CITY MAKERS LVIV

COURSE ON INTEGRATED URBAN DEVELOPMENT

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Front and back cover
Yuriy Bakay

Lviv, Ukraine, 2020

CONTENT

CITY MAKERS
Lviv Course

Lviv City Makers Course is a study programme in the field of integrated urban development. It has been developed as a joint effort by Brandenburg University of Technology Cottbus-Senftenberg (Germany), Lviv Polytechnic National University (Ukraine), National School of Architecture Strasbourg (France), NGO "Stadtagenten" (Germany) and City Institute Lviv (Ukraine). The programme received financial support from Germany's Federal Foreign Office within the funding scheme "Expanding Cooperation with Civil Society in the Eastern Partnership Countries and Russia". This publication collects inputs, insights and results from the course, which took place from June 2019 to February 2020 in the form of seven teaching modules in Lviv and an excursion to areas along the border between Germany, France and Luxembourg. Based on concrete planning challenges and the case study in Lviv, the participants, local stakeholders and lecturers explored and tested approaches and methods of integrated and participative urban planning. A broader public was included in the discussions through a series of public events in Lviv. By establishing an interdisciplinary culture of communication and exchange, the course has met the following specific goals:

- addressing urban challenges in a cooperative and participatory manner and making places not only for but with people;
- learning how to strategically "think" a city;
- bridging the gap between lived space and professional domain, as well as between research and planning practice;
- supporting young professionals and scientists to develop innovative perspectives;
- engaging critically with heritage of "Soviet planning" from the perspective of integrated planning approach including geographical, environmental, economic, social, functional and aesthetical dimensions of space;
- educating and empowering "agents of change" in the city.

STUDY AREA

STUDY AREA

Vladyslav Morhatsky, Maksym Terletsky

LVIV

Lviv is the largest city in Western Ukraine. It is located close to the Ukrainian-Polish border, at 48° 50' north latitude and 24° 51' east longitude. The city covers an area of 171 square kilometers, in size being comparable to mid-sized European cities such as Krakow, Wroclaw, Koshytse, Leipzig. Lviv is located approximately 550 km north from the geographical center of Europe (near the Rachiv town in Transcarpathian region of Ukraine), 550 km to the west from the center of Ukraine in Kirovograd region. Distance to Kyiv is approximately 450 km. The distance to both Black Sea and Baltic Sea is almost equal, at approximately 600 km.

In terms of social and economic development, Lviv is the largest city in Western Ukraine by population and economic output. This renders it an important regional and national node. Locally Lviv serves the central role as a center of Lviv oblast where major administrative, medical, educational and cultural infrastructure is concentrated. As an informal regional center of Western Ukraine, it is a major economic, infrastructural and transportation hub. At the national level, the city has established itself as an important cultural, political, logistic and innovation center. On a global scale, Lviv is situated both on the periphery and at the meeting point of the catholic and orthodox cultural spheres, European Union and the former Soviet Union, while building on its strengths as the place of the flourishing IT outsourcing industry and tourism.

Fig 1.1. Economic and socio-geographical location of Lviv in Europe (Shabliy 2012)

Environmental conditions

Landscape in and around the city is defined by the Eastern and Western European geological platforms that form hilly areas of Roztochia and Opillia in western and eastern parts of the city and plains of Small Polissia in the northern part. To the south the elevation increases across the Precarpathian geosyncline to the Carpathian mountains that are located 80 km from the city. The altitude of the largest part of the terrain in the city is between 300-340m (55%). There are several hills, High Castle is the highest point with an elevation of 413m. The riverbed of Poltva river is the lowest point in the city at the elevation of 245m. Local geomorphological conditions are connected to several unfavorable geomorphological processes, such as erosion, landslides, karst, flooding, soil suffusion.

Lviv's climate is humid-continental with cold winters and mild summers, due to the prevailing western transition of air masses. Among Ukrainian regional centers, Lviv has the highest precipitation rate and the lowest average temperature in summer. The average temperatures are 0 °C in January and 23 °C in July. Annual rainfall is 745 mm with the maximum being in summer. Rain in Lviv is a very frequent local weather condition. According to the weather monitor, the rain, on average, occurs on half of the days in a year. Microclimate conditions depend on terrain and surface. Lower parts of the town are characterized by more stable temperature while higher positions are less stable. Transport infrastructure, industrial areas and densely built-up residential areas display significantly higher local temperatures. Green areas have an opposite effect, reducing the local temperature.

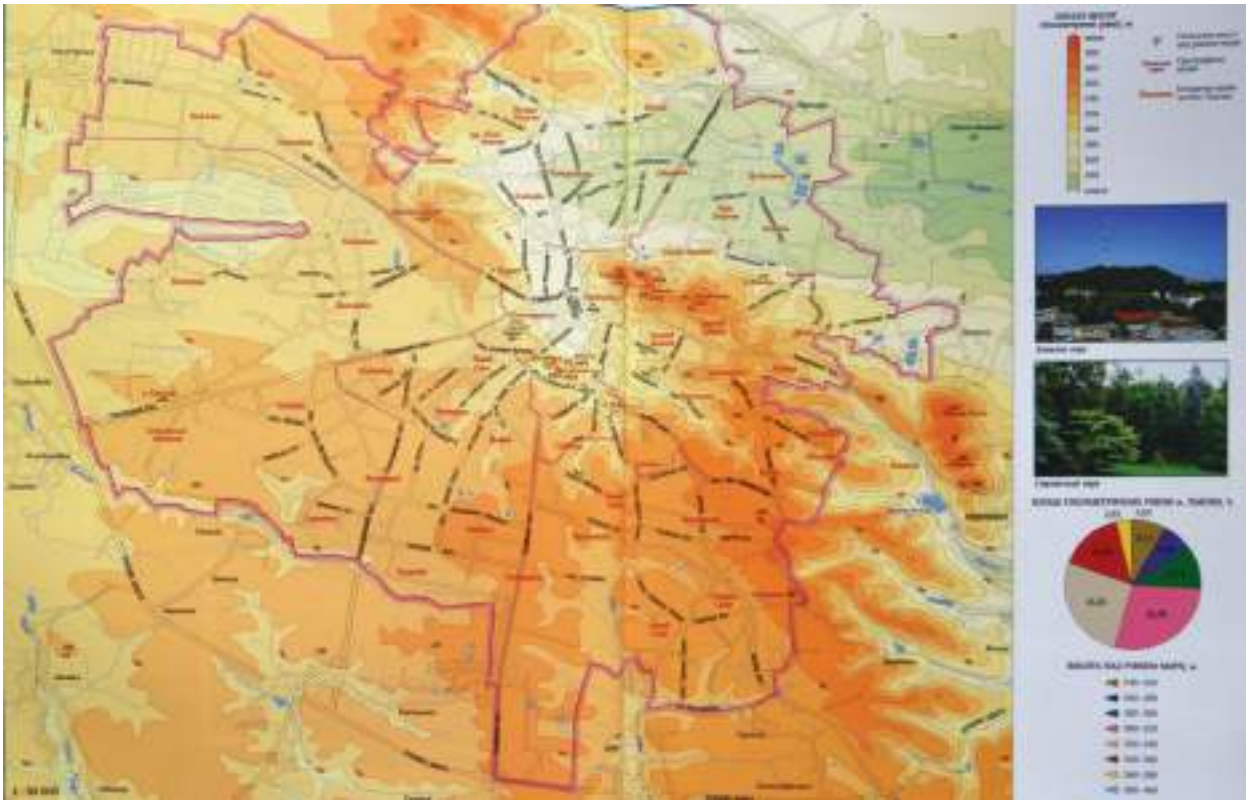

Fig 1.2. Physiographic map (Shabliy 2012)

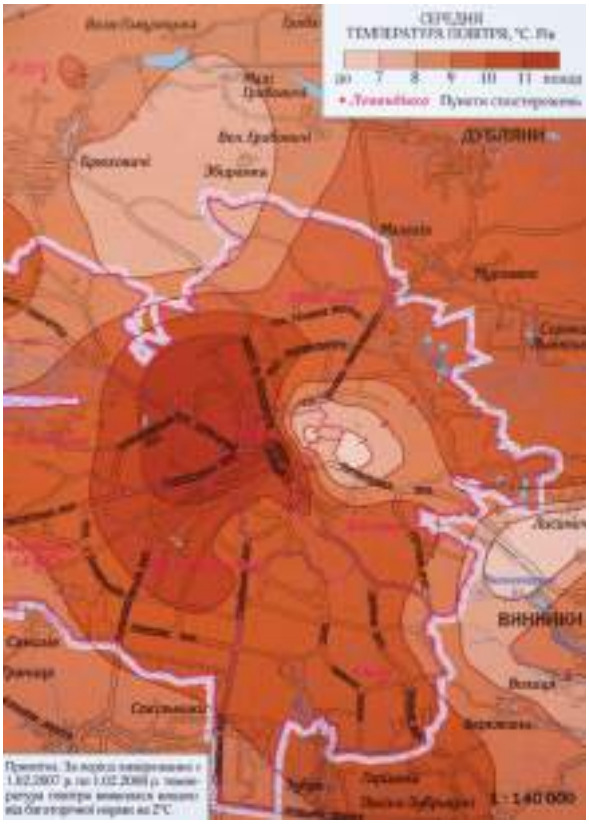

Fig. 1.3. The distribution of the average annual air temperature from 1.02.2007 to 1.02.2008 (Mukha 2012)

Hydrological network is unique because the Main European Watershed runs through the city. In absence of large watercourses, the entire network consists of small streams. The biggest among them are rivers Poltva and Zubra, both having their sources in Lviv. All tributaries of Poltva river belong to Baltic sea river basin whereas those of Zubra river belong to the Black sea river basin. At the end of the XIX century many streams and river Poltva have been included into the municipal sewage system. Their waters thus face severe pollution. Together with an outdated water treatment system such a sewage system produces a serious environmental impact on the whole Baltic sea region. There are also small water bodies in the city, usually ponds and lakes, some of them natural, some created for recreational purposes. However, most of these water objects are also polluted and not maintained properly. While reopening rivers is no longer possible, by renaturalizing lakes and ponds, the water element could be brought back into the urban landscape and residents' everyday lives.

Lviv's territory is mostly utilized for built-up areas, in an amount of 67% of land cover. Approximately 20% of land cover are forests and other types. Soils include anthropogenic materials that are transformed by human activity. The only areas with natural soils can be found within parks and forests, as well as in smaller areas in Lviv's surroundings.

Vegetation in Lviv is a product of human activity. Typical natural temperate broadleaf and mixed forest vegetation with beeches, hornbeams and oaks can still be found in the city's parks and forests. In the lower parts of the city there are meadows, shrub and swamp formations. There are several nature conservation areas and some individual trees are preserved. Lviv's parks form two green belts. The first belt surrounds the medieval city center along the course of the former medieval city walls were destroyed. Second green belt encircles the city's extensions built in the XIX-beginning of XX century. Stryjskyi park stands out within the second belt for its design by a landscape architect Arnold Rering from the end of XIX century. Outside of the green belts, greenery is also distributed throughout built-up areas, yet its quality is often not satisfactory. Former industrial areas are covered by poorly maintained shrubs and grass areas. Extensive green spaces in the residential areas from the second half of XX century suffer from poor maintenance because of disordered relationship with their "common" ownership.

Deteriorating ecological safety is primarily connected to air pollution. After the industrial collapse in the 90s, approximately 90% of all pollutants are produced by transport. Other 10% are caused mainly by energy heating plants.Noise pollution puts an additional strain on the environment. It is caused by an airport, large industry (mainly food factories), railway transport and road traffic. Main streets Horodotska, Kulparkivska, Stryjska, Zelena, Lychakivska, Chornovola, Khmelnytskoho and Shevchenka suffer from noise in the interval from 70-90 dB (Gileta, 2014).

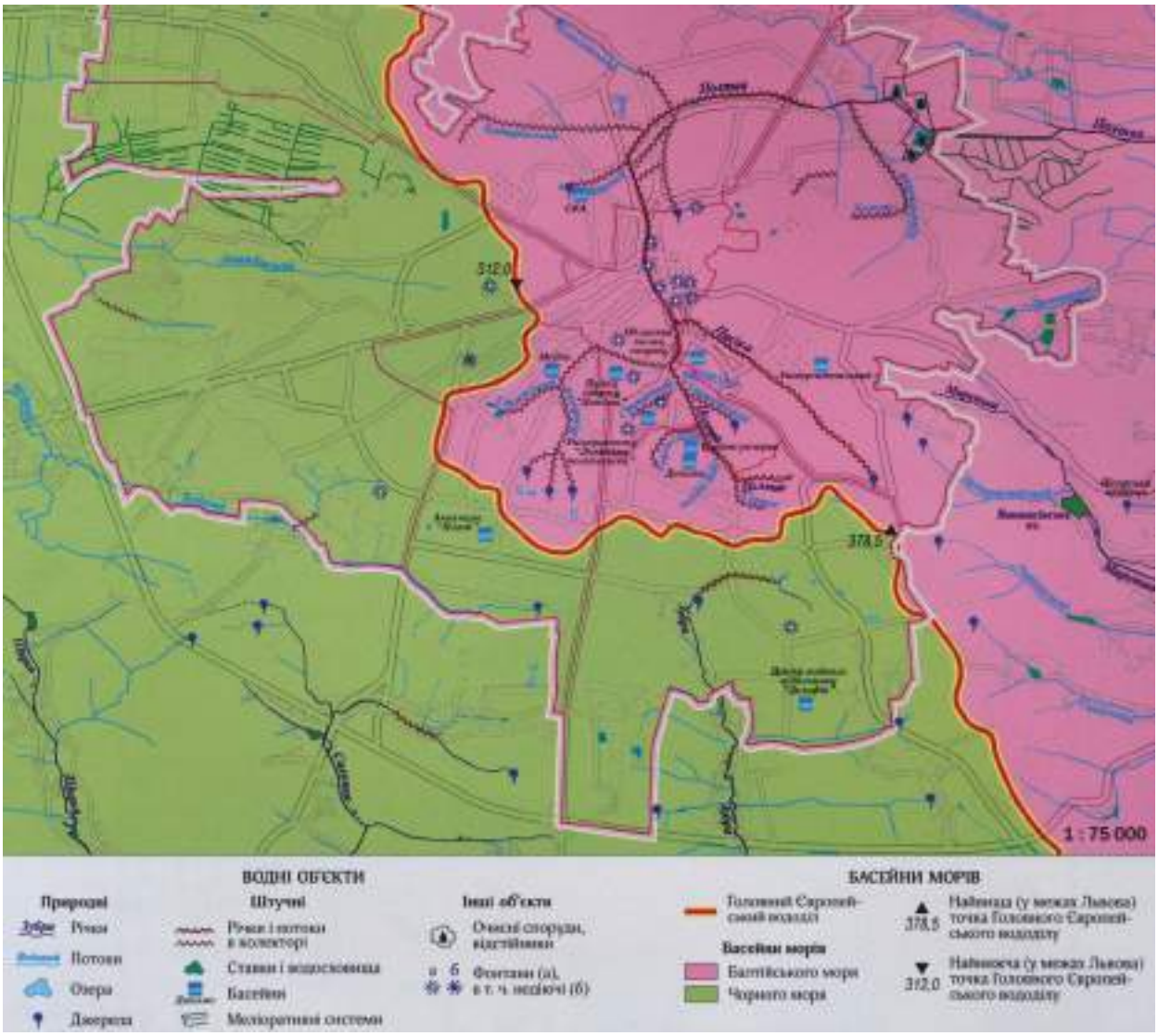

Fig.1.4. Hydrographic network (Kobziak 2012)

Social and economical development

At the turn of the XXI century, political, social and economic space in Lviv has been undergoing major transformations, marked by the collapse of the Soviet Union and the revival of Ukrainian statehood, transition from planning to market economy, replacement of the communist ideology and ideas of "developed" socialism by capitalism's rationale. As a consequence, since the 90s the industrial sector has been in decline. Lviv's key industries were: mechanical engineering and metalworking (for example: electric lamps, machine loaders, bus manufacturing, TV manufacturing, telegraph equipment, milling machines), food processing (confectionery, breweries, bakeries, fat processing, distilleries, soft drinks), leather, footwear and textile, glass production, woodworking, construction materials and others. Main industrial zones were on Pidzamche, in Zaliznychnyi district, Ryasne, Sykhiv district. Factories formed a belt around the historical austrian-hungarian part of Lviv and were surrounded by residential multifamily blocks built during the second half of the XX century. Following the transition to the market economy, many companies collapsed and went bankrupt. Without the institutional support, they were not able to quickly adapt to price-quality ratios imposed by new market conditions and replace broken cooperation links with other parts

of the former Soviet Union, which were crucial for raw resources and parts of the production processes.

The ruptures in economic development had a significant impact on demography. Lviv's population decreased from 816,000 in 1991 to approximately 750, 000 in 2001. Since the last census in 2001, development trends have not reversed, reflecting depopulation patterns which are typical for the entire Ukraine. Migration processes are characterized by the emigration of people to more wealthy European countries, and since 2014 by internal migrations of a number of displaced persons from Eastern Ukraine and Crimea.

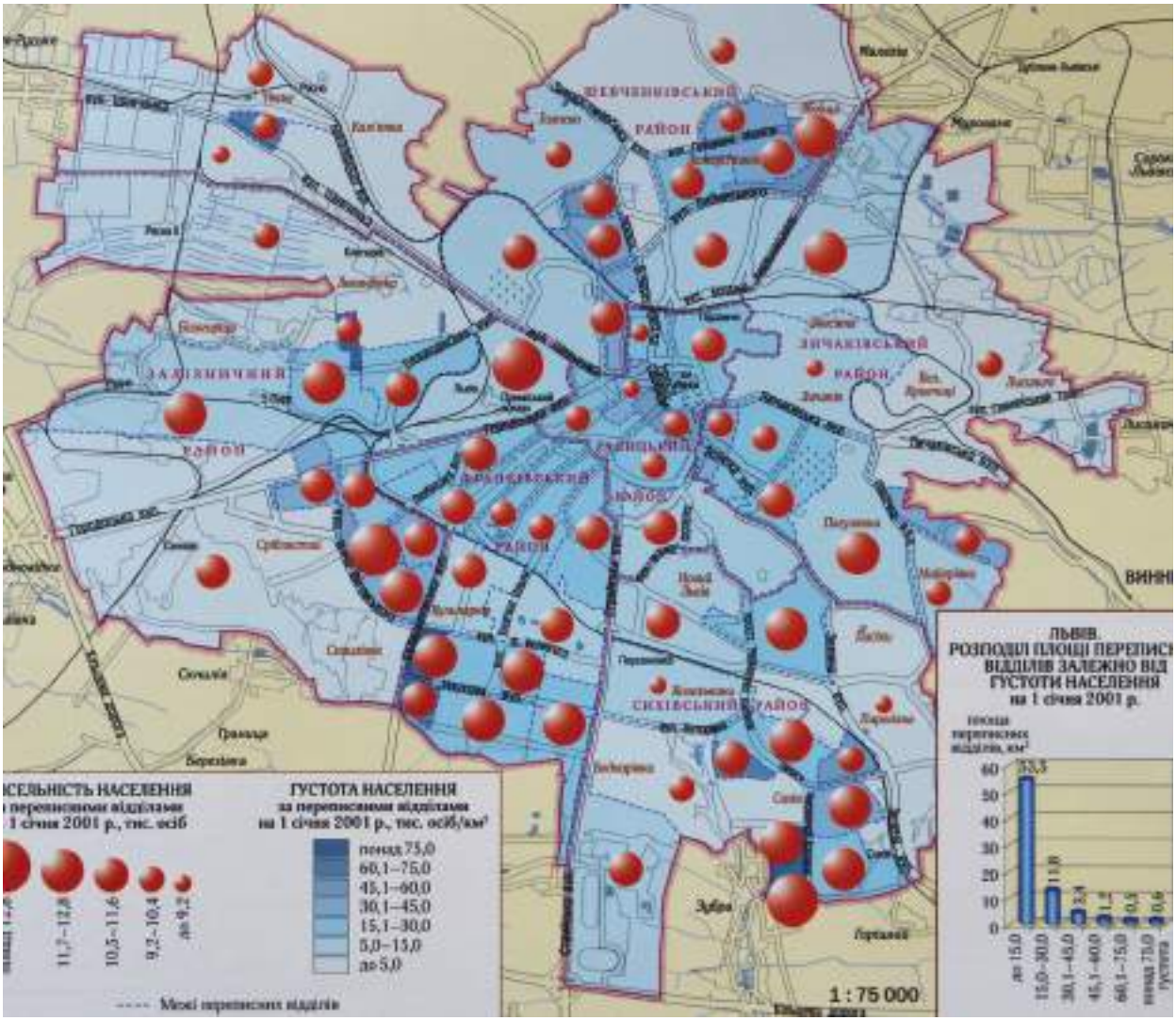

Fig.1.5. Population and its density by census units Lviv (Hrytsevych 2012)

Since 2007 Lviv's governance structures have centred their strategy of economic development on the main drivers of growth, which are IT, tourism, light industry and printing and publishing. Creative industries are growing in importance too. Two large economic clusters develop around IT and tourism as well as education and culture. Local economic development, while providing services compatible with the ukrainian and european markets, has closely intertwined a sustainable development of economic clusters with technology, education and culture development. Lviv's housing stock has grown rapidly over the last 10 years. The "building boom" has been fuelled by

the growing appreciation of home ownership. Yet, currently the average living space per person is 21,6 square meters. In addition to the growing residential market, an economic transition also increased the demand for office space. Supply of offices in Lviv is still low, standing at 135, 000 square meters, which compares to 1,13 million square meters of office space in Krakow and 1,72 million square meters in Vienna.

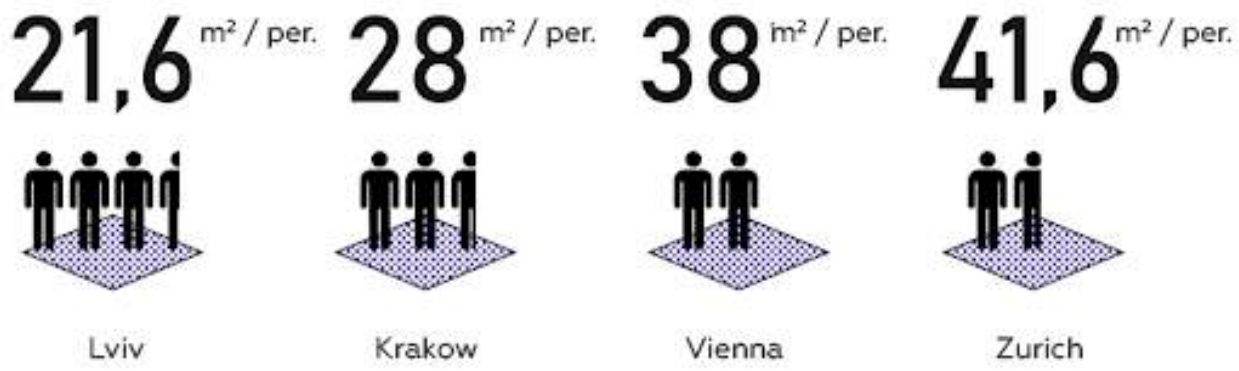

Fig.1.6. Average living space per person in selected cities (Integrated Urban Development Concept of Lviv draft 2020)

The vision for the city development is to build a compact city of short distances and transform the belt of former factories into a belt of opportunities with new office development to meet the demand of the growing economic sectors, most prominently IT.

Fig.1.7. Urban development concept for Lviv as a city of short distances with new subcenters (Integrated Urban Development Concept of Lviv draft 2020)

STRYJSKA-PODATKOVA

The study area's name "Stryjska-Podatkova" identifies the two main area's markers, its main street called Stryjska, as well as a massive imposing building of the State Fiscal Office designated as "Podatkova". Many locals refer to the area simply as "near the Podatkova".

Area "Stryjska-Podatkova" is located in the southern part of Lviv on the periphery of the austro-hungarian part of the city and soviet industrial part of Lviv. Main street - Stryjska is connected to other important streets - Luhanska, Sakharova and Panasa Myrnogo streets. These streets link the area with the city center, southern part of Frankivskyi district (historical areas "Vulka", "Frantsivka", "Novyi Svit", "Lypnyky" and "Zahorody") and with Sykhiv district (historical areas "Pasiky", "Pyrohivka", "Sykhiv", "Bodnarivka"). Stryjska is connecting the area to the road "Kyiv-Chop" and Mykolaiv and Stryj districts in the Lviv region. Important feature of the area is that it spans across two Lviv city districts - Frankivskyi district and Sykhiv district while simultaneously being peripheral in both districts. However, the sociological survey in 2015 under the Community in Action project revealed that residents identify with the area as a whole irrespective of administrative boundaries. It functions as a micro-community.

Natural landscapes and environmental conditions

'Stryjska-Podatkova" is located on the Lviv plateau that is the wavy-watershed surface with an average altitudes between 330 and 340 m. Closer to the river beds there are steep slopes with structural terrasses, which can be found in the northern and western parts of the area, respectively, in Stryjskyi park and Horihovyi Gaj. Negative geomorphological processes are present in the form of smaller landslides, leaching, removal and subsidence of soils on the slopes.

Climate conditions correspond with the general climate conditions of Lviv with small local differences. The average annual temperature is in the range between +9 and +10°C, rainfall - 715 mm. Microclimate differences are caused by the anthropogenic factor. Transport surfaces, roads, parkings, military camp, large open or void spaces covered by asphalt and concrete have the highest temperature in summer - +27- +28 °C The summer temperature in green areas and parks is usually between +20 and +21°C.

The environment is affected by high air pollution levels. Electric heating plant (Lviv TEC-1 producing on average 330 tons of pollutants a year), Lviv bus factory and manufacturing facilities on Persenkivka street produce high air pollution, which cannot be mitigated by large parks and green areas. Motorized traffic and railway add to the already high levels of pollution. Transverse road Stryjska-Naukova-Hutorivka in the close proximity of the area has an average traffic volume of 1900-2200 cars per hour. Together with the transverse road Stryjska-Sakharova, it is identified as a "highly polluted" road. Railway within the area on the line "Lviv-Ivano Frankivsk" is not electrified, with trains using low quality diesel. Noise pollution is caused by motorized traffic, with levels between 70 and 90 dB (Gileta, 2014).

Hydrographic network consists of small streams that are tributaries of the Poltva river with larger streams Vuletskyi in park "Horihovyi Gaj '' and Stryjskyi in the park of the same name. The whole area is located within the Baltic sea basin. The main pollutant is Lviv TEC-1 that produces 700 thousands cubic meter of waste water annually. Water pipe from Stryj is crossing the area from east to west and provides water to TEC-1, residential buildings and other infrastructure objects. The area is covered by an extensive large heating pipes system and electric network because the TEC-1 provides both heating and electricity.

There are two parks - "Stryjskyi Park" and "Horihovyi Gaj". Stryjskyi Park from the end of the XIX century is a landscape art heritage of national importance. "Gorihovyj Gaj'' is a municipal park providing recreational opportunities in the southern part of Lviv, but now it is not maintained well.

Social and economic development

"Stryjska-Podatkova" started to develop at the end of the XVIII century, as an area on the periphery of the city between villages of Vulka, Soroka and Persenkivka. Some houses were located along the road to Sokilnyky. Modern fabric is the result of the following activities and events:

- In the end of the XIX century a so-called "cisar" road was built and a control point for collecting taxes from visitors was established.
- A railway Lviv-Chernivtsi was built in 1864-1866 through the area.
- Creation of the Stryjski Park in 1879 and development of the upper terrace because of the Krajova Exhibilition in 1894. Some pavilions exist until today. At the beginning of the XX century more public buildings were constructed here: stadiums and a hippodrome.
- Between the two world wars a railway to Persenkivka and an electricity power plant stimulated industrial development. Housing projects for engineers and their families were implemented near the electricity power plant.
- The second world war transformed the area. Stadiums were replaced by military barracks and storages.
- During the Soviet Union time the area saw an increased construction of mass housing. This was part of an attempt to create a new administrative center for the region with the large buildings of the state tax service offices and the communist party of the region (current Institute of Ukrainian Studies of Ukrainian National Academy of Science). Two large industrial complexes were built: Lvivprylad and Lviv bus factory (Nazaruk, 2008).

After the Soviet Union collapsed, a planning economy transitioned into the market one. Almost all infrastructure became a state or the municipal property (military camps, electricity and heat plant, railway, parks etc). Small scale commercial activities in the form of small shops, cafes and similar coexist with large development schemes and commercial projects under development (Ukrainian Catholic University, Lviv IT Park, Lviv Tech. City). Former industrial sites were privatized, including the Lviv bus factory.

Transport network within the area is characterized by very good accessibility by different modes of transportation. There are 10 bus routes plus one night bus route that connect the area with all other parts of the city, one trolleybus line connects the city center. There are also local railway lines with a stop on Persenkivka station connecting the area to the main railway station and south-eastern part of the Lviv region. In everyday life, however, transport infrastructure and industrial zones form barriers throughout the area.

Social infrastructure within "Stryjska-Podatkova" is limited. There is only one primary school, no medical infrastructure. Medical facilities are concentrated near the area as part of the Lviv Polytechnic University and Military academy facilities. Recreational premises are available along the area's boundaries.

Considering quality of life index the residents report moderate satisfaction with medical, educational and recreational services, but safety is ranked low.

Future development will be directed by Lviv's new master plan which is located in the area of a new administrative centre for the city and region. The planned transport infrastructure appears to be oversized, with many highways and even a tunnel. Detailed territorial plans for the area of Ukrainian Catholic University, green line from Sykhiv to the city center and LvivTech.City and Lviv IT Park office center have already been approved by the city council.

Fig. 1.8. Stryjskyi Park - alley on the upper terrace of the park (Source: Maksym Terletsky)

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MODULE 01

ANATOMY OF URBAN PROJECTS IN FRANCE. BORDEAUX, LYON, RENNES, STRASBOURG

Volker Ziegler

CITY MAKING IN GERMANY: CHALLENGES AND APPROACHES

Stefan Simonides

INTEGRATED URBAN DEVELOPMENT IN LVIV

Maksym Terletsky

How do planning systems in Germany, France and Ukraine differ? Germany is a decentralized state with huge capacities given to local governments. France - is a centralized state where urban planning and development are predominantly regulated and steered by state. Ukraine is in the transformation process from a centralized state to decentralized one. Cities are taking increasingly more capacities as well as responsibilities. However, cities in all the three countries face similar global and regional challenges pertaining to the climate change and a series of economic, social and demographic pressures. Planning needs to shape cities that are resilient to climate changes, meet the needs of increasingly diverse urban populations, increase the quality of life and provide the opportunities to further generations to prosper and thrive.

ANATOMY OF URBAN PROJECTS IN FRANCE. BORDEAUX, LYON, RENNES, STRASBOURG

French cities have been undergoing a major transformation since the mid-1970s. After the 1973 oil crisis, the massive decline in public construction programs in favor of private investor projects went hand in hand with a rapid urban sprawl on the periphery of cities and municipalities. Since then, expansive single-family housing estates and business parks have been developed everywhere instead of state housing constructions in large housing estates and satellite towns. This process was further accelerated by France's unequal economic dynamics: the de-industrialization of historical industrial regions and the location battles in the course of European integration from 1990 onwards turned cities and entire regions into demographic winners or losers.

However, with the "rediscovery of the European city" – the old city as a cultural heritage, the city as a living, dynamic organism – planning doctrine and methods also changed from the mid-1970s onwards. Instead of tabula rasa redevelopments and retort settlements, a city worth living in is to be created by means of gentle urban renewal, by upgrading public space as a vehicle for urban life,

Fig.2.1. Yannis Tsiomis, Volker Ziegler: Anatomie de projets urbains, Paris 2007

by networking green and water spaces with the city, and by mixing and combining the functions of work, housing and recreation. A central aspect in France, too, is the question of transport: under the banner of "soft mobility", modes of transport such as trams, cycle paths and footpaths are becoming modern and increasingly real alternatives to the automobile.

All this has been made possible by a lengthy process of decentralization and democratization of planning. Over the decades, the once strictly centralized French state has handed over more and more of its planning competences to the regions and municipalities. At the local level, participation and civic involvement is also very important in France, so that planning is increasingly understood as an iterative process in favor of sustainable urban development.

In France, the term project urbain ("urban project") has been used for this form of "city making" since the late 1980s. More than a decade ago, we studied the urban projects of four large cities for the government agency POPSU (www.popsu.archi.fr) investigating new developments in urban planning and design since the early 2000s. Our working hypothesis was that urban projects promote new urban cultures, but that at the same

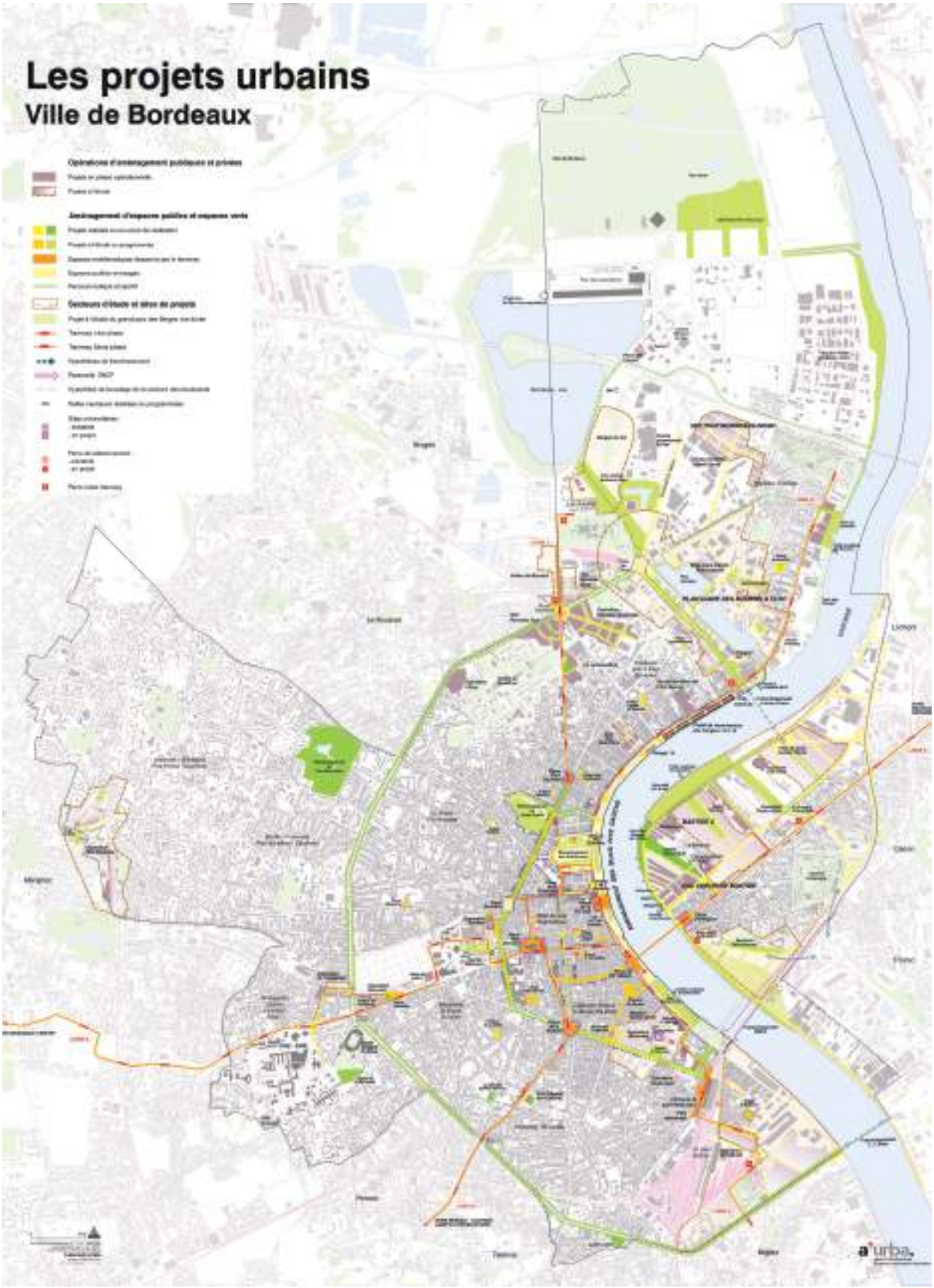

Fig. 2.2. Urban projects of the City of Bordeaux, 2003 (Source: Agence d'urbanisme Bordeaux metropole Aquitaine)

time new urban cultures also require a new type of urban projects. The investigation was designed in such a way that we worked together with local based research teams and organized in each city several workshops and discussion rounds with representatives from politics, planning offices, civil society as well as commissioned architects, urban planners and landscape architects on the most important ongoing urban project. In a final event per city, we also had representatives from all the cities discuss the project with each other.

The guiding ideas for urban development were different in each city and thematically broad. In Bordeaux, the focus was on mobility and public space. Here, the construction of a modern tram network for the metropolitan region was combined with the redesign of the banks of the Garonne – formerly an inaccessible, kilometer-long strip of harbor separating the city's inhabitants from their river.

Fig. 2.3. Bordeaux, Quai Louis XVIII overlooking the Garonne, 2012 (Source: Marc Ryckaert)

The Lyon metropolitan region, for its part, has been pursuing an experimental policy of public spaces since the 1990s. From the neighborhood space in a mass housing district on the outskirts of the city to the historic square in the old town, a variety of different models of citizen participation have been "tested" in the redesign or reorganization of public spaces. Within the framework of our study, a nuanced balance of these experiences could be drawn.

Fig. 2.4. Lyon, Place des Célestins, 2013 (Source: Volker Ziegler)

Fig. 2.5. Lyon, Place des Terreaux, 2013 (Source: Volker Ziegler)

The city of Rennes and its surroundings in Brittany are among the fastest growing regions in France. How is this growth distributed among individual municipalities and how is it possible to manage urban development in Greater Rennes coherently? In particular, the study examined the redevelopment of inner-city areas in Rennes as well as two very different urban expansion projects by municipalities in the metropolitan area that wanted to make the leap from rural to urban communities.

With its 33 municipalities, the Strasbourg Eurometropolis was one of the first municipal associations in France to be created in 1967 – with Bordeaux, Lille and Lyon – in order to counterbalance the dominance of Paris and create metropolitan regions with strong development potential "in the province". By investigating the extent to which the regulatory objectives of metropolitan development – Strasbourg is a transborder Eurometropolis with Germany – were or were not respected in the concrete implementation, we investigated the question of the "(missing) link" between objectives and measures, large-scale planning and individual projects.

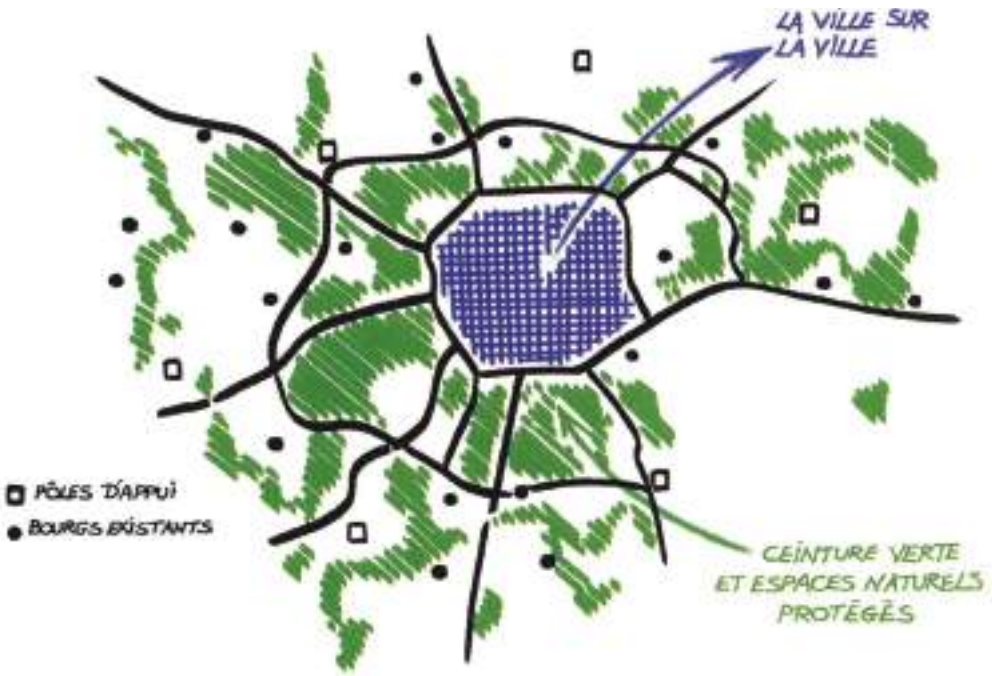

Fig. 2.6. Rennes, Draft spatial framework for the development of the metropolitan area, 2000s (Tsiomis & Ziegler 2007)

Fig. 2.7. Atelier Philippe Madec: "Green town" Pacé and the Beausoleil city extension development, 1998-today (Source: Atelier Philippe Madec, Paris)

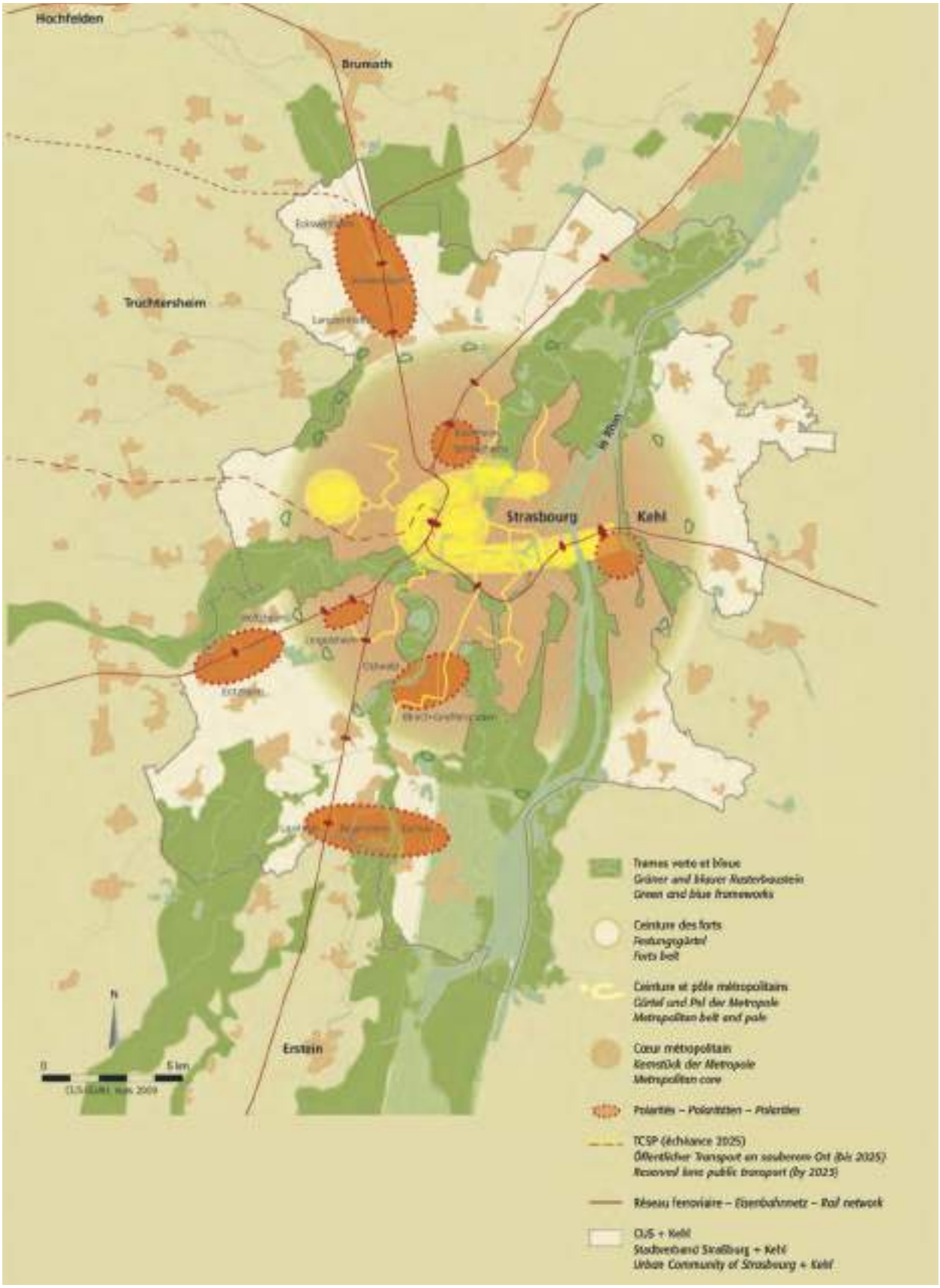

Fig. 2.8. Eco-City Project "Strasbourg-Kehl, The Two Riverbanks Metropolis", 2010 – Spatial framework (Source: Ville de Strasbourg and Eurométropole de Strasbourg)

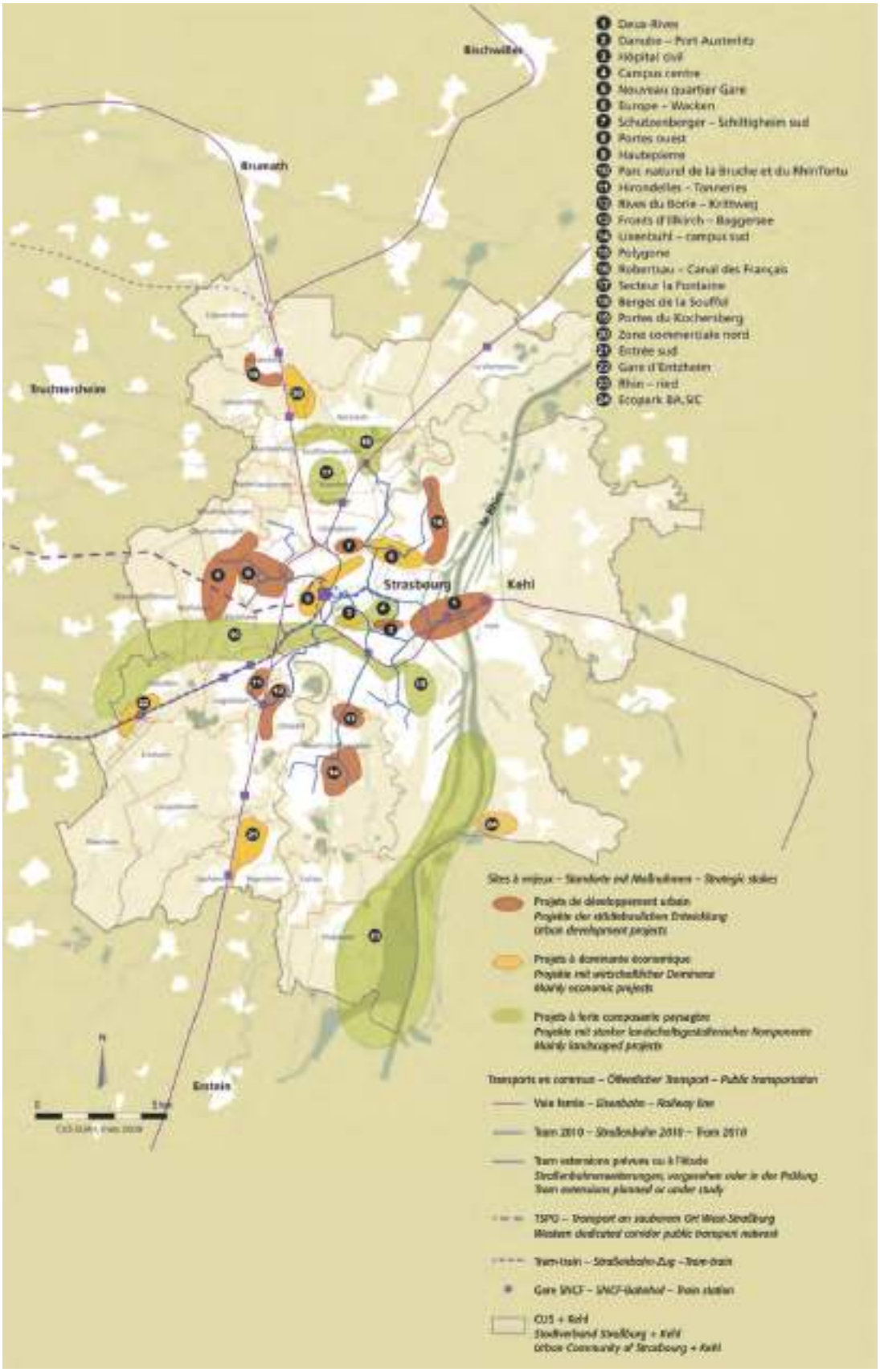

Fig .2.9. Eco-City Project "Strasbourg-Kehl, The Two Riverbanks Metropolis", 2010 – Strategic stakes (Source: Ville de Strasbourg and Eurométropole de Strasbourg)

In addition to these city-specific themes, we were also able to pursue overarching questions that may provide points of reference for the anatomy of contemporary French way of "city making".

Each actor/stakeholder brings a different attitude and logic of action to an urban project – politicians, urban planning managers, independent planners, investors, representatives of civil society, residents, etc. Negotiating these divergent goals and attitudes often requires a mediator, an outside expert or a project pilot. This role also gives rise to new, hybrid professional profiles.

The duration of projects, but also the time lapses in which actors/stakeholders think, often differ greatly. While politicians always bring in the electoral horizon, municipal planners and authorities often remain active on the same project for much longer and can certainly ensure continuity beyond political change. The time lapses in which residents of a project area think – years and decades, but also seasons and times of day – in turn, differ greatly from those of commissioned architects, urban designers and landscape planners, who (can) usually only accompany a project until its realization and are usually not involved in the "readjustment" process.

Participation is the expression of a democratic planning process. But what exactly is meant by this: a genuine participation in the decision-making process for drawing up a spatial program and designing a space – or simply informing the citizens about city council decisions and impairments caused by construction work?

So what makes a city worth living in? Urban projects emerge as a negotiation process from projections of the individual actors/stakeholders involved, each with their own specific professional cultures and personal worlds of experience. In this process, models and representations also play a major role in the implementation of concepts such as "compact", "mixed", "inclusive", "citizen-oriented", etc. city. As a consensus, our study was able to confirm that the most important "matter" of city making is public space, or the urban landscape and environment in the broadest sense. This is where the quality of a city worth living in stands and falls.

CITY MAKING IN GERMANY – CHALLENGES AND APPROACHES

How will we live in the future? What will the cities of tomorrow look like? Which boundary conditions will be decisive for this? These questions are often asked when it comes to making built infrastructures more resilient. The debate extends beyond science and engineering. Visionary representations of technical infrastructures in movies of the 20th century have become realities. Fritz Lang's Metropolis, the city of the future, resonates with today's urban agglomerations of high buildings and extensive transport infrastructure. Another example: in the science fiction series "Star Trek" Gene Roddenberry describes for the first time a mobile phone. He calls a wireless communication device used by space pioneers in 2200 a "communicator". A resemblance to today's devices is great. Visions have turned into reality! What proposals and visions do we offer as an answer to present or forecasted challenges and concerns in our cities?

Fig. 2.10. Vision of the city of the future from the monumental movie "Metropolis" (UFA film 1927) by Fritz Lang (Source: Planet Dystopia 2020)

Fig. 2.11. Reality today: Buildings and transport infrastructure in the Chinese of Mega-City Chongqing (Source: Wikipedia 2020)

The climate change will result in the changed boundary conditions for dealing with rainwater in the future. Like many cities, Lviv is increasingly affected by short flood rain events. The existing technical solutions, which mainly serve to drain rainwater, are not designed for this massive amount of water. The result is flooding (see Fig. 2.12). City planners have to find answers for this. How could future rainwater management in Lviv look like? A visionary and technically ambitious example of this could be that of the Danish architecture studio Tredje natur (Third Nature) (see Fig. 2.13).

Fig. 2.12. Sakharov Street flooded in Lviv (Ukraine) after heavy rain (Source: 112 Ukraine 2018)

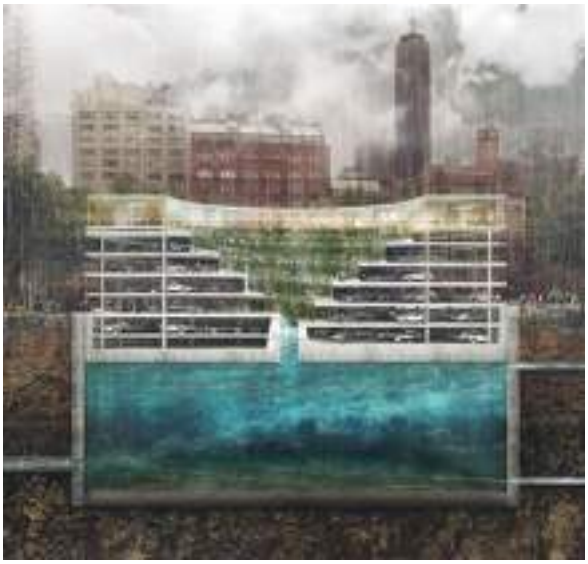

Fig. 2.13. Possible approach to solving the consequences of climate change: storm water fills the underground reservoir and the parking structure will rise (Source: Tredje Natur Copenhagen 2019)

The list of challenges that are facing our cities today is long. Some of the crucial challenges that need to be taken into consideration upon planning a future city concern mitigation of and adaptation to climate change and demographic challenges such as population growth or aging. Temperature is rising. By 2050 the number of very hot days with temperatures above 30 ° C will increase in densely populated cities, in Hamburg (Germany), for example, by up to 4 days a year (compared to 2008). This will result in an increased heat in buildings, and accordingly a growing need for energy-intensive cooling systems to counter health impairments. As a result, microclimate conditions will be further exacerbated by heat islands.

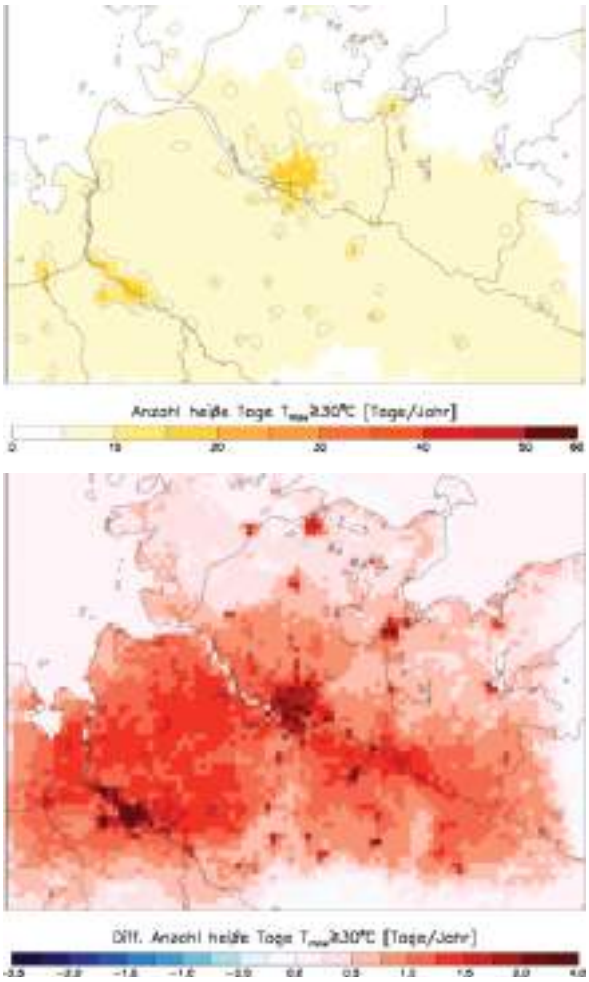

Fig . 2.14. Model calculation for the change trend of the average number of hot days in 2008 and 2050 (Source: Trusilova and Riecke 2015: 29)

Rainfall will increase. The number of days with heavy rain events (precipitation> 30 mm / day) will increase in cities by 2050. In Hamburg (Germany), for example, by up to 2 days / year compared to 2008. This means that larger amounts of water have to be handled in the same time. The frequency of rain, however, decreases, resulting in prolonged dry periods. In the rural area, however, the heavy rain events might sometimes subside. As a result, there will be more floods in the cities, while the groundwater level will tend to decrease.

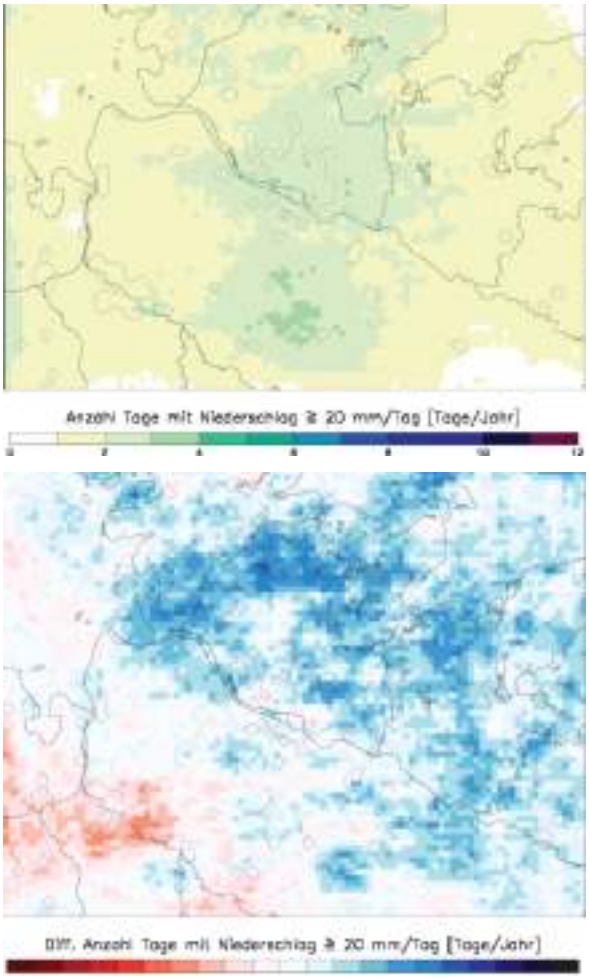

Fig. 2.15. Model calculation for the change trend of the number of heavy rain days with> 30 mm / day, in 2008 and 2050 (Source: Trusilova and Riecke 2015: 46)

Demographic challenges will continue to shape urban development. In particular, the average age of the total population in Germany in 2050 will be significantly higher than today. Overall trend in Germany is a declining population. This is accompanied by changing consumption habits (e.g. drinking water and wastewater) and shifts in the labor market. Migration movements in Germany and in Europe will lead to population losses in some regions and generally strong influxes in metropoli-

tan regions. The result is the loss of functions and growing vacancies in previously populated areas, which can lead to underutilization and functional failure of technical infrastructure (especially drinking water and wastewater systems). The rising cost of infrastructure in the shrinking regions will have to be paid by the remaining residents. Ukraine manifests similar trends, with the overall population decreasing coupled with migrational patterns from rural to urban areas. This means that the cost of infrastructure development can be expected to rise.

Technical infrastructures have to be adapted to different local conditions. Above all, we need (rain) water reservoirs to compensate dry periods. The degree of sealing should be reduced - both in existing and newly built areas (streets, squares, roofs). The goal should be to minimize space used for new construction. Wherever possible it should be aimed for local seepage of rainwater, while avoiding a channeled derivation. By linking infrastructures an increased efficiency could be achieved and resource consumption reduced. It is recommended to continue developing the shrinking areas in a decentralized manner. The adaptation is obviously an all-encompassing process which requires the acceptance of all the involved actors and affected people. This calls for communicating changes in a timely and transparent manner in an open-ended process. Prerequisites for the broader acceptance of the necessary adjustments are true costs, the openness of society for changes (also in one's own behavior) and innovations in an economically viable manner.

Fig. 2.16. Example of green roofs as a measure for delayed rainwater runoff and improvement of the microclimate (evaporative cooling) [Source: Department of Urban Technical Infrastructure, BTU Cottbus Senftenberg]

Fig. 2.17. Example of rain retention and seepage by creating a retention area in a street profile in Copenhagen (Denmark) [Source: Department of Urban Technical Infrastructure, BTU Cottbus Senftenberg]

INTEGRATED URBAN DEVELOPMENT IN LVIV

Cities in Ukraine increasingly implement their strategic processes by taking into account the principles of integrated urban development approach. There are already several such municipal integrated urban development strategies. During the last 5 years, Vinnytsa, Chernivtsi, Poltava and Zhytomyr approved their Integrated Urban development Concepts. Strategic processes on a local level also include sustainability and climate resilience aspects. Mykolaiv, Ivano-Frankivsk, Lviv and other cities have already approved Sustainable Urban Mobility Plans. While the cities are reacting to the challenges of urban development by preparing strategic documents, there still is some lack of commitment in their systematic implementation.

City of Lviv has also prepared an Integrated Development Concept, which is not yet approved by the city council. Its main idea, whch has been met with both support and opposition, is creating a city of short distances. This would be a compact city whose space would be used in an intensive and efficient way.

A key principles for an integrated urban development in Lviv, approved in a SUMP, are:

1. New developments shall use the existing reserves and heavily rely on the available infrastructure.
2. Development shall encourage ecological mobility.
3. Development shall support the old and create new spatial, social, and economic connections.
4. New neighbourhoods will be connected by public transport, cycling and pedestrian links to previously developed parts of the city.
5. New neighbourhoods in the periphery shall be planned only if good public transport infrastructure is available.
6. New development shall produce public and shared private spaces.
7. Public and green spaces shall be connected into a network.
8. Partnership between the city and developers, and citizens engagement enhances the projects and activities, and makes their outcomes more sustainable.
9. Better perception of new development will be ensured through new mobility opportunities and improved quality of public spaces.
10. New neighbourhoods, as well as areas to be restructured and densified, shall be consistently planned under sustainable mobility principles and efficient use of available infrastructure.

The key attention for urban development of Lviv is given to the territory of inefficient use of existing city space. Mainly it is a large former industrial belt around the historic part of the city. In the Integrated Urban Development Concept it is named a “Belt of Opportunities”.

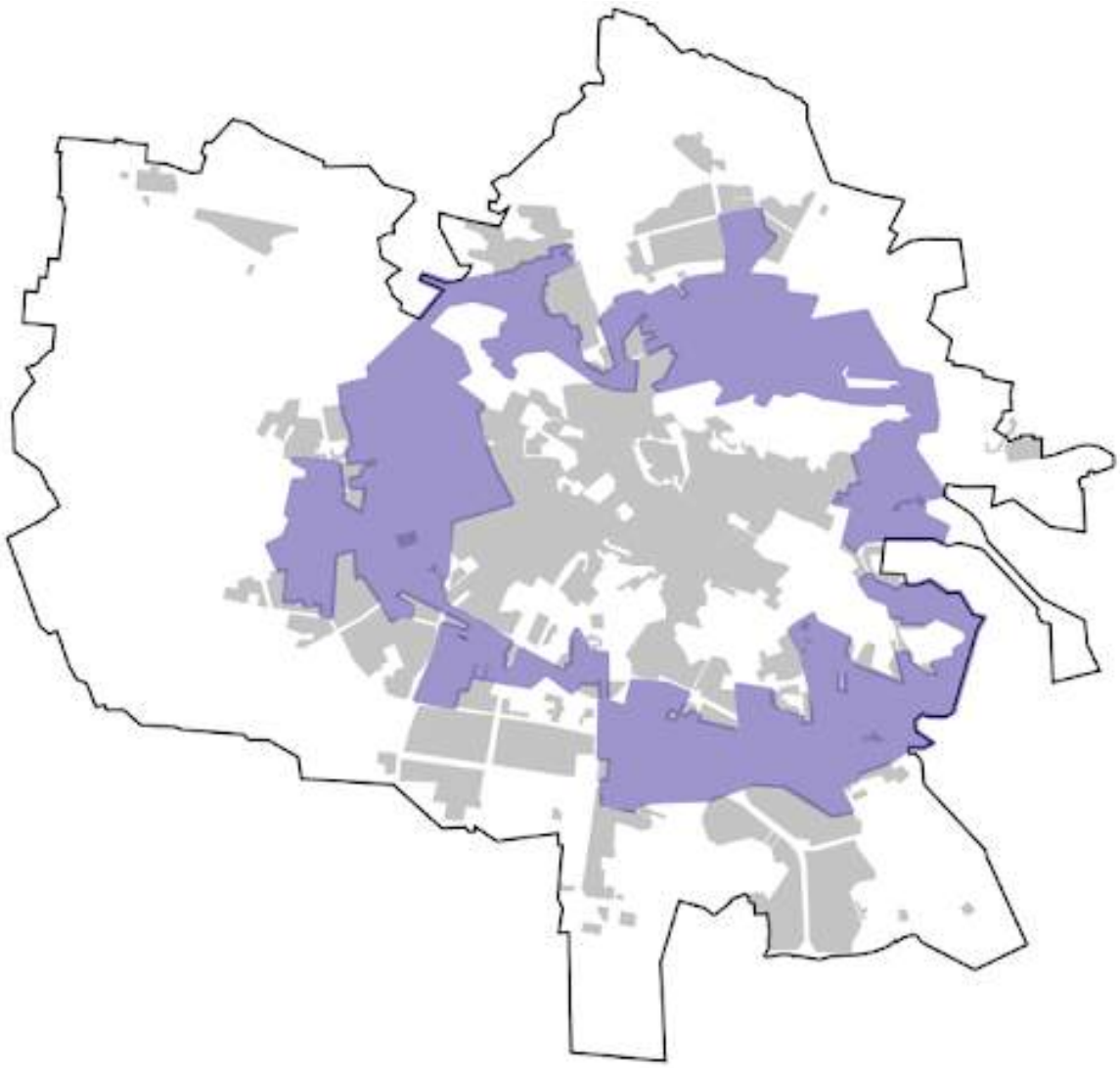

Fig. 2.18. “Belt of Opportunities” where 80% of the territory is used inefficiently (Source: Integrated Urban Development Concept of Lviv draft 2020)

Historically the industrial zones divided the city into the inner part - historical city and outer part - multifamily blocks for workers who worked in factories. Following the industry collapse in the 90ies, privatization of land resulted in a very diverse structure of ownership. Large factories were divided among new businesses and structures are maintained in an inefficient way. Planning this territory presents a great challenge, because of a great variety of stakeholders with different interests. At the same time, such an unconsolidated territory opens great opportunities and is attractive for developers. During the housing boom over the last 5 years, it is mainly new housing that was built within this Belt of Opportunities. This has caused a large demand for public services. New residents are facing daily problems due to insufficient provision of transportation, schools, kindergartens and other social infrastructure.

The Integrated Urban Development Concept of Lviv is aimed at changing the designated uses within the Belt of Opportunities. Instead of housing a priority will be given to business functions, mainly offices. Municipality will invest into social infrastructure. The goal is to create an attractive

space within the city which would provide a plentiful of reasons to residents from both inner city and outer city to come, for work or for education or a series of other social services. The position of this area within Lviv's urban fabric renders its transformation a key task for the city, and a cornerstone in materializing the city of short distances which gives a priority to walking and cycling.

Another important aspect outlined in Lviv's integrated urban development concept are green corridors on a region-wide scale and on the local city-wide scale. Historically a city has been encircled by two main green belts, the smaller around the medieval core and the larger around the Austrian-Hungarian expansion of the city. The Integrated Urban Development

Concept outlines natural corridorsthat connect the green areas within the two belts, and the two belts with the surrounding natural landscapes. In regard to this, the Belt of Opportunities is again recognized as a key urban territory. This is where green links connecting the belt surrounding the Austrian-Hungarian core with residential areas and parks in the outer parts of the city can be created.

A Sustainable Urban Mobility Plan approved by the city council defines the transformation of urban mobility from the one prioritizing a car to the human-centred one. Public transport, cycling and pedestrian modes of transportation are going to define the street design. Several streets in the city have already been transformed according to these principles.

Based on the integrated development concepts for the whole city, strategic work on a neighbourhood level will follow. New approaches and solutions are going to be developed for various parts of the city, including Stryjska-Podatkova area, to create preconditions for sustainable development and the resilient city's future.

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MODULE 02

CITY ANALYSIS

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EXPERIENCE FROM UKRAINE

Maksym Terletsky

EXPERIENCE FROM THE COURSE

Maksym Terletsky, Christoph Kollert, Stephan Pönack

CITY ANALYSIS

Following the introductory module, City Analysis module was the first step into reflecting on principles and key aspects of integrated urban development strategies and applying them on a territory. This module provided methods for analysis, mapping and advanced evaluation, drawing on a holistic understanding of the project site. The goals of this module were: 1) to deliver a better understanding of the role of analysis and its incorporation into the planning process, 2) to prepare the workshop participants to carry out an in-depth, multi-layered analysis, 3) to encourage unconventional approaches, and 4) to introduce the SWOT method as a tool to structure, synthesise and evaluate the findings. The module built on experiences from Germany, where many cities as well as the urban planning system are challenged by increasingly complex conditions: some regions and cities are growing, others are continuing to shrink, and demographic change is transforming various aspects of society. The resulting migration dynamics, particularly the growth of big cities and ongoing suburbanisation, produce very heterogeneous developments across Germany. Other societal developments, such as climate mitigation and adaptation, digitalisation, and the increasing importance of private actors, also affect urban planning. Traditional tools and strategies which worked for decades are rarely able to cope with all these challenges. Purely sectoral or departmental planning can hardly respond to cross-sectional, interlinked, dynamic requirements. Therefore, tools which are more integrative, adaptable and holistic have been developed that requiring a more integrative analysis of the often interlinked and complex conditions within project areas.

The goals of integrated urban development planning are to deliver the foundations for management and steering of urban development while including all the actors and providing flexibility for possible adjustments. Key elements of integrated urban development strategies therefore include clear and impactful visions, strategic concepts, development guidelines and specific measures. A comprehensive analysis is an indispensable basis of any such a strategy, which not only identifies all the stakeholders but also indicates the means for their possible inclusion into the process. Consequently, all aspects – socio-economic or physical, historical and prospective, dynamic and sustaining, private and public, macro, meso and micro – should be carefully analysed and integrated into the whole planning process. This analysis is often organised in thematic and/or territorial (sub-)chapters in order to be able to

Analysis	**Research, analyse and evaluate** On-site inspection, analysis of the current situation, general conditions and existing planning documents.
SWOT map and matrix	**Evaluate the findings** Structure the findings to identify strengths, weaknesses, opportunities and threats. Helps to develop necessary strategies and prioritise areas of activity
Development goals and guiding principles	**Stimulate urban development** Define development goals, principles and guidelines – augmented by defined areas of activity
Framework plan/ action plan	**Develop a flexible, powerful plan** Locally adapted and solution-oriented measures and projects based on the SWOT analysis, participation and the inspiration beyond
Implementation concept	**Managing change** Focused, coordinated implementation strategy with financial priorisation and timeline combining and managing public and private funds, initiating and establishing stakeholder networks and cooperation

Fig. 3.1. Core elements of an integrated urban development strategy (Source: own diagram, adapted from BMUB 2016: 14)

organise all the information. The same structure is frequently used to develop and categorise visions, strategies and projects, which provides a comprehensible, transparent way to indicate how the results of the analysis feed into the overall strategy. How the analysis is structured is hence of particular significance as it will typically impact the structure of the whole strategy.

Methods to analyse the site

There is no single way to carry out analysis as every analysis and every resulting integrated urban development strategy should be geared to specific local conditions. Nevertheless, there are some general guidelines and methods that should be considered. Analysis is often divided into layers and/or sub-areas, and these layers are often linked to specific sectoral topics (such as mobility or landscape). Each topic should be analysed on different levels: the superordinate level (regional/city-wide scope), the function of the site within the city, local attributes on that particular level, and if need be in an in-depth analysis (cross-section of a street, collage, detailed study, stakeholder mapping etc.). Mapping, working with diagrams, research, screening of available planning documents, and talking to local stakeholders are required in this phase. While attention should certainly be paid to details, the information must also be filtered and prioritised. It is important to strike a balance between efficiency and necessary information by finding the right level of abstraction.

However, a purely sectional/departmental analysis might fail to be integrative. The different layers should therefore be picked wisely and compared intensively (through a SWOT analysis) while layers can combine matching topics (e.g. mobility and land use) or be problem-based/cross-sectional (e.g. sustainability). Four to six layers have proven to be effective within an educational context. Consequently, the following layers were suggested for the project site in Lviv:

1. Relation to the city as a whole and local identity;
2. Uses and functions;
3. Urban morphology and typology;
4. Mobility and infrastructure;
5. Landscape and public space;
6. Inhabitants and the 'invisible city'.

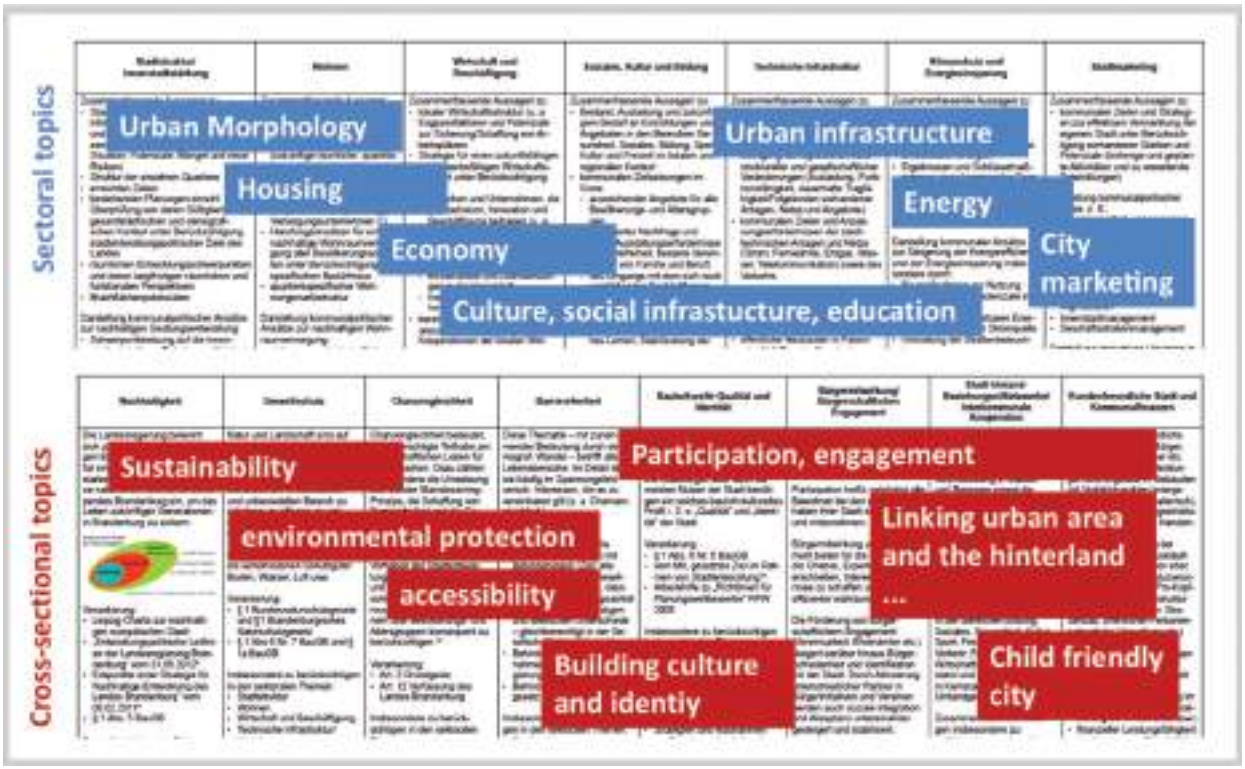

Fig. 3.2. Combining complex analysis outcomes. Both sectoral and cross-sectional topics are analysed in parallel. (Source: own image adapted from Ministerium für Infrastruktur und Landwirtschaft des Landes Brandenburg 2012: 10-11)

Fig. 3.3. Simplified analysis: Diagrams showing the morphology, mobility, public space and dominant uses within a site in Rotterdam (NL) (Source: Netsch 2015: 28-29). Linking multiple layers (culture and recreation, economy, urban morphology, green spaces, parking, street network) with conclusions and development goals (Source: BTU Cottbus-Senftenberg, student work by Stephanie Scheu, Valeria Nohle, Lennart Bayer, Tobias Keul, 2017)

Sometimes, subdividing sub-areas helps improve the understanding of very heterogeneous areas. Analysis often needs to be carried out iteratively: analysing a particular aspect (urban morphology), setting it into the wider context or in relation to other layers (land use) and going back to the initial layer to analyse further aspects (typologies, ownership etc.).

Approaches and inspirations for an unconventional analysis

Examination of the temporal dynamics and historical development of the site often supplements strategy planning process. Another crucial aspect is the investigation of local conditions and the views of local inhabitants through interviews, site visits, observations, surveys etc. Some examples of psychogeography, mind maps drawn by experts or local inhabitants (e.g. Kevin Lynch's maps with paths, edges, nodes, districts and landmarks or Jack Nasars's studies about the evaluation of likability of an area within a city) and participative mapping. Spatial characteristics can also be covered through sketching, visual storytelling, serial visions, photography, collage techniques or even movies.

Diagrams, creative models, quotes or even 'treasure maps' can also be used to synthesise, simplify, communicate and discuss findings (fig. 3.5). More sophisticated methods require expert knowledge, such as computational simulations, or modelling or working with scenarios. The methods should be chosen according to local conditions, the skillset of the involved professionals, and possibly in a complementary way to the 'traditional' methods explained above.

Fig. 3.4. Boundaries of Cottbus's inner city as perceived by local inhabitants (Source: StadtAgenten Cottbus)

Fig. 3.5. Creative analysis: A model that combines analysis and concept by providing visual representations of the surrounding and highlighting important views (Source: Christoph Kollert)

EXPERIENCE FROM UKRAINE

In Ukraine integrated development has been promoted since 2012 when the first Integrated Urban Development Concept was developed for a central part of the city of Lviv. Since that time, other cities - Vinnytsa, Zhytomyr, Poltava, Chernivtsi - have outlined their Integrated Urban Development Concepts. These documents were developed by observing the guidelines and principles of the Leipzig Charter on Sustainable European Cities.

Each city's strategy draws on a SWOT analysis. Topics that were typically included in all cities in Ukraine are: location within the region, demography, land use, economic development, environment, housing, social infrastructure, technical infrastructure and engineering networks, culture, historical heritage, tourism attractions and development, and one of the most important - transport and mobility as a key challenges in Ukraine today.

Integrated approach was ensured by involving multidisciplinary expert groups and stakeholders early in the process, already at the analysis stage. Thematic groups for each functional aspect of a city carried out analysis in the form of a group work and presented their results jointly. A well conducted analysis as the first step in the development of a strategy proved to be an important milestone which facilitates the further process. Several specific aspects of each Integrated Urban Development Strategy in Ukrainian cities can be identified as resulting from the analysis and the chosen methodological approach. For example, the Integrated Urban Development Concept for Vinnytsa demonstrates a strong focus on the governmental perspectives, which is a consequence of key stakeholders in the process being representatives of Vinnytsa city council, the city's departments and offices. Poltava's strategy puts a strong emphasis on the analytical part, which by the municipality was identified as the most valuable component of the strategy. The resulting document has outlined rather a conservative strategy. In Zhytomyr the analysis was directed at previously defined focus-zones within each district of the city. The resulting strategy calls for giving priority and concentrating efforts to develop exactly those areas. Layer analysis was a continuing process during the development of the Chernivtsi Urban Development Concept. The resulting concept is a very "city-planning-type-strategy" consisting of many maps and plans. Each spatial layer is overlapped with other layers and an integrated analysis is a result of these overlappings.

EXPERIENCE FROM THE COURSE

City makers analysed a site of Stryjska-Podatkova area through a layer analysis using different methods. 20 participants created 3 work groups with the same task. This allowed for people from different backgrounds to employ different approaches to produce specific results for the same area.

Relation to the city as a whole and local identity analysis was prepared by using citywide maps. Based on the analysis of connections to main attractors and social functions (city center, bus and railway stations, airport, large market and malls, parks), the site was identified as a desirable location within the city. Almost all mobility hubs, including an airport are located within 3-4 km distance. Mapping of functions available within that distance that is comfortable for pedestrians and cyclists is useful for integrating mobility modes and plans. Being crossed by several main streets, the territory has a potential to be developed into a sub-center in the city. However, as the site is administratively divided between two districts, it might be difficult to develop it as a whole.

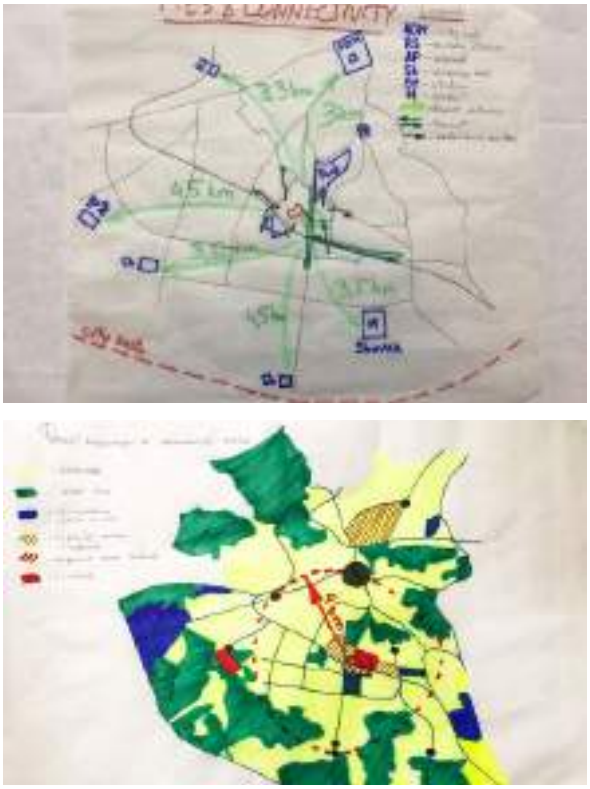

Fig. 3.6. Layers showing the connection of the site to the main attractors and functions in the city, and a 4-km zone comfortable for cycling based on the spatial analysis of functions (Source: participants' work)

Fig. 3.7. Functions identified within a Stryjska-Podatkova area (Source: participants' work)

The analysis of uses and functions identified a variety of functional zones. A site is bordered by green areas with recreational sites and parks in the western and northern part. In the eastern and southern part there are larger industrial sites undergoing transformation, including a mix of functions and new housing developments. Further residential areas can be found in the western part between the military area and the park. Central areas are the site of administrative functions - state tax office, educational function - Ukrainian Catholic University, and military function - military camp. The railway and major roads that cross the area render the transport function important within the site. The main issue related to the functions of the area is that most functions are isolated from each other. The area functions as an archipelago of monofunctional islands. Trade and recreation have to some extent penetrated residential and educational zones.

Fig. 3.8. Morphology of buildings within a Stryjska-Podatkova area (Source: participants' work)

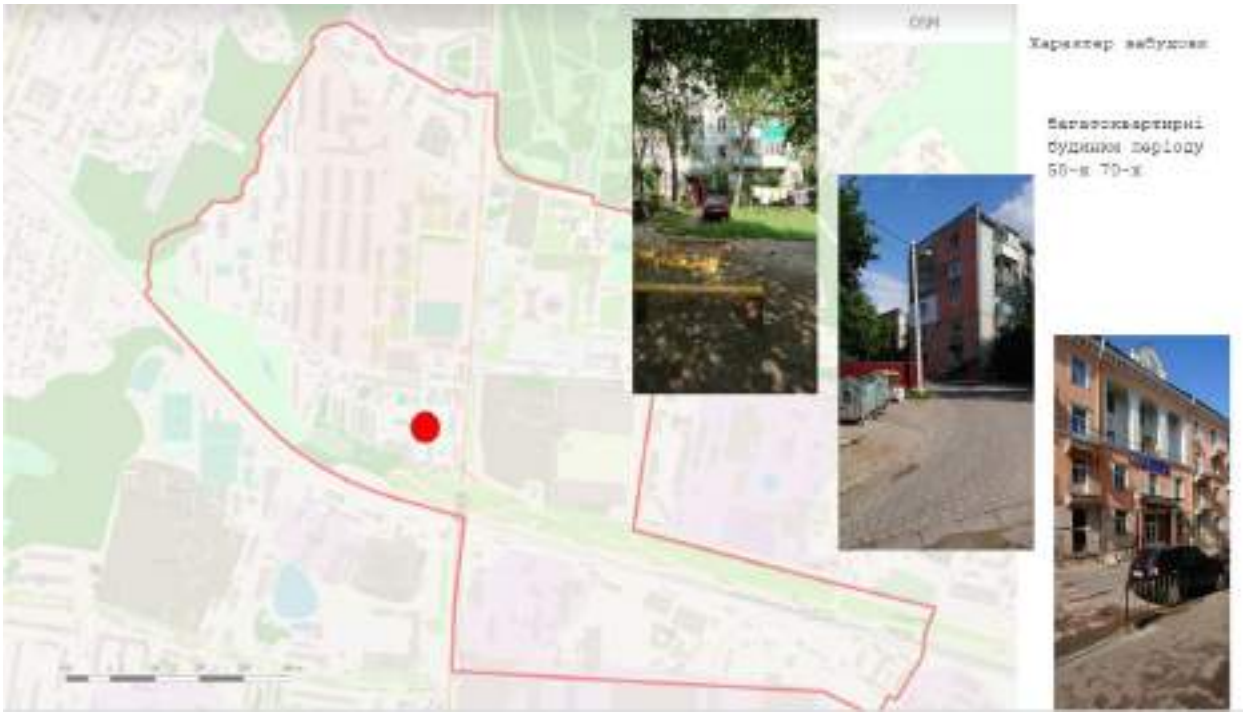

Fig. 3.9. Mapping of morphology, including the current conditions and residents' adaptations (Source: participants' work)

Urban morphology and typology formed another part of layer analysis. In terms of urban morphology and the age of buildings, the southern part of the territory is generally shaped by industrial buildings and warehouses, with the former former bus factory being a dominant structure. Residential areas can be distinguished into three typologies, 4-5 storey buildings built in the 50s-70s, 9 storey buildings from the 70s and 80s, and 9-12 storey buildings from different periods, including recent developments.

Landscape and public space analysis. We identified three types of urban open spaces. Public spaces that are available for everyone, semi-private spaces within the inneryards of building blocks accessible mainly to local residents, and private spaces available only to owners. Within the social housing projects most of space is publicly accessible. However, this public space sometimes suffers from the lack of maintenance. At some instances the residents have appropriated land around their housing estates and utilized it to their needs, for example for gardens.

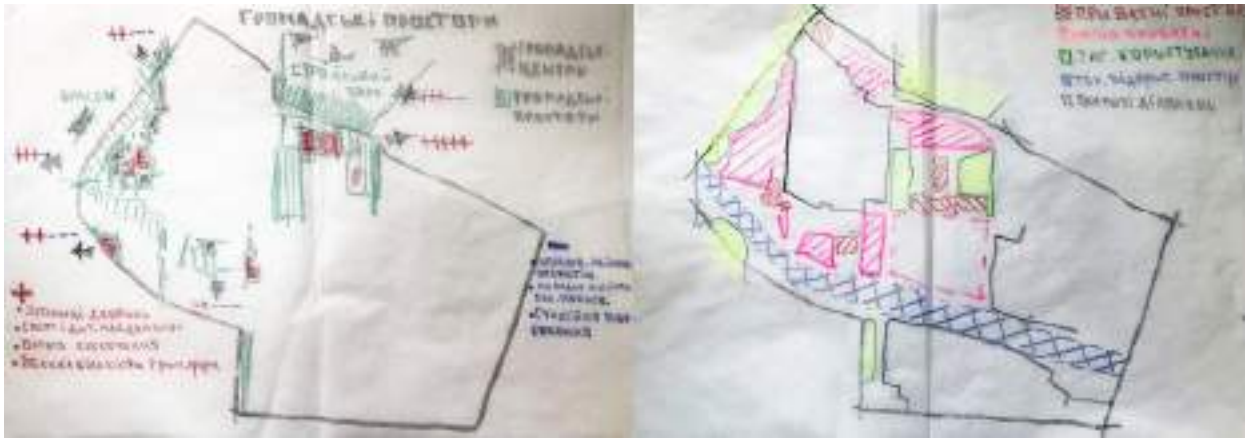

Fig. 3.10. Public (left) and private (right) spaces within the Stryjska-Podatkova area (Source: participants' work)

Fig. 3.11. Green spaces within the Stryjska-Podatkova area (Source: participants' work)

Green spaces are important layer of public space, as a means of integrating environmental aspects into the planning scheme. Local climate extremes in Lviv include heat island effects and flooding. In both cases parks prove to well mitigate these effects. Parks are also important recreational spaces for residents.. Stryjskyi Park is declared heritage and is well maintained by the municipality. Other parks are not in such a representative condition.

Mobility and infrastructure analysis. Mobility layers primarily concern main and secondary transportation corridors within the areas. Transport infrastructure is one of the biggest values of the site. It encompasses public transport that connects it to the city center, and Stryjska street whose traffic volumes prove its excellent integration into the region's road network. However, the mapping of pedestrian routes and patterns revealed that highway-like profiles of Stryjska and Luhanska street, and the railway are the main barriers for pedestrians. The main points of interests for pedestrians are the university and Stryjskyi park. Pedestrians tend to avoid heavily trafficed streets and use parks as their routes to the city center. This is mirrored in two largest pedestrian crossings being located near the park entrance and the bus stop in Stryjska street close to the tax office. Luhanska street is very pedestrian unfriendly.

Stakeholder layers provide an insight into local actors, groups of residents and users whose interests need to be taken into account in the process. The identified stakeholders within the area were local residents, uniersity and students, office workers and army. As part of the stakeholder analysis, city makers conducted surveys to collect people's thoughts, preferences and opinions about the analysed area. Local residents mainly referred to the traffic barriers as major problems and expressed negative opinion about new developments within the area.

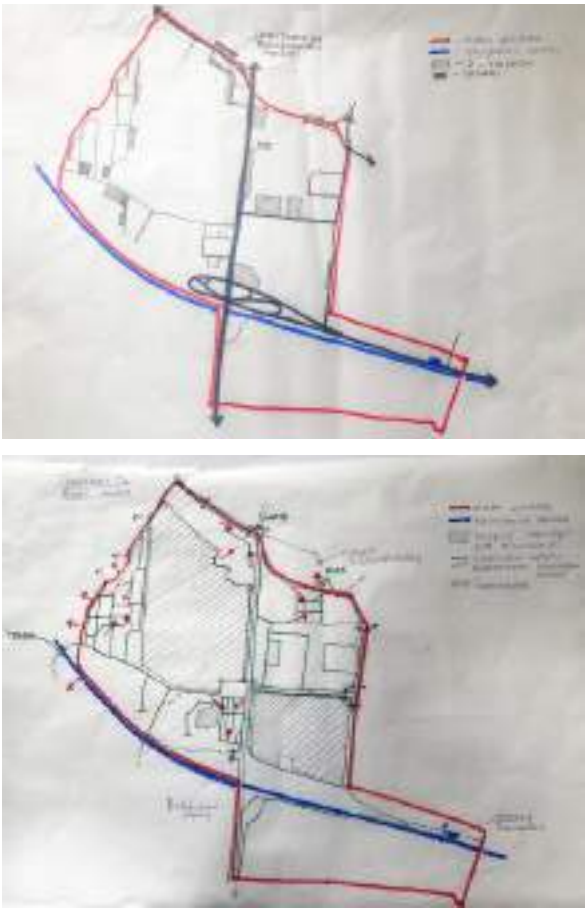

Fig. 3.12. Mobility within the Stryjska-Podatkova area (Source: participants' work)

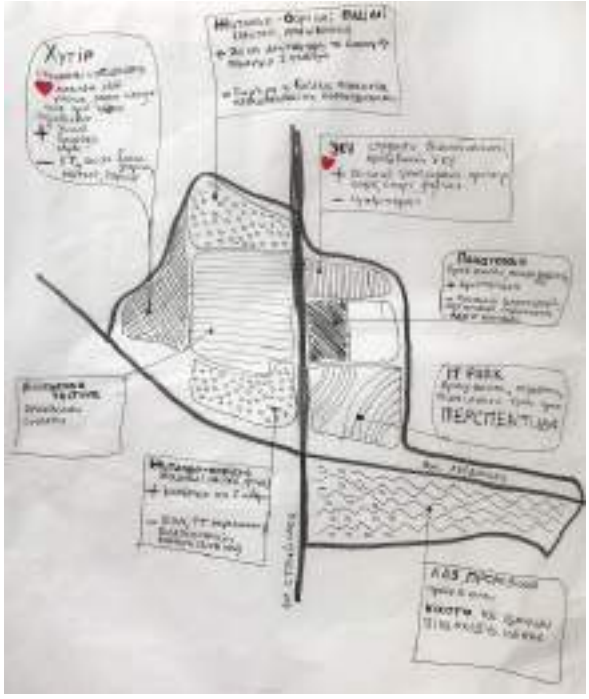

Fig. 3.13. Stakeholder map and survey results (Source: participants' work)

Fig. 3.14. Field research and observations (Source: participants' work)

The analysis of the site consisted of the review of publicly available data and planning documents (master and zoning plans), as well as site visits and on-site observations.

The field exploration and the collected layers of information about the area were used for a SWOT analysis (strengths, weaknesses, opportunities, threats). A SWOT table was prepared as the basis for further work and the preparation of a strategy.

Strengths
University, cultural center and library located in the site. Close location and good connection to the city center, parks, sport facilities.Many parks and green spaces, large open spaces between the buildings and infrastructure. Many different functions are presented in the site: housing, administrative buildings, working places/offices. Active citizens Historical heritage
Weaknesses
Fragmentation and barriers caused by illegal occupation of territories, chaotic development, isolated military area and former industrial zones, roads and railway. Lack of organized parking, cycling and inclusive pedestrian infrastructure, bad connection to public transport facilities. Lack of primary & secondary education facilities; social and retail infrastructure. Noise & environmental pollution Inefficient use of public spaces and bad maintenance
Threats
Higher pressure on transport infrastructure after new developments Infrastructure deficit Unregulated construction Degradation of green areas, abandoned areas More fragmentation and isolation
Opportunities
Activation and efficient use of open spaces Revitalization of industrial & military zones, new developments. Transport hub with city trains and connection with neighboring territories. Green links. Development of cycling and pedestrian infrastructure Sub-center of the city and a "Belt of Opportunities"

City makers made a map of problems identified during the City Analysis module and spatially explained the main problems, such as: isolated territories, streets uncomfortable for pedestrians, abandoned areas and public spaces.

In a map of potentials, city makers identified possible solutions or chances for positive development

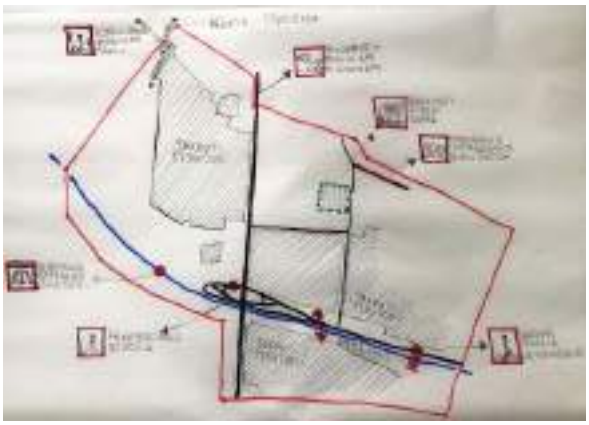

Fig. 3.15. Map of problems within Stryjska-Podatkova (Source: participants' work)

trends that could inform further design steps. For example, an isolated military area and former factories are mapped both as problems and potentials, because they might be underused and could possibly be transformed into other types of spaces. Other potentials in the area include the new office center under construction, the building of tax office and the university.

This module stimulated a productive discussion amongst the participants reflecting on the value of some analysis methods which do not or cannot always meet the standards for 'solid'/'scientific' research such as a representative sample size etc. However, we finally concluded that these limitations should be addressed or expressed accordingly and that architects and urban planners should nevertheless trust their professional background and their intuition. Because of the potential impact on the everyday lives of (future) inhabitants, it's important to reflect on employing the SWOT method in urban planning. While the method is certainly useful as a source of guidance, it's important to be aware of its limitations: the SWOT method is suitable for identifying OS, OW, TS, TW strategies, but not necessarily designed to stimulate input beyond that. Although architects, urban designers, urban planners and other actors involved in the development of the strategies should draw from the SWOT analysis, they should also use their professional, analytical and creative skills to seek out further inspiration. Sometimes, it may be necessary to introduce additional strategies, think out of the box, question the current conditions or break with prevailing perspectives and paradigms. Although creative ways of analysis, participation, knowledge transfer, and a mindset which is both ambitious and critical are therefore becoming increasingly important, they should always be supported by systematic, comprehensive analysis.

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MODULE 03

PARTICIPATORY PROCESS IN URBAN PLANNING IN GERMANY

Detlef Kurth

INTEGRATED PLANNING PROCESS IN UKRAINE AND EXPERIENCES FROM THE COURSE

Maksym Terletsky

The Participatory Planning Module discussed the engagement of stakeholders and residents in planning and design processes. Its main objectives included:

- getting acquainted with the stakeholder mapping;
- designing models for participatory planning processes;
- learning the basics about moderating and facilitating public meetings;
- gaining experience in moderation and facilitation of meetings

PARTICIPATORY PROCESS IN URBAN PLANNING IN GERMANY

The module consisted of two parts. A theoretical part providing information about participatory processes in Germany and Ukraine, and practical work developing a participatory process for Stryjska-Podatkova.

Urban planning in Germany is based on principles of the Leipzig Charta. One of the recommendations is preparation of integrated urban development plans.

These plans are informal, and set a framework for the legal binding plans. They are developed mostly in a participatory and integrated way, with an analysis of the location and with scenarios for the future, as a bottom up-approach. Beyond this informal planning tool, urban development is regulated by zoning plans (Bebauungsplan), which are defined by the building regulation act (Baugesetzbuch BauGB). A participatory process is an obligatory part in preparation of these plans. It has to start early in the planning process, and every statement has to be discussed seriously in the subsequent planning process. The importance of introducing participation very early in the process lies in the fact that planning objectives can be changed and discussed in an open-minded manner only at the beginning of the procedure.

Participation became important since the 1968-movement in Germany. In the 1970s a lot of NGOs and pressure groups had been established, especially for environmental issues and urban regeneration. Because of this, the involvement of residents and NGOs became more and more important in urban planning. Figure 4.1 provides a comparison between a top-down and bottom-up approach in urban development planning.

A successful participatory process builds on the following necessary principles:

- Participation is necessary to achieve a plan with high quality.

Fig.4.1. Top-down and bottom-up approach in urban development planning (HFT Stuttgart)

- Every resident and person concerned ("Betroffene") should be able to influence the planning process.
- There are different ways to design a participation process, it depends on the topic, the location and the framework.
- Participation should include the politics and the administration.

The main roughly defined gradations of participation are: information (only to tell the results), consultation (to discuss the topics), cooperation (to develop the objectives together). Depending on the topic, in Germany more and more planning processes are organized in a cooperative, dialog-oriented way. Important elements of such a participation are:

- Define the subject and objectives of the participation as a clear framework.
- Guarantee transparency and tolerance.
- Define clear rules for the participation.
- Discuss alternative approaches and scenarios.
- Involve all people which are affected.
- Guarantee a neutral moderation.
- Activate the people for more engagement.
- Be open for different opinions, don't avoid conflicts.
- Look for a consensus at the end.
- Involve the results of participation in the following planning process and in the democratic process of the municipality.
- Implement a monitoring of the process.

Fig. 4.2. Cooperation in participation process (HFT Stuttgart)

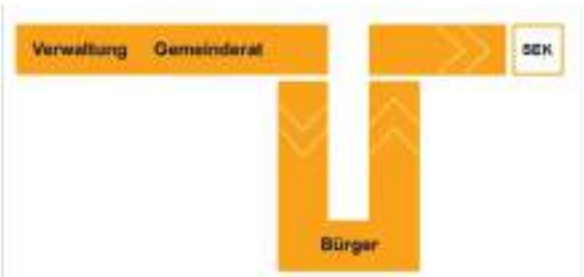


Fig. 4.3. Consultation in participation process (HFT Stuttgart)

Participation should be part of the democratic system, and not replace it. The decision about planning projects lies at the end at the city parliament. But the politicians have to make clear how they have considered the ideas of the participation process in their decisions.

In a participation process everybody has different roles. It is important to understand who is part of pressure groups (e.g. for car traffic, trade, real estate). Also, it is important to differentiate between residents, who like to avoid new housing projects in their neighborhood, and residents, who are longing for a new apartment. The internet becomes more and more important for online participation, but not everybody is able to use internet platforms.

Participation is also very important in urban regeneration. In existing neighborhoods, we have to deal with the residents and existing buildings. In Germany there is a self-standing building regulation act for urban redevelopment areas (Sanierungsgebiete, § 136 BauGB). For such areas an intensive participation process is obligatory, combined with measures of activation and empowerment.

Especially in social deprived areas there is a neighborhood management established, with social workers, urban planners and other experts. For such neighborhoods there is a special quarter council with working groups, discussing small projects to improve the environment and to build-up the civil society. At the end, such an intensive urban regeneration process strengthens the identity of a neighborhood and stabilizes the social structure.

Fig. 4.4. Participation process for a neighborhood in Wroclaw, student project (HFT Stuttgart)

INTEGRATED PLANNING PROCESS IN UKRAINE AND EXPERIENCES FROM THE COURSE

Participatory processes in Ukraine have been regulated in legal documents at national and local levels. A list of government instruments such as public hearings, consultations, petitions and other, is available and participatory practices are obligatory for municipalities and for developers. While legally regulated, participation often tends to be merely a formal procedure. One of the main problems is a short time span foreseen for planning of new developments and major urban reconstructions, normally done in one year or even shorter periods of time.

An integrated urban development approach based on the principles of the Leipzig Charter has changed priorities in planning. Even though such an approach is more time consuming, bringing together all relevant stakeholders in consultations, cooperation actions and other participatory practices delivers better projects and minimizes the number of risks in the project's implementation.

City of Lviv adopted a German experience and tested participatory planning on different street and public space reconstruction projects. "Street for All" is one of such projects based on a well explained participatory planning and implementation process. A model of that process consists of several stages:

- I stage - defining a manager of the project and design of the participatory planning and implementation. At this stage a manager designs a process and decides on the tools by taking into consideration the scale of the project and relevant stakeholders.

- II stage - defining a vision and key aspects of the site/project. At this stage the information about the site in a city-wide context is collected and experts from different fields define jointly with decision makers a vision for the site as well as main aspect of its future development, while also taking into consideration city's existing strategic development plans.

- III stage - collecting analytical data about the site: historical analysis, demographic data, sociological surveys, social and economic development aspects, environmental data. This stage results with a detailed analysis of the site. All relevant stakeholders are informed about all input data for further planning processes.

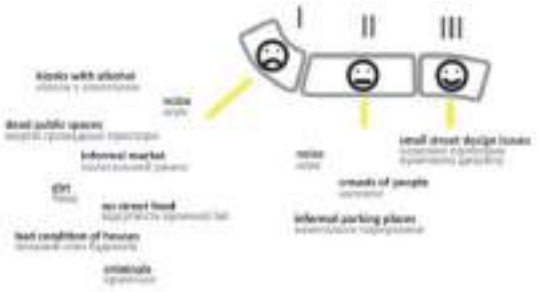


Fig. 4.5. Users of the street identify their feelings and associations on different parts of the street in Lviv (Source: Street for All project)

- IV stage - designing different variants and concepts for the site. Urban planners are designing different possible solutions for the site development, taking into an account the input information collected at previous stages. There could be 3-5 or even more different variants of transforming the existing situation, but the current condition should also be described and visually presented.

- V stage - engagement of local residents, businesses and other relevant stakeholders into discussion of the different concepts and solutions. All thoughts and comments about all concepts are collected during different participation actions: presentations, consultations, site campaigns, media publications etc.

- VI stage - final concept. During this stage urban planners analyse all comments and suggestions collected at precious stage and based on them, prepare the decision-making report and a design of final concept for the site.

- VII stage - a final concept with a decision-making report, manager together with urban planners present to all stakeholders and post on media. There are still options to propose small changes to the concept.

After the concept is finished, possibilities to change the project are limited and are possible only through formal and legal procedures.
VIII stage - collecting technical inputs for site transformation.

- IX stage - technical task for project development.

- X stage - tender procedures to define a planning institution that will prepare the detailed plan.

- XI stage - development of the detailed planning documentation. During that stage it is needed to present a project to the general public through public consultations and hearings. Participants are checking if the project documentation is responding to the concept that was designed previously.
- XII stage - state expertise of the project documentation, if relevant.

- XIII stage - developing working plans and other documentation needed for construction companies

- XIV stage - tender procedures to identify a construction organisation that will do construction works

- XV stage - construction works

- XVI stage - celebrations of the finishing transformations in site with wide engagement of all stakeholders and general public.

In practice urban planners usually define their own tools and participatory processes, depending on the area, tasks and stakeholders. So did also city makers do for their Stryjska-Podatkova site. The designed process included the analytical stage, vision development, designing a concept and its approval.

Fig. 4.6. Drafts models of participatory planning of Integrated Urban Development Concepts for Stryjska-Podatkova area (Source: participants' work)

In the first step, the identified stakeholders were to be classified into 3 main groups: residents and NGOs, businesses and government. These groups use different communication channels and require different communication approaches to be reached and included in the process. Once stakeholders were identified, physical meetings with each identified group of stakeholders are organized for presenting the first idea of an integrated development process, collect inputs and articulate expectations. In addition, a group of external experts could be consulted. This process could take 4 to 6 months.

In the second step, a vision for the integrated development concept is created. Ideas and proposals are collected through stakeholders survey and in the discussion process with experts and representatives of each group of stakeholders. The experts should ensure that the vision in a balanced manner includes proposals from all the stakeholders regardless of their institutional power (government and decision-makers, NGOs, residents and local businesses). The vision is to be presented to the public.

In the third step, a draft of concept is to be outlined and presented to the public. It is strongly recommended to engage professional moderators who have expertise to stimulate and guide a fruitful discussion. For that reason, the City Makers Course included training in moderation and facilitation of public discussions. Following the public discussions, the inputs can be interpreted and assessed, and the concept can be finalized. As the decision-makers (local authorities) need to approve this concept, it is important to keep them informed throughout the entire process through personal meetings and other communication channels.

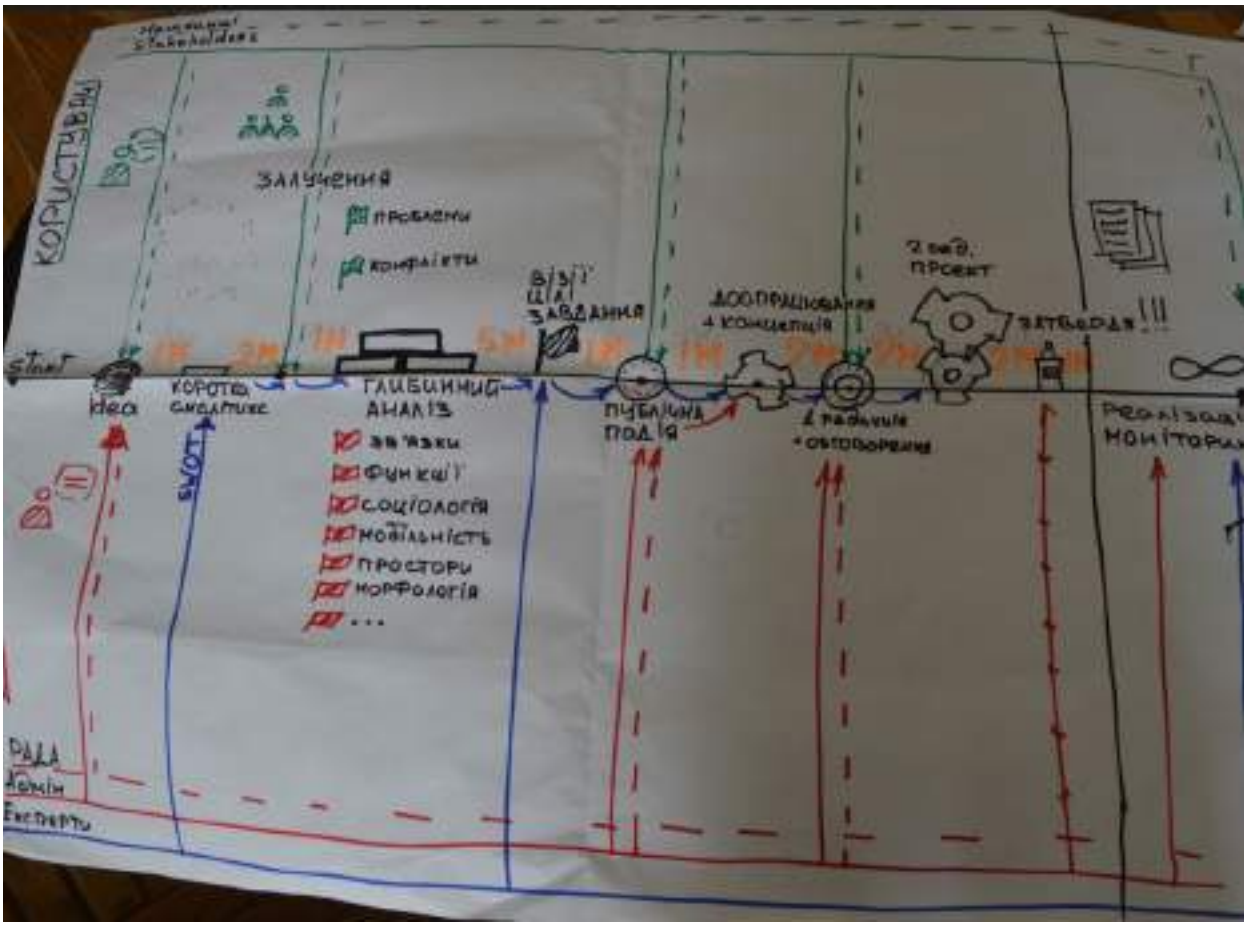


Fig. 4.7. A graphical explanation of the model for Integrated Development Concept planning process for the Stryjska-Podatkova area (Source: participants' work)

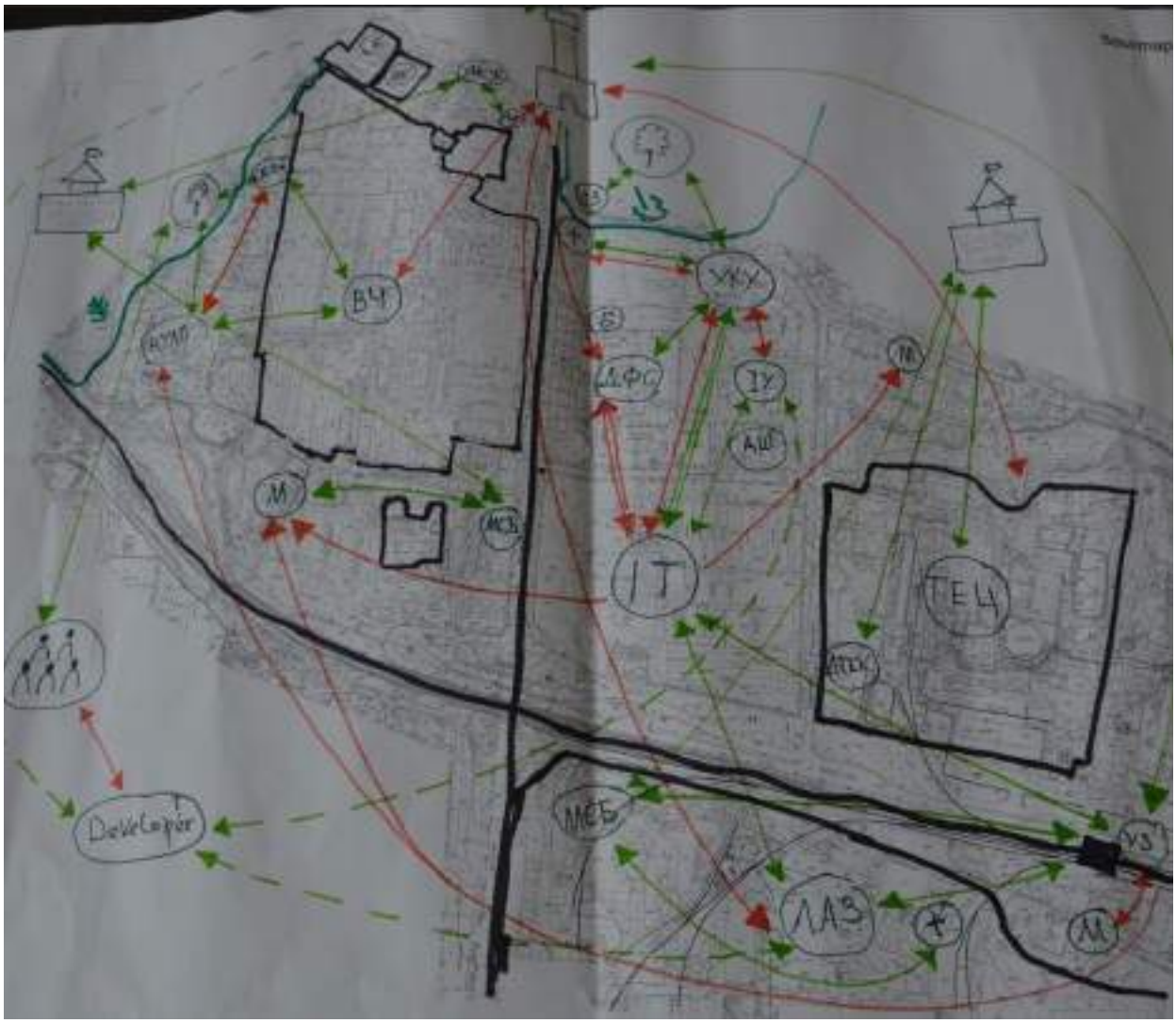


Fig. 4.8. Map of stakeholders of the Stryjska-Podatkova area (Source: participants' work)

Fig. 4.9. Photos from the public discussion where a vision for the Stryjska-Podatkova area was discussed (Source: participants' work)

Fig. 4.10. Mapping of problems and suggestions by residents during the public discussion of the vision of the Stryjska-Podatkova area (source: participants' work)

In this study course, several participatory planning actions were organised, based on the conducted stakeholder analysis and mapping main stakeholders and their interests.

Following the Module 'Strategic integrated planning', during which a vision for the area was prepared, city makers organised a public meeting. Shared mapping tool was used during the meeting for collecting feedback and suggestions.

Another public meeting was organised at the end of the course, to present the final concept. Participatory events are important for gaining profound insights into diverse interests of stakeholders as well as in spaces of everyday life, including challenges and problems that different users of space face in space. While public hearings at which authorities and developers present their plans tend to fuel conflicts, this participation process showed that constructive discussion is possible, provided that interests and needs of residents and other stakeholders are listened to and their participation is invited in an honest manner.

MODULE 04

STRATEGY PLANNING

Oleksandr Kobzarev

STRATEGIC INTEGRATED URBAN DEVELOPMENT CONCEPTS

Silke Weidner, Jochen Gauly

STRATEGY PLANNING

Urban planners and architects increasingly take on the challenge to engage with complex factors, interests, processes and resources of urban planning and development in a more profound manner, in balance with residents' needs and wants. Local authorities have increasingly recognized well developed planning strategies as necessary means for harmonizing urban transformations when it comes to new technologies, finances, education, work and others.

The term "strategy" came from a military art and it is translated from a Greek language as "the art of a general". Sir Basil Henry Liddell Hart - famous military historian and theorist called a strategy as an art of dissemination and exploitation of military solutions for achieving the political goals. Although many people consider a strategy as an art, it is more an instrument. For a civil use a strategy is an instrument for structuring existing solutions and resources for achieving goals.

Such an explanation is needed because today in Ukraine there is a widespread belief that a strategy is a "magic stick" which regardless of its quality could solve all problems. But such understanding leads to a systemic disappointment. A strategy can initially be met with enthusiasm, but then in a very short time after its official approval can be disapproved by everyone as a bad document which could not possibly work. In reality a strategy is just an instrument that should make an implementation of a certain work easier, but cannot achieve development goals by itself. Another myth about a strategy is that there is the right methodology and/ or a structure for its development, which one needs to adhere to. If certain procedures are not followed, the resulting work would not be perceived as a strategy. However, there are ongoing discussions, with proponents of each of the approaches and methods underlining benefits of their procedure while criticizing another. Examples of successful strategies show that there are at least five different approaches: a strategy could be a plan, a position, a perspective, a ploy, either a principle or a pattern. And designing a good strategy assumes a combination of different approaches according to each city's features, its strengths and weaknesses. Leaving behind these myths allows for accepting a strategy as a tool and understanding that there is no single correct approach to create a strategy.

Strategy should respond to the goals of the city. Based on a strategy a city could develop a toolbox with tools for working towards different goals. For example, a city of Lviv has different strategies for different city goals. In 2020 a Sustainable Urban Mobility Plan was approved - a municipal strategy that defines main mobility challenges in Lviv and different ways to overcome these challenges. The main plan is to prioritise a mobility of residents instead of transport in the city. A first priority should be given to pedestrian mobility, secondly to public transport, then to cyclists, delivery transport, then to private cars and lastly to the car parking.

In the field of urban economy, a cluster approach has presented itself since 2009 as well-suited for the Lviv's Competitiveness strategy. A main bet was put on the clusters of ICT and tourism. Based on this approach, thousands of new working places have been created in the city. Lviv also experienced a high level of investments in hospitality and leisure infrastructure.

In 2018 a Local Economic Development Plan was approved that defined the economic cluster as a priority for urban development. Clusters of printing and polygraphy, education and creativity, as well as clusters centred on light industry (fashion) have become new economic growth engines. Medical tourism cluster has been developed as of recently by imitating the tourism cluster.

In 2019 the Creative City Strategy was approved, promoting the idea that a city's competitiveness and attractiveness are created by creative people. Based on this strategy, the Municipality should support creativity of residents, create an environment where creative producers could be concentrated and stimulate the migration of creative people to the city.

When it comes to city planning, despite high regulation there are different approaches. In Ukraine on the local level a Masterplan should be approved and it is the documentation that defines the main principles of the development, planning, construction and other land use aspects of the city. The

other dimension of the spatial city planning is an Integrated Urban Development Concept defined on the principles of the Leipzig Charter. Integrated Urban Development Concept is an informal spatial and socio-economic planning tool. It is a full strategy that clarifies multidisciplinary long-term priorities and city development goals.

Even though it is based on certain basic principles, the Integrated Urban Development Concept gives enough space for creativity and adaptation to local condition capacity. Integrated Urban Development Concept is also an agile concept, aimed at balancing the needs of stakeholders and co-planners. A master plan and Integrated Urban Development Concept could work together and support the city government to build a more successful future for the city. Using a formal and informal planning in parallel is a very popular approach. Two chief-architects from Lviv conducted a research that from a top 10 cities with a high quality of urban space (Global Liveability Ranking, 2017), nine combine formal and informal planning. It is a quite a good argument to provide an effort for developing an Integrated Urban Development Concept in our cities.

STRATEGIC INTEGRATED URBAN DEVELOPMENT CONCEPTS

The learning objectives of this module were related to an understanding of a complexity of instruments, approaches and stakeholders involved in integrated planning processes. With reference to broader theoretical debates and using different case studies, the module cast a light on the changing quality of the relationship between urban planning and strategic thinking, discussing integrated urban planning activities as a key principle in achieving sustainable urban development in the urban age and attaining the Sustainable Development Goals (SDG No. 11), including those outlined in the Leipzig Charter..

Current challenges – as a background for a strategic planning and a reason for integrated urban development concepts – could in a rough manner be listed as:

- More than 50% of all people live in cities worldwide (2012), in 2050, 70% will live in cities, the level of urbanization is going upwards.
- Cities are the engines of development, growth and innovation..
- Demand for affordable housing has been increasing all over Europe.
- Cities face a growing need for provision of adequate infrastructure and services.
- High resource consumption takes place all over the world.
- The present climate crisis renders projections and adaptations a necessity.

So the big question is: How to deal with all these complex challenges and develop sustainable cities and neighborhoods for all? And the answer: Through an integrated urban strategy as a constituent part of urban development (formal planning and informal/strategic planning)! To underline this, further questions have to be answered in the big framework:

- Why exactly is an integrated, holistic approach needed?
- What does an integrated urban development concept/ strategy consist of?
- What fields and activities has the integrated approach been created for?

Beyond strategic aspects, it is essential to also consider the requirements for the implementation of an integrated urban development concept in regard to three main planning aspects:

- Governance, including the political will, competences for urban development (as those that this course tries to install), and cross-sectoral cooperation.
- Strategy with guiding principles, definition of goals and actions,
- Participation of citizens, politics, science and businesses

The main task of this module was to explore, understand and work on developing the linkages between analysis, development objectives and the focus area. An eight-step process for developing an integrated strategy (Fig.5.1) formed the basic framework for this work. The four steps of this process have been tested and applied in the study area and rehearsed with its stakeholders.

Fig. 5.1. Diagram depicting the entire process and rehearsed steps (red) to elaborate a commonstrategy on sustainable & integrated urban development.

Supported by methodological inputs, city makers applied the steps of an integrated planning process to create an integrated urban development strategy. Short lectures conveyed theoretical knowledge and practical experiences, to further inform the group work. Using the results of the SWOT analysis (Module 2) the needs for action were derived. In the next step the techniques of scenario design were employed, to modulate the results of the statistical, spatial and stakeholder analyses into a planning strategy with aims and measures . Scenarios, including their background, definitions and characteristics, as well as different scenario types and the methodical procedures were explained and discussed on the examples from other cities and processes. City makers prepared their worst and best case scenarios for the future development of Stryjska-Podatkova. The spatial focus area was defined using mapping as the basis for developing project descriptions for key actions. While this module provided training in all the elements of a strategy development for an area, it also delivered a strategic idea for the case study, as the foundation for the subsequent planning steps (following modules). It has identified focal areas and related requirements for urban design and landscape architecture: the “centre” and the highly frequented street.

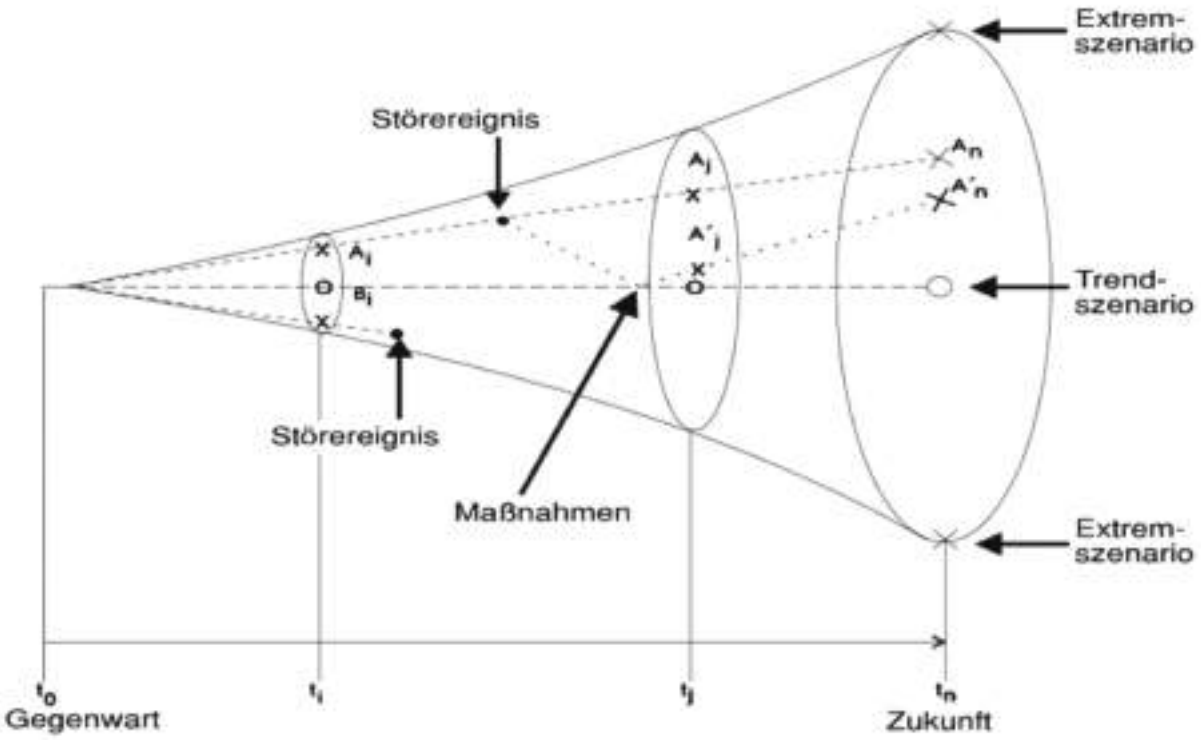


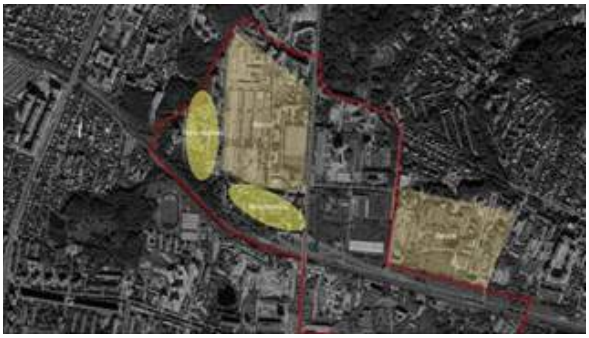
Fig. 5.2. Funnel model for scenario characteristics (step 3)

City makers' vision for Stryjska-Podatkova is an area of equal opportunities. Five key aspects of the local development are defined as mobility, economy, housing, public and open spaces, social infrastructure. In regard to these aspects, five goals and projects related to each goal have been identified:

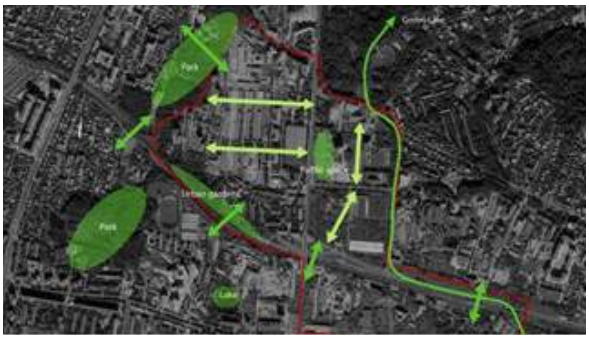
1. Sustainable mobility
   a. city electric train
   b. transport hub
   c. public transport priority
   d. cycling and pedestrian infrastructure
   e. pedestrian crossings through a railway

2. Business center based on education and innovation
   a. Business centers in Ukrainian Catholic University and IT park
   b. Revitalization of closed territories through the introduction of new functions
   c. Activation of the ground floor zone for a commercial purposes

3. District for comfortable life
   a. Renovation of the existing housing infrastructure
   b. Revitalization of closed territories through the introduction of new functions



4. District with good leisure and recreation facilities
   a. Maintenance of the slopes in Horihovyi Haj
   b. Building of railway pedestrian crossings
   c. Creating a "Green Line"
   d. Creating new links through closed territories
   e. Creating urban gardening facilities along the railway



5. District with a developed social infrastructure
   a. Community center in former public eatery
   b. Building of schools and kindergartens within good pedestrian connection
   c. Development of the educational hub at Ukrainian Catholic University

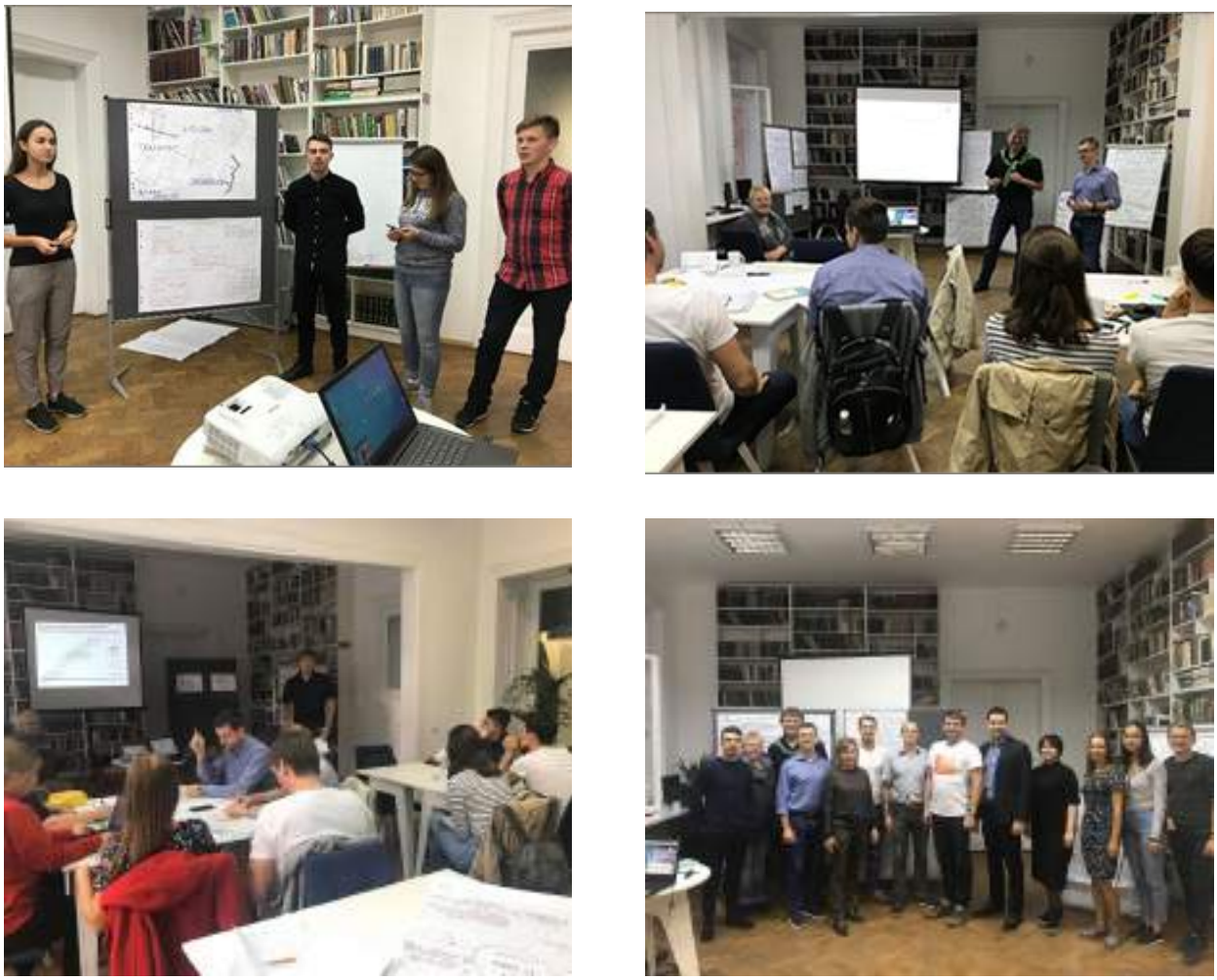


Fig. 5.3. Impressions from the seminar room (participants' presentation; lecturers' input)

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MODULE 05

URBAN DESIGN

Simon Colwill, Christoph Wessling

Developing guidelines for future development is connected to several challenges that concern urban design. Urban design is generally applied in the context of an already existing settlement. While acknowledging the existing patterns and rhythms of everyday life, a design concept needs to be flexible to adapt to changing needs, unexpected occasions and incidents. An extent to which these two sets of aspects are successfully addressed also determines how inclusive and resilient a design concept is. It also needs to be process oriented and efficient, because different interests, opportunities and resources must be integrated. This is a prerequisite for shaping a city's characteristics and identities in a productive manner, as well as rendering a city attractive to inhabitants, investors and visitors, as a way for enhancing its competitiveness.Urban design can be defined with the following six general statements:

- Designing and organising of the basic structure of urban settlements.
- Place making.
- Defining what is private, common or public space in the organisation of public and private sites.
- The composition of different urban elements.
- Designing the dialogue between the buildings and open space.
- Designing a part of the town in three dimensions.

In view of urban design's future oriented dimension, some of its main tasks and essential fields of action are:

- Conversion of former industrial sites.
- Infill on brownfield sites within the city.
- Qualifying and upgrading of existing quarters.
- Revitalisation of historic quarters.
- Adaptive reuse and development of existing building ensembles.
- Extension of residential quarters.

Urban design can be considered a continuously developing field of practice addressing the challenges and problems that occur in cities. Due to widespread belief that promoting a city's distinctiveness is central to enhancing its competitiveness, competitiveness, urban design has increasingly a lot to do with preserving and evolving from the existing structures, identity and character of the city and its districts.

A good design is based on good design methodology. How to develop an urban design concept? A general method to deal with urban design tasks towards solving urban design issues is:

1. Definition of the problem.
2. Definition of the goal.
3. Reality-check, analysis of the existing situation and structures.
4. Formulation of the main ideas / definition of the guidelines.
5. Designing the concept on different scales.
6. Transformation of the concept into a strategy.

Urban design starts from the city analysis, on the basis of which main ideas for the concept are formulated. In particular different shifts of complex urban structures need to be observed, such as: topography and natural resources; periods of historic development; the social structure; the economic structure; the structures of social and technical infrastructure; the structure of public spaces: streets, places and parks; the structures of the building plots; the building structure; the different types of building; the updating of plans and documents.

In order to understand and analyse cities and their quarters, an intensive research on these shifts of urban developments and how they are working together is fundamental in order to keep a city vital and attractive for the future. A concept is only sustainable, resilient and comprehensive, if we are able to reduce it to main messages and when we are able to explain these main messages and guidelines in an understandable way. For urban design concepts a guideline plan should summarise the main concerns, usually presented with the building plats, the structures and the characteristics of public spaces.

A sustainable and resilient design for the city incorporates a well balanced Landscape Architecture and Public Space Design. The relationship between Landscape Architecture, Urban Design and Architecture concerns basic methods of space creation, the perception of space and approach to open space design.Space creation is closely connected to the definition of boundaries. It results from a surface area surrounded by specific three-dimensional boundaries. Weaker boundaries require a stronger definition of the surface and vice versa. Impermeable spatial boundaries

such as buildings create strong boundaries, and permeable or transparent spatial boundaries are formed for example by trees or fences. Topography can also play an important role in defining spatial boundaries and can also be used to create functional borders.

In order to create comfortable open spaces, we first have to deal with the human perception of space. Space is an experience of three-dimensional proportions between the viewer and the objects to be observed. Regardless of size, the closer you get to an element, the larger it is perceived. Therefore, space is the experience of proportions, not dimensions (Loidl und Bernard, 2003).

The basic elements of open space design by expanding on the concepts developed by Kevin Lynch in The Image of the City are:

- Paths, edges, districts, nodes and landmarks.
- Open space corridors: boulevards, greenways, river embankments, green spaces adjacent to traffic infrastructure or below power cables etc.
- Squares.
- Parks.
- Landmarks: buildings, monuments etc.
- Nodes: junctions, interchanges.

Open space networks are created by developing a series of interlinked spaces of differing size and relevance, providing differing functions and distinctive atmospheres. Through developing a specific design language in combination with individual built elements, plants and materials a local identity can be created. When we design, two classes of elements are created - positive forms and negative spaces. The following aspects are used in designing places with distinct characteristics and functions:

- form / volume / mass,
- proportions / dimensions / scale,
- material / quality,
- surface texture / pattern,
- colour.

Open space networks are formed of points, lines and surfaces and can contain built structures and surfaces, waterbodies, green elements and spaces and mixtures thereof. The points are the nodes of the city, interchanges within the urban framework. The lines form the connecting corridors within the network and the surfaces are places such as parks or squares. Corridors may be public open spaces such as boulevards, greenways or riverside walks, this may also refer to traffic corridors such as streetscapes and spaces along railway lines which can also be integrated into open space networks. Well-designed cityscapes are formed of sequences of open spaces with differing proportions, functions, climatic qualities and characters. As a whole, these spaces create a network of interconnected open places that provide urban accessibility, legibility, recreational and amenity value as well as providing diverse environmental services (climate control, ecological corridors etc.). The main aim is to create interconnected city quarters with individual characteristics and identity.

The traditional functions of future urban open scape networks are:

- Access and traffic space.
- Meeting place (social function).
- Market place (economic function).
- Representative function (as ornamentation).
- Public gatherings, events and political protest.
- Play, sport, exercise.

Today, open space networks need to address a multitude of further functions within the urban context. This focus on multi-functionality has become essential due to climate change, reduction of ecological diversity and social pressures on public space. The main factors to be considered are:

- Climate control / thermal comfort (measures against the urban heat island effect, cooling, ventilation, shading, increase humidity, green roofs and walls).
- Rainwater management (retention, infiltration and evaporation of rainwater, flood prevention).
- Food production (community gardens).
- Conserving natural, cultural and aesthetic values.
- Provision of habitats, safeguarding flora and fauna.
- Ecological corridors interconnecting habitats.

In order to design the urban landscape, it is essential to firstly analyse the potentials and deficits of

the site. The following criteria form the basis for the analysis: topography, environment, including microclimate (exposure to wind, sun-shade, humidity, urban heat islands etc.) and ecology (water, soil, flora, fauna), history/ heritage, access and circulation (by foot, vehicle transport, public transport etc.), public space (squares, parks, corridors), building volume and typology, building plots, social and economic structures.

Open space is characterized by change and dynamics over time. Projects are influenced not only by future climatic and social changes but also by individual vegetational cycles throughout the seasons and the patination and deterioration of structures and materials over time. Therefore, open space design needs to address issues of time and change throughout the project lifespan. The main factors influencing future change are:

- Climate change.
- Economic pressures.
- The transformation of future transportation systems.
- The influence of the digital era.

There are good examples of public space networks, for example, “Park am Gleisdrieck” and the “Schöneberger Schleife” developments in Berlin. These projects also demonstrated the involvement of public participation through user groups and residents in the planning, management and post-completion development of public open space.

Lesson to be learnt can be paraphrased in the following statement: an urbanity is experienced as, and formed of a network of open spaces - not a conglomeration of buildings. This statement formed the basis of further discussions on urban open space networks.

City makers started their urban space design from a broad overview of the qualities of the project area through implementing an on-site survey and analysis. This included analysing the built structures and open spaces including all topographical, climatic and other factors that may influence the design. The work was divided between four working groups which then developed their own conceptual design plans (see fig.6.1). Diverse potentials and deficits were then presented and discussed in detail. The influence of future factors such as climate change, future transportation systems, social change and functional demands on open space were also discussed. This developed into the development of four spatial visions for the project area. Transport nodes and networks, squares and parks, green and blue corridors, were all defined together with the surrounding urban structures.

Fig. 6.1. Development of ideas and conceptual plans in working groups

Towards the end of the workshop an extra input lecture entitled “Urban design examples from Germany (joint ownership and co-housing projects and sustainable mobility planning)” was held which aimed to answer several questions that arose during the workshop debates. Urban design case studies with qualified concepts present a clear basic structure integrated into the existing urban context as well as spaces with a more flexible structure for individual adoption to the future residents and users. Following a debate on non-profit oriented housing construction different models were presented, including joint ownership and co housing projects. The participants of the workshop were very much interested in the options for sustainable mobility planning. To give some input for this important challenge of our cities, tools to enhance the public transport sector were discussed. The potential of Bus Rapid Transit (BRT) Systems as a measure that is easy to implement and a place-holder for the later development of a Light Rail Transport (LRT) System was identified as a main goal.

After the group work city mapers summarized the best approaches into one comprehensive urban design strategy. This was further developed by creating a final multi-layered Master Plan of the project area.

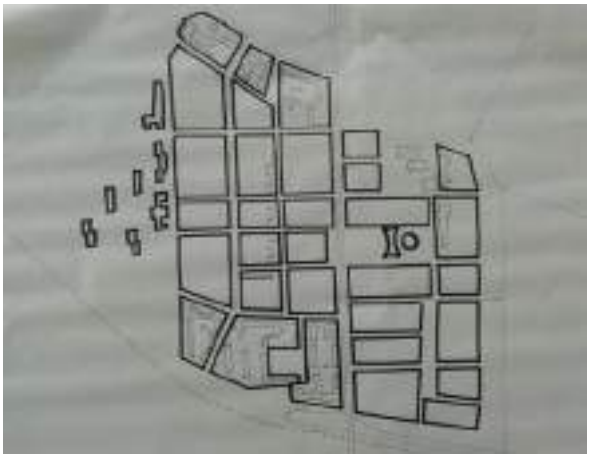

Fig. 6.2. Definition of the building plots and open space network for the future development (source: participants' work)

Fig. 6.3. Potential building structures for the future development (source: participants' work)

Fig. 6.4. Proposed integration of the site into the surrounding green context and the integration of new public green places and corridors within the development area (source: participants' work)

Fig.6.5. Proposed network of streets, footpaths and transport nodes (source: participants' work)

Fig. 6.7. 3D model of Master Plan of the area (source: participants' work)

Fig.6.6. Master Plan of the area (source: participants' work)

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MODULE 06

DESIGNING LIVED SPACE?

Tihomir Viderman, Karolina Hettchen

When evoking public space, most people visualize spaces between buildings filled with the daily lives of diverse people. Some will evoke moments of mass gatherings for ceremonies, events, or protests. These mental images clearly extend public space across legally defined boundaries of ownership or management. It has a lot to do with everyday life, how we encounter others and how we share our environments. Public space is also more than just an urban form. Although generally perceived through a richness of material objects and practices, public space is as much shaped by intangible experiences. The experiences such as comfort, pleasure, excitement, or, on the other end of the spectrum, distress, fear, indifference, are inscribed in public space as people go about their mundane daily activities or face rather uncanny situations and moments. Public space is continuously negotiated, as various groups and individuals nurture relationships while aiming to adapt shared space to their needs. Its materiality, symbolism, and memories show not only what societies have imagined and desired, but also how these societies relate to categories of difference, including gender, class, race, religion, ethnicity, age, sexuality, forms of disabilities and impairments, as well as other shifting not fixed categories. Visible and invisible struggles are therefore part of public space. These struggles are inseparable from power relations, which are embodied in particular sites, and which can be either emancipatory or discriminatory. “This explains why a place can simultaneously be loved, celebrated, feared, despised or even dismissed by different people. What might inspire excitement in some, can be intimidating for others. Whether a personal bodily experience is empowering or disempowering depends both on structures of power ingrained in space as well as categories of difference” (Viderman and Knierbein 2020: 55). Think of different emotions, intuitive reactions and debates we had at the plateau of the State Financial Service, or sitting on the lawn of the campus of Ukraininan Catholic University, or in the evening walking through the streets of the old town, alone or in a group.

Institutions, including planning and design, can either replicate constraints or create enablements (Kazepov 2005). In regard to this, the main challenge is to recognize and include also those needs and wants, which are not visible or institutionally articulated. The task of translating this challenge into any material form is immense and never complete. It requires a continuous critical reflection of own positionality as regards multiple dimensions of space. It also calls for the conscious stepping out of the comfort zone of representations of space (drawings, visualisations, text) so as to get in touch with a variety of people and include them into the process. While good design certainly helps, it is not the only ingredient in creating a dense and diverse environment which enables individuals and groups to improvise, invent and create caring relations.

With the two stories from Vienna and Berlin we would like to show how diverse publics appropriate public space, blur the divide between social and physical dimensions of space and shape lived space. In both cities, the businesses and governance structures demonstrate an increased interest in public space. That interest, however, is primarily directed at the aesthetical dimensions of polished urban public space as fertile grounds for the growth of post-industrial urban economies. Urban economies, which are largely perceived as intangible, thriving on and selling experience, knowledge, symbols or attention, actually have a very material dimension in the form of rejuvenated urban spaces of consumption, tourism-driven restructuring of real estate or advertisement. A perceptive traveller would notice the logo of the JCDecaux Group on advertising surfaces, street furniture or bus and tram stations around Europe (and beyond), including Lviv. While developing a highly profitable business model of outdoor advertising based on public-private partnerships, a global player JCDecaux shapes public space around the globe in a uniform design language (cf. Einhoff 2020). Diverse publics, however, remind of social dimensions of public space as lived space. This is the place of belonging or exclusion, of building the collective capacity for change or atomization and fragmentation – this is where social differences take on the material form.

A translocal story of Ottakringer Straße, Vienna (Dika et al. 2011), demonstrates the importance of lived space in urban design. The street on the border between the districts of Ottakring and Hernals had long had a bad reputation. Among more conservative parts of Vienna’s population, the street is infamous for its nightlife dominated by

turbo-folk music, car show offs and exposing fashion styles. Its ground floor retail zone (shops, restaurants, cafes, nightclubs) tells multiethnic, multilingual and transnational stories. This is visible in the establishments' names, business owners and personnel, products and dishes. The street is therefore commonly referred to as Balkanmeile (The Balkan Mile). The story of its sensitive urban redevelopment started during the 2008 European Football Championship, when the street developed into an unofficial fan zone. As opposed to the strictly secured and heavily controlled official fan zone in the city centre, where drinks and food could have been obtained only from a curated selection of stands of events' official sponsors at premium prices (ORF Ö1, September 13, 2011), Austrian Turks, Serbs, Croatians and other football fans flocked into Ottakringer Straße, where establishments and fans appropriated the street space for their football parties. Even when Croatia and Turkey met in the quarterfinals, the party continued in a friendly and peaceful manner without conflicts. The image of the street has changed both in media and within the broader public.
The change of the street's image can also be attributed to various institutional actions, e.g. Brunnenpassage in 2007, Verlagshaus Hernals in 2008 or VinziShop in 2010. To correct the perception of the street, Gebietsbetreuung (GB) a service facility of the City of Vienna responsible for urban renewal, launched the urban research project "Travel Agency Ottakringer Straße", by setting up a fictitious travel agency in an empty groundfloor restaurant with the aim of promoting tolerance (Dika et al. 2011). Its activities included guided tours, souvenirs, tourist maps, events, as well as panel discussions on a series of topics, including international urban life, football and identity, Turbo Folk culture, etc. All these activities established trust between local residents and entrepreneurs in the street and the institutional actors, allowing for a successful redesign of the street in 2012 and 2013. The goals of the design upgrade were 'more space, more green, higher quality of life and more safety for pedestrians and cyclists'. The locals were involved in defining both general design principles as well as fine-grained details. During the implementation of the design scheme, the locals had their say in defining precise locations for parklets, benches, parking places, bicycle parking racks and other elements of urban furniture, which is why they have embraced the new design as theirs, and keep protecting it from damage and vandalism. A local weekly newspaper described the redesigned street as 'Vienna's most modern boulevard'.

The Gececondu at Kottbusser Tor in Berlin-Kreuzberg exemplified a spatial manifestation of an idea of public space. Kottbusser Tor is a place in Berlin that embodies the radical modernist ideas of urban planning of the late 1960s in West Berlin. It is realized as part of a larger regeneration scheme for the Kreuzberg district that never has been fully implemented. This place and its landmark Neues Kreuzberger Zentrum - stacked social housing apartments - nicknamed "Kotti" is a peculiar spot in Berlin. Formerly it was a district at the periphery of West Berlin, near the Berlin Wall, considered as unattractive, where the Turkish immigrant workers settled. After the Fall of the Wall it found itself at the very heart of the pulsing city. Kotti has a strong media presence - medialized as a very problematic neighborhood, infamous for its drug trafficking, associated with crimes, violence, and unemployed people hanging out. At the same time, it is a vivid multicultural urban civic place offering social spaces for the diverse public at all times of the day.

The story of Gececondu at Kotti has started in the year 2012. The idea grew up within the context of the housing crisis, urban displacement, rising rents, and was an expression of the rental market upheaval in Berlin. The tenants' community organized protests, and one of them led to the occupation of a public square at Kotti. Over the night, some of the participants built a protest house and called it Gececondu. The idea and the name originate from the traditional Osman right and means 'built over the night' and refers also to the large Turkish community in Kreuzberg. At this moment, it was a very symbolic gesture – the tenants exercising power over public space, intervening in the existing spatial power system, and maintaining this position – it was a strong political act.

In the course of time, Gececondu has become more than merely an overnight built-up shanty. Today, it is rather a sophisticated system of self-organization, social relations, social and cultural institutions, local small business owners, but foremost the place where the local neighborhood flourishes. Gececondu can operate in multiple

ways, as a meeting spot, a shared living room, or a venue for protest. Built structures, planning and architectural means alone are not enough to make lived space. The multifunctionality is a must, but at the same time social instruments - for instance, a samovar as an invitation - are of great importance. Social use does not result from the building or space itself. The porous relations between inside and outside and an open, incomplete form of Gececondu allow the tenants' active participation in the creation of their commonplace. People and their practices shape and create a living space. Through the act of the collective appropriation of this public space, the tenants became aware that they have a say in the issues of planning and changing the status quo. As a result of the intervention in the public space, the tenants of Kotti became makers of their environment in the process of co-production, not consultation. Here the social practices determine the spatial design. The Gececondu as a public space has become a vivid urban civic place because it gives a variety of interpretations by the diverse audience exercising their everyday living practices.

How does a planned, designed, and generally standardized public space turn into a lived space? It is ultimately people and their experiences that need to be recognized as part of the architectural construction of space – not only on the part of the users but also of professionals who conceive a design, by critically reflecting on their own biases and professional position in the production of space. Beyond collecting information about a particular place, we suggest participatory methods that use some elements of ethnographic urban research to build more sensitiveness towards lived public space. This means to experience public space by 'rubbing along' (Watson 2006), through curated and unexpected social encounters, by engaging with experiential geography of bodily disposition, time and space constraints, and opportunities. Guidelines that many cities prepared for designing good public space [e.g. Vienna – Stadt Wien (2018)] can help structure both the reflection on the multiple dimensions and needs as well as the design process. Those guidelines usually point to general normative requirements pertaining to public space as a shared, secure, and used place. Do not think only in the relations of clear zoning, but rather about mixing uses and people across categories of difference. Think of strategies and concepts for versatile, multiple, and interim uses in order to stimulate encounters with the new and strange, while avoiding possible fear and conflicts. At a strictly design level, think about measures and elements that can provide quality surfaces for longer stays and improve micro-climate. Introduce elements such as art to support engagement and a sense of belonging. Think of use frequency and visibility during day and night as an important security aspect. Your design must be appropriate for a particular place and the use patterns. And while thinking of great design, do not forget elements of mundane everyday life: a bench, a trash bin, or a public toilet.

City Makers engaged with and designed several public spaces in Stryjska-Podatkova, with the particular focus on:

1. Sports playground in Lazarenka street is identified as a great spatial potential for the local micro-community. A large area without any sport or leisure is currently scarcely used. A proposed sports playground will address some of the needs of local residents, attract more people to use that space, thus increasing the attractiveness of the area in general.

2. Public space in front of the community centre in Lazarenka street can be redesigned to serve as an extension of the future community centre combining both indoor and outdoor community activities.

3. Pedestrian crossing across the railway is planned to provide more safe and comfortable connection between the two parts of the town.

4. A pedestrian street between the State Fiscal Office and the student campus. Students and residents use Lazarenka street between their homes and the bus stop near the State Fiscal Office. A pedestrian street would render this link more safe and comfortable, and could also provide a good opportunity for businesses to expand within the newly constructed quarters.

5. Design of public space needs to recognize a great potential of void space surrounding housing estates in Stryjska-Podatkova. Newly planned urban form is the one of urban blocks, allowing for developing a gradation of experiences, from open public space to semi-closed spaces inside the block.

6. Active public space near the Ukrainian Catholic University and the future IT Park. Ukrainian Catholic University already has already made its well maintained open spaces accessible to general publics. We suggest that the neighbouring IT Park should follow this model.

7. A large parking lot in front of the State Fiscal Office needs to be transformed into a square whose landscape design would make it attractive for an extended outdooor stay.

8. The future development of the area needs to include the improvement of living conditions in the existing housing stock: renovation, thermal modernisation of buildings, implementation of the concept houses surrounded by a park. In addition to the financial contribution from the city government, for improving the management of housing estates innovative models are to be explored drawing on cooperative development and private initiatives.

Fig 7.1. Lviv's central public spaces (Source: Olena Moyseyenko)

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MODULE 07

SMART CITY STRATEGIES

Julia Binder

INFRASTRUCTURE AND MOBILITY

Pavlo Syrvatka, Olena Kuzhym

SMART CITY STRATEGIES

Urban design and planning nowadays deal with two main tasks: smart city infrastructure and mobility planning. Both topics have been explored in the last module as a means of designing solutions for Stryjska-Podatkova.

IIn recent years a growing body of research on smartness adreesses the opportunities and challenges of digitalization within the administrative city boundaries (Breuer et al. 2014; Caragliu et al. 2011; Cocchia 2014; Vanolo 2013). Even though the notion of smart cities covers a range of different approaches to fostering efficiency, innovation and life quality, it still lacks a clear definition of what a smart city actually means. Almost every smart city strategy deals with Information and Communication Technologies (ICT) and the ways it can help reorganize the urban metabolism in a more efficient way. Smartness in that sense can be understood to denote an enhanced urban technological infrastructure through means of digitalization. In the context of urban planning, Giffinger et al. (2007: 10) identify a "certain ability of a city" to qualify as "smart" as a capacity to perform well "in a forward looking way, built on the smart combination of endowments and activities of self-decisive, independent and aware citizens" (Giffinger et al. 2007: 10).

A definition of a self-decisive, independent and aware citizen resonates with the Institute of Sustainability's definition from 2011, which articulates a smart city as a city in which information and communication technologies as well as resource-saving technologies are systematically used to tread a path towards a post-fossil society, to reduce the consumption of resources, to permanently increase the quality of life for citizens as well as the competitiveness of the local economy - shortly, to improve the future viability of the city. In this context the areas of energy, mobility, urban planning and governance need to be taken into consideration. An elementary characteristic of a smart city is the integration and interconnection of these areas as a prerequisite for realizing the attainable ecological and social improvement potentials. A comprehensive integration of social aspects of urban society as well as a participatory approach are crucial dimension of this approach (Wiener Stadtwerke 2011, own translation).

We can understand that the social dimensions such as participation constitute a key factor in embedding smart city strategies in the local context. Considering further urban-rural linkages spatially anchors the discussion on the risks and potentials of the implementation of large scale digitalization projects.

In the context of German spatial planning, digital infrastructure counts as a key factor for regional development. However, the Federal Office for Building and Regional Planning (BBSR) draws attention to significant spatial disparities regarding the technical infrastructure of high-speed internet in German rural areas. It highlights the difficulties in establishing an equivalent standard of high-speed internet in sparsely populated areas, reminding that huge disparities between metropolitan areas and rural provinces persist. Hence, cities count as incubators of smart strategies.

Jairo Parada (2017: 1) refers to the Latin America's context to outline some of the preconditions for a successful implementation of large-scale smart strategies, highlighting, for example, a "sufficient degree of social and institutional density", e.g. the participation of state actors, the civil society and the private sector. The need for social and institutional density resonates with a broader affirmation of governance models that are based on collaboration, networks of actors and communication processes as a mode of management of (public) affairs.

When talking about a successful implementation of smart city strategies, we need to also think about new forms of steering urban processes in the sense of changed orders, new modes of governing, replacing strictly hierarchical organization models by more horizontally structured processes. The Fig.8.1 is illustrative of current discussions in Germany's academia pertaining to ICT in mobility: it displays some of the key words from the call for papers for the conference on intelligent mobility, which was planned for February 2020 in Hannover.

Fig. 8.1. Intelligent mobility key words (Source: Julia Binder)

When it comes to a future Ukrainian city, I suggest three main aspects to be critically reflected on as part of discussion on a successful implementation of smart city strategies:

- there is an urgent need for a greater critical reflection on the production and management of big data in terms of ownership and data security,
- the role of multi-national corporations shall be questioned in providing critical technical infrastructure,
- the problem of centralization and monopolization of data is to be reflected on in favor of decentralized solutions.

INFRASTRUCTURE AND MOBILITY

Mobility is one of the greatest challenges in Lviv today. As there is still no clear understanding among the public of the difference between mobility and transport, education programs for planners still draw on the 20th century's paradigms to build more infrastructure for cars whenever possible. Many planners still plan the roads for transport, instead of streets for people.

The City of Lviv has approved a Sustainable Urban Mobility Plan, which defines principles of sustainable mobility. Such a mobility promotes the means of transportation (including rolling stock and infrastructure) that are efficient in terms of social, environmental and climatic impact on the environment. The most important shift is a reverse of the mobility pyramid during the next 10 years from the one prioritizing a car to a people centred one.

Lviv SUMP principles are key statements to refer to in any decision-making on urban infrastructure or development. Principles for Mobility Development in Lviv include:

Fig. 8.3. Lviv Sustainable Urban Mobility pyramid (source: Lviv SUMP)

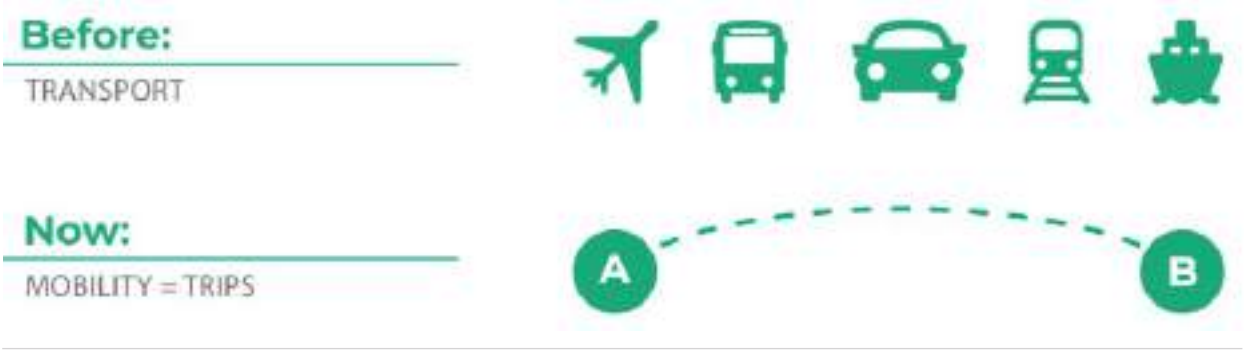

Fig. 8.2. Difference between transport and mobility (source: Lviv SUMP)

1. Street – is public space, not a "road".
2. Traffic safety has a priority over travel speed; human life and health are the highest values.
3. Quality pedestrian space is a key priority in street planning.
4. Public transport is the backbone of the city's transport infrastructure.
5. A passenger shall benefit from taking public transport in terms of time and financial input.
6. Transport for passengers, not passengers for transport.
7. The city holds back the growth of private car usage.
8. Possibility to safely and comfortably ride a bicycle along all streets in Lviv.

Based on these principles city makers prepared solutions for Stryjska-Podatkova area.

Fig. 8.4. Streets within the area (source: participant's work)

Suggested upgrade to the existing streets network will include pedestrian and cycling only streets, streets with new and existing public transport routes, streets with access for cars and delivery. After a detailed study, a new hierarchy of streets was proposed, with the split on arterial streets, streets of a district significance, inner-quarter streets, and driveways. Such a distribution will adjust the design of each street to the function it is supposed to serve and protect the transit traffic inside the functional districts.

Fig. 8.5. Cycling and pedestrian infrastructure within the area (source: participant's work)

The suggested grid provides for short and direct paths for pedestrians and cyclists, which will stimulate residents to behavioral shift towards more sustainable and healthy mobility patterns includes not only new and existing streets, but also walking and cycling connections via green areas, in-

cluding the integration of a district to the existing "Green line" between Sukhiv and the city centre. The suggested grid provides for short and direct paths for pedestrians and cyclists, which will stimulate residents to behavioral shift towards more sustainable and healthy mobility patterns.

Fig. 8.6.Public transport within the area (source: participant's work)

Changes to the existing public transport network were developed, including additional public stops locations along the existing Stryiska street, where new residential and office spaces are planned to replace the existing military barracks and voids.. A new street between Lazarenka and Sakharova was planned with bus stops and deviation of bus route 42 inside the new block. The locations of potential stops were selected based on the radial distance from the functional units, with a particular focus on residential and working areas. The two-ways bus lanes are planned to be organized on Stryiska street to provide for the uninterrupted and more rapid running of public transport.

Detailed solutions were proposed for a few most important intersections within the district. Among them: Stryiska - Akademika Lazarenka - Ivana Chmoly, and Luhanska - Kozelnytska. Currently redesign of intersection Luhanska - Kozelnytska with creation of roundabout is approved by Executive Committee of City Council, and final design is being performed by Lviv Municipal Enterprise "Institute of Spatial Development".

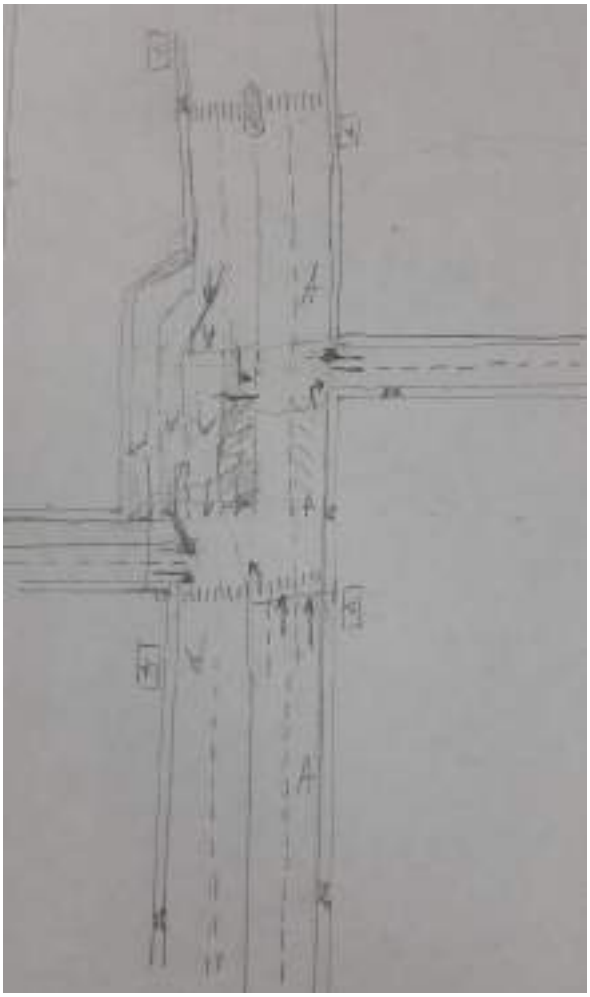

Fig. 8.7. Traffic organization scheme of Stryiska - Akademika Lazarenka - Ivana Chmoly intersection (source: participant's work)

A draft scheme of Stryiska - Akademika Lazarenka - Ivana Chmoly intersection suggests the solution for the key pain point in the district. This solution was developed to ensure direct access to residential neighborhoods of Lazarenka street, to avoid unsafe left turns via Luhanska - Kozelnytska - Chmoly, creating additional pedestrian crossing and integrating bus lanes into existing street layout.

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STUDY VISIT TO GERMANY AND FRANCE

Dmytrii Shevchenko, Maksym Terletsky,
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At the end of February city makers visited several cities and communities in Germany,
France and Luxembourg to learn about best practices of city planning and design. The list of visited places included: Heidelberg, Karlsruhe, Saarbrücken, Nancy, Strasbourg, Esch-sur-Alzette.

Volker Ziegler from National School of Architecture in Strasbourg and Markus Otto from Brandenburg University of Technology organized a study visit programme that included site visits, as well as lectures and inputs from researchers and practitioners from local universities, city administrations and other institutions.

In Nancy in France we explored and discussed the materialisations of different urban planning solutions from the middle ages to the middle XX century. We also had a closer look at the social housing project Haut-du-Lièvre and contemporary mobility solutions in the central part of the city.

In Heidelberg we surveyed both historical and modern parts of the city, including the historical core with the castle, former factories revitalized into residential space, such as a transformation of a former freight yard into Bahnstadt district, or a former vagon factory into Quartier am Turm, as well as condominiums constructed in place of former military barracks.

Strasbourg is a city with both French and German urban planning traditions. In addition to this historical heritage, we also visited a contemporary development of the Deux-Rives Project. We visited an info point and discussed with representatives of local public company (SPL des Deux—Rives), which is responsible for implementation of the project, various aspects of planning as well as practices of sustainable development.

Karlsruhe is known for its radial urban planning scheme with a palace in its centre, and streets radiating from it. As part of heritage we also visited Rüppurr, which dating back to 1907 is one of the first garden city in Germany. The Dammerstock Estate from 1929 was visited and analysed as an example of modernist architecture and city planning principles. Interesting mobility solutions were presented and discussed in Karlsruhe, as this is the city that first in Europe created a track-sharing railway system for light and heavy rail vehicles. At Info-Pavillion K we have informed ourselves about future mobility concepts for the city. Additionally, we also visited Karlsruhe University of Technology and discussed the topics of international urban development.

Belval in the commune of Esch-sur-Alzette, Luxembourg, is a former steel factory which was redeveloped as a housing district and a location of Luxembourg University. It is redeveloped as a public-private partnership project managed by development company Agora. We had an opportunity to visit their offices and have an in-depth discussion about different planning and management solutions.

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