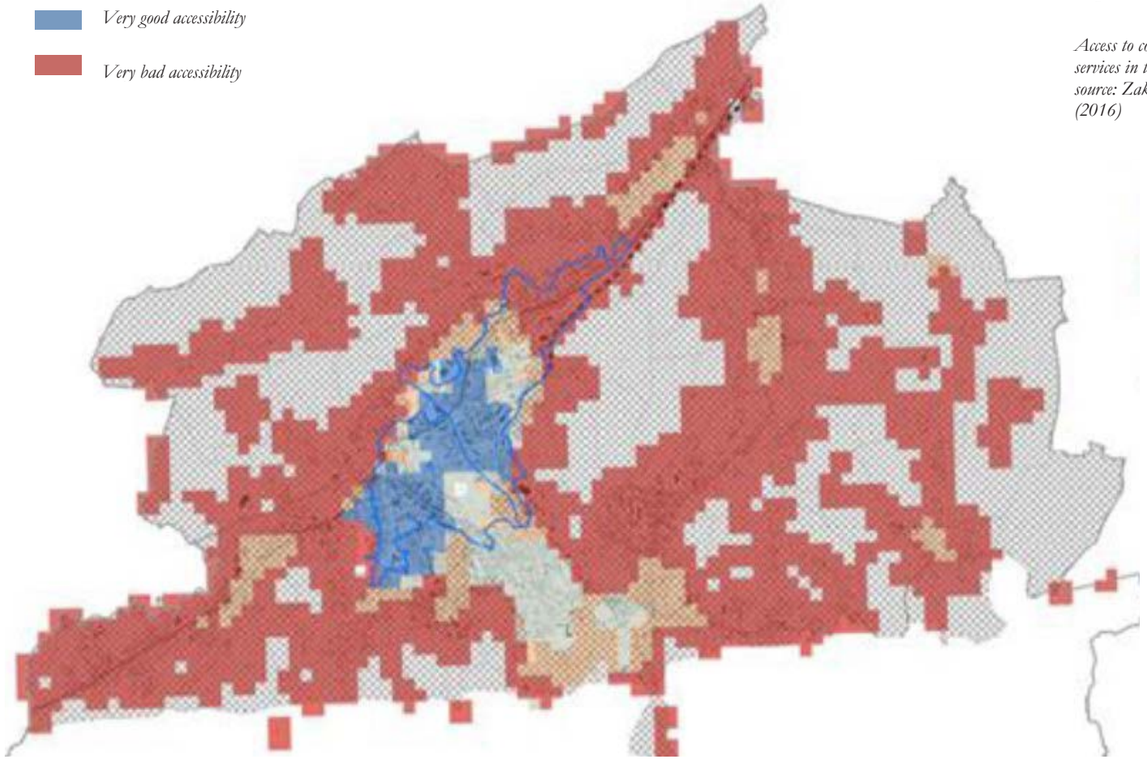


Fig. 14 .

Access to communication services in the city source: Zakopane (2016)

CONTEXT
UNLIVEABILITY

In summary, the previously mentioned factors and phenomena are the cause of the degradation of the urbanized environment in Zakopane, in a manner typical for Car Dependency. The following phenomena were discussed: traffic disfunction, air pollution, city sprawl, loss of street life, community, public safety.

Moreover, such a configuration makes the buried city a jammed, noisy city, with public spaces that are dangerous to the public and with poor quality of the poviat. All this degrades the quality of the urbanized environment, but also adversely affects the natural environment. For these reasons, Zakopane does not quite respond to today's needs for the quality of life of its meiszkancow, it is not prepared for the future challenges brought by climate change.

Fig. 16
Traffic jams on the route to Zakopane (source in list of fig.)

Fig. 17
Traffic jams in the city centre (source in list of fig.)

Fig. 18 .
Smog over Zakopanem, (source in list of fig.)

CONTEXT
PROBLEM STATEMENT

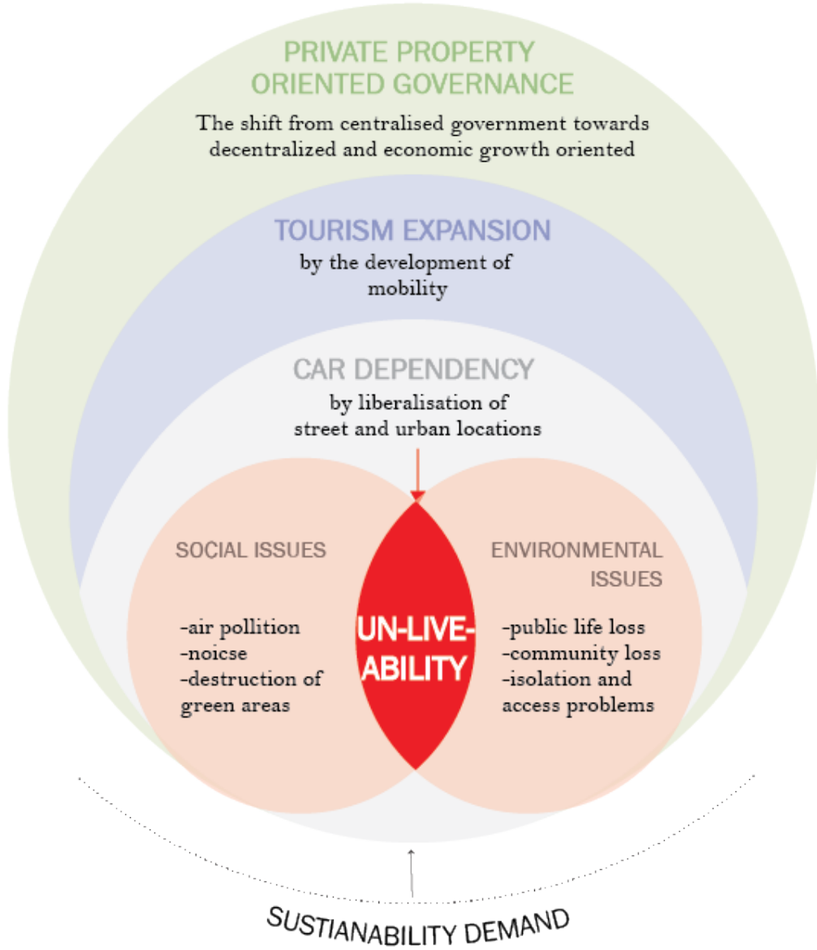


Fig. 19 .
Problem field scheme

DUE TO THE DEVELOPMENT OF MOBILITY, ZAKOPANE IS EXPERIENCING MASS TOURISM, WHICH SUPPORTS ECONOMIC GROWTH BUT ALSO REDUCES THE QUALITY OF LIFE IN THE CITY. THIS IS MAINLY DUE TO A DEVELOPED DEPENDENCE ON THE CAR, A LACK OF COORDINATION BETWEEN SPATIAL DEVELOPMENT AND INFRASTRUCTURE, AND A SYSTEMIC SUPPORT OF PRIVATE PROPERTY AT THE COST OF PUBLIC GOOD, WHICH IS A PHENOMENON CHARACTERISTIC OF POST-COMMUNIST COUNTRIES.

2 METHODOLOGY

INTRODUCTION

This chapter describes the adopted project methodology.
First, the goals of the research and the resulting research questions are defined. Next, the Conceptual Framework of the project and the Analytical Framework are discussed, illustrating the methods used for the research, their mutual configuration, and the expected outcomes.
The methods themselves are described in more detail in the 'Methods' section, along with their location on the timeline.
The adopted methodological system is summarized in the 'Methodology Flow Chart'.
The chapter ends with a reflection on societal, scientific relevance, and ethical considerations.

METHODOLOGY
RESEARCH AIMS AND RESEARCH QUESTIONS

RESEARCH AIMS:

-Liveability for residents and better coexistence with tourism

-Sustainable development, securing the needs of future generations

-Adaptation of the administrative system

RESEARCH QUESTIONS:

WHAT CHANGES ARE NEEDED TO IMPROVE LIVEABILITY IN THE CITY OF ZAKOPANE WITH RESPECT TO SUSTAINABLE DEVELOPMENT?

SRQ 1

WHAT SPATIAL TRANSFORMATION ARE NEEDED TO SECURE SUSTAINABLE LIVEABILITY IN ZAKOPANE?

SRQ 2

WHAT CHANGES IN THE GOVERNANCE SYSTEM ARE NEEDED TO FACILITATE THAT TRANSFORMATION?

SRQ 3

HOW TO IMPLEMENT THOSE TRANSFORMATIONS AS PART OF A SPATIAL STRATEGY?

SRQ 4

WHAT ARE THE KEY OPERATIONAL ACTIVITIES AND WHAT WOULD ITS IMPLEMENTATION LOOK LIKE?

METHODOLOGY
CONCEPTUAL FRAMEWORK

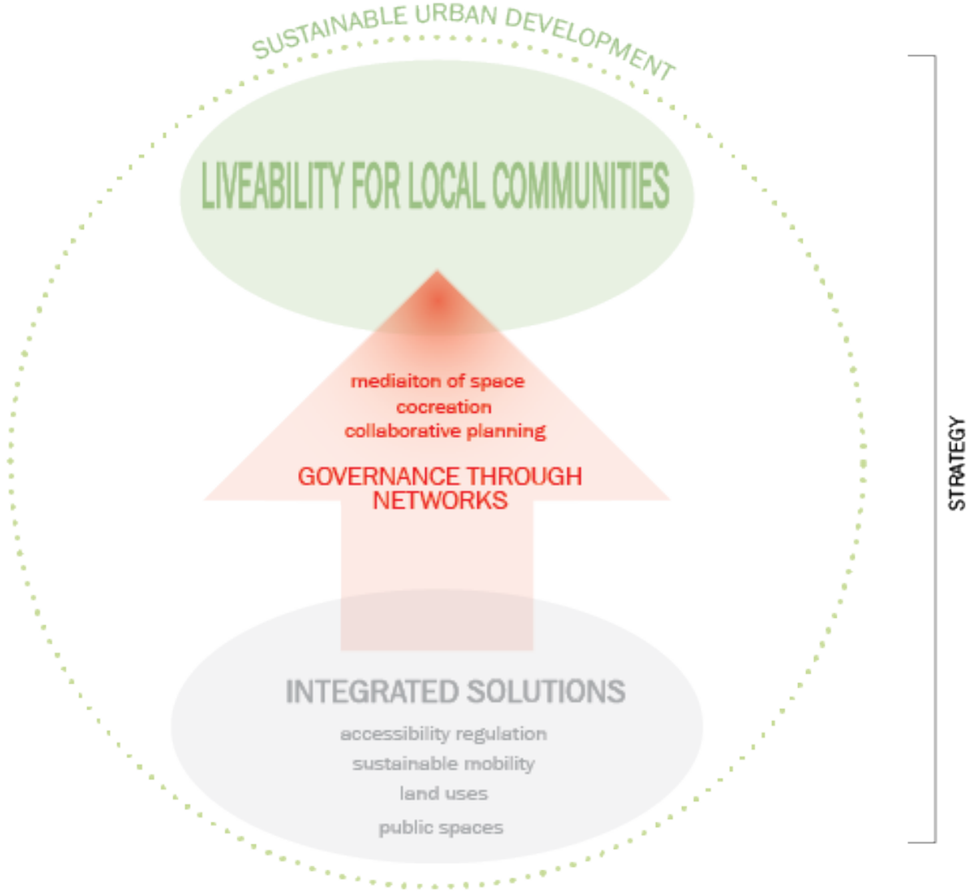


Fig. 20 .

Conceptual Framework

The most important concepts on which this project is based are:

1. The top part of a diagram presents the concepts that make up the goal of the project:

Sustainable liveability, as an integrating concept of liveability defining the fulfilment of human needs by a given urbanized environment, along with sustainability, i.e., with attention to the preservation of resources for future generations.
Livability is the sum of the factors that add up to a community's quality of life—including the built and natural environmenits, economic prosperity, social stability and equity, educational opportunity, and cultural, entertainment and recreation possibilities (Partners for Livable Communities, n.d.)

The qualities of a sustainable liveability are basic needs, and part of these needs have a spatial dimension that are of interest for the design of a sustainable liveable neighbourhood. The well-known elements of this sustaina-ble liveability are health, safety and the importance of the green environment (van Bueren et al., 2012).

The concept for achieving the quality of sustainable liveability is sustainable neighborhood, which is the basic environment of the community and the most important guidelines for spatial transformations are developed for this unit. "…neighbourhood as an ecosystem and the operationalisation of a sustainable liveability". (van Dorst, 2012)

2. The middle part of the diagram illustrates the necessary transformation of the management system, operating based on a network and collaboration.

Mediation of space and market integration concepts that form positive cooperation and a win-win situation for new investments (Adams & Tiesdell, 2012).

3. The bottom part of the diagram presents a set of integrated solutions needed to achieve sustainability and liveability objectives.

The most important of these is how to shape the local public space in relation to the mobility system and how to regulate accessibility in order to limit access by private cars (Newman & Kenworthy, 2015; Cervero & Kockelman, 1997; Adams & Tiesdell, 2012)

METHODOLOGY
ANALITICAL FRAMEWORK

RESEARCH QUESTIONS:

METHODS:

EXPECTED OUTCOMES::

WHAT CHANGES ARE NEEDED TO IMPROVE LIVEABILITY IN THE CITY OF ZAKOPANE WITH RESPECT TO SUSTAINABLE DEVELOPMENT?

SRQ 1

WHAT SPATIAL TRANSFORMATION ARE NEEDED TO SECURE SUSTAINABLE LIVEABILITY IN ZAKOPANE?

-LITERATURE REVIEW
-TOOLS DESIGN
-URBAN FABRICS ANALYSIS
-MAPPING
-CASE STUDIES
-ANALYSIS OF ARCHIVAL MATERIALS
-SWOT ANALYSIS

SRQ 2

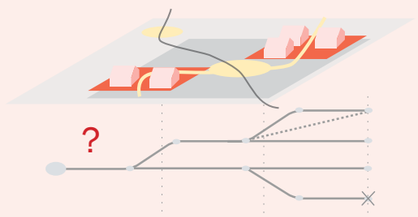
WHAT CHANGES IN THE GOVERNANCE SYSTEM ARE NEEDED TO FACILITATE THAT TRANSFORMATION?

--LITERATURE REVIEW
-DOCUMENTS AND POLICY ANALYSIS
-ANALYSIS OF THE DECISION-MAKING PROCESS
-INTERVIEW WITH STAKEHOLDERS
-STAKEHOLDER ASSESSMENT
-SWOT ANALYSIS
-CASE STUDIES

SRQ 3

HOW TO IMPLEMENT THOSE TRANSFORMATIONS AS PART OF A SPATIAL STRATEGY?

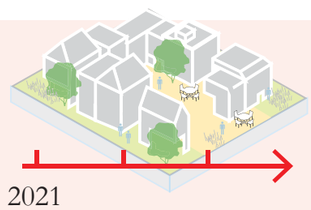
-RESEARCH BY DESIGN
-SCENARIOS DESIGN
-MAPPING AND SPATIAL ANALYSIS
-COCREATION



SRQ 4

WHAT ARE THE KEY OPERATIONAL ACTIVITIES AND WHAT WOULD ITS IMPLEMENTATION LOOK LIKE?

-STAKEHOLDER ASSESSMENT
-STAKEHOLDERS INTERVIEWS
-RESEARCH BY DESIGN
-CRITICAL EVALUATION



-GUIDELINES FOR SPATIAL TRANFORMATION OF DIFFERENT AREAS IN THE CITY

-GUIDELINES FOR THE TRANSFORMATION OF THE ADMINISTRATIVE SYSTEM

-ESTABLISHMENT OF A CONSULTATION GROUP WITH KEY STAKEHOLDERS

-SCENARIOS DESIGN

-STRATEGY DESIGN

-SETTING OF OPERATIONAL OBJECTIVES

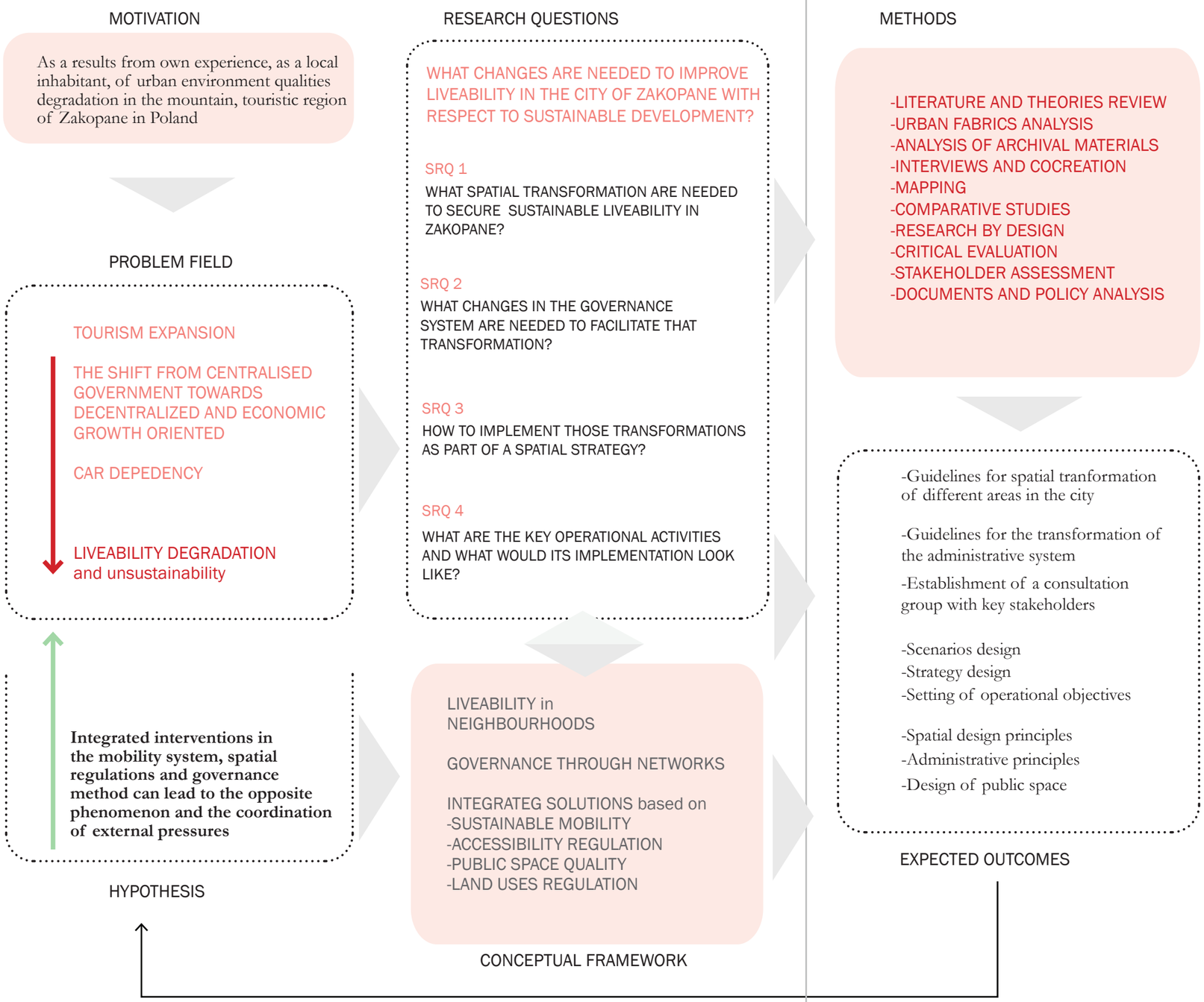
-SPATIAL DESIGN PRINCIPLES

-ADMINISTRATIVE PRINCIPLES

-DESIGN OF PUBLIC SPACE

METHODOLOGY
MATHODOLOGY FLOW CHART

Sequence among the different components of the research design



3 THEORY

INTRODUCTION

This chapter provides an overview and partial discussion of the underlying theories for this project.

This chapter describes the theories behind this project. The entire theoretic basis is illustrated by the Theoretical framework (Fig. 21)
On the left are the theories that were used in the analysis of the context chapter, building the problem formulation.
On the right is the desired factor configuration which allows to coordinate the impact of mobility expansion and support liveability.
The key theorists who explain these relationships are the publications of the authors: Adams & Tiesdell, (2012), Newman & Kenworthy (2015), Mulley & Nelson (2020), Carmona (et al., 2012)

The green box contains concepts and theoreticians who have extended the beneficial configuration of the city's functioning for its residents to include the aspect of the future, i.e. sustainability. Such an integrated approach allows only to apply urban solutions that can also meet the challenges of the coming climate crisis. The theories of all theoreticians were used here: van Dorst (2012), Ewing & Cerveo (2010), Wagner & Caves (2012).

In the next part of the chapter, theories that build the configurations that allow for the creation of liveable and sustainable cities are discussed. First, the theory of Governance through the market and networks by Adams & Tiesdall is described, and then, in the form of an edible, theories of spatial criteria for liveability and sustainability.

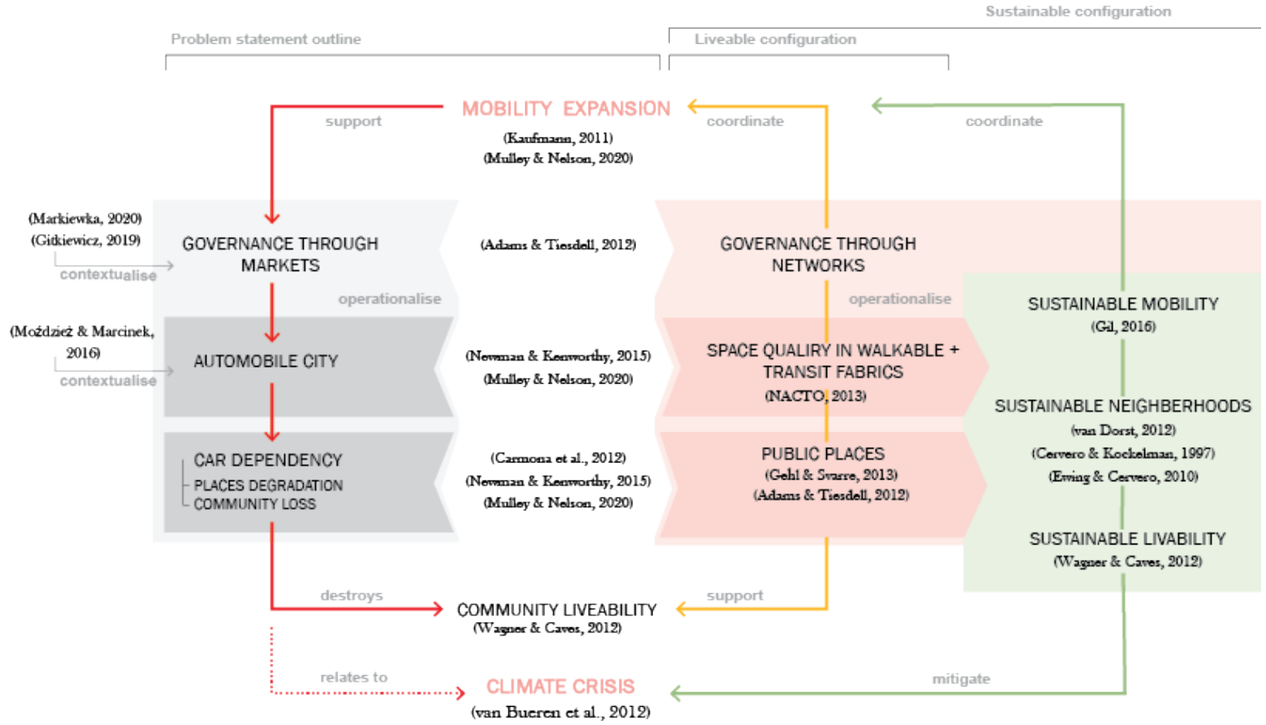


Fig. 21 .

Theoretical framework

LOOKING FOR THE SHAPE OF QUALITY

REFLECTION ON THE RELATIONSHIP BETWEEN URBAN FORM, LIVEABILITY, AND SUSTAINABILITY

ESSAY

Abstract:
The cities were shaped by various factors, such as wars, economics, or technology. These factors combined influenced the quality aspects of the urban environment. The dynamics of urbanization, which accelerated throughout the 19th and 20th centuries, provided us with more and less successful examples of places explicitly designed for people. However, as the urban form is not only shaped by the pressures of trends and paradigms, it is also a possible tool for quite an opposite reaction. Here, the spatial transformations emphasize different mobility choices, such as, walking, cycling, or create vital, cozy places that can shape both communities and their identities resistant to external changes. In the recent literature, it is possible to point to an increasing number of specific guidelines on how to achieve quality in an urban environment. However, the number of these strategies and their complexity may be confusing if one seeks the set of solutions targeted at a specific case of location. Therefore, based on the precedent theories, this paper analyzes first the genesis of how the quality urban space is understood today, then, why the concepts of livability and sustainability are used in this context, and what are the key principles of shaping urban environment across different scales.

Fig. 22 *Keywords:* **livability, sustainability, good places, sustainable neighborhoods, urban form**

INTRODUCTION

The history of society is characterized by change. Our needs, perceptions of problems, and desires are in a constant state of flux. The way people live in cities has changed as well. Here, the time has also verified which city districts and their urban forms are considered as the 'good places' to live in. The same can be found in the case of the concepts and theories that were used to design these districts. Errors from the past, especially from the 19th and 20th centuries, motivate theoreticians and practitioners of the field of urban planning to search for factors that effectively define the quality of the urbanized environment not to repeat similar mistakes or to find a way to successfully improve the already existing areas that face complex problems. Therefore, it is crucial to recognize and define the human needs that co-create that quality. It has been explored that the design of such a place consists of different social, economic, and technological aspects combined with the factors derived from the built environment. As a result of the complexity of conditions relevant to shaping the urban environment, the guidelines for shaping and transforming urban ecosystems are constantly refined and follow a never-ending process-based form.

This paper aims to collect the principal techniques that can be used for the spatial transformation of cities, regardless of their characteristics. To clarify and expose these techniques, first of all, this paper analyses the evolution of the aspects that create the quality of the urban environment. Here, the aim is to understand the complexity and value of the concepts of liveability, sustainability, and sustainable liveability, which stand as the most crucial concepts for urban needs of today and tomorrow. Then, while considering different scales of place, neighbourhood, and city, the paper recognized the basic guidelines introduced by various theorists, such as, Carmona (2012) and Adams & Tiesdell (2012) who discuss the best practice guidelines in the context of the recent challenges; then, the authors, such as, Babb (2012) and I van Bueren (2012) who introduce the integration of the contemporary issues with the concept of sustainability.

1.TOWARDS LIVEABILITY (AND MORE). WHAT DEFINES THE QUALITY OF URBAN ENVIRONMENT?

The urban area is a space characterized by a high population, densely built environment, and infrastructure. Here, society, economy, and nature intersect as human-mediated creations. The way of this intersection and the relationship between systems have varied over centuries as a matter of constantly changing and rapid re-evaluation.

In the context of Western culture, cities have emerged in opposition to wildlife, and protection from hostilities. Throughout history, rural areas were the basis for human lives, as they were the basis for agriculture and food production. Parallel to the development of rural areas grew the economic attractiveness of cities. Here, the turning point came in the 19th century during the industrial revolution. Cities and their industries became a magnet for the increasing flows of people coming from the countryside as the result of increasing financial expectations. However, the promising benefits brought issues never encountered before.

The process of rapid industrialization resulted in unprecedented population growth. To accommodate the incoming workers, living quarters had to be built around factories facilitating the expansion of cities. This resulted in overcrowded, dirty neighbourhoods of low living standards with no access to sanitary infrastructure and greenery. The ashes and smoke from chimneys began to cause smog deposition, and soon after their rapid industrial growth, cities became a non-healthy environment for life (Carmona et al., 2012; van Dorst, 2012).

The key solution to these issues was found in the spatial limitation of cities. In the past, most people travelled on foot. Thus, the urban area could not be too large, and factories had to be integrated with the place of residence of their employees (Carmona et al., 2012). New means of transport, such as railway

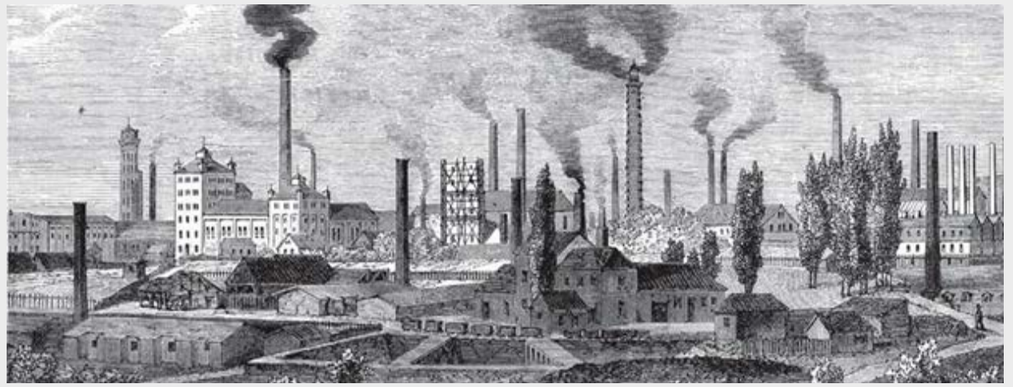


Fig. 24 *Industry and smog in Manchester in the 19th century; (source: list of fig.)*

and trams, offered new opportunities, yet it was another means of transport that successfully lifted the blockade of the urban growth - an automobile. Beginning its career at the beginning of the 20th century, this breakthrough technological development made new areas accessible – the areas that were never accessible before. As a matter of this, the city was given a green light to expand while rendering new, healthy neighbourhoods in the proximity of the (post) industrial core.

In different parts of the Western world, numerous proposals for the expansion of the city began to emerge. In the United States, Frank Lloyd Wright drew a concept of 'The Broadacre City'- an idyllic vision of an urban environment embedded in a rural setting connected to transport technology (Carmona et al., 2012). The new types of housing estates, offering a very low density, were incredibly expensive and, given the scale of the demand, causing the expansion of cities that once again led to exceeding urban functionality. Contrary to Wright's concept, a different approach was proposed by Le Corbusier and the Modernists. The housing estates designed by them followed a completely different set of guidelines that similarly considered the car as an integral part, but at the same time introduced the large-scale residential blocks filled with greenery, aimed at providing fresh air, and zone-based division of functions.

People were given freedom of choice; not necessarily following the aspect of health, but certainly accessibility – a concept that had just been born with the development of means of transport and new transport pathways. The concept of accessibility that defines the ease of achieving a selected goal and functions that are needed by people (Mulley & Nelson, 2020) - was carried out by cars. This, in turn, contributed once again to a new type of problem. The more car-based settlements were built, the farther from the city center they began to emerge, and as a result, their functionality started to decline. The declining functionality required a reaction of constructing bigger, wider, and faster roads. At this point, urban planning began to be subordinated and shaped by civic engineers (Babb, 2021). Paradoxically, the expanding transport infrastructure caused the further decline of accessibility to various places in the city and gave birth to lost places defined as "undesirable urban areas that are in need redesign" (Carmona & Tiesdell, 2007)- spaces detached from the real needs of their users. Moreover, the problematic roads that were aimed at facilitating access to the city center, rendered more and more space necessary for parking vehicles.

The turning point in the development of transport infrastructure came with the escalating degradation of 'places' serving the public. Here, the 'place' as the concept "has long been used to capture the meanings and social practices that humans create in varied environmental settings"(Babb, 2021). In the case of car-based development of the cities, streets which previously served as a primary public place turned into roads, and soon after began to divide instead of connecting. This primarily struck the local communities that began to organize and protest the

Environmental	Economic	Social
• Oil vulnerability • Petro-chemical smog • Toxic emissions such as lead and butane • High greenhouse gas contributions • Urban sprawl • Greater storm-water problems from extra hard surfaces • Traffic problems such as noise and severance	• External costs from accidents and pollution • Congestion costs, despite road building • High infrastructure costs in new sprawling suburbs • Loss of productive rural land • Loss of urban land to bitumen	• Loss of street life • Loss of community • Loss of public safety • Isolation in remote suburbs • Access problems for those without cars and those with disabilities

Fig. 23 *Problems brought by Car Dependency. (soiurce; list of fig.)*

processes destabilizing their integrity. In this context, the most famous example is found in the case of Jane Jacobs, an American journalist, and activist, who in the 1960s successfully fought for her district against the destructive interventions of New York planners (Gehl & Svarre, 2013). At this point in the history of urban development, it is relevant to mention that urban planners of the New Urbanism discourse, such as Leon Krier and Christopher Alexander, were pioneers in redefining the quality of place and creating the guidelines based on a human scale.

In this context that the concept of liveability was born. Introduced in 1981 in Donald Appleyard's book "Livable Streets", rose in opposition to accessibility and car dependency. In his book „How to Study Public Life" (2013) Jan Gehl cites Ray LaHood's definition of liveability (Gehl & Svarre, 2013):

- Livability means being able to take your kids to school, go to work, see a doctor, drop by the grocery or post office, go out to dinner and a movie, and play with your kids at the park – all without having to get in car.

Finally, the term of liveability attempts to capture the right balance between all the aspects that shape the quality of life. Further, as van Dorst (2012) puts it:

- The ecosystem of the species called human is the living environment. The quality of the match between people and their living environment is known as livability.

Considering the constant change of people, technology, and expectations, van Dorst's match is always within the transformation process. This is well illustrated by the work of USA-based organizations, such as, The American Association of Retired Persons (AARP) or the Partnership for Sustainable Communities (PSC), which for years have been developing the definition of liveability. Here, AARP's most recent definition states that:

- Livability is the sum of the factors that add up to a community's quality of life—including the built and natural environments, economic prosperity, social stability and equity, educational opportunity, and cultural, entertainment and recreation possibilities.

This definition translates the burden of the individual into his or her relationship with the whole community understood as a basic social unit providing identity and culture. This unit is related to health, economic, and mobility security exclusively. The mentioned definition includes the relationship as well between the quality of life and the natural environment, which refers to another important factor that requires recognition.

Liveability concerns the present moment. It defines what is currently necessary for communities to flourish in an urban environment. However, if one considers the accelerating effects of the climate crisis (2021), the need to integrate sustainability with liveability comes to the foreground; so that the improvement of today's problems will not be the source of problems for future generations. At this point, it is relevant to mention that it is required to integrate the goals and values of people's quality of life with sustainable development, and this fact was first noticed at the Earth Summit of United Nations in Rio de Janeiro (UN, 1992). During this meaningful summit, it was proclaimed that "human beings are at the center of concerns for sustainable development. They are entitled to a healthy and productive life in harmony with nature" (UN, 1992). The lack of integration of the previously mentioned key concepts will serve neither humans nor nature. Thus, in the context of escalating disintegration in the environment, the concept of sustainable liveability began to appear. According to van Bueren (2012):

The qualities of a sustainable liveability are basic needs, and part of these needs have a spatial dimension that are of interest for the design of a sustainable liveable neighbourhood. The well-known elements of thissustainable liveability are health, safety and the importance of the green environment.

As meaning-wise sustainable liveability is very close to liveability, in sustainable liveability the emphasis is put on the extension of the needs to future generations. This difference is especially visible in the guidelines for the built environment. These guidelines are the result of the concepts that will be discussed in the following chapter.

2. SPATIAL IMPLICATIONS OF PLACES, NEIGHBOURHOODS AND CITIES

In the previous chapter, *sustainable liveability* was presented as a concept integrating social, economic, and environmental aspects. As on one hand, it combines the elements of the environment, on the second it includes the cultural ones. However, since the initial meaning of the concept was based on the spatial problems formed by excessive use of the car, its evolution should involve the development of spatial guidelines. As van Bueren (et al., 2012) notes: "The quality of the social environment may have a more important role in the well-being of people than the physical environment, but there is a clear relationship between both". And these spatial aspects are still of great importance, because „The relationship is in the fact that the physical environment facilitates the control over the social interaction." As sustainable liveability targets multiple scales, this chapter is dedicated to collecting key guidelines for these different scales.

2.1. LIVEABLE PLACES

As it was mentioned in the first chapter, places are the foundation for the creation of community. Attractive and lively places build attachment and a desire to fight for quality and care. These are the main reasons why liveability itself was first clarified based on the degradation of places and streets. From this perspective, new guidelines and principles started to emerge (Itard, 2012), and they were based on the seduction for the pedestrians. These guidelines understood as the representative key needs are listed by Adams and Tiesdell (2012). These are::

- *Activity*; is related to the variety of functions that make people active, eager to explore the place and making it alive. Prominent examples are found in the open facades of shops, or cafes, playgrounds, or parks. Here, connectivity is considered as the advantage - if a place has a rich network of connections to other places, the chance to find the place is much greater.

- *Scale*; this aspect is evident in the 2012 film "The Humans Scale" by Jan Gehl, which describes which proportions of space and density evoke positive feelings and encourage users to interact. In his work and publications, Jan Gehl particularly promoted research that is based on the observation of human behavior, perceptions, and feelings.

- *Safety*; only where people feel safe, they are willing to stay and make a place out of space. As it was mentioned in the first chapter, pedestrians are endangered by car traffic that limits their sense of safety. For this reason, it is accepted that slow-paced mobility modes, such as walking, biking, and collective transport are more supportive for place-making. Here, the perception of safety is equally important, and it includes, inter alia, lighting, design, or well-groomed conditions.

- *Comfort*; comfort refers to the convenience of use, meaning whether the place is functional and visually attractive and whether the places the users are heading towards are connected conveniently.

- *Identity*; identification of place builds emotional attachment making users protect the values of the place. Identity is a context-dependent factor that cannot be described by any guidelines.

- *Contact with nature*; reduces stress and makes people feel better. Green allows people to relax and makes them more willing to rest and stay longer.

The description of the abovementioned general guidelines confirms that places are crucial for attachment, interactions, and result in building communities. However, this type of space can certainly affect only a narrow range of requirements that are included under the umbrella of the concept of sustainable liveability. To look for more answers, there is a need to zoom out to reveal the perception from a different perspective.

2.2. NEIGHBOURHOOD

- (...) neighbourhood as an ecosystem and the operationalisation of a sustainable liveability. (van Dorst, 2012)

Neither house nor the street, but the neighbourhood serves as an operating area of the community. In the case of the neighbourhood, its scale covers the aspect of connection with other parts of the city, thus, it is related to transport, economic prosperity, and educational opportunity. A neighbourhood that meets the requirements of sustainable liveability has been known as a sustainable neighbourhood. This concept has been used, among others, by the city of Pickering in Canada in the development plans. It has been defined as (Rose, n.d.):

- (...) a place where people want to live now, and in the future. It is a neighbourhood that is socially, environmentally and economically healthy; a place that is safe, well planned and built to last.

Here, we can pose a question: what kind of interventions in the built environment can help to meet the requirements of the sustainable neighbourhood? As Babb (2021) mentions, the design of this kind of neighbourhood:

- (...) is achieved by the arrangements of lots, design of movement networks and the location of community services and centers. These design elements can contribute to streets that accommodate a mix of communi-ty activity and local access, active neighborhood community hubs, and afford access to places in the broader urban region via arterial road connections.

Fig. 25

Bad and good practices in terms of "control". The gallery in the housing estate shared by several apartments lacks the feeling of control, privacy and the possibility of interaction between the neighbors (source, list of fig.)

In literature, there exist numerous theories that suggest how to achieve the arrangement leading to sustainable liveability. Since places are included in neighbourhoods, the guidelines used in the context of places are also applicable in the context of neighbourhoods. Here, a broadly acclaimed list of factors contributing to the sustainable neighbourhood was proposed by Cervero and Kockelman (Cervero & Kockelman, 1997), and this list has been known as the 3Ds rules: Density, Diversity and Street Design. In 2010 the prominent theory of 3Ds was extended by two additional dimensions: Destination accessibility and Distance to transit. Since then, has been known as the 5Ds that integrate the aspects of sustainable mobility (Ewing & Cervero, 2010) capturing not only the spheres of place and neighbourhood but also connectivity with different areas within the city. However, if one considers the social aspect of sustainability, it is best to refer to Van Dorst's (2012) list of social needs. This list follows the needs such as::

1. *Health and safety*: they are expressed in the construction requirements, conditions, and the way of shaping infrastructure and its capacity.

2. *Material prosperity*: access to jobs, provision of transport, but also the aspect of lifestyles and incomes. Although people feel better in a homogeneous environment, in terms of social and sustainable points of view, it is relevant to ensure the inclusiveness and balance of various economic groups. This fosters the resistance of the built environment against social changes, thus supporting the weakest members of society.

3. *Social relationship:* here, a minimal level of social cohesion is required to lay the foundation for both relationships and integration.

4. *Control:* it is another factor contributing to the establishment of a community. It follows a sense of attachment to place and care after it. The key feature is found in the gradation of space from public to private, thus, providing a sense of freedom, however, the freedom is interwoven with the responsibility for the place..

5. *Contact with the natural environment:* the presence of greenery reduces stress, improves well-being, and affects health.

Sustainability related to the natural environment is best framed by van Bueren et al. (2012) who propose the integration of social needs with the care for the natural environment.

- (...) shifts from car use to more sustainably powered modes of transport and measures that reduce congestion contribute to the air quality outdoors. Putting vegetation on roofs of buildings reduces the heating of these roofs and buildings during a day of sunshine and thus the need for air conditioning; while at night the evaporation of the vegetation helps to cool down the cities. In addition, green roofs slow down rainwater runoff and purify the air by binding particulate matter and carbon emissions. Also, they offer a living space for plants, birds and insects and make the city a nicer place.

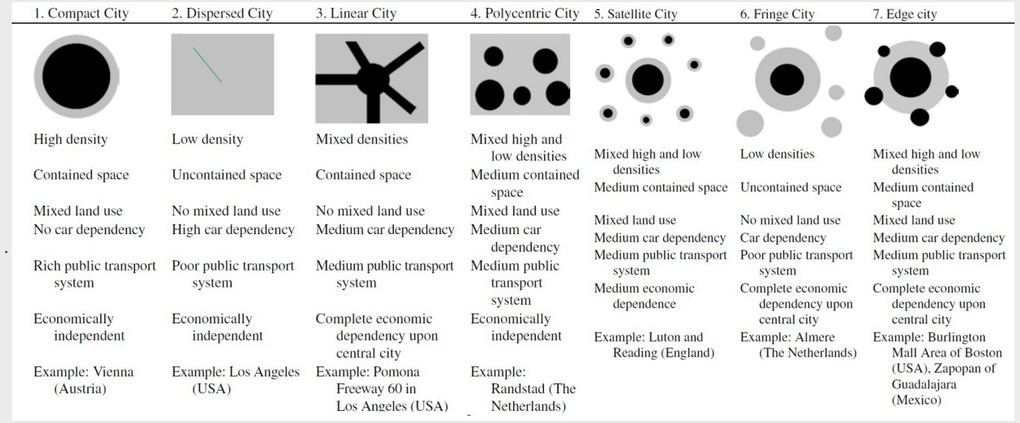
Here, Van Bueren et al. (2012) present how different goals can be integrated not only with the same solutions but also with the scales. The application of the guidelines follows private and public places, accessibility to transport infrastructure, and other parts of the city. This last point begs the question: which theories should be considered by the city that is heading towards meet-ing the requirements of *sustainable liveability?*

3. URBAN FORM

As it was mentioned in the first chapter, throughout the 19th and 20th centuries cities underwent a rapid process of urbanization. Development of the technology, especially related to transport, had a huge impact on the formation of cities. While previously the difference between city and village was evident, more recently this difference has been blurred by numerous intermediate forms of different characteristics.
In the context of these new forms, Milder (2012) distinguishes urban types, such as:

1. Dispersed city
2. Compact city
3. Corridor/linear/radial city
4. Multi-nuclear/polycentric city/edge city
5. Fringe city
6. Edge city
7. Satellite city

While the types of 1 and 2 represent the extremes, the rest of the list follows the intermediate types. All of these types are illustrated in the author's table (Fig. 4).



1. Compact City	2. Dispersed City	3. Linear City	4. Polycentric City	5. Satellite City	6. Fringe City	7. Edge city
High density	Low density	Mixed densities	Mixed high and low densities	Mixed high and low densities	Low densities	Mixed high and low densities
Contained space	Uncontained space	Contained space	Medium contained space	Medium contained space	Uncontained space	Medium contained space
Mixed land use	No mixed land use	No mixed land use	Mixed land use	Mixed land use	No mixed land use	Mixed land use
No car dependency	High car dependency	Medium car dependency	Medium car dependency	Medium car dependency	Car dependency	Medium car dependency
Rich public transport system	Poor public transport system	Medium public transport system	Medium public transport system	Medium public transport system	Poor public transport system	Medium public transport system
Economically independent	Economically independent	Complete economic dependency upon central city	Economically independent	Medium economic dependence	Complete economic dependency upon central city	Complete economic dependency upon central city
Example: Vienna (Austria)	Example: Los Angeles (USA)	Example: Pomona Freeway 60 in Los Angeles (USA)	Example: Randstad (The Netherlands)	Example: Luton and Reading (England)	Example: Almere (The Netherlands)	Example: Burlington Mall Area of Boston (USA), Zapopan of Guadalajara (Mexico)

Fig. 26 .
Urban forms and their main characteristics (Milder, 2012; 268-269).

Over years of research, it has been proved that collective, slow-paced transport has no negative impact on places and liveability (Bertolini, 2017). This type of transport can be achieved in a relatively easy way in the compact city as this form of the city is considered to be the most beneficial. In this context, Milder (2012) lists the arguments, such as:

1. A contained compact city protects the rural land
2. The quality of life and quality of services can be maintained in the city
3. High urban densities promote more sustainable use of energy (for housing)
4. A short distance city reduces the amount and lengths of trips by modes of transport harmful to the environment.

At this point, it might seem clear that urban planning methods should be channelled to the model of the compact city. However, this is not as simple as it might seem in the first place. The form of the compact city includes numerous conceptual problems (Milder, 2012), and these are:

- Compact city versus energy efficiency
- Compact city versus suburban quality of life
- Compact city versus the green city
- Compact city versus renewable energy sources
- Compact city versus rural economic development
- Compact city and affordability of housing
- Compact city and air quality/noise
- Compact city and crime/feasibility/social acceptability
- Strategic benefits and perceived disadvantages

It is crucial to consider the fact that urban sprawl and suburban residents are the results of people and their needs. In the case of numerous urban areas, local identity and quality are connected to the form that cannot easily fit the model of a compact city. If there is too much focus on compactness, this feature can disintegrate both sustainability and liveability. Further, many urban areas are shaped by topographic and environmental conditions, which render the form of the compact city highly impractical.

As the scale increases, the same applies to both the complexity and influence of the context. Therefore, despite the initial theory, in 2004 The European Commission noted in the Urban Thematic Strategy (CEC, 2004: 30) that:

- It is not for the Community to set a standard system for making land use decisions, or to define the "ideal" settlement pattern as each town and city is unique and the solutions needed to achieve a sustainable urban environment are specific to each case.

However, a more universal perspective is delivered by the theory of Urban Fabrics that analyses cities as combinations and interactions between the walking city, transit city, and automobile city (Babb, 2021).

These forms present how different possibilities and problems resulted in different locations of the neighbourhoods to meet the needs of sustainable liveability. While in the automobile part, there is a great shift towards the density problem, in the automobile suburbs, this problem may be the situation of the quality apartments and houses, which might result in the problematic car dependency. However, most problems accumulate in the centre, where, despite the proximity of the services, pedestrian use of the city is impeded by the omnipresent cars and traffic intensity. Therefore, the act of solving local problems requires placing them in the typological context of the urban fabrics and applying the solutions both beneficial and sustainable for the entire system. Such a holistic approach can be defined by the concept of the 'Sustainable Urban Development' that, in fact, is a process-oriented version of sustainable liveability:

- Sustainable urban development is the way forward for cities to mitigate climate change. Integrated urban places designed to bring people, activities, buildings, and public spaces together, with easy walking and cycling connection between them and near-excellent transit service to the rest of the city. It means inclusive access for all to local and citywide opportunities and resources by the most efficient and healthful combination of mobility modes, at the lowest financial and environmental cost, and with the highest resilience to disruptive events. Inclusive development is an essential foundation for long-term sustainability, equity, shared prosperity, and civil society in cities. (ITDP, n.d.)

CONCLUSIONS

The attractiveness of cities and features that determine their quality is in a constant state of flux. While in the past cities drew waves of people because of their protection against the wilderness, more recently their attractiveness is based on the economy. When these non-regulated flows of people towards

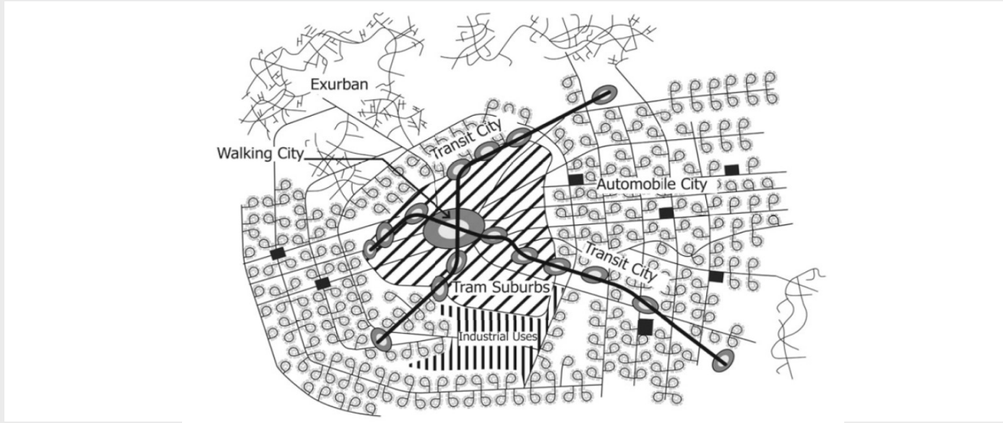


Fig. 27 .
The automobile city as a mixture of three other types of cities (Newman & Kenworthy, 2015).

cities resulted in the overarching compaction and pollution, the solution was found in the technology of transportation. At this point, accessibility began to be the most im-portant determinant of quality, and the exaggeration of one feature diminishes the others. Transport becomes a threat to healthy; cars destroy the quality of public places that shape local communities. As the result of this cause-and-effect sequence, the concept of liveability is born, as it is an attempt to integrate all the relevant aspects of the high-quality life in the urban envi-ronment. The strength of this concept is found in the openness towards context and time-based changes. The increasing awareness regarding the mentioned changes leads to the integration of liveability with sustainability aimed at meeting the needs of not only present, yet future genera-tions.

Based on the analysis of both bad and good practices, various theories have been defined con-cerning the possible impact of the built environment on sustainable liveability. Relatively clear and commonly accepted are the principles that target the design of user-friendly public places. However, their impact on sustainable liveability, although significant, is limited. In this context, a more appropriate scale is found in the neighbourhood, including an addition to the public space and the area of functioning of the local community. What is more, it is also related to the issue of connectivity with other parts of the city, which makes it the most effective scale to de-rive spatial guidelines towards sustainable liveability. Mentioned connectivity relates to an im-portant aspect of city-scale principles. It seems that the Compact City form is the most sustaina-ble one, unfortunately, it is not necessarily supporting liveability. What is more, in some con-texts, it is simply impossible to obtain. However, in even the most unique cities, it is possible to distinguish the basic urban fabrics; walkable, transit, and the automobile. Recognition of those types and their mutual configuration gives guidelines where and how to develop the city, where transformation is required, and in which direction.

Summing up, it is possible to shape the urban environment in the direction supporting sustaina-ble liveability. The impactful are both, the transformation of places, neighbourhoods, and the city form, but the accuracy of the guidelines changes with the scale from spatial oriented, to-wards strategy-oriented. The ease of integrating liveability with sustainability is also changing; place scale guidelines are more effective in reaching liveability when city-related one- in sus-tainability. For this reason, therefore the most representative unit for a transformation in this in-tegrated direction is the neighbourhood and the guidelines for this scale are the most crucial. Conclusions and key principles are illustrated in the table Figure X.
In literature thre are many more complicated tools very advanced and detailed tools for guiding urban design steps towards sustainable liveability. However, these tools differ from each other in focus on a different scale, the hierarchy of evaluation criteria or methods; and most of them are not truly universal in terms of context. driven by measures versus perception. Some are more suitable for small, less complex cities, others are more efficient with the greater complication of urban factors (Gil 2016). For this reason, these basic guidelines are crucial as a starting point for your own analysis.

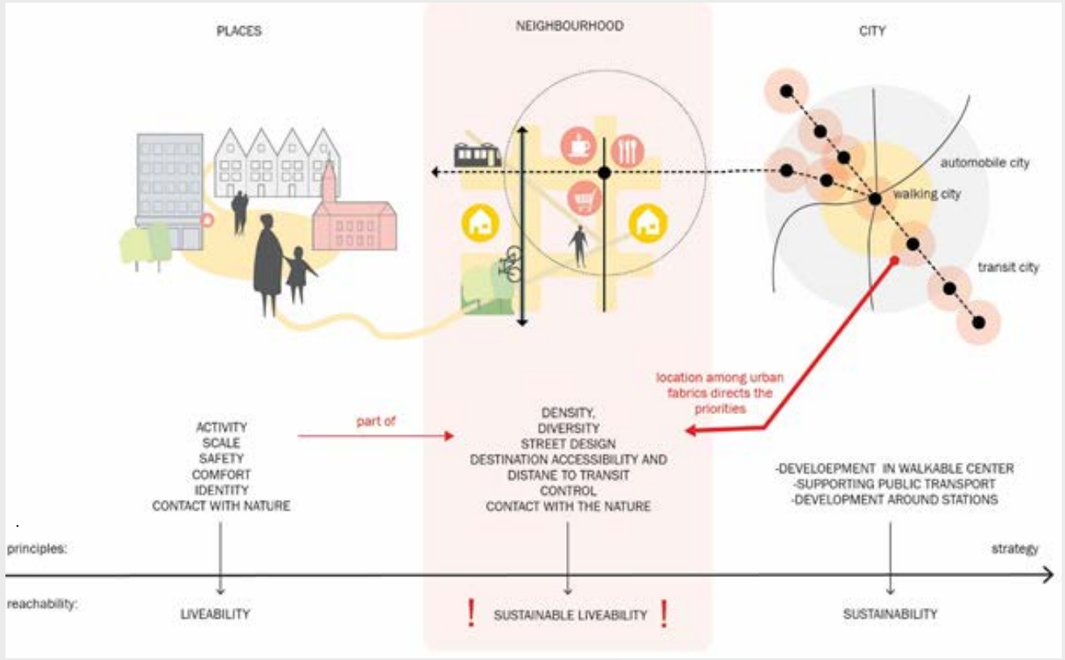


Fig. 28 .

Basic rules for different scales and their interconnection. (source: own authorship

THEORY
GOVERNANCE THROUGH NETWORKS

The criteria and values for sustainable liveability cannot be met in a system that is not oriented towards the good of the community. The dependencies of the governance method and the form of city formation are described by Adams & Tiesdell (2012). According to the authors, during the liberal era, and especially at the height of the noe-liberalism, governance became subordinated to private property and focused on efficiency and cost-cutting and limiting the influence of the state, thus depriving the authorities of the tools of the influence of control. Defined by him as "governance through markets", it accurately describes the phenomenon that can be observed on the example of Zakopane, which was described in the *Contex* chapter.

In opposition to this, approach governance through network is described as enabling "all relevant stakeholders across the public, private and voluntary sectors to work together to achieve common end". In this configuration, different actors with different interests are set up as partners who must find a common solution. Thanks to this, the interests of residents are treated as equally crcicial, and at the same time it is not clearly contrary to the interests of the market. In such a model, municipal authorities have a coordinating character and initiate collaboration and dialogue of various parties: "alongside the 'making of place ;, planning is equally concerned with the' mediation of space '" (Adams & Tiesdell, 2012).

A particularly important change in the practice of management is manifested in the transition from regulating land-uses to creatively creating tools to stimulate and shape the market in a way that is beneficial to the city and its inhabitants. In this context, a vision is a particularly important tool, which should express the city in its best possible shape, touching and inspiring to many groups in the city, so as to activate them to fight and make efforts to implement them. On its basis, it is possible to search for real and possible coalitions of interests and potential sources of conflicts that can be combined and resolved in key projects.

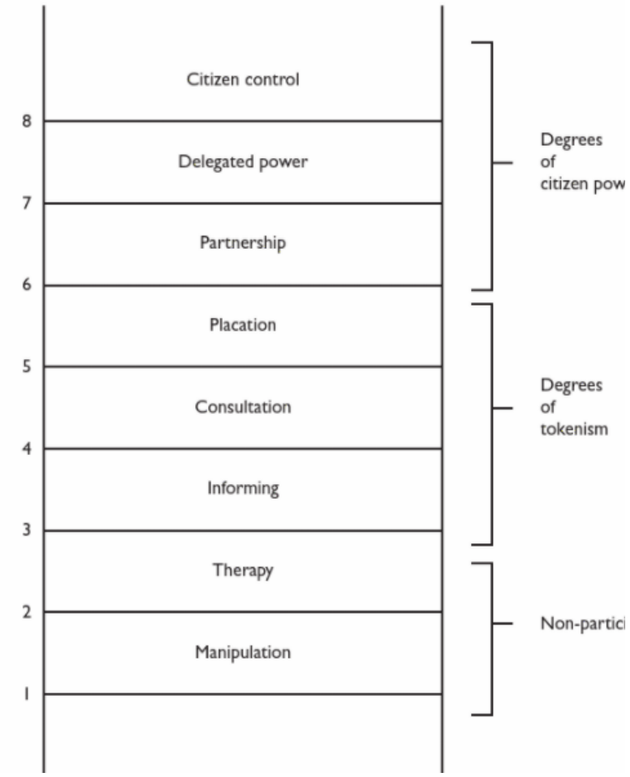
The effectiveness of this process depends on transparency and the degree of stakeholder involvement. The diagram below (Fig 38) (Adams & Tiesdell, 2012) illustrates the degree of citizen involvement in the decision-making process. The full power of the inhabitants may be difficult to implement in any state system, its complete lack is the imposition of will and the manipulation of the community. The model is discussed below. can be realized in partnership and cooperation.

CONCLUSION

This chapter describes the key theories on which the analysis of the conditions of the city of Zakopane is based. In the next chapter. Designated guidelines for spatial transformations and key changes in the way of management will be elements of the proposed vision.

Fig. 29

Amstein's eight rungs on a ladder of citizen participation. Soruce : Adams & Tiesdell (2012), p. 126



4

PROBLEM ANALYSIS
INTRODUCTION

In this chapter, the problems of the city will be analyzed broken down into spatial and systemic problems.

4.1

LIVEABILITY ANALYSIS
INTRODUCTION

In this chapter, the problems of the city will be analyzed broken down into spatial and systemic problems.

Spatial analysis consists of;
selection of criteria and creation of an evaluation tool for liveability
-selection of representative districts based on the theory of urban fabrics.
-Evaluation of neighborhoods
- drawing conclusions from evaluation as postulates of spatial changes
-SWOT analysis based on the city's characteristics, spatial and cultural conditions

LIVEABILITY ANALYSIS
EVALUATION FRAMEWORK

The evaluation tool is a simple form of checking compliance with the criteria that make up Sustainable liveability by selected districts. As mentioned in the introduction, from the theories discussed in the Theory chapter, criteria have been selected that are measurable under research conditions and based on available OSM data, open polish statistical data and with the help of Google Stret maps. For this reason, the Diversity criterion, for which there is no public data available, was not included, and besides, given the tourist nature of the city, it is difficult to assess how social diversity is spreading locally. This category also does not have much design potential for this project. The Street Design criterion was replaced and developed into Spatial place quality based on theories oriented towards the perception of public and public spaces of such as van Dorst (2012), Carmona (2012) or Gehl (2013). Local public spaces and public places are crucial for building relations between neighbors and communities.

Each category is assessed in a simplified manner on a 3-point scale; from 1-weak, to 3 -strong. The final result is the arithmetic mean of the scores obtained in each category.

DENSITY:

The density will be presented using a diagram illustrating the population density on the basis of data provided by the Central Statistical Office (Central Statistical Office in Poland), and the density of buildings defined by the estimated FSI. The range of categories is determined on the basis of comparing data from areas of different densities in Krakow (center, periphery, sprawl).

DESTINATION TO TRANSIT:

Destination to transit is measured with the GIS network analysis tool and measuring which area of the district is within a 5-minute walk with the current stop configuration. 5 minutes is a widely accepted norm as the comfort limit for walking on foot.

DESTINATIONS ACCESSIBILITY:

The key locations that residents need access to are classified into 5 categories; services (e.g. shops and restaurants), employjment, education, leisure and sport, nature. The availability of these locations is measured in this framework only by sustainable means of transport, such as walking, cycling and public transport.

In the most advantageous configuration, most of these locations should be within 5 minutes walking or cycling, less advantageous but also sufficient when most destinations are within 40 minutes using public transport. Nowadays it is accepted as the limit of acceptability a distance of 60 minutes from home for which one point is accepted here. However, if any of the key locations is not available at all in the above criteria, zero points are obtained as this means a serious transport exclusion and the dependence of the district on a passenger car

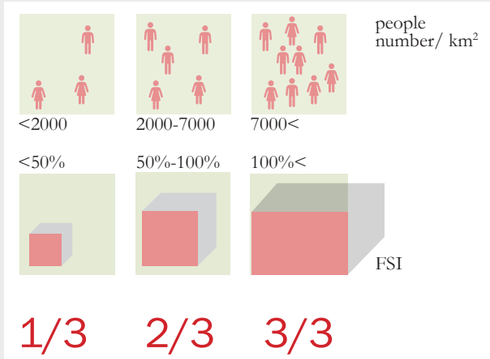
SPATIAL QUALITIES:

The spatial qualities analysis is made on the basis of photos from Google street view of fragments of semi-private space and a place that functions as a local public place. These types of spaces are particularly important for building relationships and community identity. Views are assessed through the prism of categories assumed to be key for the individual types of space. The assessment is supported by drawing and descriptive arguments.

FINAL GRADE:

The final assessment gives an overview of the scale of the problem, however, it is partial assessments that are the main source for the transformational guidelines.

DENSITY:



DESTINATION TO TRANSIT:

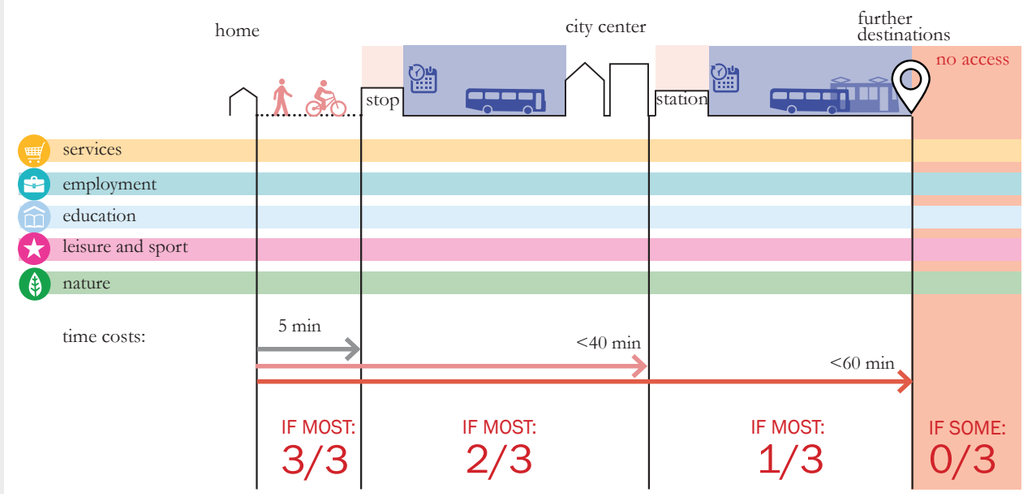
if 0-30% area is within: 0/3

if 30-60% area is within: 1/3

if 60-80% area is within: 2/3

if 80-100% area is within: 3/3

DESTINATIONS ACCESSIBILITY:



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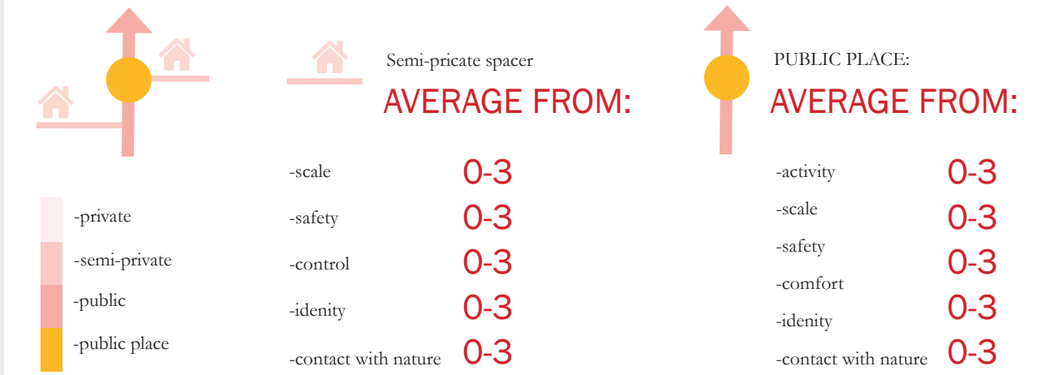


ASSESSMENTS

LIVEABILITY ANALYSIS
SAMPLES CHOICE FOR EVALUATION

According to Urban Fabrics Newman & Kenworthy (2015), each modern city consists of three basic fabrics; walkable city (center 4 km away), transit city (built-up areas oriented around the transport network), automobile city (remote areas, outside the main mobility routes). Each of these types represents different problems and needs in the issue of sustainable liveability,

Zakopane is a small city with almost half of the built-up area in the theoretical walkable city. Similarly, a large area is within the main access roads to the center, which is a solid foundation for a transite city that can be operated on the basis of public transport. Only small built-up areas fall outside the above categories and represent rural and low-density housing. A particularly large area of such areas is in the northern part of the city, on the slopes of Pardalowka (Fig. 42) where the farm functions disappear.

Within each of these fabrics, one district has been selected.

Fig. 36 .
Urban fabrics

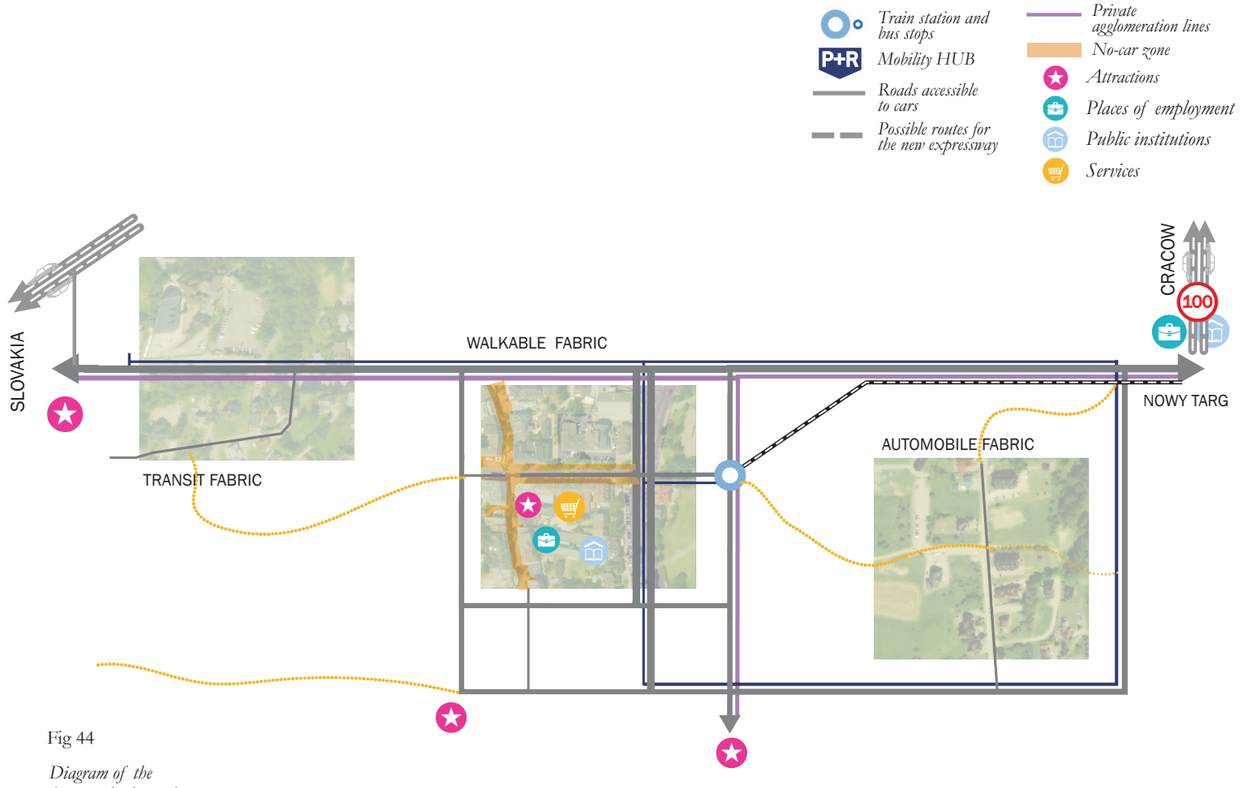


Fig 44
Diagram of the functional relationship between different urban fabrics in Zakopane.

TRANSIT FABRIC

The Krzeptówki neighborhood- as a representation of transit fabric

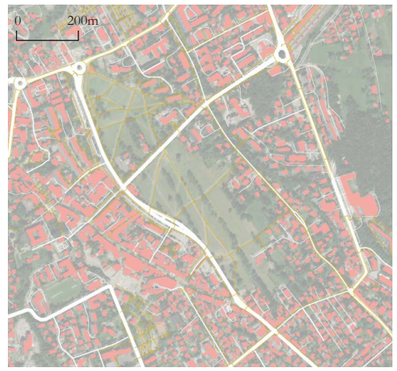
WALKABLE FABRIC

The Aleje neighborhood as a representation of walkable fabric

AUTOMOBLILE FABRIC

The Pardalowka neighborhood as a representation of automobile fabric

Fig. 37 .
Fig. 38 .
Fig. 39 .
own maps



LIVEABILITY ANALYSIS
DESTINATION TO TRANSIT

There is a public transport network in Zakopane, but it is mostly offered by private carriers and is very expensive (source: own experience of the user). The public lines run very rarely and only in the city area. There are practically no bicycle paths in the city, therefore access to this type of mobility will not be considered at all

The associated stops with these bus lines serve the individual urban fabrics in the following ways (analiza z uzyciem Place Syntax Tool):

TRANSIT FABRIC

As can be seen from Figs. X and Y although by their definition, transit fabric could be fully in terms of proximity to public transport, it is only about 70% so. This is due to the too far spacing of the stops.

WALKABLE FABRIC

An analogous situation exists in the automobile fabrics; despite a favorable spatial configuration, a large part of the area has no functional access to bus stops..

AUTOMOBILE FABRIC

According to their definition, these areas do not have any access to sustainable transport

CONCLUSIONS

Transit and walkable fabrics need changes to the location of autobahn stops. Automobile fabrics need a new mobility strategy.

Fig. 42 .
Collective transport in the city (own map)

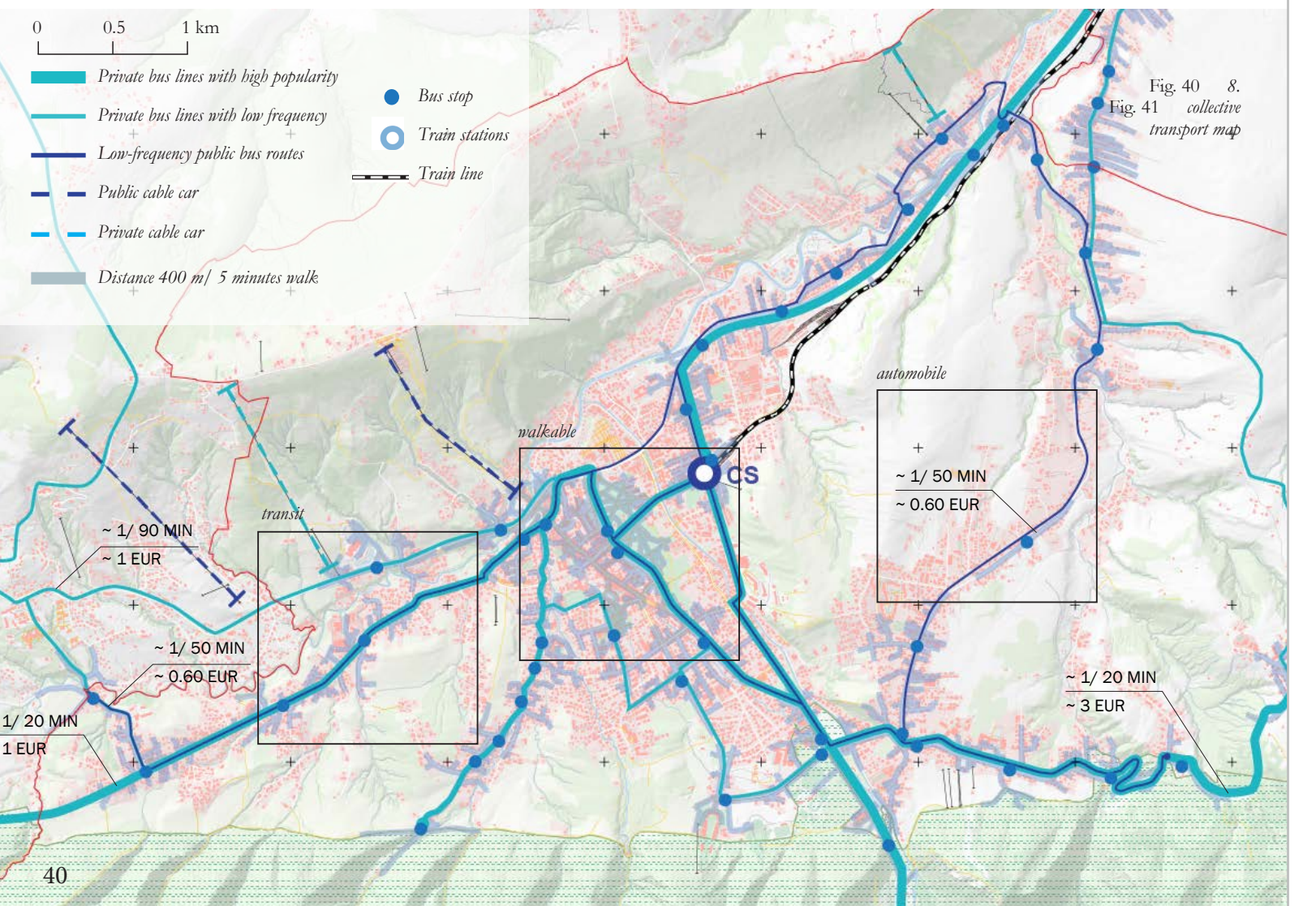
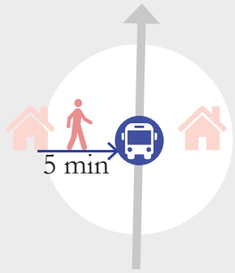


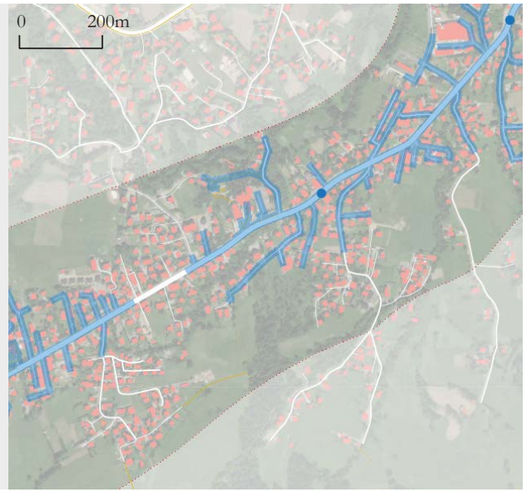
Fig. 40 8.
Fig. 41 *collective transport map*

Fig. 43 .
Fig. 44 .
Fig. 45 *own maps*

TRANSIT FABRIC

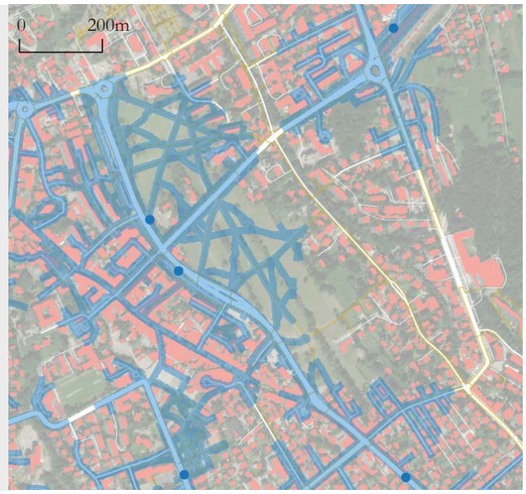


if 60-80% area is within: 2/3

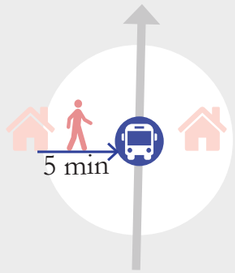


WALKABLE FABRIC

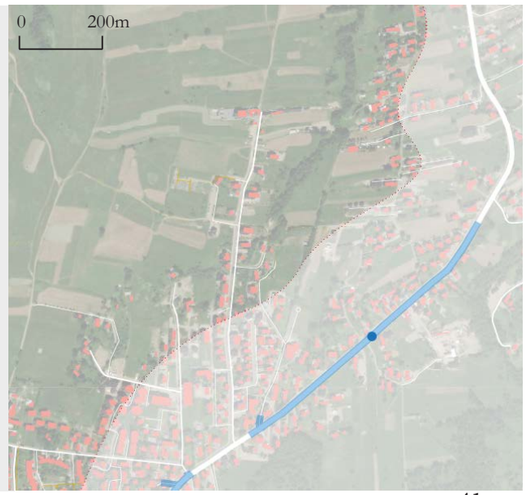
if 60-80% area is within: 2/3



AUTOMOBLILE FABRIC



if 0-30% area is within: 0/3



LIVEABILITY ANALYSIS
DESTINATIONS ACCESSIBILITY

Many key functions such as greater diversity in employment or education are found in the next major city 25km away.
Many important tourist attractions are also at a distance beyond the city limits.
Each area is characterized by a large short-term rental offer which is a source of income for many residents - only locations requiring travel (services in the center, administration, offices, etc.) have been designated as employment locations.
Many destinations are only accessible by private carriers, and this means that for many it can be another barrier which is not visible in this analysis.
Given the limitations of functioning collective transport, the following consequences can be observed:

TRANSIT FABRIC

Within the transit fabric, there are shops and green areas within walking distance. However, access to important services in the city center by public transport takes up to an hour. The situation is even worse when it comes to access to the larger educational and more varied employment opportunities located in the neighboring city of Nowy Targ. According to the city's research (City Council, 2017), Zakopane and Nowy-Targ generate very high shuttle traffic to each other. In its current

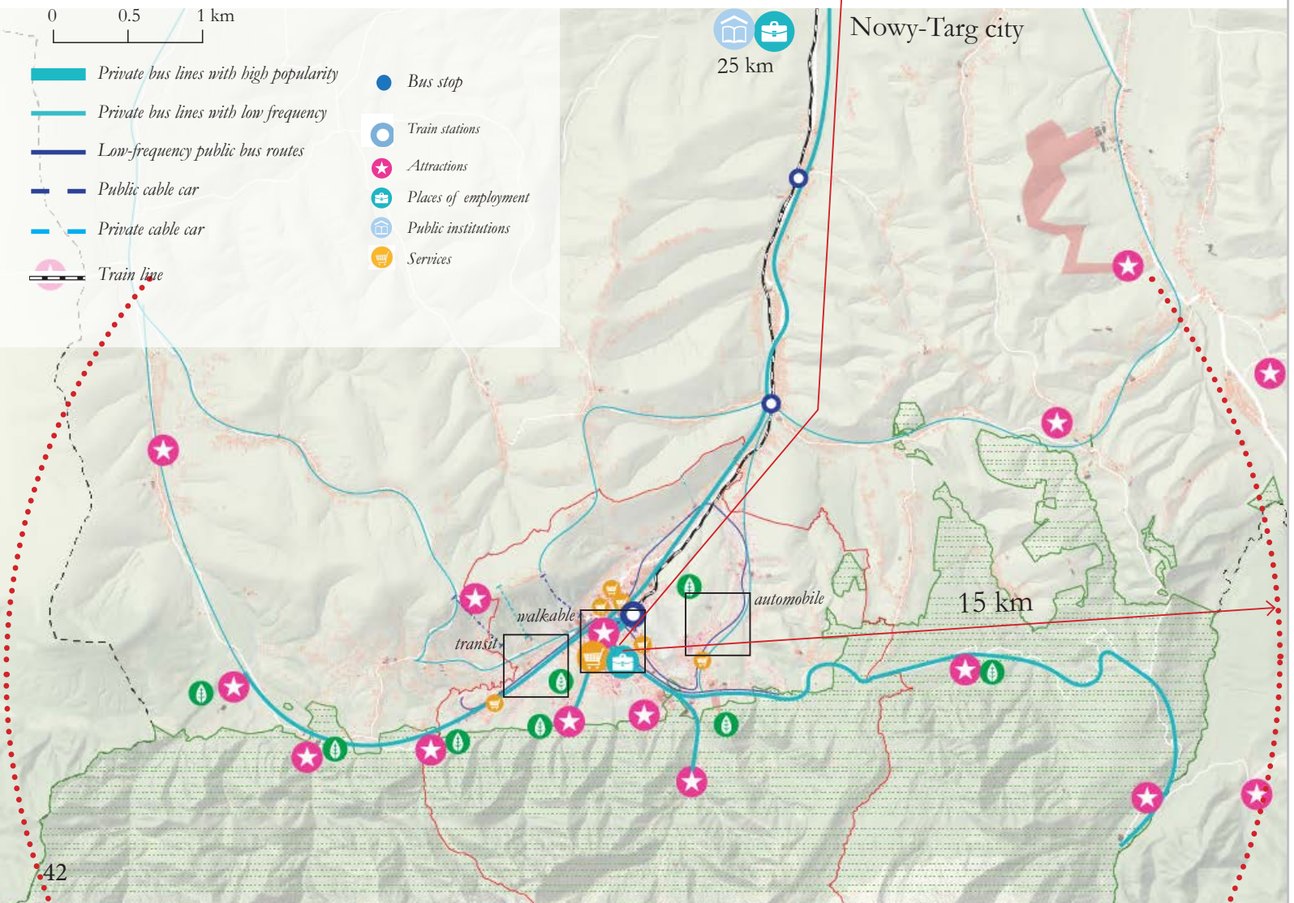
WALKABLE FABRIC

The situation is of course better in the walkable fabric; most services are available within walking distance, but due to the low ridership of public transport, it is often more economical to walk for 30 minutes than to wait for a bus for 40 minutes. Also from the city center, the balanced transport to the key partner city is not feasible because it takes more than an hour.

AUTOMOBILE FABRIC

Automobile fabric has access only to small estate shops. However, the area is characterized by its proximity to attractive green areas.

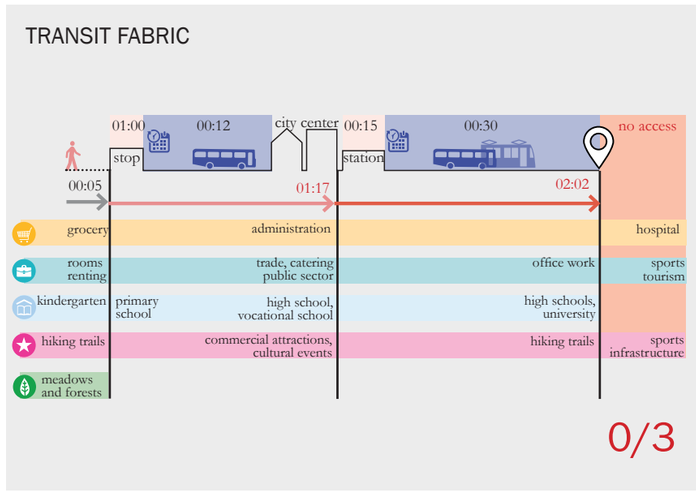
Fig. 46 .
Map of availability of important services (own map)

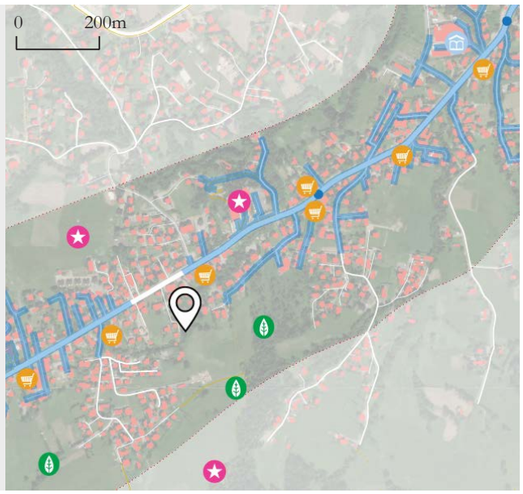


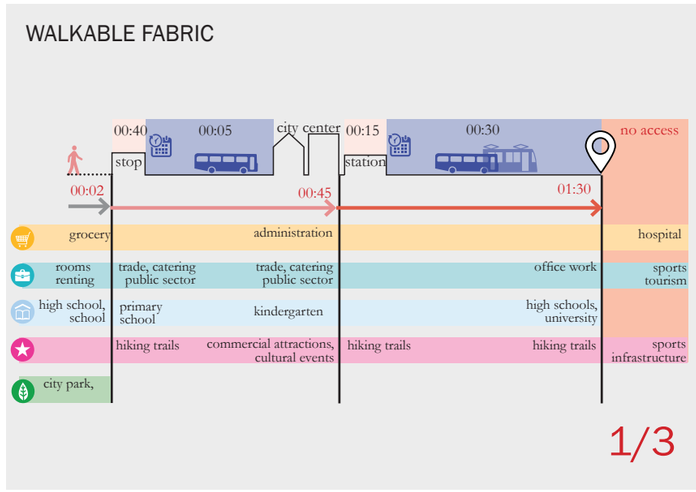
CONCLUSIONS

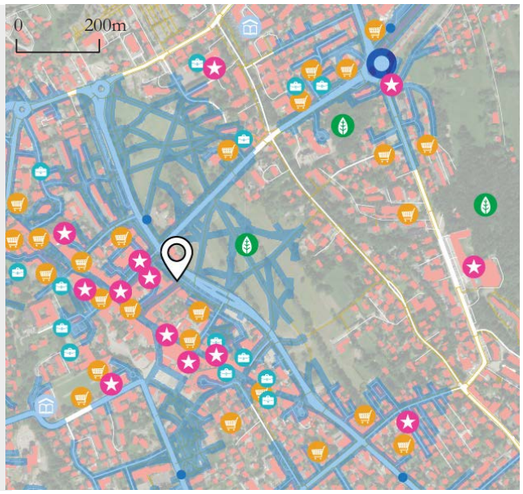
The key problem is interchanges and low bus frequency, and that affordable public transport does not cover the main demand, which is agglomeration-based.

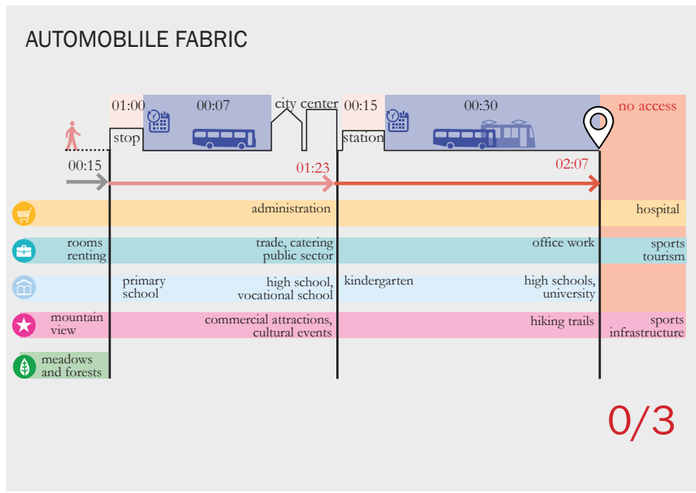
Fig. 47 .
Fig. 48 .
Fig. 49 *own maps*

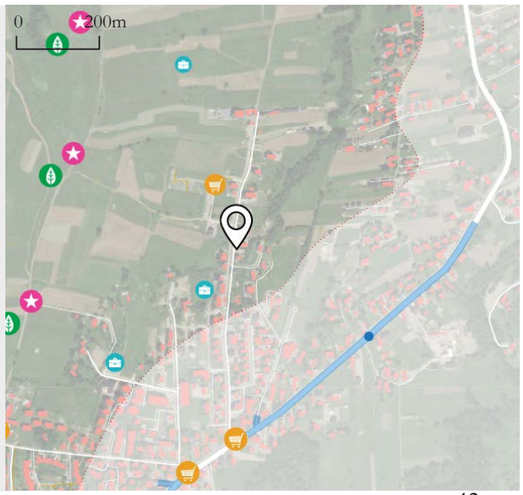












LIVEABILITY ANALYSIS
SPATIAL QUALITIES

The analysis of spatial values was carried out on the basis of Google street view images representing characteristic types of private and public space.
For the transit and automobile fabrics, the main types of roads and surrounding space are very similar and were analyzed together.

VIEW 1

Transit road
Pedestrian priority
Car priority
Green areas
Barriers

1,40 m | 1,25 m | 7 m | 1,25 m | 1 m
11,90 m

VIEW 2

Semi-private road

2,40 m | 6 m | 3 m
11,40 m

VIEW 3

Dirt path

~3 m

CONCLUSIONS

In the areas of automobile and transit fabrics, there are no attractive public spaces, and the main public space is the transit road, the profile of which is mostly for car traffic. This causes discomfort for pedestrians and does not provide opportunities for local people to meet and interact. There is also a lack of space for slow-mobility vehicles.
In built-up areas, the roads are narrow and without pavements, but they are quiet so that both pedestrians and cyclists can move around in relative comfort. There is a tendency to separate from the shared space by high fences. There is a tendency to cordon off shared spaces with high fences. Nowadays, given the scenic value of these areas, they function as informal walking routes with high recreational potential. The problem, however, is their unregulated legal status and the lack of adaptation of the subsoil for comfortable use..

Historic agricultural trails have also been used for recreation in the past. Soirce: list of fig.

Fig. 55

public promenade
large transit road
transit road
semi-private road
dirt paths

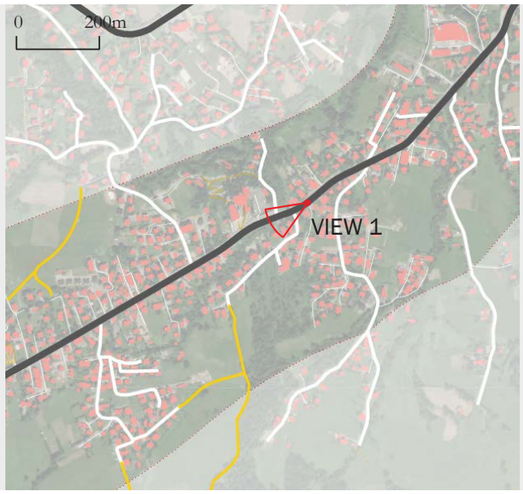
Fig. 56 *own maps*
Fig. 57

TRANSIT FABRIC

Semi-private spaces

Public spaces

-scale	1	-activity	1
-safety	2	-scale	1
-control	0	-safety	1
-idenity	0	-comfort	1
-contact with nature	2	-idenity	0
		-contact with nature	0

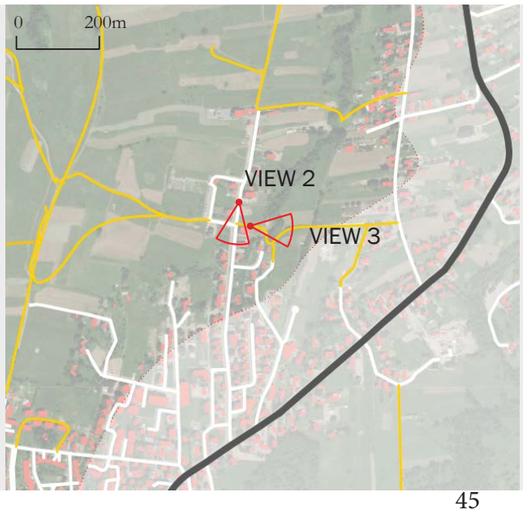


AUTOMOBILE FABRIC

Semi-private spaces

Public spaces

-scale	1	-activity	1
-safety	2	-scale	1
-control	0	-safety	1
-idenity	0	-comfort	0
-contact with nature	2	-idenity	0
		-contact with nature	0



LIVEABILITY ANALYSIS
SPATIAL QUALITIES

In the city center in the walkable fabric, there are analogous types of space associated with transit roads and semi-private roads, but beyond this, there are finally fully-fledged public spaces. It is a pedestrian promenade full of services and attractions. It is, however, surrounded on all sides by transit roads with heavy traffic, which effectively limits the possibilities of expanding the pedestrian zone.

CONCLUSIONS

the accessibility of the city centre by car, the whole network of car parks and accesses severely limit public space. Because of this, the only pedestrian space in the city is congested and inefficient, and walking outside of it is made very difficult and dangerous by the intensity of car traffic. Numerous pedestrian crossings with traffic lights and high kerbs make walking in the centre uncomfortable. Despite the large road profiles, there is no space for slow-mobility vehicles..

public promenade
large transit road
transit road
semi-private road
dirt paths

Fig. 58 *own maps*

VIEW 4

Public promenade
Pedestrian priority
Car priority
Green areas
Barriers

4 m | 8 m | 4 m
16 m

VIEW 5

Dirt path

3,50 m | 15 m | 2,5 m | 15 m | 1,3 m
37,30 m

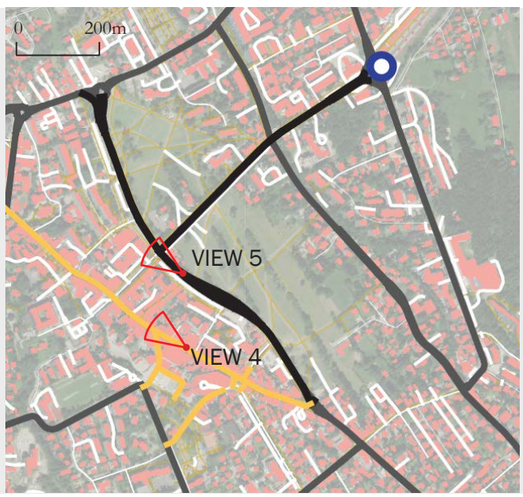
WALKABLE FABRIC

Semi-private spaces

-scale	1
-safety	2
-control	0
-idenity	0
-contact with nature	2

Public spaces

-activity	3
-scale	1
-safety	1
-comfort	1
-idenity	1
-contact with nature	1



LIVEABILITY ANALYSIS
SWOT ANALYSIS

STRENGHTS

CONTACT WITH NATURE

All built-up areas in the city have close and easy access to nature and greenery - only the level of recreational accessibility differs.

SEMI-PRIVATE AREA

Despite the slow disintegration and the tendency to build fences, the districts still have relatively attractive public streets, allowing for contacts between neighbors.

WEAKNESSES

DENSITY

The theoretical low population density is filled with a large number of tourists who are hosted in every part of the city, which makes it profitable to create street activities and public transport.

DISTANCE TO TRANSIT

Due to the form of the city (in the center based on a grid, on the outskirts oriented towards development around the access road), the vast majority of the city has the potential to be in the area of servicing the main bus lines.

DESTINATION ACCESSIBILITY

Currently, there is no bicycle path network in the city - new, safe routes may facilitate access to most services within this small city
Given the size of the city and the agglomeration and the number of tourists moving around the area, increasing the frequency of bus travel and editing routes can cover the main transport needs of the city.

PUBLIC PLACE

- Connectivity- Improving the visibility of pedestrian connections to nature can build connectivity and activity in places favorable for the district
  Zakopane, a town that was recently a village, has an existing traditional network of pedestrian routes that is an alternative transport network - but the entrances to it are very difficult to see and the paths are used by the few.
- Since the number of tourists' cars is responsible for the scale of road enjoyment; limiting their entry into the city could significantly improve the comfort and safety of public spaces in the city.
- Considering that public life once took place on hiking trails and also in green areas around the place of residence and since trend for life in motion, walking, cycling, cross-country skiing or ski touring, is back again connecting urban sites with routes can support activity of potential public places.

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OPPORTUNITIES

THREATS

CONTROL

The roads connecting to the paths and nature run through semi-private zone which may raise objections from residents who will not want strangers passing through their zone of residence.

Green areas around the housing estates lose their importance for the inhabitants. They are no longer a place to graze animals, t, and with local construction pressure and land prices, they are an enticing direction for landlords.

LIVEABILITY ANALYSIS
CONCLUSION

From the analyses on the previous pages the following conclusions can be drawn about the necessary transformation goals of the city:

CAR ACCESSIBILITY REGULATION

An analysis of the quality of public space has shown that the scale of car dependency in the city has a destructive effect on all areas of the city. For this reason, a strategy is needed to significantly reduce its presence in each of the urban fabrics.

SUSTAINABLE MOBILITY

In connection with the reduction of car traffic in the city, it is necessary to develop sustainable transport:
-functional location of bus stops
-functional public transport network in the region
-improving transfer efficiency for sustainable transport
-provision of a sustainable mobility policy for areas beyond the reach of transit routes

SUSTAINABLE DEVELOPMENT

In order to protect the quality of space and the identity of local communities, it is necessary to stop the chaotic way in which new buildings are built; especially in the area of automobile fabrics. For this, it is necessary to provide perspectives on the location of buildings that meet the principles of balanced development.

PUBLIC SPACES QUALITY

To improve the quality of public space, it is crucial to adapt the profiles of the main road types to the needs of pedestrians and sustainable transport vehicles.

PUBLIC PLACES OPPORTUNITIES

each urban fabric needs a strategy to offer public places serving and supporting the local communities.

STRATEGIC RELATIONSHIP BETWEEN SPATIAL OBJECTIVES

Thanks to the theories analyzed in the essay (pages X-Y) and especially the account presented by Newman & Kenworthy (2015), it is possible to sketch the relationship between goals. Action at the city and regional level in reducing car availability in close connection with the development of public transport is key. Successful action in these areas will only partially reclaim space in the city for the realization of sustainable development, the transformation of public spaces, and the creation of public places. This relationship is illustrated in Figure X.

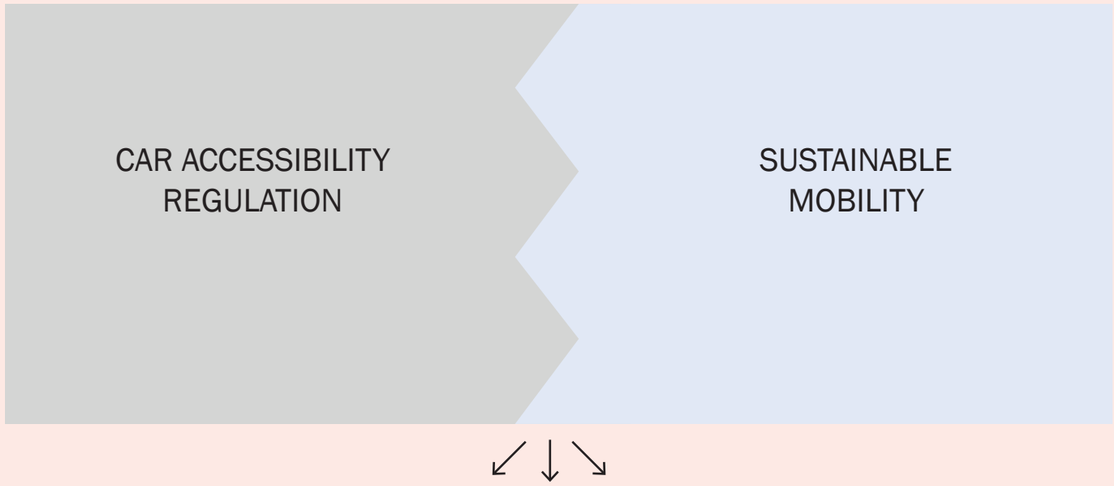


Fig. 50 .
Scheme of necessary actions in the functioning of the space and their mutual relationship

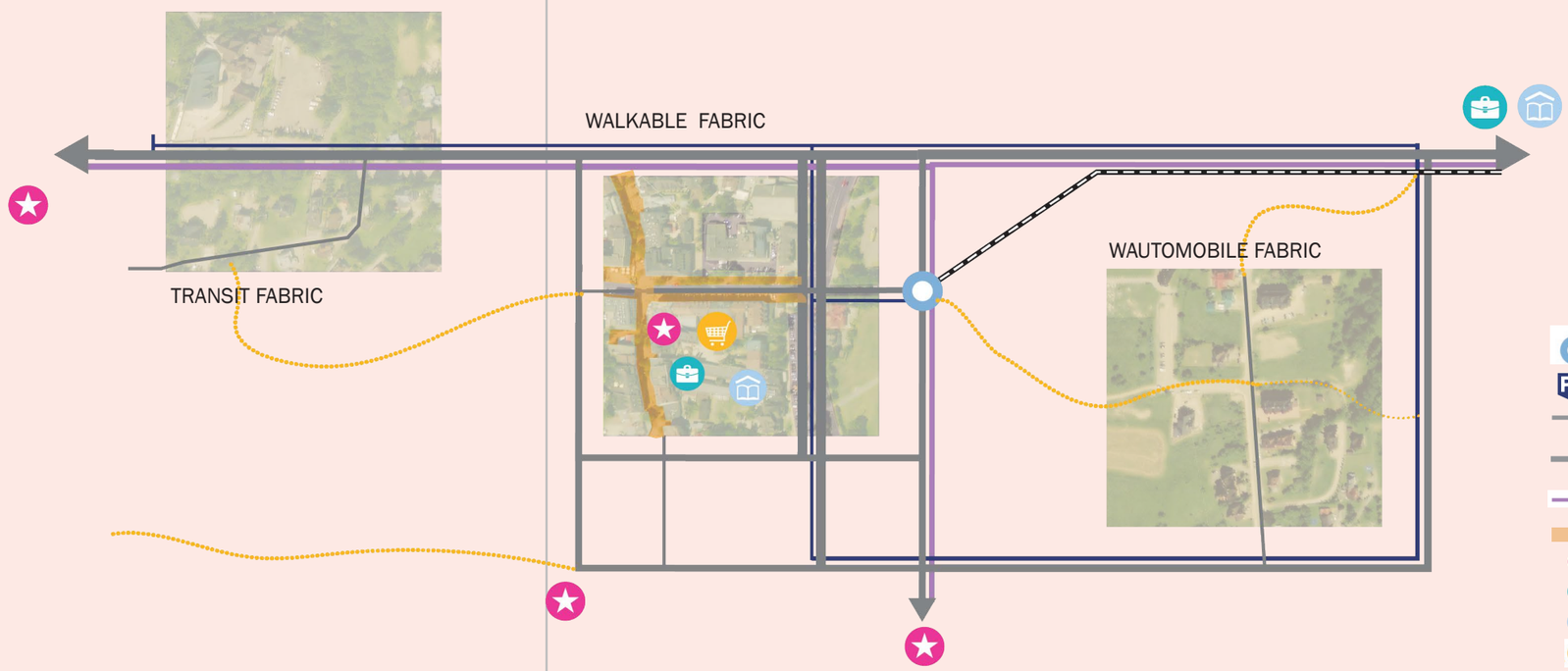


Fig. 51 .
Diagram of the functional relationship between different urban fabrics in Zakopane.

4.2 GOVERNANCE ANALYSIS

GOVERNANCE ANALYSIS
INTRODUCTION

This chapter presents an analysis of the administrative system in Zakopane, which aims to find the problems that prevent effective spatial transformations to improve the quality of life. The study consists of;

The analysis process will proceed as follows:

-analysis of the administrative toolkit and decision-making process for implementing the desired spatial changes in the light of Polish planning and zoning law and development policy principles

-Analysis of the city's existing and planned activities towards the desired transformation.

-Identification of key stakeholders and interviews for the evaluation of the city's administrative system.

-Power/interest index of stakeholders.

- SWOT analysis organizes the collected data in a way that allows the identification of intervention priorities.

-Example studies for changes in the management system.

GOVERNANCE ANALYSIS
ADMINISTRATIVE TOOLS

The analysis of administrative tools was based on the Act on spatial planning and development, and the principles of development policy(Kancelaria Sejmu, 2003; 2006)

This overview will serve to understand the issue of Zakopane's transformation and to build a new strategy based on administrative realities.

NAME:	SCALE OF APPLICATION:	GENERAL DESC. :	FIELD:	CHARACTERISTICS:	DECISION-MAKING PROCESS:
SPECIAL ACT	National and provincional scale.	A special law enabling the effective expropriation of private land for provincial or national strategic purposes.	Infrastructure investments	TOP>DOWN actions must be consistent with the country or regional strategyts	The decision-making process involves only administrative units and is not public
STRATEGY	Mandatory at the national, provincial, and municipal levels. They can also be created for a city agglomeration or an association of municipalities.	Define the basic conditions, goals and directions of development relating to sectors, fields, regions or spatial development	All areas of cities and regions.	TOP>DOWN hierarchical consistency of scales; from the national through province to the commune-stimulated by better financing of coherent projects HORIZONTAL COOPERATION AS A POSSIBLE BONUS -possible but not stimulated partnership cooperation between administrations of the same level BASIS FOR CHANGE The basis for any change in the functioning of the city. Potential projects and investments must be in line with the strategy	The entity preparing the strategies/programs prepares a diagnosis of the social, economic and spatial situation -Consultation: Public information on consultations and the manner of submitting comments. On a national or provincial scale, consultations take place between administrative units. The project of the development strategy and the commune development strategy is subject to consultations in particular with: neighboring communes and their associations, local social and economic partners, inhabitants of communes Draft programmes are subject to consultation with local government units and social and economic partners. -Comments: the possibility of sending public comments on the draft for 35 days -Evaluation report The entity that prepares the draft development strategy carries out prior evaluation of the relevance, anticipated effectiveness and efficiency of the implementation of the situation -Approval of the project and public announcement
PROGRAMS	Mandatory at the national, provincial, and municipal levels. They can also be created for a city agglomeration or an association of municipalities.	Operational and implementation documents established in order to implement goals of the strategy,	All areas of cities and regions.	PROSPECTS FOR FINANCING -the document must state what sources of finance are being considered for the planned activities, but these are not in any way assured BASIS FOR OBTAINING EU FUNDING Programme investments, coherent with the strategic objectives, have the possibility to apply for financing from the European Union budget. COMPETITION OF PROGRAMS FOR FUNDING Investments included in the programs of various municipalities compete with each other in competitions launched by the provincial authorities for funding (mainly from the EU budget)	
SPATIAL DEVELOPMENT STUDY	City scale	A document drawn up for the entire area of the municipality, defining in a general manner the spatial policy and local development rules. It is the link between the strategy and the land use plan	The use of land in the city	CHANGE OF USE -areas requiring a change in the use of agricultural and forest land for non-agricultural and non-forest purposes; on the basis of economic, environmental, social and demographic forecasts, CONDITIONING -Determination of conditioning for future changes in land use DESIGNATION OF SPECIAL AREAS -areas requiring separate regulations; e.g. areas in need of merging and division of real estate, as well as areas of public space; PRINCIPLES Principles for shaping and protecting different types of land use For example, agricultural areas, but also the way of developing and shaping public space around the stops in order to stimulate the public space	-Start Commencement of works commissioned by the commune council -Consultation: Obligation to advertise publicly and hold one consultation meeting with residents -Collection of comments Public announcement on the office's website; 21 days for stakeholders to submit comments -Design -Opinions and arrangements with: -bound communes - the appropriate town planning commission -regional environmental protection department -A competent fire department -e.t.c. -Adaptation of the project to the opinion -Announcement of the Project for public review for 21 days -Possibility of submitting comments for 21 days -Including or addressing comments in text -Approval of a legal act
LAND USE PLAN	District scale	A legal act which determines the intended use of the land, the distribution of public investment and determines the manner of land development and development conditions	Land development	PRINCIPLES -principles of shaping the land, buildings and land development indicators -detailed rules and conditions for the consolidation and division of real estates covered by the local zoning plan	
REVITALISATION PLAN	District scale	A specific form of the land use plan plan that may be adopted for the revitalization area (after prior approval of the municipal revitalization program).	Land development	CONDITIONING -Gives the city additional powers to set conditions for potential investors; e.g. creating a public place, making premises available for public use, social use, etc. BETTER INVESTMENT PROSPECTS Projects within the framework of a revitalization plan can apply for funding from a separate budget allocated by the province.	

GOVERNANCE ANALYSIS
PLANNING DOCUMENT ANALYSIS

CITY STRATEGY

In 2016, the city authorities passed new development strategy valid until 2026. The document bases its ideological axis on the concept of smart city, understood as investing in people and social capital, traditional (transport) and modern (ICT) communication infrastructure, sustainable fuel and energy management, as well as high quality of life combined with wise management of natural resources - achieved through participation and social commitment. (Zakopane, 2016).

A smart city is a broad concept which consists of all areas important for the functioning of the city, but asis seen from the definition, there are elements consistent with the guidelines for sustainable liveability identified in the previous chapter. One of the objectives is also subject of the more inclusive governance this chapter addresses.

As part of the preparation of the strategy, the city carried out a thorough diagnostic process which was supported by series of consultation with residents, representatives of the Tatra National Park, local NGOs, entrepreneurs, and a group of academic experts. These data discuss issues in governance process, as well as the topics already analyzed in this work, the results of which are represented by the list of collected below document objectives;

With the exception of the subject of car accessibility (where the city is during preparations for expansion of the central station and the construction of a Park & Ride point there) the city's tasks in those topics consist mainly in carrying out analyzes process to find possible solutions.
The strategy also includes other goals which helpful for the transformation strategy like the ones from economy related chapter:

ACCESSIBILITY REGULATION AND MOBILITY

Goals:
- Transport exclusion of a large part of the population
- Restricting entry of tourists' cars
- Development of pedestrian and bicycle paths based on historical network

LAND USES

Goals:
- Stopping construction pressure on areas excluded from development in official development plans
- Supporting green areas

connected →

ECONOMY

Goals:
- Supporting farms to support local culture and preserve green rural spaces.

PUBLIC PLACES

Goals:
- Creating public spaces and functions for residents integrating local communities.
- Lack of strategies for individual neighborhoods to support their local communities and their identity

connected →

- Supporting beginning entrepreneurs not related to tourism in order to diversify the city's economy. The support may be of a local and marketing nature.
- Creating an incubator for non-governmental organizations, along with help in finding a location
- Consolid

The key factors here are the identification of management and community involvement, for which I mention both the identification of problems and the planned tasks:

From the governance department, I am citing not only the identified problems but also the tasks that the city has planned to improve the situation. Tasks are punctual; one problem, one measurable task. The potential for the integration of goals into wider projects or tasks is not signaled.

GOVERNANCE

Goals:	Tasks:
• Residents do not have a sense of efficiency and are not aware of the possibility of participating in city management, which is why the level of social participation is low	• Developing a system of public consultations included in the standard of administrative work • Lectures in schools educating about the possibility of engaging in decision-making processes • Press articles • Public lectures • Integrating events such as citizens' picnics • Improving the availability of public information by improving the web platform and applications
• Lack of partnership relations with non-governmental organizations and actors	• Developing cooperation programs with non-governmental organizations • Creating an administrative standard based on consultations with actors in the implementation of public tasks • E-governance; greater digitization of the work of the city hall and the flow of public information • Reorganization of the office's work in order to
• Lack of support for local groups important to local communities;	• Creating an incubator for non-governmental organizations, along with help in finding a location • Consolidation of the community of Zakopane craftsmen and craftsmen (meetings, building a constantly updated database of contacts) and then promotion of craft and handicraft activities
• Problems in cooperation with other administrative institutions and offices of neighboring communes	• Developing a spatial information system in the Municipality • Developing a system for coordinating the activities of the city hall and poviat starosty in Zakopane and other public institutions operating in the city, using greater digitization • Strengthening cooperation between the city hall and offices of other municipalities, including neighboring municipalities and partner municipalities, as well as on the level of cross-border cooperation by increasing the frequency of meetings and joint search for cooperation.

GOVERNANCE ANALYSIS
PLANNING DOCUMENTS ANALYSIS

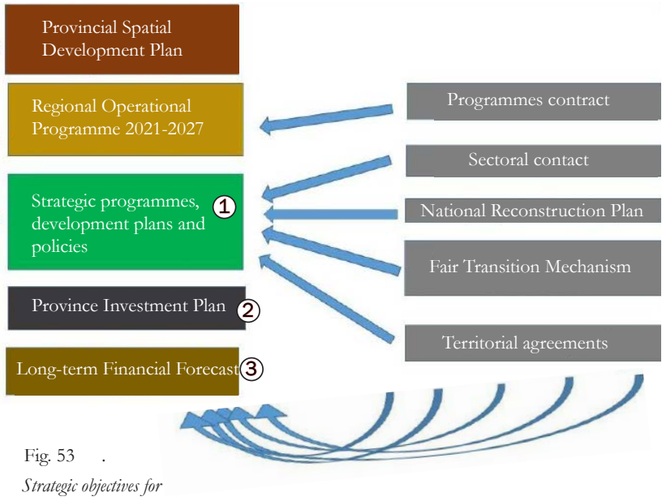


Fig. 53 .

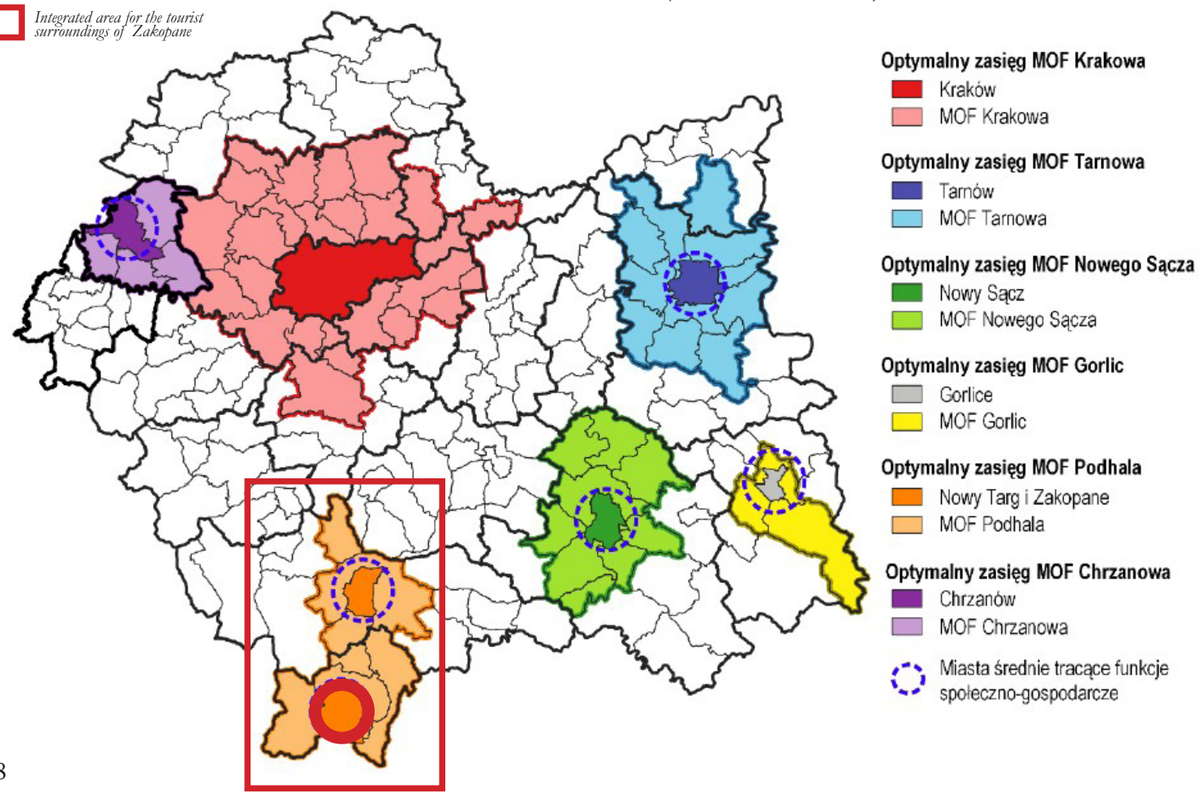
Strategic objectives for development of the Malopolskie Province (Kozlowski et al., 2018)

Fig. 52 .

Plan for the creation of Integrated Investment Territories in the province. (Kozlowski et al., 2018)

City of Zakopane

Integrated area for the tourist surroundings of Zakopane



PROVINCE STRATEGY

The provincial strategy of setting goals for the whole region is therefore very broad and complex. These goals which the Province has set and which will have a close impact on the realization of Zakopane's transformation are:

①**Provincial programs;** ongoing and planned investments important for Zakopane will be analyzed on the next page (Kozlowski et al., 2018).

②③ **Provincial investment financing strategy;**

The strategy focuses heavily on the funding prospects for strategic projects. It is planned to adapt the strategic activities of the local level (municipalities) in line with EU funding, especially taking into account the National Reconstruction Plan (European Solidarity Package after the Covid-19 pandemic) and the creation of Integrated Investment Areas (X-maps) for which a separate budget has been created. This is intended to stimulate the associated municipalities to cooperate in investment. The new area includes Zakopane (map. X) as the center of the tourist region Podhale (Kozlowski et al., 2018).

PROVINCIAL MOBILITY PROGRAMME

The voivodship has planned a number of investments that will improve the accessibility of Zakopane.

④⑤ Investments were planned to speed up the railway crossing

⑥ Unfortunately, from the point of view of the objective of limiting car access to Zakopane, expansion of the road network was planned in its direction. However, it is positive that the construction of small bypasses has been taken into account in order to relieve the built-up areas. (Zarząd Dróg Wojewódzkich w Krakowie, 2015)

CONCLUSIONS

These strategic actions cover the period up to 2030 and must be taken into account when developing the spatial transformation strategy

Fig. 54 .

Road investments in the south of the Province 2016-2030, (Zarząd Dróg Wojewódzkich w Krakowie, 2015)

GOVERNANCE ANALYSIS
PLANNING DOCUMENTS ANALYSIS

CITY'S MOBILITY PROGRAM

The city's transport program (presented on fig. X) has been developed to implement the strategic goals for smart mobility; the development of sustainable transport in the city and the reduction of car traffic in the center.
The program is consistent with the transport plan of the Province and takes into account the development of improving the railway connection and the possibility of creating new stops in local train communication. New roads are also planned to relieve built-up areas from car traffic and the addition of new bus line (Rada Miasta Zakopane, 2017).
The city has also planned activities for the construction of road sections that would act as a partial ring road (points 4 and 7 in fig. X). It is part of the provincial strategy to improve mobility for the region ((Zarząd Dróg Wojewódzkich w Krakowie, 2015) The planned two-lane roads would relieve some built-up areas from transit traffic (arrow 9 in fig. X).

IMPLEMENTATION

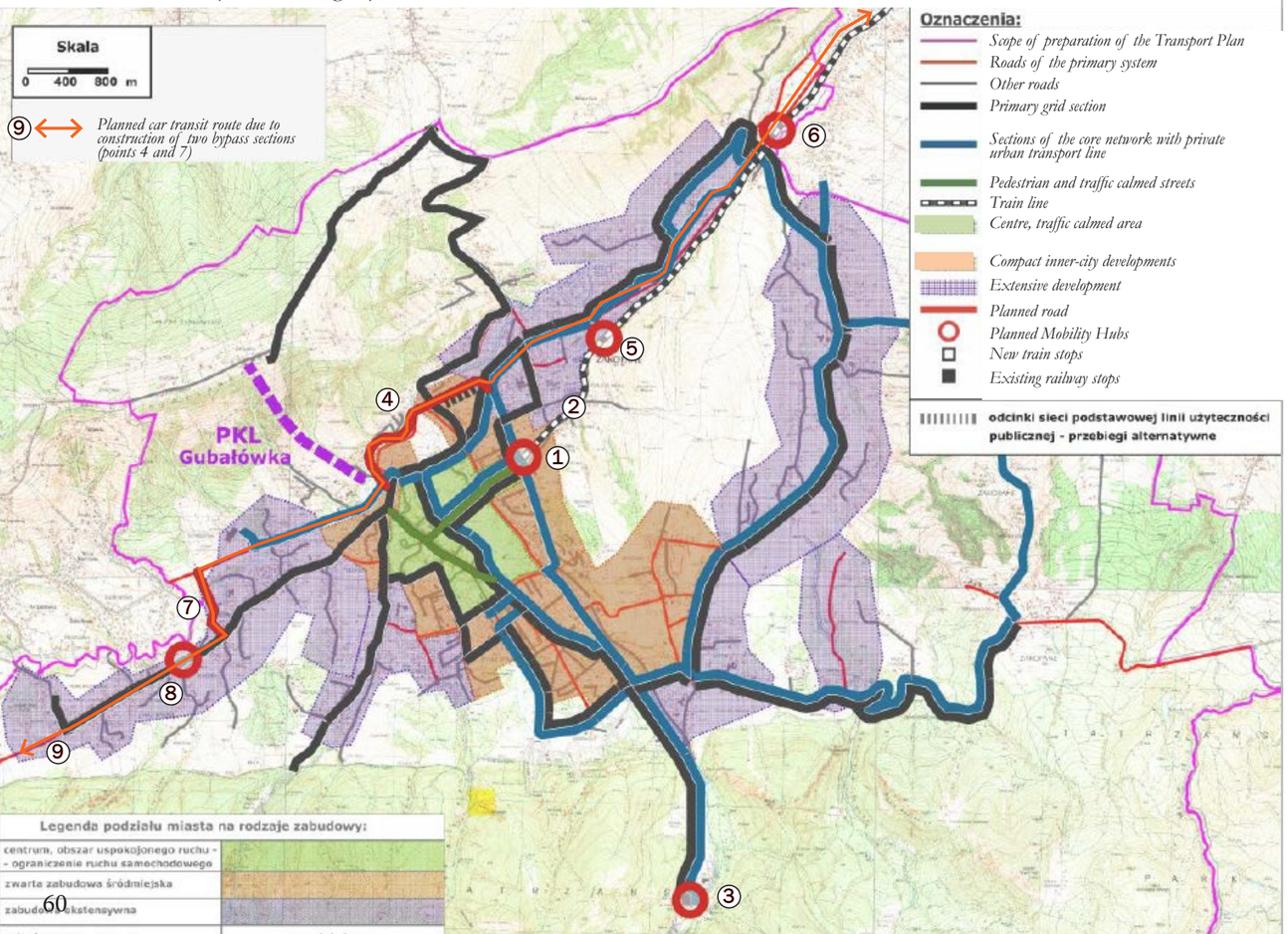
Evaluation of implementation on the basis of tenders announced on the Public Information Bulletin for the City of Zakopane (Urzad Miasta Zakopane, 2021):

① In the city center, the renovation of the railway station and the construction of a Mobility Hub is already nearing completion. Car parking spaces are only provided to serve local residents.

② The construction of a second railway line is also nearing completion, which will enable an increase in the number of train journeys.

③ The mobility junction at the cableway to the High Tatras has also secured funds and realization. This investment will enable the connection of the public transport line running from the central station.

Fig. 55 .
Transport plan for the city of Zakopane until 2025 (Rada Miasta Zakopane, 2017)



④ The northern section of the planned bypass has also secured funds. Its construction should start in 2023 (Urzad Miasta Zakopane, 2021).

⑤ ⑥
The mobility Hubs that were supposed to be coordinated with barrier parking are frozen and their implementation is uncertain (Urzad Miasta Zakopane, 2021).

⑦ ⑧
The mobility Hub which was supposed to be coordinated with the bypass road has completely disappeared from the implementation plans (Urzad Miasta Zakopane, 2021).

CONCLUSION

The city's transport plans were in line with the objectives of Car Access regulation and sustainable mobility development: the construction of a network of interchanges, the development of railways, and the construction of a partial bypass around built-up areas.
The problem is that half of the strategic investments are frozen or blocked, which prevents the effective functioning of sustainable transport and even more so the possibility to regulate the restriction of car traffic in the city.

Despite the fact that a plan for the construction of a cycling network and the use of a network of footpaths in green areas for this purpose is included in the city's strategy, there is still no programme for the realisation of these postulates (Zakopane, 2016).

GOVERNANCE ANALYSIS
PLANNING DOCUMENTS ANALYSIS

Fig. 56 .

The effect of revitalization of monuments Czerwony Dwor. Function; local cultural center (source; list of figure)

REVITALISATION PROGRAMME

The program covers the city center as the areas where the greatest number of social, economic and demographic problems is accumulated. The adopted revitalization program is important from the point of view ofliveability as it includes the objectives of improving the public offering and the quality of life of the inhabitants of the areas covered. Objectives for the revitalization of facilities and open spaces with public potential and the implementation of the public program have been set (Rada Miasta Zakopane, 2017)

Areas and facilities that are in the authority of the city or other State organs have been taken over; i.e. monuments, offices, green areas, railway station etc. part of the interventions was planned under the civic budget via citisens votes.

IMPLEMENTATION

Many investments have been put on hold.
The slowness in implementing plans, especially under the Citizens 'Budget, lowers the residents' trust and willingness to participate.
Successful revitalization has a low contribution to the improvement of the quality of space in the district, as these are buildings and surroundings separated by a fence and do not function as an active public space.

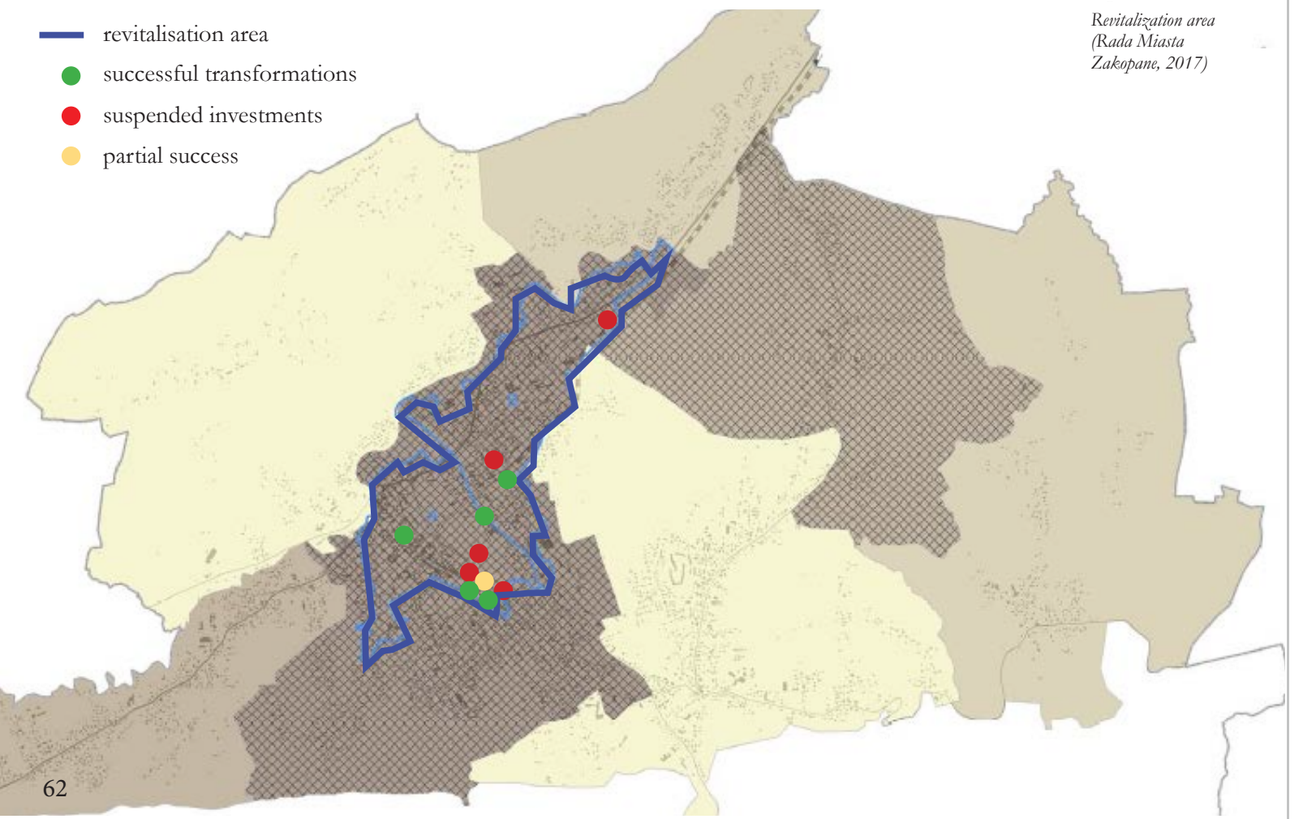


Fig. 57 .

Revitalization area (Rada Miasta Zakopane, 2017)

CONCLUSIONS

The Revitalization plan recognizes the need to improve the quality of the space well, but the actions are undertaken ineffectively. This is mainly due to the restriction of activities to public lands.

STRATEGIES OF NEIGHBORING COMMUNES

Zakopane and the neighboring communes form the territorial unit of the Tatra Mountains. The poviat's strategy talks about the need to provide public transport in the region, however, it shows budget shortages to meet the goal (Rada Powiatu, 2012)

Zakopane and the neighboring communes form the territorial unit of the Tatra Mountains.
The results of the public consultations in each of the County Boroughs have shown that residents expect the creation of functional public transport in the region, the improvement of road safety, and the promotion of the Borough as an attractive place for tourism. The poviat's strategy talks about the need to provide public transport in the region, however, it shows budget shortages to meet the goal (Rada Powiatu, 2012)

TATRA NATIONAL PARK

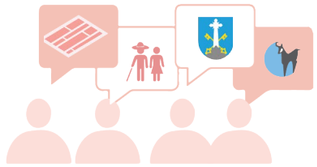
The Tatra National Park realizes in partnership with neighbouring municipalities several recreational cycling routes.

Fig. 58 .

Map of Tatra Communes (soirce; list of fig.)

GOVERNANCE ANALYSIS
EVALUATION OF THE DECISION-MAKING SYSTEM WITH STAKEHOLDERS

Zakopane Municipality
TPN (Tatrzański National Park)
Residents
Private land owners



EVALUATION WITH KEY STAKEHOLDERS

In order to understand why the city's and region's strategic actions are ineffective, stakeholders representing the main interest groups were interviewed (see next pages for a summary of actors' positions). All stakeholders asked to remain anonymous. Interviews, therefore, took place as a series of separate meetings in September 2021. Questions were asked about the parts of the strategy that were most relevant to the stakeholder representative and the scale and form of their participation in the selection process.
Small investments that have been discussed with actors:

① WESTERN PART OF THE PLANNED CITY BYPASS WITH THE MOBILITY HUB-WHY DID IT NOT WORK OUT?

PRIVATE LANDOWNER

" It was us, a group of landowners, who blocked this investment by suing. We were united and motivated by outrage. The judge had no doubts that the investment, as proposed, did not fulfill a public purpose at all, so the expropriation was unjustified. This was because; nobody informed us, that there were no meetings. It was only after the fact that we found out that there was one notice of public consultation hanging in the parish. I found out about the case by accident, when a representative of the oil company called me with a proposal to buy the rest of my land to build a petrol station. Decisions were made over the heads of landowners; the county clerk and the pastor of the church next to the planned bypass were the active parties. It was on his land that the mobility hub was to be redeveloped. The whole project, using our land and public money, provided pilgrims with better access to the sanctuary.
On top of this, they wanted to expropriate us for symbolic amounts. We could not agree to this."

MUNICIPALITY OFFICIAL

" Indeed, the investment has been blocked and buildings have already started to be erected on the land earmarked for the bypass. I have no idea how the bypass will be closed in the future.
The Mobility Hub was to be realised in partnership with the Church Sanctuary, as it is a popular tourist location and it was in the interest of the co-investor to improve the accessibility of its facility. Unfortunately, due to unreliable consultation and poor design, the project attracted a lot of public opposition. People do not trust cooperation of the authorities with private investors due to numerous experiences of corruption in the past"

1. IMPLEMENTATION OF MOBILITY HUBS AT THE ENTRANCE TO THE CITY WITH BARRIER PARKING?

MUNICIPALITY OFFICIAL

② " These investments have been suspended for lack of funds. We are counting on a pool of EU funds allocated by the provincial government, but this requires winning a competition. In such competitions important investments from all municipalities of the province compete for money, therefore we are not able to say when we will be able to realize these goals."

③ RENOVATIONS OF MONUMENTS FOR PUBLIC USE: WHY HAVE THEY NOT ALL BEEN SUCCESSFUL?

MUNICIPALITY OFFICIAL

"Municipalities in Poland are underfunded. From our own budget or with the support of the state we are not able to do much. The key here is the EU funding.".

RESIDENT

"I don't know why these investments have not been made. There were public consultations, the administration wanted the residents to get more involved, and then for years they fail to implement it. In my opinion, nothing can be done in this city and it's not even worth spending your time on these meetings"..

④ COLLECTIVE TRANSPORT LINKING DIFFERENT MUNICIPALITIES : WHY ARE THERE NO PLANS, EVEN THOUGH IT IS CLEARLY EXPECTED BY THE RESIDENTS?

MUNICIPALITY OFFICIAL

"The development of public transport in the city has been neglected since the 1990s. It is only in the last 10 years or so that the city has made intensive plans for the development of public transport. However, there is a lack of money. So far, the lines that run in the city are not profitable and the city cannot afford to contribute to them. Regional transport requires the cooperation of municipalities, which has so far been limited. It is only thanks to the recommendations of the Voivodship for the creation of ITIs (areas for integrated territorial investments) that regional cooperation for the plan of joint investments has begun. However, the meetings started not long ago (end of 2021).

⑤ CYCLE NETWORK- WHY THERE IS NO PLAN?

MUNICIPALITY OFFICIAL

"For now, the priority is public transport and Mobility Hubs. Once we have funding for these, we will implement a programme for cycle lanes."

A REPRESENTATIVE OF THE TATRA NATIONAL PARK

"We are currently planning several cycling routes along the Park boundary in partnership with neighboring municipalities. Such investments are in our interest to keep the area around the Park green and focused on slow-mobility vehicles so that the animals in the National Park have peace and quiet.
We would like to increase the number of such investments, but the problem is the landowners; they are reluctant to make landscape investments because they expect that one day they will be able to develop the green areas. The problem is also the lack of funds in the partner municipalities.
"

GOVERNANCE ANALYSIS
ACTORS ASSESSMENT

On the basis of analyses of planning documents and own observations, the main stakeholder groups important for the city's transformation have been identified

1. National and European authorities have the greatest influence because they are able to change the law and support given projects financially and regulally. The European Union offers many programs dedicated to sustainable local development, however, the involvement of structures of this level requires the intercession of intermediaries such as the authorities of the Malopolska Province. For projects related to transport, the willingness to cooperate with state institutions managing roads and railways is also important.

2. The key to the cooperation and favor of these higher-level bodies is, above all, the active action of local authorities. Considering that the effects of various projects may concern different areas of communes, their cooperation is necessary to start activities. It is often difficult to implement due to the different level of profitability of the given projects for each party.

3. The Tatra National Park has a high position and commitment, as it manages half of the city's area, and is also the main attraction for tourists and the city's economic engine.

4. Private owners and entrepreneurs show great interest in decision-making processes, who are very active in opposing any activities that are detrimental to their interests. In the current ownership paradigm supporting private property, they have relatively high power, and their support or objection often proves to be crucial.

5. Low positions, despite the fact that the transformations concern them in particular, have the inhabitants themselves, as well as tourists. Due to low social activity and a sense of solidarity, the inhabitants do not have a strong influence as a group. Tourists, despite being the economic engine of the city, but due to the iconic and symbolic position of the city as a tourist destination, it does not seem possible to start boycotting the city, so their voice also has a relatively low impact.

6. As the least important, there are social groups and institutions that have an impact potential, but are not necessarily interested in public projects that do not concern them directly.

Fig. 60 .

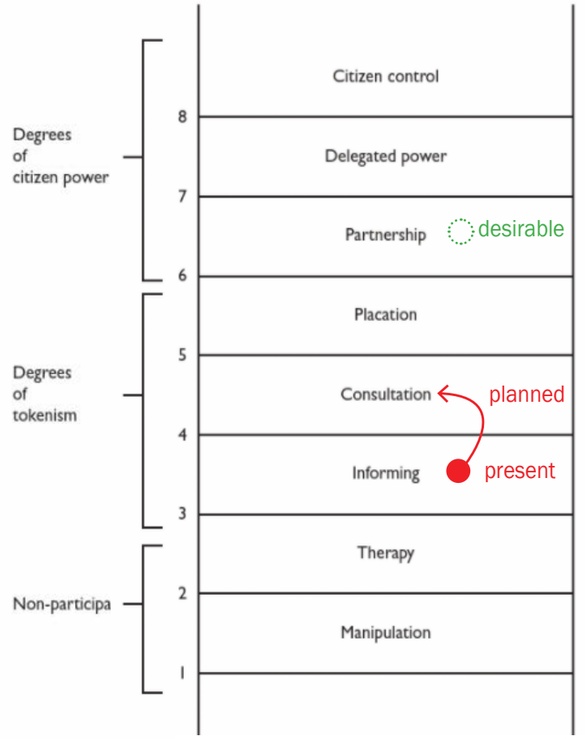
Actors assessment (own drawing)

CONCLUSIONS

- Although the decisions concern the common good, from the moment the problem is recognized by the city authorities, their participation in the process of finding and evaluating solutions is negligible. Even with the changes announced in the strategy and the preparation of consultation regulations by administrations, the process of involving residents will still be insufficient for collaborative city managment (Fig 44).
- Due to the covert process of creating solutions and the lack of public involvement, the imposed solution often meets with strong opposition from individual private actors, which often effectively blocks public projects.
- Collaboration between various administrative bodies is of key importance in initiating beneficial transformation processes. As mentioned in the self-analysis of the city's strategy, such cooperation does not function well, which jeopardizes the decision-making process from the inside.

Fig. 61 .

The position of the city on Amstein's eight rungs on a ladder of citizen participation. The current state and the state outlined in the city's strategy.



GOVERNANCE ANALYSIS
SWOT ANALYSIS

the conclusions of the analysis carried out in this chapter are presented using the SWOT table:

STRENGHTS

- STRONG VISSION SUPPORTED BY CITIZENS; The city, thanks to the diagnostic work carried out, is aware of its problems and has started to work actively to find solutions to improve the lives of its inhabitants
- CONSISTENCY OF PLANS; tools of spatial policy are used as part of a joint strategy, and are in line with the objectives set in the spatial analysis of this project

WEAKNESSES

- PROJECTS OREINTED APPROACH; Objectives are divided into various projects which, through separate funding programs, can be implemented at unpredictable timescales and thus lose consistency.
- PROTEST ORIENTED DECISION MAKING PROCESS; the decision-making process under the Spatial Planning Act is informative. Consultation is symbolic, most decisions depend on agreements at the level of various administrations. Residentss can only submit opinions and protests. As a result, most decisions are met with active protest and no active support.
- LACK OF A EFFECTIVE LOCAL FUNDING STRATEGY;The city has only two strategies for financing investments: comply with the provincial strategy and use their budget, or compete for funding from the European Funds. Although the provincial strategy recommends that municipalities adapt to dedicated EU programs such as the Integrated Investment Area (IIT), Zakopane only started preparing for this in 2021. In Zakopane, there is no cooperation with the private sector due to past corruption cases.
- NO LONG-TERM STRATEGY; because the city focuses only on individual projects, lacks a strategy for linking the various strategic actions and with a long-term perspective for the future.

OPPORTUNITIES

- COOPERATION WITH THE PRIVATE SECTOR; Due to economic growth and land prices in the city and the tightness of the Land Use Plan, there is great potential to work with the private sector to achieve the goals.
- COOPERATION WITH NEIGHBORING COMMUNES; the functional area of the city exceeds its borders, which gives the potential to look for solutions in cooperation with neighboring communes. There are European programs that specifically support such cooperation as Integrated Territorial Investments (ITI)
- AGRICULTURAL LAND WITH FOOTPATHS;There is a lot of agricultural land in Zakopane. The owners of this land want to change the use of the land. This pressure can be used for transformation with the private sector.g
- THE POWERS THAT SPATIAL STUDY GIVES; A new Spatial Study is currently being developed. In its framework, it is possible to record the conditioning of land-use changes, land for roads, and new investments. This can be used to plan development strategies with potential collaboration with the private sector.
- COCREATION AND TRANSNATIONAL DECISION-MAKING SYSTEMS; operating in other countries can help restore public trust.

THREATS

- OFFICIALS RELUCTANCE; The scale of consultations and social participation in the decision-making process included in the act is negligible, and officials are afraid of conversations with residents and stakeholders, which are difficult and unpleasant.
- SOCIETY DISTRUST; residents are very distrustful of the cooperation of public money with private interests. They have experiences suggesting corruption and cheating, which is why officials are afraid of such projects.
- DIFFICULTY OF INTER-ADMINISTRATIVE COOPERATION; the administrative process stimulates work within one administrative unit or between the superior and the subordinate - it is difficult to cooperate between units with similar powers, such as two communes, which hinders the development of the region.
- HIGH LEVEL OF PRIVATISATION OF THE CITY: the city has very little land in the city, and low tax revenues.
- MARKET POWER; private investors have strong influence, while public bodies or residents have a weak bargaining position.
- BUILDING PRESSURE; greenfield landowners want to develop their land for a vision of profit. Because of this, access to their recreational and natural qualities becomes difficult.

GOVERNANCE ANALYSIS
CONCLUSIONS

The analyses in the chapter showed that both the municipality and the citizens agree on the need to reduce car access and ensure sustainable mobility (page X). However, the transformation efforts of the city authorities have been characterized by very low efficiency for years (p. X and X).
Through interviews with different stakeholder groups (p.X-X), three main reasons for this were identified:

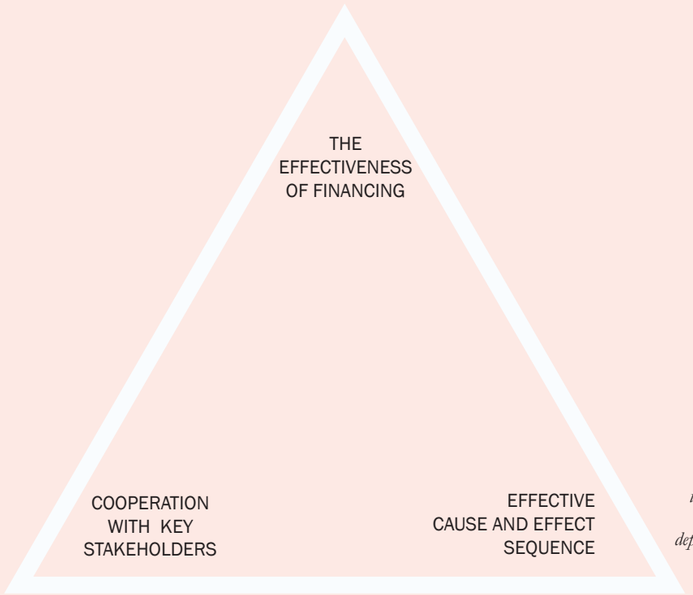
-**Lack of sufficient resources within the developed model of action;**
the neo-liberal model implemented in Poland in the 1990s assumed minimal state interference and for this reason city administrations have very low budgets (ref. X, p. X). Since 2004, the main funding for urban renewal has come from the EU budget, but it is allocated in provincial competitions and cities are not able to predict the timing of their projects.

-**Lack of integration of objectives and random sequencing of implementation**;
of the current financing model (largely random allocation of EU investment funds by provincial authorities) makes it safer for the municipality to plan projects without integration of objectives so that delays or blocking of some of them does not block the rest.

-**Conflicts with stakeholders**;
The decision-making process for the Polish local administration is very complicated and not very transparent. For this reason, public trust in the decision-making process is very low, and the result is strong public resistance and blocking some key investments.

An effective transformation must therefore take these realities into account. In the local context, the aspect of feasibility is decisive for the different possibilities of spatial transformation. The changes in the governance system which make up feasibility of transformation are illustrated in Figure X.

A SWOT analysis (p. X-Y) using the city's strategic documents, stakeholder interviews and literature has identified opportunities and constraints of change in these areas.



the feasibility of transformation depends on factors:
Fig. 62 .

5. CASE STUDIES

CASE STUDIES ANALYSIS
INTRODUCTION

In order to find potential tools for spatial and governance transformation within the framework of the defined objectives, an analysis of examples of three types of solutions in various tourist cities will be carried out.

CASE STUDIES ANALYSIS
CRITERIA FOR SELECTING THE CASES TO BE ANALYSED

In order to find potential tools for spatial transformation within the framework of the defined objectives, an analysis of three examples of solutions in different tourist cities will be presented.

A. ZERMATT, SWITZERLAND

Ski resort in the Swiss Alps. The town is closed from three sides by a mountain chain which imposes its urban form as a *Compact City* (Milder, 2012).

B. CHAMONIX MONT-BLANC VALLEY, FRANCE

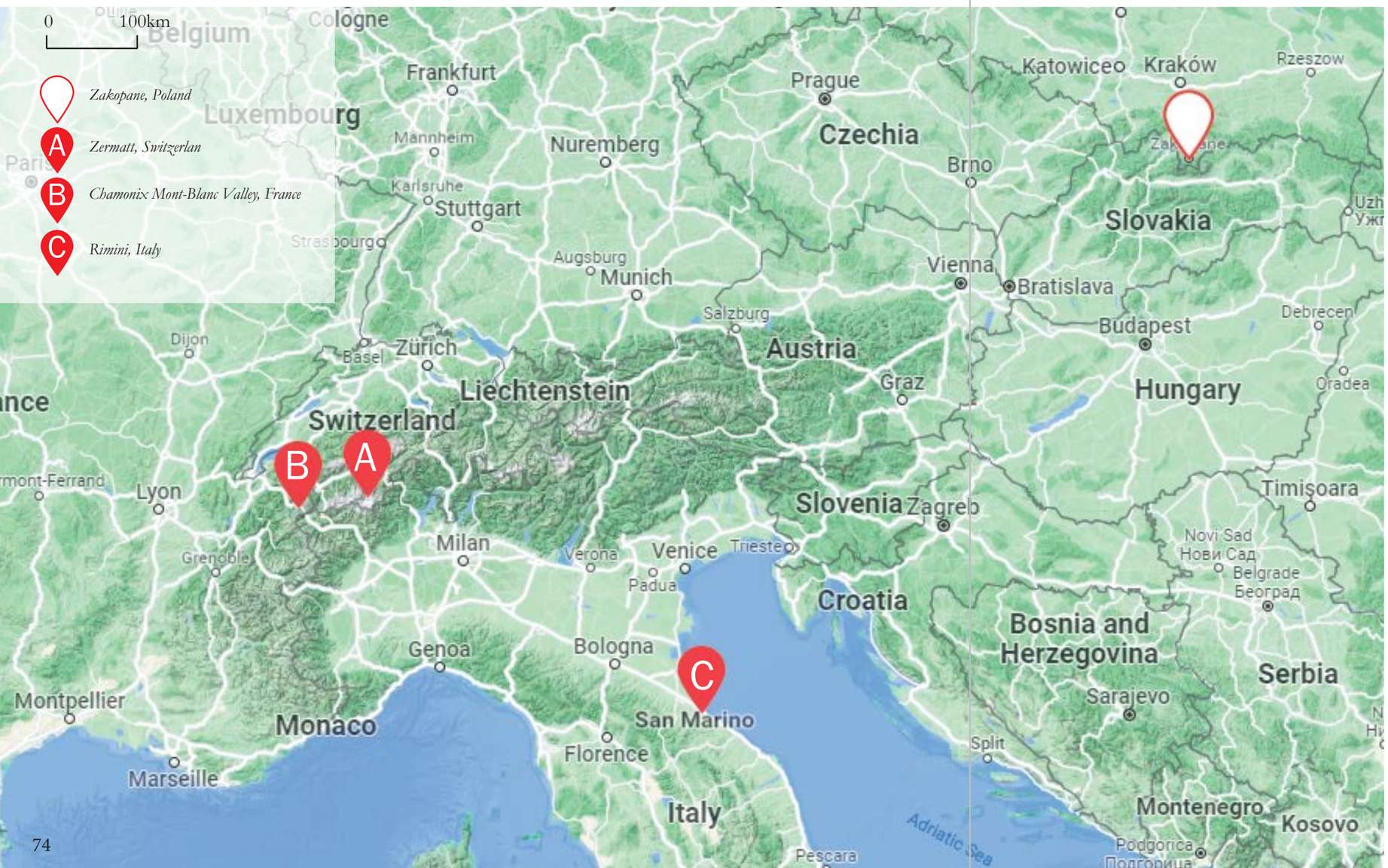
Ski resort in the French Alps. The town lies between two mountain chains which imposes its urban form as a *Linear City* (Milder, 2012).

C. RIMINI, ITALY

Summer resort by the Mediterranean Sea. The city, thanks to its location by the sea, is a local center for smaller inland *Satellite* towns living in tourist symbiosis.

Each of these tourist destinations is characterized by different geographical, cultural, and economic conditions, which in some aspects correspond to the characteristics of Zakopane. Zermatt and Chamonix Mont-Blanc, like Zakopane, are mountain resorts facing similar types of tourism, but they are smaller and more compact due to the greater constraints imposed by the Alps. Rimini, despite having a completely different tourist and geographical profile, is, like Zakopane, a larger city that is the center of a tourist agglomeration. It also has a similar administrative culture.
These different types of tourist destinations have adopted different solutions to reduce car traffic and improve the quality of life, which will be illustrated in the following pages.

Fig. 63 .
Fragment of the map of Europe.
Source: list of fig.

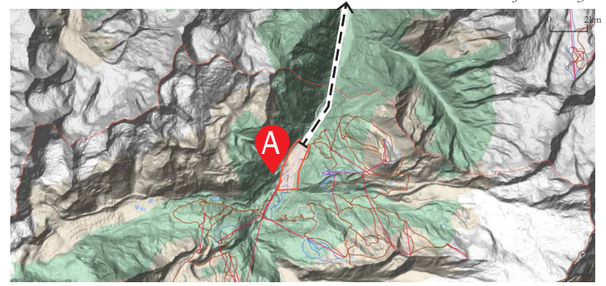


ZAKOPANE, POLAND

Fig. 67 .
Satellite view of the city

ZERMATT, SWITZERLAND

Fig. 65 .
Satellite view of the valley

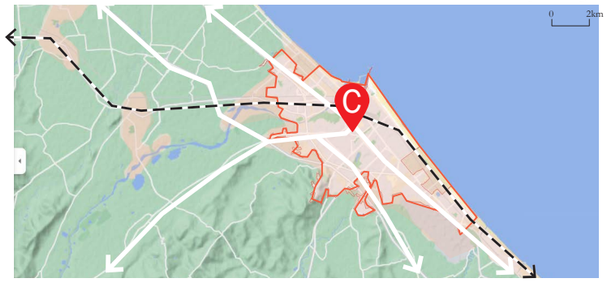


CHAMONIX_MONT-BLANC
VALLEY, FRANCE

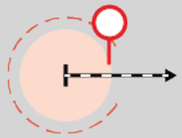
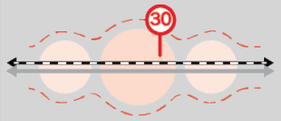
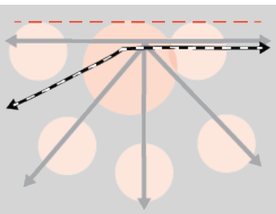
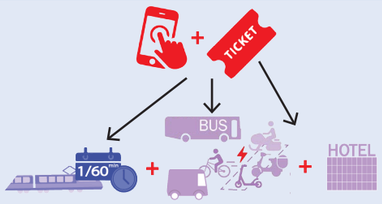
Fig. 64 .
Satellite view of the valley

RIMINI, ITALY

Fig. 66 .
Satellite view of the city



CASE STUDIES ANALYSIS
COMPARATIVE ANALYSIS

	SOCIO-ECONOMIC CONTEXT	ACCESSIBILITY REGULATION	SUSTAINABLE MOBILITY IMPLEMENTATIONS
A ZERMATT, SWITZERLAND *(Zermatt Tourismus, 2020)*	Switzerland is characterized by a strong civil society, important changes are carried out on the basis of frequent referendums. The organization of the state also gives ample scope for financing necessary public investments. Thanks to the strong development of public transport, car reduction in the country is a common practice.	 The town has banned the entry of cars; the only way to get to the village is by train.	Alternatively the town offers:  -Park + Ride before entering the city. -Access to the city by train with high frequency of travel.  -Mobility in the city is mainly on foot and by bicycle. There are also buses and electric vehicles for hire which is especially important in winter when tourists move with ski equipment.
B CHAMONIX-MONT-BLANC VALLEY, FRANCE *(Chamonix pocket guide, 2020)*	France also has a strong civil society, but many areas of the country are car-dependent. For this reason, the solutions adopted in Chamonix-Mont-Blanc for limiting car traffic are more liberal.	 Cars can still enter the village, but traffic is calmed down by strong speed limits and numerous one-way roads.	In parallel, the city and the entire functional region have introduced a number of measures to promote the use of sustainable modes of transport:  -Free public transport in the entire agglomeration of towns in the valley  -Availability of a wide range of electric vehicles for hire.
C RIMINI, ITALY *(PMR Rimini, 2020)*	The situation is different in Italy; the local administration has a low social mandate and very limited funding. Rimini itself is surrounded by smaller satellite towns which generated a high dependence on cars. Therefore, in order to reduce car traffic in the agglomeration, it was necessary to work closely with local actors to find solutions that reconcile the urban policy objectives with the economic perspectives of each actor.	 No restrictions on the entry of cars have been introduced in the agglomeration.	 Sustainable transport has been developed through the promotion of public transport and smart mobility services in integrated user-friendly applications as well as combined tickets whereby it has been possible to obtain a discount on the train+smart mobility+hotel package

SPATIAL QUALITIES

Different traffic calming stratagems were applied in each of the identified locations. The table below illustrates these differences:

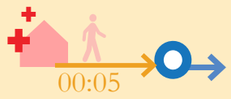
By eliminating cars from the city, the entire road profile can be shared between shared and slow-mobility vehicles. Thanks to the pedestrian intensity of some roads, they naturally have the potential to develop public services.

Typical road profile in the city. Source: list of fig. Fig. 70 .

The city, thanks to geographical constraints but also to the mobility pattern; develops within a strong densification of a small area.

In this model, the city still faces car traffic, but it is low enough that streets can be shared by different vehicles and a large part of the road profile is dedicated to pedestrians and services.

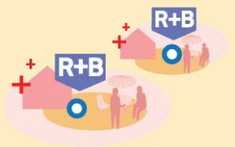
Typical road profile in the city. Source: list of fig. Fig. 71 .



Taking into account the spatial arrangement of a city (conditioned by a shape of a mountain valley), potential new buildings are located within the functional distance of public transport.

The city does not have much money for the revitalization of public spaces. For this reason, wide roads which were characterised by high car traffic were narrowed with slopes or painted lines and additional space was dedicated to cycling.

Typical road profile in the city. Source: list of fig. Fig. 72 .



In such a model, the whole agglomeration can develop within an integrated sharing mobility system.

CASE STUDIES ANALYSIS
LESSONS AND CONCLUSIONS

These examples show that different geographical, as well as cultural and economic conditions give different possibilities for action against tsarist dependency on tourist destinations. More stringency in car accessibility regulation requires a small commitment and transformation of the public space to provide conditions favorable to liveability (Zermatt). More liberal car accessibility (Rimini) involves the need to motivate stakeholders to move towards sustainable transport in other ways (such as good price or maximizing comfort of use) but also to intervene at the level of public space (adapting infrastructure to improve the comfort of use of other means of transport).
Between these two models, an intermediate strategy is represented by Chamonix-Mont-Blanc, where the entry of cars is possible but hampered by speed limits and free public transport throughout the region.

Each of these strategies was implemented under different cultural, geographical, and economic conditions. None of these contexts is 100% representative of Zakopane's situation. The next chapter will be devoted to testing different solutions in the local specificities of Zakopane.

6 STRATEGY DEVELOPMENT

STRATEGY DEVELOPMENT
INTRODUCTION

This chapter focuses on the process of building a strategy for the successful transformation of the city towards the vision set out in the previous chapter. This construction will be based on the information gathered in the Problem Analysis and will be carried out within a framework:

STRATEGY DEVELOPMENT
METHODOLOGY FOR THE STRATEGY DEVELOPMENT

CONCLUSIONS OF THE PROBLEM ANALYSIS

The problem analysis section identifies the main objectives for spatial and functional transformation, as well as the aspects blocking potential actions. A summary is presented in Figure 74, illustrating the strategic objectives and opportunities for their implementation.

SCENARIO BUILDING

As the SWOT analysis and case studies in the Problem Analysis chapter have shown, there are many potential options to address the objectives. In order to be able to test combinations of solutions in a transparent way, the method of creating compounding scenarios based on three alternative criteria will be applied.

OUTPUT CRITERIA FOR SCENARIOS

The starting point for the scenarios will be the 3 different strategies for obtaining financing (point 1 in figure 75). This aspect of the feasibility guidelines was chosen because, in the context of Polish cities, it is the sources of financing and the partners associated with them that have a decisive influence on the location and shape of potential key investments.

SCENARIOS OF SPATIAL CONSEQUENCES

The different financing strategies considered would influence investments and thus the form and scale of changes in the mobility system and spatial conditions of the city. This impact will be tested within the framework of scenarios related to the mobility scheme (point 2 in figure 75) and the human perspective on a selected representation of each urban fabrics (point 3 in figure 75).
Taking into account the time constraints of this project, the scenarios with regard to spatial changes will be proposed only on the basis of logical thinking, without e.g. simulating the traffic intensity - which should be done under different conditions.

SCENARIO EVALUATION

To assess the feasibility of each scenario, the spatial effects will be presented to representatives of decision-makers. Their opinions and comments will guide potential changes and decisions to create the final strategy (point 4 in figure 75). The purpose of this is to activate the actors so that they feel empowered, but also to realign the strategy to be as effective as possible (point 4 in figure 75).

STRATEGY COMPOSITION

Based on the evaluations and the determination of critical temporal points, a sequence of actions was composed (point 5, fig. 75).

Fig. 74 .

Conceptual framework for developing an effective transformation

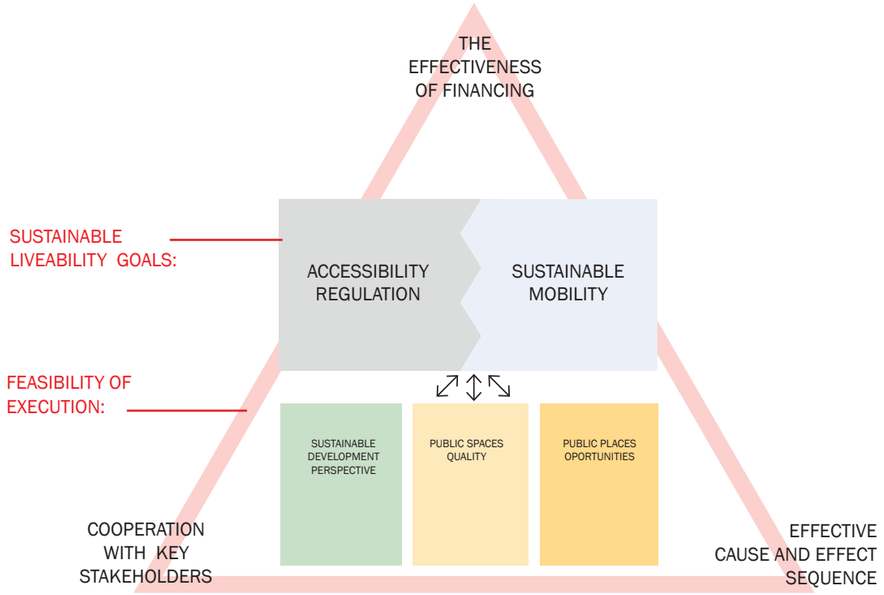
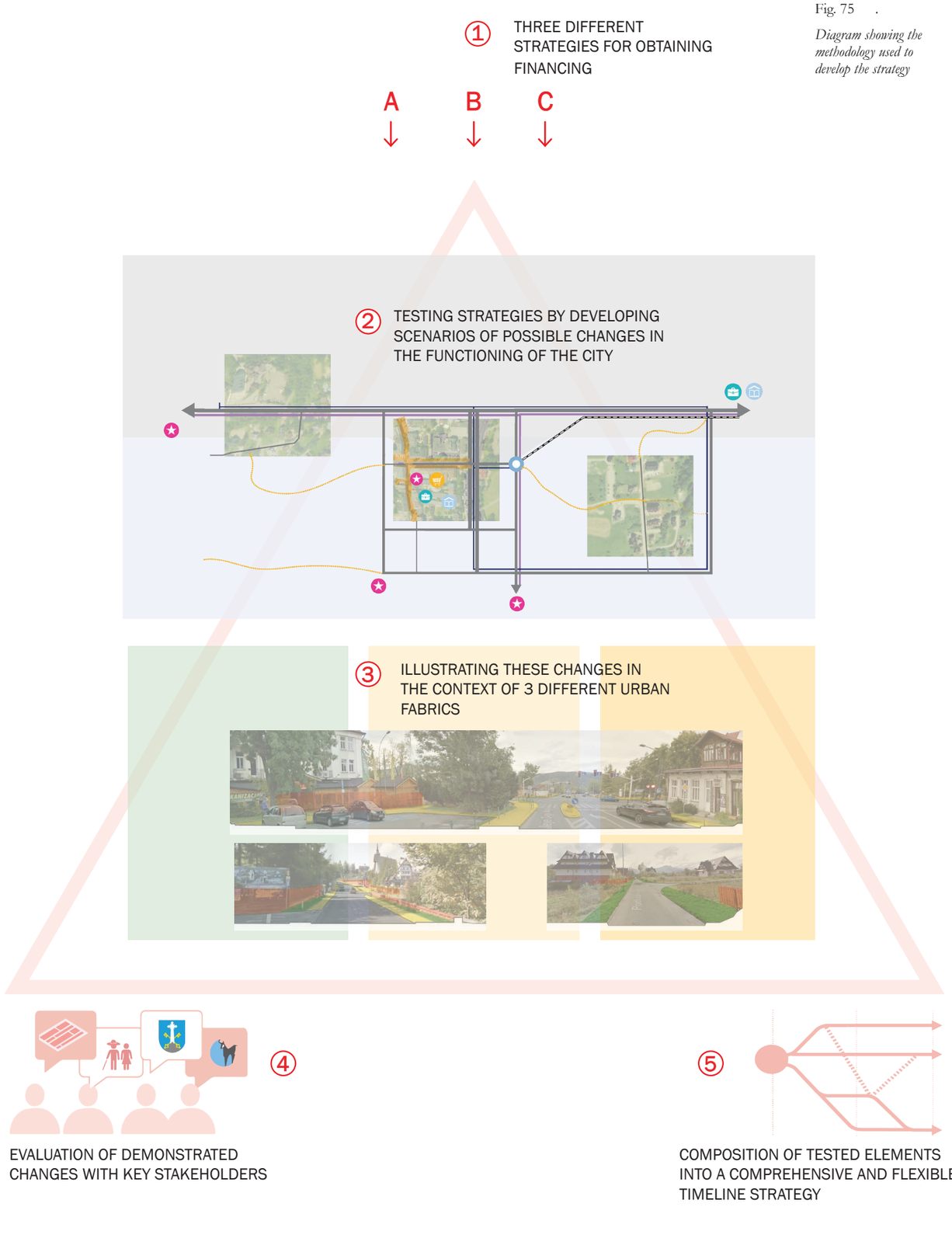
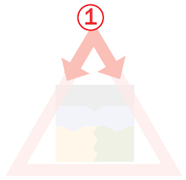


Fig. 75 .

Diagram showing the methodology used to develop the strategy



STRATEGY DEVELOPMENT
1. THE EFFECTIVENESS OF FINANCING- THREE DIFFERENT STRATEGIES



THREE EXTREMES FOR WAYS TO RAISE FUNDS

The given starting points for the created scenarios are based on the composition of the elements identified in the Problem Analysis chapter. These are the means of financing, the associated specific stakeholders and the administrative tools (Fig. 77) which define the specific opportunities and constraints for the spatial actions proposed on the following pages.

I TOP-DOWN EFFICIENCY

While the flow of state funds becomes more difficult the lower the level of territorial governance, this model is the most effective for carrying out large investments. For this reason, this scenario will be devoted to testing the best efficiency of the current model in spite of its limitations.
A catalyst for increasing the impact of such a model could be an injection of cash under is a European Union economic recovery package to support member states adversely impacted by the COVID-19 pandemic, although the Polish allocation of this money is still suspended by the political situation in the country.

II TRADE WITH THE MARKET

Zakopane is a strong tourist centre where private capital is very active and still looking for further investment opportunities. This scenario tests the possibilities of taking the interests of investors into account in the strategy in order to realise key changes in cooperation with private capital.

III ADJUST TO EU PROGRAMS

The EU offers investment funding under special programs to stimulate the implementation of the Union's statutory values. It is, therefore, possible to plan activities by adapting them from the outset to the terms of the programs:

-**ITI (Integrated Territorial Investments)**; a separate pool of European funds for the associations of municipalities to stimulate local cooperation

- CLLD (Community-Led Local Development) program supporting local community oriented projects

-Interreg; Poland-Slovacia
European program supporting cross-border cooperation

-NGEU (he Next Generation EU fund)
Here again, the catalyst could be " covid" money, potentially adding to the above EU programs.

MAIN SOURCE OF FUNDING	STAKEHOLDERS	LEGAL TOOLS
-European Funds Province's pool -National budget -The Municipality budget -NGEU (The Next Generation EU fund).	-In this scenario, administrative units at different levels are the key actors -Also the levels of transport institutions	-Provincial mobility programme -Municipal mobility programme -Regulation of traffic -Revitalization plan -Land use study and plan This scenario relies on maximum coherence between the different levels of corresponding strategic and land-use tools
-Private sector -The Municipality budget	-In this scenario the key actors are all kinds of institutions and companies with their own capital, whose interests may be able to combine with the city's strategic goals. -The Tatra National Park can also be a partner of this kind	-Land use study -Revitalization plan -Municipal mobility programme -Regulation of traffic on municipal and district roads -New tools: The city's original programmes and legislative initiatives In this scenario local strategy and planning tools are important. In the absence of developed standards for cooperation with the private sector, the initiative and creativity of local officials is also needed
-ITI (Integrated Territorial Investments) -Interreg; Poland-Slovacia - CLLD (Community-Led Local Development) -NGEU (The Next Generation EU fund).	-In this scenario, the key actors are partners integrated by relevant EU programmes -Considering that cooperation is in the initial phase and the lack of territorial structures, some entities have yet to be established (e.g. a regional transport institution)	-Regional strategy -Regional mobility programme -Revitalisation plans of partner municipalities In this scenario the development of new strategies and programmes at the scale of the partner functional area for the mobility system has potential.

Fig. 77 .
Table of elements composing the tested financing strategies

- *EU Funds*
- *Skarb Państwa (Treasury)*
- *GDDKiA (General Director for National Roads)*
- *PKP (Polish Railway Lines)*
- *Małopolska Province*
- *Tatra Poviat*
- *Zakopane Municipality*
- *Poronin Municipality*
- *Biały Dunajec Municipality*
- *Kościelisko Municipality*
- *Bukowina Tatrzanska Municipality*
- *Kościelisko Nowy Targ*
- *Slovacia*
- *TPN (Tatra National Park)*
- *Local public instytutions*
- *NGOs*
- *Religious institutions*
- *Farmers*
- *Sport tourism industry*
- *Car related services*
- *Tourism industry*
- *Private carriers*
- *Residents*

STRATEGY DEVELOPMENT
2. SCENARIO OF TRANSFORMATION -I TOP-DOWN EFFICIENCY

This strategy seeks maximum efficiency within the constraints of the current top-down administrative system. With this in mind, such spatial steps can be proposed:

FOR ACCESSIBILITY REGULATION

-Bypass road with provincial invesments towards Slovacia:
The greatest strength of the top-down system is that it is very effective if local goals are aligned with provincial goals. Voivodship goals that are already being realised include better road connections to border crossings. As part of the construction of new roads, a section of expressway was built on the Kraków-Nowy Targ route (point 1 in fig. 78). One of the most important routes towards Slovakia runs through the built-up area in Zakopane. Further development of the current provincial strategy could involve the construction of an expressway on the missing section (from Nowy Targ to the Slovak border). Such a connection would also be an effective bypass for the city and would free the built-up areas from intense car traffic (point 2 in fig. 78).

-Park and Ride point:
By limiting plans to build a network of barrier car parks to one large one - the city could accelerate the prospect of winning a competition for funding under the Provincial European Funds pool. Both locations currently under consideration by the City are large enough for the construction of a multi-storey car park for approximately 3,000 cars (point 3 in Fig. 78).

-NO-car zone:
By being able to diversions around built-up areas and providing a P+R point, those urban areas that are within transit and automobile fabrics can be completely excluded from car traffic (except locally owned vehicles) (point 4 in Fig. 78). This requires coordinated decisions between the different administrative levels to which the different roads within the city belong.

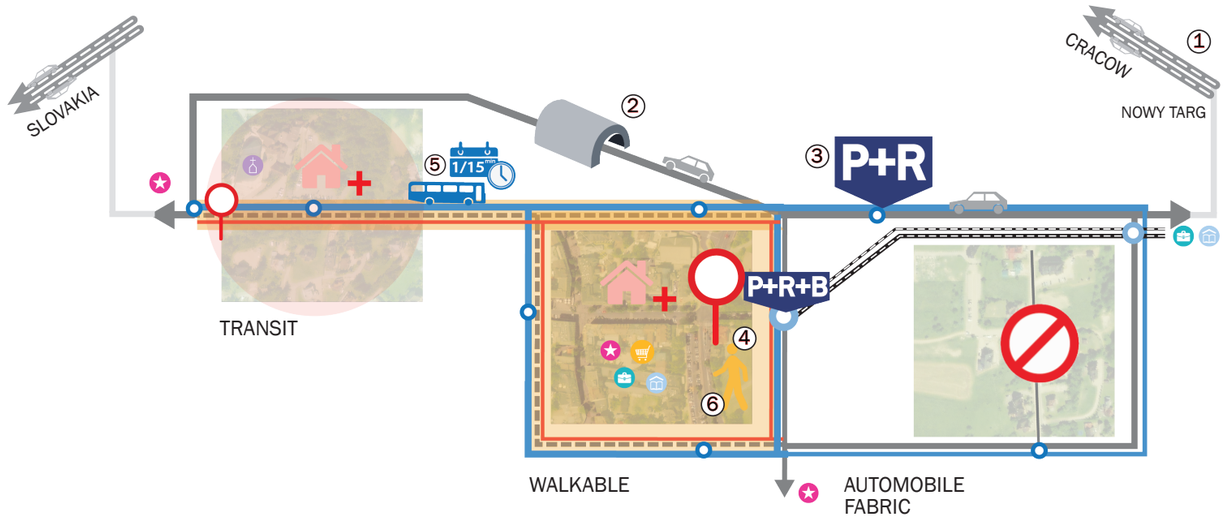


Fig. 78 .
Scheme of functional concept of the scenario A

FOR SUSTAINABLE MOBILITY

-Efficient city buses:
Given that a large part of the city would become inaccessible to most cars, it is necessary to provide efficient public transport with a high frequency (point 5 in Fig. 78).

-Slow mobility:
Removal of cars allows the majority of the road profile to be given over to pedestrians and cyclists (point 6 in 78).

STRATEGY DEVELOPMENT
3.SPATIAL IMPLICATIONS
-I TOP-DOWN EFFICIENCY

3-I

Considering the spatial conditions of different urban fabrics, changes in accessibility regulations and sustainable mobility could have the following spatial reflection:

TRANSIT FABRIC INTO WALKABLE FABRIC

Thanks to the ring road and the exclusion of the built-up areas from regular car traffic, the transit fabric can be turned into a pedestrian promenade with more of the road profile dedicated to pedestrians (point 1, fig. 79), greenery, and the street shared by balanced modes of transport (point 2,fig. 79).
Increasing the attractiveness of the street would stimulate roadside property owners to create services to activate the neighborhood (point 1, 3, fig. 79).

WALKABLE FABRIC

In the center, large parking lots would no longer be needed, and when most streets would be pedestrianized. There will also be a possibility of densification (point 4, fig. 80).

AUTOMOBILE FABRIC

The area which is outside the range of sustainable transport (point 11, fig. 88) shall be excluded from development prospects. The effectiveness of such (similar to existing) regulations requires consistency in the enforcement of penalties for violations.

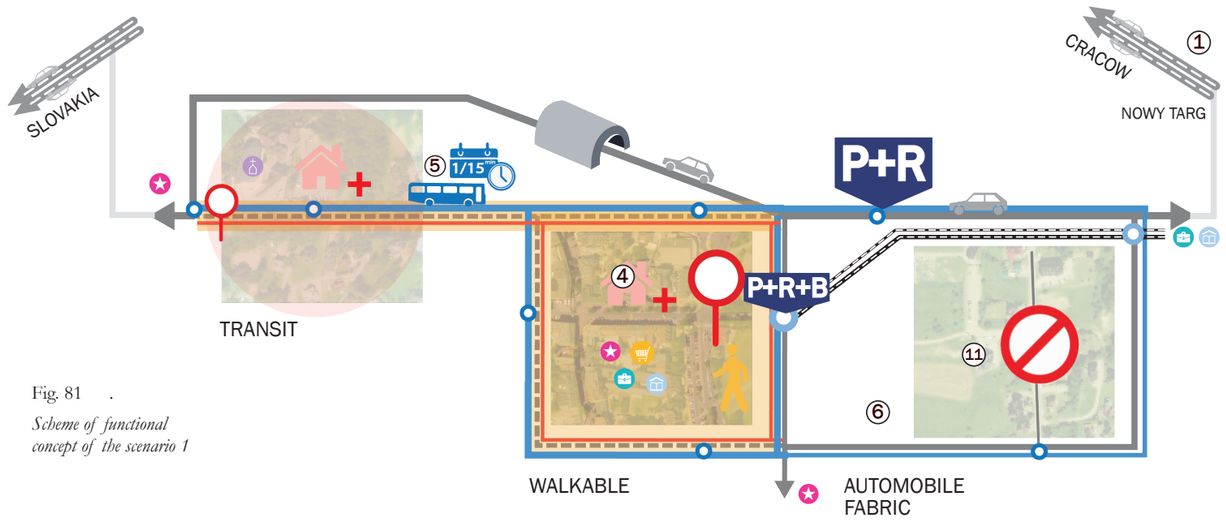
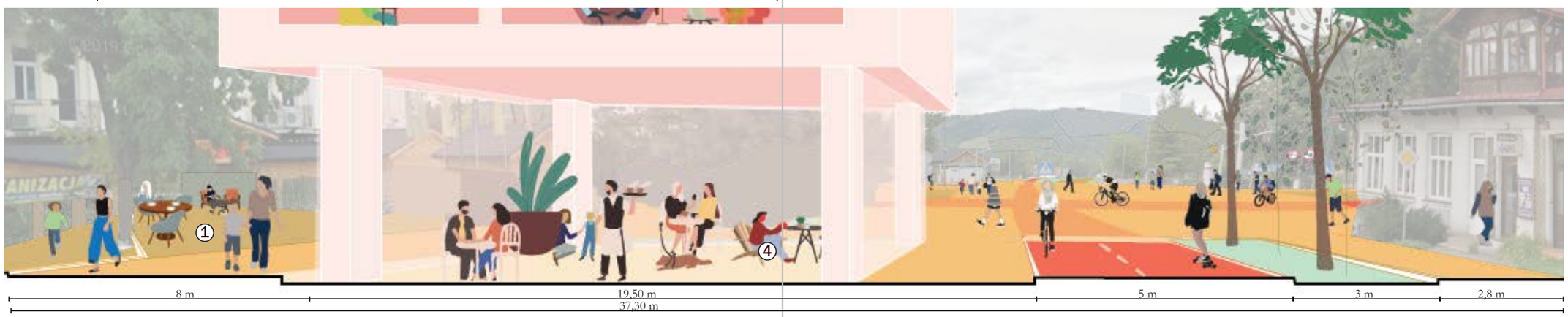


Fig. 81 .
Scheme of functional concept of the scenario 1

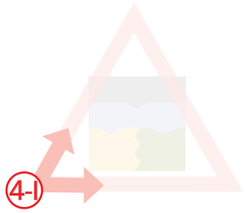
Fig. 79 .
TRANSIT FABRIC

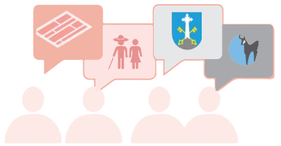
Fig. 82 .
AUTOMOBILE FABRIC

Fig. 80 .
WALKABLE FABRIC

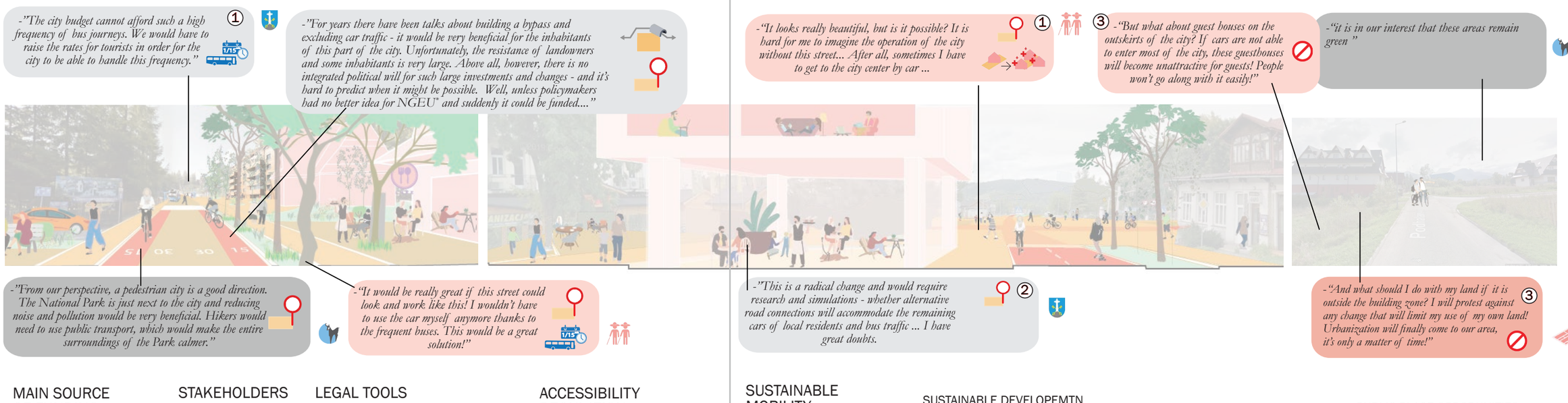


STRATEGY DEVELOPMENT
4. EVALUATION WITH KEY STAKEHOLDERS -I TOP-DOWN EFFICIENCY





As mentioned in the introduction of the chapter, the methodology adopted to evaluate the scenarios is based on the effectiveness of their implementation. It is impossible to be effective without the cooperation of key partners and therefore their input and opinion will guide the selection and adaptation of individual elements for building the city transformation strategy.
In this project the evaluation was carried out with 4 representatives of key stakeholders:a resident of the town, a Zakopane town official, a landowner and an employee of the Tatra National Park.



I TOP-DOWN EFFICIENCY

MAIN SOURCE OF FUNDING	STAKEHOLDERS	LEGAL TOOLS	ACCESSIBILITY REGULATION
-European Funds Province's pool -National budget -The Municipality budget		-Provincial mobility programme -Municipal mobility programme -Regulation of traffic -Revitalization plan -Land use study and plan	-City ring road -PR at the main entrance to the city -Most of the city as a car-free zone

SUSTAINABLE MOBILITY	SUSTAINABLE DEVELOPEMTN PERSPECTIVE	PUBLIC SPACE QUALITY	PUBLIC PLACE OPPORUNITIES
-public transport in the city scale with a high frequency - the city as slow mobility zone	-densification around bus stops	-all streets into shared street	-growth of the pedestrian zone and its better accessibility

GENERAL CONCLUSIONS

The stakeholders feedback contains both helpful facts and opinions driven by the force of previous experiences and habits. Stakeholders contributions need to be viewed as an additional source of information that may suggest areas that require special attention, longer preparation, and additional steps.

Some important conclusions from the actors' statements:

① **Stakeholder inflexibility.**
They are afraid of the unknown and prefer not to risk it. Any change must be gradual and preceded by attempts to involve the residents.

②
Poor position of the administration
The office workers themselves are very much afraid of the reaction of the residents and especially of the reaction of the powerful private sector

③ **Landowner resistance.**
Landowners are very sensitive to their interests and determined to protect them, further negotiations with them are crucial for the scale of positive changes in automobile areas of the city.

The above comments show that neither the inhabitants nor the administration is ready to fight for such a solution. it requires a prior cultural and organizational change; the actors do not believe that the region could function effectively without the car.

STRATEGY DEVELOPMENT
2. SCENARIO OF TRANSFORMATION
II TRADE WITH THE MARKET

This scenario is based on engaging the private sector in the desired transformations by demonstrating the associated potential profits. In this context, the transformations that can be achieved are:

FOR CAR ACCESSIBILITY REGULATION

-Network of Park+Raide points integrated with private business:
Without large-scale investment in road infrastructure, a Park + Ride network on the city's arterial roads can be used to reduce car traffic. Funding such investments can be attractive to individual tourism investors who can link this function to their business to gain more customers through better accessibility. Such partners may be important churches, large hotels with ski slopes, or potential shopping centres (point 1 in Fig. 84). A similar function could be fulfilled by the already existing parking spaces at guest houses and houses for rent - as points to which it is possible to drive and leave the vehicle during the stay in the city.

-Obstruction of access:
In this scenario, it is impossible to fully ban cars from the city. However, traffic in built-up areas and in the city centre can be made as difficult and slow as possible by closing some streets, introducing a 30 km/h speed limit zone, giving priority to smaller streets for pedestrians and cyclists, and by numerous speed bumps (point 2 in Fig. 84).

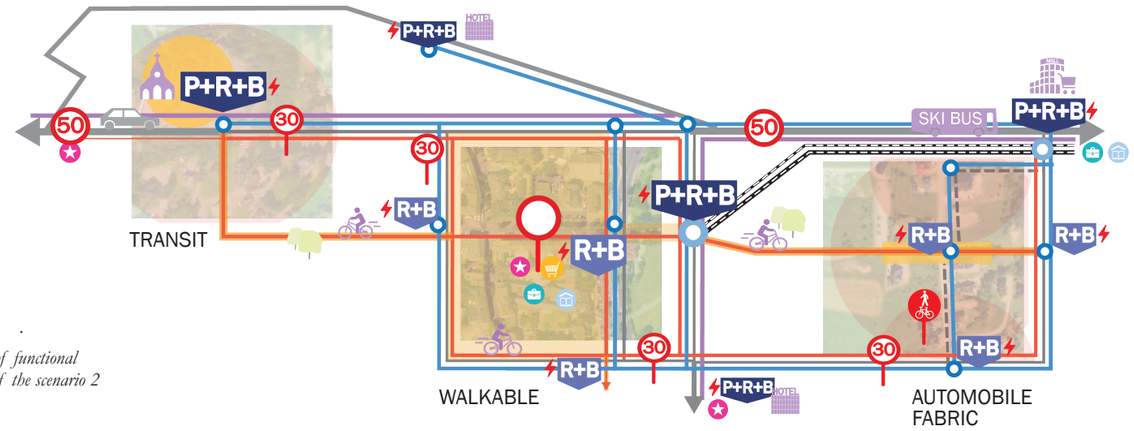


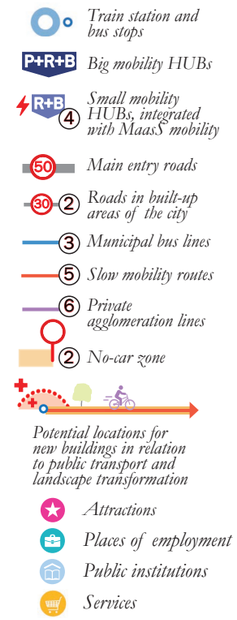
Fig. 84 .
Scheme of functional concept of the scenario 2

FOR SUSTAINABLE MOBILITY

-Efficient city buses:
Also with this strategy it would be crucial to provide functional public transport between the main car parks on the outskirts of the city. In cooperation with the private sector, it could only complement the offer of private services related to sustainable transport.(point 3 in Fig. 84).

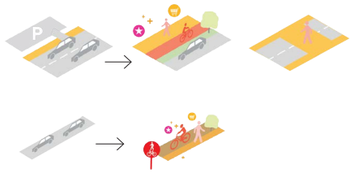
-Sharing mobility:
The city could open up to companies offering shared vehicles and equipment such as: small electric cars, e-scooters, e-bikes, and in winter also: snowmobiles, cross-country skiing, etc. Such services need an adequate network of stopping points integrated with bus stops and equipped with electric chargers (point 4 in Fig. 84).

Agglomeration mobility by touristic lines:
Cooperation with the private sector can extend beyond the city limits. Owners of tourist resorts, or private transport companies, may offer services to key locations as part of an agreement with the city. (point 6 in Fig. 84).



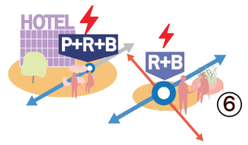
STRATEGY DEVELOPMENT
3. SPATIAL IMPLICATIONS
-II TRADE WITH THE MARKET

Taking into account the spatial conditions of different urban fabrics, changes regarding car accessibility and sustainable mobility can have the following spatial reflections for public spaces or sustainable development perspectives:



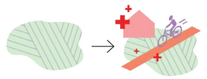
TRANSIT FABRIC AND WALKABLE FABRIC

Maximum obstruction of traffic by speed regulation and street design; like raised pedestrian crossing thresholds. By limiting traffic speed, bicycles and other slow-moving vehicles would be able to use the carriageway.



WALKABLE FABRIC

Co-operation with private tourism and mobility investors would allow local investment in shared mobility (fig. 87).



AUTOMOBILE FABRIC

By working with landowners, partial development could be allowed in exchange for sustainable transport and quality living space.

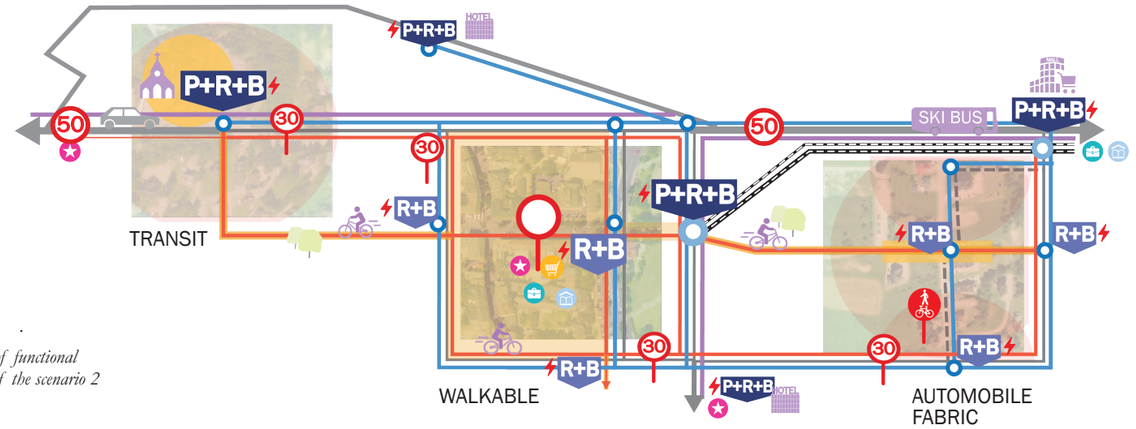
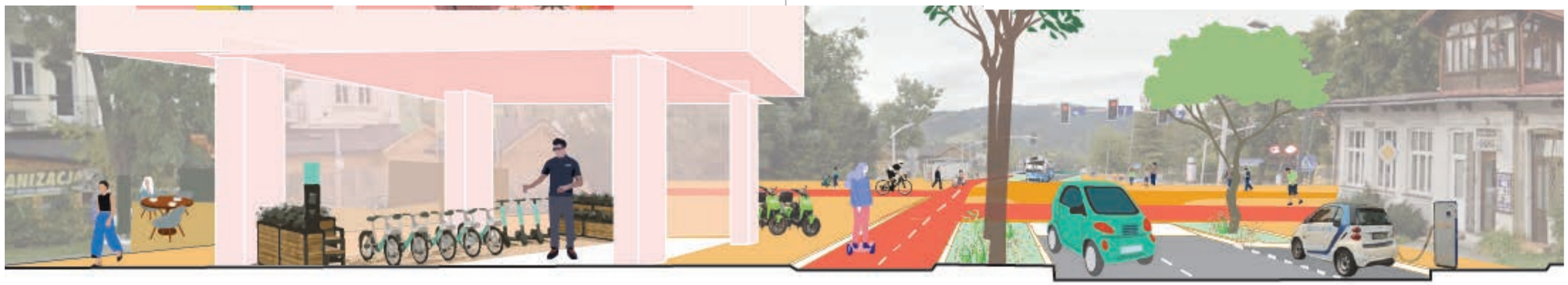


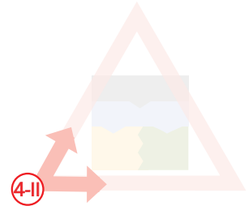
Fig. 88 .
Scheme of functional concept of the scenario 2

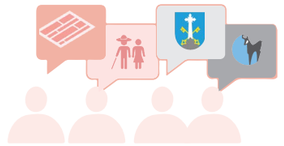
Fig. 86 .
TRANSIT FABRIC

Fig. 87 .
WALKABLE FABRIC



STRATEGY DEVELOPMENT
4. EVALUATION WITH KEY STAKEHOLDERS
-II TRADE WITH THE MARKET





"Such mobility services are great for tourists, but can ordinary people afford them? In a tourist destination prices are always inflated." ⑤

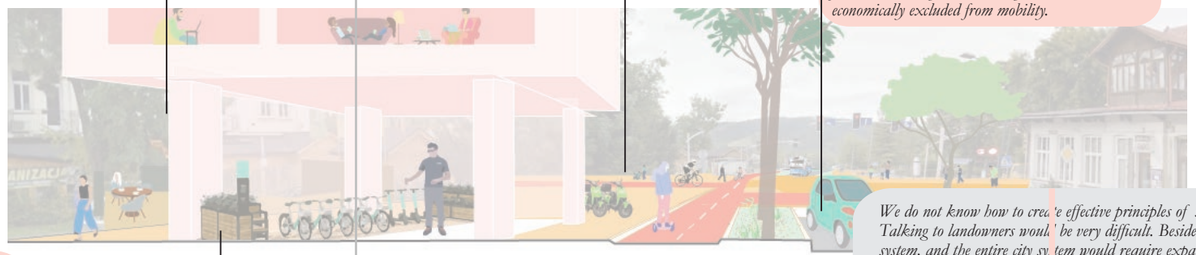
-"We are afraid of cooperation with big, private investors ... In the past, there was a lot of corruption and investment settlements for acquaintances and we know that the nhabitants are very suspicious of such actions. Investors are also difficult partners; they have a lot of influence and as officials we have a weaker negotiating position." ⑤

-"I'm afraid these new buildings and functions would be for tourists only... I don't feel like it is going to help local community..." ④⑤

"Tourists will want to take these shared vehicles to the National Park and will often cross the city limits. This r equires coordination with the Park and other Municipalities."

-"There will be no big parking, instead there will be many smart vehicles which can be expensive- I fear that ordinary residents may be economically excluded from mobility.

-"From my perspective, it is very profitable, I would support such an initiative. I just don't know how it could be done fairly, so that it would be profitable for landowners from the whole changed area - since part of the land is to remain green. ⑥



-"I would like a street like this, it would be nice to walk around. But without the beltway, I do not think a significant slowdown in traffic in this area of the city.

-"I do not believe in such a solution. I do not believe that a private investor will make a Park+Ride point available to everyone and create a public area around it. It seems to me that only with public help will he get better access to his business."

-"Shared transport in the city would certainly be useful, but it requires a lot of preparation: we have no experience of such partnerships here and no infrastructure." ⑤

We do not know how to crea e effective principles of sustainable development. Talking to landowners woul be very difficult. Besides, the media, sewage system, and the entire city sy tem would require expansion in order to be able to service other areas of the city ...
Also the number of building areas in the city is legally dependent on the number of inhabitants. We would have to do some sort of security first so that the new construction could not be used for short-term rental." ④

These green spaces are important ecological corridors! There would have to be specific regulations where and how to build, and some ownership changes to land - very complicated and dangerous.

II TRADE WITH THE MARKET

MAIN SOURCE OF FUNDING

-Private sector

- CLLD (Community-Led Local Development)

STAKEHOLDERS

LEGAL TOOLS

-Land use study

-Revitalization plan

-Municipal mobility programme

-Regulation of traffic on municipal and district roads

-New tools
The city's original programmes and legislative initiatives

ACCESSIBILITY REGULATION

-Obstructing the movement of cars in the city

-P&R points provided by the private sector

SUSTAINABLE MOBILITY

- basic public transport in the city scale

-transfer facilities provided by the private sector

- assistance and facilitation for private transport operators

SUSTAINABLE DEVELOPEMTN PERSPECTIVE

New investments as part of a compromise with the owners; construction in return for contributions to sustainability and liveability

PUBLIC SPACE QUALITY

- transit streets limited for extra bicycle and facilities lines

-creating safe crossings

-small roads into shared streets

-new slo-mobility infrastructure under new investment

PUBLIC PLACE OPPORUNITIES

-better accessibility of the pedestrian centre

-opportunities for public places in new developments

-public places integrated with shared mobility services

GENERAL CONCLUSIONS

⑤ **Lack of trust between actors**
Citizens have bad experiences with public-private cooperation (corruption) and therefore such solutions would require very transparent regulations

④ **Lack of proper spatial regulations**
Current zoning regulations are not able to secure the quality needed for liveability in private investments

⑥ **Positive perception of landowners**
This group is strongly self-interested. Their positive feedback shows the opportunity to direct their pressure in a direction that is favorable for the city.

To sum up; a lot of spatial and system regulations need to be developed for such activities. In order for the city to work in this way on a larger scale, it must first gain the confidence of the citizens in this methodology, e.g. through a positive example in a smaller project.

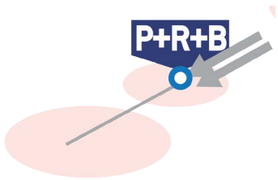
STRATEGY DEVELOPMENT
2. SCENARIO OF TRANSFORMATION
-III ADJUST TO EU PROGRAM

This scenario is guided by EU programmes under which the city can link its strategic activities. The most important such programmes stimulate regional cooperation within the framework of ITI* (tourist region of mountain resorts in the Zakopane area) and Interreg (border towns in Poland and Slovakia), while CLLD supports local communities. Thus regional investments should be beneficial also for local contexts in the vicinity of Zakopane. In practice this means that the costs and location of the investment can be shifted outside the city in exchange for sharing access to tourists. Such investments are naturally linked to mobility and can be imagined on such terms:

FOR CAR ACCESSIBILITY REGULATION

-Network of Park+Raide points integrated with private business:

A Park+Ride+Bike point, with funding from the Integrated Region Funds, could be built in Nowy Targ (the town before Zakopane), where the last section of the expressway is currently under construction (point 1 in Fig. 89). A barrier car park at such a location would reduce car traffic on the Zakopane exit roads, most of which also run through built-up areas.
In the same way, transfer points could be created at different edges of the integrated region (point 2 in Fig. 89).



-Obstruction of access:

As in the previous scenario, in built-up areas car traffic could be impeded by various restrictions (speed limits, speed bumps, etc.). However, in this case, such obstructions could be synchronised across the region so that the effectiveness of such measures would be maximised (point 3 in Fig. 89).

FOR SUSTAINABLE MOBILITY

-Regional public transport:

An integrated region requires a common public transport network. A network connecting all partner towns and cities would also cover key tourist attractions so that all transport needs in the region could be covered by public transport (point 4 in Fig. 89).

-Sustainable mobility infrastructure:

A cycling route co-financed by Interreg*; "Around the Tatra Mountains" has been running for years as part of cooperation between villages on the Polish and Slovak sides of the border. These routes increase the tourist and landscape attractiveness of the region.

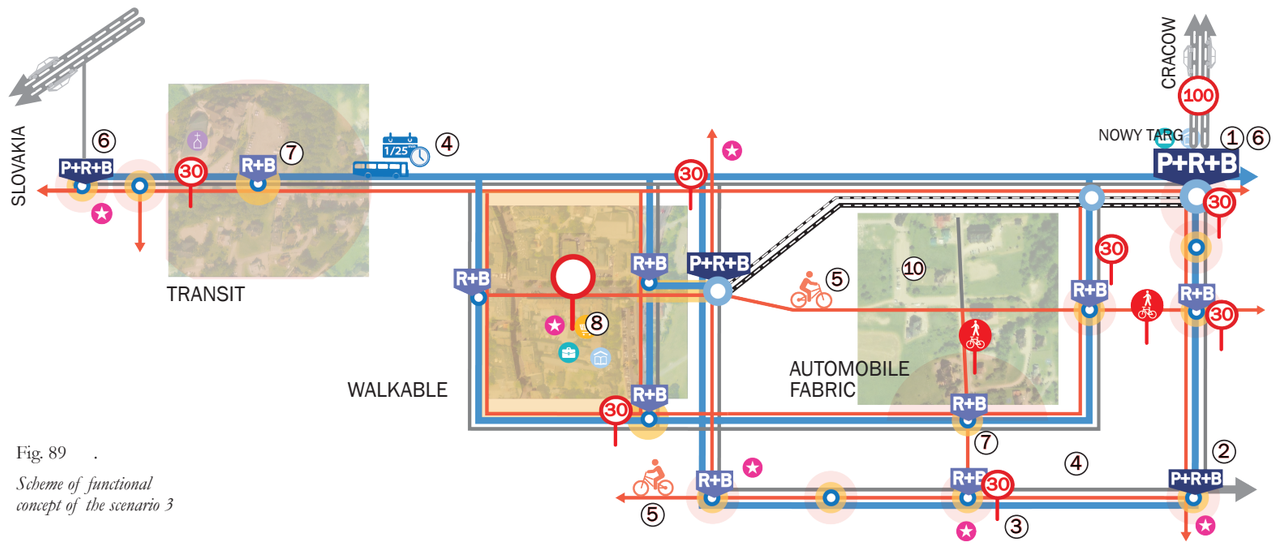


Fig. 89 .
Scheme of functional concept of the scenario 3

In the same way, trails could be developed throughout the integrated region, enriching the attractiveness of smaller towns around Zakopane as well (point 5 in Fig. 89).

Despite being tourist-oriented, such routes can also fulfil transport functions for local residents and contribute to a sustainable mobility choices in daily life.
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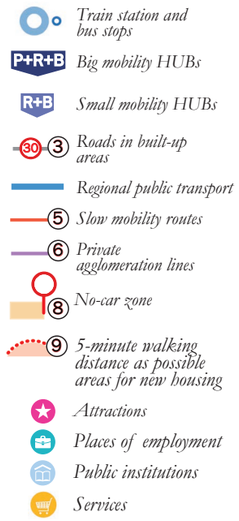


STRATEGY DEVELOPMENT
3. SPATIAL IMPLICATIONS
-III ADJUST TO EU PROGRAMS

This scenario assumes maximum alignment with current EU programs in order to achieve the goals with EU funds. The spatial consequences that can be imagined for such a strategy would be as follows:

TRANSIT FABRIC + WALKABLE TRAFIC

The transit fabrics will continue to be crossed by a street with car traffic-but its intensity will decrease thanks to the increasing mobility alternatives: buses serving the whole agglomeration (point 10, fig. 90-91), and bicycles and slow-moving vehicles (point 11, fig. 90-91). With these assumptions, in route areas, space for slow-mobility infrastructure can only be provided instead of one of the sidewalks (point 1, fig. 90-91), and public spaces within the junctions between bus and bicycle transport (point 2, fig. 90-91). New investments and redevelopment would take place in the area of public transport (point 5, fig. 90-91).

Densified interchanges would also provide the opportunity to create local public places.
In the city center, a large part of the space previously occupied by cars would be adapted to serve priority public transportation (point 9,10, fig. 90-91), for bicycle expressways, and to improve the walkability (point 9,11, fig. 90-91).

AUTOMOBILE FABRIC

As in Scenario A), here too development would be limited to areas within the functional area of the bus routes (point 5, fig. 92). The excluded areas could, however, be helped by dedicated EU programs to support organic farming or handicrafts, thus preserving their character and giving some prospects to their owners (point 7, fig. 92).

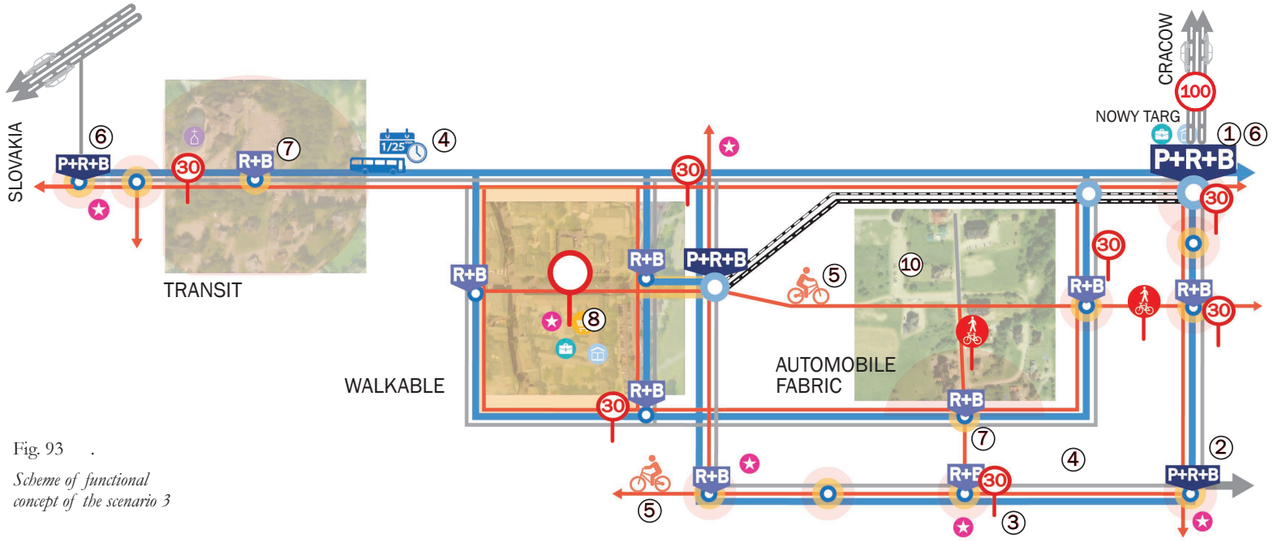


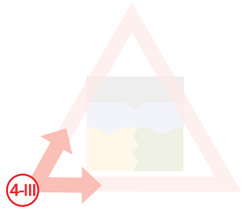
Fig. 93 .
Scheme of functional concept of the scenario 3

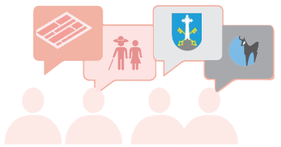
Fig. 90 .
TRANSIT FABRIC

Fig. 92 .
AUTOMOBILE FABRIC

Fig. 91 .
WALKABLE FABRIC

STRATEGY DEVELOPMENT
4. EVALUATION WITH KEY STAKEHOLDERS
-III ADJUST TO EU PROGRAMS





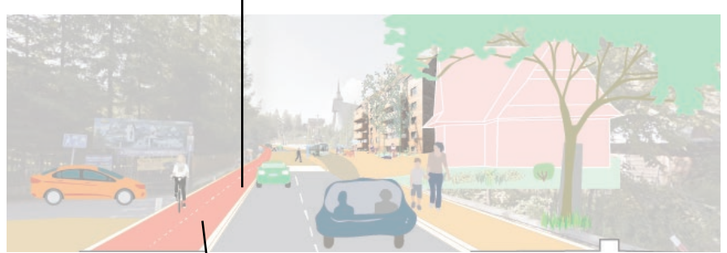
-"Well, in this version the effects are not very spectacular. However, I am glad that there would be reasonable bus connections and a bicycle lane, but I am a bit surprised by the lack of one sidewalk - are surely pedestrians will have enough space?"

This is a necessary step that we are slowly beginning to work on. The partner cities are interested in this, the only problem is the long term financing and some resistance from private transport operators.

In fact, the construction of the Park+Ride will also be difficult on an agglomeration scale - a lot of negotiation with the city that would take on the construction ... But financing from ITI" may indeed be a decisive factor.

-"The regional public transport network would have our greatest approval, we would be happy to provide land for stops etc! Thanks to this, tourists from all over the region could reach the Park without a car, which is important for animal welfare."

-"Such a region-wide strategy would be very dangerous for green spaces!"



-"This seems more realistic, although it requires a partial exclusion in places where the pavement is too narrow to adapt to a bicycle lane which will consume a lot of money ... "

-"It looks great but I still find it hard to believe downtown without parking. Is such a large bicycle path really needed ..?

-"It's nice that there would be connections with other towns in the region, but I'm a bit worried that tourists will prefer to rent out of Zakopane, because it's more expensive here... Will it be in our best interest?"

-"The new development requires the protection of the function of permanent residence so that it can be legal in the light of linking new construction areas with the perspective of changing the population number."

- "Few farmers stayed with us now, plus the land is fragmented. It's hard for me to imagine who would be willing to subsidize agriculture ... "

III ADJUST TO EU PROGRAMS

MAIN SOURCE OF FUNDING	STAKEHOLDERS	LEGAL TOOLS	ACCESSIBILITY REGULATION
-ITI (Integrated Territorial Investments) -Interreg; Poland-Slovacia - CLLD (Community-Led Local Development)		-Regional strategy -Regional mobility programme -Revitalisation plans of partner municipalities	-Obstructing the movement of cars in the integrated region -P&R points in the entrsnces to the integrated region

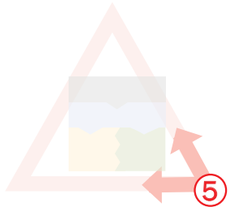
SUSTAINABLE MOBILITY	SUSTAINABLE DEVELOPEMTN PERSPECTIVE	PUBLIC SPACE QUALITY	PUBLIC PLACE OPPORUNITIES
-public transport in the region scale with a high frequency -creating pedestrian and bicycle landscape paths in the integrated region -R&B points throughout the region	-densification around transit	-big transit streets limited for extra bicycle and bus lines -transit street with adaptation of a part of the profile for bicycle needs -creating safe crossings -calm roads into slow mobility streets	-Creation of public spaces around interchange nodes

GENERAL CONCLUSIONS

① The actors are very enthusiastic because these are not radical changes, plus regional cooperation has already been initiated (first ITI meetings). For this reason, they can believe in these solutions and are ready for a fast implementation.

However, the results for liveability are quite moderate (the car is still present in the city to a large extent)

STRATEGY DEVELOPMENT
5. COMPOSITION OF STRATEGIC ELEMENTS



The following table summarizes the key elements for the three scenarios. Based on the actors' comments, scenario C was chosen as the main basis for the final strategy and the elements from the other scenarios that could enhance it. The choice was influenced by arguments;

-Stakeholders inflexibility; which suggests that change needs to start gradually; in a way that is acceptable to the actors

-The existing power of the EU Fund programas; which makes it possible to implement this scenario very effectively, which is crucial in this context.

This scenario can be reinforced by complementing it with elements from other scenarios (yellow indications), each of these elements however requires an appropriate preparatory strategy (from interviews with actors, e.g. transparent decision-making, pilot projects, etc.)

	MAIN SOURCE OF FUNDING	STAKEHOLDERS	LEGAL TOOLS	ACCESSIBILITY REGULATION	SUSTAINABLE MOBILITY	SUSTAINABLE DEVELOPEMTN PERSPECTIVE	PUBLIC SPACE QUALITY	PUBLIC PLACE OPPORUNITIES
I TOP-DOWN EFFICIENCY	-European Funds Province's pool -National budget -The Municipality budget		-Provincial mobility programme -Municipal mobility programme -Regulation of traffic -Revitalization plan -Land use study and plan	-City ring road -PR at the main entrance to the city -Most of the city as a car-free zone	-public transport in the city scale with a high frequency - the city as slow mobility zone	-densification of pedestrian center	-all streets into shared street	-growth of the pedestrian zone and its better accessibility
II TRADE WITH THE MARKET	-Private sector - CLLD (Community-Led Local Development)		-Land use study -Revitalization plan -Municipal mobility programme -Regulation of traffic on municipal and district roads -New tools The city's original programmes and legislative initiatives	-Obstructing the movement of cars in the city -P&R points provided by the private sector	- basic public transport in the city scale -transfer facilities provided by the private sector - assistance and facilitation for private transport operators	New investments as part of a compromise with the owners; construction in return for contributions to sustainability and liveability	- transit streets limited for extra bicycle and facilities lines -creating safe crossings -small roads into shared streets -new slo-mobility infrastructure under new investment	-better accessibility of the pedestrian centre -opportunities for public places in new developments -public places integrated with shared mobility services
III ADJUST TO EU PROGRAMS	-ITI (Integrated Territorial Investments) -Interreg; Poland-Slovacia - CLLD (Community-Led Local Development)		-Regional strategy -Regional mobility programme -Revitalisation plans of partner municipalities	-Obstructing the movement of cars in the integrated region -P&R points in the entrsnces to the integrated region	-public transport in the region scale with a high frequency -creating pedestrian and bicycle landscape paths in the integrated region -R&B points throughout the region	-densification around transit	-big transit streets limited for extra bicycle and bus lines -transit street with adaptation of a part of the profile for bicycle needs -creating safe crossings -calm roads into slow mobility streets	-Creation of public spaces around interchange nodes

STRATEGY DEVELOPMENT
5. ORDER OF OPERATIONS

The pre-selected elements from the previous page needs to be arranged in a timeline strategy. The aim is to better recognise the links between the activities and the key strategic objectives on which the next steps depend.

The elements of the three scenarios are linked to three different funding sources and each of them has a certain time profile, which the session with the stakeholders helped to clarify. This time frame will be used as a guideline for strategic actions:

TIME: 2021 | <2025 | 2027 | 2030

I ADJUST TO EU PROGRAMS

EU FUNDS BUDGET - 2021 TILL 2007

The funds that can be obtained in the form of grants from EU programs (ITI, CLLD, Interreg, NGEU*) are earmarked for 2021-2027. As there is no certainty about the next budget, the priority is to quickly implement key investments that can be linked to EU programs.

*As already mentioned, European Union economic recovery package for Poland is still suspended by the political situation in the country. For this reason, these funds must be treated as an uncertain bonus in planning.

?

II TRADE WITH THE MARKET

PRIVATE SECTOR - THE COOPERATION MODEL REQUIRES SEVERAL YEARS OF PREPARATION

Strategic cooperation with the private sector requires preparation; it requires a transparent decision-making system and pilot projects in order for the city to gain the trust of its citizens as well as potential investors.

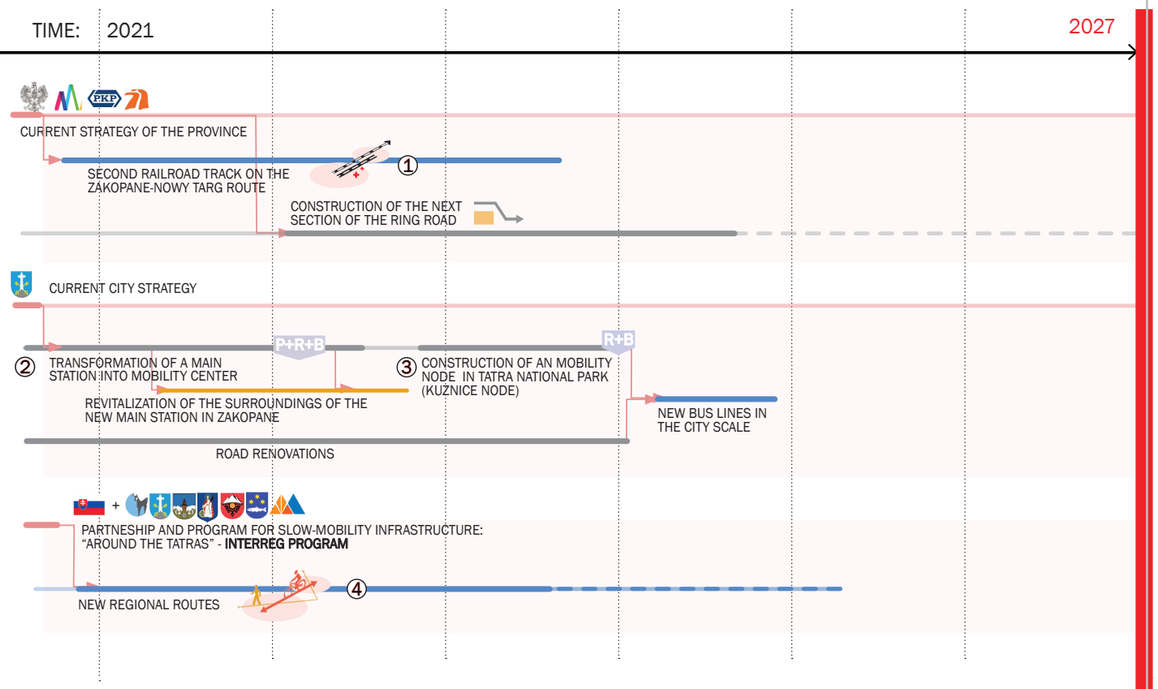
III TOP-DOWN EFFICIENCY

?

NEW PROVINCIAL BUDGET 2030-2050

It would be possible to include the implementation of a complete bypass of the city towards the border crossing with Slovakia. This investment could offer the potential for a larger-scale withdrawal of car presence from the transit fabric. Such a decision at the provincial level requires strong political representation from the city authorities and their effective lobbying over the years. The strength of the political mandate would also depend on the strength of support from residents and tourists for further reducing the presence of cars in the city.

STRATEGY DEVELOPMENT
5. ORDER OF OPERATIONS
PRESENT ACTIVITIES



On the basis of the analysis of data and information obtained from city officials, it is possible to draw a timeline of strategic activities with a certain implementation:

Sustrainable mobility goals;
-Collective transport; the city with the construction of two new mobility HUBs, extension of the road to Gubalowka, and purchase of additional bus fleets will enlarge the public transport network. The city center will become more accessible by public transport, but the problem will still be the coverage of the area limited to the city limits, and the low turnout caused by the still strong car preference in the region.
-Bikeability will improve only in the recreational aspect thanks to the new route along the National Park. This will help to popularise the bicycle, but will not support the use of the bicycle as an everyday means of transport.
-None of the currently planned investments and activities relate to improving walkability.

Public spaces;
Point interventions will be implemented by revitalizing historical buildings for public purposes within the city center.

Stakeholders Activation;
Discussions have begun within the partnership group to ITI.
Consultation meetings with the inhabitants for the new Spatial Study of the city have started.

However, as can be seen from various urban fabrics, it has no visible effect on liveability at the city scale.

Fig. 94 .
The starting phase of the strategy

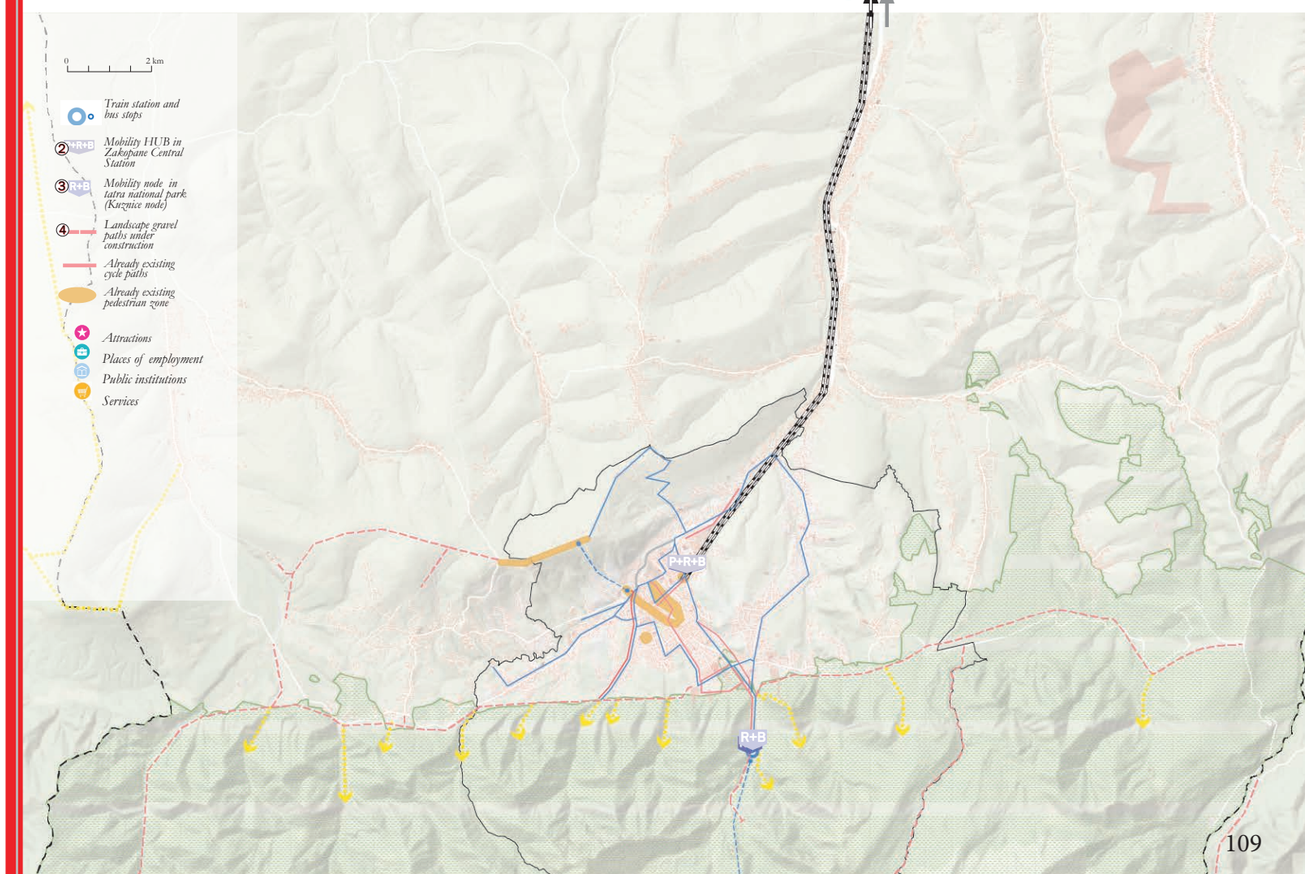
- *Goals of previous strategies*
- *Accessibility regulation*
- *Stakeholders + Legal tools*
- *Sustainable mobility goals*
- *Spatial design investments*
- *The implementation period depends on the political effectiveness of the public administration*

TRANSIT FABRIC Fig. 96 .

AUTOMOBILE FABRIC Fig. 95 .

WALKABLE FABRIC Fig. 97 .

Fig. 98 .
Agglomeration map



STRATEGY DEVELOPMENT
5. ORDER OF OPERATIONS
I PHASE - REGION OF SUSTAINABLE MOBILITY

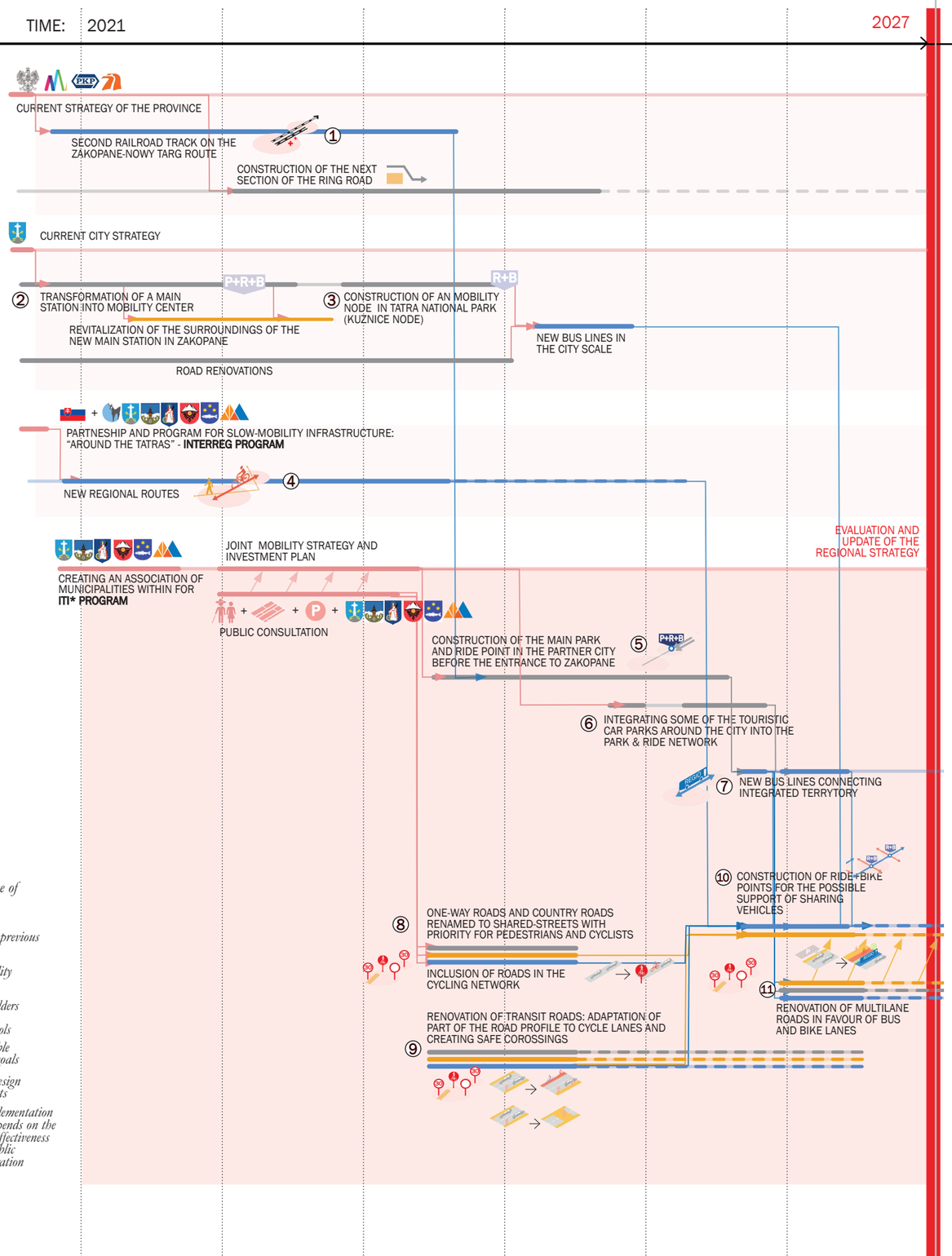
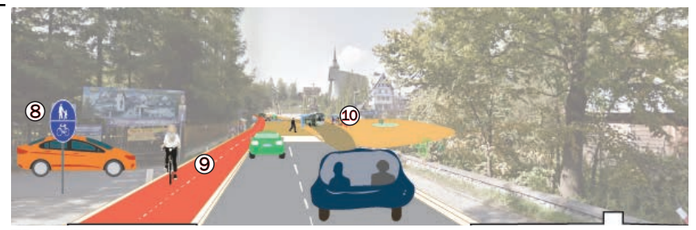


Fig. 99 .

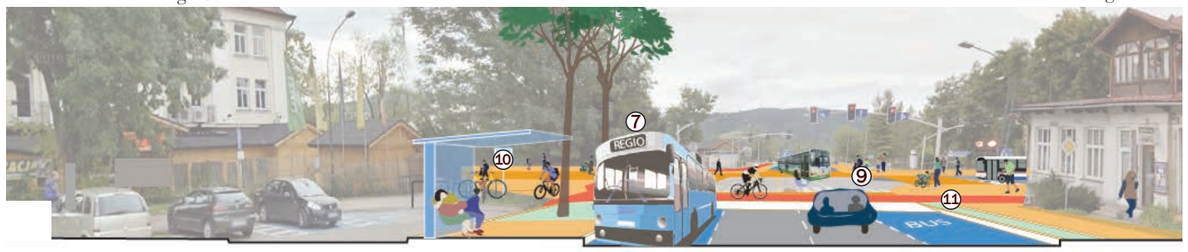
The starting phase of the strategy

- *Goals of previous strategies*
- *Accessibility regulation*
- *Stakeholders + Legal tools*
- *Sustainable mobility goals*
- *Spatial design investments*
- *The implementation period depends on the political effectiveness of the public administration*



TRANSIT FABRIC Fig. 102 .

AUTOMOBILE FABRIC Fig. 100 .



WALKABLE FABRIC Fig. 101 .

Based on scenario testing and stakeholders feedback next step should foloow:

Given the high pool of available EU funds, and the time limit for their disbursement (2027), it is crucial to provide an effective alternative to car travel in the region at an early stage.

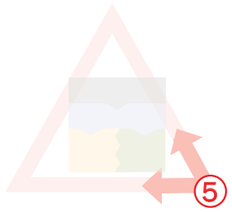
For this reason, it is important to focus on those elements of Scenario III (p. 104) which are relatively easy to implement and give the maximum effect for sustainable mobility.
Such elements are the realization of regional public transport (most authorities of the integrated region are interested in a common mobility system and the creation of a slow-mobility network within the existing infrastructure (the construction of completely new paths is associated with potential social resistance (according to p. 64).

OPERATIONAL GOALS

As can be seen from the timeline (fig. 99), the following operational objectives can be set:
-Construction of the Park+Ride main barrier car park integrated into the regional shuttle railway from Nowy-Targ to Zakopane and the expressway (point5, fig. 99-101)
-Integrated regional public transport (points 7, Figs. 99-101). Main lines linking the most important towns and attractions of the region.
-Adaptation of existing roads to the needs of the slow traffic (points 8-9,11, fig. 99-101)

Imagining the spatial consequences of these changes in individual urban fabrics (fig. 99-101), it is clear that the improvement in the quality of the public space itself will not yet be significant. What is important, however, is that the provision of sustainable transport will enable residents and tourists to start reducing the use of cars, which is a basic condition for starting further changes.

STRATEGY DEVELOPMENT
5. ORDER OF OPERATIONS
I PHASE - REGION OF SUSTAINABLE MOBILITY



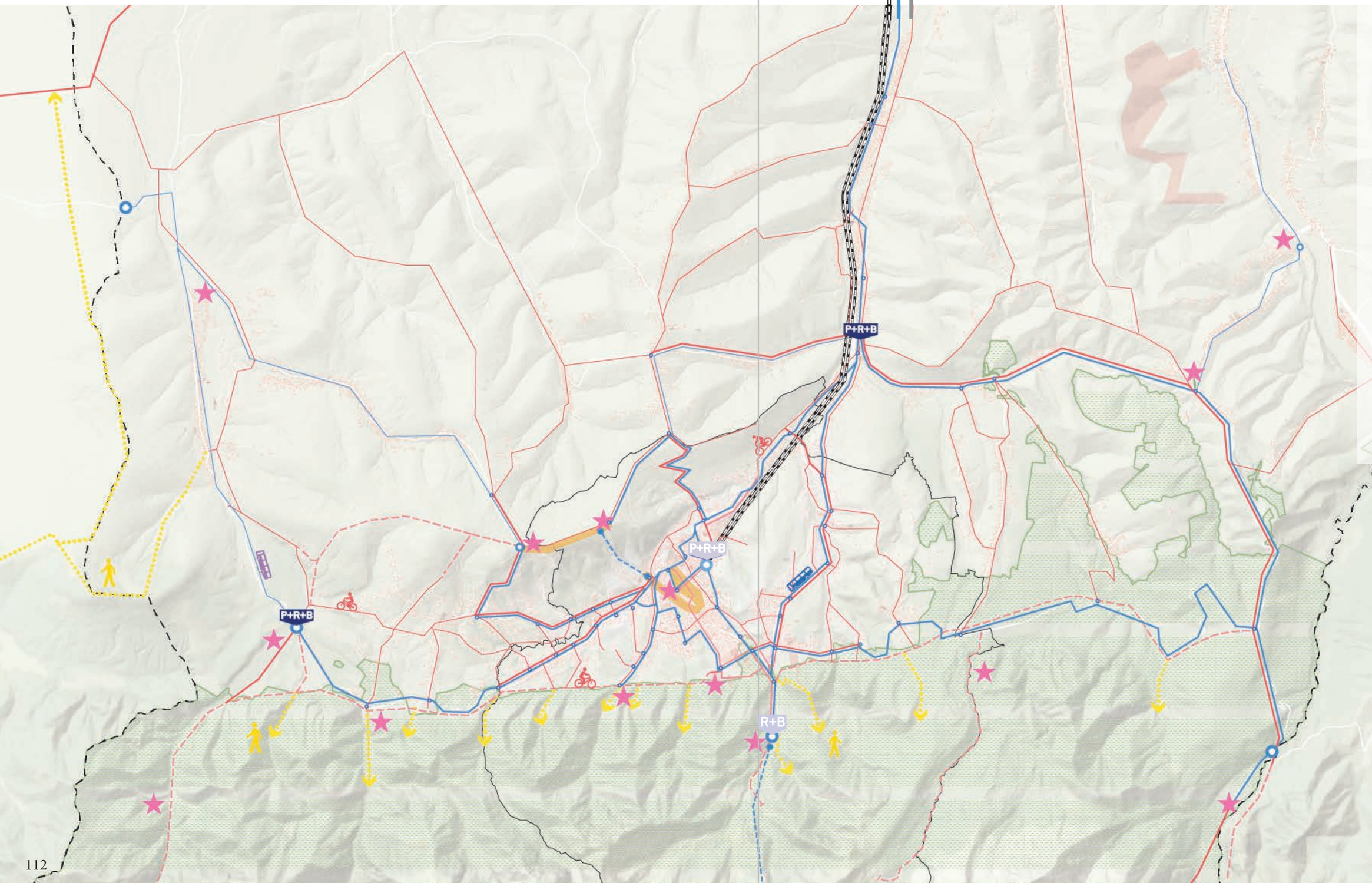


Fig. 103 .
Map representing phase two

STRATEGY DEVELOPMENT
5. ORDER OF OPERATIONS
II PHASE- OPPORTUNITIES FOR SPATIAL QUALITIES

TIME: 2021 | 2027 | 2030 | 2035

CURRENT STRATEGY OF THE PROVINCE

SECOND RAILROAD TRACK ON THE ZAKOPANE-NOWY TARG ROUTE ①

CONSTRUCTION OF THE NEXT SECTION OF THE RING ROAD

CURRENT CITY STRATEGY

② TRANSFORMATION OF A MAIN STATION INTO MOBILITY CENTER P+R+B

REVITALIZATION OF THE SURROUNDINGS OF THE NEW MAIN STATION IN ZAKOPANE

③ CONSTRUCTION OF AN MOBILITY NODE IN TATRA NATIONAL PARK (KUŹNICE NODE) R+B

ROAD RENOVATIONS

NEW BUS LINES IN THE CITY SCALE

PARTNESHIP AND PROGRAM FOR SLOW-MOBILITY INFRASTRUCTURE: "AROUND THE TATRAS" - **INTERREG PROGRAM**

NEW REGIONAL ROUTES ④

JOINT MOBILITY STRATEGY AND INVESTMENT PLAN

CREATING AN ASSOCIATION OF MUNICIPALITIES WITHIN FOR **ITI* PROGRAM**

PUBLIC CONSULTATION

CONSTRUCTION OF THE MAIN PARK AND RIDE POINT IN THE PARTNER CITY BEFORE THE ENTRANCE TO ZAKOPANE ⑤ P+R+B

⑦ NEW BUS LINES CONNECTING INTEGRATED TERRYTORY

⑧ ONE-WAY ROADS AND COUNTRY ROADS RENAMED TO SHARED-STREETS WITH PRIORITY FOR PEDESTRIANS AND CYCLISTS

INCLUSION OF ROADS IN THE CYCLING NETWORK

⑨ RENOVATION OF TRANSIT ROADS: ADAPTATION OF PART OF THE ROAD PROFILE TO CYCLE LANES AND CREATING SAFE COROSSINGS

⑩ CONSTRUCTION OF RIDE+BIKE POINTS FOR THE POSSIBLE SUPPORT OF SHARING VEHICLES

⑪ RENOVATION OF MULTILANE ROADS IN FAVOUR OF BUS AND BIKE LANES

WORKING OUT THE PRINCIPLES FOR BALANCED DEVELOPMENT

DEVELOPMENT OF A TRANSPARENT DECISION-MAKING SYSTEM

HIGH DEVELOPMENT POSSIBILITIES IN RELATION TO DISTANCE FROM PUBLIC TRANSPORT

PUBLIC SUPPORT

EVALUATION AND UPDATE OF THE REGIONAL STRATEGY

MORE PARK + RIDE POINTS AT OTHER ENTRANCES TO ZAKOPANE:

OR

-IN PARTNERSHIP WITH THE PRIVATE SECTOR HOTEL P+R+B

-WITH THE PARTICIPATION OF EUROPEAN FUNDS P+R+B

MORE LINES CONNECTING INTEGRATED TERRYTORY

FURTHER DEVELOPMENT OF R+B POINTS WITH:

-BY COOPERATION WITH PRIVATE INVESTORS R+B

OR

-THANKS TO THE EUROPEAN FUND AS PUBLIC FACILITIES R+B

FACILITATION OF PRIVATE TRANSPORT OPERATORS

CREATION OF LANDSCAPE PATHS ON GREEN UNCULTIVATED LAND

-BY COOPERATION WITH LANDOWNERS

OR

-THANKS TO HIGH COMPENSATION FOR LANDOWNERS WITH EU FUNDS

EVALUATION AND UPDATE OF THE REGIONAL STRATEGY

? CONSTRUCTION OF FULL RING ROAD

? REMOVING MOST OF THE CITY FROM CAR TRAFFIC

? OR/AND

TRANSFORMATION MOST OF TRANSIT STREETS INTO PEDESTRIAN AND BICYCLE ZONES

GROWTH OF ACTIVE PEDESTRIAN ZONE AND SOCIAL FUNCTIONS IN THE CITY CENTER

ENABLING DEVELOPMENT OF PARKING LOTS IN THE CITY CENTRE

STRATEGY DEVELOPMENT
5. ORDER OF OPERATIONS
II PHASE- OPPORTUNITIES FOR SPATIAL QUALITIES

?

In the next stage, it is crucial to deal with the improvement of space quality while further developing the user comfort of balanced mobility. However, after 2027 there is no certainty about the scale of EU support, so further activities must be planned within the framework of an alternative. Elements of Scenario B may be helpful here.

However, cooperation with the private sector requires more space to integrate activities with private investment. In order to make such investments safe in terms of liveability and sustainability, and more importantly accepted by the inhabitants; it is necessary to prepare beforehand an appropriate regulation and decision-making process.

Only a series of changes to improve the quality of sustainable transport and a visible improvement in the quality of public space will give a real chance of gaining public support for the systematic exclusion of cars from the city center.

OPERATIONAL GOALS

With all this in mind, further operational goals can be set:
-Developing a transparent and inclusive decision-making system.
-create regulations to ensure liveability and sustainability for new developments
-expand the Park+Ride network around the city (partly in cooperation with the private sector, partly publicly)
-expansion of the Ride+Bike points together with the creation of attractive public spaces (partly in cooperation with the private sector, partly publicly)
-construction of new landscaped paths within green areas (partly in cooperation with the private sector, partly publicly).
-regulation and adaptation of space to eliminate private cars from the city center.

SPATIAL IMPLICATIONS

As can be seen below the way in which targets are made after 2027 will have an impact on the form of space. Investment in partnership with the private sector will require more land for development. In order to be able to build recreational infrastructure on greenfield sites, it would first be necessary to respond to the needs of landowners in the form of allowing partial development.
On the other hand, it is unlikely that the transformation can be completed only with the help of public and EU funds after 2027.

STRATEGY DEVELOPMENT
CONCLUSIONS

The steps carried out in this chapter aimed to test a number of measures and find the most effective strategy for an integrated transformation of the city to improve liveability. The following conclusions can be drawn from this process:

-City authorities have three main types of fundraising available for their activities. The methods of financing investments have a great influence on their form, scale and location.
-At the moment the city can only rely on the EU; every other funding path requires more preparation, and already now the city authorities have started to adapt their plans to the EU programmes
-Different mobility strategies can have very different consequences for the individual urban fabrics These changes are often difficult to imagine for local citizens and other actors.

By visualizing the spatial consequences, actors can be more consciously involved in the decision-making process and add to the plans key information which is often necessary to verify the potential effectiveness of the measures. These are both facts and a picture of their emotional feelings, which give important indications on the necessity to edit the plans or prepare an educational campaign to counter the protests:

-The benefits for walkability and transit fabrics are generally in opposition to the interests of the actors involved in the automobile fabric area. In the context of such a privatized legal culture, their attitude to change can be an effective stunner to any change. It is crucial to keep this in mind in your strategy.

-Dates for individual budgets are very important critical points in a potential strategy; such dates include 2027 as the end of the current budget, and 2030 when a new perspective for the provincial strategy with a new round of budgets will appear. It is for these dates in particular that it is necessary to prepare the flexibility of financing the necessary strategic activities.

-In the strategy there are also key strategic activities whose realization is a condition for starting further activities. In the elaborated strategy in this chapter two most important activities were determined, namely: construction of the Park+Ride point on the territory of the partner city within the scope of ITI cooperation and: the establishment of a decision-making process and a procedure for sustainable urbanization in order to allow for potential cooperation with the private sector after the expiry of the EU funds budget..

NEXT STEPS

For the strategy presented in this chapter to have a chance of being implemented, it is necessary to preper diversification of financing options.

However, this requires the development of special regulations involving different stakeholders. These can be worked out through practical measures; for example, a test project oriented towards negotiations with landowners with the participation of residents.

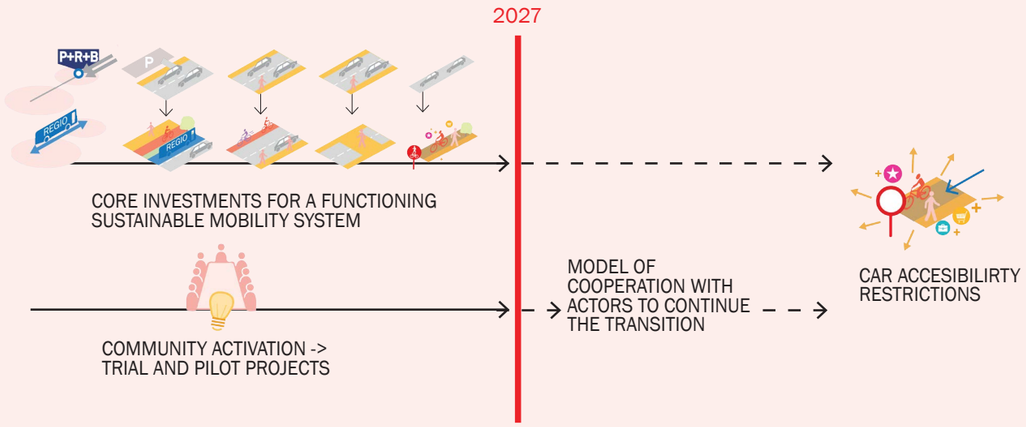


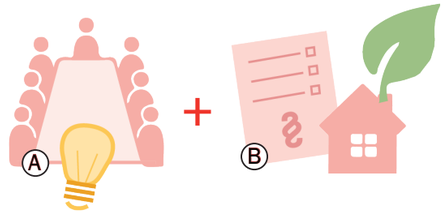
Fig. 104 .
chart of key objectives

7. PILOT TRANSFORMATION

PILOT TRANSFORMATION
INTRODUCTION

This chapter focuses on the development of a system of stakeholder cooperation, and the principles of sustainable land transformation to secure liveability and sustainable mobility choices in the city development perspectives. For this purpose, the process and strategy of a pilot site transformation will be reconstructed and, based on it, general principles will be developed.

PILOT TRANSFORMATION METHODOLOGY



In line with the conclusions of the previous chapter, the next steps will be directed toward achieving the two main objectives necessary to continue the transformation of the city beyond 2027 (Figure 104):

Ⓐ To develop a decision-making system
that integrates and activates various stakeholders, necessary for effective collaboration.

To accomplish this, the answers to the following questions are needed:

-What stakeholder groups are affected by the potential landscape transformation and how to activate them?

-How to ensure effective and justice communication between stakeholders?

-How are actions needed to find a compromise between stakeholders?

Ⓑ To develop regulations for sustainable land developmen
to secure livability and reduce car dependency in urban fringe areas

To accomplish this, the answers to the following questions are needed:

-Which criteria should govern land-use changes in a given area?

-How do ensure a sustainable mobility system in areas of new development?

-How to ensure the quality of space providing liveability and stimulating sustainable user choices?

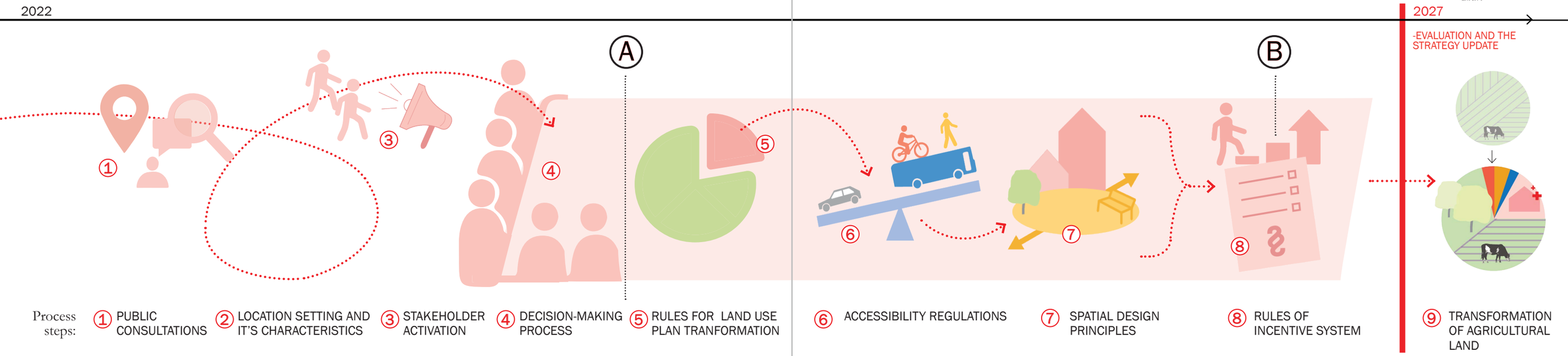
RESEARCH BY DESIGN METHODOLOGY

The research by design methodology is adopted to answer these questions. In order to establish a dialogue and cooperation with the actors as well as to develop regulatory solutions, it is best to work on a specific location and then to draw universal conclusions.
The process of such a pilot project can be imagined in the steps presented in Fig. 105., where the first phase is oriented to the activation of actors and the elaboration of an equitable decision-making system, and the second to find within this system regulatory solutions for balanced changes in the landuse plan, the mobility system and the formation of urban space.

PRIORITIES AND CONSTRAINTS

Due to the limited resources of the academic project, the simulation of such a process is severely limited in this case. In practice, the active and regular participation of stakeholders would be a key aspect of the decision-making process (points 6-9 in Figure 105). In this case, however, their input will be limited to the information that has been collected in the previous chapters through interviews and analysis of the results of the municipal public consultation. Design decisions will also be largely based on a case studies (pages 74-77) , in reality, they should be deepened by performance analyses..

Fig. 105 .
Pilot Project Steps Chart



PILOT TRANSFORMATION
LOCATION SETTING

INPUT FROM STAKEHOLDERS

The concepts for the pilot projects are based on data from the public consultation. This work is based on data collected from the consultation report carried out by the Zakopane City Council (Zakopane, 2016)) and the own consultation carried out for this project (pp. 56-64).

SUMMARY

-The landowners are very attached to the ownership of their land (as an important heritage from the time of regional sheep grazing) and public investments on their land are strongly opposed

-Due to the growth of the city population, the ownership structure of agricultural land is broken down and agriculture exists only in a small form

-Agricultural land is now primarily valuable for its landscape and nature as an important ecological corridor

-These areas have been successively developed illegally over the years with little consequence.

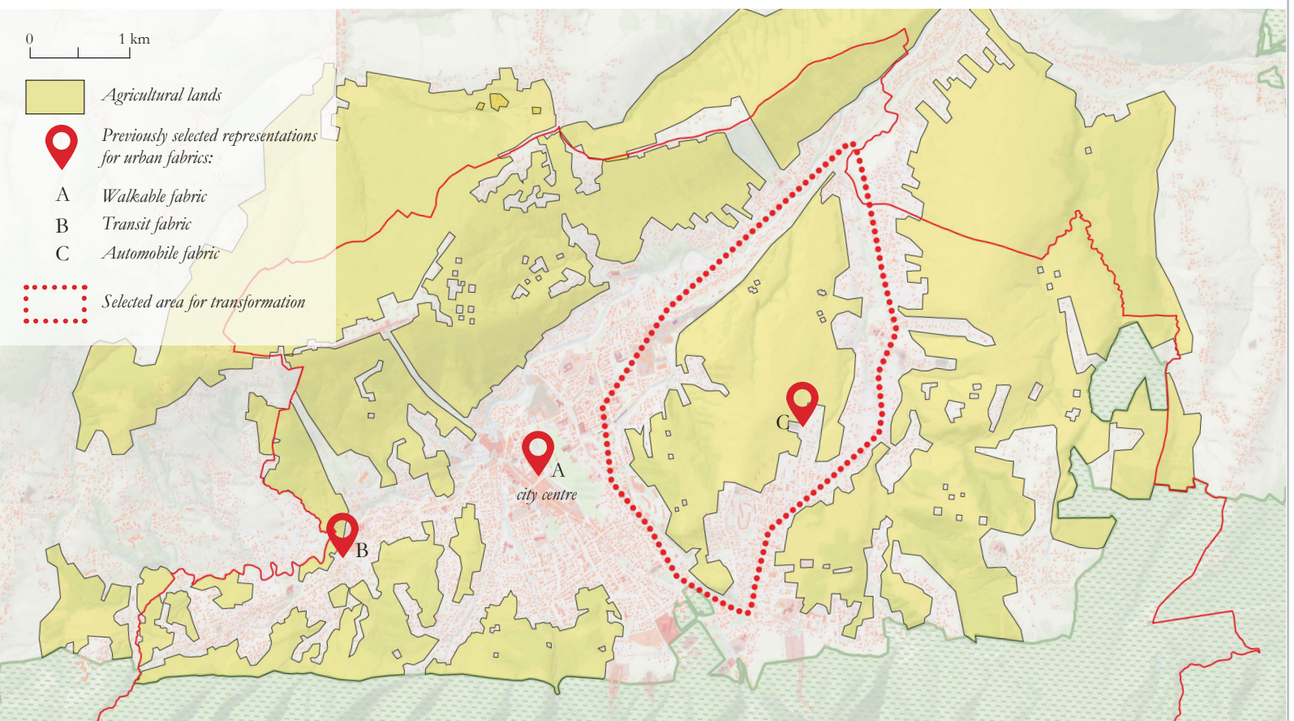
-The attitude of landowners and investors who try to purchase agricultural land is oriented towards the expectation of future development possibilities

-Given the extremely high prices of real estate, there is a tendency for investors to try to buy up agricultural land in the hope of profit in the long term (after the possibility of development).

-Rural areas became neglected after incorporation to Zakopane city; agriculture is disappearing, investment opportunities are limited, public services are poor.

Having these data in mind it must be stated that effective communication with the actors and commencement of key investments is not possible without addressing the demands of landowners to invest in their land.
The key asset of the municipality here is the possibility to make changes in the land use plan and the right to consolidate and re-divide plots.
Based on the above, the City can offer to design and manage the process of land transformation so that owners of non-functional agricultural land get smaller but viable building plots in areas where balanced development is possible, and the remaining land can be made available for strategic public purposes.

Fig. 106 .
Map showing agricultural areas in Zakopane and the selected location for the pilot project



LOCATION SETTING

The pilot project site must be representative of the broad spectrum of problems facing auto fabric residents and agricultural landowners.

Agricultural areas in Zakopane are characterized by great diversity in terms of topography, size of area, or proximity to public services.
In real conditions, the choice of the testing location should be based on preliminary negotiations with potential stakeholders, but for the purposes of this project, the test site will be the area indicated by the information gathered so far, namely the land between the center of Zakopane and Olcza district. Olcza was created by annexing a separate village to the city and it functions within the transit fabric. It was indicated during public consultations as a particularly neglected part of the city, which needs intervention (Zakopane, U. M. 2016).). This territory also contains a significant proportion of automobile fabrics and the location form point A (fig. 106) was used in the Problem analysis (pages 38-47) and scenario making (pages 84-104).

Land is characterised by a large degree of differentiation in land use (Fig. 107):

-Agricultural; which is predominant. Livestock grazing, however, is already occurring to a very limited extent. There is a network of dirt paths in the area with the great scenic appeal (view 1)

-Rural: built-up areas where farms predominate and rural culture is still alive (view 2)

-Woodlans; around areas of watercourses and particularly steep topography (view 4)

-Residential and guesthouse areas

-Residential and services; services are established in a scattered way around the main road without creating public places (view 3)

-Hotels: areas characterised by scenic qualities, where clusters of large hotels have been established

The favourable topography and the growth of large-scale housing deepen the car dependency in the area. The street is the main transit route and is not able to provide the quality of an attractive public place (view 3, fig. 109).


view 1) souce in list of fig. Fig. 108 .


view 4) souce in list of fig. Fig. 111 .


view 2) souce in list of fig. Fig. 110 .

view 3) souce in list of fig. Fig. 109 .

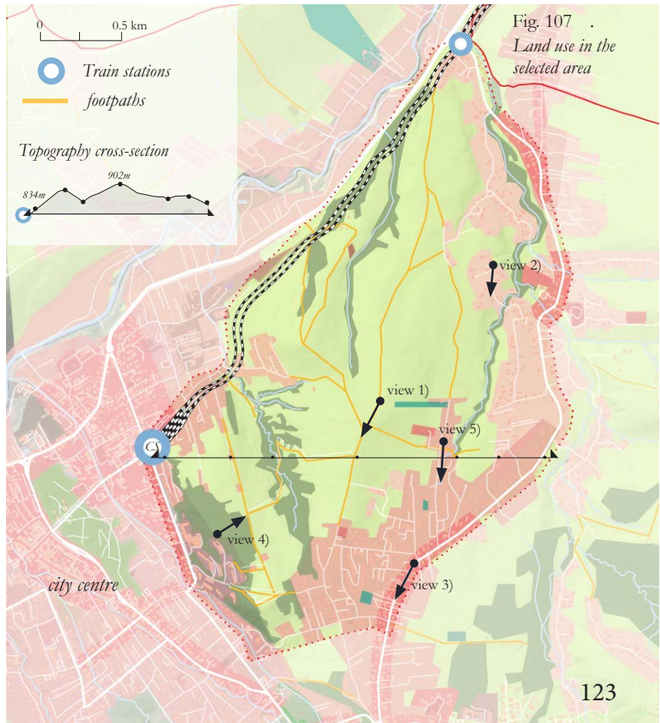


Fig. 107 .
Land use in the selected area

PILOT TRANSFORMATION
STAKEHOLDERS ACTIVATION

The next step is to identify the stakeholders with their needs and then to define a strategy for their activation and cooperation in the city's desired direction.

At present, the site largely conforms to the use plan set out by the municipal authorities. However, as has been shown on previous pages, this plan no longer suits the landowners.

Map X shows an outline of the intersection and conflicts of interests of stakeholder groups. The whole area is in private ownership, and the owners have different interests and expectations of their land:

Key stakeholders:

-CITY AUTHORITIES; legally enable and coordinate the transition

-LANDOWNERS: landowners who are awaiting the possibility of changing the use of their land. They must ust agree to the descent and re-division of the land according to the principles of the transformation.

-FARMERS; a small group within the landowners who continue to use the land for its legal purpose. -Their consent is also crucial for the implementation of the transformation.

-RESIDENTS; despite the lack of tools to directly influence the fate of the area, their political pressure can strengthen or completely block the actions of the city administration.

It is in the interest of average residents to be able to use the scenic paths in the area, despite growing opposition from landowners.

Investment partners:

-Outdoor sports industry: investors in landscape sports can lease green spaces to support their attractiveness and conservation

-Large tourism investors: are looking for opportunities to invest large capital in large-scale tourist facilities - their investment motivation may be partly directed towards the creation of public places

-Developers: There is a housing glut in the city and residential investment is very profitable. Large development sites can participate in the creation of service facilities for the local centre.

Strategic partners:

-TATRA NATIONAL PARK; a public institution with considerable influence in the region. It is keen to protect nature trails and increase the National Park's buffer zone. It has a budget and the ability to revitalize the forest and provide recreational facilities.

-LOCAL CHURCH

-LOCAL PRIMARY SCHOOL

-JEWISH MEMORIAL FOUNDATION

They want more users; important social services which have an interest in the growth and development of the communities for which they serve

EU is interested in pursuing sustainable development objectives in the framework of programmes financed by it.

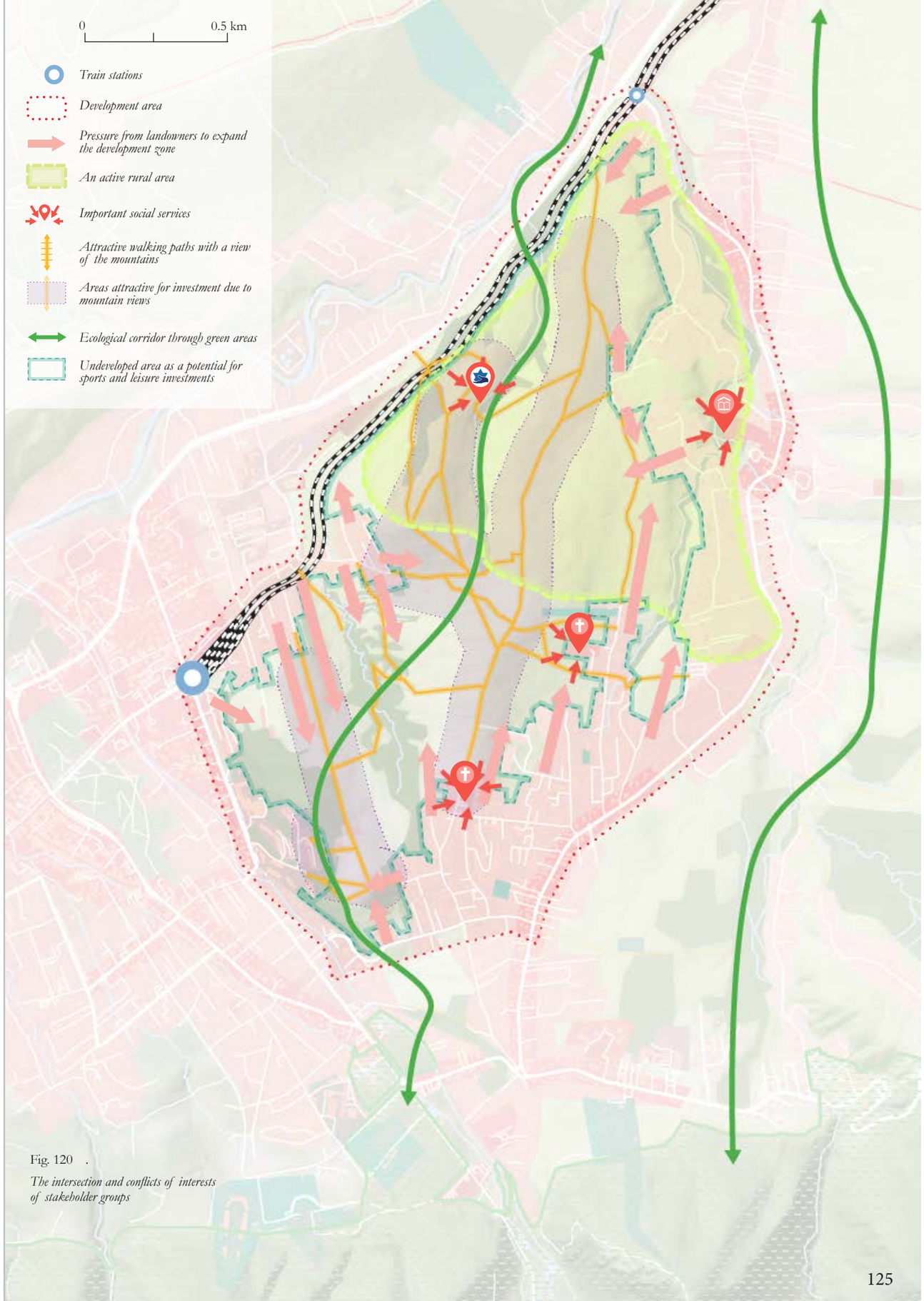


Fig. 120 .

The intersection and conflicts of interests of stakeholder groups

PILOT TRANSFORMATION
STAKEHOLDERS ACTIVATION

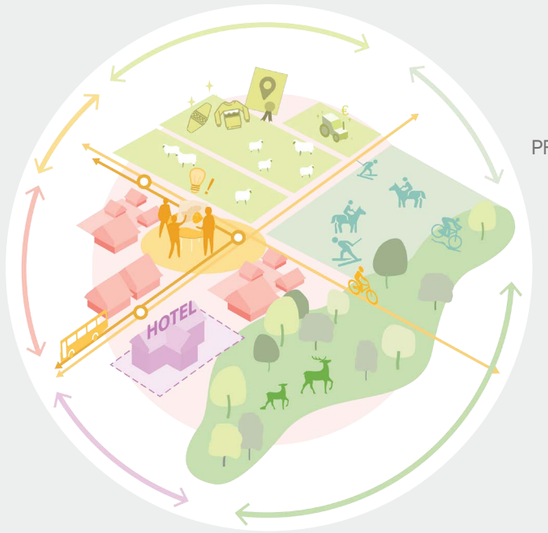


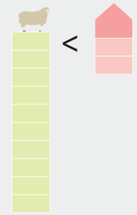
Fig. 121 .
the concept of actors' cooperation

Activating stakeholders for transformation through appropriate profit visions is key:

Key stakeholders:

-City authorities; ltranformation only possible according to rules developed by the administration which support liveability and sustainability

-Landowners: lan increase in the value of the assets by more than 200% by exchange for building land or flats with ensuring the quality of spaces, public services and public transport



-Farmers; Protection and support of traditional agriculture. Improved availability of pastureland.

-Residents: public support through the prospect of improved recreational areas

Strategic partners:

-Tatra National Park; co-organization and co-financing of the transformation in exchange for the acquisition of areas of natural significanc

-Organisations active locally

Assist in networking with local stakeholders; co-organise local events to help reach groups that are not usually involved in the decision-making process; farmers or different groups of citizens. In return The prospect of business development due to the increased number of users

Investment partners:

-Outdoor sports industry

-Large tourism investors

-Real estate developers

Co-financing of transformation through investment capacity guarantees

PILOT TRANSFORMATION
DECISION-MAKING PROCESS

TRANSPARENCY

However, the process of such transformation requires effective cooperation between these various stakeholders. They need a process that will secure the regular participation of representatives of all parties. This can be achieved through project work including a series of meetings and workshops with representatives of all actors (Fig 123).

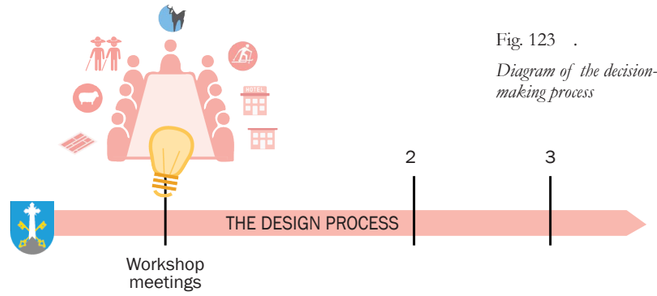


Fig. 123 .
Diagram of the decision-making process

STAKEHOLDERS POSITION IN LAND DIVISION

As the analysis in the section on Governance in the Problem analysis (p. 52-69) has shown, the bargaining position of the actors is very unequal. Economically strong actors are privileged and stronger here. In order to balance the positions, it is necessary to establish rules that are superior in decision-making.
To this end, priorities for the transformation should be set. On the basis of the brief analysis of this area on the previous pages and keeping in mind the objectives of this project (improvement of the liveability of the community while respecting the principles of sustainable development) the priorities

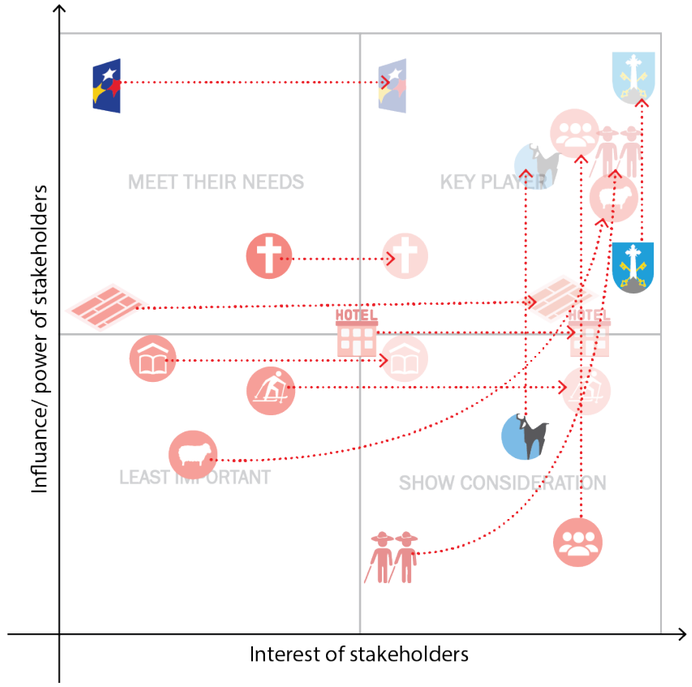
1. Landscape value of the area as an important public space

2. The local rural community as a carrier of tradition and culture

3. Respect for the environment

The interests of the other stakeholders must therefore be subordinated to these three actors. The city, by initiating, coordinating and carrying out the main project work, will gain a strong influence on a balanced transformation process (fig. 197)

Fig. 122 .
Stakeholders assement



PILOT TRANSFORMATION
LAND DIVISION

5

-NATURE

Fig. 124 view 1) own picture

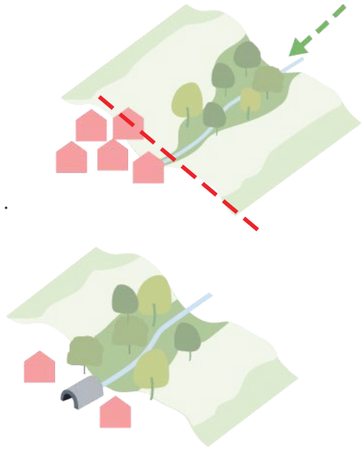


Fig. 125 .

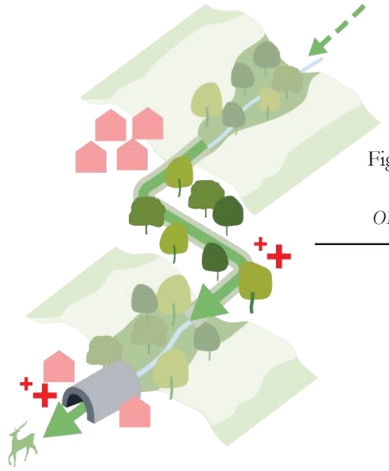


Fig. 128 .

OR

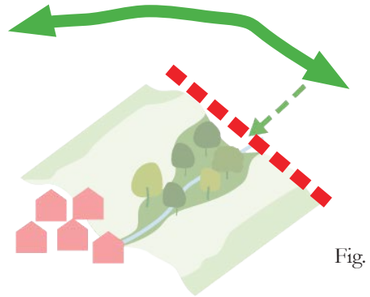


Fig. 129 .

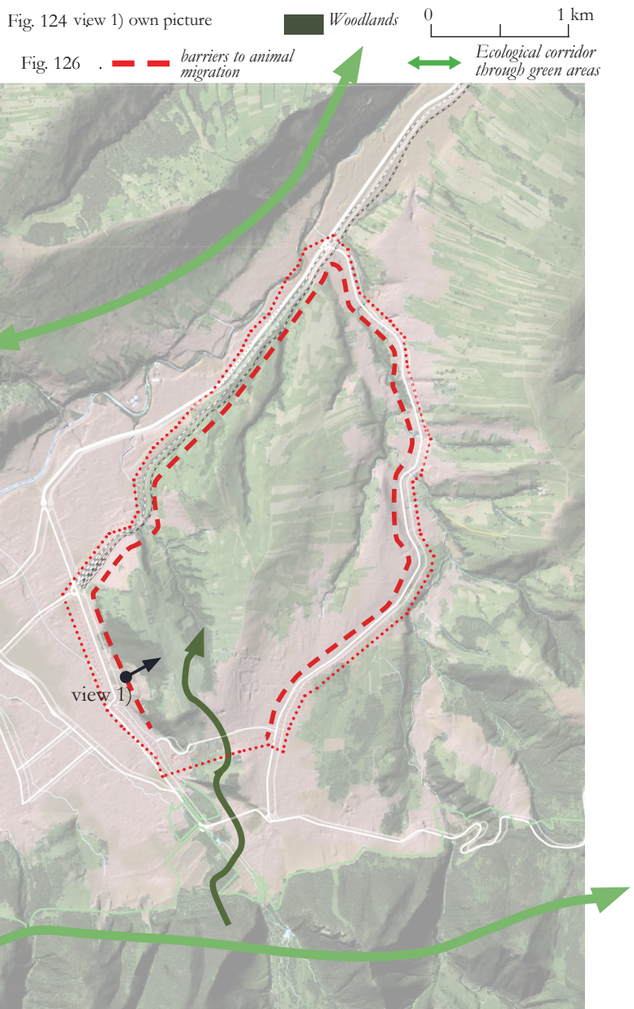


Fig. 126 .

As can be seen in Figs. 125-126 woodlands are preserved only in areas with difficult access. Usually, these are sharp slopes of watercourses.

However, they do not form a coherent network but are crossed by areas used by people.

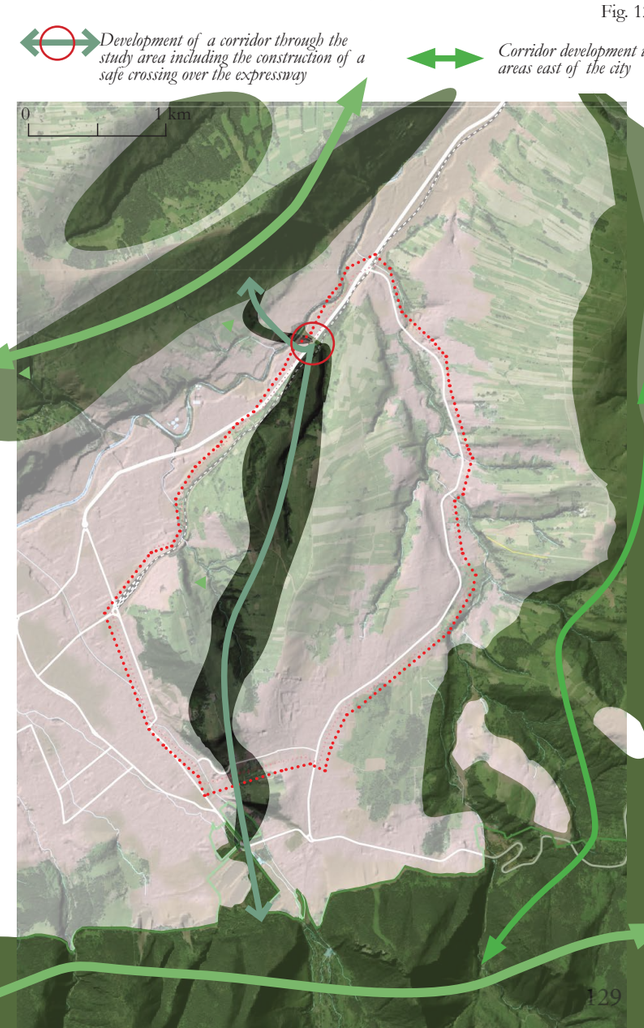
The study area is characterized by a large amount of green space and is relatively easily accessible for migrating animals from the National Park to the south. However, the area currently acts as a dead end; it is enclosed on other sides by highways, train tracks, and dense housing. Because of this, the animals often get lost and enter urban areas (view. 1).

From an ecological point of view, it is important to provide safe and clear migration routes for animals connecting the national park in the south of Zakopane with the forest belt in the north of the city. More suitable areas for this purpose are located on the eastern border of the city and it is there that the development of an ecological corridor is particularly needed (Fig. 128). Based on the interview with a representative of the Tatra National Park it can be concluded that it is necessary to provide very clear routes; thus either to develop a forest area to the east of the town and close the access of animals to the study area or to improve the quality of green space in the study area and to build

Fig. 130 *site of a potential ecological passage (source in list of fig.)*

a safe passage through the expressway (Fig.130 and red point, fig 127). For the National Park the best solution would be a combination of both options.

Fig. 127



PILOT TRANSFORMATION
LAND DIVISION

-AGRICULTURAL

Fig.185 view 1)

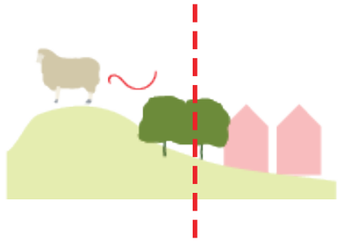
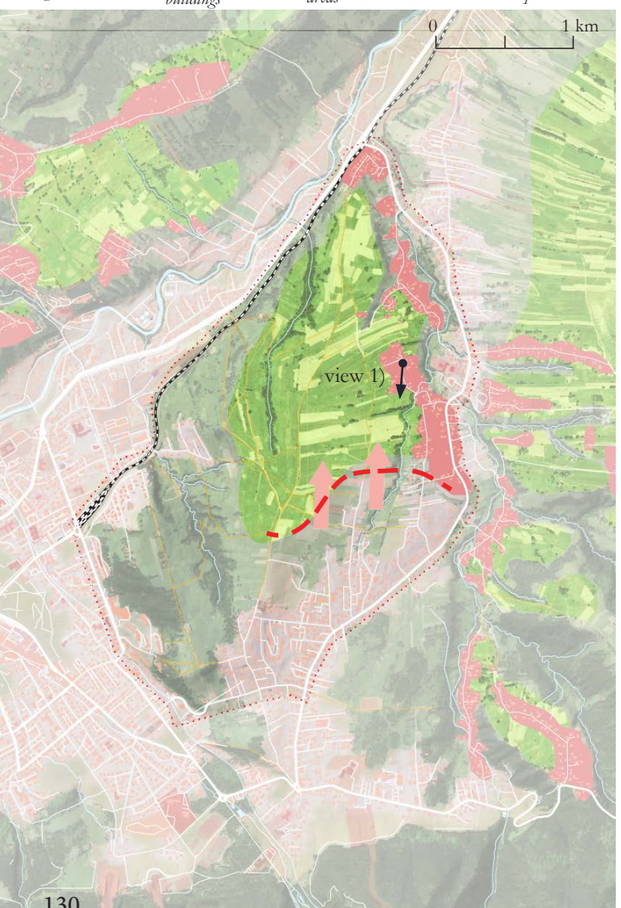


Fig. 133 .

Fig. 132 .

Fig. 131 . *Farm buildings* *Agriculturally active areas* *Urbanisation pressure line*



Agriculture is disappearing from the region, however, there are still areas where most of the buildings are farms and barns (Fig. 185) The areas where the grazing of animals can still be observed are mostly areas adjacent to the farms. The countryside had its own network of footpaths which are still preserved.

Over the years, the ownership structure has become very fragmented and some areas have also been purchased as investment areas (Otodom, 2020). Therefore, in order to develop local grazing, it is necessary to solve the land ownership problem in the functional area of the farms (Fig. 131).

They also need protection from further building pressure from south, which is disrupting the local community structure and its traditions. Urban residential areas are sensitive to odors associated with animal husbandry, so it is important to create a buffer zone by means of land separation or green belts (Fig 131, 133).

Local agriculture also needs systemic support: traditional handicraft products are very popular among tourists (sheep cheese, meat, jumpers) and sheep grazing attracts viewers, but currently, the farms are too small to be profitable; they need help in developing and promoting their products.(Fig 132).

PILOT TRANSFORMATION
LAND DIVISION

-PUBLIC

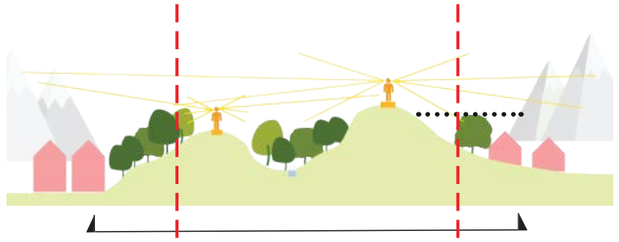


Fig. 137

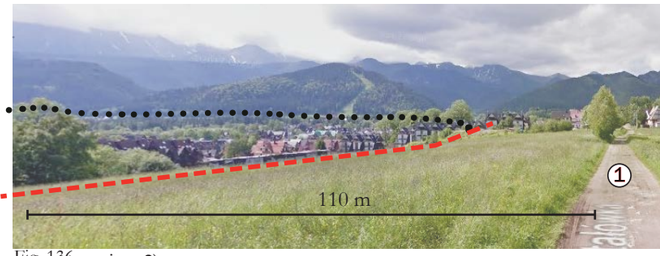
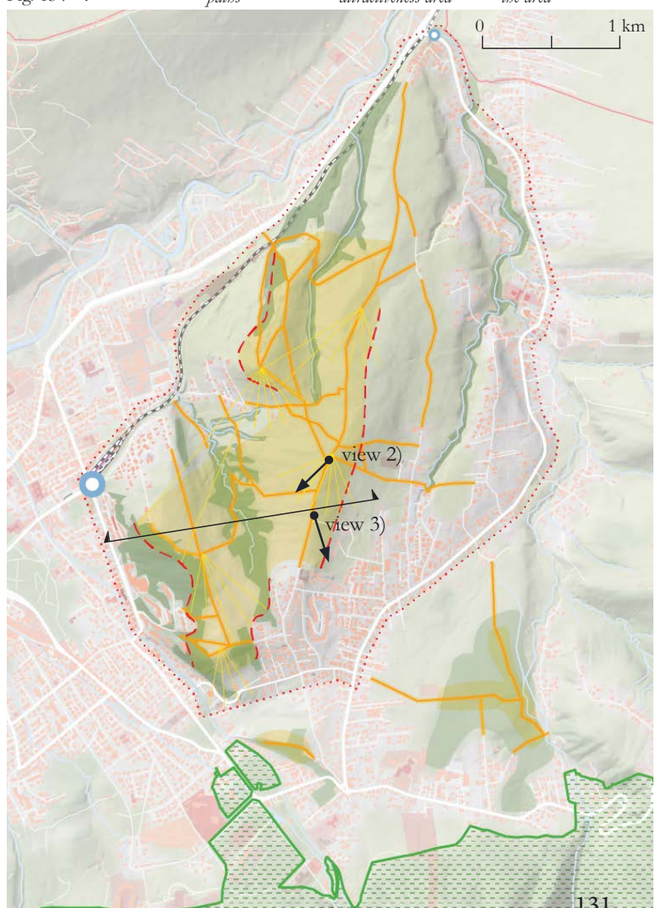


Fig. 136 · view 2)
Fig. 135 . view 3)
Fig. 134 . *Traditional paths* *Landscape attractiveness area* *View closures in the area*



From the perspective of public welfare, the old footpaths preserved in the area from the farming time are very important (fig. 134). Nowadays, despite their very poor quality (point① on view 3) they are used for recreational purposes, mainly because of their scenic value (views 2-3).

It is important to provide residents and tourists with better access to these trails, but also to protect the landscape composition of the green hills against the background of the mountain range (views 2-3). For this purpose, a protected landscape area can be designated presented on map 134.
On the west side, the border of protected scene is a line of trees on the hill which obscures the buildings (fig. 134, 137)
The view from the east side (fig 135) shows that the tree line at a distance of 100 m can effectively block the view of the buildings of hifht max. 20m, while at the same time preserving the view opening onto the mountain range.

PILOT TRANSFORMATION
LAND DIVISION

-OUTDOOR SPORT

view 1) *existing ski-slopes (google view)*

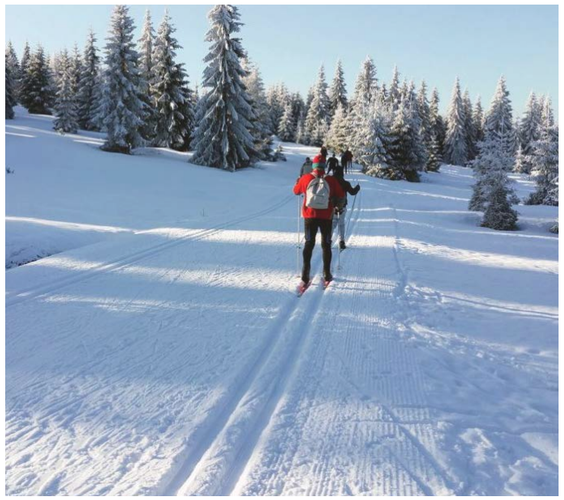
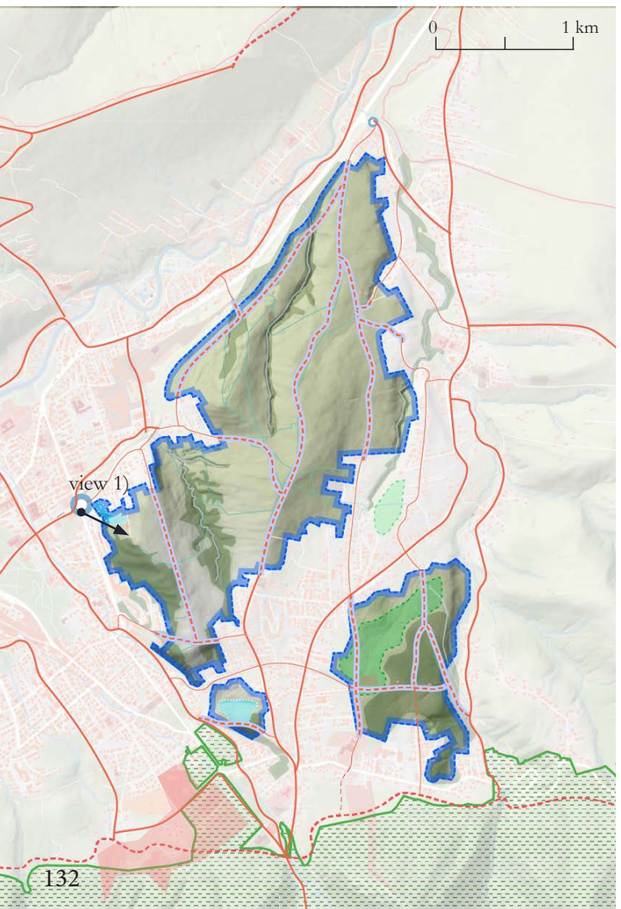


Fig. 139 . *Examples of cross-country tracks in the region (source in lidt of fig.)*

Fig. 140 . *Main cycle paths* *Shared-streets cycle paths* *Scenic gravel paths*

Fig. 138 . *Multi-terrain sports potential* *existing ski-slopes* *sports field potentials* *Winter sports centre in Zakopane*



The large green area has great potential for recreational sports. It is about 10 times bigger than the current Winter Sports Centre in the city (fig. 138), where there are cross-country trails and ski jumps.

On the area are currently two small ski slopes in the area, which, however, cannot be developed due to ownership problems (View 1, fig. 140)
The open area has potential for horse riding, cross-country skiing and snowmobiling (fig. 138)

The traditional routes mentioned on the previous pages could be adapted for cycling. It could give even 10 km of new paths of scenic value

All these sporting opportunities offer concrete possibilities for entrepreneurs offering services or renting equipment. They need an effective access to land.

PILOT TRANSFORMATION
LAND DIVISION

--HOTELS

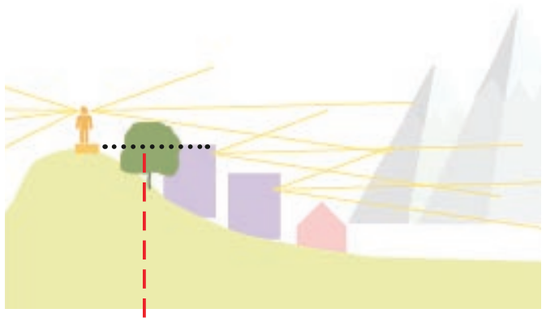
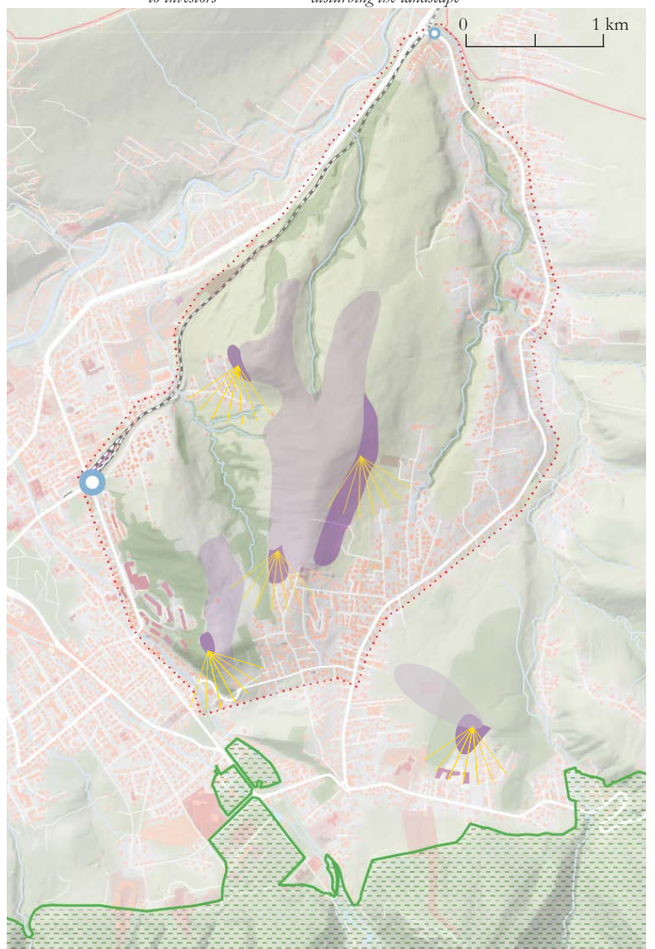


Fig. 142 . *Concept of location of hotel cubicles*

Fig. 143 . *source in list of fig.*

Fig. 141 . *Areas attractive to investors* *Attractive areas without disturbing the landscape* *Existing Hotels*



Due to its scenic value, a large part of the area is attractive for hotel investments. The view of the mountains is the biggest potential asset for hotels in the region (fig. 141).

Another important factor for hotel investors is the size of the available land which enables the creation of large recreational complexes (fig. 143).
Such large-scale buildings may disturb the landscape, so it is important to designate those areas which are outside the protected area (fig. 142) and the maximum height of the buildings

PILOT TRANSFORMATION
LAND DIVISION

--HOUSING

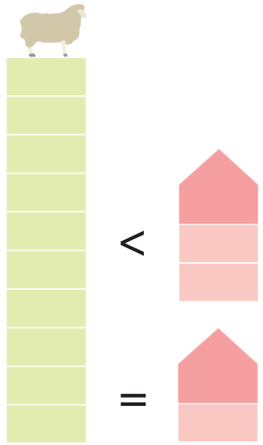


Fig. 145 .

The ratio of the price values of plots with different uses

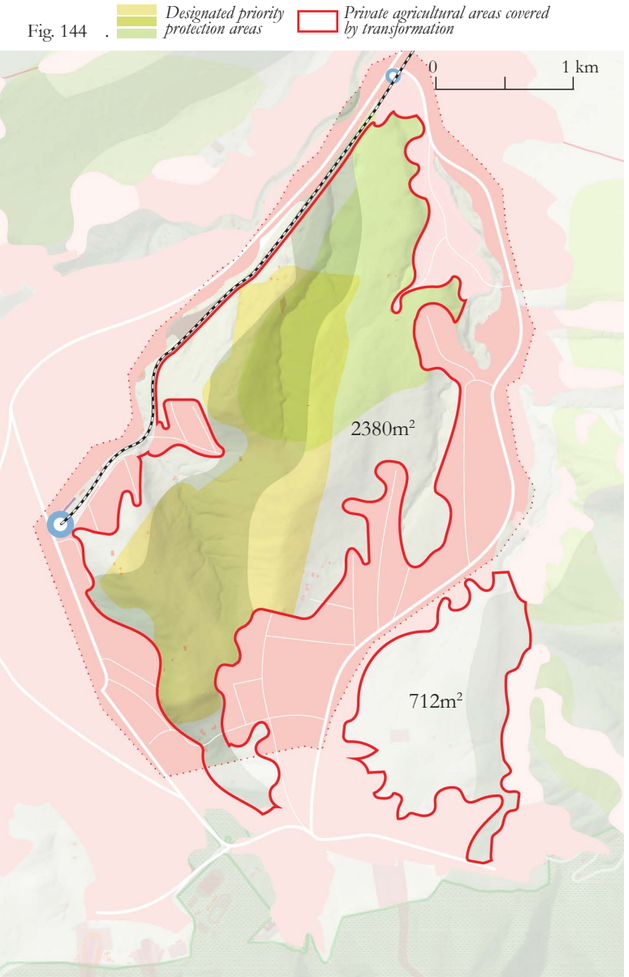


Fig. 144 .

The whole area is now privately owned. In order for the owners to agree to a complex transformation and boundary changes, they must see a large profit in it for themselves.

With the exception of a small group of still active farmers, the owners of the frontiers, their property is simply blocked by the local plan. Although they own large tracts of land in a scenic location, the value of this land is relatively low.
According to market prices, the value of building land is 10 times higher (ref. Otodom, website).
On this basis, it can be concluded that an equivalent compensation for the owners would be to give them 10% less land but with the possibility of development (fig. 145).
Equivalence, however, is not enough to make them really want to engage in it, for which reason this study assumes transferring at least 20% of the area to construction purposes so that from a market perspective each owner receives 200% of the initial value (fig. 145).

Potential locations for new building sites must be characterized by the ability to provide a balanced mobility system.
In the first stage of the strategy we obtain regional lines connecting the main tourist attractions and towns around Zakopane (map 148).
There are 3 possible types of location for new development in relation to public transport:

-Development around transport links (map 146).
There is still a large area of undeveloped land in the city which is in close proximity to existing transport routes. The area around the main railway station is particularly attractive in this respect.

-Creation of a local bus line serving built-up areas off the main transit routes (map 149).
The creation of a new line would allow development in areas further away from the main transit routes.

-Analogous to the previous solution, but with a different route for the new bus line (map 147).

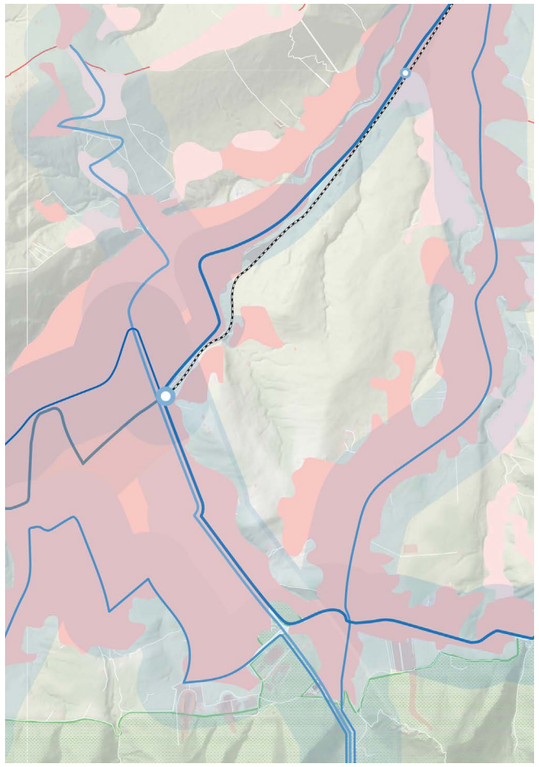


Fig. 148 .

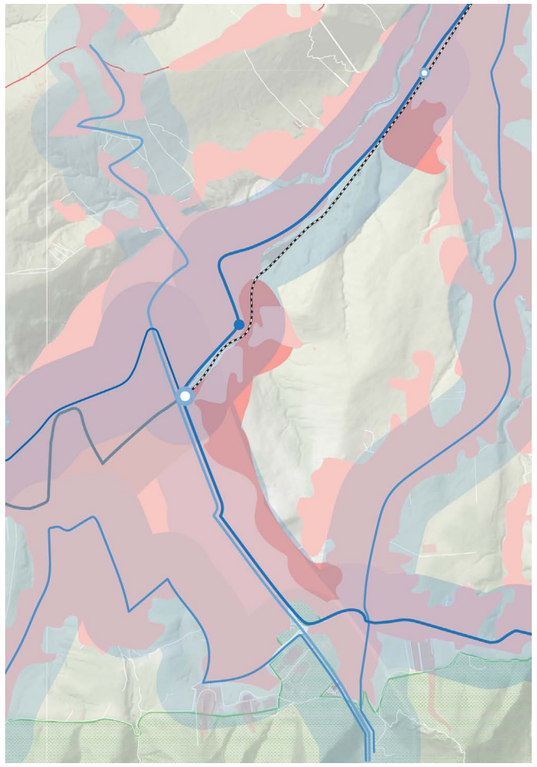


Fig. 146 .
Option A

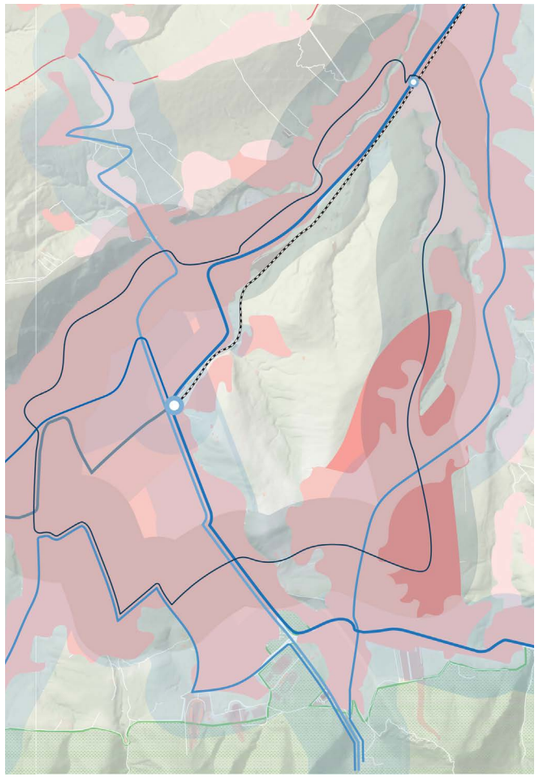


Fig. 149 .
Option B

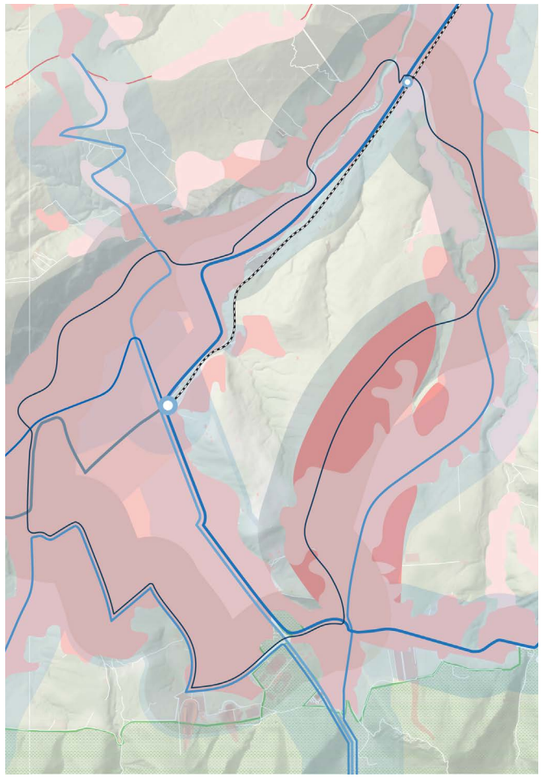


Fig. 147 .
Option C

PILOT TRANSFORMATION
LAND DIVISION

--HOUSING

EVALUATION

Evaluation of the options should take place as part of the next stakeholder meeting. Given the time constraints of the project, the selection is based on the information already collected and with the support of the place syntax tool.

The maps on the right show the angular integration of potential built-up areas after applying a very dense grid (50m). The analysis shows that Option A suggests a built-up area to support the density around stations and stops, and this is where public functions can take place. Options B and C provide opportunities for local placemaking.

Taking into account the principles for balanced urban forms, the most favorable option would be option A. However, knowing the specifics of the location and the actors, it is clear that option A would encroach on woodland, which is very attractive in landscape terms, and agricultural land of important cultural value.
Such a choice would also not help the local population of the eastern areas, who complained during the consultation about the neglect of these areas and the lack of a revitalization policy.
Another argument is the prospects for future transformations. There are many agricultural areas in Zkopan, on all of them there is building pressure and all of them are valuable in terms of landscape and nature. Most of them have no access to transport stations, and the aim is to develop a useful strategy for the whole city area.

For all these reasons option B is chosen.

An outline of a potential angular integration of different configurations

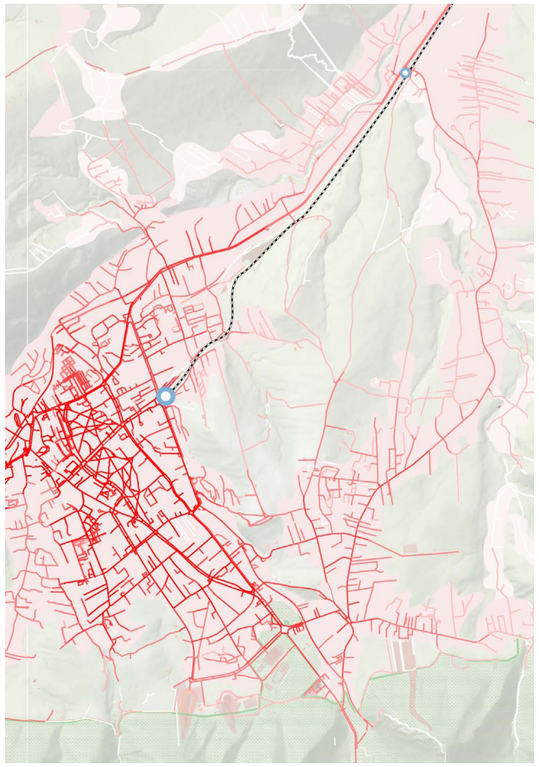
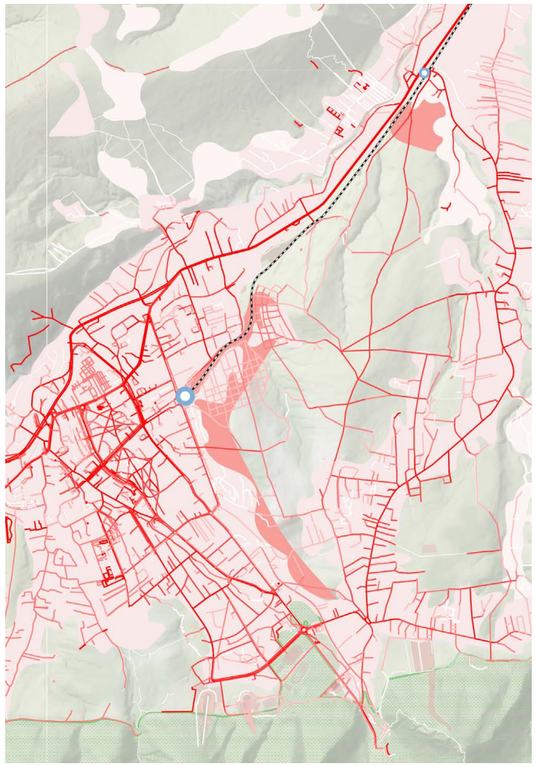


Fig. 151 .
Current situation

Potential development area



Potential areas for creating attractive public places

Chosen option

Fig. 150 .
Option A

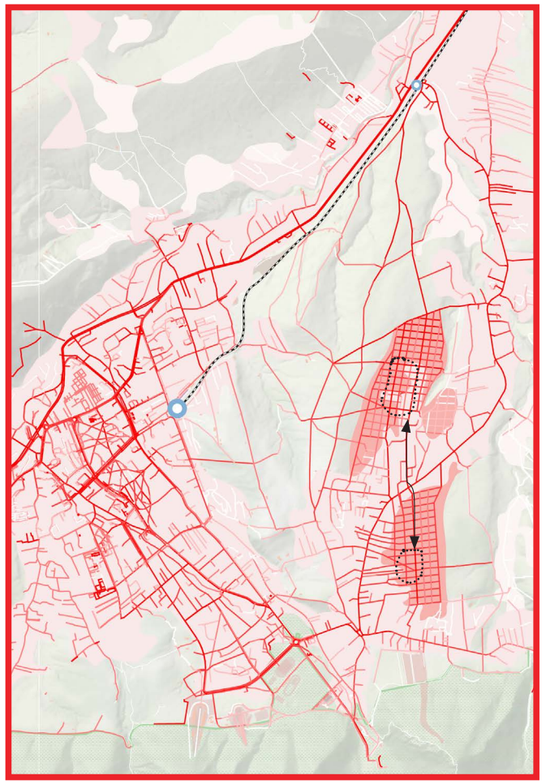


Fig. 153 .
Option B

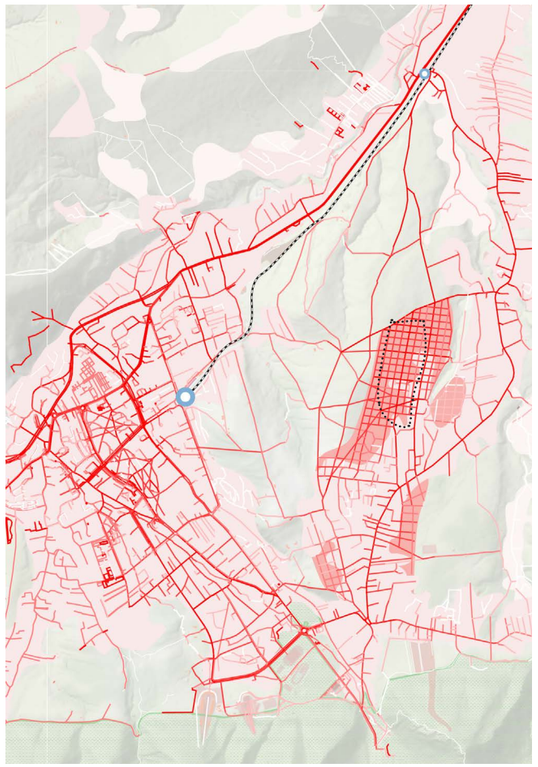


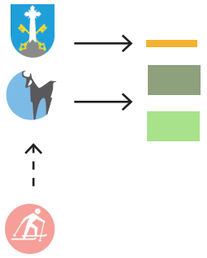
Fig. 152 .
Option C

PILOT TRANSFORMATION
LAND DIVISION

Based on the above analyses of the relation between the needs of the stakeholders and the spatial conditions, it is possible to propose new land use plan (fig. 154).

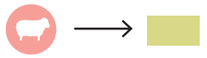
The change of use plan also involves a change of ownership structure:

The forests, woodlands and recreational trails would be transferred into the hands of public institutions; **the municipal authorities** and the **Tatra National Park** in order to effectively protect and revitalise them.

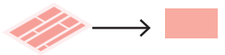


The recreational sports ground will finally be able to effectively lease part of the green areas thanks to agreements with public institutions

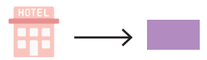
The farming community will receive land for its activities and system support



Land owners of the transformed area will receive in return more valuable building plots with the prospect of connection to public infrastructure



The hotel investors will be guaranteed the purchase of land with appropriate landscape and functional values



NEXT STEPS:

Once a suitable location for the development has been found, it is now necessary to look on a closer scale at how to ensure its sustainability and liveability.

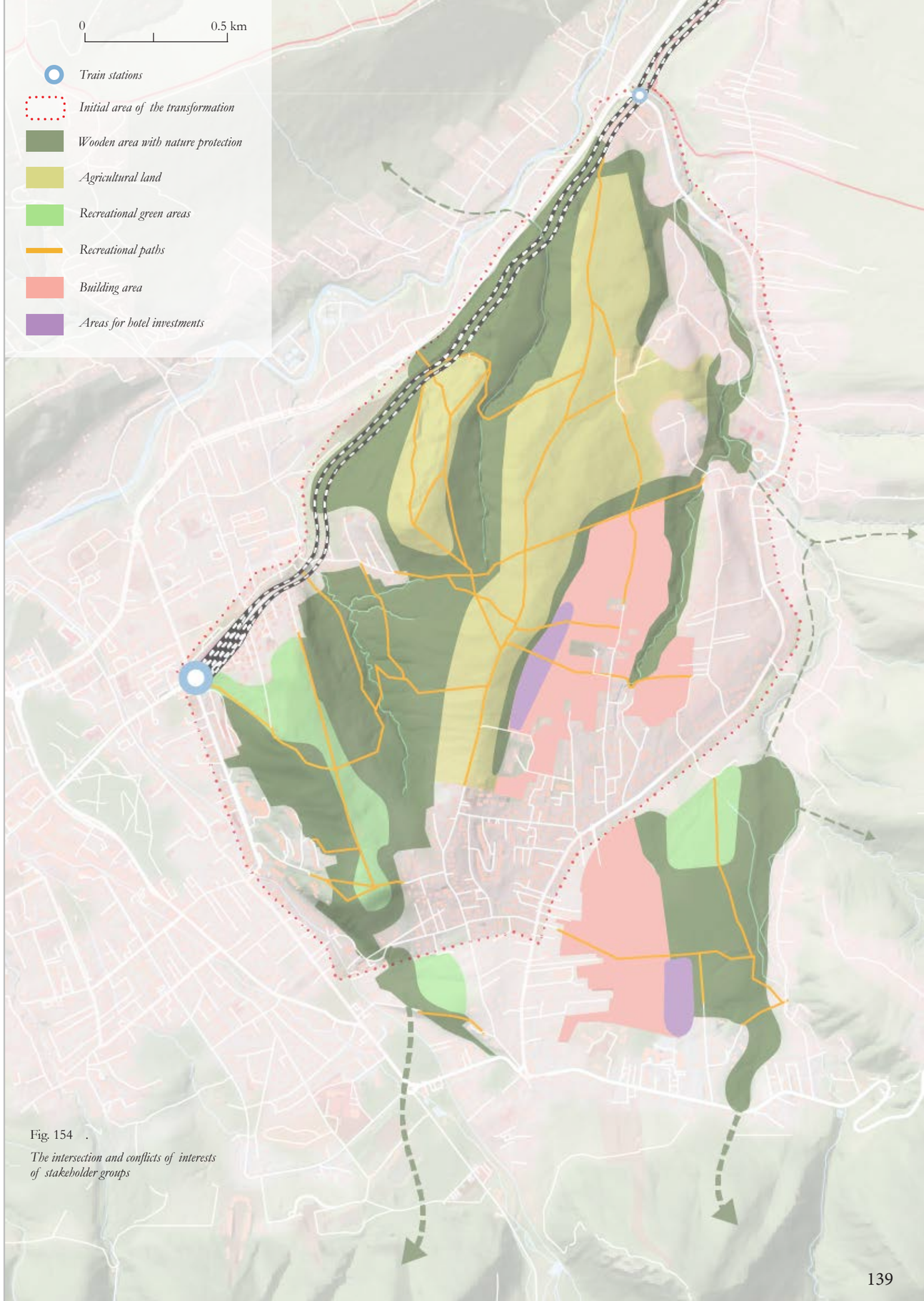


Fig. 154 .
The intersection and conflicts of interests of stakeholder groups

PILOT TRANSFORMATION
MOBILITY DESIGN

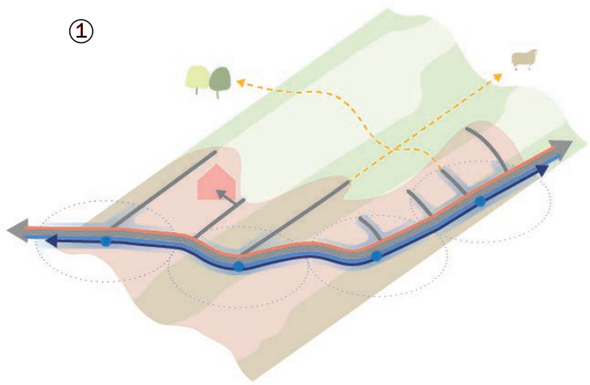
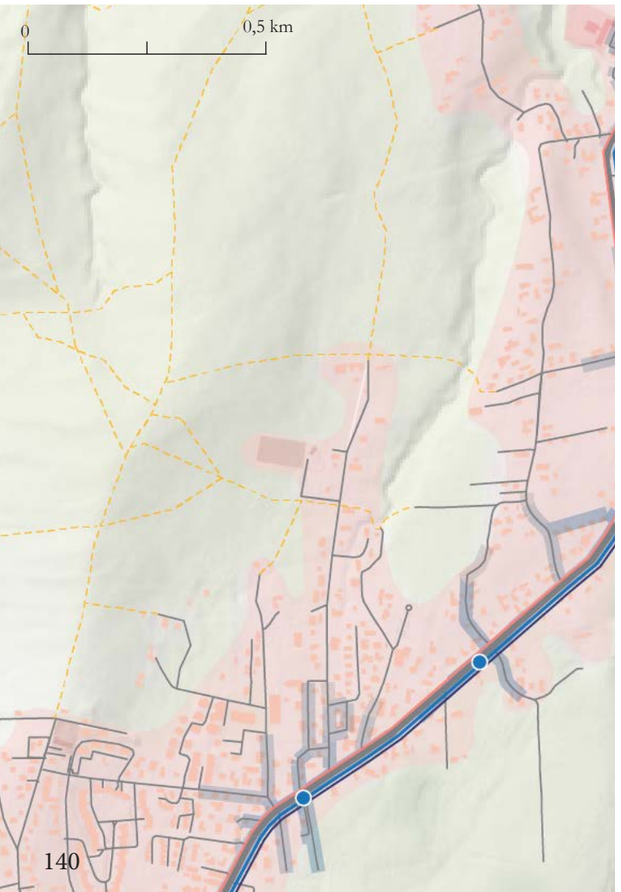


Fig. 156 . *Areas currently built up* · *Cycle path* · *Traditional walking routes* · *Regional bus lines* · *City bus line* · *Main car road* · *Bust stops* · *400m distance network* · *Access roads*

Fig. 155 .



SYSTEM OF MOBILITY OF NEW BUILDING SITES

The idea behind allowing partial development of green spaces was to guarantee their sustainability and liveability.
This requires the design of the accessibility system.

According to the principles of sustainable mobility. the primary means of long-distance transport should be public transport, locally by bicycle or short-distance walking.

① MOBILITY SYSTEM IN THE FIRST PHASE OF THE STRATEGY

As mentioned in the strategy chapter and shown in Figs. 155-156, despite the provision of functional regional public transport links and the creation of transit bike lanes, the car will still be the most convenient form of transport for most of the "automobile" area.

② LANDSCAPE PATHS AS A CORE OF LOCAL MOBILITY SYSTEM

The previous pages have presented the concept of editing the bus route through the proposed development area. If the aim is for pedestrian mobility to be the primary mode of transport over local distances it is important to link the location of new bus stops to the existing network of footpaths that will form the core of the grid; linking public transport to the landscape (fig. 157-158)

③ BIKEABILITY

It is not possible that the entire area of new developments is within 5 minutes walking distance from the bus stops. For longer distances, it is important to provide other sustainable alternatives like slow-mobility vehicles. The stops are therefore Ride + Bike transfer points that need to be integrated into a functional bicycle network.
The terrain has a large spatter, so basic paths should be located along terrain contours.

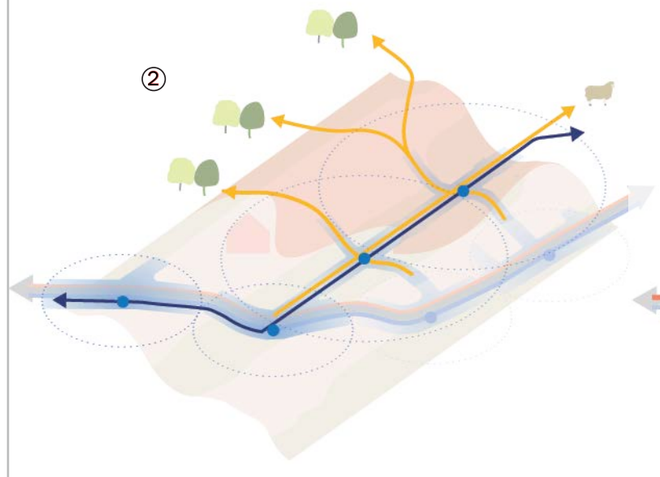
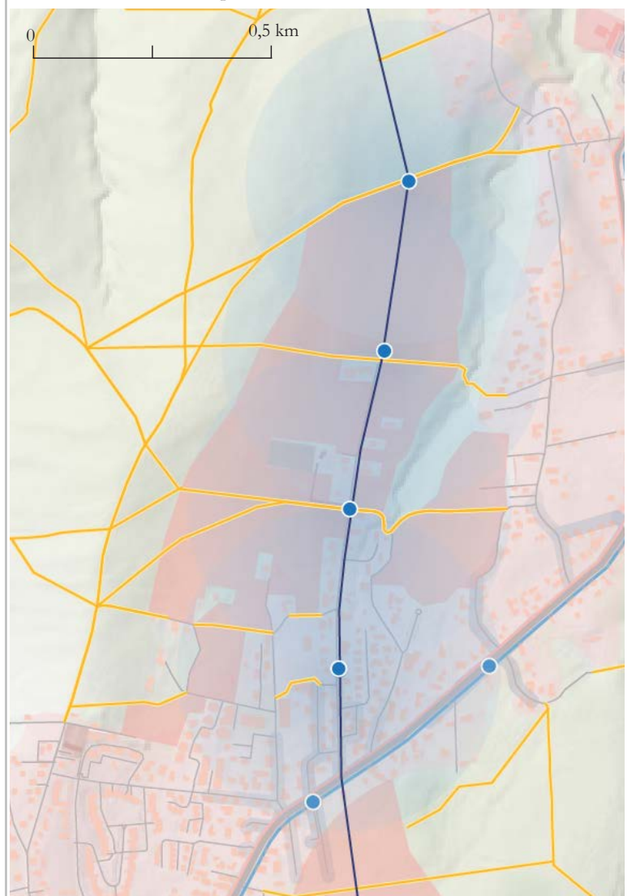


Fig. 158 . *Areas currently built up* · *New development* · *Traditional walking routes* · *Regional bus lines* · *City bus line* · *Bust stops* · *400m distance network = 5 min of walking*

Fig. 157 .



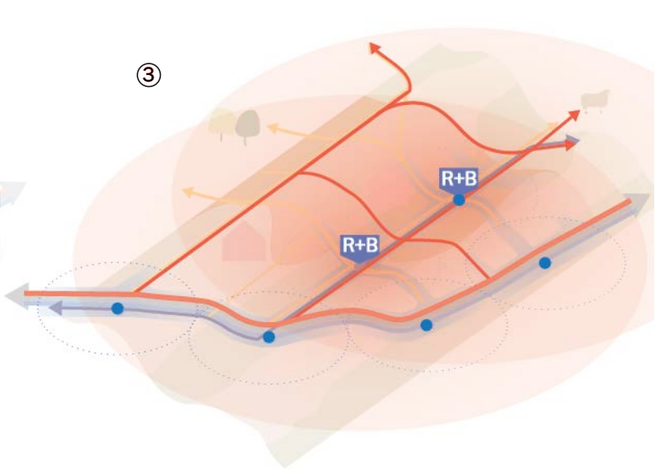
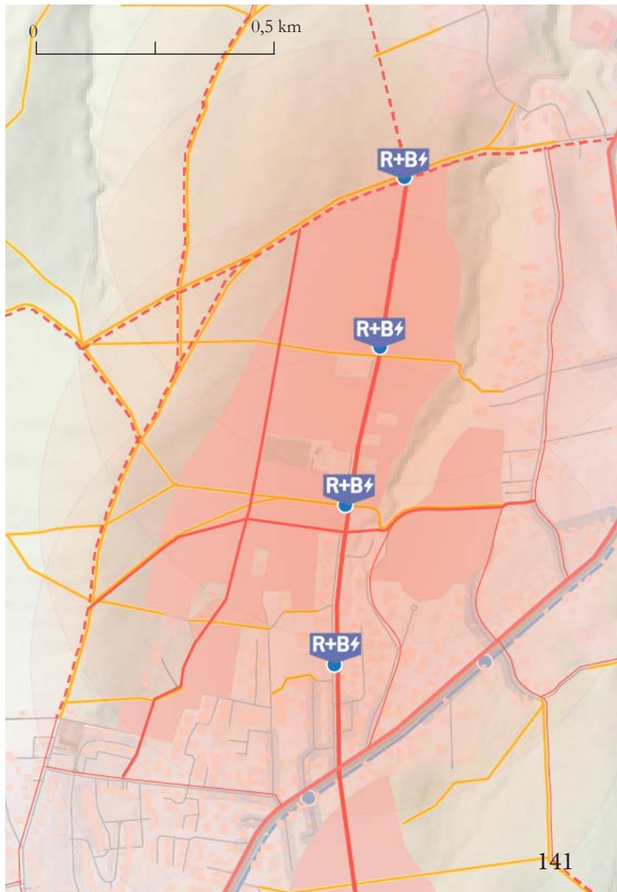


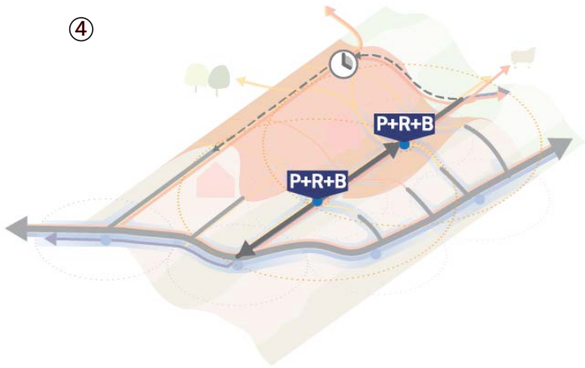
Fig. 160 . R+B *Ride + Bike HUBs* · *1200m distance network= 5 min of biking* · *Existing roadsas a shared-streets* · *Bikeable landscape paths* · *Main new bicycle network*

Fig. 159 .



PILOT TRANSFORMATION
MOBILITY DESIGN

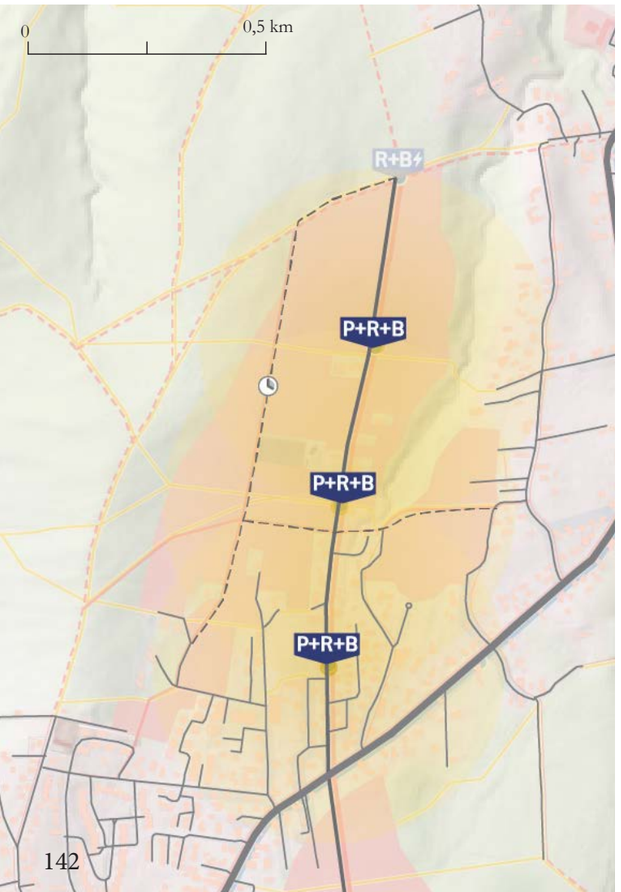
④



Areas currently built up
New development
Main access road
One-way logistic access
P+R+B Local Park +Ride+Bike
Short time parking spot
400m distance network = 5min walking

Fig. 162 .

Fig. 161 .



④ DIFFICULT ACCESS TO THE CAR

Given that current city dwellers are heavily dependent on the car, the idea of excluding it altogether would meet with great opposition. Another thing is that some users are unable to use slow-mobility vehicles (e.g. people with disabilities). The provision of car access close to the property is necessary.
However, it is important that access to parking spaces is less convenient than sustainable mobilities. To this end, the infrastructure should be organized so that cars are not permanently parked right next to the houses. This can be achieved by creating collective parking spaces. integrated within Park+Ride+Bike points.

Areas more than 400m from transport interchanges must have an access road, although parking spaces should be oriented towards short-term parking. Access roads off the main road should have reduced traffic volumes as much as possible and one-way traffic should be used where possible.

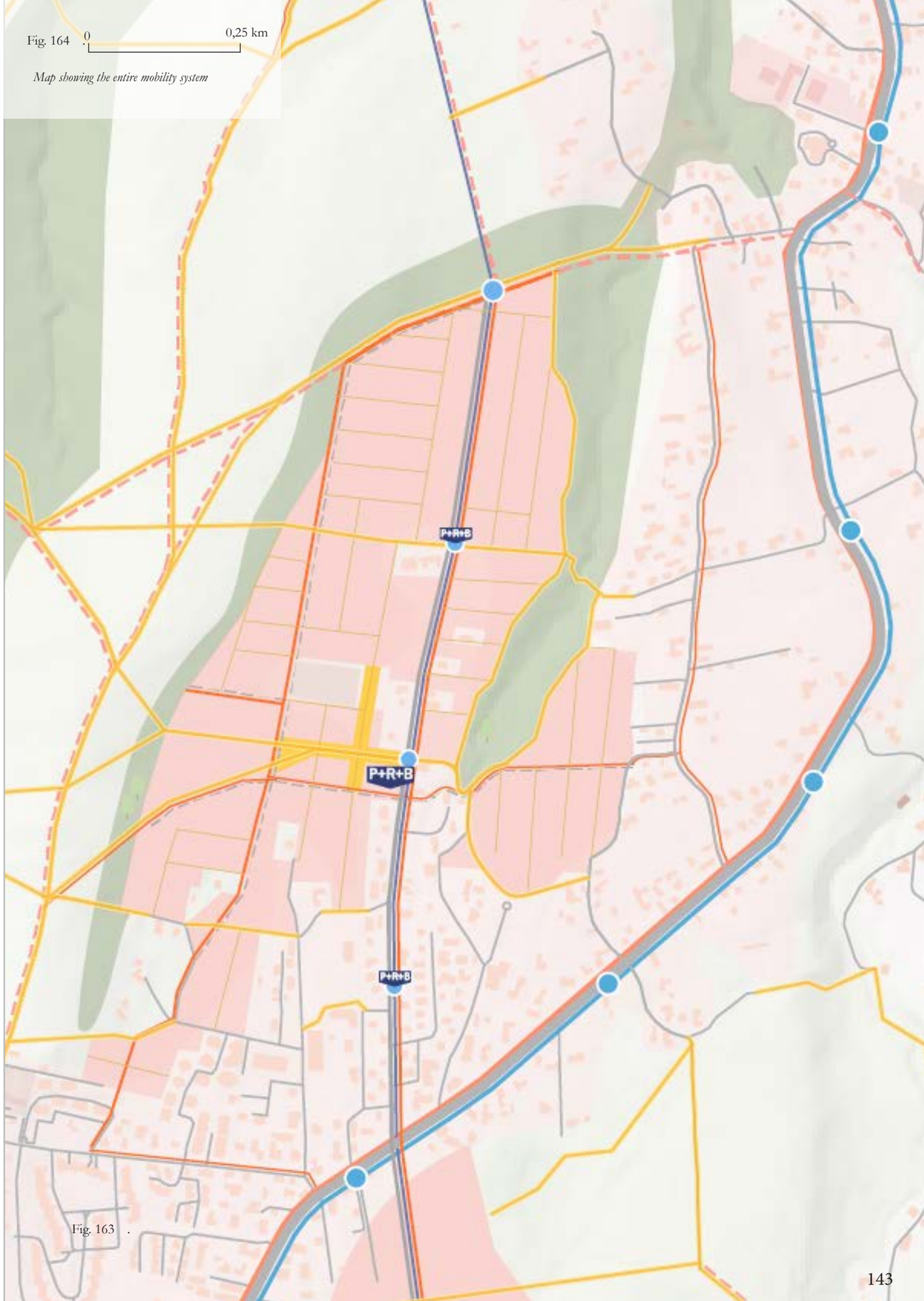


Fig. 164 .

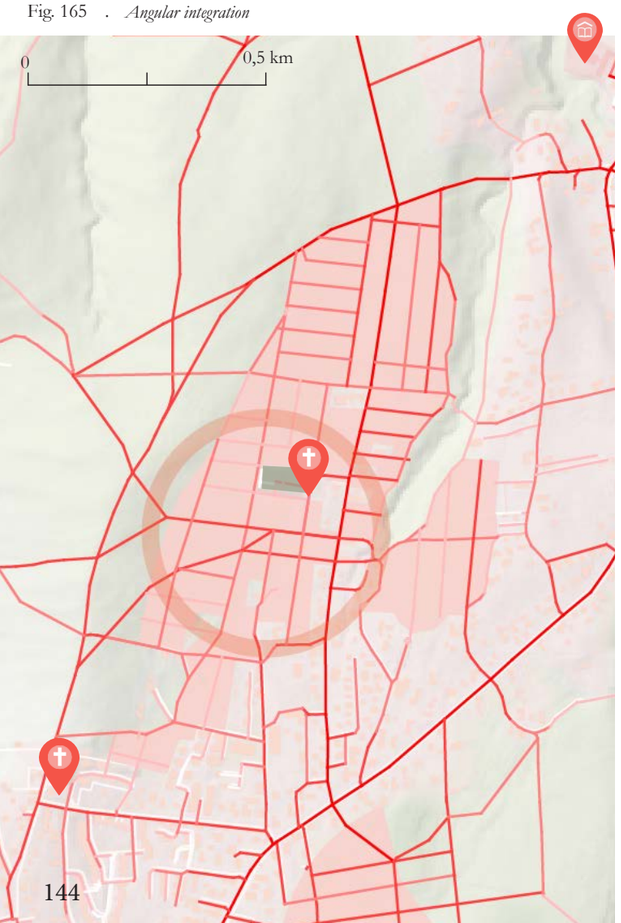
Map showing the entire mobility system

Fig. 163 .

PILOT TRANSFORMATION
PUBLIC PLACE LOCATION

Fig. 166 .

Fig. 165 . *Angular integration*



In the chapter about theory (p. 26-33) the conditions for public place liveability are set (Carmona et al., 2012; Adams & Tiesdell, 2012), of which connectivity and activity are crucial for the location of a planned public place.

CONNECTIVITY

Thanks to the analysis with the PST tool (fig. 165), it can be seen that semi-private streets are intended to have a lower angular integration, while the main pedestrian routes have the highest (apart from transit car roads).
Taking into account the configuration of the existing and planned functions (existing church, pedestrian routes connecting the bus stops with the green recreation area) a location for the creation of a public place can be determined.

ACTIVITIES

the local center needs a location for attractive functions, both for residents and tourists. From the needs analysis of the involved actors it is clear that for the transformation of the whole area it is important to locate:

- -Hotel complexes
- -Market with local products
- -Rentals of outdoor sports equipment

In addition to this, other services are important for the quality of the local public space, such as:

-Local media library
-Local community centre
-Shops
-Cafes
-Restaurants
-Kindergartens

DENSITIES

- DENSE MIXED USE
- DENSE RESIDENTIAL
- MEDIUM RESIDENTIAL DENSITY
- HOTEL CAPACITY

On the following pages references will be presented to develop recommendations for them.

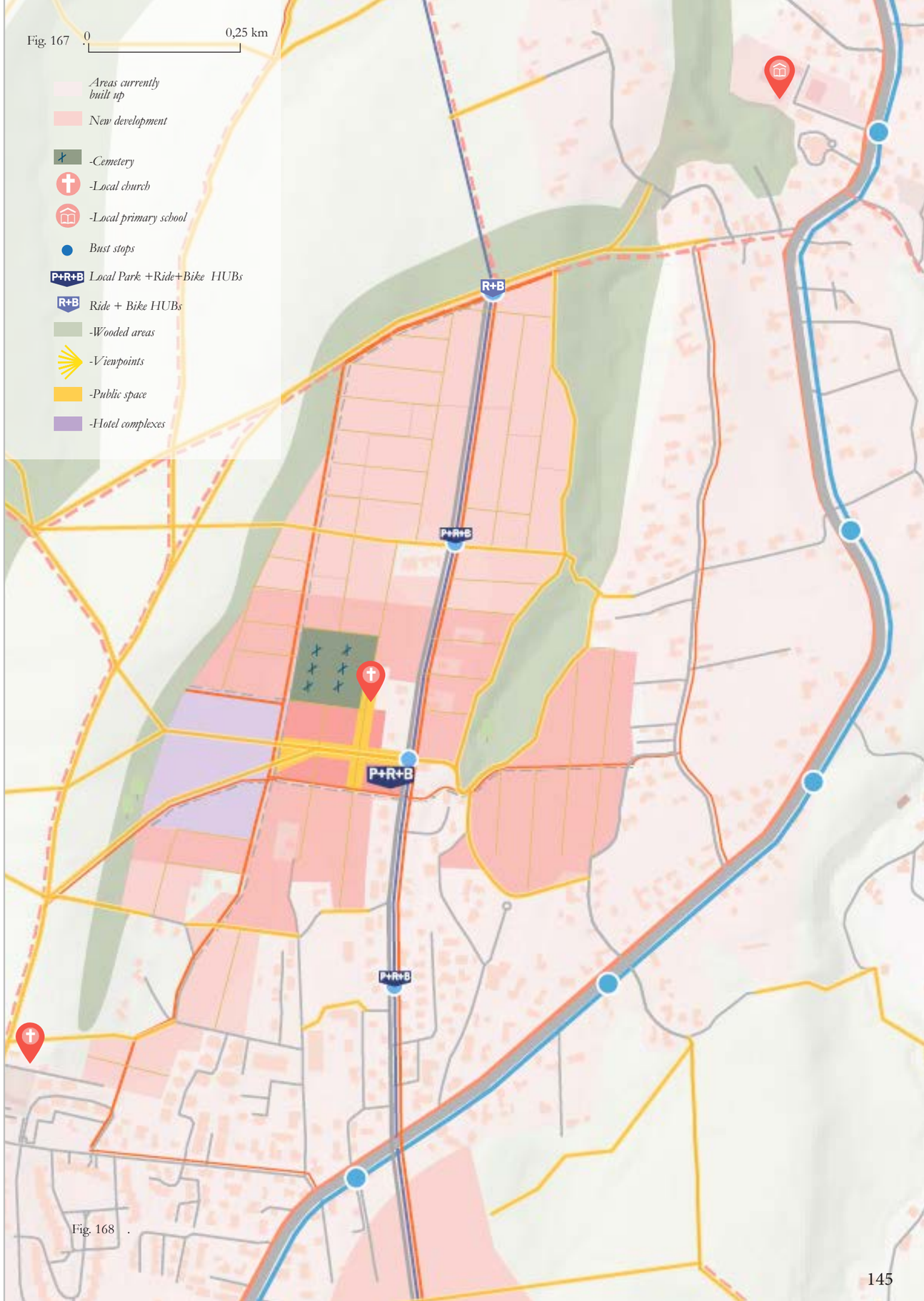


Fig. 167 .

Fig. 168 .

PILOT TRANSFORMATION
STAGES OF IMPLEMENTATION

The next step is to work out a guideline for the sequence of activities so that the settlement has a liveable quality from the beginning and stimulates sustainable mobility choices.

STAGE 1- A CORE FOR SUSTAINABLE MOBILITY

The first step in implementing the spatial transformation is to provide sustainable access to the area. In this respect, the construction of the main transit road (fig. 169) is crucial, as well as the improvement of the accessibility of the landscape paths in order to already support local recreation.

Public transport service should start as soon as the road is revitalized; although it will not be profitable initially, it will already start to build sustainable mobility habits in local residents.

A key implementation will also be a Park+Ride+Bike facility so that future housing developments do not have to involve cars.

STAGE 2- LOCAL CENTRE VIA PRIVATE INVESTMENT

The next step is to provide basic services locally. To achieve this, building opportunities need to be unlocked for large investors obliged to realise public spaces.

STAGE 3- HOUSING DEVELOPMENT

Once the appropriate infrastructure for liveability and sustainability is in place, there will be opportunities to develop the whole area.

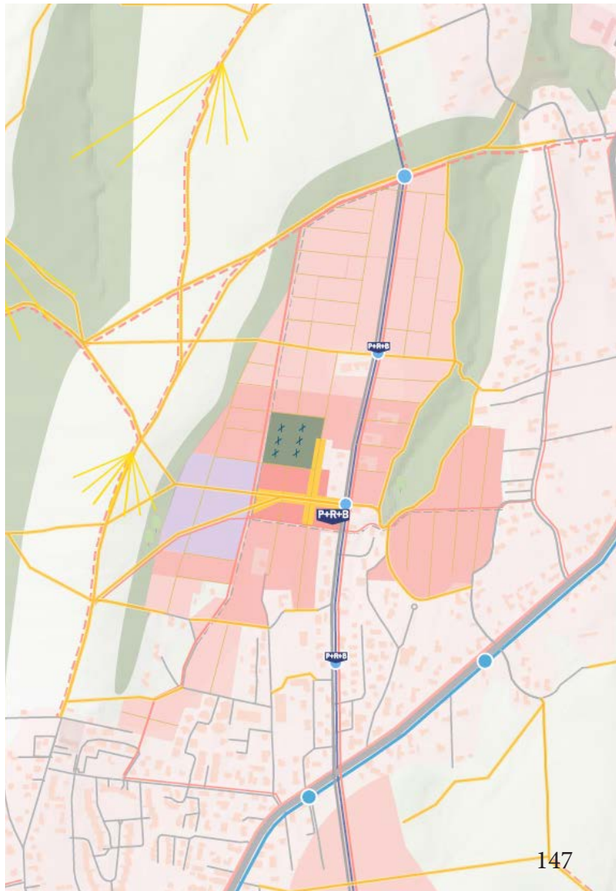
Areas currently built up
Pedestrian routes
Area of axonometry
Main access road
Bust stops
Regional bus lines
City bus line
Existing roads as a shared-streets avaliable for bikes
Bikeable landscape paths
Main new bicycle network

Fig. 169 . STAGE 1- A CORE FOR SUSTAINABLE MOBILITY

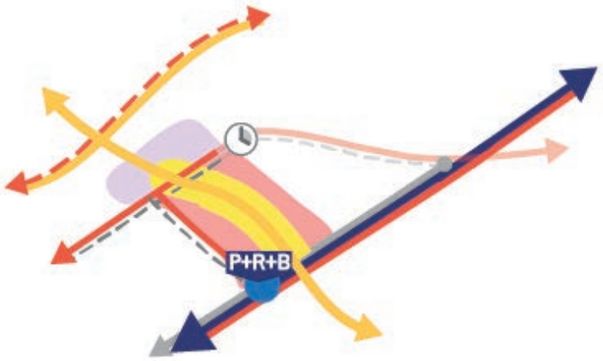
Dense mixed use development
Hotel capacity
Area of axonometry
Local Park +Ride+Bike HUBs

STAGE 2- LOCAL CENTRE VIA PRIVATE INVESTMENT Fig. 170 .

STAGE 3- HOUSING DEVELOPMENT Fig. 171 .



PILOT TRANSFORMATION
SPATIAL REGUALTIONS



Each stage involves the realization of different types of roads and buildings. In order to ensure liveability within the framework of sustainable development, the city authorities should prepare detailed regulations in the local revitalization plan, specifying the building lines, building density, maximum building heights, and guidelines for the design of streets and public places. Due to the time and thematic constraints of this project, only the second stage of the local transformation will be considered here; that is the realization of the place and the public functions in connection with sustainable transport and private investors.

This stage consists of such spatial elements:

-MAIN TRANSIT ROAD

The main access road to the new development serves both the city bus line, bicycles, cars

-RESIDENTIAL ROAD

Residential road serving mainly slow-mobility vehicles

-SEMI-PRIVATE ROADS

-SHARED RECREATIONAL PATHS

-PEDESTRIAN PATHS

Spatial recommendations will be proposed on the basis of references.

DENSE MIXED USE

HOTEL CAPACITY

-PEDESTRIAN, ACTOVE STREET

Fig. 172 .

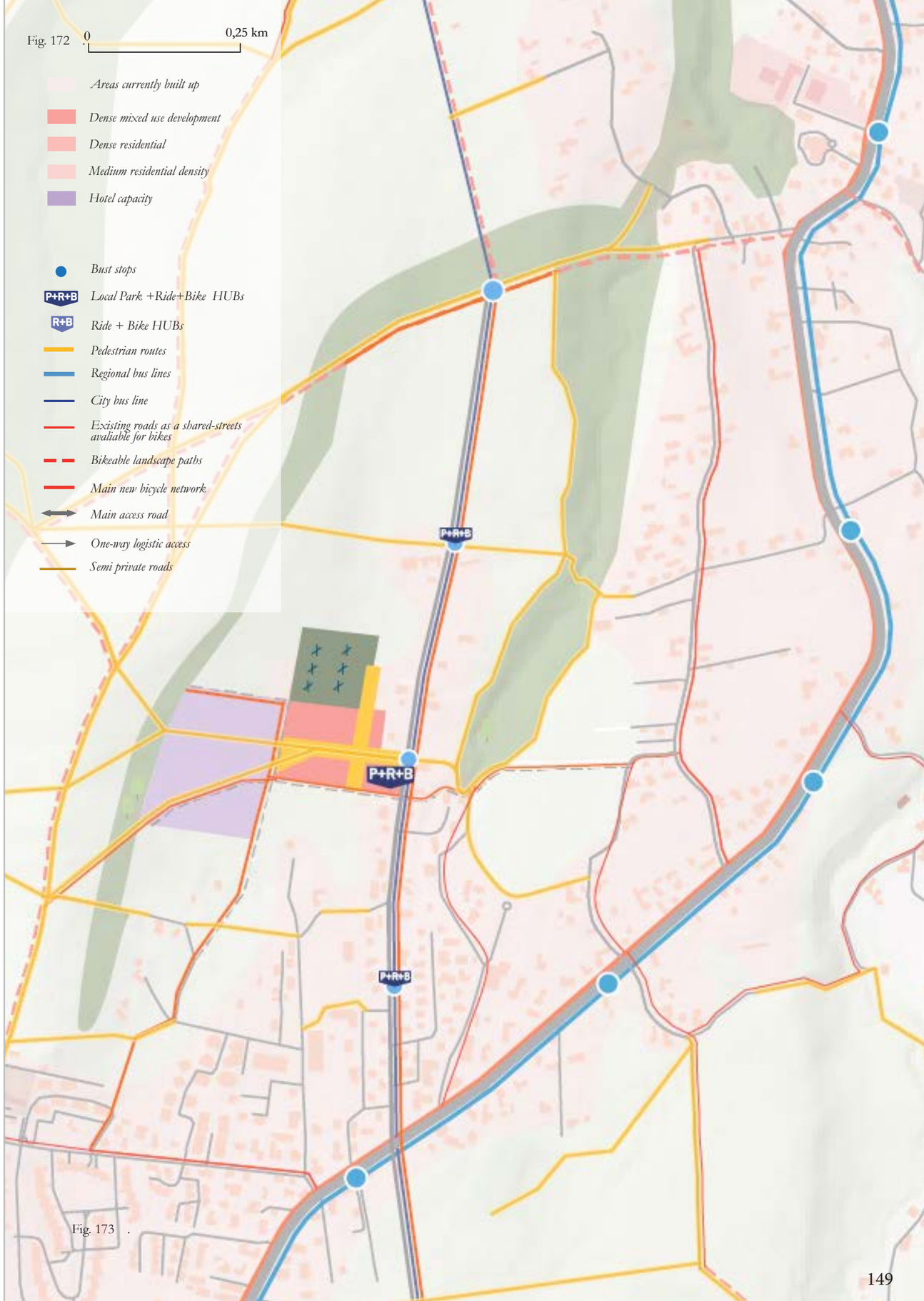
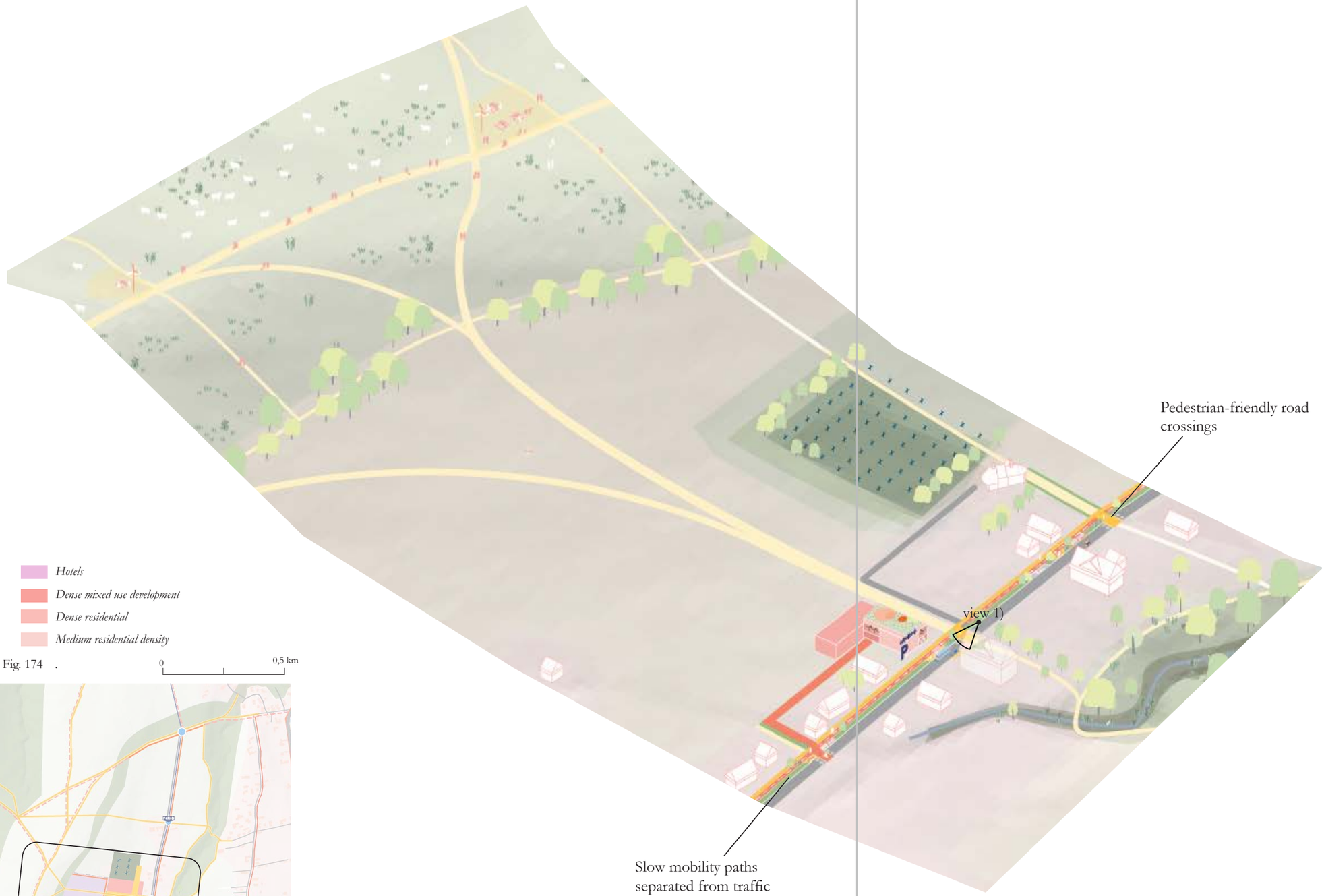


Fig. 173 .

PILOT TRANSFORMATION
SPATIAL REGULATION- MAIN TRANSIT ROAD



Hotels
Dense mixed use development
Dense residential
Medium residential density

Fig. 174 . 0 0,5 km

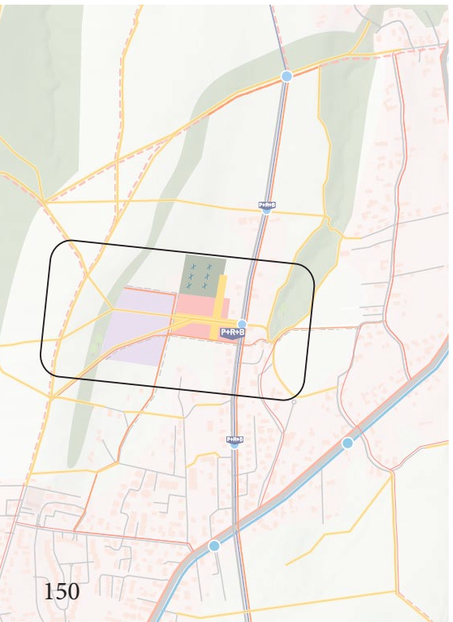


Fig. 175 . *Raised and safe pedestrian crossings (source; list of fig.)*

Fig. 176 . *Mulitifuncitonal separation of slow-mobility lines from car traffic (source in list of fig.)*

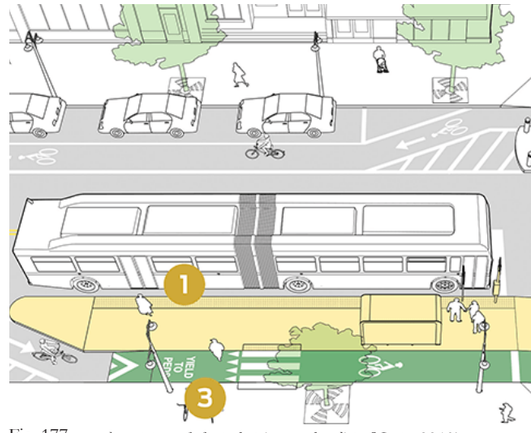


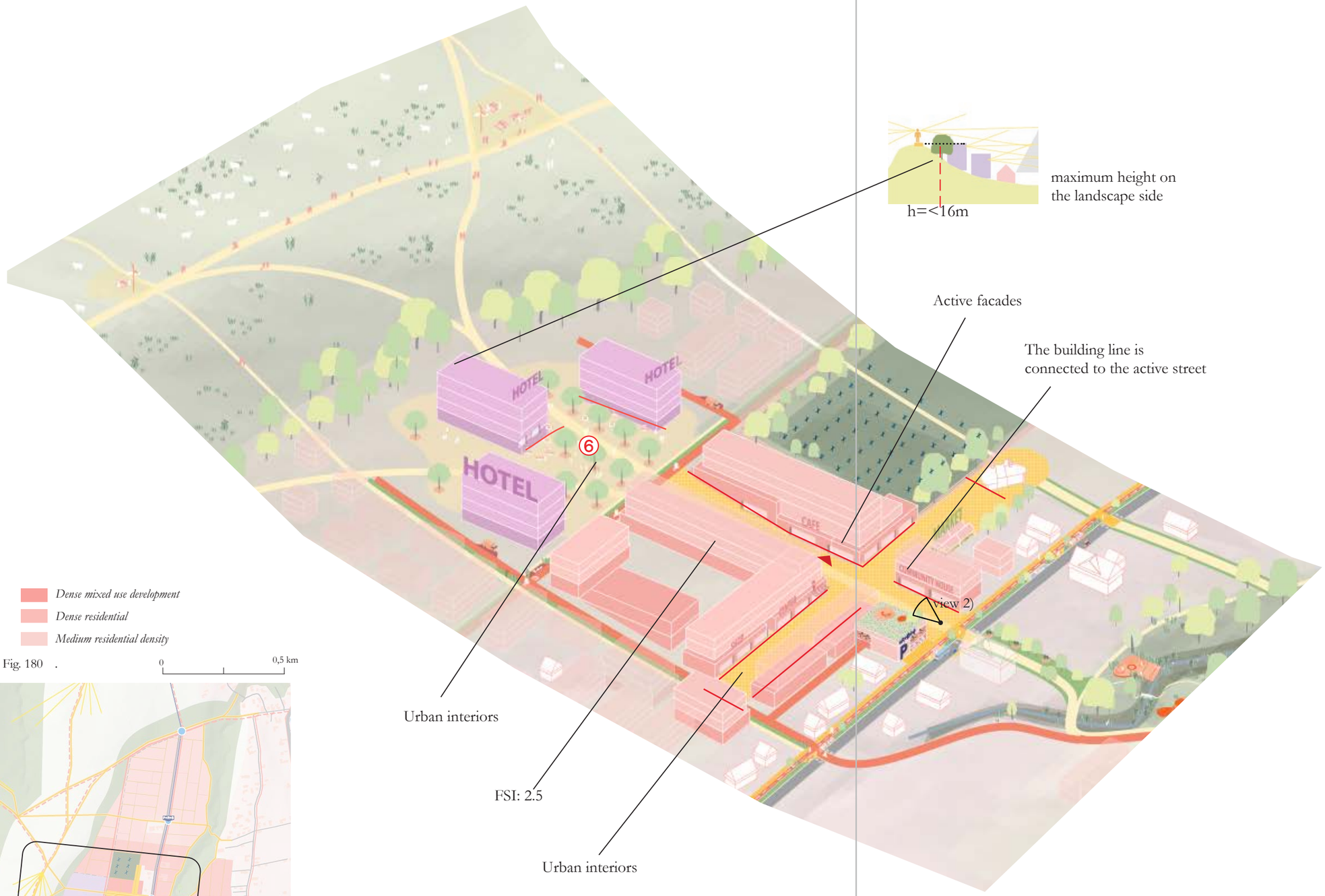
Fig. 177 . *bus stops, safe for pedestrians and cyclists (Nacto, 2013)*

PILOT TRANSFORMATION
VIEW 1- TRANSIT STREET

Now (source; list of fig.) Fig. 178 .

New transit road Fig. 179 .

PILOT TRANSFORMATION
SPATIAL REGULATION- LOCAL PUBLIC PLACE



Dense mixed use development
Dense residential
Medium residential density

Fig. 180 . 0 0,5 km

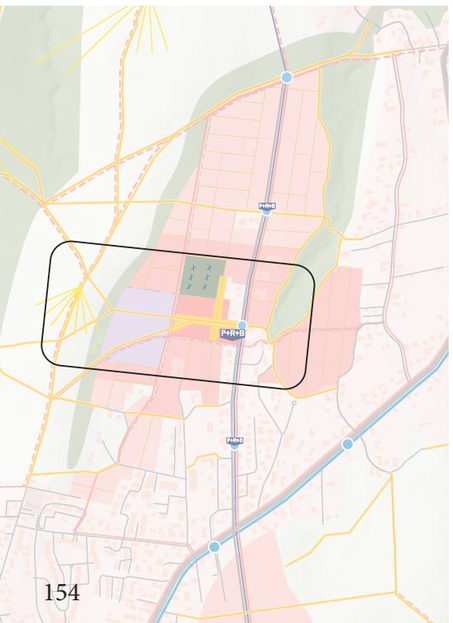


Fig. 181 . *Atcive facades (source; list of fig.)*

Fig. 182 . *Active street design (Nacto, 2013)*

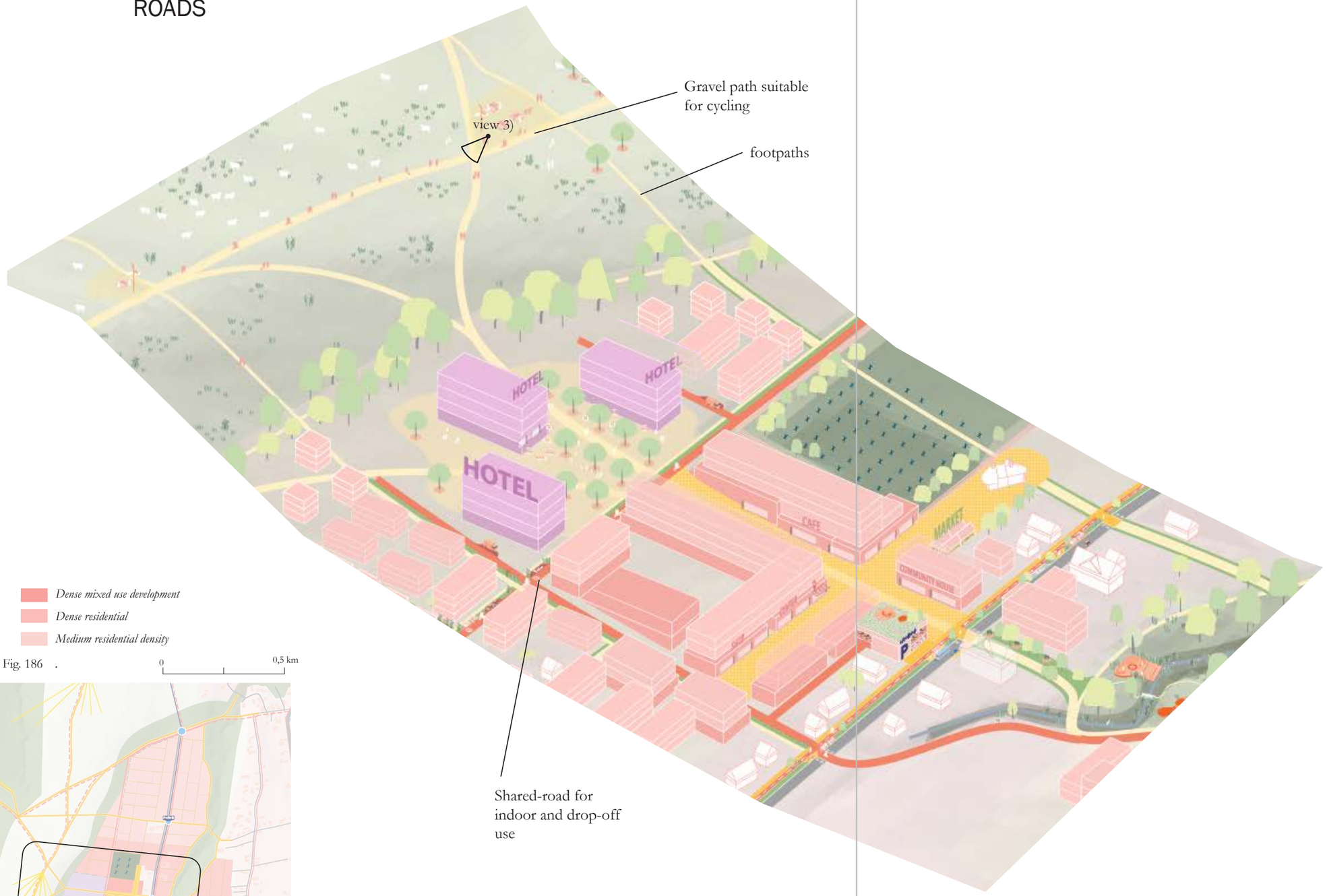
Fig. 183 . *bus stops, safe for pedestrians and cyclists (Nacto, 2013)*

PILOT TRANSFORMATION
VIEW 2- ACTIVE STREET

Now (source; list of fig.) Fig. 184 .

New public area Fig. 185 .

PILOT TRANSFORMATION
SPATIAL REGULATION- RESIDENTIAL AND LANDSCAPE ROADS



Dense mixed use development
Dense residential
Medium residential density

0 0,5 km

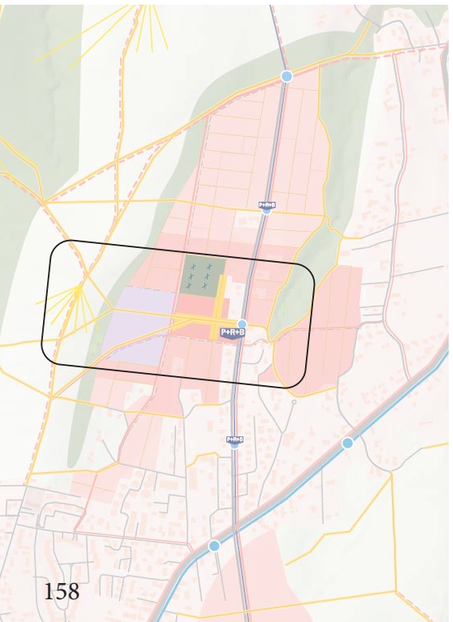


Fig. 186 .

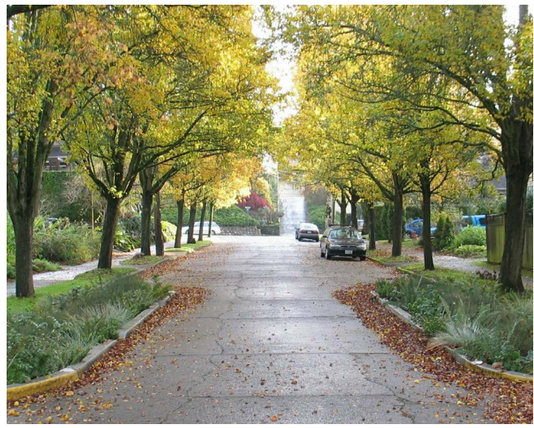


Fig. 187 . *Residential / local road (source; list of fig.)*

Fig. 188 . *Landscape cycling and walking path (source list of fig.)*

Fig. 189 . *Lanscape paths (source list of fig.)*

PILOT TRANSFORMATION
VIEW 3- PUBLIC LANDSCAPE

↓

Now (source; list of fig.) Fig. 190 .

New public landscape Fig. 191 .

PILOT TRANSFORMATION
CONCLUSIONS: DECISION-MAKING PROCESS

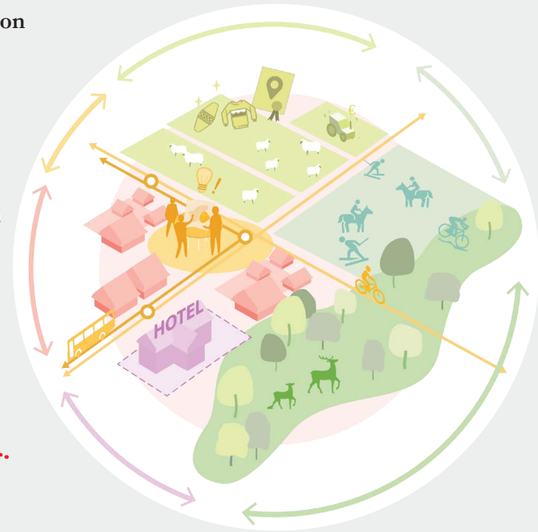
The pilot project simulation presented on the previous pages was intended to develop general principles for further landscape transformation.
These principles should be valid as part of a binding landscape transformation process for agricultural land in the Zakopane urban area. Conclusions from the pilot project will be adapted to the principles of the regulatory process based on the analysis in the chapter on Governance in the Problem analysis (page 53-70)

I STAGE DECISION-MAKING PROCESS FOR LANDSCAPE TRANSFORMATIONS:

1. Design team

The municipality will need a team of officials and designers for the preparatory analysis and coordination of the whole design process

3. Stakeholders activation



Activating stakeholders for transformation through appropriate profit visions is key:

Key stakeholders:

-City authorities; ltranformation only possible according to rules developed by the administration which support liveability and sustainability

-Landowners: lan increase in the value of the assets by more than 200% by exchange for building land or flats with ensuring the quality of spaces, public services and public transport

-Farmers; Protection and support of traditional agriculture. Improved availability of pastureland.

-Residents: public support through the prospect of improved recreational areas

Strategic partners:

-Tatra National Park; co-organization and co-financing of the transformation in exchange for the acquisition of areas of natural significanc

-Organisations active locally

Assist in networking with local stakeholders; co-organise local events. In return The prospect of business development due to the increased number of users

Investment partners:

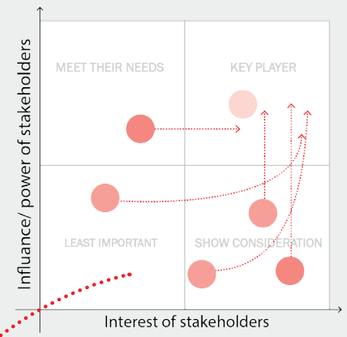
-Outdoor sports industry

-Large tourism investors

-Real estate developers

Co-financing of transformation through investment capacity guarantees

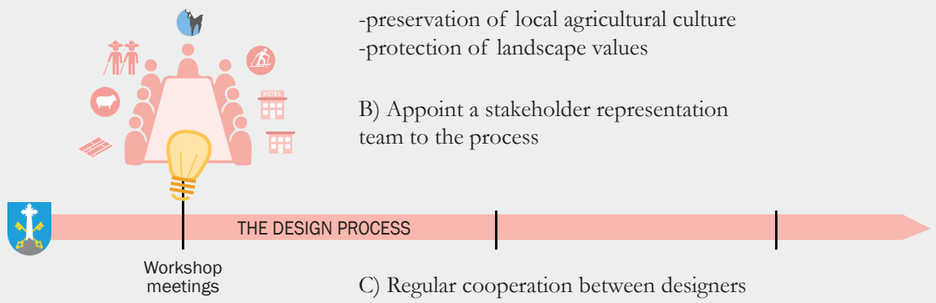
4. Inclusiveness and transparency



In order to safeguard the social equity of the decision-making process it is necessary to:

A) Setting socially just priorities for the distribution of space:
- securing the area of transformaition access to the sustainable mobility
-protection of environmentally valuable areas
-preservation of local agricultural culture
-protection of landscape values

B) Appoint a stakeholder representation team to the process



C) Regular cooperation between designers and stakeholders in joint design workshops

PILOT TRANSFORMATION
CONCLUSIONS: SPATIAL REGULATIONS

II STAGE
CHANGE OF USE PLAN AS PART OF A SPATIAL STUDY

III STAGE
SPATIAL GUIDELINES WITHIN THE LOCAL REVITALISATION PROGRAMME

5. Inclusiveness and transparency

The design of territory transformations requires the designers to actively cooperate with the stakeholders, but first of all decisions have to be made on the basis of various types of analysis:

-Performance analyses (e.g. using Place Syntax Tool)

Hotels

Housing

The location of new building sites within the framework of sustainable development must be able to provide public transport accessibility on their sites (functional distance: 400m area around the bus stop). New housing developments must also have the spatial potential to create liveable public places (angular integration).

-Mapping of field conditions
-Field work

Hotels

Agriculture

Recreational areas

Outdoor sports

Nature

depends decisively on the terrain conditions in the area. The analysis in this respect requires both mapping and field research in order to pick up on the prospects.

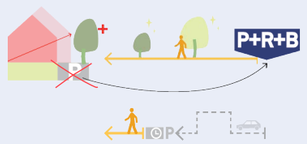
6. Mobility design

To ensure that the new development meets the conditions for balanced mobility (**using Place Syntax Tool)**

-Most of the area is within reach of public transport

-The whole area is integrated with cycling infrastructure

-Permanent parking spaces only in a shared Park+Ride location with convenient pedestrian access.
Provision of emergency access to the property only.



7. Street design

Designation of pedestrian friendly street design principles:

-Main transit road; separation of different lanes

-rural busway

-Residential road; shared street

-semi-private roads; shared, local street

-pedestrian, active street

-shared recreational paths

-Pedestrian paths

Designed within the principles of favouring pedestrians and cyclists

8. Conditional investment stages

Opening up investment opportunities for actors only after the targets have been met:

1) A CORE FOR SUSTAINABLE MOBILITY

-Pedestrian paths

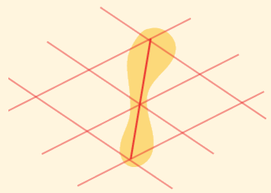
-Main transit road and connecting public transport

2) LOCAL CENTRE VIA PRIVATE INVESTMENT

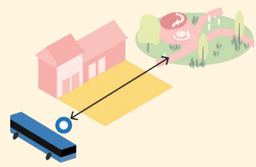
3) HOUSING DEVELOPMENT

7. Public centre design

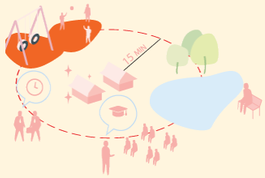
-Angular integration as a determinant of geometric potential



-stimulation of attractiveness through integration with the landscape area and mobility hub



-planning of locally missing functions



-Local centre with mix-use development with a density of 2.5 and active façades linked to the street

8. CONCLUSIONS

CONCLUSIONS
INTRODUCTION

This chapter summarises the conclusions and answers the research question of this project

RESEARCH QUESTIONS:

This thesis work aimed to find an answer to the following research question:

WHAT CHANGES ARE NEEDED TO IMPROVE LIVEABILITY IN THE CITY OF ZAKOPANE WITH RESPECT TO SUSTAINABLE DEVELOPMENT?

The research and design process within the chosen methodology led to the following answers:

WHAT SPATIAL TRANSFORMATION ARE NEEDED TO SECURE SUSTAINABLE LIVEABILITY IN ZAKOPANE?

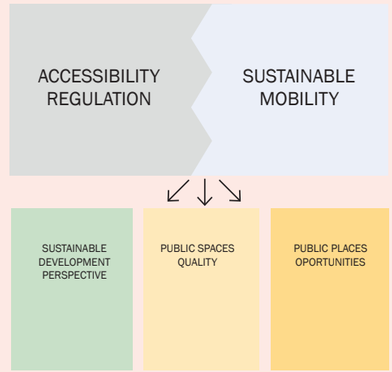
SRQ 1

The answer to this sub-question is partly found in the Theory chapter (p. 26-33), dedicated to setting the necessary standards for sustainable liveability, but mostly in the problem analysis chapters.
By evaluating the spatial situation in the city and the exemplary urban fabrics with “walkable”, “transit” and “automobile” fabric, it was possible to recognise that the transformation of the city must be comprehensive enough to reconcile the conflicting interests of the different parts of the city:

From the theory (Newman P, Kenworthy J, 2015) analysis (p. 26-33) and it can be concluded that the key to improving liveability in a city is to reduce car dependency.
While just regulating car accessibility and ensuring efficient sustainable transport can already unlock the potential for improving the quality of public spaces in the “walkable” and “transit” fabrics, the maximum reduction of “automobile” fabrics requires additional measures. The spatial layout of these parts of the city needs (if possible) to be transformed to a transit-oriented form and/or to provide alternative housing in locations with better accessibility to sustainable transport (Newman P, Kosonen L,Kenworthy J, 2016).

This key correlation of the above concepts is illustrated in Figure 257:

Integrating transformation objectives for sustainable livability Fig. 192 .



Practice and theory already offer a number of proven solutions for each of the named in the diagram above. The examples of the cities of Zermatt Chamonix Mont and Rimini, each struggling with tourism, show the different relationships between accessibility regulation, mobility system, urban form and space design. The stronger the restriction of car entry into a city, the more compact and simple the profile of pedestrian-friendly streets. The more different speeds in the city, the more attention to the design of streets and public space elements is required. These have been compiled on pages 72-78 in Problem analysis and compared with the spatial potential of the city as a basis for subsequent design decisions.

CONCLUSIONS

SRQ 2

WHAT CHANGES IN THE GOVERNANCE SYSTEM ARE NEEDED TO FACILITATE THAT TRANSFORMATION?

The analyses in the subsection on governance (pages 52-69) showed that both the municipality and the citizens agree on the need to reduce car access and ensure sustainable mobility. However, the transformation efforts of the city authorities have been characterized by very low efficiency for years. Through interviews with different stakeholder groups (p.64-65), three main reasons for this were identified:

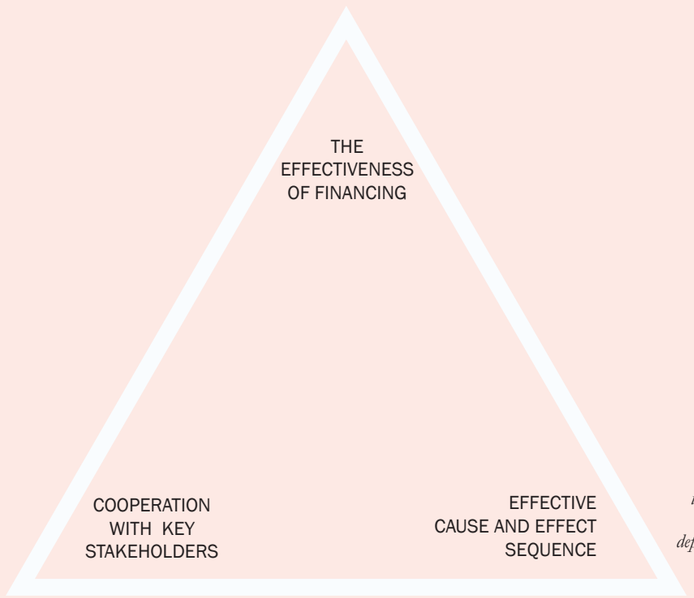
-**Lack of sufficient resources within the developed model of action;**
the neo-liberal model implemented in Poland in the 1990s assumed minimal state interference and for this reason city administrations have very low budgets. Since 2004, the main funding for urban renewal has come from the EU budget, but it is allocated in provincial competitions and cities are not able to predict the timing of their projects.

-**Lack of integration of objectives and random sequencing of implementation**;
of the current financing model (largely random allocation of EU investment funds by provincial authorities) makes it safer for the municipality to plan projects without integration of objectives so that delays or blocking of some of them does not block the rest.

-**Conflicts with stakeholders**;
The decision-making process for the Polish local administration is very complicated and not very transparent. For this reason, public trust in the decision-making process is very low, and the result is strong public resistance and blocking some key investments.

An effective transformation must therefore take these realities into account. In the local context, the aspect of feasibility is decisive for the different possibilities of spatial transformation. The changes in the governance system which make up feasibility of transformation are illustrated in Figure 193.

A SWOT analysis (p. 68-69) using the city's strategic documents, stakeholder interviews and literature has identified opportunities and constraints of change in these areas.



the feasibility of transformation depends on factors:
Fig. 193 .

SRQ 3

HOW TO IMPLEMENT THOSE TRANSFORMATIONS AS PART OF A SPATIAL STRATEGY?

The Problem Analysis section allowed for the clarification of key factors for the desired transformation of the city in both spatial and systemic terms. The references collected on pages 74-77show that there are different possibilities for changing each of these elements. The possible scenarios, however, mainly define the model for raising funds for investments (p. 82-105) and significantly influence the type, scale, location, and timing.
An illustration of the spatial consequences of the different financing models was used to evaluate with representatives of stakeholder groups in order to obtain guidance for strategy development.

On this basis, and through evaluation meetings with stakeholders, it was possible to define a course of action, which can not only improve liveability in the city but is also feasible; given the administrative but also cultural situation (attachment to private property and the car), the transformation strategy cannot be oriented towards radical change. Various actions are also possible within limited time frames and these financing realities were another factor influencing the construction of the strategy:

I PHASE: PRESSURE OF EU FUNDS

2021 → 2027

1. Goal: sustainable mobility as an existing alternative

Polish local authorities still have a large pot of EU funds to spend under dedicated programmes. The budget, however, is valid until 2027, so priority must be given to key investments providing mobility alternatives to the car.

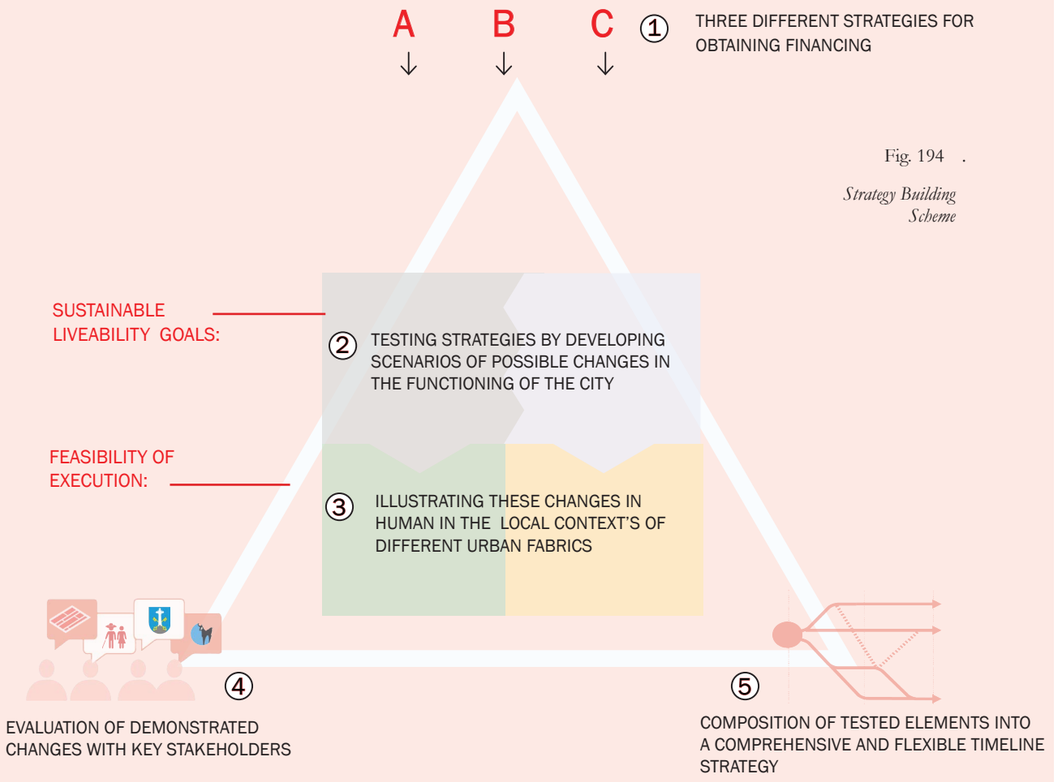


Fig. 194 .
Strategy Building Scheme

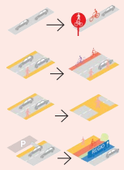
CONCLUSIONS

In this context, the integrated territorial investments programme (ITI), which supports joint investments by partner local authorities, has particular potential. This programme has the following operational objectives

In this context, the integrated territorial investments programme (ITI), which

-Creation of a regional public transport network linking the main towns and tourist attractions in “the integrated region”.

-Adaptation of various types of existing road infrastructure to the use of slow-mobility vehicles.



2. Goal: Preparation of tools for effective operation without EU funding

The provision of sustainable mobility within the framework of regional investments will improve the mobility situation for transit and walkable fabric, but will not reach the automobile industry. For this, investments in the quality of public spaces are still needed. As EU funding cannot cover everything, the alternative is to be prepared to work with the private sector. as part of opening up investment opportunities to investors in exchange for activities in line with the city’s strategy.

In view of the low public confidence in public institutions and the lack of adequate regulation, the following operational objectives were set:

-Developing an inclusive and transparent decision-making process

-Developing spatial regulations to ensure that new investments meet the conditions of liveability and sustainability

II PHASE: IMPROVING THE QUALITY OF PUBLIC SPACES

2027 → 2030

3. Goal: Improving comfort of sustainable mobility

A functioning sustainable mobility system must become more comfortable than the car and therefore needs to be further developed within the operational objectives:

-Creation of a network of recreational paths in green areas

-Construction of further barrier parking in the region around the city

-Construction of comfortable Ride+Bike nodes

4. Goal: Revitalization of public spaces

Given the gradual takeover of passengers by sustainable transport, it becomes possible to take over a part of the space for quality improvement as part of:

-Creating a comfortable space as part of Ride + Bike points

-Excluding some downtown streets from pedestrian traffic.

In view of the possible size and conditions of the next EU budget and the attitude of the potential partners, the above-mentioned operational objectives will be implemented as public investments or integrated into private ownership.

III PHASE: CAR-FREE CITY

2030 → ?

A new provincial strategy will follow in 2030. With the right political climate and public support, it would be possible to take bolder decisions on the exclusion of the car from the city:

1. Goal: exclusion of the city centre from motorised traffic

In view of previous efforts to promote public transport and to valorise public spaces, it is possible to plan:

-Pilot traffic calming in the center to familiarise residents and tourists
-definitive removal of car traffic from the center and development of a pedestrianized public space

WHAT ARE THE KEY OPERATIONAL ACTIVITIES AND WHAT WOULD ITS IMPLEMENTATION LOOK LIKE?

Among the strategic objectives set out in the strategy is the development of a systematic alternative to the implementation of urban investments within the framework of European Funds. The city authorities must prepare for 2027 when the continuation of the necessary transformation will require a different financing model. In this respect the key issues are:

In order to fulfill public objectives in cooperation with the private sector, the city must prepare a series of rules to secure the liveability and sustainability of such investments in relstion to:

-Developing an inclusive and transparent decision-making process

-Developing spatial regulations to ensure that new investments meet the conditions of liveability and sustainability

As a design example, an area of post-agricultural land was chosen, where there is intensive development of automobile fabric and degradation of the landscape. A step-by-step simulation of the transformation of such an area allowed for the development of a decision-making process and regulations safeguarding the liveability and sustainability of potential strategic investments in cooperation with the private sector:

-City authorities must take the initiative and recognize the needs of stakeholders and involve them
The decision-making process must balance the opportunities of stakeholders: protect the community’s priority values and give actors the opportunity to actively participate in the process
-The designer must translate the objectives of the city and the actors into a subdivision design that takes into account the assets and the conditions of the area.
-Only changes in ownership and a system of phased development will allow full regulation and shaping of balanced development and liveable public squares within the framework (within the framework of mobility system design rules, street design, and public place guidelines).

The transformation requires the development of many regulations and the involvement of many different stakeholders, but success would allow landowners throughout the city to be motivated to change ownership and the city to gain access to landscaped areas and include them in a system of sustainable mobility.
An effective strategy for improving the liveability of automobile fabrics as well as gaining the support of their owners will enable the city to effectively reduce the presence of cars in the city center. This will improve the liveability of all inhabitants of the city.

SRQ 4

9 REFLECTION

REFLECTION CHAPTER
INTRODUCTION

This chapter contains my reflections on aspects of my entire design process over the last 1.5 years:

REFLECTION CHAPTER

GENERAL OVERVIEW

The source of motivation for choosing the topic of my thesis was the juxtaposition of my two different experiences:
-Firstly, the perspective of an inhabitant and user of urban space in Zakopane, which suffers from many problems affecting liveability.
-On the other hand, the perspective of an urban planner formed in the Netherlands; both at university and during my professional practice. In the Netherlands, the elements of the Zakopane problem, related to car dependency, have been solved y long ago, and most cities and towns are very pleasant to live in. Since there are proven and effective solutions, I was curious why the same could not be done in another part of Europe.

This thesis is set in the specific context of my hometown:
"Zakopane, which, in addition to huge economic growth thanks to tourism, is experiencing the harmful consequences of car dependence: loss of community and environmental problems. This is due to the lack of coordination between spatial development and infrastructure and to the systemic promotion of private property at the expense of the public good, a phenomenon characteristic of post-communist countries". (Context chapter, p. 11).
From this fragment of the problem statement description, it follows that the project focuses on the relationship between mobility and the quality of space- in relation to the specificity of the Polish administrative system, which defines the scale of possibilities for action. For this reason, in the initial design phase of the research process, I hesitated whether to focus on spatial aspects within the Design of the Urban Fabric studio or on governance within Planning Complex Cities. Decisive in this decision was the experience from a resident's perspective. In Zakopane, many ideas have been discussed for years, but very few of them are actually implemented or even visualized for the average resident. As a resident, I would like to imagine how my city could look differently, and what spatial changes this would require. For these reasons I decided to start my research by analyzing the spatial possibilities within the Design of the Urban Fabric studio, which is oriented on:
"The formation of transformation strategies must be an integral process that (...) provides spaces for communities with attention to the demands of the future" (TU Delft, 2021).
A second mentor from Planning Complex Cities enriches the research on the causes and consequences of the current situation. This also helps to find the necessary steps for planned changes in a local administrative context characterized by many constraints.

I gained the basic knowledge necessary to plan and start my thesis within the Urbanism Track program at TU Delft. Various assignments in the first year helped me to learn how to read the connections between economic networks, political networks, different scales, and what can be observed in a small, even seemingly peripheral city (Q1 Analysis and design of urban form). The second quarter gave me a solid foundation for understanding and creatively transforming the mobility system, as well as the proportion and location of functions to improve liveability, which was crucial for my thesis. This quarter also provided me with technical knowledge; on how to base analysis, conclusions, and design steps on the data and technical capabilities of tools such as GIS or Space Syntax.
I am evaluating my design proposals in this thesis through the programming capabilities of PST (Place Syntax Tool) and network analysis, which were also introduced to me in Quarter 2 while working on Designing Urban Environments.
In Q3 I prepared a regional strategy for circular food production with my team. This was a great lesson on the different complexities of system, phasing, and stakeholder analysis. This knowledge proved to be crucial to understanding the roots of the problems in my thesis project needed to initiate change, including the decision-making process, activation of actors, and development of strategic plans. During Q3, it was the first time I encountered such well-explained research methods and methodology projects. This aspect was the most difficult for me in the whole study program so far and unfortunately, thanks to the group work and the division of responsibilities, I did not manage to deepen this issue enough, which had its consequences in the difficulties of creating the methodology for my own thesis (about which I will write more in the methodology section).
In Q4 I completed an internship at the urban and strategic design office PosadMaxwan. My responsibilities were focused on working on mobility topics and designing solution scenarios in relation to spatial consequences and their visualization. This experience gave me a certain methodology and work ethic, the necessary knowledge of the topics related to the planned thesis, as well as drawing skills and agility. On the other hand, the difference between working in a practical and academic context also proved to be a small pitfall; at work due to time and financial constraints, research is often limited, methodology simplified and design-based more on designers' experience than on data sources. This kind of habit was deceptive when I moved into the context of an academic project, requiring theoretical underpinning, data acquisition methodology, and detailed planning. For this reason, this thesis project was not only an extension of the previous year's knowledge but in a sense, a whole new quality shaping me as a designer.

Another point is that this project also shows the importance of interdisciplinarity and partnership between professionals and urban users. Although my educational path trained me more as an urban planner, the experience of building this project in partnership with the stakeholders, and the scale of the data to be processed and integrated showed me that today's planning activity is moving more in the direction of communicative planning. It seems to me that academic education still doesn't prepare us sufficiently for this kind of work and that educational projects could integrate students from different fields of study, like sociology or transport, to get us used to an interdisciplinary approach

REFLECTION ON METHODOLOGY

The approach adopted included the use of several main research methods, primarily basing the analysis on the simultaneous consideration of three urban fabrics.
The scientific literature provided a theoretical basis for the construction of the research methodology and the identification of spatial elements influencing liveability in urban spaces.
The analysis of examples of cities dealing with tourist mobility in different ways showed the possibilities and relations between accessibility regulation, sustainability mobility, and their relation to the form of space shaping. This became a kind of design basis for the design activities.
The analysis of the planning documentation and its evaluation with selected stakeholders allowed us to identify the systemic problems of the city.
Mapping the spatial situation of Zakopane allowed us to recognize the spatial situation and the SWOT analysis allowed us to draw key conclusions and potential actions for building the strategy.
The involvement of actors in the design process; made the process very complicated for me, I could not focus only on spatial factors to improve liveability, because the input of actors gave information that forced me to plan activities that were not necessarily in line with theoretical guidelines. Working with actors also requires developing more subject matter. However, without such collaboration, it is not possible to plan adequate activities. Stakeholder input into my process has clearly shown that theoretical guidelines are not necessarily able to meet the requirements of local conditions.
An important tool was also the PST (place syntax tool), which helped analyze the accessibility of different parts of the city to basic services. Above all, PST has been decisive in selecting the location of new buildings in the city, as it can be used to analyze the potential of a given street layout and services to create a public place.

The construction of the Methodology caused me many difficulties, which affected other parts of the thesis. Initially, I found it difficult to envisage the whole process, and many of my planning predictions required subsequent changes or adjustments, resulting in a lot of unnecessary work. If I were starting such a project from scratch, I would certainly have analyzed the methodology of already existing academic projects from the repository more carefully and with greater understanding, and composed a simpler path of analysis.

The difficulty was partly because the project touches many areas simultaneously (car dependence, sustainable mobility, liveability, administrative system). However, in this specific context of Polish administration, spatial analysis in isolation from the realities of governance would not have been adequate or potentially effective, but it was difficult to combine these aspects within the constraints of the thesis project, especially as it concerned the transformation of an entire city. In redesigning the methodology I would look for opportunities to limit the scope of the analysis, more in the interests of accuracy and adequate representativeness. With today's knowledge, I would focus from the outset

REFLECTION CHAPTER

on the city's edge problems in the vehicular fabric, which do not quite fit into standard solutions.

Another aspect worth reflecting on is the flexibility of the methodology adopted. Due to health problems, several times during the dissertation I found it difficult to achieve the set goals. As a result, the process was significantly prolonged. If I were designing the research process from scratch I would adopt a more flexible methodology taking into account several alternative scenarios of what I could achieve during the work, to be prepared for potential difficulties and the need to limit the scope.

In conclusion, the methodology of this project required numerous adaptations during the process but was effective in finally answering the research questions. Moreover, the whole process was a very valuable lesson, which will allow me to avoid many mistakes in future project work.

SCIENTIFIC RELEVANCE

The main value of this project from a theoretical perspective is the attempt to adapt and evaluate theories concerning the reduction of car dependency (Newman & Kenworthy, 2015; Mulley & Nelson, 2020) and the revitalization of the quality of public space for improved liveability (Carmona et al., 2012; Adams & Tiesdell, 2012) to the administrative realities of Poland (and, more broadly, the poorer EU countries, i.e. the countries of Central, Eastern and Southern Europe). The theories used in this research work are based on actions taken in a context where local authorities have very strong legal and financial capacities and there is a different distribution of power between the different stakeholders. For this reason, they propose solutions that offer maximum effectiveness. In Polish conditions, unfortunately, often the most functionally beneficial solutions are not realistically feasible. This relationship between efficiency and feasibility, combined with the whole background of the financing system and the position of stakeholders, is worth taking into account in the scientific discourse.

This project takes this relationship into account and by working with stakeholders analyses and proposes adaptations of the theoretical guidelines to the realities of the local system and culture

SOCIETAL RELEVANCE

Through the political transformation in Poland and the sudden leap from central planning to the disintegration of decision-making processes, as well as through the systemic promotion of individualism - all cities in Poland are associated with advanced car dependency (Gitkiewicz, 2019; Trammer, 2019). Residents thus suffer from environmental pollution, noise problems and degradation of public spaces. The destruction of public places disintegrates the local community, leading to further neglect of the common. Therefore, this project's strategy of providing residents with an attractive place to live while reducing the presence of the private car is a solution to a wider problem that is crucial to the functioning of communities in the country.

Another important issue is the funding aspect of potential investments. The low budget of local authorities severely limits the scope for action. The key is the European Union, whose funds allocated by the provincial authorities are the main catalyst for change. The pool of money is limited and there are many local authorities in need, which makes the cities compete for money and the feasibility of planned activities depends on their effectiveness (Problem Analysis, p. 64). From this perspective, it is important to debate and attempt to diversify the acquisition of funding and the construction of scenarios for this project in the construction of the transformation strategy based on this aspect (p. 82-115). For this reason, this project has considered various models for implementing the investment, especially based on cooperation with the private sector.

The decision-making process itself is also crucial in this respect; due to legal liberalization, open debate about the possibilities and needs of different stakeholder groups has also disappeared. A fragmented community cannot use limited tools to influence key decisions, where the market and investors are much more effective. This project, therefore, proposes a way forward in parallel with solutions, recognizing that process in this context can sometimes be more important than the scale of effectiveness of individual project proposals (Strategy chapter and Pilot tronsformation chapter p. 104-160).
In the project this is particularly well illustrated by the Pilot Transformation chapter (p. 118-160) dedicated to the landscape transformation of the automobile fabric in close cooperation between groups of different stakeholders; There are many green areas in Zakopane which are uncultivated agricultural land. They are of great landscape, ecological and cultural importance, but strong building pressure causes these areas to be developed step by step without a plan, which further exacerbates the spatial and mobility chaos. While, with the right legal regulations, attractive prospects could still be found for densifying current built-up areas and saving green spaces, this would not resolve the claims of local landowners for whom their land is frozen wealth, and the lack of any prospect of monetizing their property in such a rich municipality is unacceptable. Given the weak position of the administration, the landowners would continue to break the law. For this reason, a more realistic strategy in such a privatized and individualistic context of Eastern Europe is to create a system of refinements and compromises with the private sector and to allow a partial but controlled development of green areas. Without a transparent decision-making process, ensuring active and simultaneous participation of the various stakeholders, it would be impossible to find room for compromise.

When I started the research, I had some idea of what the city of Zakopane needed, as well as the required level of integration of residents in the design process. It seemed to me that a greater degree of informing the residents about the planned changes and educating them about the urban planning process was sufficient to gain public support. But when I started to research old projects and strategies, which were never implemented, I realized that in this case, the dialogue with the actors itself is often as important as the concrete design solutions. It also showed me how important illustrations and communication tools with stakeholders are; to properly prepare visualizations of potential actions, especially from a human perspective, as this is the language they understand most.

REFLECTION ON ETHICS

Reducing the presence of cars in Zakopane will definitely contribute to improving the quality of public space and liveability in the city, but although the effect is beneficial to residents, this measure may reduce the tourist attractiveness of the city for people for whom the private car is synonymous with comfort and quality of travel, which they do not intend to give up. This is a very important argument in the context of the nationwide dependence on the car and its cultural role as a determinant of success (Gitkiewicz O, 2019; Trammer K, 2019). For this reason, it is important to gradually introduce restrictions on cars and to strongly promote and facilitate the use of alternative means of transport. The integrated regional public transport system proposed in the strategy (p. 104-115) would relieve tourist pressure on the whole Podhale region and contribute to a more balanced regional development. For this reason a gradual process of transformation is important; firstly providing a balanced alternative to mobility, increasingly demonstrating the spatial benefits for public spaces - and only then more radical steps to regulate car accessibility.

Changing the mobility system may also exclude residents of areas within the automobile fabric. More and more tourist accommodation is being built in these areas; a decrease in the accessibility of these areas to the mobility system of the city will be opposed by their owners. For this reason, in the design of the strategy, the need for a direction for balanced development has been taken into account to relieve building pressure from spatially disadvantaged areas.

Taking into account the spatial layout of the city, the attitudes of the stakeholders, and the potential for pedestrian footpaths on the city's periphery, this project considers partial development of green spaces in return for the possibility of regulating the accessibility of these areas and influencing liveability and sustainability. Although the research process has shown clear arguments for this, even partial development of greenfield sites raises ethical questions. From a sustainability perspective, such areas should preferably be left to nature. On the other hand, due to the ownership structure in the city and the distribution of the power of the actors, it is unrealistic to think that illegal building pressure and thus the aggravation of transport problems in the city will cease. The management of the economic pressure in a direction that takes into account the principles of sustainable development and helps to achieve the strategic goals of the city, however, seems to be a sufficient argument for such

REFLECTION CHAPTER

an action.

Another important thing is the above-mentioned cooperation with the private sector and the possibility of developing some green areas in order to have a real influence on the way the city is formed (Pilot Transformation chapter, p. 118-160). With the power of the investment market, effective protection and influence on the form of development of new areas are risky. This is why inclusive and transparent decision-making, protecting the rights of the most vulnerable, is so important. In the Operational Action chapter, protected areas are designated and the principles of the process of dividing such areas and the principles of landscaping are set out to effectively protect and support green spaces and local communities. However, it must be admitted that in practice, a real design process would require more detailed analyses, simulations, and mini-pilot transformations to effectively exclude the risk of excessive damage to the environment or local culture.

POTENTIAL FOR TRANSFERABILITY

The issue of car dependency is now a common problem in the urban world. The solutions presented in this paper for revitalizing streets and the quality of space can be adapted in places with very different characteristics. Safe pedestrian crossings, separated bicycle lanes within the existing infrastructure, an adaptation of roads to active streets for pedestrians, and improvement of the quality of public space; are activities that are needed in most urbanized areas in Poland (as well as in the entire context of the poorer countries of the European Union).

The solutions presented in the project in terms of limiting car accessibility are suitable, however, mainly for tourist destinations with already limited geographical accessibility.

Also in the case of the presented methodology of limiting automobile fabric is specific to the very local context. In contexts where urban culture is stronger, municipal authorities have more power to protect green areas intact. Often there are still many potential sites for densification of development within the inner city. In the case of Zakopane, the economic pressure is so strong and the authority of the municipal authorities so weak that the method of banning or trying to delegitimize does not work; the social resistance is too strong. This is why the aspect of negotiations and seeking a compromise for partial urbanization and effective protection of the remaining green areas is so important.

Nevertheless, the very topic of cooperation with the private sector to achieve public goals is universal for the whole of Poland and other South and Eastern European countries (European Commision., 2021) where private property has become synonymous with post-communist freedom. These contexts need a strategy for diversifying investment fundraising. In such conditions, overt cooperation with the private sector to achieve key public benefits is often the only effective method of implementing projects. At the same time, it is very important to safeguard the influence and interests of residents in this process.

Another issue, which is universal for various countries in the Central, Eastern, and Southern regions of Europe, is the planning of strategic measures on the basis of financing possibilities; especially in the context of EU funds. These countries are characterized by low national budgets for self-government and it is EU funds and its programs that are the main catalysts for key changes (European Commision., 2021).

LIMITATIONS

This thesis project had to be developed in acceptance of a number of constraints. The key constraint was still the gaps in my knowledge and experience of running such a large project independently for such a long period of time. It was difficult for me to imagine the whole process and plan it in an efficient and flexible way, which was a source of further problems but also a great and important lesson.

I have not been able to do a proper analysis of the examples so that the sources of my design processes are fully adequately supported. Due to time and health constraints, some of the design decisions should still be better motivated in the analysis.

I also failed to carry out the planned number of performance analyses. Due to limitations, I have often resorted to estimative analysis or logical thinking when evaluating the mobility system.

Another constraint was access to a fully representative stakeholder group. For the purposes of the project, the analyses and proposals are based on one-person stakeholder representations, with important investment sector representatives missing. Apart from the number of representatives, the way of cooperation was also a limitation; most of the interviewees asked for anonymity for fear of their own or other communities' opinions. In such a situation it would be difficult to organize a joint, fruitful meeting, but this only highlights the need in the future to prepare more elaborate strategies to activate, educate and support civil society.
It was also not possible to simulate the full integrity of the actors' participation in the process; I was only able to have 2 meetings with each, so for the final design stage (operational action chapter) I had to guess at their points of view myself.

A technical limitation was the access to data in Poland. Regional and local data are still in the process of being digitized, and the standardization of public information is still failing; some material is in the unified Public Information Bulletin, and some have to be found on the websites of individual municipalities. I was able to access some important materials only after direct conversations with officials, which caused delays in the project process.

In the Strategy and Pilot Transformation chapters (p. 104-160), locations for new development are proposed. There is indeed a great lack of housing prospects in the city, but in addition to building locations, it is also necessary to ensure a strategy limiting short-term rentals in such a way that new developments are not fully taken over by the tourist market. This very important aspect has not been developed in this thesis project and would need to be developed.

In the chapter Pilot Transformation (p. 118-160) the guidelines for localization of balanced development, its connection with a balanced mobility system, and ways of formation of public space have been determined, but the preparation of the construction of a new housing estate should be deepened by typological and density analyses and the execution of a local plan.

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